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NEW LIVING PARADIGMS. A QUALITATIVE ANALYSIS OF RECENT SOCIAL HOUSING NEIGHBOURHOODS IN MILAN

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Abstract *Since house has become a mass consumption good, several researches have focussed mainly on affordability and repeatability of buildings and settlements, forgetting qualitative aspects related to cultural and building legacy of specific sites. Nowadays, following some important on-going changes in the demographic structure and social dynamics that are happening in many parts of the World, and specifically in Italy, we are facing a new trend which consider the housing policies as a specific part of the general welfare system that is now focussed concerning even less needy people (through opportunities given by “social housing” mechanisms for private developers to benefit of public aid). New paradigms for housing project consider environmental commitments and conceive the city as a “device set up to save resources”.*

The research (within the founded programme “For Rent. Addressing the gap between demand and supply of affordable housing” based in the Politecnico di Milano) proceeds from the review of some new social housing estates that have been recently realized in Milan. Design solutions of these new settlements seek to provide specific innovative living solutions. The research selects some qualitative parameters in order to present and analyse the most significant features of these new settlements. Some relevant aspects, among the ones considered, are: the relationship with the urban context and the openness of neighbourhoods to urban activities and social life (with a close consideration of public spaces features); the customisation of interior livings according to some peculiar needs in terms of privacy and social distinction; the typological research of building flexibility carried out applying different technological solution; specific targets and outcomes in terms of economical and environmental sustainability (with a precise commitment to the reduction of energy consumption); social activities that contribute to social cohesion and community building.

1. INTRODUCTION. MILAN AS AN EXPERIMENTAL FIELD FOR SOCIAL HOUSING INITIATIVES

After a long period of stagnation in the production of housing for less affluent households, at the beginning of this century, Milan started to be a testing ground for new housing developments, through different innovative arrangements and with a specific attention, at least in the design phase, to the quality of living [1]. Innovations refer mostly to two aspects: the attempt to promote a social mix in new housing neighbourhoods and the multiple nature of social housing promoters: no more just public authorities but also nonprofit organizations and co-operatives. New settlements quality is achieved mainly through the promotion of architectural competitions. In the framework of the research “For Rent”, focusing on the offer of affordable rent housing within the Milanese area, this paper analyses five housing neighbourhoods built in recent years in the North-West axis of the city which reflect the different achievements of this new phase. The specific purpose is to analyse how the living quality is expressed in their final realisation and how they actually work. The methodology used is based on the collection of data from projects’ promoters and on a direct analysis of the sites. The selection of the five case studies considered proceed from their geographical proximity, in one of the most dynamic areas of Milan (North–West is where some main urban developments have occurred in Milan in recent years: Ciylife, Portello, Expo 2015 site, Cascina Merlata). In addition, they offer the full range of different arrangements, which have been used in recent years within the whole city.

In 2005 a regional regulation (Regione Lombardia, Regional Law n. 7, February 8, 2005) [15] introduced the concept of affordable rent housing as an urban service: as a consequence, that choice allowed vacant plots (which the former general development plan had classified as “areas for public services”) to become suitable areas for social housing developments. The Municipality of Milan took this opportunity to directly promote several social housing interventions in such kind of areas or, as an alternative, to designate nonprofit organizations to do that. Within this framework, housing developments of via Gallarate and via Appennini are two of the eight sites of a double architectural competition named “Abitare a Milano” promoted by the Municipality; via Cenni and Figino are housing developments realized by “Fondazione Housing Sociale”, a nonprofit actor. Eventually, via Zoia, is one of the eight areas that the Municipality of Milan proposed to private actors in order to realize affordable rent houses.

