SOCIAL HOUSING AND URBAN REGENERATION. THE CASE OF MILAN'S WESTERN SECTOR.

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INTRODUCTION

The significant crisis of the models of development inherited from the industrial society, together with the loss of confidence in the results that they produced, has lead to the revision of the intentions and the products of the capitalist culture[1]. In the last few years, cities have been subjected to a strong process of analysis and criticism, with the aim of finding weakness and potentialities, and of identifying the critical points from which to begin their rethinking. Even more recently, the conjunction between the failure of the real estate development model, due to the strong, global, economical recession, and the dramatic manifestation of the consequences of disproportionate land consumption, has brought the realisation that similar modes of growth are no longer able to provide any type of security, and are incapable of producing quality[2]. For this reason, the number of researchers and practitioners going back to critically examine and operate on existing cities, attempting to discover new or renewed possibilities of development, has abruptly begun to rise[3]. As a consequence, according to some scholars, there is now a widespread conviction that the city of the future will be built within already urbanised territories[4]. Within this scenario it seems clear that the topic of housing redevelopment is a central and extremely articulated theme that must be addressed. The number of housing estates; the growing age and the obsolescence of the buildings; the weaknesses inherent in many spatial situations where they are located: these are a few of the relevant problems that must be addressed to update these assets that face complex and challenging demands. Furthermore, this reflection is emphasised by local and regional specificities, together with an abundance of contrasts and differences oftentimes related to the ownership regime, where the public social housing estate represents a specific and emblematic case study[5]. In order to address these topics, this paper will focus on a part of Milan's urban area as a significant sample. Here the coexistence of stratified fabrics, the presence of recent urban phenomena, and the criticality of spatial, social, and environmental conditions, allows for the testing, verification, and upgrading of the theoretical assumptions and the design strategies proper of architectural and urban design.

SOCIAL HOUSING DISTRICTS AND URBAN FABRIC: THE WESTERN SECTOR OF MILAN

Like many other European medium-sized cities, the situation of Milan is characterised by the coexistence of contrasting urban phenomena within an apparently restricted territory, where the administrative limits of the city are only an invisible line within a densely urbanised and highly fragmented region[6].

Even a brief glance at the map of the Western sector of the city, chosen as study sample for the research work described in this paper, highlights the accumulation of buildings emanating from the

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historical core where the primitive, recognisable, expansion has rapidly shattered into a dusting of artefacts correlated by an intricate system of infrastructures.

Within this scenario, the presence of some autonomous shapes can be easily noticed, recognisable as almost independent units by their singularity, density, and disposition, and which, if subjected to further analysis, clearly reveal their "special" nature. In large part these urban forms correspond to the social housing districts that undoubtedly contribute to characterise this area and which, in part, were the first elements that initiated the urbanisation of this sector. The origins of these settlements fully justify their autonomy and the reason why they emerge as independent figures from the urban fabric. Like cornerstones, they where once completely isolated and now are necessarily linked to a city that has grown around them. This consideration, which could appear simplistic, actually explains very well the spatial, physical, and social conditions of these places and their urban sector. The definition of "enclosures"[7] that has recently been applied to these districts is fully justified because, even if the enclosure does not always exist physically, there is nevertheless a form of perceptive separation and exclusion that richly reflects the social status of these places. It is a separation emphasised by a serious problematic situation and enhanced by a condition of widespread obsolescence, and requires a strong renewal process.

Such a situation is confirmed by several analysis that display how autonomy, separation, and isolation, together with marginalisation, negligence, and decay are present and relevant, and how the influence of these phenomena is frequently limited to specific districts, even where they lie within a wider environment[8].

Figure 1. Research PRIN 2008 - Description of the relationship between public open spaces, social housing districts, historical centres, and infrastructures.

WIDESPREAD OBSOLESCENCE AND URBAN REGENERATION

A deeper investigation, description, and study of the territory of the Western Sector of Milan allows the discovery of a series of deeper contrasts that serve to highlight how the condition of obsolescence does not correspond only to a problem of physical decay of the built fabric that exists, especially in respect to the social housing estates, but which can be considered even more so as being a widespread phenomena, involving built areas, open spaces, and infrastructures, in an almost all-encompassing way.

