

ACTIVATING PUBLIC SPACE

An Approach for Climate Change Mitigation

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(Eds.)

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Adapt_ability

The Leaf Plane Project

Mosé Ricci

Abstract

What is the destiny of architecture (as the complex of the design disciplines) in the revolution of sharing information technologies? In an age that seems to consider at least with absolute priority the development of the Net and of the connecting devices? If today -and in the future more and more- the focus of cities development is no longer the growth but the resilience and environmental quality? When not the new constructions, but the efficiency and re-signification of existing ones become the central issue of building sector? Is it possible to think about a new statute for the architecture of the present time?

Investigating the opportunities of the city and landscape architecture project in the context of major environmental changes is for us an obligatory and innovative choice even if the issues of major environmental changes have seemed hitherto unrelated or complementary to the disciplines of the project. It is a research to be done because architecture or proves to be a resilient discipline - even when school enrollments decrease in most of the western world and especially in Italy - and finds a decisive, sustainable and convenient role in improving the conditions of the contemporary living or will not be able to stop its decline in the presumption of the superfluous.

Global warming, low CO2 emissions, the cost of oil, renewable energies, great social migrations, the explosion of the city, the fragility of large concentrations in the face of natural events that turn into catastrophes, the defense of

contexts premises hired as bulwarks of identity. The culture of architectural and urban planning cannot remain insensitive. It is an epochal transformation that starts from the bottom. It proceeds through quality of life goals, autopoietic practices and survival strategies.

The research approach of the consulting group of the University of Trento is not just an urban retrofitting action, but the activation of regenerative processes that involve the environmental performance of the city. The Plan tends towards the composition of an ecological mosaic, of a projective and visionary collage of shared landscape and urban quality: the Leaf Plan. Trento like a leaf. A Plan that defines the new shape of the city to a landscape dimension, which brings together the urban and the rural in a single metabolic icon representative of the new quality of Trento habitat.

Keywords

Adaptability, Leaf Plan, Performing Landscape, Ecological Urbanism

Formgiving the exhibition of the work of BIG (the Bjarke Ingels Group) at the Danish Architecture Center in Copenhagen from June 2019 to January 2020 begins with a film on the rise of the oceans' level due to the effects of global warming. The one of Rehm Koolhaas and AMO's research at the Guggenheim in New York from February to August 2020 (the first of an architect in the Wright museum) is titled Countryside the Future and is all centered on the exploration of the most urgent environmental, political and socio-economic issues through the researches by students from Harvard, Beijing, Wageningen and Nairobi. As also Koolhaas states in the launch clip, exhibitions like these would have been unthinkable just a few years ago. Perhaps for once it was Italy that inaugurated a season of a new socio-political commitment for the design disciplines with the exhibition Re-Cycle. Strategies for Architecture, the City and the Planet at MAXXI in Rome in 2011. Without a doubt, these exhibitions mark the decline of the metropo-

litan modernist horizon and the triumph of the landscape (rural, urban, but above all ecologically performing), as *topos* of the quality of the life.

The simultaneous action of three key factors: the economic crisis, the new environmental awareness and the sharing information technologies revolution is so deeply changing our lifestyles and the way we imagine and we want the solid forms of our future that all our design knowledge suddenly seems inadequate both as an interpretative tool of the current condition and as a device capable of generating new environmental, social, economic performances and new beauty for the living spaces.

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If today -and in the future more and more- the focus of cities development is no longer the growth but the resilience and environmental quality? When not the new constructions, but the efficiency and re-signification of existing ones become the central issue of building sector? Is it possible to think about a new statute for the architecture of the present time?

Nothing surprising. In the history of architecture and the city the great technological changes have always produced major changes in the styles and in the forms of living and consequently in the way in which is conceived any design action. One of the main principles of modernity was to consider architecture as the best possible spatial synthesis between form and function. Today, with the information technology revolution, we have the opposite problem. Namely to give meaning, narrative and uses -even temporary uses- to residual and abandoned spaces that have already given forms. And turn them into attractive and ecologically efficient living places.

Investigating the opportunities of the city and landscape architecture project in the context of major environmental changes is for us an obligatory and innovative choice even if the issues of major environmental changes have seemed hitherto unrelated or complementary to the disciplines of the project. It is a research to be done because architecture or proves to be a resilient discipline - even when school enrollments decrease in most of the western world and especially in Italy - and finds a decisive, sustainable and convenient role in improving the conditions of the contemporary living or will not be able to stop its decline in the presumption of the superfluous.

