

UNVEILING CITIES IDENTITY THROUGH WATER

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Abstract

An exponential and badly managed use of land has led to a progressive crisis of open spaces. They become residues in-between the cities, the marginal part of the fragmented urban periphery in contact with still agricultural areas. In these territory waterways represent an important connecting element with environmental and sustainable potentialities able to create a new system with open spaces, in and outside the city, becoming opportunity to rebuild structures of meanings and to give back habitability to the open spaces of the future city.

The potential of these projects is not only responding to evident ecological and biodiversity possibilities, but also to a real management of the resource that has to be in synergy with local and regional administrations. The designs dealing with open spaces along waterways have to have in themselves an effective character over a long period, on one side able to adapt to the economic potential and management of local governments, on the other able to provide a tool to indicate guidelines and objectives for the management of the territory and future cities.

With this goal the research wants to investigate the territory around Milano that, as Carlo Cattaneo said, is based on an historical tradition characterized by an important domestication work conducted by man on the water, claiming, in the nineteenth century, the primacy of Lombardy in the field of hydraulic science and agriculture. Today what's left of the domestication work are natural areas, often residual, in between a territory made of spaces strongly anthropic, where dwelling is the new protagonist and where open space for citizen public life is reduced and without quality as well as fragmentary on urban fringes.

The research has set up either through didactic research, specifically through courses dealing with the topic of open spaces from the territorial scale to the specific one of single places with them equipments, either through funded research, shared with public institutions, making strong links between didactic and local policies of territorial government to think about and create a new development of the future city in relation with water (a vast topic evidenced by the work done and in progress for the Villoresi Canal that crosses whole the territory North of Milano).

The studies made on the canal demonstrate how waterways become strategic places where public firm and local authorities should invest to create new urban areas and a new image of cities in relation with water, follow a trend witnessed by urban regeneration projects that especially in the last thirty years characterized and continue to characterize the cities and towns around the world.

Keywords: Water, Public Space, Waterfront, Rivers, Villoresi Canal.

WATER AND PUBLIC SPACE

«Water is now, more than ever, a strategic aspect of urban development.» (Picon, 2005).

Rivers, creeks and canals -as well as lake and seas, even though in different ways- have always been a characterizing feature of landscapes and, over time, also of the urban context.

While in the past the role and significance of the water was established, in its support of the development of the city itself -responding to water needs, sanitation and transport- in more recent times, particularly in the last century, the necessary changes for the development of territory gave new meaning to water. It was seen only as an element of danger and obstruction, often leading to the total denial of the river or canal, which were gradually covered, and completely diverted from urban context and excluded from the image of the city. The urban and industrial growth process hasn't spared open urban spaces, modifying their structure, but at the same time generating new chances of relations between public space and water.

Urban regeneration projects and initiatives are producing, especially in the last thirty years, a strong change in the pattern of urban public spaces in European cities: architectural design stands as a true «treatment of space» (Emery, 2007), where its purpose is to «protect the public value of undeveloped natural areas» disclosing «the strategic preciousness of places even if minimal» (Ottolini, 2002). Within this new process of transformation, rediscovery and new configurations of urban public spaces, water is recognized as an important resource structuring the new open spaces, thanks to a new ecological awareness, reading the form and the role in order to adapt to the changes that the city and society have matured.

Through the architectural project water's presence, especially in the form of rivers and canals, is given back to the city enriched with new meanings more suited to answer modern-city needs and to accomodate new citizen lifestyles.

In this way the water comes back to play a central role not only in the conformation of the open spaces of the city but also in social processes, returning to the community new *living* spaces: architecture as «the weighed construction of space» (L. I. Kahn: Bonaiti, 2002) with its geometry, its dimensions, from the planimetric relations with the context to the scale of furniture, the human scale. The project becomes the interpreter of places of the city in direct contact with water, forming a complex network of relationships. It's all about grasping the potential that the complex experiential relationship between man and water allows, interweaving with the living body, full of signs and tracks, of the open spaces of the city.



Figure 1. Lyon and the Rhone river.

WHY STUDY VILLORESI CANAL

Water is an important feature of the territory that causes its development both physical and social. This assumption is easy to understand while discussing rivers, lakes and seas. It is harder to see how smaller and completely artificial systems as canals, albeit complex, have the same value.

