Anthropological Aspects and Spatial Dynamics in New Forms of Living. Recovery and Conversion of a Squatted Industrial Building: The Case Study of Spin Time Labs in Rome

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Abstract. The research has as its object the analysis of the squatting of Spin Time Labs, interpreting it as a manifesto of the housing problem in Italy and specifically in the city of Rome. There are more than one hundred occupations for housing in the capital, one hundred and forty if we consider all the other types of occupations (cultural, recreational, political ...). It is therefore natural to question how it came to form this "Informal City", a reality parallel to the institutions, and what did not work in the fundamental State-citizen relationship, in regard to the right to housing. The purpose of the research is to succeed in finding a replicable model, through which these forms of occupations can be stabilized in a state of legality and constitute a solution to the problem of social housing and the Caat. An alternative solution to the uncontrolled expansion of suburbs through new satellite cities without services, a solution that allows the State to exploit the public assets it has and currently in a state of neglect or occupation.

1. Introduction
The right to housing is the economic, social and cultural right to adequate housing and shelter. In the Italian Constitution there is no specific protection for the right to housing, but in some articles there is a clear reference to values related to the right to housing. This right is seen as an instrument of propagation of all the other fundamental rights of the individual, allowing them to be valid and effective. Today, the housing crisis is unfortunately a reality: in Lazio in 2015 the number of evictions was 8,745, 89% of cases due to guiltless default [1].

The Italian population, particularly in the last years, has shown a growing housing discomfort: between increasingly precarious living conditions, cuts in essential services, increased costs, the housing emergency becomes an increasingly acute emergency. This situation has led to the emergence of movements that strongly claim the right to housing. As a response to the problem, they begin to take possession of buildings that have been left unused, which previously had a different destination than the residential one.
The case study building, Spin Time Labs, is a former office building, the INPDAP\(^1\) office building, abandoned in 2011 and located in the San Giovanni neighbourhood in Rome, has been squatted and partly readapted by the inhabitants themselves in order to obtain living spaces. The attempt of this research is to construct a contextual and interpretative model that, starting from a building used as offices, designs homes functional to different types of family by number, geographical origin and cultural sphere [2]. Consequently, a contextual and interpretative model also means a project strongly influenced by and with the inhabitants-squatters.

2. The housing emergency in Italy: Rome as a case study

Today the housing emergency is a reality. The difficulty of buying or renting a home and securing a space in which to live with one's family is not a new problem, but the crisis has had a major impact on the situation. Income from workers is increasingly incompatible with house prices set by the real estate market. [3] Housing is not lacking, but what is increasingly lacking is the ability of people to bear the costs of a rent or mortgage. This situation has led to the birth of movements that strongly claim the right to housing. The struggles for the home began, already since the last century, to deal with the political choices made by the various governments. [4] As a response to the problem, they begin to take possession of buildings that have been left in disuse and the self-restoration is proposed. For years, the goal of some of these movements is to ensure that the policy of self-recovery becomes the main source for resolving the precarious living conditions of the Municipality of Rome. The struggle for a home has for years begun a long and complex process of active and subversive participation on the territory, in order to "satisfy" the demand for low-cost housing in an autonomous way.

In Rome, the main movements are: three: Blocchi Precari Metropolitani (BPM), Coordinamento Cittadino di Lotta per la Casa (CCLC) e Action. The Tenants Union, Coordinamento Cittadino di Lotta per la Casa or Action, create "lists" of people living in emergency who are willing to occupy disused buildings. It is up to the assembly of the movement from time to time to decide who becomes part of the squatting and often not only for emergency criteria, but also with respect to participation in the movement, or to the degree of awareness with respect to the path that is being undertaken. With respect to nationality, the experience of movements is quite different and certainly also depends on the years in which the occupations took place.

