Additive and polysemantic strategies for improving quality of suburban building stock

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ABSTRACT: Starting out from relevant architectural design experiences applied to buildings for public services and facilities in historic residential districts dating back to the Fifties and the Sixties of the 20th century, the mix of private/public activities and spaces figured as an important part of the strategies adopted. Through this analysis, it is possible to link these experiences to a number of good practices of innovation/transfer of European residential districts, aimed at increasing the quality of the public spaces through certain architectural design techniques.

1 INTRODUCTION

Historians (De Giorgi 1977, Tafuri 1982) have acknowledged the experiences of planning and design of INA Casa districts as a key part of Italy’s architectural culture of the latter half of the 20th century. Through self-criticism and re-examination of these experiences, new fields of research have developed which have, in turn, paved the way for exploration, in the fields both of theory and design work, by later generations of architects, directed also toward the theme of new districts hosting public housing edifices.

The residential districts built in Italy through the Piano INA Casa (housing plan managed by the State life insurance concern, INA), between the late Forties and early Sixties of the 20th century, make up one of the most interesting fields for investigation into the role that buildings for collective use and for services have played in residential district conceptual work and design.

2 PUBLIC NUCLEI AND NEIGHBOURHOOD UNITS

2.1 The role of public buildings and buildings for services

As we consider work for the districts of Valco San Paolo in Rome (1949-52), Malaspina Notarbartolo in Palermo (1949-57), Tiburtino (1950-54) and Tuscolano in Rome (1950-60), Falcchera in Turin (1950-58), Palazzo dei Diavoli in Florence (1950-58), and the building complexes at Is Mirrionis in Cagliari (1953-56), and via Pietralba in Bolzano (1954-56), constructed during the first seven years (1949-1956) of Piano INA Casa activities, we note the significant presence of public buildings and spaces (churches, social centres, crèches, primary schools and nursery schools, at times with annexes consisting in sports facilities, playing fields, police stations or gymnasia) and annexes for services (covered markets, shops, bars, pharmacies, surgeries, garages, bicycle parking spaces), playing a role in urban planning of the district.
As we consider the work carried out during the second seven-year period of the Piano INA Casa (1956-1963), in various districts – Torre Spaccata (1955-63) and Ponte Mammolo in Rome (1956-61), Borgo San Sergio in Trieste (1956-61), via Forcellini in Padua (1956-63), Belvedere in Pistoia (1957-74), San Giusto in Prato (1957-77), and the building complexes, Don Bosco in Bolzano (1956-61), Villaggio del Sole in Udine (1956-63), Strada vecchia Trevigiana in Conegliano (1958-62), Villa San Martino in Pesaro (1957-59), and Villa Adriana in Tivoli (1959-76) – we note a reiteration of the aforementioned practices, with integration within the plans for settlements also of other public buildings (junior secondary schools, libraries, civic centres, parish centres, public offices) and buildings for services (shopping centres, sectoral shops and district shops).

In the settlement plans and at the various design stages, these public buildings and buildings for services frequently constituted a central nucleus, linked by pedestrian ways and spaces inter-nervating the fabric constituted of residential buildings, with public spaces duly provided – in squares, courtyards, yards and public gardens. In certain cases, there was a tendency in the projects to accommodate a particular relation between public and private spaces. This transition process was both gradated and gradual, and was implemented by means of a broad range of internal and external spaces, such as arcaded passages, hallways or loggias etc., which occasionally led to the delineation of original prototypes for aggregation of public and private functions, as in the case, for example, of the casa-ponte (bridge house) with a suspended street for shops, constructed in the INA Casa district, Villa Bernabò Brea in Genoa Sturla (1950-53), based on a group project headed by Luigi Carlo Daneri.

Nowadays, most of these nuclei for services, and the buildings making them up, are either run-down and in a state of neglect or have been employed for purposes differing from those originally foreseen (regulatory standards have changed; the scale on which the services were provided has been found to be inadequate over time vis-à-vis the needs of the inhabitants).

