
Future *edible* cities

Naples fertile city

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ABSTRACT. Urban growth is changing the Earth and people living conditions. Driven by global imperatives such as climate change mitigation, more equitable economic models and dietary health concerns, urban agriculture has moved from an issue at the edge of public discourse to one at its core. We are now talking about urban agriculture in new terms, as something strategic and infrastructural: the question today is how a significant amount of urban agriculture can be reintegrated into cities. Reintegration through architectural forms has become the most important issue for the contemporary city. Rural Urbanism, Agricivismo, Civiurbanism, Weak Urbanization are just some of the terms by which the architecture is trying to meet this no longer avoidable idea of re-thinking urban settings and forms of human association itself. The current environmental conditions require us to design spaces that can be inhabited and farmed simultaneously, "edible spaces".

KEYWORDS: Rural Urbanism, dispersed city, agricultural landscape, fertile city producing land

Daniela Buonanno

*Architect, PhD Course in Urban Design and Planning
Università degli Studi di Napoli "Federico II"
danielabuonanno@libero.it*

1. Introduction

Urban growth is changing the face of Earth and people life-styles. In the last century, global urban populations have expanded from 15 to 50% of the total, which itself has gone up from 1.5 to nearly 6 billion. The size of modern cities in terms of numbers as well as physical scale is unprecedented. Driven by global imperatives such as climate change mitigation, more equitable economic models and dietary health concerns, urban agriculture in the past few years has moved from an issue at the edge of public discourse to one at its core. We are now talking about it in new terms, as something strategic and infrastructural. The question today is how a significant amount of urban agriculture can be reintegrated into cities. Reintegration through architectural forms has become the most important issue for the contemporary city. **Rural Urbanism, Agricivismo, Civiurbanism, Weak Urbanization** (Branzi, 2005) are just some of the terms by which the architecture is trying to meet this no longer avoidable idea of re-thinking urban settings and consequently the forms of human association itself. While it is true that cities have been built over time and through this we have a clear vision of their becoming from the beginning to the end of the process, nevertheless today the architecture has to develop and to test its new instruments starting from the end of production cycles and the consequently emerging geographies. The current environmental conditions require us to design spaces "**habitable and farmable**" (Ciorra, 2011:52) at the same time.

Therefore we can consider the urban project as an opportunity and a very suitable tool to put the already existing elements of a territory back together again, establishing new relationships between them and connecting different parts into a new integrated network. After decades of generic equipped green, the cities of the twenty-first century are starting to regenerate themselves, rediscovering the value of urban biodiversity. No more green projects, but projects of new urban natures. We can re-configure the unemployed and marginal greenery of our public spaces in productive space, generating cost-effective land and new forms of human communities, economies and educational systems. Accomplishing these objectives in the urban reality requires ambitious projects together with appropriate techniques: from *vegetecture* forms to the cultivated balconies, from micro-sites to quarter parks, from the roof garden to the unexpectedly garden, the vegetation is spreading in our living environment, in public and private life dimension as well as in enduring and temporary modes, revealing itself in a variety of unexpected scenarios.

2. Recycling disused space

The expression "**Urban Agriculture**" refers to the emergence in many cities of areas cultivated by farmers who distribute the fruits of the land they work in the environs of the zone of production. In this regard, Cuba can be considered as a pioneering example of laboratory-city for urban agriculture (Vilijoen and Bohn, 2005). This movement, born in response to a range of real needs, has become a global phenomenon and has taken on an organized form in a large number of cities: from Mumbai to London, New York, Detroit, Chicago, etc. The urban farming movement, with its production of food, its educational aims and the idea of creating sustainable situations, has been able to take root in many cities and metropolises as it is closely integrated with the urban ecosystem. Most European cities contain extensive post-industrial brownfield areas, such as abandoned factories, ex-military barracks, and unused rail yards. In some cases forms of civic agriculture have made significant landscapes transformations of these empty sites. One of the most

recurrent themes in the context of urban agriculture is the optimization of the exploitation of areas of the city. Leaving aside the vast area of vertical surfaces (colonized by means of the most sophisticated techniques of hydroponic farming) and concentrating on unused horizontal surfaces, each city presents, on careful observation from above, a wide variety of abandoned lots, roofs and courtyards. These agricultural settings are creating new and interesting landscapes that need to be analyzed from an aesthetic perspective as well for the influence that they might have on contemporary landscapes architecture. The phenomenon is having an high impact on the visual conventions of the urban and suburban environment and even affecting the behavior and lifestyles of city dwellers.