2. ABITARE A MILANO 1, VIA GALLARATE (VIA APPENNINI 92-98)

2.1. Urban Context

The settlement of via Gallarate is located in a narrow strip along the north side of San Leonardo neighbourhood, in an urban area which is highly accessible thanks to the presence of two stations of the metro line number 1, each one is about 300 m far from the neighbourhood. The site of the new settlement is about 500 m long and has an average depth of about 50 m. The area is pretty limited in size, with an overall extension of less than 3 hectares. The settlement layout basically seeks a relationship with the neighbourhood of San Leonardo, while it

tends to gain a separation from via Gallarate (a highly congested road) making a podium about 3 m high which produces a gap between the road level and the edge of the new district [2, 4]. The sequence of buildings and open spaces is rather elementary and not referred to the urban landscape of the adjacent neighbourhood of San Leonardo. Within the new social housing estate the open space is clearly predominant but, as a consequence of the specific arrangement provided, it appears excessively cut into several small open spaces which looks to be less interesting and usable than it could. The relationship between roads and buildings is generally denied by the settlement layout: while along via Gallarate there is a shielding which is almost continuous due to the embankment that delimit the settlement, along via degli Appennini buildings have an orthogonal orientation in respect with the road. This condition practically limits the possibility to activate significant urban relationships among different settlements and the perception of a friendly urban front. The urban form, the absence of public facilities and the lack of commercial activities reduce the possibility for the new settlement to actually be attractive and vital in comparison with the existing neighbourhood.

2.2. Architectural Features

Four buildings of different height arrange themselves transversely to the lot. The first one and the last one are characterized by the presence of a tower of eleven storeys placed on the south side of the site along via Appennini, a linear building of three or four storeys (which is connected to the first one and crossing the site), and a further element which consist of four and six storeys placed on the north side along via Gallarate. In a similar way, the buildings placed in the middle of the area have different elements: a linear building of four storeys which traverse the site and a tower of nine storeys along on the southern edge.

According to different building typologies, there are multiple accesses to the 183 apartments: central stairwells with lifts in higher buildings or elevated walkways for transverse lower bodies. In most cases the living rooms are placed to the south and to the west sides of the building: they generally have large balconies which are shielded by aluminium brise-soleil and placed in front of sliding windows characterized by high thermal and acoustic performances. Bedrooms and bathrooms are generally placed on the east and north facades: they have narrow and long windows with foldable aluminium shutter. Most of the apartments have kitchens closed by sliding panels that make it easy to integrate them with the living space. Distribution spaces are reduced to the minimum and tend to disengage day areas from night areas and, in some cases, to separate entrances from the daytime living spaces.

The project is characterized by a particular interest in achieving the maximum energy efficiency through passive systems and by a careful study of the shadows cast on the lot by the existing buildings as well as by the towers. Furthermore, it is remarkable the use of high thermal efficient concrete blocks and the implementation of an energy supply network for the production of heating and hot water based on the nearby incinerator. Facades are plastered and painted in grey [11].

3. ABITARE A MILANO 2, VIA APPENNINI (VIA APPENNINI 36-46)

3.1. Urban Context

The intervention is carried out under the second social housing program of the Milan Municipi-

pality and it is located in a wedge-shaped area within a complex and diverse urban context in which some critical elements are still present. The site is next to the Gallaratese neighbourhood. The northern and eastern urban fronts are varied and controversial: they are characterised by the presence of several residential clusters, a church, some public open spaces (not always properly arranged and neat), and a considerable public housing estate characterized by significant aspects of physical decay and social problems. On the east side it is underway the construction of several hundred new private houses.

3.2. Architectural Features

The estate consists of seven medium-rise bar buildings, based on double-height pillars. The 196 dwellings have several sizes, from 39 to 78 square meters [3, 5]. The accesses consist of outdoor elevated walkways on which are placed houses thresholds and some toilets. The stairs are open and parallel to the building. Four buildings of nine storeys are about 45 meters long, while the others are four-floors high and double in length, dividing walkways on both facades. This arrangement, that together with the use of colours becomes a compositional choice, doesn't care about sun exposure. Staircases, painted in dark brown, are actually placed indifferently in respect of cardinal axes. Thus, also the white painted inhabited fronts (behind which all the rooms are placed) don't have a defined exposure. The elevated walkways distribution system could have facilitated a wider variety in apartment dimension and more flexibility (having the possibility to consider different housing demands and flat dimensions by simply opening new entrances). Furthermore, it does not appear any consideration on the location and possible merging of "humid zones" of the buildings: if that were needed, it would be necessary to make significant building works.

