Housing Solutions through Design

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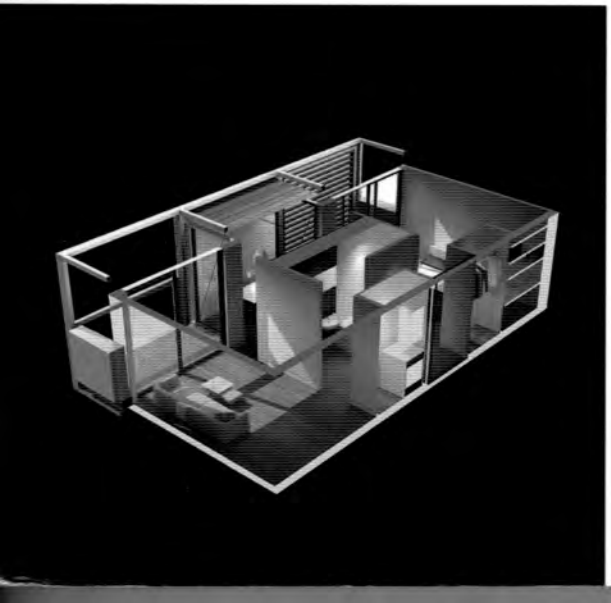

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GRAHAM CAIRNS

FOREWORD

This book is the second in the Housing the Future Series developed by AMPS (Architecture, Media, Politics, Society) and Libri Publishing. One of the aims of the series is to collate a broad sample of the work being done from a design perspective in universities across the world on the issue of affordable housing. This publication continues that effort by bringing together academics and their students from a total of nine countries. Their efforts represent a combination of theory, primary research, explorative design and, in a number of instances, direct community engagement and the development of live projects.

This very 'real' engagement with the issues of housing affordability is a key component of this series and is why the series invites practitioners to discuss their work. In this book, those practitioners include an award-winning commercial practice from the UK, Shed KM, and two of the most important reference points in the area of housing affordability and community development internationally, the world-renowned Herman Hertzberger, from the Netherlands, and the US-based but internationally active Habitat for Humanity. The inclusion of the work of such practices is not simply important because of their undoubted international status: it is important because of the work they do and the role models they represent for a generation of architects and designers who, in the coming years, will be faced with the need – and the opportunity – to develop new approaches to housing design.

Whilst nobody expects the design of housing to solve larger social problems, improved and more affordable housing models are the contribution that we, as architects and designers, can make; and as such, it needs to be taken seriously. By highlighting the work of academics, students and practitioners engaged with this task, the Housing the Future series hopes to make its contribution, no matter how small, to efforts evident worldwide from designers and architects of all types, to improve living conditions, social and community empowerment and the economic security of individuals struggling in multifarious scenarios in which housing costs and quality are either unaffordable or in apparently never-ending decline. Engaging with an architectural issue that they frame this way, the contributors to this book should be supported.

CHAPTER EIGHT

ROBERTO RUGGIERO

PUBLIC HOUSING ESTATES IN ITALY FROM THE 1960S TO THE 1980S – A CRITICAL ANALYSIS

INTRODUCTION

The public housing policies pursued in Europe from the 1960s to the late '80s have left a vast legacy of housing estates created using industrialised building systems. They were built mainly in the suburban areas of major cities, sometimes as real 'new towns'. From the start, in Italy at least, most of them turned out to be unfit for the inhabitants' needs. Currently, they consist of rapidly deteriorating, obsolete and often overcrowded homes within neighbourhoods where the 'crisis', now, is not only environmental and technological, but also social, political and cultural.

Partial and incomplete responses have emerged with reference to specific recovery policies adopted in several European countries, either before or after the recent policies of what is now known as 'social housing'.[1] In Italy, particularly in the south, the effect of the economic downturn from 2008 onwards required thinking that went beyond the strategy of 'social housing' in favour of more specific, urgent and effective solutions. In relation to this scenario, this chapter seeks to:

1 Although most European countries use the term 'social housing' in their present policies on low-income housing, in the literature there is no single definition. However, nowadays, it generally refers to housing provided for people on low incomes or with particular needs by government agencies or non-profit organisations, and that is owned, mainly, by local authorities and private registered providers (as defined, in the UK context, in section 80 of the Housing and Regeneration Act, 2008).