This phase of modernity disposal demands new paradigms (such as new points of view on the future) and a new project idea of physical space. It is a major challenge for the architectural culture. A challenge that puts the existing value with conceptual devices that work on the slip way and new life cycles of living spaces. A challenge that considers the environment as a project and the landscape as infrastructure that produces ecological value and the future of the city as a collective project and not authorial.

Society has for obvious reasons always been interested in the quality of the forms of living, but this is increasingly identified in the environmental, economic and social sustainability of the interventions. Aesthetic values remain fundamental, but they are rapidly changing. Innovation in architecture today seems to move on the definition of a new theoretical / practical context of conceptual reference for the interventions and on the affirmation of three main non-oppositional quality objectives, which indeed are almost always integrated: the project as narrative, the project as a social action, the project as a performance and not as a sign. These are three points of view on architecture as an expression of beauty in the city of our time: narration, social action and performance, which refer to the landscape as the new context of intervention.

The paradigm of the project as narrative expresses the need to give sense to the existing, to discover with new eyes

what's already there. Rem Koolhaas declines it superbly in the project for the Prada Foundation in Milan, as it covers the old industrial building with a golden patina. Narrative architecture, as written by Giancarlo De Carlo is able to listen, to accept, to annex what are the tensions of the city and its inhabitants. An architecture that has to become process, breaking up the consolidated view of the building as *unicum* perfect and complete (Marini, 2013).

But also, in the strict etymological sense the narrative reveals different meanings, tells us the story of the building and its inhabitants through material signs. Sometimes it is the citizens themselves, or artists to write their stories on artifacts such as Dan Pitera with the Detroit Collaborative Design Center or Francesco Giorgino, alias Millo, with murals of Turin. More often it is the same architectural ratio of intervention to clarify the meaning of the narrative tension, evocative as in the Hannah Arendt School of Claudio Lucchini in Bolzano or anti-rhetoric and pop as in the Ski Slope on top of the incenerator by Big in Copenhagen.

The project as social action is the focus point of many contemporary works for (even temporary) inhabiting spaces and systems for collective mobility. As it was said before is one of the key themes of the 2016 Biennale. Always Aravena writes: *"We would like to learn from architectures That despite the scarcity of means to intensify what is available instead of complaining about what is missing. We would like to understand what design tools are needed to subvert the forces That privilege the individual gain over the collective benefits, reducing We to just me. We would like to know about cases That resist reductionism and oversimplification and do not give up architecture's mission to penetrate the mystery of the human condition. We are interested in how architecture can introduce a Broader notion of gain: added as design value instead of an extra cost or architecture as a shortcut towards equality"*.

The project as a social action concerns obviously buildings as neighborhoods, public spaces and infrastructure. It achieves the objective of emancipation and often through shared action design processes. Often in this type of projects the traditional concept of authorship is questioned by sharing the creative process and the implementation process is

self-managed *hic et nunc*.

It exceeds the long bureaucratic processes of public approvals. Among others interesting experiences, the works of Alfredo Brillembourg with Urban Think Tank, of Grávalos and Di Monte (Esto no es un Solar) and of Boamistura in Brazilian favelas, as well as the Italian *Guerrilla Gardens* are paradigmatic in this field.

The project as a performance and not as a sign is the technological paradigm declined as a conceptual principle of operational aesthetic. The architecture of performance versus the architecture of sign means put at the center of architectural changings not the use but the appreciable innovative results in ecological terms mainly, but not only. It is the contemporary evolution of *Advanced Architecture* by Manuel Gausa (2001), It is a matter which is being developed at the urban level -from policies for the smart city in Barcelona to Copenhagen biocity- as at the architectural scale (think LEED protocols or ClimateHouse), at the industrial design scale, or at the scale of the process design as Carlo Ratti does with his SENSEable design lab at MIT. “We are facing a change in the field of Architecture, to move towards a different form of “habitats”, where architecture is not merely inhabited, but becomes interactive and evolutionary; to technologically integrated interface,” says Areti Marcopoulou, academic director of the IaaC (Institute for advanced architecture of Catalonia), one of the most quoted international schools of architecture that functions as a laboratory of continuous technological innovation. The performance paradigm projects the design discipline in the contemporary age using it as an interaction device of a system of physical or intangible relationships that substantiate the same existence of architecture. It is at the same time the re-contextualization of the idea of designing within a new and not necessarily material space of intervention and the return to the idea of the project as a cure for the existing.