Taking as examples the Navigli in Milano, this assumption appears surely clearer, since they are artificial canals built from XII century in relation to the city of Milan and have characterized the whole country-side south of the urban area. For these reasons Navigli are recognized as preexistence and a resource that small towns had always respected and exploited, organizing their conformations around them.

However, it remains difficult to understand the potential of a canal built in more recent times and that has always been ousted from the life of towns.

This is the case of the Villoresi Canal, a feature that has geometrically modified the landscape between Ticino and Adda, the two rivers that run west and east of Milano. The canal moves itself to the country, drawing large curves, like a highway, avoiding the towns and always maintaining the highest altitude possible: a real infrastructure.

In this way studying Villoresi addresses three major topics: water, infrastructure and land; where the first is the main character, the second his robe and the third stages the setting.

«Le territoire est à la mode»¹ (Corboz, 2001): with these words André Corboz debuts in his essay in Casabella dedicated to the design of open spaces² and, though almost 30 years have passed, it

¹ "Land is trendy".

continues to be, despite having acquired very often the nickname of *landscape*³. This trend is witnessed on one side by a regulatory update that is increasingly protective and that preserves the landscape and the territory (especially in Lombardy, region in which the Villoresi canal is located), but also by the growing interest towards these issues, lately driven, for example, by events and competitions linked to EXPO2015. The main theme of Expo is *Feed the Planet, Energy for Life* and the principal location of the activities that has been picked is the Milano-land, not the city, to underline its importance. For this event itineraries are being created to explore this territory, often unknown or forgotten, where the water is recognized as the leading subject, fueling and characterizing the site of the expositions. The water that will be used is coming from the Villoresi Canal, derived from the main channel in Garbagnate Milanese, creating a new small tributary, a novel artery for cycle paths and itineraries that will be organized around this event but which aspires to have a lasting nature able to reconnect these landscapes, nowadays fragmented and unskilled.

The territory in which Villoresi flows coincides with the *metacittà* described by Paul Virilio, that can be defined even better as an «urban without the city», name by which Marc Augé describes the colonization of the world today: a space now virtually all urban «a complex, intricate space, a set of fractures on a background of continuity, a space extending from the mobile borders» (Augè, 2010). Within this changed territory, the channel represents an «urban fiber» (Augè, 2010) that binds together, along its shaft, existing cities and fields, unraveling and partly ordering this «degradation of the urban environment»⁴ (Virilio, 1984) that now characterizes the peripheral forms of almost all cities. Today, in those areas which once were agricultural «you cannot recognize any social relationship, in which it is inscribed a shared past, but on the contrary into the non-places of triumphant supermodernity, they are not even more opportunities for communication or consumption»⁵ (Augè, 2010).

The subject and matter of this urban fiber is water. Water incredibly clean and unpolluted, unlike many rivers and streams crossing this territory, which have become more or less legitimately dumping sites of many industrial activities. It is therefore a precious resource that can be exploited to redevelop this piece of territory, of a distinctly urban character that turns its back and does not consider it. Cities, in fact, consider the canal as a mere infrastructure that urban development has surrounded without a care and without recognizing its potential as in «extraordinary pieces of architecture seemingly isolated but in fact deeply interconnected with the rest of the system and completely metropolitan»⁶ (Biraghi, 2010).

² Topic used, almost 10 years later, for a monographic number on the magazine: *The Design of Open Spaces*, Casabella 597-598, 1993.

³ The European Landscape Convention, signed in 2000 by twentyseven nations, define landscape « an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors» (article 1, a.). Also etymologically the word comes from the french one *paysage* and italian *paese*, assuming a direct relationship with the artificiality implemented by man: «landscape has become both the lens through which the contemporary city is represented and the medium through which it is constructed» (Waldheim, 2006).

⁴ «degrado dell'ambiente urbano». Paul Virilio. 1984. *Lo spazio Critico*. [Tda].

⁵ «non è possibile riconoscere alcuna relazione sociale, in cui si iscrive alcun passato condiviso, ma al contrario dei nonluoghi della surmodernità trionfante, non sono nemmeno più spazi di comunicazione o di consumo».

⁶ «straordinari pezzi di architettura apparentemente isolati ma in realtà profondamente interconnessi con il restante sistema e compiutamente metropolitani».

