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XXIX INTERNATIONAL SEMINAR ON URBAN FORM

Urban Redevelopment and Revitalisation. A Multidisciplinary Perspective

6th June – 11th September 2022, Łódź–Kraków

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The places of the crisis as a gnoseological field of new interpretative processes

Abstract The research filed is the plastic-masonry territory of Mediterranean, focused on the city of Taranto: a city of ancient Magna Graecia, characterized by an extraordinary historical-archaeological-landscape palimpsest, for decades subject to regressive transformations, due to vast industrial plants and scattered settlements, detached from the organic relationship with the historic city, with its sea, with the countryside.

The aim is to experiment methods to resolve the pathologies of the contemporary city with regard to the palimpsest inherited from urban history, focusing above all on public spaces.

The method is based on the historical-processual reading, aimed at understanding the formative phases of the city and at identifying and classifying the phenomena composing and characterizing the aggregative space. Starting from this reading, the essay proposes a reflection on regressive phenomena, through a project experimenting a critical relationship between original codes, organic evolutions, critical transformations and their possible re-meanings. The project site is to the north of 'Mar Piccolo', a sea basin facing the historic city. An area with landscape values, subject to regressive phenomena due the presence of the largest steel plant in Europe and bounded by the shipyards and the 'Tamburi' district, detached from the direct relationship and organic with the historical city.

These issues allow to reflect critically not only on the specific theme, but also on the meaning and methods of the contemporary project. Rethinking these places in fact means making a critical and multidisciplinary comparison between consolidated urban codes and the current needs. A comparison that becomes the gnoseological field through which to plan the renewal actions according to a critical continuity capable, at the same time, of revealing new meanings of urban grammar.

Keywords Urban morphology, City/territory, Natural landscape/industrial landscape.

Introduction

The dissertation investigates the organic-wall territory of the Mediterranean region, focused on the city of Taranto. It was founded by the population of Sparta, which later became the capital of ancient Magna Graecia, it is characterized by an extraordinary historical-archaeological-landscape palimpsest, for decades subject to phenomena of regressive transformation deriving from important industrial plants and settlement systems, often detached from the organic relationship with the historic city, with its extraordinary landscape.

Background

The objective of the study is to experiment with possible methods through which to resolve the pathologies generated by these critical issues with regard to the palimpsest inherited from urban history, focusing above all on its peculiar areas through a different interpretation of the notion of organicity, based on the recognition and the possible 're-agreement' of conflictual phenomena.

Background subsection

The urban form of Taranto has been experiencing a profound crisis for many decades, due to pluri-heteronomous and multi-linguistic phenomena which, de-enucleated by the urban rhetoric inherited from history, makes morphological reading insufficient and errant, if operated only through reconstruction logical-procedural. The goal is therefore to build a wider gnoseological field, which involves the cognitive components and tries to understand places through the comparison between consolidated urban codes and the expressive substance of its own criticalities; wandering substances, of course, but often capable of aesthetic qualities which, although not immediately recognizable, can become the basis of a different interpretation of their own phenomena, opening up to linguistic frameworks and a different reformulation of the concept of organicity, based on the complex and contradictory exercise culture which our time forces us to.

Methodology

The study began with the reconstruction of the state of the art, recovering and interpreting previous studies and then comparing them with recent urban phenomena.

The knowledge base was the historical reconstruction, thanks to which it was possible to understand the settlement palimpsest and therefore to identify the critical issues that have gone through it over time. From it we then proceeded to investigate the phenomena relating to the specific area of intervention, the one located north of the Mar Piccolo.

The method of reading was the historical-procedural one aimed at understanding the formative phases of the city and at identifying and cataloging the data that make up and characterize its peculiar phenomena. This method, operated through the cartographic investigation and the morphological-type reconstruction, made use of the cognitive approach which, making use of perceptual scales and their interpretation through conjectural plans derived from sensory experience, made it possible to investigate the detected phenomena according to a constant critical relationship between tangible data of urban genesis and their problematic restitution in today's dimension.

The first phase concerned the documentary and cartographic reconstruction; the second phase, that of direct knowledge of the places through photographic and survey campaigns; the third, that of the project.

From this approach, the main codes and the main contradictions within the urban-territorial system of Taranto have been received; that is, those summarized in the dual character between the settlement system located south of the Mar Piccolo, overlooking the open sea of the Ionian and the agricultural system of the north coast.