Public spaces (squares, courtyards, yards, gardens) have gradually been taken over by the inhabitants, by individual households, by households grouped together as condominiums, or by private players. This development has led to the introduction of partition structures such as fencing, gates and railings, with parks and installations therefore diverging from the originals.

One of the main reasons for such a process of occupation of spaces within districts is linked to the need for parking lot areas, in view of the extraordinary rise (in Italy and also elsewhere) in car numbers per household over the decades following the period of the Piano INA Casa.

A number of the spaces termed internal/external (loggias, verandas, balconies, arcaded passages) – which are a frequent feature of these residential buildings, and whose presence is owing to the original intention on the part of designers to provide for useful ‘extension’ of inhabited spaces, while ensuring a harmonious composition in terms of the full and empty elements of recurring façade architectural devices – have also been gradually occupied by inhabitants, via inclusion of a considerably varied array of enclosing structures (sometimes temporary and often permanent).

Many studies (Capomolla & Vittorini 2003) have provided detailed analyses not only of the manners of transformation of the works dealt with here, which are a key part of our architectural heritage, but also of the factors of deterioration emerging over time, impacting public spaces and spaces with relational functions, or with functions of distribution, outside the housing unit.

The recovery or ‘refurbishing’ interventions to which these studies refer mainly focus on the upgrading of open-air areas within the district. The interventions entail cutting back on impermeable surfaces in favour of new spaces (for squares, gardens) with surfaces which are more permeable; assignment of new areas for parking lots or underground parking; construction of areas for sports activities; the re-opening of arcaded passages; and restoration, recovery or ‘refurbishment’, or construction of partitions in accordance with the original project drawings.

In regard to individual buildings, these studies generally focus on selection of intervention criteria that are compatible with the architectonic characteristics of the district analysed, for the introduction of focal point ‘additions’, arising out of functional needs which emerged after construction of the building and/or which have been necessitated by compliance with regulations (closing of balconies, inclusion of internal lifts or lifts outside the body of the building, or second toilets/bathrooms within the home, drafting of specifications for restoration techniques and for the inclusion of supplemental recurring technological components: thresholds, cornices, cladding, windows and doors).
However, generally speaking – precisely because of the value of these works, as a part of our architectural heritage, as resources of historic interest, also of interest from the viewpoint of material culture – recovery/refurbishment work in these cases is based on criteria inspired by the principle of ‘integrated conservation’, which undoubtedly cannot be adopted within the context of the upgrading of more recently constructed districts, because the said criteria would greatly limit possible manners of transformation, upgrading and adjustment of the said districts.

2.2 Hybrid buildings for shops and housing

Among the various solutions adopted to delineate the said service nuclei in the residential districts constructed during this period, the solution to be considered regards, in some cases, buildings for shops and housing. Such buildings are derived from application in these districts of an architectural type which, in terms of urban context, has characterised the fabric of Italian and European cities from the Middle Ages on until the time of today’s modern cities (albeit entailing a variety of processes of articulation and change).

Application of this architectural type to such districts has frequently taken the form of experiences based on an interpretation of the theme that more or less conforms to the original configuration. One example is the linear building with shops on the ground floor and with housing, designed by the group headed by Mario Ridolfi – for the aforementioned building complex in Conegliano (1958-62) – in which the position of the arcaded-passage recess providing access to the housing units and to the service entrances of shops matches the position of the projecting basement of the shop’s windows opposite.

At times, application of this construction typology has provided an opportunity for designing what can truly be considered architectonic “hybrids” in which linear superimposition of shops on the ground floor and housing units, on the floors above, leads, on the one hand, to the adoption of a pronounced blending of linguistic modes and, on the other, to interesting volumetric combinations. The case of the linear, multi-floor building for shops and housing units – designed in 1956 by Enrico Castiglioni at the Villaggio INA Casa district in Cesate near Milan (1950-59) – represents an original, modern re-interpretation of the traditional running balcony type of housing unit, with inclusion of an interestingly variegated division of compositional elements, featuring a subtle staggering of floors and well designed technical solutions for the detail work (Giambruno 2002).

