#20

RETHINKING DOMESTIC AND NEIGHBOURHOOD SPACE

An analysis of social housing in the Portuguese post-revolutionary period

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ABSTRACT

During the Portuguese post-revolutionary period in the 1970's public housing policies were restructured, resulting in the organization of public housing development in three groups; direct state development, state co-subsidized housing co-operatives and construction of private housing for organized ill-housed populations in the city centre. The latter solution gained disciplinary and media attention at the time, and remained an important reference to contemporary approaches to participatory design processes. However, marked by projects of little urban impact and of mainly punctual action, it has proved unable to respond to real housing needs, comparatively encompassing a very small percentage of the population. It has gained exceptional relevance in the historiography of Portuguese architecture due to its participatory nature, and the resulting typologies have remained, in opposition to the large-scale top-down projects directly promoted by the state, connected to democratic values in the dominant architectural discourse. In order to challenge this notion, syntactic analysis' tools are used to examine six neighbourhoods from the post-revolutionary period in Porto, Portugal, representative of the set of built projects in each group. The paper examines the relation between type of housing development and design process with the configurational relations between functional spaces of the produced typologies, both at the domestic and neighbourhood levels.

KEYWORDS

Social Housing, Portuguese Architecture, Citizen Participation, Domestic Space

1. INTRODUCTION

1.1. SOCIAL HOUSING POLICIES IN THE PORTUGUESE POST-REVOLUTIONARY PERIOD

The years after the revolution were a particular moment in the history of Portuguese social housing, both for the multiplicity of typological and morphological solutions which emerged from intense research, multiple programs and experiments, and for the particular relevance it had in the city. Corresponding to a momentary extinction of the real estate market, all these new residential areas of state development had great impact in the city's growth, and, benefiting from infrastructures and public services' planning in the long term, are in great part responsible for the current urban configuration of Porto and its adjacent cities.

While the dictatorial regime which preceded the revolution had always recognised both the necessity and the usefulness of a public housing program, it failed to provide a solution for the ongoing housing crisis. The enterprises it developed were often directed at public

employees with middle class incomes and, working as devices of governmental control, the process of admission for new families was difficult and highly monitored (Borges Pereira, 2011). Consequently, when the regime was overthrown in the early seventies, the city of Porto still suffered from long-lasting overcrowding issues and lack of proper housing conditions.

In this context, the revolution of 1974 brought a necessary restructuring of the existing institutions and public housing policies. The state department of social housing, FFH (Fundo Fomento da Habitação in Portuguese), which had been created five years prior to the revolution with the objective of integrating a new national housing policy with urban planning by centralising both in a single organic structure, remained the main housing developer. Benefiting from an increase in financing and with a practice that was, during the post-revolutionary period, highly connected to the normalisation of constructive processes, development of social studies, data collection and statistical procedures, the FFH developed a series of different solutions in policies, urban morphology and domestic typology which were highly innovative in the national context, and reflected contemporary housing experiences worldwide.

Within the FFH, public housing was organised in three different programs with different objectives. On one side, there was direct state development, working with the city council for the construction of new housing enterprises.

While the state and municipality made an effort towards a lower segregation of the working class in the city suburbs and adjacent cities through thorough planning, a different programme was created in an attempt to keep the existing populations in the city centre, SAAL (Serviço Ambulatório de Apoio Local in Portuguese). Its main objective was to promote the initiatives of ill-housed communities by creating incentives through the municipalities to their collaboration in the transformation of their own neighbourhoods, through direct discussion between architects and neighbourhood associations.

Finally, the housing co-operatives, which has existed since the late 19th century, were also vastly restructured and integrated in the FFH. Having functioned before mostly as a mechanism for facilitating gradual middle class access to private housing, cooperatives benefited during this period from the technical, juridical, social and financial support of the State. Furthermore, fruit of the initiative and organization of future inhabitants, they had a say in the selection and acquisition of sites and development of typologies. (Fleming and Magano, 1992).

As the particular conditions in which they appeared, the new housing programs, responsible for great part of the production of social housing in Porto, were short-lasting. The SAAL program was extinct in 1976, having lasted only two years, and the financial aid to co-operative housing was cut down in 1978. The FFH lasted eighteen years before its extinction in 1982, in a political and social context very different from that in which it had emerged. From this point on, these programs have been majorly forgotten in the study of Portuguese architecture, housing production and urban growth. Porto, which has become the symbol of the country's architecture, is a blatant example of this.

