GROUND FLOOR. TRANSFORMING THE CITY AT ZERO LEVEL

Author:

MARIALESSANDRA SECCHI

Institution:

POLITECNICO DI MILANO

INTRODUCTION

In Milan, like most European cities, public housing estates dating from the mid to early twentieth century now face serious issues of obsolescence and as such are the object of large renovation projects However, whereas neighbourhood restructuring will occasionally include relevant demolitions, this is not the case in Milan. Due to municipal policy, demolition of social housing is still an exceptional event, which incentivises and calls for alternative, less traumatic solutions to be envisaged.

Moreover Milanese public-housing stock is in noticeable crisis, evidenced by a marked mismatch between available spaces and the needs of inhabitants. One of the clearest examples of this discrepancy is the pervasive state of abandonment found at the ground level of the estates. Here the vacancy of spaces, originally intended for "diverse uses" such as workshops, commercial activities, or local association centres, is expressed poignantly by the barred street windows and conveys a desperate tone nonetheless inconsistent with the social context of the neighbourhood.

A closer look to a specific case study _Quartiere Chiesa Rossa in Milano_ will illustrate how the role of public housing estates, in the context of the metropolitan city, has changed. [1] Once at the extreme periphery, they are now at the interface of the city's core and the metropolitan urbanized territory. A consequence of this new position is the increased stress on public open spaces; local streets and sidewalks are frequently forced to play the role of interchange parking lots. Nonetheless, public open spaces also constitute a possible entry point for a strategy of renewal of the neighbourhood as a whole.

This paper hence seeks to propose a new approach to neighbourhood regeneration, hypothesizing that reorganization of "the zero level of the city" can trigger a positive interrelation between the housing enclave and the city, resulting in a viable alternative to more traumatic, and costly, demolition and reconstruction strategies.

REGENERATION AND DEMOLITION

In recent decades, regeneration strategies employed across Europe have showcased a vast range of planning and design issues and demolition has frequently emerged as the preferred tool to achieve the required renewal. Amongst the numerous concerns informing such projects it is possible to single out

three general motifs driving the regeneration of the "public city" fabric. In light of such themes it will then be possible to define a background against which to consider the specificity of the Chiesa Rossa case study.

Early examples of regeneration initiatives were at first incited by *social matters of concern,* with the purpose of de-stigmatising social housing districts, whilst demolishing actual buildings.[2] Since the early 1970s, evidence for social discomfort was associated with poor physical qualities and with social homogeneity in many public owned neighbourhoods. Consequently, demolition appeared as a valuable solution to upgrade existing neighbourhoods introducing a higher variety of building typologies. However, after the very first examples, the disruptive social effect of demolition on existing communities was becoming evident. Thus recently there has been a greater drive to preserve and improve the existing social environment whilst redesigning space, as in the case of Bijlmermeer, in Amsterdam.[3]

Secondly, *technical obsolescence* of post war architecture has also been a key factor shaping examples of regeneration projects. In these cases, poor energetic performances are associated with high maintenance costs, while the mismatch, between old spaces and new inhabitants' needs, can effect difficulties in the appropriation of built and un-built spaces. In this context, Modern Architecture ideals have come at the centre of debate concerning the physical and perceptive qualities of public space in large neighbourhoods.[4] However, technical obsolescence does not necessarily lead to demolition. Frequently, in fact, the brilliance of Modern Architecture both promotes their preservation and fosters the study of rehabilitation technics: upgrading existing buildings to cope with current demands. As a recent and good example of regeneration without demolition, we can point at the "Citè du Lignon" in Geneve.[5]

Finally, regeneration strategies now explicitly focus on *increasing density* in the existing city, radically transforming twentieth century housing districts.[6] This can frequently occur in absence of any relevant social problem. Yet it ought to be noted that the presence of a good social environment is a specific feature enabling the densification process and allowing more people to be hosted in an already cohesive and mixed environment, as in the "secteur Viessieux" in Geneve.[7] Here, as in previous examples, demolition (and reconstruction) of existing housing stock is a major tool in the regeneration process, able to foster a typological and sometimes a morphological redefinition of large parts of the city fabric.