4. CENNI DI CAMBIAMENTO (VIA GABETTI 15)

4.1. Urban Context

The new settlement spread over a surface of about 12.000 square meters and it is located in a wedge-shaped area surrounded by residential neighbourhoods and large functional enclaves that do not engage in any kind of relationship with it (the only exception is the north-east front, where a former rural building is still present and it has been included in the building program). Along the southern edge it is still present a large military brownfield, which occupies an area of about 64 ha; toward north-west a public bus garage; toward west (although not contiguous) an important hospital, and between this last and the settlement of via Cenni a large area which holds several sport facilities. Due to its specific shape, the settlement of via Cenni is completely open and permeable to pedestrian flows, even if paths (made of special paved surfaces) precisely identify space for movement and space for rest [10]. However, it should be noted that, as a consequence of its peculiar location in a cul-de-sac, the new settlement is rather isolated and occasionally interested by pedestrian flows and crossing paths.

4.2. Architectural Features

Four residential nine-storey towers are served by central staircases and elevators and connected each other at the base by four two-storey housing buildings. On ground level there are

some apartments with direct access from the courtyard and some local services dedicated to vulnerable social groups. On the first floor of the same two-storey buildings, a walkways system, generously sized, marks the inner perimeter of the complex by reconnecting all the buildings. From here people can access a community area equipped for meetings and cooking activities as well as other houses which directly take light from some openings in the ceiling. Roofs are flat, sometimes covered with greenery and equipped with tanks for small gardens crop. The top floor of the tower, however, is always intended for community areas for residents and from here it is possible to access large collective terraces. Further open spaces for community activities are placed on the roof of some of the two-storey buildings and they are accessible only by internal stairs. Although in continuity with open spaces (along which are also placed some activities managed by third sector organisations) accesses to stairways are strictly reserved to residents or guests through intercoms. 122 houses all have open spaces, porches, balconies, terraces or gardens in order to satisfy the needs of different kinds of users: families, young people, couples, singles, people with disabilities, elderly and protected communities.

The neighbourhood is built using the X-LAM process, an innovative technology based on the use of wood, that for the first time reaches such important heights. All buildings are A+ energy class [7,8,13,14].

5. VIA FRATELLI ZOIA (PIAZZALE DELLA COOPERAZIONE)

5.1. Urban Context

This small social housing estate were built by two different cooperatives of inhabitants and it is located in an urban fringe between the edge of the city and the green area of Parco delle Cave. The site is also near the historical village of Borgo Cagnino and close to an urban area where there is an extensive settlement of public housing (which was realized in the early '70s) and some huge urban facilities: an hospital, sport fields and a school. The recent social housing estate has an overall surface of about 15.000 square meters and it is connected to Milan downtown by five bus lines although it doesn't have any underground station in the surroundings. Due to the small extension and the irregular structure of the site on which the neighbourhood was built, its layout seems to be poorly articulated and quite elementary; the plot is organized in two different parts: the first one, on the north side, consist of a large plaza and market area while, to the south, three buildings are arranged around a central courtyard. All open spaces are private areas sacrificed to public uses: both the garden within the domestic inner courtyard and the plaza [6]. The Fratelli Zoia complex is identified by introversion and closure to the outside: the internal space of the garden and the courtyard seems to be an enclosed and private space, as an adjacent lot of the apartments. This perception is strengthened by the presence of fences and the closing of the access gates at night-time. The facades of the buildings are rearward in order to obtain the continuity of public space systems and pedestrian paths. Within the neighbourhood commercial activities and shops are not present, while they are rather abundant in the historical village of Quarto Cagnino (though not really close to the social housing estate).