1.2. THE POST-REVOLUTIONARY PERIOD IN THE HISTORIOGRAPHY OF PORTO'S ARCHITECTURE

"The SAAL remains, in the School's imaginary, as corresponding to the Modern Movement's heroic period - its foundation, unforgettable, unrepeatable." (Jorge Figueira, 2007, p.67)

The SAAL program was not the first concretization, the sole or the most productive in number of built homes, of the participatory and highly political movement which emerged from the restructuration of social housing policies. In fact, the period immediately after the revolution of 1974 was characterized by a series of different strong social movements reclaiming the right to proper housing. It was this constant popular pressure, supported by brief favourable political and ideological conditions that made it possible to create state structures which allowed for organised ill-housed communities to have an active role in the production of proper housing.

However, particularly in Porto, this program became a key point, and often the only reference, of a multiple process. It is tendentiously through SAAL projects by renowned architects that the post-revolutionary period makes an appearance in the historiography of Porto's architecture.

While this was a moment of particular activity which had major impact both in Porto's urban configuration and in the development of new standards for contemporary living, the multiplicity of the housing program is often reduced to particular examples of the SAAL and brief mentions of enterprises developed by housing co-operatives in the existing literature (Ruivo and Tenreiro, 2014).

It is interesting to analyse why it might be so. If It may be questionable that, as Figueira (2007) proposes, this program was the founding point of the movement known as School of Porto, it is true that the set of aesthetic and ideological principles it had been developing since the 1950's is deeply present in a majority of SAAL projects in Porto. Furthermore, the period of the program's activity coincided with the moment when Porto's architecture, and in particular Álvaro Siza's work, started being recognised as an international reference.

While the actual impact of the SAAL's role in the School's newly gained visibility been argued in recent years (Costa, 2014; Bismark and Domingues, 2014), this program continues to be deeply connected to a set of principles which remain the base of Porto's architecture identity. In this context, the impact of the overall housing production in Porto during the post-revolutionary period has been undervalued by the discipline of architecture. It seems pertinent then to draw a comparative analysis of the three models of housing development in order to shed light, in the context of Porto's architecture and urban development, on other programs which, not less relevant or architecturally pertinent, may add to the typological model and of urban morphology of the SAAL, which has been consistently presented as the victorious materialization of architecture in the post-revolutionary process.

2. METHODOLOGY

While some historical and socio-political reasons have been advanced here which for the prominence of the SAAL program in the historiography of post-revolutionary housing, it is outside the scope of this paper to attempt to thoroughly explain them. Instead, this study aims to contextualize its projects within the housing production of this period, analysing the spatial characteristics of each program. This will be done in light of a set of objectives which was transversal to all.

In fact, the development of public housing in the post-revolutionary period was directly connected to intense research conducted by the national laboratory of civil engineering (LNEC). It encompassed various fields of action, from the development of new construction techniques to anthropometric, ergonomic and sociological studies (Portas, 1969). Within the latter some major concerns stand out:

(1) The importance of a shift in the understanding of the woman's role in the household;

(2) How a growing intensification of the time spent at home reflects in a changing attitude towards children;

(3) The importance of neighbourhood relations, focusing on the ways of interaction and mutual aid systems - this particularly in the case of the housing co-operatives, which aimed at fostering a feeling of familiarity and community;

(4) The degree and relative value of the relationships established between the family and other groups - this particularly in the case of the SAAL projects, concerned with the integration of lower class populations in the city.

These were reflected in a set of design regulations and guidelines for the overall quality of life and development of desirable social interactions in the domestic space (Portas, 1969) and neighbourhood (Redol, 1985), regarding the design and composition of functional spaces.

Three main variables were defined for the quality of the domestic environment:

   (a) Domestic activities: those necessary to foster domestic interaction and good neighbourhood relations;

   (b) Configuration: the disposition of the private and collective spaces where activities took place within the overall configuration and their influence on the family life (Redol, 1985; Pereira, Gago and Lopes, 1984);

   (c) Areas: In order to generate what were considered good conditions for living and sociability, ideal areas for each functional space were suggested which were different from the minimum areas commonly researched during that period (Portas, 1969).