The result of this process of shifting from the aesthetics of the sign to that of the sense gives beauty to a new form of city-landscape where the buildings and the city are in harmony with the environment and describe a new settlement context. Where nature is the main connection infrastru-

re between people and the quality of life, and the city can become the sensitive form of living into the present time.

The research approach of the consulting group of the University of Trento for the revision of the Master Plan -developed with Marco Tubino, Sara Favargiotti, Davide Geneletti, Silvia Mannocci, Francesca Marzetti, Matteo Aimini and with Giuliano Stelzer coordinator of the group of design of the Municipality of Trento- is based on these premises . It is an experimental work that investigates the possibilities of innovation of the general urban planning tools according to the fact that the object of the intervention is no more the urban expansion of Trento, but the existing city which does not want and no longer has to increase its urban footprint, with a huge amount of empty volumes and a substantially stable and not augmenting resident population. The intervention themes underlying the revision of the PRG are those of the quality of life, of the ecological and social function of open spaces in the city, of the mitigation and adaptation to climate change, of social inclusion, sustainability of development, abandonment-built spaces. Issues that in short have to do not so much with the uses and with zoning maps as with the environmental and social performance of the already existing built or open spaces. Even if it is not just an urban retrofitting action, but the activation of regenerative processes that involve the environmental performance of the city in relation to the quality of social life and the development of the sense of belonging of the resident populations and the attractive capacities of the city of Trento for the economies generated by students, workers and tourists. The university group's proposal is based on a conception of the new visionary and metabolic planning instrument. It is the project of a Plan that works by challenges and not by objectives. There are no goals to be reached in a specific time but challenges to be continuously faced. The new tool is used to immediately accompany the change of the city with regeneration actions, also from below, aimed at continuously developing strategies and tactics of adaptation or contrast to the environmental, social and economic emergencies of the present time.

The Plan tends towards the composition of an ecological mosaic, of a projective and visionary collage of shared land-

scape and urban quality: the Leaf Plan. Trento like a leaf. A Plan that defines the new shape of the city to a landscape dimension, which brings together the urban and the rural in a single metabolic icon representative of the new quality of Trento habitat.

In the leaves the ribs are the conducting vessels, the channels that bring the life. The water and mineral substances that come from the roots reach the leaves through these channels, are processed in sap and brought back to the ground by the same ways. In Trento the ribs of a city are the lines, the concretions and the social relationships traced by its open spaces. It is the green and blue infrastructures that organize the system of public spaces and social life. The ribs describe a system of existing and magnetic spaces that continually tends to grow stronger. Their position represents the landscape / environmental corridors that descend from the mountain, the trace of the ancient ditches now underground, the tree-lined avenues, the main lines of urban crossing, such as waiting spaces, unresolved and abandoned places. The green rib system catalyzes public education, sports and recreational facilities, spaces for universities, places in the historic city and tends to attract spaces for new landscape and environmental compensations. Identifies the channels of the continuous aggregation of the landscape / environmental qualities of the city and the favorite places of social life. This is the structural vision of the framework of research actions in scientific support of the 2016-2020 General Revision under the Trento Plan. Global warming, low CO2 emissions, the cost of oil, renewable energies, great social migrations, the explosion of the city, the fragility of large concentrations in the face of natural events that turn into catastrophes, the defense of contexts premises hired as bulwarks of identity. The culture of architectural and urban planning cannot remain insensitive. It is an epochal transformation that starts from the bottom. It proceeds through quality of life goals, autopoietic practices and survival strategies. The protagonists are citizens, consumers and savers, who feed on the products of organic agriculture and make separate collection; prefer public transportation or bicycle; are attracted to low-emission cars; they appreciate bioclimatic houses and not build-

dings with high energy consumption; they want sustainable and landscape-sensitive public works.