- Establish a critical analysis of public housing policies pursued in Italy after World War Two, up to the present
- Conduct an in-depth examination of the public housing estates built between the 1960s and '80s, which have become one of the most serious social, environmental and technological emergencies in the country
- Focus on the last large program of industrialised housing in Italy: the Extraordinary Program of Residential Housing (PSER), carried out in Naples after the 1980 earthquake
- Present remarks about the policies currently practised in Italy in relation to the crisis of existing industrialised housing estates.

THE THEMATIC BACKDROP: PUBLIC HOUSING POLICY IN ITALY AFTER WORLD WAR TWO AND UP TO THE PRESENT

In the 30 years after World War Two, Italy experienced a marked phase of modernisation and developed into an industrialised nation. This brought about not only changes in social and economic organisation, but also a marked urban and environmental transformation of a large part of the country. This process developed in a rapid and non-homogeneous way, in a country with differences in culture and physical complexities, leaving an unpredictable legacy. As in other European contexts, during this period several housing estates were built, mainly for the working classes and situated on the outskirts of the principle urban centres.

The first low-income family housing plan in post-war Italy was established on the 28 February 1949 with the INA-Casa Plan (43/1949 Act). Initially lasting seven years, this was subsequently extended by a further seven (1148/1955 Act). Mainly devoted to the working class, the plan was funded by government investments (providing that the property was owned by a government authority, in accordance with the UK model of 'council housing') and also by employers and employees through specific taxation which, for the employees, involved a small deduction from their monthly salary ('the equivalent of a cigarette a day', in the words of the propaganda of the time).

The INA-Casa Plan was not only an instrument to satisfy the need for working-class housing but a way to curb unemployment. For this reason, the planners applied low-cost traditional technologies, compatible with the need to employ unskilled labour.[2] Aimed at researching new housing typologies more than new construction techniques, the INA-Casa Plan delayed the technological development of the building sector in Italy. A hasty recourse at the beginning of 1960s to adopt precast industrialised

2 In the first seven years, a total of 334 billion lire were invested for the construction of 735,000 rooms, representing 147,000 units. At the end of the fourteen years of the plan, the rooms built totalled about 2,000,000 (i.e. 355,000 units).

systems turned out to be belated. In any case, the INA-Casa Plan was unable to satisfy all the housing demand which at the beginning of the 1960s was still high.

Figure 1: INA-Casa PLAN, Villaggio Olimpico, Rome 1957–60

With later policies it was decided to change direction in favour of a strategy that promoted industrialised building systems that were deemed more suitable, being faster in construction, lower cost and technically more reliable. This lead to new legislation for a second large program of residential building for the lower income classes. Innovative regulations were drawn up to apply to what was announced as a marked

transformation of this sector. The revolution was primarily the result of the application of three subsequent laws: 60/1962 ACT (the GESCAL fund),[3] 167/1962 Act (the PEEP plans),[4] 865/1971 (the concept of ERP).[5]

However, as a consequence of technical policies of the preceding years, Italy was unable to develop its own system and ended up importing those utilised by the French in the urban planning of their suburbs. The principle districts created in this period focused not only on precast systems but also on methods of industrialisation of the building sites. Particularly successful were the 'tunnel', the 'banches et tables' and the 'large precast panel' systems which turned out to be less efficient than was thought. When France at the beginning of the 1980s developed later precast systems, the so-called 'light' system, Italy continued, instead, to buy clearance stocks of the older technology from the French market.

The period of prefab construction for housing (and, with it, the period of public housing) finished at the end of the 1980s, with the last works belonging to the Extraordinary Program for the Reconstruction (219/81 Act) in Campania and Molise after the 1980 earthquake. The outcome was decidedly negative: it was unable to satisfy the housing demand and created, in just a few years, a new housing emergency often determined by inefficient housing estates. Starting from the 1990s with the transfer of technical and administrative competence to local authorities (mainly the regional councils), further compromises were made in the programs for new settlements and also in the efficiency of the management of existing housing, creating more differences between the regions in the north and those in the south of the country.