The adopted methodology aims at studying how the differences and similitudes of the variables (a), (b) and (c) at the domestic and neighbourhood levels of the three different types of housing development above mentioned, acting as social and spatial mediators, translate the main social concerns indicated in (1), (2), (3) and (4).

   (a) Which domestic functions and functional spaces: The existence or non-existence of each of the functions considered necessary by the LNEC in each case was examined, as well as which of those are located, according to the labels on the projects, in the same room or perceivable space. At the neighbourhood level, the existent rules and regulations are much vaguer, focusing mostly on a systematic suggestion of the necessity of designing spaces for collective social use, such as public equipments and services like schools, sports facilities, social centres, shops, restaurants, and public spaces like gardens and squares. At this level, areas planned to house collective functions were taken into account.

   (b) Spatial Configuration: The spatial configuration of the studied cases was analysed with recourse to syntactic analysis' tools, mainly justified permeability graphs, and the syntactic properties of depth and integration were calculated.

   Functional spaces have been used instead of convex spaces in several studies of the domestic space (Chatzichristou and Kranos, 2014; Hadjichristos, 2003; Monteiro, 1997). Following this approach, each area destined to a specific activity was counted as one, regardless of its shape, unless there exists a major division (in the form of steps, difference in height, or other separations such as fixed furniture) between areas meant for different activities.

   (c) Areas: The areas of the examined projects are analysed in light of the exhaustive research work conducted in this period for the definition of minimum and ideal areas for functional spaces and the home. As these areas were defined always as the possible best within the reduced budget of social housing, lower, but not higher, values than those determined by the LNEC were considered to be less propitious for the creation of favourable social interactions.

3. ANALYSIS AND RESULTS

Following the discussed methodology, the analysis will begin by studying (4) "the degree and relative value of the relationships established between the family and other groups", through an examination of the patterns observed for each of the studied programs in their location in the city, in regards to more or less integrated areas and connection to main infrastructures.
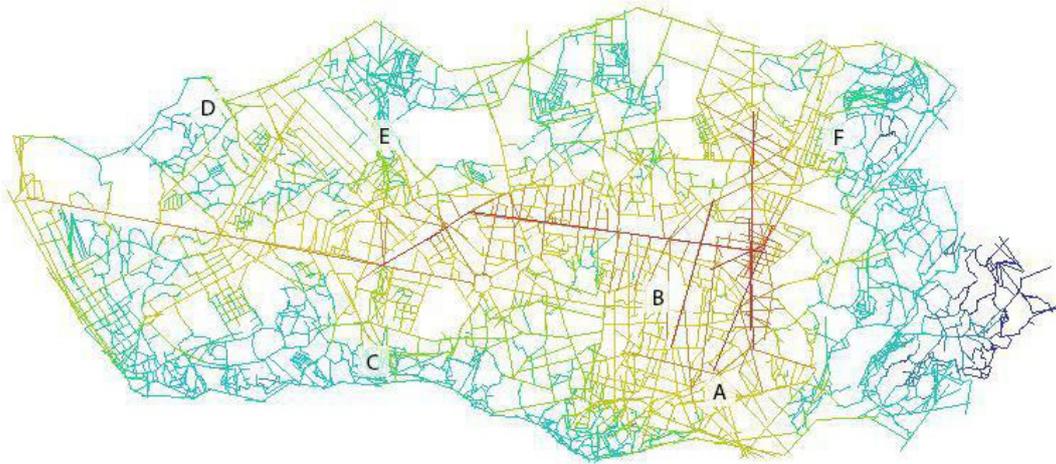
Figure 1 - Porto's axial map depicting the space syntax measure of integration with selected social housing neighbourhoods designed between 1974 and 1984.

Integrating a housing program concerned with keeping existing communities in the centre, the small scale participatory SAAL projects are normally settled in or around the best integrated areas of the city. However, as shown in figure 2, often situated inside existing city blocks and resorting to complex pathway structures in order to adapt to the site's form and topography, these neighbourhoods present the highest depth values for the houses in relation to the main street system. With houses situated five steps deep from the exterior, these neighbourhoods are invisible from outside the blocks, and so from the main city arteries.