Here we present two examples of self-managed urban locations in French cities that have been turned into vegetable gardens/public gardens at the behest of the local communities (Collectif Etc, 2011 and AAA, 2006). In both cases the project stems from an initial public demand and from the participation of groups that promote the use and management of abandoned urban spaces by local inhabitants. The first project is located in Saint-Étienne and originated from a public competition held by the city's Établissement Public d'Aménagement, and has involved the local people, boosting their awareness of urban changes and progressively accustoming them to taking care of a new public space. On a disused site at the intersection of two streets, the project simulates the first phase in the process of design and construction of a building. On the ground and the adjacent walls are represented the plan and section of an imaginary residential building, whose courtyard is treated as a vegetable/ornamental garden and whose "interiors" are furnished with furniture constructed ad hoc, which is in fact a series of urban elements. The project took on concrete form in workshops open to the public every day for a month, and divided into three types: a carpentry workshop, to build the urban furniture; a graphic design workshop; a gardening workshop that focused on the shared green space in the middle of the site. Since the end of the period of work, during which the site of the project was used to stage other events and activities organized by local associations, the garden has become an important place for the neighborhood. The furniture has not been damaged, the place is well maintained and the local people take care of the garden and regularly organize events.

The second project is located in Paris and is the product of a long process that has transformed a disused urban interstice in the densely inhabited district of St. Blaise. Since 2006 the Atelier d'architecture autogère has promoted a consultation among local people on the future use of the site, and has coordinated a synergy between local institutions, associations, professionals and inhabitants with the aim of restoring it to local community. Through the use of temporary devices and the development of a series of activities proposed by the locals, the site has gradually been turned into a collectively managed space and has been transformed on the basis of environmentally-friendly guidelines. It is currently occupied by a collective/vegetable garden and a greenhouse that also contains an office, whose frontage opens up, allowing the interstitial space to communicate with the street. The site is used collectively by over 70 people for activities of gardening, the sale of organic food, exhibitions, screenings of films, meetings and workshops.

With respect to spatial planning and scheduling, the most interesting example of encouragement and development of agricultural activities in urban areas is provided by the Plan for Public Space in New York (2011). Released in 2007, PlaNYC was an unprecedented effort to prepare the city for one million more residents, strengthen the economy, combat climate change, and enhance the quality of life for all New Yorkers. The Plan brought together over 25 City agencies to work toward the vision of a greener, greater New York. Since then, they have made significant progress towards their long-term goals. In just four years they have built hundreds of acres of new parkland while improving our existing parks and building more than a thousand community gardens. In this way it will be

possible to equip the poorest New York's neighborhoods of new public spaces in order to produce fresh food, grown by the local community.

3. The Italian debate

The relationship between agriculture and architecture is also at the center of the Italian national debate, as demonstrated by two major architecture fairs in 2011: Saie, held in Bologna, and Made Expo, held in Milano. The Order of Architects of Bologna announced an ideas-competition ("Towards a RuralCity. A project for a new alliance town-countryside") aimed to investigate issues related to urban sprawl and consumption of agricultural land. In line with the global concern of cities and farmlands' future, the announcement required to determine the most urgent measures to interrupt the consumption of new territories and to limit the spread of urban development, in favor of a requalification of already existing settlements. On the other hand, Made presented a conference entitled "AAA *Agricoltura, Alimentazione, Architettura (Agriculture, Alimentation, Architecture)*", emphasizing the inseparable link between these three terms. The relationship between Architecture, Agriculture and Alimentation has created many examples of architecture at different scales: window farm, green wall, roof tops, *vertical farm* (Despommier, 2010), *Pig City* (MVRDV, 2001), or *city-farms* like *Continuous productive landscapes*" (Viljoen, 2005), *Agropolis* (Schroeder, 2008) and *Orto Planetario* (Boeri, 2009).