After years of inactivity, the 112/2008 Act (Piano Casa) should have represented a new opportunity for housing in Italy, even considering the economic downturn and the return of a widespread housing emergency. In accordance with the current European policies, the Piano Casa also introduced to Italy a new model of social housing within this period, directed mainly at dwellings rented on a permanent basis, built or rehabilitated through public and private contribution or employing public funding, rented for at least eight years and also sold at affordable prices, with the goal of achieving a social mix. Due to the lack of housing policy based on extensive state funding, it was (and remains) a parallel model to public housing, based on a new link between public and private capital. Despite the start of some programs, mainly supported by private foundations, the Piano Casa seems so far to have failed in its mission, just as the ongoing contemporary economic crisis has contributed to further aggravating the housing problems in Italy.

3 With this act a ten-year program of new housing for the working class was drawn up. It was based on the so-called GESCAL fund, most of which made up of state funds.

4 This act gave an effective instrument (PEEP – Piani di Edilizia Economica e Popolare) to the regional and local authorities to acquire new areas for new housing interventions.

5 ERP: in English, *Public Residential Housing*; in Italian *Edilizia Residenziale Pubblica*.

PUBLIC HOUSING ESTATE CREATION IN ITALY BETWEEN THE 1960s AND 1980s WITH INDUSTRIALISED SYSTEMS: THE REASONS FOR FAILURE

The public residential housing neighbourhoods built in Italy from the 1960s up to the end of the '80s, using industrialised construction methods, are now one of the greatest social emergencies present in the country.

Laying aside the failed planning policies that accompanied the creation of many public housing estates in this period, it is clear today how the industrialised building method (which theoretically should have determined a better quality of life for the inhabitants) turned out to be completely inefficient except only for its speed of construction. In this process, the interests of industrial production ended up prevailing over good planning. Thus excessively rigid and predetermined construction systems created in the absence of mediation by the planners produced banal building schemes and architecture indifferent to local cultures. In addition, most of the technologies adopted turned out to be ineffective from a performance perspective and also in terms of durability, falling very rapidly into decay. Political appetites and business interests prevailed over the legal, technical and design rules, which, despite being based on innovative theories, were unable to avoid shoddy construction systems.

Today we can state that many of the clear defects of these districts are due to congenital planning and production defects. Often the planners were indifferent to the real demands of users and were totally unprepared for industrialised construction models. The builders, instead, driven by essentially economic motives, enthusiastically greeted the possibility of using prefab systems. Even worse, although based on an industrial logic of optimising the application, building systems 'on site' proved even more mortifying for the quality of living space produced. For example, tunnel formwork systems (*coffrage-tunnel* in France) were widely adopted in this period for reasons of speed and economy, but they left no room for space planning because the building systems automatically produced a 'series', theoretically endless and homogeneous, of space/function units. In effect the planners themselves were forced to use systems unsuitable for residential purposes, fit only for optimising costs and construction times. These methods were overall detrimental to the lives of the inhabitants, who were unprepared for serial architecture. Frustrated at living in a place in which they didn't belong, their reaction was often dissatisfaction and even vandalism.