Public street network not in contact with neighbourhood   Public streets in direct contact with neighbourhood

Transition spaces   Public spaces and equipment   Housing buildings
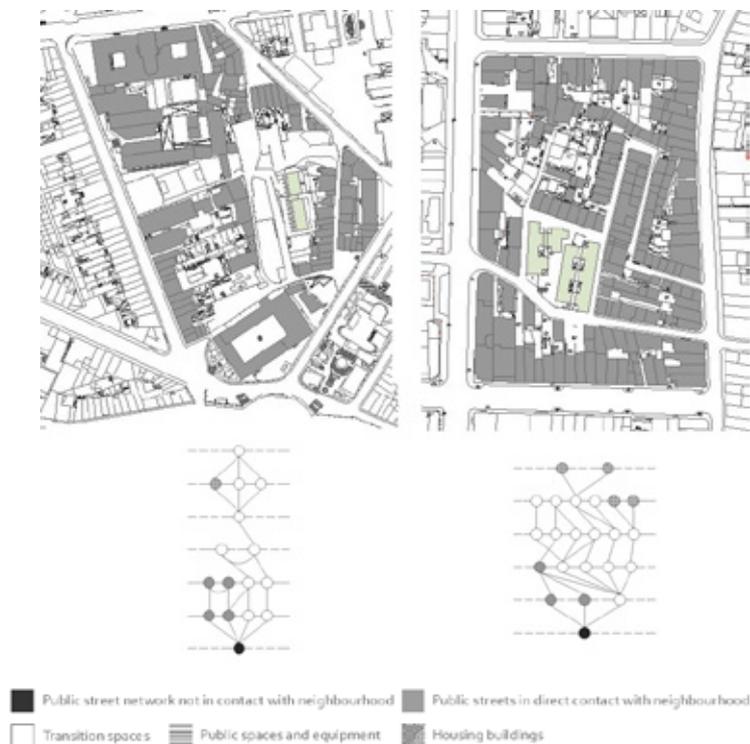
Figure 2 - Neighbourhoods (a) (S. Vitor) and (b) (Leal), small scale single-family housing enterprises inside existing blocks

In contrast, state and municipal social neighbourhoods appear in areas that were, at the time of their construction, mostly un-urbanised. These are today mostly areas of medium integration, well connected with the main built fabric of the city.

In most cases, buildings turn their back on the existing streets and there exists a secondary pathway system as shown in figure 3. Both apartment buildings and public infrastructures lead to complex sidewalks which often place their entrances three steps away from the street network interior to the neighbourhood. While the same design logic is followed in larger scale cooperative projects, there is a big part of cooperative enterprises, dependent on available urban land, which is small and integrates the existing city fabric.
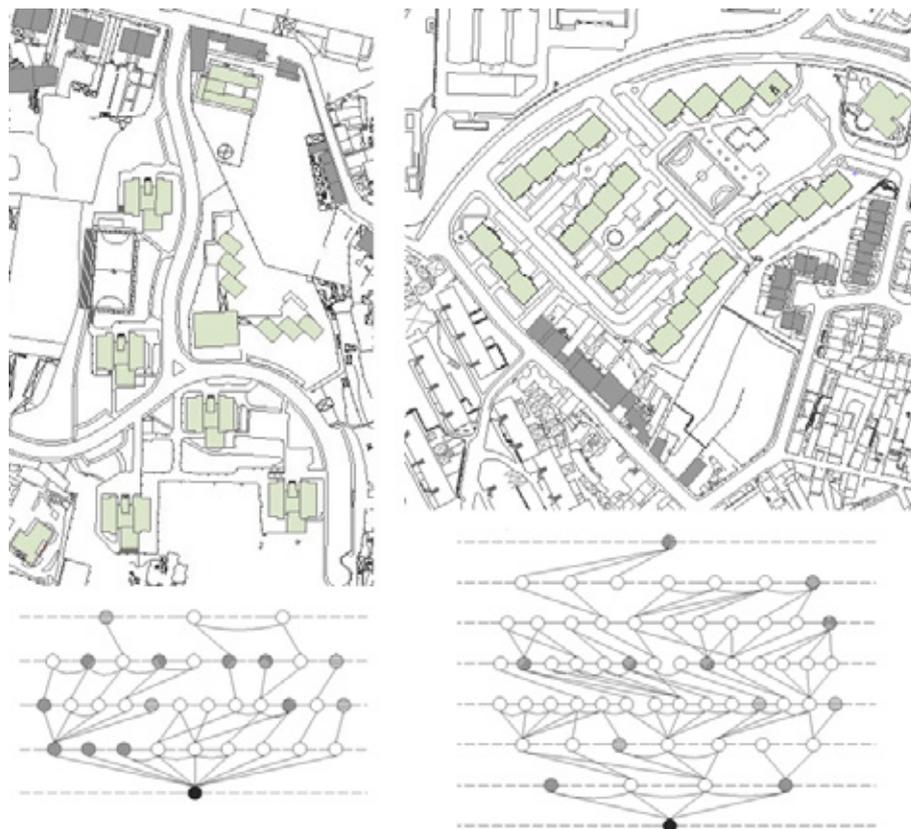
Figure 3 - Neighbourhoods (c) (Aleixo, state development) and (d) (CETA, co-operative development), large scale enterprises with public equipment and facilities.