MILANO: BUILDING THE CITY OVER THE CITY

Taking into account theses three themes we can better understand the opportunities for regeneration of Milanese public housing estates. Indeed most neighbourhoods call for diverse social policies to be implemented; the majority of large estates face critical problems of technical obsolescence, requiring considerable maintenance interventions; whilst some have already been target of public initiatives increasing density. The backdrop is one of dramatic crisis in the public housing sector: in the last decade's public maintenance and construction interventions have progressively decreased.[8] In addition, in Milan, just as other Italian cities, a conspicuous share of the public housing stock has been privatized.[9] Often only the areas, where there is a concentration social problems and marked technical obsolescence, remain within public property.[10]

Meanwhile, the profile of the populations in need of social housing are more varied and polarising than ever before, and can include mono-parental families, as well as seniors living alone, first generation immigrants living alone, etc. Nonetheless, access rules to social housing are still based on a twentieth century model for low-income large families. Whilst this model was never able to capture the whole range of the population's needs (typically excluding the lowest income families), it is now evident how it excludes a vast range of new subjects.[11]

In Milan, existing public housing stock mainly comprises small and obsolete flats (with a very small percentage of large flats), and in some neighbourhoods, several flats remain vacant as they are too small, under equipped, or in need of major maintenance intervention for which public administrations are under-funded. The result is a complex geography of vacant spaces, frequently illegally occupied, intermingled with "normal" social housing apartments.

Moreover, vacant spaces carved into social housing neighbourhoods are not simply a missed opportunity to match renewed needs with existing stock; they are also responsible for a progressive decay and for a whole range of anxieties and discomfort of the existing population.[12]

Back to the centre

Considered against the background of this crisis, Milan public neighbourhoods have some specific features, which could reveal the interest of a renovation effort when compared with different European experiences, where demolition was chosen as a more viable solution.

One of the most interesting factors is the position of large public estates within the metropolitan structure. Public housing neighbourhoods, in Milan, were built in different periods throughout the twentieth century. However the largest estates were built between the 1950s and the '80s. Yet in a dissimilar fashion to previous examples, these were planned and built as autonomous, self-contained establishments, which would be able to cater for all the needs and activities of the community. Planning thus unsurprisingly brought them to be systematically located at the very periphery of the city.

However, they now occupy an intermediate position between the city core and the larger metropolitan area.[13] Consequently, they fall at the centre of new and increasing pressure from the private market, which could enable a more varied social mix to emerge, assimilating the former social housing enclaves to the general fabric of the city. Nonetheless, in our case study area- quartiere Chiesa Rossa – private settlements are simply adding new and smaller housing enclaves to the larger and older existing parts. The foreseen "social mix" remains questionable.

By contrast, we propose to focus on the potential offered by the large amount of "under-used" or vacant spaces within large public estates as they constitute a "critical mass" enabling a specific regeneration project, systematically upgrading the existing stock.

The research hypothesis is that, the requalification of the existing fabric of built and un-built spaces, could transform the overall urban quality of the neighbourhood. Regeneration can, thus, achieve more relevant results with fewer resources, profiting of existing spatial qualities while reforming problematic spaces. More specifically reordering the "zero level" of the city is, in this perspective, a key element to address simultaneously social issues, technological obsolescence and even possible densification strategies.

CHIESA ROSSA: REORDERING AN INNER CITY THRESHOLD

The first settlement was built in "Chiesa Rossa" by IACP (Istituto Autonomo Case Popolari) between 1960 and 1966, following a design competition.[14] It was part of the post-war program for working class housing. This program, known under the name of "piano Fanfani", was the main funding instrument for most Italian post-war social housing. It was a "Keynesian" policy aimed at contrasting underemployment by supporting the building industry- where a large amount of workforce was demanded - and thus targeting economic development.[15]

The vast majority of post-war social housing settlements were then located at the extreme periphery where land was less expensive and where public intervention would provide first urbanization equipment to the advantage of subsequent - and more central - private initiatives.[16] However, like many other "public city" neighbourhoods, Chiesa Rossa is now in a transitional position between the city core and a vast metropolitan area.[17]

An evident consequence, of this challenging new role at the metropolitan level, is the use of the over-abundant public space as interchange parking lots at the service of a large population, entering the inner city every morning. Since 2005, the area is connected with the city centre by the underground service.