2.3 The relationship between seamless fabrics and key territorial features or landmarks

In Italy, the adoption of well-consolidated settlement morphologies such as the closed courtyard or cluster systems (understood as spatial combinations made up of semi-open courtyards) does not mean that more radical experiences were neglected as a part of the work on designing and planning public residential districts.

Following cases such as the Unità di abitazione orizzontale (horizontal residential unit), based on Adalberto Libera’s project, in the Tuscolano district of Rome (1950-60), or the aforementioned San Giusto district in Prato (1957-77) – where the group headed by Ludovico Quaroni (Tafuri 1982) developed a ‘swirling’ compositional sequence of habitat cells which, transiting from the tower-based to the courtyard-based planimetrical module, provides a seamless aggregation capable of determining a kind of urban fabric – materials and compositional techniques were developed for more extreme, or radical, experimentation (Quaroni 1960, Tafuri 1964), such as Quaroni’s own experimentation for the competition project for the CEP district at San Giuliano in Mestre (1959).

The courtyard, as matrix of the theoretically extendable grid, becomes, together with other modes of aggregation, the mode through which a geometrical system of figures can be obtained which govern the configuration of the settlement, at times with repercussions within the territorial context: large linear buildings, generously proportioned crescent-type semi-courtyards, and sequences of tower focal points become the subjects of this variable geometry.

The districts, Falchera in Turin (1950-58), Harrar-Dessiè in Milan (1950-55), Via Cavedone (1957) and Via della Barca in Bologna (1957-62), provide examples that anticipate more radical experiences, such as the INA Casa district for 4,500 persons at Forte Quezzi in Genoa (1956-58), designed by the group headed by Luigi Carlo Daneri, where the buildings – re-evoking Le
Corbusier’s Plan Obus residential infrastructures in Algiers – embody a reflection upon the landscape through figurative reproduction of the tier curves characterising the site (De Giorgi 1977, Tafuri 1982).

3 SETTLEMENT STRATEGIES AND COMPOSITIONAL TECHNIQUES

3.1 Adding/enlargement

The most immediate response to the need to create new living spaces – in view of the various needs of the inhabitants, new regulatory provisions, and changing social policies – consists in enlarging existing residential buildings.

Certain techniques for addition may develop, mainly on the level of individual buildings, through work on bodies constructed above existing bodies, with the inclusion of new, raised artificial land, or through planning for projections which physically prolong the building outward.

The project for the Gemini Residence Frosilos, drawn up by the Dutch MVRDV office (Fig.1), explores the latter compositional technique. Here, the frontages of the housing units face outward from the reinforced concrete cylindrical bodies of the existing silos, with uninterrupted loggias facing the landscape (Clemente & De Matteis 2010). The interior of the silos becomes a large vertical hallway with zenithal illumination. This interior features running balconies leading to the various housing units.

Another example – in this case, dedicated to workplaces – is provided by the project for re-use of Amsterdam’s Kraanspoor, drawn up by OTH (Fig.1). Here, a lightweight, transparent three-floor office building has been constructed over an imposing bridge crane which survived demolition work in the area occupied by a shipyard (Ciorra & Marini 2011).

Many techniques for addition may be noted in the history of our cities, some of which can be encountered at certain points in 20th-century architecture. A genealogy of these techniques developed by the Italy’s architectural culture can be drawn up, starting out from architectonic experiences dating back to the earliest years of activity after World War II. These techniques were applied above all to residential buildings (Alatri and Astaldi residence in Rome planned by Mario Ridolfi and Wolfgang Frankl), but also to complexes (Polano 1991) for production and for offices (Loro Parisini office building based on Luigi Caccia Dominioni’s project).

3.2 Filling/density

A second possible settlement strategy, within districts, is the introduction of new spaces or uses inside existing residential and production complexes. This enables development of new compositional techniques such as will determine a different density within the spaces between existing buildings.