The cognitive apparatus is therefore what has made it possible to form a real new gnoseological plan consisting not only of the documented and/or tangible components, but also of those belonging to the immaterial world, investigated, precisely, through the cognitive experience. The method was that of the multidirectional interpretation of forms and data belonging to the territory, to the city, to their heteronomous instances, translating them into an equally layered approach within which stories, grammars and syntax of different architectures, form a project, understood, in fact, as a hypertextual grapheme.

It is there that, by intersecting the oppositional components, synchronic/diachronic, organic/disorganic, coherent/different, the framework of the compositional experience proposed here is derived, that is focused on the search for grammars capable of re-meaning in the architectural culture inherited from history of the city, the forms of its own contradictions.

Summary of the territorial analysis

The territory of the Taranto plain is morphologically characterized by slightly inclined courses towards the sea and slopes placed in correspondence with the ancient coastline; fault systems also affect the limestone substrate directed towards the Murgian plateau, while the area occupied by the consolidated city (the one between the two seas) presents two distinct phenomena: the first is the island of the Old Town, affected from a vast plateau slightly declining towards the inland sea; the second phenomenon is the city located on the mainland, on a large cliff of 12 meters.

The northern territory is the one most affected by natural phenomena. The large stretches of low cliffs, alternating with small rocky platforms, often jagged by narrow inlets, variously deep, configure it in the marine bend. They are part of the dense network of underground waterways that pervade the area that rises slightly towards the hinterland. Here, in fact, rivers, springs, underground waterways, characteristic of karst soils, furrow and draw the cultivated soil, throwing themselves back into the sea. Of significant importance are the underwater springs and the Galeso river (the ancient Eurota, from the name of the homonymous river in the motherland of Sparta, mentioned by Horace).

Manifestations of the karst area are also: the blades (deep furrows in the soil, caused by the water courses coming from the Murgian hills); the citri (outlets on the surface of underground rivers from the Taranto plateau); the so-called 'obliterated watercourses', that is, sections of the hydrographic network used for irrigation purposes whose traces are now partially erased by human activities.

It is within this area that the most dual and problematic phenomena of the city arise, deriving from the macro-settlement actions that overlook the ancient farmhouses, farms and palatial facilities. A city profoundly transformed during the 1900s with the construction of the Tosi shipyards and with the great Italsider (now ILVA).

Summary of the urban analysis

Open on the Great Sea, there is therefore the ancient city. Founded by the Spartans, it became the capital of Magna Graecia. With the exception of some important archaeological presences, it is today the result of the medievalization processes and then of the transformations that took place especially between the 18th and 19th centuries. Its settlement system is in fact made up of a pseudo-reticular system, straddling the Mar Piccolo and the Ionian Sea. These are mainly 'in line houses', the result of the demolition or the conspicuous building

transformation that took place on the ancient pseudo-terraced houses. Along the coast of the Old Town, a system of buildings arranged as a 'comb' on the sea, together with some specialized architectures (especially the Town Hall designed by Armando Brasini in 1934, on the ancient ruins of the Politeama Alhambra) testify to the extensive redevelopment activity urban area operated by fascism during the twenty years and their coherence with regard to the settlement codes inherited from the history of the city.

To the east of the Old City there is the expansion on the mainland. In ancient times it was occupied by the lakes Salina and Salinella – used, as Pliny the Elder states in the second half of the 1st century. AD, for the cultivation of salt – they were definitively dried up at the beginning of the 19th century to make up for the serious housing shortages that arose in the Old City. This fact was the beginning of a transformation that, marked by large residential districts, had its maximum expression during the 1950s, with the creation of new economic-popular housing districts that frayed the nineteenth-century urban edges in an incessant transformation of the campaign. These phenomena affected in a more specialized, and at the same time more dramatically sensitive, the area north of the Mar Piccolo, the subject of the project presented in this essay; this is in fact the area in which, transforming and often erasing part of its orographic system, of its privileged relationship with the coast, of its rural grids, of its 'sheep tracks', of the architectural heritage that had come from the Greco-Roman period in the mid-1900s, the upheavals of the urban, social and economic history of Taranto took place.

These upheavals were caused by the great industrialization of the country commissioned by the Italian government after World War II, which chose to place in that place one of the main centers of the European steel industry built in 1959, the Italsider (the current ILVA), thanks to the particular strategic condition of the Mar Piccolo. Its construction determined an extraordinary settlement out-scale, destined to upset the ancient dialectics between the two shores of the sea, and its environmental system, until it became a problem of international interest.