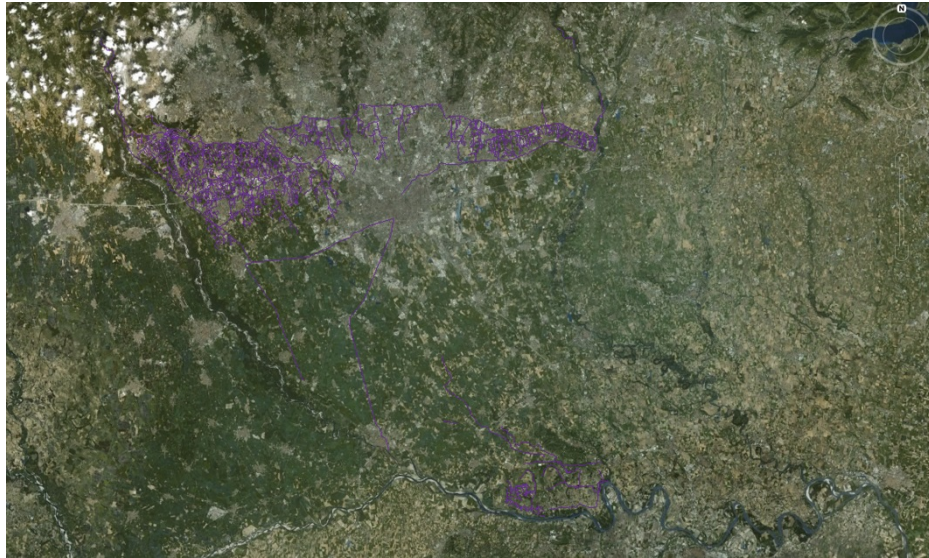


Figure 2. The Villoresi Canal and its tributaries (in the center the city of Milan).

WATER-APPROACHES

Water-infrastructure-land (in which city is a specific part) are subjects and main characters of many projects that, mainly in XIX century, had characterized architectural and engineering design in the contest, not only European, but actually International. Among these we consider two examples in particular because they were, as it would be desirable for the Villoresi canal, re-designed and re-semantised by contemporary interventions: St. Denis Canal in Paris and Dora Park in Turin. On one side a canal built from scratch in the early XIX century, first as a source of drinking water, then with a commercial purpose, completely artificial, on the other side river Dora Riparia, used to support productive activities from mid-XVIII century⁷ that in Turin becomes protagonist of the Fiat-Michelin industry, active from the late XIX century to the '50s.

Both water features characterize and give meaning to a part of the city that in contemporary time has lost its own purpose. These redevelopment projects intervene and attempt to give a new meaning, and a new identity to these infrastructures stripped from their original role.

Through Canal St Denis, (6,6 km long, going from Basin de La Villette in north-west direction to the Seine) the project extends the Parisian spirit to the suburbs. In fact another canal⁸, heart of life in the north-east area of Paris and around which take place the lives of many students and many shops, links the Seine to La Villette and is, thanks just to its location, already a place to rest dedicated to leisure. St. Denis becomes in this way a new water-artery, not only for Paris but also for the surroundings and suburbs, in which also others canals of the city and life around them, could find a new continuity.

⁷ The first silk mill was built in the mid-eighteenth century in the city of Collegno not far from Turin.

⁸ Saint Martin Canal sited in Paris is 4,5 km long (2 of them covered) and links Basin de La Villette to the river Seine.

Similarly the industrial area of Turin⁹ was rethought, only Italian example in recent years of this particularly delicate and discussed issue¹⁰: a new park where the water course is the basic element that joins the different areas and suggests the design criteria for the formation of pathways and entrances.

The success of these projects, the way how citizen use and enjoy spaces and how newly the city turns to these infrastructures, determine the importance and the need to reclaim these figures that are



part of the territory (landscape and city) but that are, too often, forgotten.

Figure 3. Canal Saint Martin, Paris.