Public space is disregarded, widows are closed and the street is invaded by parked cars

Since the 1960s, the place represented a mono-functional residential site where collective services, programmed and realized, were never able to act as a catalyst for a vibrant social life, despite their relative abundance and their proximity to each other. In this respect, the neighbourhood does not reveal relevant differences between the oldest public settlements - built as a unitary project - and more recent private initiatives, which appear to amplify existing problems of urban quality rather than solve them. This is partly due to a general decay of urban quality in recent initiatives, which appears to be pervasive in the Milan region.[18]

The case study neighbourhood was chosen, together with the Municipality of Milano, as it presented two specific typologies of un-allocated spaces: "under-threshold" flats, and "diverse-uses" spaces. The latter are ground floor spaces intended for commercial or service activities, cultural and social associations, etc. While "under-threshold" flats are those too small to be compliant with current norms, (under the threshold of 30 square meters). They cannot, thus, be legally allocated through usual procedures.

In this paper, we will focus on the ground floor vacant spaces. However, the research was strictly coordinated with a study on the reconversion of "under-threshold" flats: possible target populations were identified, with the help of third sector associations; specific restoring and refurbishing projects were investigated; prototypes were studied with the help of local furniture industry. Meanwhile, tools to involve residents in a participatory design process were scrutinized. As a result, the experimental role of "under threshold" flats as buffer for urgent and temporary uses was emerging.[19]
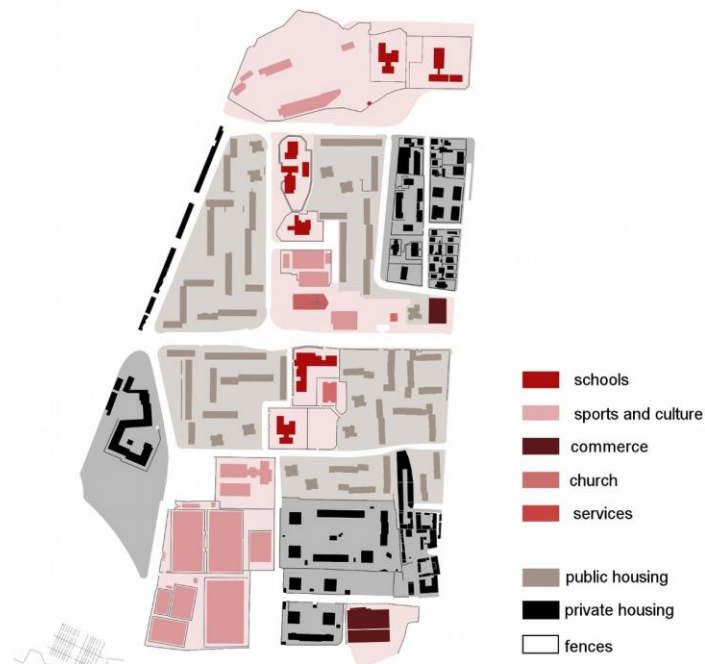
Mapping public space

Despite large social housing estates show several similar problems in most European cities, they are usually very different in their spatial and social character and need to be closely analysed.[20]

The research was carried through a direct survey of the site settlement criteria (built morphology and typology) and their relationship with open spaces, mobility network and collective services. The investigation consisted in mapping the qualitative aspects of urban space, documenting the material features of the built and unbuilt spaces, and finally assessing their state of maintenance as well as their uses, focusing on collective appropriation of public space.