5.2. Architectural Features

The two 5-storey buildings, on the east and west side of the inner courtyard, are organized in 49 private property apartments with, at the ground floor, some collective spaces (for gatherings and meetings, parties and do-it-yourself activities), accesses and elevators. Differently, the 6-storey building on the north side of the courtyard has at his ground floor rooms for collective and handcraft activities with social aim (a maker of stringed instruments, an art gallery, an architecture firm, a theatrical tailor's shop) with shop windows facing the market's square. These activities are chosen by means of a public announcement for business incubators and they are required to promote events for inhabitants engagement in social and training activities. On the upstairs floors of the building there are 36 apartments for rent: 14 for "social rent", 22 for "fair rent". The apartments are generally small in size (one room or two room at maximum) and they are arranged along the two sides of a central hallway: that inhibit the possibility to have a cross ventilation. All the apartments have their own outdoor space: loggia for the home ownerships, balconies for the tenants. All the buildings are in highest energetic class thanks to the continuous EIFS system and the geothermic plant integrated with solar panels for energy supply.

6. FIGINO BORGO SOSTENIBILE (VIA RASARIO)

6.1. Urban Context

Figino Borgo Sostenibile is a village placed in proximity of the borders of Milan, between the Municipalities of Pero, Rho and Settimo Milanese, in an area that is delimited on the east side by some infrastructures and the green public area of "Bosco in città". The new neighbourhood is part, with the old village, of a large settlement. Figino Borgo Sostenibile is located on the south side of the old Figino village. The new settlement stands in a periurban territory, which is characterized by an incomplete set of services and infrastructures.

The new settlement has a surface of 4,7 ha and can holds about 1.000 inhabitants (nowadays the settlement is inhabited for just half of its hosting capacity). The new village, as the old one, is separated from the downtown of Milan (which is 4 km faraway) and the urban areas of Pero (because of the presence of a huge industrial area dividing them) and Settimo Milanese (which can only be accessed by private car). The only public transport service is a bus line that reaches Molino Dorino, the terminal of metro line 1.

Figino Borgo Sostenibile is morphologically characterized by an open layout and it is permeable in any directions to pedestrian and bicycle flows (cars are banned within the village). The new neighbourhood is composed of several building typologies. Buildings are arranged into blocks, creating a sequence of open courtyards, which differ in dimension and shape. Block buildings are organized on both the sides of a central distribution path. This path, in the first section, on the west side, generates a little plaza along the borders of which some shops and commercial local services will hopefully be present. Despite this could be a good opportunity, it doesn't seem enough in order to re-balance a long-term lack of primary services within and around the historical settlement of Figino. In addition to some general services, some special services for vulnerable people are already present within the neighbourhood.

On the opposite side, along via Silla, the social housing neighbourhood is bounded by a green area. Open spaces are generally intended as public space: most of them are green and perme-

able, with several dimensions and shapes according to the buildings layout. These open spaces spread for more than a half of the whole new settlement surface (about 15.000 on 27.500 square meters) [9].

6.2. Architectural Features

The new neighbourhood has its own morphological identity: that is partially due to its remarkable dimensions and to a homogeneous urban landscape. Even if four different architectural firm expressed several different languages, the result seems to be homogeneous and well integrated: the plaster colours of the facades highlight the presence of local services at the ground floor; the shutter solutions repeat; the design of pedestrian paths is continuous. There are more than 300 residential units of different sizes: from one-room to four-rooms apartments. Dwellings are arranged in buildings of several different heights (from two to five storeys) but have the same distribution system, while stairways and elevators are accessible from a private hall. The only exceptions are the buildings on the east end of the neighbourhood that have free access stairways and balcony, without any “safety filters”. Along the main pedestrian path some special apartments are assigned to individuals with some disabilities or, in the case of duplex apartments, are used for craftsmanship or firm activities.