This part of the city in fact displays all the contradictions of the chaotic conditions of many peripheries, where historical, sometimes precious, traces are superimposed on new layers containing some clear, ordered, and recognisable structures that lie together like a patchwork with degraded, abandoned, and underused areas. For instance, it is worth mentioning the fragmented and separate parts originating from the overlapping of the systems of infrastructure, together with some unjustified "breaks" resulting from the dynamics of the uncontrolled development of the city, as well as the relics of agricultural plots that are now surrounded by urbanised areas. All these present themselves alongside once well-designed spaces that no longer respond functionally to the needs of today's society, and which are no longer used appropriately.

Focusing on this scenario from an urban and architectural design perspective means dealing with such complexity, carefully considering how each single regeneration process should be addressed according to an extensive strategic prevision. Each intervention should thus constitute part of a global process that is able to deal with a widespread condition of obsolescence and inadequacy.

As a consequence, it can be argued that the obsolescence of social housing estates is one of the crucial topics in this sector of Milan, where the majority of buildings were completed more than forty years ago. Furthermore this condition of inadequacy can be extended to the urban context in which these buildings are located. In this sense, the relationship between these settlements, the urban context, and the process of city renewal, represents one of the most relevant yet least discussed opportunities, especially if compared to the common root between public ground floors, adjacent underutilised spaces, pavements, streets, and public open spaces; all of them requiring improvement and new ideas. For this reason, the public nature of social housing estates opens the opportunity for the renewal of the public dimension of the city as a whole. Considering the confusion and the weaknesses of the contemporary urban forms, the fixity, despite their poor quality, of the built spaces, and the lack of an integrated network of the public spaces, it can be established that the only possibility for recomposing the scattered parts of our cities depends on a rethinking of the open spaces.

Following this path implies the development of a precise methodology, moulded according to specific situations in order to achieve results that can then be generalised for application to other similar conditions, starting from the problem of the description and the interpretation of the urban systems implicated in the research. These are the considerations that animated the research work conducted on Milan's West Sector[9], which will now be described.

URBAN DESCRIPTION AND INTERPRETATION AS DESIGN

The "research by design" process of this work is aimed at delineating a possible methodological approach and defining some design strategies that will be useful for the regeneration of districts characterised by the presence of outdated social housing complexes within an urban fabric affected by a high, generalised, degree of obsolescence. Since it is a research process, its final goal cannot be considered a design proposal but, more appropriately, as the definition of a methodological approach, strategically generalisable also for other locations with similar contexts and conditions. For this reason the first, consistent, part of the work is based around an attempt to define a precise methodology of description and interpretation of such contexts, in order to understand what elements could be considered as predominant design materials, useful to launch possible transformative strategies.

The belief that design entails working with the site is clearly evident through a large part of this approach. The idea is to follow a path that leads from the discovery of the territory, through to its descriptive analysis, and then on to forecast and define the strategic contents necessary for its

transformation[10]. This process is based also on a careful confrontation with the history and the phases of development of the territory, according to a specific cultural attitude. Following this path means acknowledging the weaknesses, establishing limits and potentialities, and providing an opening to the expectations made possible by design.

Investigating the complexity of these marginal, layered, and contrasting territories implies a strong reflexion; not only concerning urban morphology, types, and forms of use, but also the connections that exist between spaces belonging to different systems and scales. This could be to take into account, for example, new potential systems based on spatial resources ranging from huge open spaces to mosaics of neglected minor resources, such as traffic islands. In effect, the upgrading and regeneration of the city starts from the re-evaluation of each minute space, with the intent to relocate it into a renovated system of relationships, which naturally implies a new way of envisaging and using the city according to a sustainable vision.

The map[11] is once again the best tool to collect, classify, and disclose all the information useful to represent and communicate this cognitive process; their collection proceeds with the final objective of carrying the architect to precise design choices.

The descriptive work conducted in respect to the Western part of Milan, of which some maps are presented in this paper, is based on the proposed approach. Each map tries to find out, filter, and display the weaknesses and the resources operating in different aspects and scales. A final strategic drawing exposes the way to re-establish a precise system of relationship between spaces belonging to different categories (open, built, and infrastructure spaces) in an integrated way, forecasting their possible regeneration. In this way, interventions carried out on social housing estates cannot be separated from the rethinking of their ground level and their surroundings, opening then to the city through an integrated and global redefinition of categories and meanings of space. Following this idea, the concept of sustainability cannot be understood other than on a city scale as global environmental compatibility, healthiness, and liveability.

Figure 2. Research PRIN 2008 - Regeneration strategy: diagram of the potential relationships and description of the degrees of transformation of the urban fabric.

INTEGRATED EXPERIMENTS OF URBAN REWRITING

The set of strategic maps that emerge from the descriptive and interpretive phase contain the most extreme synthesis of all the insights that are placed at the base of urban sector rethinking.