The first wave of occupations in Rome, in the early 90s, was mostly linked to the series of evictions for the sale of housing by many social security institutions and involved for the most part population of Italian origin. But over the years the percentage of immigrants has grown and currently make up almost half of the squatters. Today there are more than one hundred squatting for housing purposes in the capital, one hundred and forty if we take in account all the other types of squatting (cultural, recreational, political ...) ‘Figure 1’ The squatting of public or private buildings in a state of neglect, strategically positioned in the urban fabric becomes a way to access the house but even more to the city. [5] The satisfaction of the housing problem is not resolved with a safe shelter, but it is all the more effective the more it is able to insert its inhabitants in urban services: health, education, work, transport, etc. The forms of appropriation of disused buildings go to satisfy the disregarded demand for low-cost houses, addressed to public administrations, which can only be filled through appropriate public policies, which are still incapable of adapting to the socio-economic changes taking place. It is therefore natural to wonder about how this Informal City came about, a reality parallel to the institutions, and what did not work in the fundamental State-citizen relationship, with regard to the right to housing. [6]

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1 Istituto Nazionale di Previdenza e assistenza per i Dipendenti dell'Amministrazione Pubblica. National Institute of Social Security and Assistance for Public Administration Employees. The decree law 6 December 2011, n. 201 (aka salvaitalia), converted with the law December 24, 2011, n. 214 ordered the deletion of the INPDAP by transferring the relative functions to INPS.
Figure 1. Identification of the squatted building in the Municipality of Rome. The squatted building is mapped according to the original intended use: houses, offices, schools, theatre, factories, hospitals

3. The case study: Spin Time Labs
On October 11, 2013, the third Tsunami Tour of movements for the right to housing was implemented. In a few hours three buildings were occupied, including the one at number 59 of Via di Santa Croce in Gerusalemme, Spin Time Labs. The building was built after World War II, with 8 floors above ground and two undergrounds. It is located in the San Giovanni area, facing the great green of the Wolkonsky park, the new park of Via Statilia and in the background the Basilica of Santa Croce in Gerusalemme, therefore an urban context of the highest quality. Spin Time Labs, born as a different squatting than the
other regulated by Action, as usually to prepare the list of occupants it takes a path of 5-6 months, in this case, however, there was the urgency to go to take possession of a building in a short time. The building was part of the urgency of a battle on the abandoned public heritage, one of the properties considered most desirable for the Tsunami Tour, since, although it was publicly owned, it was managed by a private fund. Spin Time Labs not only responds to the housing emergency but tries to integrate itself by offering services both to the neighbourhood and to the residents of the building. For this purpose, within the occupation, a laboratory of ideas was created that manages: the popular school (ie. support for the study and afternoon coaching for children and teenagers), the cinema, the clown school, theatre workshops, a disco, the carpentry workshop, the graphic laboratory and a room dedicated to the applied arts.

3.1. Antropology

The theme of the housing emergency is combined with that of social cohesion and urban degradation together with the phenomenon of immigration. Over the last twenty years, migration policies, flows, characteristics and conditions of entry of foreigners have become a topic of great importance all over the world. Historically characterized by high rates of emigration, Italy has entered the ranks of the immigration countries at the very moment when the states of industrialized Europe were closing their borders to transactional movements. The first census carried out on the occupants of Spin Time Labs, divided between people with and without residence permits, collected information on each family unit (date of birth, nationality, education, known languages, profession, entry into the squatted building). The subdivision by nationality is very complex, reaching over 25 countries ‘Figure 2’. Excluding Italy, they represent the starting points of major migratory flows such as South America, North Africa and Eastern Europe.

![Figure 2. Identification of the country of origin of the squatters in Spin Time Labs](image)