In line with the themes outlined by the European Urban Agenda (Environment, Society, Demography, Mobility, Economy), the plan proposes some challenges for the future and development of Trento which intercept the main problems and potential of the city: the activation and regeneration of marginal areas, soil consumption, the role of agriculture (for communities, for the microclimate, for productivity and excellence), management of water use, landscape, environmental, social aspects, biodiversity, urban climate change (microclimate and urban heat island). These challenges materialize in the transformation of the physical space of the city and can be implemented through various action policies that form the foundation of the new PRG. These are also the premises on which the Strategic Document was drawn up which identifies five challenges for the city of Trento divided into 18 objectives and 68 strategies, in turn referring to the goals proposed by the 2016 European Urban Agenda:

1 - ECO TRENTO for a sustainable city, founded on a network of green areas, on the vitality of agricultural areas, natural and semi-natural areas that must aim at adapting to climate change. Urban sustainability is identified in the balance between the city and its surroundings and concerns traffic, water management, waste management, land use planning, urban and peri-urban green management. The system of green areas contrasts in a functional and ecological sense with the tangle of infrastructures and anthropic elements that characterizes the urban mosaic. The green in the city, also through the formation of corridors, tries to restore balance and ecological functionality essential for the quality of our life. To these prerogatives are added unexpected qualities, new functions related to the absorption of dust and heavy metals produced by means of transport and heating systems, the containment of thermal imbalances and rainwater losses and new possibilities for economic development related to the use of renewable energy sources. Trento must therefore aim at the energy transition, the good use of natural resources, to support the closure of resource cycles, mitigation and adaptation to climate.

2 - WELCOMING TRENTO for the provision of spaces and places that allow the meeting, the integration of people, the quality of life in the neighborhoods and suburbs, as well as the reception of visitors and tourists.

3 - ACCESSIBLE TRENTO to guarantee good supralocal connections by enhancing the places of railway mobility, limiting traffic flows and encouraging sustainable mobility.

4 - SMART TRENTO to qualify as a competitive and innovative city, which integrates the places of training and research with production activities.

5 - BELLA TRENTO to capture the beauty of urban spaces and the landscape as a common good and resource on which to base the well-being and attractiveness of the community.

The new Master Plan revision offers an answer to the new question of design competence at the various scales in the field of ecological design, the themes of landscape, environmental and construction sustainability, mitigation, climate change, resilience, collaborating for the definition of a figure of designer and manager capable of combining skills of architecture, territory, environment and contemporary technologies. It offers an offer tailored to the new needs of society in compliance with the local alpine context and the guidelines of the European programs. The preliminary actions of the plan focus on the management of the ecological and sustainable project, the reading and understanding of complex contemporary landscapes, natural and man-made ecosystems, together with the tools to analyze it in economic terms. In particular, there are three actions that guide the debate on the future of Trento. The Plan as a „urban narrative“ expresses the need to give meaning to the existing city through the project, it makes possible to discover what is already there with new eyes. It reflects a concept of urban planning capable of listening, welcoming and annexing the tensions of the city and its inhabitants. A narration that stages the meanings, rediscovers sensuality, reactivates the beauty of urban centers and the sense of belonging of its citizens. The Plan as a „shared urban action“ interprets the spirit of the time that leads us to overcome traditional participatory processes, taking directly part in the planning and design phases of the urban planning tool.

Conceiving planning as an open source system achieves a goal of social emancipation and increases the contribution of competence. This idea subtracts the Plan from authorship, by sharing the creative process and its implementation phase. Ideas and actions become common good by involving the technical skills present in the area and the experiences of those who live in the city. The Plan as „performance“, is the idea of scientific and technological innovation that meets urban aesthetics. The performance planning opposite to that of the functions puts at the center of the transformations not the uses but the predictable innovative results in ecological terms. Not only that, it makes the territory welcoming for the sustainable development of urban life. The mitigation of major climate changes, the relational quality of public spaces, the issues of energy and the waste cycle, mobility, knowledge as a growth engine, territory as a smart grid of ecological, landscape and social values. All of this is and must be measurable in the effects of the forecasts of a Plan which however remains a promise of happiness. A tool that promotes a new quality of life vision based on shared and continuously verifiable objectives.

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The book - *Activating Public Space* - deals with the regeneration of the public realm from different points of view, with the main purpose of optimizing its social, functional, technological and energetic requirements.

Under this premise, the text aims at identifying intervention strategies that, in addition to satisfying the basic needs for fruitive, aesthetic and safety qualities, address the environmental compatibility for an outdoor comfort upgrade. For this purpose, the authors' group analyses different scales ranging from the global climate macroscale analysis, the mesoscale for the urban analysis and ultimately to the microscale for the local and pedestrian comfort analysis.

In light of the complex relationship between climatic, social and urban conditions, the text aims to enhance awareness on the urban requalification practices, and proposes interventions that address microclimate mitigation, urban resilience, process, and social innovations as an adaptive approach to compensate extreme heat waves and health risk conditions.