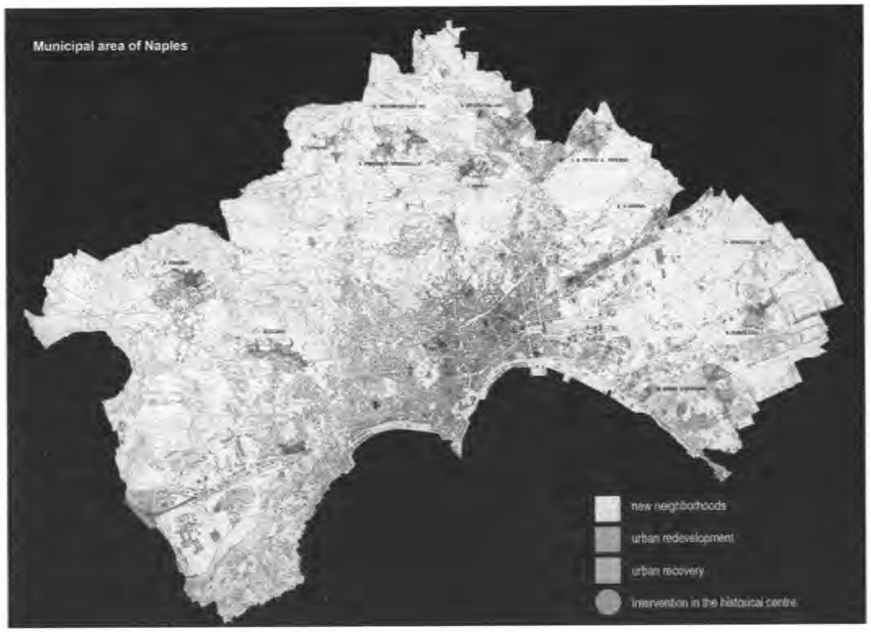

Figure 2: The PSER interventions in the municipal area of Naples

A CASE STUDY

The Extraordinary Residential Construction Plan (PSER) was drawn up in Naples following the earthquake of the 23 November 1980.[6]

Naples and its province have a long tradition of housing problems, only partially resulting from a density of population that is among the highest in Europe. According to the 1981 census, in the Naples municipality alone, 1,210,503 people lived in 1,198,223 rooms with almost a total lack of new housing constructed in the past few years. Of existing buildings, 6,321 were collapsing and 4,010 partially uninhabitable. In the last call for the allocation of new public housing (1977–8), there were 37,000 requests for a total of 1,700 dwellings. Every year 300 households, on average, were forced out of their houses, which were unsafe even before the earthquake when 32 per cent of the housing stock was damaged.

The 1980 earthquake worsened an already serious situation. The strategy adopted was to apply urban plans already approved by the administration before the earthquake,

6 In particular, the earthquake hurt Campania and Molise, causing 2,914 deaths, 8,848 injuries and the displacement of 280,000 persons. In Naples, which was fortunately far from the epicentre, there were 49 deaths, five collapsed buildings, 6,000 buildings evacuated and about 112,000 people displaced.

originally devoted to the redevelopment of suburbs and not yet effective.[7] A disaster like the earthquake was used as an accelerator for processes that had not been put into practice.

The PSER (219/1981 Act) was drawn up to build new housing estates or to restore those existing but damaged, amounting to a total of 20,000 dwellings (not enough to satisfy the housing demand in Naples at the time) for about 100,000 inhabitants, encompassing 2,170,590 square metres of housing, 16 green areas for up to 100,000 square metres, 15 neighbourhood parks up to 170,000 square metres, 3 urban parks over 100,000 square metres; 94 schools, 27 health and social facilities, 22 cultural facilities; 37 public offices and other facilities of common interest; 12 churches; 1,500 premises for commercial and craft activities; productive areas for about 2,500 employees. The whole thing was designed to be distributed across 13 areas in the municipality of Naples.[8]

The new neighbourhoods were all built using industrialised construction systems. In relation to the technical choices, methods and procedures implemented, but also to the dimension of the intervention, the PSER operation was a vanguard and experimental plan in the national history of public urban planning. It should also have been a program of absolute excellence in terms of performance. But particularly for the new neighbourhoods, this was not the case: not all the facilities were completed and the construction systems were not as efficient as hoped. Above all, it was a relocation of the population into an area in which the social context was already problematic.