It can be argued that each map represents an indicative, inclusive drafting of all the individual modificative opportunities merged into a single precise relational strategy. This process can be compared to a sort of rewriting action, where the pre-existing layers are overlaid with some new ones that are able to rearticulate the same text in order to obtain new narrations.

Following this theory, the "research by design" experiment has proceeded by focusing on some experimental applications, based on specific opportunities suggested by the general strategy. In particular, different contexts have been evaluated, selecting those most significant in comparison to an approach susceptible to multiple integrations. For this reason the choice was double referenced: firstly according to the three traditional categories of space (open, built, and infrastructural), and then in relation to a specific transformative strategy. Thus this work has focused on three key case studies that will now be briefly introduced. Each case study presents problems and resources typical of a situation of obsolescence and inadequacy. In this condition a very weak backdrop hides many potentialities that could be enhanced.

Building on the built

The First experiment focused on built up fabric, working on the obsolescent social housing district of "Lorenteggio", so named because of the main axis road that runs close to the neighbourhood.

This high-density albeit low-rise complex, dating back to the nineteen-thirties, hosts approximately 4,500 people, in apartments almost exclusively owned by the public authority. The district, completed during a period characterised by scarce economic resources, is comprised of a dense grouping of buildings that, while apparently adhering to a modernist grammar, judging by the facades, are actually rather traditional, based on pre-war models, characterised by a small-sized, and equipped only with essential, rather basic and deficient, facilities[12].

The district is equally well known to the public for the numerous official complaints made about the state of decay and obsolescence of the buildings, which are almost inhabitable, as well as the high levels of criminality and social disorder recorded there. Despite several attempts at rehabilitation, especially those based on social participation, the conditions remain critical, and there have been repeated municipal discussions about the opportunity to demolish and rebuild the neighbourhood as part of a process of gentrification, obviously with a reduction in the number of social housing units[13].

The study carried out has tried to analyse the physical condition of the district, and to figure out how this could influence the mode of use of the spaces and the social behaviour of the inhabitants. For this reason, the relationship between the district and its urban setting has been interpreted by evaluating three possible scenarios: full reconstruction, partial demolition, and simple refurbishment. The context has been analysed through a photographic and graphic description, building a perfect mosaic on the situation. For a final stage, a new master-plan was designed based on the idea of maintaining more than half of the existing buildings, taking into account the possibility to fully reconfigure this neighbourhood whilst maintaining its morphological traces, its history, and its identity. Strategies were defined that are oriented to: producing sustainability requirements on an urban and building scale; building and improving relationships between the city and the district through a redesign of the open spaces; creating a sense of *fixate*, or diversity, between private, public, and semi-public spaces; and equipping the district with new public spaces, including a new subway station integrated into the design. Particular attention has also been focused on the definition of a sequence of actions useful to define the timeline for improving and regenerating the district that allows for a slow and gradual rehabilitation, and that is partially open to variations during the implementation phase. This timeline is also based on the idea of balancing investments between private/residential spaces and public/semi-public facilities, with the aim of guaranteeing the coexistence of the two aspects, which is extremely important to ensure social sustainability.
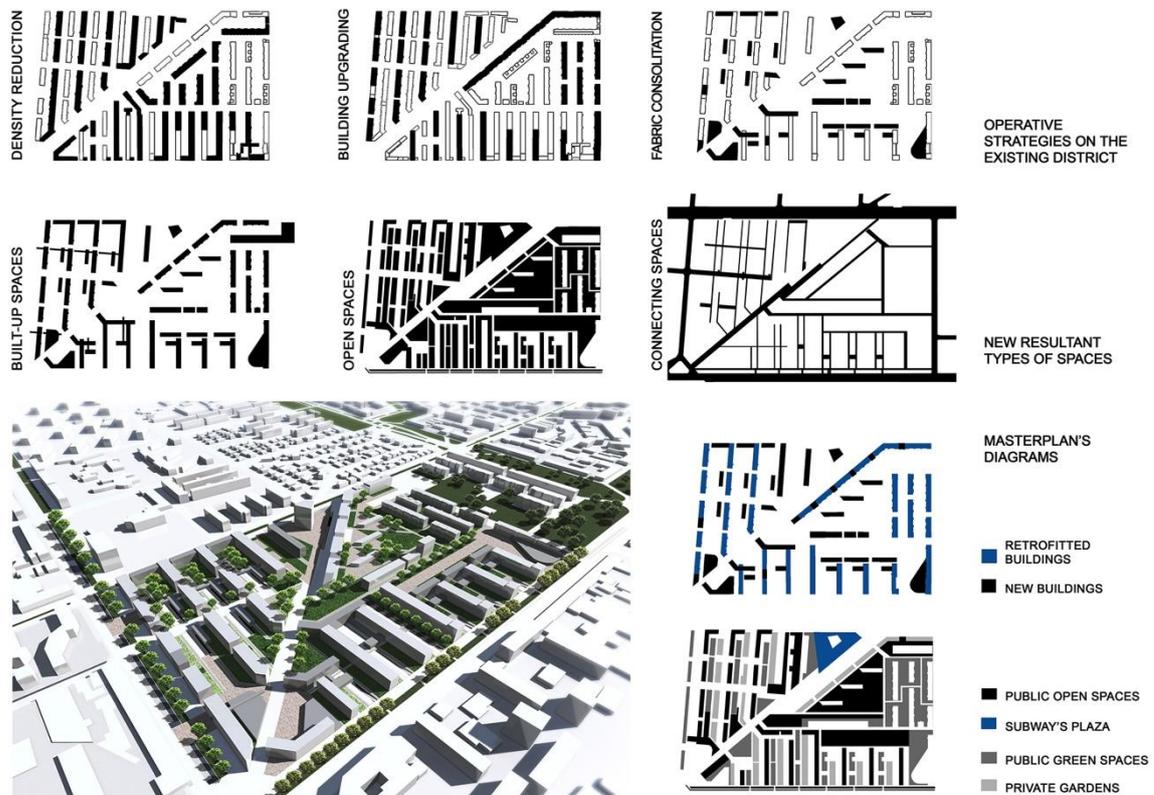
Figure 3. Research PRIN 2008 – Synthesis of the master plan for the "Lorenteggio" district.