POSSIBLE APPROACHES FOR VILLORESI CANAL

In order to enhance its assets, in line with contemporary trends, the Consorzio di Bonifica Est Ticino Villoresi (entity that manages the Canal) aimed in recent years at creating a *plan*¹¹ (called V'Arco Villoresi) to manage and exploit water at the same time. In agreement with this regard a research study, carried out inside the School of Architecture at Politecnico di Milano, was developed, in parallel to a didactic work done with students of *Design and Furnishings Open Spaces*. The purpose of the course and of the project V'Arco Villoresi, is to create and give new meanings to places and to achieve these goals we must use two strategies: reading and designing¹². The research approach to

⁹ Designed by a team of architects, including Latz & Partners, expert in dealing with these issues (designers of the famous and many times published Emscher Park in the Ruhr area in Duisburg that sees them involved since 1991).

¹⁰ That is the question of recovery of so-called industrial archeology, in which water plays a crucial role. It is interesting to study how the river Dora takes on a new meaning within this area, and how to become perhaps the most specific element of the new area related to leisure.

¹¹ This plan being developed is called V'Arco Villoresi and involve not only the consortium but also the Lombardy Region, Expo Parks and municipalities concerned.

¹² Vision supported by Giancarlo De Carlo who saw the analysis (reading) and the design as two actions are essential for making architecture, but not consequential indeed strictly dependent on each other. *Lettura e Progettazione*.

this issue has not only stopped to the analysis and interpretation of the *status quo* and survey of the Canal (reading) but wants and proposes a real project. An action is required: design to know. "You actually should "read" having already in mind the "project". This means that it is essential to have in mind, or mature within the mind -while we are reading- the idea of how to transform, to recover»¹³.

The first level of the research is dealt at the scale of a general *masterplan*, able to focus on the elements of urban structure rereading the whole system of public open spaces that go, starting from canal, to branch into the depths of the territory, ranging from the residence to the places of production through pieces of landscape, mainly agricultural. The analysis and the proposed projects, through research discontinuities and permeability of the consolidated urban, seek to build new relationships that can involve directly the lives of citizens with the presence, often forgotten, of the channel and water: it is required to understand how to arrange in a system different places, casually approached and leaned on, which can find in the presence of water, with its paths, a new sign to organize at a broader scale¹⁴.

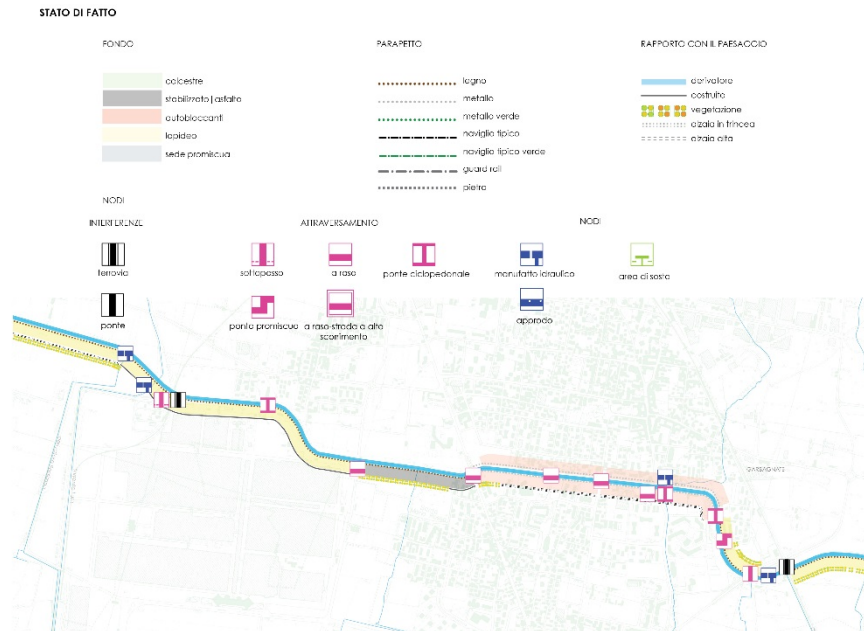
Starting from mapping the existing, to understand not only the structure and the physical form of the canal and related cities, but also the potential hidden in it, we designed a broad *masterplan* (the scale choice from year to year, depending on the length studied, ranged between 1:2000-1:1000), where the importance of the canal is shown as a corridor, not only ecological but also cultural. Water is the sign that connects, relates, recomposes but also, in a way, uses the open space. It is a strategy based on the dialectic developed between human and public open space, and therefore necessarily translated into physical forms of space otherwise declined: roads, sidewalks, bike paths and pedestrian walkways, green areas and parking, consolidated terminations, fragments of the agricultural landscape, rural towns, urban parks. In this way it is possible to think about a new balance that, with different materials, various in shape, size, status and use, constitutes an architectural project hovering between permanence and change.