Unlike the INA-Casa interventions, most of these neighbourhoods are rapidly and seriously degraded, in social, environmental and technological terms. The buildings are mostly badly damaged, the dwellings are often overcrowded and penalised by rigid and not always functional living spaces. Part of the ground levels should have been original spaces for commercial activities and services; the open spaces should have been characterised by a dense presence of public parks. Today, the ground floors are closed or improperly used for residential purposes (or lock ups) and the open space is used as parking areas. The monotonous repetition of the dwellings and the rigidity of the internal space solutions are the result of a housing model that has been unable to satisfy the needs of the inhabitants, also because of the rigidity of the industrialised construction systems. Often these neighbourhoods are not connected with the city centre or with other areas of interest. Many blocks are built with concrete pillar/beam systems and concrete panels for the envelope which today is totally inefficient in terms of thermal and acoustic insulation and waterproofing, or with three-dimensional

7 'Piano delle Periferie' (Outskirts Plan), adopted in the spring of 1980 and not yet effective

8 The areas are: Soccavo, Pianura, Piscinola-Marianella, Chiaiano, Miano, Secondigliano, S. Pietro a Patierno, S. Arpino, Secondigliano II, Barra S. Giovanni, Ponticelli 167, Secondigliano 167 Soccavo, Pianura, Piscinola-Marianella, Chiaiano, Miano, Secondigliano, S. Pietro a Patierno, S. Arpino, Secondigliano II, Barra S. Giovanni, Ponticelli 167, Secondigliano 167

reinforced concrete systems built on site (tunnel formwork system).

They are energy-consuming settlements, not simply due to the reduced performance of the concrete panels of the envelope. The lack, during the planning and construction phases, of any strategy for reducing energy consumption and increasing thermal comfort has meant that most of PSER interventions are currently far from the now-acceptable standards; likewise, the size and the emptiness of their open spaces share the responsibility for the environmental degradation that has resulted over the years. In these buildings, there is no trace of that 'environmental responsibility' which in those years was in its early stages. The houses are hot in summer and cold in winter and the large outdoor spaces are dominated by climatic conditions. This is the reason for the clearly visible attempts at 'spontaneous' energy adjustment by the residents who – using awnings, porches, double glazing and other DIY devices – have created, over time, a supplementary apparatus to improve the level of comfort of their own living space. Other concerns are the lack of a reference social model; the priority with which the households were chosen; the degradation of part of the components and construction systems; improper use of the spaces by the inhabitants; and finally sabotage by the residents as a manifestation of their malcontent.

Figure 3: The PSER interventions – (Left) Miano Neighbourhood, (Right) Sant'Arpino Neighbourhood

THE CRISIS OF INDUSTRIALISED HOUSING ESTATES AND THE CURRENT SOCIAL HOUSING POLICIES: CAN THESE BE THE ANSWER?

The last ten years have marked, not only in Italy, a return of a widespread housing emergency fuelled by economic recession and by new demands for low-cost rented accommodation (only in a small part fuelled by recent immigration). This emergency can also be read through some figures.[9] In 2012, 60% of Italians stated that they paid rent amounting to more than 50% of the family budget, a percentage usually considered a threshold of the poverty level. The availability of public housing satisfies today little more than 700,000 households, that is one-third of those who are in a problematic situation of need. Housing problems in Italy are on the increase. Among the causes of this phenomenon are refugee intakes and immigration in the last few years which have seen, for example, in 2014, the number of foreigners residing in Italy increasing by 227%, with an incidence of 7.4% on the national population.

In addition to these numbers, there is another emergency ascribable to past mistakes, with particular reference to the housing policies pursued from the 1960s to the 1980s. As stated above, many *grand ensembles* built in those years have prematurely ended their life-cycle and have become sites of degradation and social emergency. In this context, the public housing districts in the centre and south of Italy have emerged as a specific national emergency, considering that this is the part of the country which has always suffered from unemployment and social problems. The 'Zen' in Palermo, the 'Vele' in Secondigliano (Naples) and the 'Corviale' in Rome are only the most renowned examples of vastly populated housing estates where the residents live in very critical conditions. Many of these areas have partially escaped control by administrations, resulting in a higher degree of rent arrears, a phenomenon of squatting in dwellings and common spaces, and bad maintenance conditions (with thousands of homes unassigned because they are uninhabitable). In this context, an aggravating factor is the widespread presence of criminal organisations that, in part, use and sometimes manage public areas and dwellings.