New urban sections: artificial grounds and multi-relational spaces

The second experiment, closely connected to the previous one, shifts attention towards the strategic transformation of connecting, or relational, spaces that could more or less be considered as corresponding to the infrastructure system.

The western sector of Milan is characterised by two important hierarchies of infrastructural arteries. The first corresponds to the new fast roads connecting the city to the ring road and then to the major motorways; the second is based on a grid of boulevards originated from the first extension of the city in the early Twentieth Century. This second system is relevant and holds a high degree of potential. The axes, designed according to the French models of the period, offer generous spaces, divided into pavements, flow lanes, and a large central *parterre*, which are now perceived and used in a completely different way from that of when they were designed. The massive presence of cars and parking has occupied and reduced the lanes, and the central *parterre* has essentially been transformed into a messy parking lot.

The study conducted on these spaces has highlighted the potential of this space, especially when compared to the comprehensive quantity of obsolete, dismissed, and forgotten small-scale open spaces surrounding these extended axes. The idea to reconnect and revitalise this potential system was further strengthened by the possibility of also involving the open spaces pertaining to social housing neighbourhoods in the redesign process, potentially creating a bridge between these fragments and the spaces belonging to the infrastructure.

Accordingly to these considerations, the research was addressed to define some strategies useful to rethink the road section using the space according to new needs and sensibilities. The aim was to provide new solutions for parking facilities, working also on an underground level, to introduce new

types of low speed connections, and to ensure a continuous sequence in the systems of open spaces. Particular attention was also given to the integration of landlocked areas, and to the redefinition of the relationship between each social housing district and the new system of defragmented spaces in order to offer areas of contact, interaction, and exchange.