Taranto, urban regeneration project of the north coast of the Mar Piccolo: from a wandering place to a new urban-territorial polycentricity

The research project presented here is the result of a degree thesis prepared at the Department of Architecture of the Polytechnic University of Bari (Italy), with the author of this contribution as the coordinating professor. The intervention area, as mentioned in the previous paragraphs, is that north of the Mar Piccolo, in front of the historic city and the great Arsenal of the Navy (the first naval establishment in the whole of the lower Adriatic, dating back to 1883). Today it is a promiscuous area, with a strong landscape value, but subject to regressive phenomena deriving from the coexistence of the Italsider, from the nearby 'Tamburi' district, and from the Tosi Shipyards inaugurated in 1914 for the construction of military submarines¹. Phenomena, which, detached from the organic relationship with the consolidated city, contribute to forming the most problematic context and the most crucial questions for the future of the Taranto area.

¹ The area occupied by the Tosi shipyard has an almost rectangular shape over an area of about 12 hectares. Located on the coast line, the main warehouses and workshops are arranged perpendicular to the sea. This location derives from the direct relationship established with the Navy Arsenal located on the opposite bank, and from the easy connection to the railway axis and the main extra-urban road infrastructures. Their construction dates back to 1914, a period in which the strong link between architecture and technical evolution had in industrial construction one of the fundamental areas for the development of the modern national language. This is what happened above all in the building called 'Sala Tracciati'. The building, placed in the center of the system, was originally intended as a drawing room. Formed by a linear and symmetrical system, it is composed of a supporting structure in exposed tuff, with vertical steel inserts placed to join the facade and give support to the roof.

This scansion is what enhances the rhythmicity of the masonry, in turn emphasized by the superimposition of two rows of horizontal moldings which, equal to the large 'arched' windows, declare the corresponding number of floors. In fact, consisting of two floors, it is surmounted by an iron truss roof with a skylight in the upper part which, extending along the entire length of the building, allows natural lighting of the second level, used for the functions of technical design.

Another relevant place within the shipyards is the naval workshop. It is a complex made up of a series of sheds placed side by side to form a vast covered space of about one hectare of surface. Used for the processing of sheets, for their shaping, for the assembly of boilers and for the repair of railway wagons, they are arranged as large open-spaces. The entire complex develops throughout its extension through the repetition of the construction module responding to the framed system of reticular beams and pillars, with the exception, only in one case, for reinforced concrete. The exterior is made up of corrugated sheet metal panels and large openings capable of ensuring ventilation and the passage of bulky materials and goods.

The entire plant, with all its buildings, has always been subject to continuous changes, both for functional needs and for the succession of different owners; the buildings described above they are the only ones in which the original structure can still be recognized despite the countless alterations. Located a few meters from the main enclosure of the shipyards, there are two important buildings containing the collective canteen, the changing room and accommodation for submariners. Made between 1937 and 1939, they are characterized by a more expressly rationalist language emphasized by the more mature use of reinforced concrete.



Figure 1. Taranto. Plan of the project site
Source: author's own work.



Figure 2. The design concept
Source: author's own work.



Figure 3. Director axes representing the structural link between the city settlement fabric and the project area
Source: author's own work.



Figure 4. The project plan
Source: author's own work.



Figure 5. Planimetric detail of the project
Source: author's own work.