The social housing policies deployed in Italy starting from the Piano Casa regulation (2008) have only partially dealt with problems of the current housing emergency, both in regards to construction of new housing stock (fewer dwellings have been built compared to the demands) and the recovery of existing stock. The involvement of private capital for new building and for the refurbishment of existing public housing promoted by Piano Casa has turned out to be difficult to carry out in a country where, until now, public funding has been the engine driving large programs of social residential housing and which, for the past few years, has experienced a strong recession.

With particular reference to the original public housing estates (some of the dwellings have been sold to the tenants in accordance with the 'right-to-buy' policy adopted in Italy starting from the 1990s), Italy has recently applied two strategies which appear totally ineffective for the large and densely populated neighbourhoods built under the 1960s–80s housing programs:

a) The relaunch of the 'right-to-buy policy'[10] (which today makes planning of renovation intervention even more complex)

9 Source: 'Cassa Depositi e Prestiti', *Report Social Housing 2015*

10 From 1994 to 2012 over 200,000 lodgings were sold, reducing the supply managed by public companies by over 50,000 units (down from 800,000 to 750,000 homes).

b) A maintenance, renovation and modernisation program for the existing public housing estates (enforced with the Ministerial Decree, 16 March 2015) ineffective for the dimensions of the problem.

With reference to the high environmental and economic costs but also to the logistical difficulties relating to possible demolition/reconstruction policies, it would be useful to broaden our view on other contexts, looking for realistic and responsible urban strategies and technical policies practised up to now (if they exist) to solve the problem. In Europe, several examples exist of recovery policies devoted to these kinds of estates. For example, Park Hill in Sheffield (2010–13) and many other interventions carried out in the UK by Urban Splash represent vanguard interventions from the technical and organisation perspectives. However, they emerge in countries that are relatively economically sound, where the recourse to private capital has enabled many interventions; however, at a cost such as the removal of the majority of the residents. Often these interventions have taken place in contexts of gentrification and/or pursuing so called Living Over The Shops (LOTS) strategies (as in the case of Brunswick in London), which has favoured a property re-evaluation of the dwellings but also of the rent. In the cases where, as in the south of Italy, the scanty appeal of these urban districts and the economic and social conditions of the settled communities make such actions impossible, it is necessary to hone innovative approaches and instruments to find intervention strategies compatible with an Italian reality.

For many of the estates, such as those created by PSER, the current social housing policies in force in Italy are not realistically applicable. Nor is it reasonable to conjecture, in the short or medium term, that these areas will be the object of gentrification on the basis of the Anglo-Saxon model (assuming this to be the right one). In many cases, these neighbourhoods have become real slums that need extraordinary programs for which it appears unrealistic to foresee incentive formulas that could attract private capital. Their regeneration should occur first at the social level, before the urban and the technological aspects are addressed. In many cases, the situation is so compromised that it appears very unlikely that a similar process can be triggered without a reappropriation by the state of the areas that today escape, at least in part, its control. Before this, however, it seems indispensable to have a strong political will, above all on a national level, to prevent the emergency necessitating demolition of whole neighbourhoods (a situation with huge and probably unfundable environmental, urban, economic and social costs). The complexity of the problem requires 'extraordinary' measures, as was the case with PSER where similar measures were adopted after the 1980 earthquake.

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Dr Graham Cairns has taught at universities in Spain, the UK, Mexico, South Africa and Gambia. He has worked in architectural studios in London and Hong Kong. The author and editor of five books, he has delivered keynote talks internationally and has published multiple articles on architecture, film and advertising in scholarly journals. **Dr Kirsten Day** is a registered architect, lecturer (Interior Architecture, Swinburne University of Technology) and researcher (Centre for Design Innovation, Swinburne University of Technology). She has worked as a researcher in solar technology and brings those skills to her practice. **Dr Christakis Chatzichristou** is currently an Associate Professor of Architecture at the University of Cyprus. Awarded a PhD in Architecture from the Bartlett School of Graduate Studies at University College London in 2002, he has taught at Pratt in New York (visiting professor, Spring 2010), the American University of Beirut and the Lebanese American University (2002–3).

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