The new section re-proposes, according to a new sensibility, the concept originally presented by Giuseppe De Finetti between 1944 and 1946 in the designs for "Lombard Street"[14] that even today represents a utopia of modernity, reinterpreted according to new exigencies.
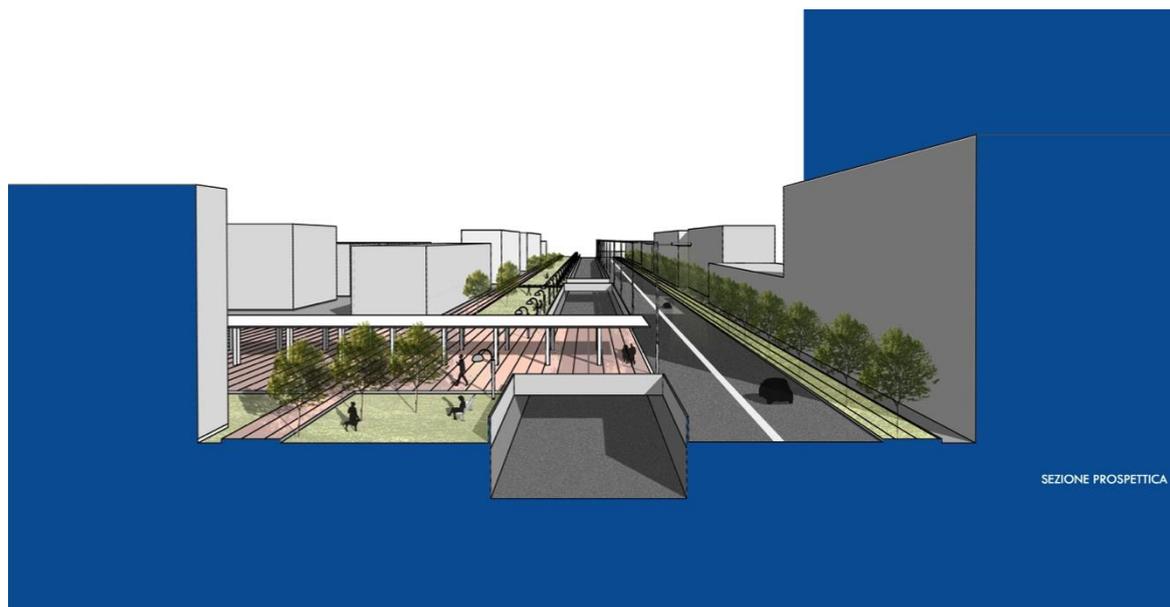

Figure 4. Research PRIN 2008 – Perspective section of one of the new urban sections.

Residual open spaces: re-measurement and re-signification

Finally, the last strategic proposal is based on a reflection on the larger system of open spaces, comprising the remains of agricultural lands that now appear as cut outs between the urban fringes[15]. An apparently insignificant mosaic of spaces, that until a few years ago seemed destined to be completely urbanised, has now become extremely important in marking a new destiny for peri-urban territories. The extension, in recent years, of a series of laws aimed at the reduction of soil consumption have effectively introduced an important novelty, one that strengthens the interest to extend the research towards the fragments of the city that still maintain some relics of agricultural spaces.

This last design experiment is thus centred on the area close to the historical centre of Baggio, now included in the periphery of the municipality of Milan, with the important district of "Quartiere degli Olmi" that is an example of self-sufficient social housing complex, a huge system of infrastructures, and some remarkable elements that includes old partly abandoned farms[16].

The strategies developed for this area have focused on the idea of reassembling urban margins by working on the redesign of open spaces, starting from the definition of their history and the processes that lead to their fragmentation. The research investigates how to rethink the relationship between the remains of historical centres and the ring of scattered, undefined, and uncertain open spaces that surround them. The basic assumption is to identify the role of measurement, giving it a new role in the redesign. The coexistence of some pre-ordered parts, belonging to the lost agricultural arrangement,

with many confused elements suggests to re-establish the former order in a renewed way. The design provides a solution for the urban compatible reuse of agricultural lands, defining new modes of use, including finding new roles for the emergent elements such as the farms.

Figure 5. Research PRIN 2008 – Baggio: Strategy of re-measurement and re-signification of residual open spaces; emerging elements, old traces and new meanings.

CONCLUSIONS

The obsolescence and necessary renovation of housing estates, especially public ones, represents a great opportunity to rethink the contemporary, unstable, urban forms, in a more complex and comprehensive way, particularly by shifting attention from a series of architectonic objects to their relationship with the ground, the collective dimensions of the city, and the network of public spaces and infrastructures they encompass.

The hypothesis of a new form of city-design based on the reflection around the voids (belonging to different scales) is not completely utopian. Through the transformation of open spaces it is possible to rebuild the city, and in this regard it is extremely important to reconsider each and every open space as being a part of a complex and stratified system that must be reorganised to retrieve sense. Each void is a container of dystopias that can be rearranged by architectural and urban design. This means that the utopia of being finally able to crystallise the urban form, even if into a context of dispersion, can take consistency.

Focusing on case studies of the Western sector of Milan, some operating modes have been introduced that are applicable to the redefinition of voids. Through an on-going dialogue with history and with the present, each fragmented space has been considered in relation to its peculiarities, to the elements that surround it (in terms of built and open spaces), and to the comprehensive relational system of the city as a whole, and the spaces have been redesigned in an attempt to give them back the overall meaning and functionality that they had lost over the years.

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