Reshaping the city ground-scape with vegetation

Maria Livia Olivetti, University of Roma Tre, Dipartimento di Progettazione e studio dell’architettura

1. Introduction

The following text is a part of a wider research named “Living Urban Scape”¹ carried on by the University of “Roma Tre” and the IUAV University of Venice. Aim of the work is to provide a new way of reading and understanding the “urban-scape” as to define new strategies of urban regeneration by landscape and by social principles. The investigation is focused on the empty pieces of land that are present in the contemporary big cities, especially in the suburban and residential zones. We think that these areas are crucial to reach a new and different meaning of living in such territories.

Our research method is based on the consciousness that with a careful use of vegetation it is possible to achieve important results into the urban renovation process. “New environments for new natures”². We should start giving thought “To dynamic evolutions rather than static positions. To impure developments rather than basic figurations.(…) To topologies rather than typologies. To “landscapes” rather than “edifices”. Architecture established (from now on) like geographies”.³ In fact, if we start the renovation process from the reshaping of the ground-scape of the city we could overcome the traditional dimension of the urban environment.

Figure 1. Logo of the Living Urban Scape national research project: www.livingurbanscape.org

2. Vegetation as climate control tool

The actual asphalt territories, particularly the “parterre” of the suburban residential blocks could be redesigned integrating vegetable elements, to provide a better climate situation. By an energy-saving and healthy point of view is it known that “vegetation produces the oxygen necessary for life (it is estimated that a leaf surface of 25 square meters provides the daily requirements of oxygen for a person), and fosters the development of biodiversity. Vegetation works on a number of levels: it absorbs the excesses of carbon dioxide present in the urban environment; it captures toxic gases, dusts and particles thus diminishing the levels of pollutants in the environment; it serves a thermo-regulatory

---

¹ www.livingurbanscape.org
² Gausa M., Architecture is (now) geography (other urban ‘natures’) in Green Island. Piazze, isole e verde urbano, Damiani, Bologna 2008, p. 18.
³ Gausa M., Architecture is (now) op. cit., p. 19.
function, preventing the excessive heating of the ground and favoring the movement of air closest to the ground: in a word, it improves the livability of the urban environment⁴.

3. Vegetation and ground-scape design as social and identity renaissance tool

Furthermore a careful choice of different tree and plant species can contribute to a social and identity renaissance of the suburban areas. Vegetation can be used not only in an energy efficient way but also in an appealing way. In fact, special attention to the light variation and to the color brightness of the species provides a reading and a fruition of the landscape that can be perceived in a unique and personal way by each inhabitant. The lesson of Bernard Lassus demonstrates that: “Light and color become basic research topics to deeply explore the relationship between real and apparent, light and dark, and the color variations. That’s the way perception becomes a reading and a design tool”⁵. One of the latest work of Lassus, the hanging gardens of Colas Foundation (2008) is formed by multicolored garden elements (which can respond to the four seasons) and interweaves natural and artificial landscape elements. Such a design demonstrates a way of understanding and reinventing the landscape like an heterogeneous place, multicultural and democratic⁶. Furthermore a poetic design of the landscape architect Ken Smith named “P.S. 19” located in one of the poorest New York City neighborhoods (Queens) shows the potential of the soil to be element of social cohesion and “good-identity” factor. The project, in a few words, shows the reshaping of the ground area where the various pavilions of the school where placed, with the use of trees, various vegetation types, colors on asphalt and giant colored pots of plants. “This schoolyard (...) gave us the opportunity to give a new sense of pride, color, and playfulness to the barren asphalt spaces woven through the school’s classroom buildings, “temporary” structures that have been in use for 20 years.”⁷ At the end of the construction process, having modeled the asphalt ground-scape, and after a period of observation, testing his work with the children that attended the school, Smith said that “P.S. 19 shows that we can achieve socially responsible city parks and great design at the same time. If we look beyond typical off-the-shelf benches, play structures, and planters, it is possible to reimagining everyday city objects and spaces as opportunities for wonder”⁸.

Figure 2. The hanging garden of Colas foundation by Bernard Lassus, 2008

⁴ Favini E., Verdecuratodavoi in Green island, op. cit., p. 43.
⁶ Bagliani F. (edited by), Paesaggio, op. cit., p. 16.
⁸ Ken Smith, op. cit., p. 107.
4. Two case studies in Rome: Casale Caletto and Santa Maria del Soccorso

The research group “Living Urban Scape” (the Roma Tre group is composed by Maria Livia Olivetti and Andrea Vidotto) has started to analyze two case studies of public housing suburbs in Rome (Santa Maria del Soccorso and Casale Caletto). These two neighborhoods are both periphery, with a predominance of social housing buildings and a great presence of empty space in-between and around the buildings. The buildings date back to the ‘70 and ‘80: medium size (5-6 levels), with an envelope of grey prefabricated panels or red bricks and a concrete structure. The typologies are the linear one and the courtyard one. Both cases need to find a meaning for the unused land areas around them, in order to activate the urban regeneration process in its ecological and social dimension.