Fig.1

3.1 Naples fertile city

This is a preliminary study which is part of my current doctorate experience at the *School of Doctorate in Architecture, PhD Course in Urban Design and Planning of Federico II University of Naples*. My proposal is to study and analyze the urban and rural forms of settlement, looking for the possibility to re-connect them according to new integration perspectives ("rural urbanism"). In this project we have dealt with the changing dynamics of the contemporary urban scenarios, characterized by a progressive divestment of their original functions and soil sterilization. The areas under examination are encompassed between the harbor of Naples city and its east hinterland, between the historic and the industrial city. Our aim is to shed light on the new evolving environments and to disclose the covert features of the future urban landscape, which will emerge from social demands and will embody social expectancy. In this project we propose a possible approach to adapt different forms of habitability and to build a new form of collective memory through the idea of fertile city, by assuming three different interventions with the same clear purpose: to connect parts of the city with the port, to integrate previously unrelated spaces, to produce land.



Fig.2

The study area extends longitudinally to the coastline of the harbor of Naples. The area extension, variable in size, is given by the gap between the city and harbor. The area of interest is composed of inhomogeneous urban materials: there is a

police station built in 1700 by Vanvitelli, the Magdalen's Bridge, the Marinella's park (yet unfinished), a building devoted to the Fish Market, constructed by the architect Luigi Cosenza, and few more recent buildings. Once this area, which was outside the historic city walls, was made of greenhouses, gardens and agricultural cultivation. Today, new requalification interventions (implementing urban plans, PUA in Italian) are planned for this area, many of which not yet realized. In line with these premises, the design concept was conceived as a figure of continuous open space. The idea was to design a fertile city system allowing a new kind of connection between the city and the harbour. Three different types of interventions have been identified.