Consequently, a set of interpretative maps was produced identifying the main problematic issues and possible design themes. The resulting frame describes a situation where most of the existing problems are deeply interlinked: ground floor abandonment is patently connected with the lack of quality in public open space, with the isolation of public services and the intrusiveness of individual mobility. The mapping, thus, reconstructs the overall image of the neighbourhood, revealing four main issues to be considered comprehensively within the regeneration project.[21]

An introverted public open space.

The neighbourhood built structure is composed of open blocks: 4/5 story buildings aligned to form large, green courtyards, mainly oriented north south. A clear-cut difference is evident in the use of space. After decades, well-cared gardens occupy the inner courtyards, quiet and protected from the surrounding environment[22], while outside public space is disregarded, perceived as uncomfortable and unsecure, devoted to car traffic and parking.

■	schools
■	sports and culture
■	commerce
■	church
■	services
■	public housing
■	private housing
□	fences

The neighborhood as a juxtaposition of different enclaves

Specialized service precincts and housing enclaves

Whilst the neighbourhood is well equipped with public services - schools, nursery, sports centres, churches, market and a theatre- these are built in separate precincts, each one defined by the hosted activity. At first sight, from an aerial view of the original master plan, public services seem to compose a central spine within the neighbourhood. Nonetheless, as the survey evidenced, the precincts are impermeable to pedestrian flux, resulting in a necklace of enclaves juxtaposed along the road. The isolation of different services is even more acute where differences in the "ground floor" level exist, as in the case of the main church, standing on a small artificial hill. Detached from everyday local pedestrian flux, these services never succeeded as attractive centres for public life.

The "asphalt domain"

The site has reached a good level of public transport servicing, compared to other peripheral sites. Two tramway lines (both on a dedicated lane), the underground terminus and some local buses endow the site. Nonetheless, public space is overwhelmed by individual mobility. Local streets are usually over-dimensioned and invaded by parked cars during the whole day. The same happens with the large sidewalks, outside the housing courtyards. The the extensive scope of the asphalt produces a mono-functional space, uncomfortable to cross. Moreover, in recent private housing initiatives most of the ground surface is impermeable as it covers underground garages, contrasting the positive image of the older green courtyards. The private inner space, in this case, does not compensate for the lack of quality in public space.

Permeable and impermeable ground, the framework of a possible regeneration project

Ground floor and building typology

As the survey evidenced, building typology shapes the access to the upper floors from the inner courtyards. The pedestrian access sequence is, thus, from the street to the inner garden and from this collective space to the individual entrance and staircase. In contrast with this sequence of access, centred on the public green, the settlement maintains an open-block disposition where shops and spaces for associations were intended to open along the streets, identifying the sidewalks as the main reference spaces for everyday public life. Nonetheless, the result is ambiguous, as ground floors are usually vacant and act as a solid barrier between the inside and outside of the housing courtyards. Consequently, while creating a good inner environment, the large blocks revert the relationship between city and housing, relegating public space, the outside streets, to play the role of a "back", empty and disregarded.

Access to the individual buildings is through the inner gardens

Recovering the city at ground level

In this frame, the presence of a critical mass of un-allocated space at the ground floor of public housing becomes a relevant opportunity to implement technical upgrading and functional recovering of the existing buildings.

In order to overcome difficulties in allocating ground floor spaces Milan Municipality has started offering very favourable leases while providing finances for basic recovering of ground floor spaces, and helping young entrepreneurs (under35) to start new activities.[23] The basic idea, in coherence with national policies, is to employ diverse tools (space, economic and social policies) to unlock a specific potential.

While the aim is clearly to attract valuable activities and change the perception of the street space, the rationale is that by adding new activities, the social composition of the area will change, thus enhancing everyday life. Nonetheless, this simple cause/effect relation appears to be problematic as the lack of quality in public space could prevent the transformation from succeeding. The research's hypothesis is that the success of reactivating vacant spaces at the ground floor of the existing blocks is interdependent with the restructuring of the relation between individual buildings and the open space structure, i.e with the regeneration of city fabric.