This can be seen in the winning project of the competition for the new Masterplan of the Bakemabuurt-Geuzenveld district, by the Italian architects’ office, Baukuh (Fig.2). The need to construct individual homes with garden generates a grid which fills the spaces determined by the foreseen demolition of the minor linear buildings by Jacob B. Bakema.
The grid is articulated in variously sized lots, in which various residential typologies are inserted (the typologies are organised by means of a set of project specifications for possible homes, mainly with patio) (Mastrigli 2007). The only limitation is the height of the grid of houses with patio (one floor above ground).

The roofs of the houses can be used as terraces and terraced gardens. By setting a minimum number of access roads required for the creation of a maximum number of homes with individual access, private garage and garden, the project delineates a new hierarchy of spaces between the pre-existing buildings, two floors of which (the ground and first floors) are transformed into duplex homes, with independent access and private lock-up garage.

3.3 Mixing/hybrid

The mixing of various functions, frequently associated with movement within the urban space, has been explored in many cases, pertaining to various historic periods. The most notable examples of inhabited bridges (Dethier 1991) include an eloquent prototype of this historic hybrid, while the possibility is left open to encounter similar techniques in more recent projects and constructions.

One such project is the public park created along the High Line (Fig.3) – an elevated railway abandoned some time ago, leading (over a 2.4 km stretch) to Manhattan (Ciorra & Marini 2011) – or the similar Promenade plantée (1986-93): a transformed railway viaduct in Paris (4.7 km) between Place de la Bastille and Boulevard Périphérique.

A further instance is the A8ernA project (Mastrigli 2007). A viaduct on piers over the river was constructed in the late Sixties for the new A8 freeway. The viaduct dramatically splits the urban fabric up. This split is symbolically represented by the resulting separation of the church square from the park in the vicinity of the town hall (Fig.3).

The project represents an attempt to re-forge the links between the two parts of the urban centre separated by the viaduct. Under the viaduct is a monumental cathedral-like structure characterised by a sequence of 7-metre tall piers. The project turns this space into an area capable of functioning as a catalyst of activities such as may instil new life into the district.

Starting out from a series of proposals, expectations and requests, in regard to the transformation programme, drawn up in a document prepared by the district’s inhabitants (residents and
tradespeople belonging to various age classes), the project led to the creation of a sequence of spaces below the covered public space created by the viaduct. These spaces include, from West to East, a skateboarding arena, playing field (football and basketball) and dancing areas, a parking lot, a supermarket, a florist’s shop, a fishmonger’s shop, a bus stop, and, facing the river crossed by the freeway, a small ‘marina’ for the use of boaters.

Here too, traces of such residential building hybridization and polysemantic strategies – in projects programmatically aiming toward integrating housing and collective services within a single architectonic complex, as for example the Centro sociale cooperativo Grandi e Bertacchi in Milan (1950-53) or the Olivetti Centro per servizi sociali e residenziali (social and residential services centre) in Ivrea (1967-75) – can be noted in the interesting, innovative experimental work undertaken between the Fifties and Seventies of the 20th century.

4 CONCLUSIONS

The low quality of the public and relational spaces of many of the residential districts dating back to the latter half of the 20th century, and their deterioration, are probably due, in Italy, to various intrinsic factors (incomplete and/or inconsistent construction of the works foreseen by the projects), and due also to factors arising at a later stage (inappropriate uses, occupation of land, transformations for compliance with regulations).

However, we note that the relationship between public nuclei and neighbourhood units, the presence of hybrid buildings for shops and housing, and the relationship between seamless fabrics and landmarks bear witness to the fact that such examples of architecture still display vitality and are still of contemporary significance. These examples may be compared with certain contemporary settlement strategies adopted to instil new life into the districts of cities of Europe and elsewhere (Reale 2008, Gelsomino & Marinoni 2009.).

Strategies on the level of the district and of the portion of the city, in turn find articulation, on the level of individual buildings, in compositional techniques based on combinatory systems similar to those developed, for example, by Vicente Guallart for ‘logics’ of relational structures (Guallart 2008), which may be explored and ordered in a catalogue open to later additions.

REFERENCES