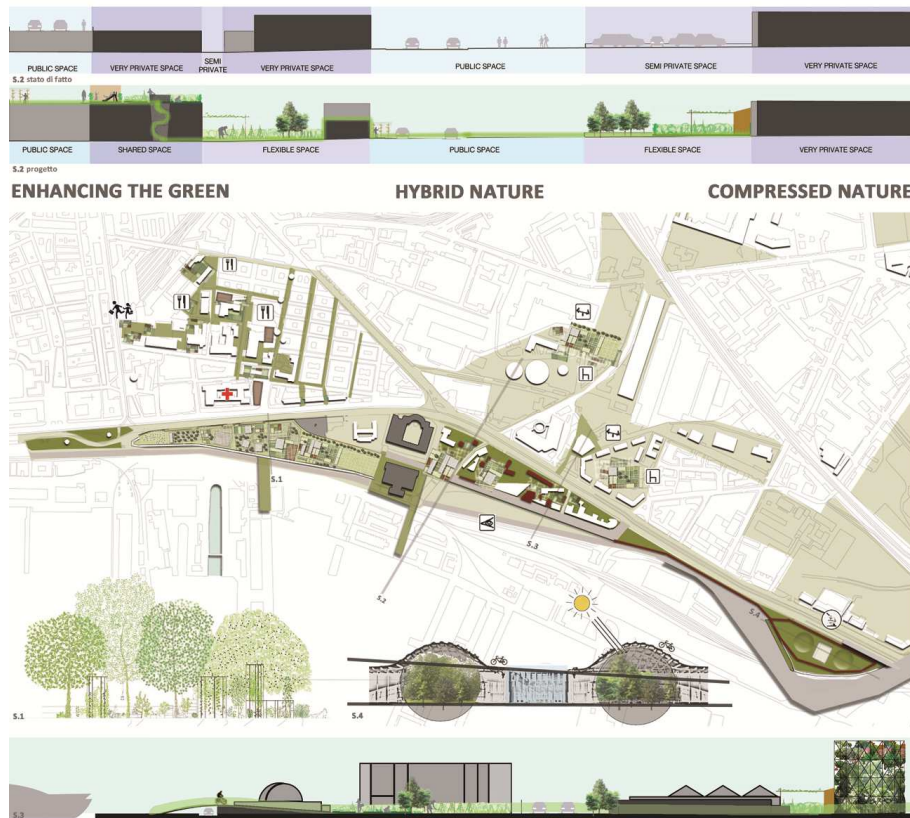


Fig.3

– Marinella's park. Enhancing the green

Marinella's park has been planned by Naples's Urban Planning and it has not been yet realized. The project idea was to enhance the green, via the creation of an agricultural park where food, services, energy and social relations may be produced. The idea was to combine the typical characteristics of usability, accessibility and aesthetic enjoyment of a park with an agricultural-productive, refreshing, food-recreation function, especially with an ecological balancing function both for the city and the harbour. So, this agricultural area has been re-thought in terms of affordable public space. The park was designed to assume different configurations, depending on functions and uses. It's surrounded for necessity by a fence drawing the outer perimeter. Inside, it is organized as a grid, beam-column,

made with natural elements (tree small-size trunks and pillars) which are, according to the usage, differently assembled to create enclosed, fenced or simply covered spaces. Inside the agricultural park the following functions were supposed to take place:

- Farming
- Tourism
- Social
- Ecologic
- Educational

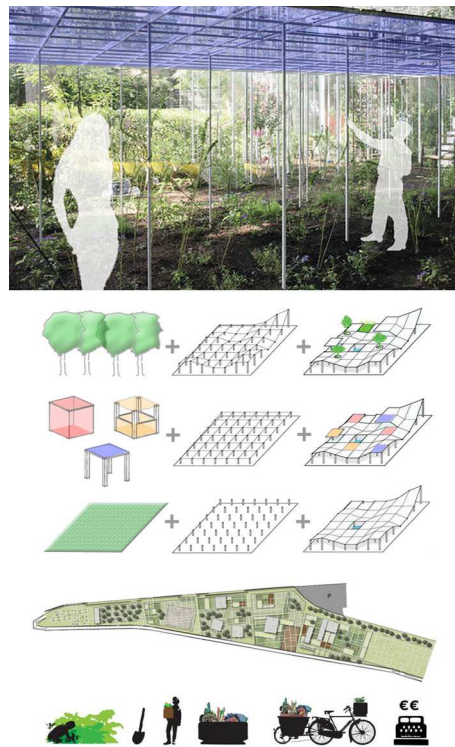


Fig.4

- Hybrid Nature. Eco-Acupuntura

The second area is bounded by A. Volta street and by the historic Magdalen's Bridge. The area is configured as a fenced, closed system, characterized by a mixed-use of functions sharing the same space (hybrid nature). Inside the area you may find specialized commercial buildings, small repair shops, a petrol station, warehouses for storage of boats, multi-storey residential buildings and many temporary and abusive shacks. Among these elements, you can identify several empty spaces, different in size, function and position. The "project idea" was to connect those empty spaces together, turning them into a continuous pedestrian space. To this scope an abacus of possible interventions (eco-acupuntura) was built. These are lightweight and removable structures, interposed with cultivation and production areas, which can host functions and activities of collective life. These spaces allow to regain possession of terraces and upper floors, hosting vegetable and public gardens.

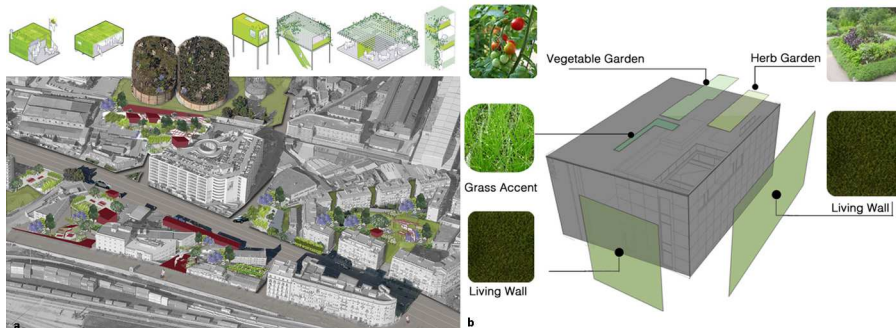


Fig.5

- Compressed Nature

The third area, owned by the Port Authority, is located inside the harbor and used as storage space for containers. This drop-shaped area is delimited all around by the highway. The project hypothesis plans to completely transform the place through the implementation of an infrastructure-building. In this inaccessible and highly contaminated area, it was decided to locate a green oasis as a place for scientific research, cultural exchange and meetings.