Consequently, as a further step in the research, we investigated diverse transformation scenarios connecting the recovery of ground floor vacant spaces to the requalification of public open space. In the regeneration scenarios, some issues emerged more forcibly and can coherently become the starting point for a regeneration program to be implemented along with the foreseen socio-economical policies. First, we suggest the need to revise the relationship between the street and the inner courtyards, working on a transformation of the building section and, to a certain extent, of the building typology. Access to staircase can be reconsidered and reverted from the inner courtyards to the street sidewalks. Inner courtyards are a, in fact, valuable green spaces, which are perceived as a positive feature. This quality however does not contribute well enough to the overall structure of public space. Courtyards should be preserved as inner green core for the residential settlements, while access to staircases can better perform as a tool for revitalizing sidewalks.

Secondly, relevant advantages can be effected by redesigning the street section, favouring pedestrian and bicycle surfaces while introducing principles of traffic calming and speed reduction in local roads. This project requires a reconsideration of the area mobility pattern and strong action in regulating and supervising parking lots. The overabundance and generosity of street space, as in other urban areas of the same period, is a relevant resource as it offers an ample margin for redesigning the areas' urban landscape introducing high quality structure as bicycle paths, trees alleys, community gardens, etc.

Finally, a general and participatory plan could redefine the hierarchy of pedestrian paths and collective spaces introducing a more clear structure in public space. This last matter should tackle the issue of permeability of open space to pedestrian flux. Access to specific services (schools, church, sport services, etc.) could be regulated according to a time frame enabling cross relations to emerge, dismantling the excessive "enclosure" of each service area.

In a broader scenario, reordering the zero level becomes an opportunity to re-weave the "fabric" of the existing city and enhance public life. Clearly, the position of the area in the larger metropolitan context and its new role as city threshold make this operation invaluable and urgent. The requalification of public space, in this specific case study, can also be intended as an attempt to set

aims and objectives for an overall municipal program considering that several public housing neighbourhoods are in a similar condition.

Neighbourhood's street simulation. Via Santa Teresa

CONCLUSIONS

The urgent demand for regeneration of vacant spaces triggered a larger reflection on the possible strategies of intervention able to transcend the immediate need and the present lack of resources. The aim is to envisage specific tools to enlarge the offer of public housing including new subjects currently excluded from housing policies. Upgrading existing neighbourhoods is a strategy aiming to transform the peripheral areas into a more coherent section of the city's core, profiting from their new position in the metropolitan geography. However, transforming and upgrading existing vacant spaces within buildings is frequently not enough to change the state of isolation and lack of quality of existing neighbourhoods. The challenge, thus, is upgrading obsolete buildings while reconfiguring public open space and redesigning mobility networks. Moreover, the regeneration of public housing can affect a larger urban context from diverse perspectives. Acting on street space, re-weaving urban relations and setting a standard of space quality within a larger context the transformation can perform a cumulative effect, changing the position of the neighbourhood itself in the metropolitan hierarchy, thus, recovering the leading role of public housing in the transformation of city fabric.

REFERENCES

1   The case research has been developed by the author together with Nicolò Privileggio within the "Polisocial" frame of research and didactic activities. Polisocial is the social responsibility program of Politecnico di Milano.

2   Marcus Zepf, Nicole Commerçon, Franck Chignier-Riboulon, Fatiha Belmessous. "Demolition of large housing estates : overview". In Ronald van Kempen, Karien Dekker, and Stephen Hall (eds*). Restructuring Large Housing Estates in Europe* (Bristol:The Policy Press, 2005) pp. 193-210.

3   Frank Wassenberg, "Demolition in the Bijlmermeer: lessons from transforming a large housing estate," *Building Research & Information* 39, no. 4 (2011): 363-379.

4   Elena Cogato Lanza and Christophe Girot. *Experimenting Proximity. The Urban Landscape Observatory.* (Lausanne: PPUR, 2014).

5   Franz Graf, Giulia Marino, *La Cité du Lignon, 1963-1971: étude architecturale et stratégies d'intervention*, (Lausanne: in folio, 2012).