Casale Caletto

Casale Caletto is like an island within the roman country. It has an extraordinary location in between two strong lines of infrastructures (the City Ring and a major highway) and the landscape of the natural park of the Aniene river. Sitting at the corner of the garden of the main building of the settlement (on the north-west) it is possible to get a glimpse of the Sant’Eusebio fort. The view of the natural vegetation of the Aniene valley is all around. The relationship between the architectonic form of the settlement and the landscape morphology gives to the neighborhood an enormous value still to be discovered. There is no need of urban densification, because the sense of the operation is to enhance the beauty of the space putting into action a precise operation on the space that connects the buildings with the open landscape. “The “arrangement” of a place throughout a significant change of the physic environment is the effort to replace landscapes that we were not able to perceive or to imagine: a designed landscape. (...) A minimal intervention, also the smallest
one, almost imperceptible, could reveal landscapes that weren’t in an heterogenic sequence of objects or challenge the usual understanding of a place. These operation in Casale Caletto could consist in the organization of a new “intermediate nature”, (with the placement of some trees and plants and the organization of the existing nature and structure), that walks the architecture to the landscape and, at the same time, provides social spaces for the inhabitants. As Tom Trevor says in an analysis of the work of Lois Weinberg: “Nature and culture overlap in these sites, on the periphery of social space. This is a second hand nature, flourishing in a post-industrial landscape – a secondary nature”.10

Figure 5. Aerial view of Casale Caletto neighbourhood and a scheme of its location into the urban contest

Figure 6. Glimpse of the Casale Caletto unused open spaces in between the buildings

Santa Maria del Soccorso

Santa Maria del Soccorso neighborhood is located in a more central part of the city (on the north-east) than Casale Caletto, and it is locked between various high density urban settlements (Monte Sacro, Tiburtino and Ponte Mammolo) and the Aniene Valley. The significant presence of vegetation together with the spatial distribution of the buildings and the architectonic morphology allows to think of a new design and a reinforcement of the present vegetation as a real and concrete solution for the regeneration of the suburb. The head of the neighborhood is formed by three big courtyards. The open and public space of the courtyards have never been equipped with the expected services, and now are empty and useless. Reshaping the ground-floor of this spaces and of the spaces in-between the buildings, it would make possible to perceive a new dimension of experiencing this place. In fact, the green soil emphasizes the social and community needs that so often seems to be denied to the suburbs inhabitants. Furthermore, since the green mass

10 Trevor T., Secondary Nature in Green island, op. cit., p. 50.
present in Santa Maria del Soccorso is very considerable, if it would be increased and rationalized, it could ameliorate the environmental conditions of the neighborhood, also reducing the urban heat island effect. As to the renovation of Santa Maria del Soccorso place and landscape, it was announced a contest\(^\text{11}\), and the winning project (submitted by the team of Carmen Espegel) has its main feature in the new modeled ground-scape that connects the buildings on the courtyards, like they where a unique architectonic system, and creates a comfortable and nice open-space where the community can meet. The project of Carmen Espegel will be soon realized according to the regional law\(^\text{12}\) for the social housing blocks. Both cases, Santa Maria del Soccorso and Casale Caletto would need a dedicated study of the economic investment and of the future management of the areas, once they are fully renovated. In fact, it would be strictly necessary to find the way of generating an economic process that enabling the promoted “greening” action to be part of a more general renaissance. This would allow to identify such pieces of the city with new reference points for the whole urban system.

---

\(^{11}\) http://www.aterroma.it/concorsopass

\(^{12}\) Lazio regional law n. 21 of 2009 “Extraordinary measures for the construction sector ad social housing interventions.”
5. Conclusions

“Rather than “object architecture” we should be able to speak of “environmental architectures” – those associated with a new understanding of “place” (and space in general) as a field of forces – open and plural – and no longer with a fixed and stabilized context (historical, typological, figurative, etc.). These architectures could be described as “fields-in-fields”\(^{13}\) In the case studies illustrated above the promoted “greening” action could be a concrete and sustainable solution to the environmental decay, from many point of view: environmental, social, identity and economic too. This is much more evident while we are talking about suburbs: “fallows/peripheries are gardens and places where boundaries turn out to be in motion, uncertain”\(^{14}\). The aim and the main result of the “Living Urban Scape” research would be to devise many projects where the city ground-scape can be the method and the matter of its own renovation. “There is no way we can leave nature untouched. We are part of nature, and we change the planet while living on it. We only have to make sure that we change it for the better.”\(^ {15}\)

References

MAAS W. et al., Green dream. How future cities can outsmart nature, NAI, Belgium 2010.
WWW.LIVINGURBANSCAPE.ORG

\(^{13}\) Gausa M., Architecture is, op. cit., p. 18.
\(^{15}\) Maas W. et al., Green dream. How future cities can outsmart nature, NAI, Belgium 2010, p. 84.