In this context, female immigration in Italy has had an exponential growth in recent years, reaching previously unthinkable figures. Today, foreign women in Italy represent 51.8% of the population of immigrant residents. [3] This figure is reflected in the case study, in which there is a female percentage even higher than the national average. The analysis of the distribution of occupants by age groups returns a univocal datum, as many as 67% of the subjects belong to the adult group (19-60 years), while 18% belongs to the children's category (0-12). ‘Figure 3’The analysis of the adult age group shows that some of the squatters are in possession of degrees such as college degrees, high school diplomas or professional qualifications. This fact leads us to believe that there is a potential for knowledge to be used both to make improvements to the occupied building and to its quality of housing and to trigger work in the neighborhood. Most of the adults are now without work employment. ‘Figure 3’
As part of the research, it was decided to study whether the ethnic background of the occupants had in any way influenced the disposition of families on the floor. This study was carried out because after the inspections, it was noticed in the various plans a possible union of more ethnic groups. Initially, the internal structure of the distribution of households on the various floors was dictated purely by a spatial choice made by the Action council. An action due after the disturbances of the first days of occupation, where there was anarchy, and everyone had taken possession of the living space depending on the order of arrival. Based on the organization, Spin Time Labs carried out a census, where every single-family unit had been mapped into its own home. Initially the study started from these documents, in order to seek these ethnic movements. The analysis of this census was unsuccessful, as it was not updated with the various exchanges that families have made between them and only through a system of precise interviews, family by family and plan by plan, it was possible to reconstruct the mapping of the Nationality. It is noted that indeed various ethnic origins have been grouped together at various levels, simply because of a question of customs and traditions, going to determine common hours. Despite this, the association is not inclined to these movements as they cause a ghettoization and stop the integration between the various cultures of the world, one of the strengths of this type of cohabitation. The study of the social aspect, in order to understand the problems and conflicts inherent in the community, was conducted through interviews addressed directly to those who live in the building and was available to tell their experience. The questions aimed to understand the internal dynamics of Action, the acceptance criteria by the association, the time of employment, the possible payment of a rent or a money contribution, the composition of the family unit, the degree and the acceptability of environmental comfort and above all the conditions of social relations within the community. What emerged revealed a homogeneity of thought and attitude towards the experience that the community is living. Most expressed a positive assessment, even if there is no shortage of people who denounce their living conditions.

3.2. Architectural transformation

The former INPDAP headquarters have the classic distribution system for executive buildings, central distribution and single-sided side cells. The dimensions of the base module of the cell are 3.40x5.50 m, these vary according to the plan and the function, the most substantial differences are present on the third floor, the management one. When the building was occupied in 2013, this distribution model had to adapt to the needs of the new inhabitants. Initially the first days of occupation there was not a model within the association or the rules to be followed, who previously occupied one or more offices could live there. There was no specific division between single and multiple persons. Later, it was decided to regularize the whole, based on how extended the family unit is. A family unit of 1 to 2 members was assigned a cell of the former offices, and in particular cases 2. The larger the units, the more square meters were granted to the family in question. Through an analysis study it was decided to synthesize the inhabitants of the occupation in three categories, each of which correspond to different types of accommodation ‘Figure 4’:

- Single: 1 member
- Coppia: 2 members
- Famiglia: 3+ members

Figure 4. On the left: the survey housing distribution with pie chart inside Spin Time Labs. On the right an axonometry of all the floorplans with highlighted the services.

An office unit is assigned to the Single category. Two types are identified, one with the internal kitchen, made by using a gas tank, the other without a kitchen, and then shares the common one with the other inhabitants of Spin Time Labs. The bathrooms for both types are not private but common and correspond to the old bathrooms of the offices. The interior layout of the furniture is generally always the same and is designed to optimize space and create a subdivision.

In the Pair category, similar to the Single have been identified two types, one double unit and one single unit. The double unit is mainly characterized by a division between living and sleeping areas. In the living area, in addition to a sofa with a wardrobe system, there is also a kitchenette to remain
independent of the common kitchen system. In the sleeping area you can find a bed, a wardrobe; in some cases, this environment has the function of storage for the family. In this type, when the two cells are placed side by side, if a door has not already existed, a hole has been made in the wall for the passage from one room to another; another reported case is to keep the two rooms separate using the corridor as a connection. For the single unit type, as in the case of Single, there is a subdivision of the spaces through furniture and curtains.

In the family category, houses are from two units up, as in the other two categories there are two different types, one with and one without kitchen. In families it is more common to find the kitchen inside the accommodation, as there is a marked preference in not sharing the kitchen with other families. Given the variations in this category it is not possible to find a standard type of accommodation, the highest percentage of houses, however, has a common room that functions as a living area, a sleeping area for one or more members of the family unit, and an additional room where parents sleep; as the number of nucleus components increases, the number of rooms increases.