6   DALE, *Plan directeur cantonal Genève 2030, Adopté par le Grand Conseil le 20 septembre 2013*, 55-59, accessed January 10, 2016. http://etat.geneve.ch/geodata/SIAMEN/PDCn/PDCn_GC_03_Schema_ficheA02.pdf.

7   Christian Bernet, "Bientôt plus de 500 nouveaux logements à Vieusseux," *Tribune de Geneve, 08.03.2013*,

8   Alberta De Luca, Francesca Governa, Michele Lancione, "Politiche della casa in Europa. Differenze nazionali e tendenze unificanti dell'housing sociale," *Rivista Geografica Italiana* 116, no. 3 (2009): 349-378.

9   Silvia Mugnano, "Milano tra luci e ombre," in *Ripensare Milano guardando all'Europa. Pratiche di riqualificazione urbana*, eds. Silvia Mugnano, Francesca Zajzcyek (Milano: Raffaello Cortina, 2008), 30.

10   Edoardo Marini, "La città pubblica milanese," in *Milano Cronache dell'abitare*, ed. Multiplicity.Lab (Milano: Bruno Mondadori, 2007), 286-291.

11   Antonio Tosi, *Case, quartieri, Abitanti, Politiche*, (Milano: Clup, 2004), 102 -105.

12   Francesca Zajzcyk*, Milano. Quartieri periferici tra incertezza e trasformazione*, (Milano: Bruno Mondadori, 2005), 76.

13   Paolo Bozzuto, "Quartieri al centro," in *Dal recinto al Territorio.Milano, esplorazioni nella città pubblica*, ed. Francesco Infussi (Milano: Bruno Mondadori, 2011), 144.

14   Maurizio Grandi, Attilio Pracchi, *Milano. Guida all'architettura moderna,* (Milano: il libraccio 2008), 261-262.

15   Paolo Nicoloso, "Genealogie del piano Fanfani 1939-1950," in *La grande ricostruzione. Il piano Ina Casa e l'Italia degli anni Cinquanta,* ed. Paola di Biagi (Torino: Donzelli, 2010), 45-48

16   Antonello Boatti, "Il piano regolatore del 1953 e la sua attuazione: dall'utopia del piano AR agli anni della speculazione," in *Un secolo di urbanistica a Milano*, eds. Giuseppe Campos Venuti, Antonello Boatti, Annapaola Canevari, Valeria Erba, Federico Oliva (Milano:Clup,1986), 54-55.

17   Francesco Infussi (ed.), *Dal recinto al Territorio.Milano, esplorazioni nella città pubblica*, (Milano: Bruno Mondadori, 2011), 28-29.

18   Bozzuto "Quartieri al centro," 158.

19   Francesca Cognetti (ed.), *Vuoti a rendere. Progetti per la reinterpretazione e il riuso degli spazi nell'edilizia pubblica* (Milano: Fondazione Politecnico di Milano, 2014).

20   The necessity for urban plannng to reconsider its apporach to description and surveying - to avoid sterotyping, reveal differences and start comphending the logic of contemporary cities - is a clear argument in Bernardo Secchi "Dell'utilità di descrivere ciò che si vede, si tocca, si ascolta". (lecture, *II Convegno internazionale di Urbanistica. Descrivere il territorio, Prato, 30 marzo - 1 aprile 1995*).

21   James Corner, "The Agency of Mappig: Speculation, Critique and Invention," in *Mappings*, ed. Denis Cosgrove (London: Reaktion Books, 1999), 214.

22   Green spaces, in Milan large estates, are usually better appreciated than in other European cases, producing less anxiety or sense of unsureness, which is, instead, motivated by vandalism and lack of maintenance. Zajzcyk, *Milano. Quartieri periferici tra incertezza e trasformazione*, 75.

23   Cognetti (ed) *Vuoti a rendere. . .* , 55-56.

BLIOGRAPHY

Bernet, Christian. "Bientôt plus de 500 nouveaux logements à Vieusseux," *Tribune de Geneve, 08.03.2013*. accessed January 10, 2016. http://www.tdg.ch/geneve/actu-genevoise/Bientot-plus-de-500-nouveaux-logements-a-Vieusseux/story/27448636.