Working in a land as fragmented as this one does not mean to search for a regulative principle or homogenize the existing differences, but encourage variety and interferences to «reunite, liquify, hybridize, integrate, starting with a look of diagnosis exercise of the resources already present, to be put in a system bridging gaps, and invigorating weaknesses, within an overall spatial, morphological, ecological recomposition, having as objective not the mere sum of areas and isolated elements, but the creation of interrelated systems between the different parts» (Metta, 2013). At the scale of the masterplan, the projects try to prepare the land, in relation to those who live and dwell in it, to its future vocation, working on processes (connecting, relating, recomposing and using), while at the smaller scale, the real scale of the project, work on the form and equipment of places: working on two scales, seen as two dynamics - which are closely related to each other, and not always in a row but intricately intertwined - of the same process, means working to create a new identity.

¹³ Giancarlo De Carlo notes presented at the conference *Urbino and the Heritage of the Modern*. May 30th-31st, 2013, Collegio del Colle, Urbino.

¹⁴ The course studied, in three years, three different traits of the Villoresi Canal: Lainate-Garbagnate; Nova Milanese; Muggiò-Monza. At the beginning of the course the students of have contributed to the creation of a mapping of the area by analyzing in particular: the green areas and water; mobility system; areas in transformation; thresholds and historical paths; the system functions and services.

We talk about *inhabiting* these spaces just because we extend to the *open* domesticity caused by the spaces where people *stay*, people *cross* and *see*: «inhabiting is moving from one space to another»¹⁵



(Perec, 1974).

Figure 4. Example of the mapping of the state of the Villoresi Canal.

¹⁵ «Vivere è passare da uno spazio all'altro». (1989). *Specie di spazi*. Torino: Bollati Boringhieri.



Figure 5. A proposed *masterplan* for the Canal in Nova Milanese.

CONCLUSIONS

Cities, where the architectural project is changing and designing the areas enriched by water, create new places for life, where the most modern necessity linked to leisure, the consolidated assets of meeting and gathering, typical of public spaces, and respect for the heritage - built and moral - of the city are enclosed in a single urban piece. All thanks to the modern attitude that not limited to re-qualify the infrastructure, observing and contemplating its presence, but allowing the use of it and of the water to citizen. Infrastructure and water comes back in the city with different value, linked to the way how man inhabits, experiences, making it his own¹⁶.

The presence of water is the start point of the design of a new and different use of infrastructure according to citizen needs: «once married with architecture, mobility, and landscape, infrastructure can more meaningfully integrate territories, reduce marginalization and segregation, and stimulate new forms of interaction. It can then truly become “landscape”» (Shannon, 2010).

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¹⁶ «a process of appropriation [...] relations among differentiated positions [...] realization in the form of a spatial acting-out of the place» Michel de Certeau, (1984). *The practice of everyday life*. University of California Press: Berkley. (pp. 97-98).

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BIOGRAPHY

Caterina Gallizioli. Architect and PhD candidate in Interior Architecture and Exhibition Design, Politecnico di Milano. Graduated in Architecture (2010) she collaborates with prof. M. Ugolini on a research project with Consorzio di Bonifica Est Ticino Villoresi about the remodelling of *Canale Villoresi*, elaborating strategies for a possible revitalization of the canal and public spaces around it. The topic of her PhD dissertation is the way of *Inhabiting Open Public Spaces* in the contemporary cities. In 2013 she was Visiting Scholar at Columbia University in New York and now she is Teaching Assistant in courses (in Politecnico di Milano, School of Civil Architecture) dealing with Designing and Furnishing of Open Spaces and also Interior Design and Preservation of Buildings.

Main publications: *Ricerche di senso: esplorazioni nel mondo degli Interni* (Maggioli 2013); *Il Canale Villoresi come occasione di riqualificazione e riconnessione degli spazi pubblici urbani* with Michele Ugolini (in A. Lambertini et al., *Città pubblica/Paesaggi Comuni*, Roma, 2013).