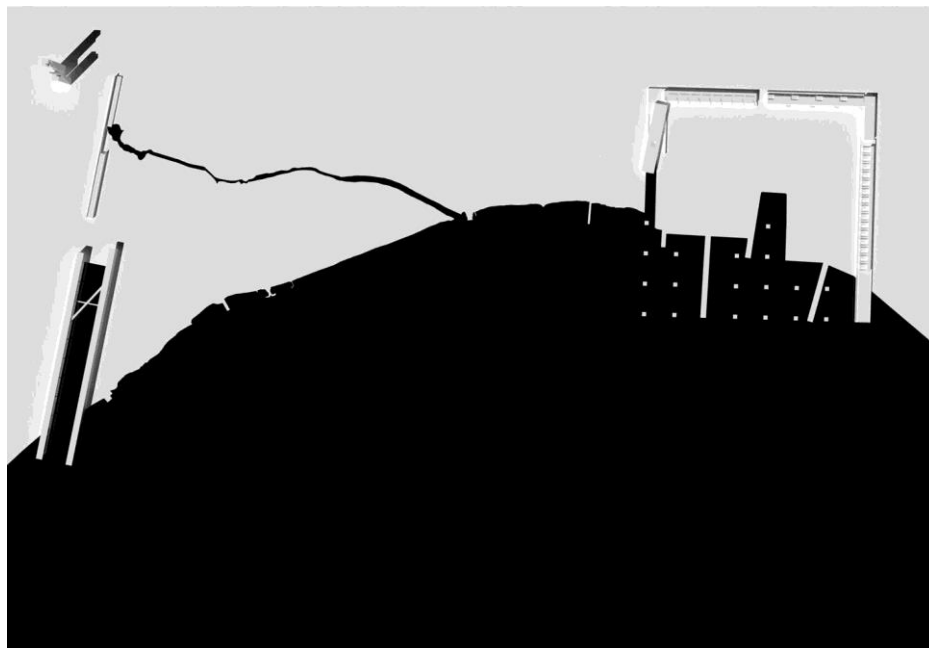


Figure 6. Model of the project system reduced to its primary elements
Source: author's own work.

In fact, today that the Tosi Cantieri are closed and ILVA is partly subject to disputes that question its destiny, the area of the Mar Piccolo is the center of urban-environmental regeneration policies: policies that the project has intended to interpret, by intersecting the cultural aspects contained in the structure of the territory (those evoked by the anthropic-landscape signs), with the new socio-housing issues destined, as a whole, to affect not only on the structural level, but on the general socio-economic condition.



Figure 7. Perspective view of the redevelopment project of the Tosi Shipyards
Source: author's own work.

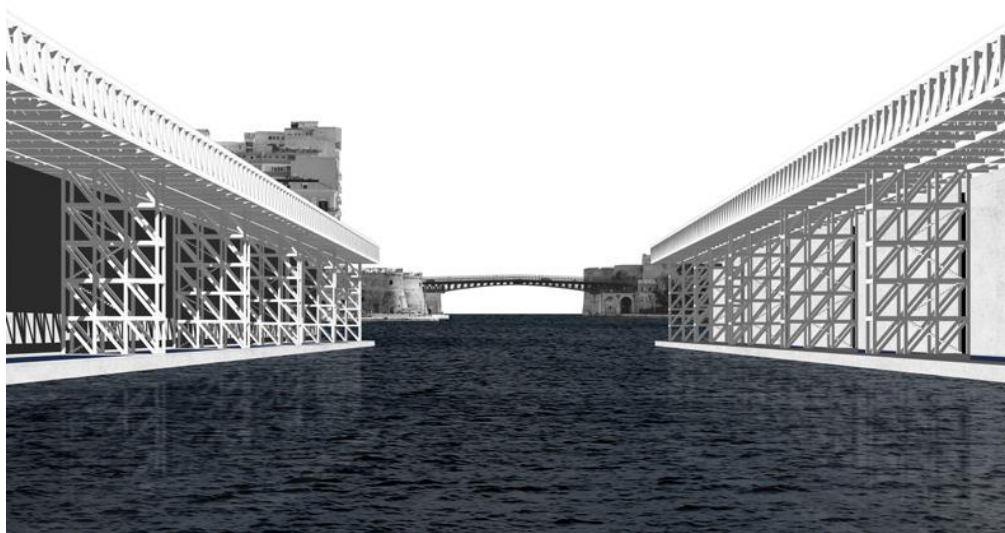


Figure 8. Perspective view of the relationship between the submarine museum and the swing bridge
Source: author's own work.

It is, therefore, a relevant area, not only for the problematic nature of its schedule, but also for the urgency due to the transformative movements still lacking a design definition, given the enormous complexity that would require the transformation of its artifacts.

The methodological basis of our project proposal was to understand the existing buildings as differently operating components of a possible re-signification of the area, experimenting compositional procedures capable of transforming the current critical issues into their fertile testimonial-regenerative activity. Starting from the analysis of the factors that have outlined our gnoseological framework, the hypothesis was to operate a 'territorial writing' capable of exposing and re-signifying the history and the mutations that have occurred in the coastal arc, assuming as its invariants the geomorphological-naturalistic characters and the palimpsest of industrial archeology.

These invariants are those related to the close relationship between the signs of water and terrestrial signs; signs that find apex in the sudden out-of-scale that cross the problematic relationship of its phenomena which are: the passages of the Ponte Girevole and Porta Napoli (the ancient access point to the internal basin of the Mar Piccolo) counterpointed by the large infrastructure of the Punta Penna bridge; the large industrial settlement that pervades the coast of the Old Town to the west and compresses the coast towards the Tosi shipyards to the north-east; the opposite front of the Military Arsenal, dominated by the nineteenth-twentieth century fabric and surrounded by

the suburbs. These are signs that, taken as linguistic specificity, typical of the city of Taranto, have produced a design approach based on the critical reformulation of its own grammar.