4. The new Living Model

It is not possible to think about the design of a new housing model, without first understanding the legislative bases through which it was possible to legalize Spin Time Labs. The hypothesized legalization process involves the training by the occupants of an undivided cooperative able to dialogue with the Municipality and to be able to access subsidized mortgages in order to buy the building in participation with the same Municipality and to divide it between squatters and people in waiting lists.[7] The Region is interested in the stabilization and legalization of the employment of Spin Time Labs, for this an economic comparison has been made that highlights the future savings for the Municipality of Rome with a view to a complete redevelopment of the building in comparison with the costs of managing the Caat. [8] If the process assumed by the Region were able to start, the occupants forming an undivided cooperative would get a third of the building, while the other two thirds would be divided between people living in the Caat and those on the waiting list for public housing.

The redevelopment project of the housing area of Spin Time Labs includes three fundamental themes: Cohousing, [9] the revaluation of housing standards [10] and self-construction. [11] These three themes are all connected by a preliminary study on the current housing distribution of the building and on the current lifestyle of the inhabitants. The project provides for an expansion of the current housing capacity of the building, from 323 to 500 at best and 368 at worst. This expansion is made possible by the study of the occupants' lifestyles and their needs, in order to maximize the space as much as possible. [12] One of the main problems encountered in the actual situation is the relationship between the distribution spaces and the private spaces, where the former consists of the largest percentage of square footage for each floor. This is mainly due to the old intended use of the building, which was based on a very large central horizontal distribution on which the office cells faced. Another problem is the overcrowding of the areas of common services, not having a specific division in the catchment area, in particular the bathroom space, are not appropriate to the current housing situation. To overcome this problem, the idea behind the project is the subdivision of each floor into four macro houses. Each macro accommodation hosts common services that are based on the current Spin Time Labs. A kitchen, with a common dining area and a laundry area. There isn’t a living area because the lifestyle of the twenty-first century is increasingly characterized by living in two spaces, the dining area and its own bedroom. [13] With this division in macro housing it is also

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2 The members join the cooperative with the aim of obtaining the permanent assignment of an accommodation (it is, practically, a permanent lease). The cooperative proceeds with the construction of residential buildings that become part of the cooperative's assets and which will be granted to the members assigned to them, upon payment of an enjoyment fee. [7]
possible to have control over who uses the common areas, as only the inhabitants of that particular area can access them. ‘Figure 5’ Dialogue with the inhabitants was essential to decide the most effective intervention strategy. From these interviews, two fundamental requests have been extrapolated: each house has its own private bathroom (in order not to use the old services of the former offices and the only three showers per floor), to have a kitchen inside each accommodation. The amortization of restructuring costs and the relative structural feasibility has only a partial possibility to fulfil these requests. In fact, each new accommodation has its own bathroom (including toilet, sink and shower), but not a kitchen with gas system. The solution adopted was to design four large kitchens with their gas plant for each floor, one for each macro accommodation, and within each house a kitchenette, equipped with sink, induction plate and microwave oven. This makes the occupants partially independent, who are not obliged to use the common kitchen for every meal of the day. [14] Moreover, to protect the different ethnic groups with the relative cultural backgrounds, represented by the occupants, there are different times in which meals can be consumed. This mixture of cultures allows, through the establishment of macro multi-ethnic housing, a use of the common kitchen that develops over several hours of the day, without necessarily leading to overcrowding only in a few hours. In each room, in addition to the kitchenette, a table of varying sizes has been provided to allow you to have your own meal inside the house. [15] To access the macro accommodations there are four staircases and their elevators up to the third floor; from the third to the sixth floor there are three staircases, as the stairway body which is accessed from via Statilia stops at the former managerial level. To access the seventh floor there are only two staircases, the one from which you can enter from street number 59 of Via di Santa Croce in Gerusalemme and the one with an access inside the building.