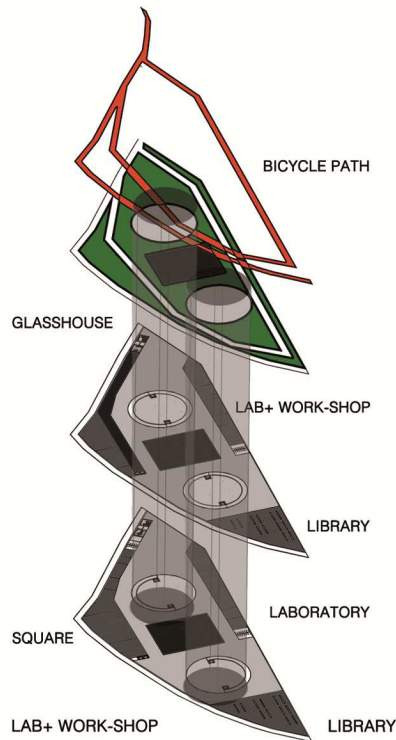


Fig.6

The building invokes forms and aims of the Academy of Science, projected by Renzo Piano in California, which develops the theme of reconciliation between technology and nature. This project was designed as a big research institute for a

more efficient, sophisticated agricultural production and for studying and reproducing different ecosystems and landscapes. To this aim, two huge symmetrical greenhouses, with climate control, were planned, where the world's major biomes can be reproduced (compressed nature). The circular shape of the greenhouse is visible externally; the light spreads through the roof to illuminate inner environments and the public central area designed for meeting and cultural exchanging. The roof is the main mark of this intervention: it was designed as a green surface that can be crossed by foot or bicycle, due to the flexible geometry of its curves, and from which you can have an original view of the city. Within this space, we tried to create a sense of estrangement from the surrounding environment.

4. Conclusions

This educational experience has tested possible solutions for integrating urban and rural settlements. In this project great importance has been given to changing phenomena generating new instances and needs. From the harbour to the eastern urban area, this project focused on the various landscapes of Naples and their possible connections. The keywords were: annexation, integration, coexistence and diversification. The rural, urban and natural spheres must be re-placed at the center of the urban project. The architecture, dominant and stiff sign of the modern city, can become an adaptable and reversible system able to create new relationships and produce land.

Legends

Fig.1: Specification of the project area. These photos illustrate the variety of urban materials and historical finds characterizing the area.

Fig.2: a. Hidden shapes through city texture. b. Future shapes. c. Concept project

Fig.3: Masterplan and project sections. Definition of the three areas of intervention: Enhancing the green, Hybrid nature, Compressed nature.

Fig.4: Details of the Marinella's agricultural park with its defining structural elements

Fig.5: a. Details of the project-elements designed for the eco-acupuncture intervention. The project plans the construction of small sustainable structures designed for different uses and (b.) the requalification of existing building

Fig.6: Axonometric projection of the research center

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Biography

Daniela Buonanno is an architect, graduated in the School of Architecture "Federico II" University of Naples, awarded 110/110 cum laude. Final dissertation has been titled "Plan for the harbour of Torre del Greco". In 2010 she has been admitted to a Phd Program in Urban Design and Planning. Her area research is focused on the study of integrated forms of urban space and rural areas (rural urbanism). Since 2010, she works as assistant professor in the first and second year course of architectural and urban design taught by prof. R. Amirante and prof. C. Piscopo in the School of Architecture. She has been involved in numerous research. She was part of a research group involved in the drafting of a feasibility study for the preparation of development plans of urban and regional areas of multi-purpose CASE Project, Municipality of Aquila (2010), and is currently working at the Research MIUR PRIN 2009 Architecture-market-democracy: how do you value the "venustas" in architecture? Guidelines for the drawing up of programmes/announcements of competition for urban transformation. She participated in architectural design competitions earning mentions and victories. She's curator of exhibitions, seminars and conferences in university initiatives and / or scientific nature. She participated as invited speaker to national and international conference. She has published numerous articles in conference proceedings. Some of her projects have been published in national magazines and books.