A singular building, made of wood and glass, is conceived as a community space for social activities of the inhabitants; other spaces with a similar destination are located at the top of the only 13-storey building on the west side of the village, close to the principal access and to the main square of the neighbourhood. The highest energetic class is reached thanks to the continuous EIFS system, the high performances frames and the VMC systems for the air renewal [8, 9, 13].

7. CONCLUSIONS. WHICH PARADIGMS?

The observation of these five social housing neighbourhoods allows to state three different kinds of achievements: about the model of management provided; the features of the buildings; the urban effects and outcomes that derive from these housing developments.

In all these case studies a specific attention has been paid to the selection of several social profiles of inhabitant, considering both income brackets and skills, in order to encourage a fair intersection between resourceful inhabitants and vulnerable ones (of course sometimes they coincide). From this point of view, the mechanisms of the inhabitant selection are various and, in some cases, the social skills of the persons have more importance than the weighted income: that is coherent with the social perspective and mission of the challenge. Therefore, several forms of dwelling enjoyment are generally provided: fair sale of the apartments or several types of rent (“social”, with a significant public funding; “moderate” and “agreed”, according to different kinds of procedures). These aspects, which are basically referred to the assignment mechanism and to the management of the apartments, constitute a primary form of insurance about the establishment of a social context that has to be enough various and articulated concerning the social profiles of the inhabitants and different ways of living. Furthermore, the professional role of the “social manager” represents a protective element and a guarantee for different people concerning personal needs and community empowerment.

As far as the buildings quality and their features, an interesting point concern the layout of the public space and its role considered as an added value for the whole urban context. Open

spaces are often green and generally provided for people usage, being often placed in accessible position in order to foster a relationship between the new and the old settlement, even if in some cases the actual results are not in line with the initial expectations. Fences and filters between private open spaces and public spaces are reduced to the minimum in order to attenuate segregation feeling and to encourage the sharing of spaces, promoting people associations and mutual support. In spite of good goals, these solutions are still negatively perceived by the inhabitants, which are generally claiming more privacy and safety. On the other hand, building typologies are still referred to standard solutions that were generally fully experimented in past decades, not always with positive results. Direct accesses are often used in order to decrease the influence of distribution spaces in respect to the whole building surfaces. This solution doesn't consider several aspects concerning privacy or energy savings and temperature surges. Open-plan kitchens are often used, even in medium and large size apartments: this doesn't consider different ways of living and needs. Flexible dwellings and innovative solutions are not frequent. Sometimes old building codes are in a sense responsible of that (nowadays Milan has a new and more adequate building code). Technological features of buildings are generally up to date, making it possible to reach the best energy performances. Passive solar gain design strategies are often used in order to give to the living spaces the best exposure to sun radiation and to provide a proper distance between different buildings (avoiding shadow projection).

The third set of achievements considers the urban effects triggered by the construction of these new social housing settlements. In most cases these initiatives benefit the advantage of being realized on public property areas (using land lease agreements) that were previously zoned for public services and collective infrastructures (according to the interpretation of social housing as a collective service which was mentioned at the beginning of this paper). The sites on which the new settlements were built are often small and irregular in shape: this seems to have affected settlements layouts and design choices. Furthermore, in most cases, new social housing neighbourhoods have a marginal position and suffer their isolation from the surrounding urban areas: this seems due to their eccentric location and their residual condition as a result of being before intended as public service areas for collective infrastructure. According to the results, we may say that the original zoning would probably fit better for such kind of small and irregular areas. On the other hand, it has to say that most of the urban context surrounding the five new settlements, much more than residential buildings, would have needed to increase their set of services: this is particularly true especially for those urban areas that had a chaotic and no-limits growth without any plans and layouts. In most cases the functional organization of neighbourhood prefers to activate "residential compatible functions" (as fair handcraft activities) to which the promoters ascribe the skill to kick-off social relationships that could engage the inhabitants of the old settlement and the new ones.

However, the structural lack of services and local shops seem to be conditions which are limiting the possibility to activate widespread human relationships based on informal social practices. This is probably one of the reasons why new social housing settlements don't succeed in the creation of new urban attractive district.

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