Figure 9. Perspective view of the project for the Taranto submarine museum
Source: author's own work.

The guidelines that structure it come from the settlement system that organizes the front nineteenth-century grid positioned on the mainland. From it derives the strong regularity of the Cartesian plot that orders the urban park of the project, assigning it to a new urban-territorial polycentricity. Within it, a series of variations, dissonant with the planning regulations, instead emphasize the historical pre-existing structures, such as: paths, water canals, agricultural lots, spontaneous building phenomena; the same ones that, going into the park for about a kilometer, involve and re-establish the 'Paolo VI' district. To polarize the two cantonal areas of the park are the Tosi shipyards to the east; to the west – along the ILVA chimneys – the water channel dedicated to the new submarine museum and the towers of the new business center. Polarity, which, keeping the maximum thinning inside the park, try to transform the current settlement constellation into a unitary condition, relying on the historic sea/countryside relationship. The expressive components of the project are reduced to a few but essential signs.

In this way, the project became a place within which the problematic palimpsest of its events, confronting the grammatical dimension of the city, produced the probable re-signification of its own elements. These 'signs' are, as has been said: the opening of a new water channel which, along the axis of the Ponte Girevole, tries to establish an analogical meaning between the two shores of the Mar Piccolo; the configuration of the urban park grid, directly derived from the nineteenth-century building structure in front; the precise perimeter of the Tosi Shipyard area in accordance with the Military Arsenal opposite. Further evidence of this design intention is the museum pavilion located at the source of the Galeso river for the exhibition and cultural activities dedicated to the figure of Horace, and the Museum of submarines. Configured as a 'translated footprint' of the canals leading from the Great Sea to the Small Sea, it expresses the metaphor of crossing, of the passage, of the aquifer threshold, that is, of the most identifying phenomenon of the city of Taranto; phenomenon that has determined the very theme of its expressiveness, namely that entrusted to the pervasive iron architecture of the entire historical infrastructure of Taranto's nautical industry.

The Museum (a 'plaster cast gallery' of historical submarines built in the nearby Tosi shipyard) consists of two parallel bodies set along the axis of the new canal. It is articulated by two altimetric levels: that of the water level, making the museum open to visitors by navigating the canal and that of the countryside from which to look at the plaster cast gallery directly from the park. The system thus constituted is crossed by the railway and road infrastructures that run through the countryside. Taken as an integral part of the project, they become places of further respect for the sign and functional schedule of this territory. At the back of the museum complex, a research laboratory for the study and protection of biotypes aims to contribute to the reclamation of the ILVA territory, which has long been advocated by the environmental remediation policy. Apex of this system is the

group of directional towers consisting of three buildings positioned in analog form to the chimneys of the nearby steel mills. On the opposite pole there is the Nautical School. Here a 'fencing' system allows you to give a new dimension to the current Tosi shipyards by configuring them in perfect correspondence to the front of the Military Arsenal. The system is completed by the system of floating platforms on the sea intended for carrying out the exercises of the Naval School and 'islands' for free fishing.

Conclusions

This study made it possible to address the problems relating to the urban crisis of Taranto, experiencing an intersection between the urgent demands to which contemporary design calls us and the urbanological ethics to which the legacy handed down to us by the history of the city obliges us. Having rethought these places has therefore made it possible to carry out a critical study on the needs of our time, on the way in which to try to make them synergistic with the codes of the city, its values and new aspirations. Aspirations often incompatible or superstructural to the capabilities of the city, destined to make it difficult, often impossible, to re-tie them to the logical-formative process of their own history. In this sense, a design method has been proposed capable of transferring the various criticalities into an approach that, systematic but not rigidly pre-established, can reveal possible logical-inductive connections, bringing out latent potentials in terms of both functional and syntactic re-significations. Understood in this way, the phenomena of the crisis have become the place through which to 're-measure' the phenomena that dot the illogical form of the city, becoming the field of new theoretical perspectives, new compositional methods, new aims of contemporary design; a project intended as a place for the dialectical confrontation between the elements, aimed at tying the transience of a present increasingly dedicated to its own consumption, and eternity preserved in the original myth of the concept of the city.

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