Boatti, Antonello. "Il piano regolatore del 1953 e la sua attuazione: dall'utopia del piano AR agli anni della speculazione." In *Un secolo di urbanistica a Milano*, eds. Giuseppe Campos Venuti, Antonello Boatti, Annapaola Canevari, Valeria Erba, Federico Oliva (Milano:Clup,1986).

Bozzuto, Paolo. "Quartieri al centro." In *Dal recinto al Territorio.Milano, esplorazioni nella città pubblica*, ed. Francesco Infussi (Milano: Bruno Mondadori, 2011), 141-159.

Cogato Lanza, Elena and Christophe Girot. *Experimenting Proximity. The Urban Landscape Observatory* (Lausanne: PPUR, 2014).

Cognetti, Francesca, ed. *Vuoti a rendere. Progetti per la reinterpretazione e il riuso degli spazi nell'edilizia pubblica* (Milano: Fondazione Politecnico di Milano, 2014).

Corner, James. "The Agency of Mappig: Speculation, Critique and Invention." In *Mappings*, ed. Denis Cosgrove (London: Reaktion Books, 1999), 213-252.

DALE. *Plan directeur cantonal Genève 2030, Adopté par le Grand Conseil le 20 septembre 2013*, 55-59. Accessed January 10, 2016. http://etat.geneve.ch/geodata/SIAMEN/PDCn/PDCn_GC_03_Schema_ficheA02.pdf.

De Luca, Alberta De Luca, Francesca Governa and Michele Lancione. "Politiche della casa in Europa. Differenze nazionali e tendenze unificanti dell'housing sociale." *Rivista Geografica Italiana* 116, no. 3 (2009): 349-378.

Graf, Franz and Giulia Marino. *La cité du Lignon, 1963-1971: étude architecturale et stratégies d'intervention* (Lausanne: in folio, 2012).

Grandi,Maurizio and Attilio Pracchi. *Milano. Guida all'architettura moderna* (Milano: il libraccio 2008).

Infussi, Francesco, ed. *Dal recinto al Territorio.Milano, esplorazioni nella città pubblica*, (Milano: Bruno Mondadori, 2011).

Marini,Edoardo. "La città pubblica milanese." In *Milano Cronache dell'abitare*. ed. Multiplicity.Lab (Milano: Bruno Mondadori, 2007). 286-291.

Mugnano, Silvia. "Milano tra luci e ombre." In *Ripensare Milano guardando all'Europa. Pratiche di riqualificazione urbana*, eds. Silvia Mugnano, Francesca Zajzcyek (Milano: Raffaello Cortina, 2008).

Nicoloso, Paolo. "Genealogie del piano Fanfani 1939-1950." In *La grande ricostruzione. Il piano Ina Casa e l'Italia degli anni Cinquanta,* ed. Paola di Biagi (Torino: Donzelli, 2010).

Secchi, Bernardo. "Dell'utilità di descrivere ciò che si vede, si tocca, si ascolta". (lecture, *Il Convegno internazionale di Urbanistica. Descrivere il territorio, Prato, 30 marzo - 1 aprile 1995*).

Tosi, Antonio. *Case, quartieri, Abitanti, Politiche* (Milano: Clup, 2004).

Wassenberg, Frank. "Demolition in the Bijlmermeer: lessons from transforming a large housing estate." *Building Research & Information* 39, no. 4 (2011): 363-379.

Zajzcyk, Francesca. *Milano. Quartieri periferici tra incertezza e trasformazione* (Milano: Bruno Mondadori, 2005).

Zepf, Marcus, Nicole Commerçon, Franck Chignier-Riboulon and Fatiha Belmessous. "Demolition of large housing estates : overview." In *Restructuring Large Housing Estates in Europe*, eds. Ronald van Kempen, Karien Dekker, and Stephen Hall (Bristol: The Policy Press, 2005),193-210.