Figure 5. Standard design floor plan, highlighted with colour the common spaces of the macro housing
There are four types of accommodation on each floor. These four types are focused on the preliminary study and the three categories found: Single, Couple, Family. The point of union between all is the optimization of the space and the mixing of multiple areas of the house in one room. [15] This design choice made it possible to use the scansion dictated by the pillar structure of the building as a limit for the minimum development of the base cell of each accommodation. In fact, one of the most important design limits encountered is precisely the presence of a strong scan of the space dictated by the pillars, which today corresponds to the cellular offices. In the intervention, it was decided to reduce the width of the horizontal distribution space, as it is oversized to the design function. The only type that differs is that dedicated to the disabled and to the elderly with limited mobility. This has a larger square footage than the other to facilitate the movement of the disabled inside the housing and is easy to access, without jumps (as is present in one of the other types). The accommodations have also been designed to face the increase and decrease in the families, in fact depending on the case, by means of sliding walls or removable dry-built walls it is possible to divide an accommodation into two cells or, conversely, enlarge it. [16] This allows the elderly left alone to not have too much space to manage, or too many families with the desire to enlarge their unit in order to be able to access a larger square footage. Furthermore, the idea that when one of the children enters adulthood may have an independence from the rest of the family, by dividing the housing permanently, has been taken into consideration. The seventh floor differs significantly from the typological and functional point of view from the remaining 6 floors used as a dwelling. This is mainly due to the current architectural composition. The square footage is considerably lower, as the perimeter wall partitions are set back from the road of 1 meter and 1.40 meters in the courtyard, the roof is pitched, so the height is not constant in any of the areas inside the floor, and there is a large terrace that can be used on the corner where Santa Croce in Jerusalem and Via Statilia cross. In addition, some rooms are used as machine rooms for elevators, making it impossible to change the use. The plan has been divided into two main areas, the first is used as a student housing, taking over the existing function, the second to temporary housing for families waiting for a home. The student area has been designed on the basis of a student room, living rooms and common kitchens and for each two rooms there is a shared bathroom. Temporary dwellings instead resume the concept of the traditional house with living area with kitchenette and bedroom.

5. Result and discussion
The drafting of the housing model is based on three key concepts: co-housing, the redefinition of Italian housing standards and "guided" self-construction. Each of these three themes was fundamental to redesign the internal distribution of Spin Time Labs. Then, real design choices have been defined: Expansion of the service plan, Increase in the number of housing units within Spin Time Labs, project for each unit of basic services such as toilets and kitchen, use of macro housing to ensure to each unit of shared services to reduce expenses and restore the building in terms of safety. [17] In designing the housing model, dialogue with the inhabitants was fundamental, to understand their needs and where it was deemed appropriate to modify them accordingly. The collaboration of the inhabitants in the drafting of the project is fundamental from the standpoint of self-construction and self-recovery, where they themselves will be involved in the construction of their new homes. Self-construction is also based on the enthusiasm of the occupants who become fully involved in the process.

6. Conclusions
In conclusion, this research focused on a new way of living and on the delicate passage of occupants from outside the law, to stable inhabitants of dwellings based on new forms of living. The model fully involves the occupants, because they see the need for a home as a need that goes beyond pure physical construction, understands its cultural and social implications, and appreciates the possibility of improvements in the quality of life and the opportunity for retraining also of themselves, as well as of the building.
The model also aims to be replicable for other disused buildings and public property in the Roman and national territory. The methodology for exporting the new housing model is not based on precise architectural forms of design; but on the drafting of guidelines to be applied to other scenarios. The drafting of a strategy, adaptable to multiple contexts, is fundamental, since one cannot think of applying the same model of architectural, energetic and service redevelopment to any buildings abandoned or occupied in Rome. The cultural architectural panorama of the city is so vast and different to the scale of the district and in some cases in minor scales, to impose this flexible working methodology.

Acknowledgments Section
The research project described, started through the interdisciplinary Degree Laboratory coordinated by prof.ssa Chiara Tonelli at the Department of Architecture of the Roma Tre University. Currently the paper describes the study made by Matteo Molinari and Andrea Piattella. Currently the research is underway within the department, expanding the mapping of squatted and disused buildings within the Roman real estate, through the collaboration of different personalities.

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