In these cases, buildings tend to follow the existing urban design, often opening directly to the sidewalk. In this aspect neighbourhood (c) presents a different approach. Organized directly around the main street, apartment buildings are positioned according to solar orientation, with its accesses facing north. While houses and public equipment are both more integrated in the city fabric than in other cases, they show a lower relation with each other.

Usually located near the city limits, with only a few more central exceptions, housing co-operatives developed the least integrated neighbourhoods of the three groups. Not as articulated in urban planning strategies as state and municipal housing, the co-operatives' need for cheap terrains, its inability to conduct expropriations and a systematic fall-through of the construction of designed infra-structures, seems to result in a discrepancy between the needs of lower class populations and the resulting enterprises. These end up being directed mostly by lower middle class, which can afford to be mostly dependent on personal transportation. Even though these neighbourhoods mostly follow the same design principles state and municipal neighbourhoods, the interior of the apartment often appears to reflect class differences between their respective inhabitants.
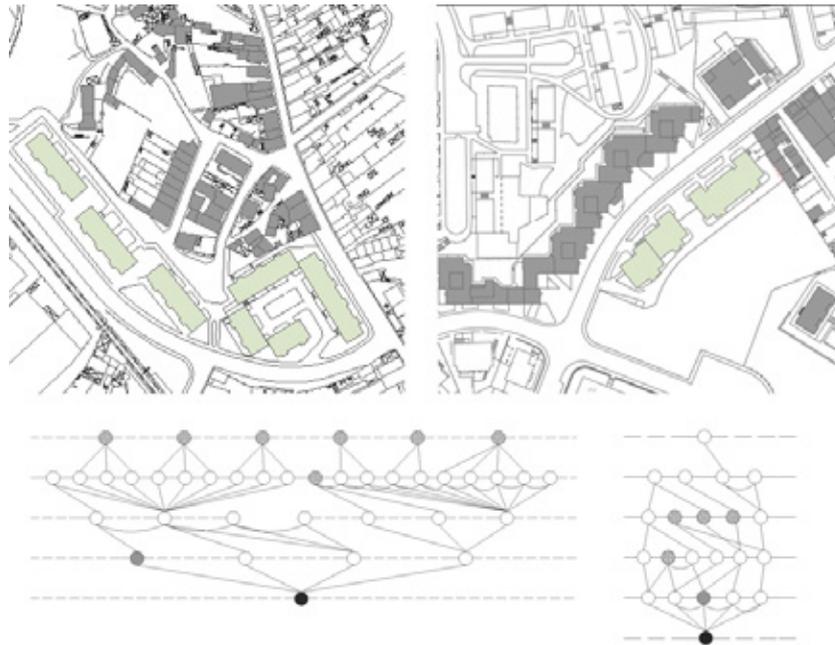
Figure 4 - Neighbourhoods (e) (Ramalde, municipal development) and (f) (Contumil, co-operative development), medium and small scale enterprises without public equipment

The houses' total internal useful area is larger in these cases than in any of the others, sitting at around ten square meters above the legislated minimum. This reflects into a higher percentage of the apartment's area being assigned to the kitchen and bedrooms over living areas, with the first being significantly larger than in other studied enterprises.
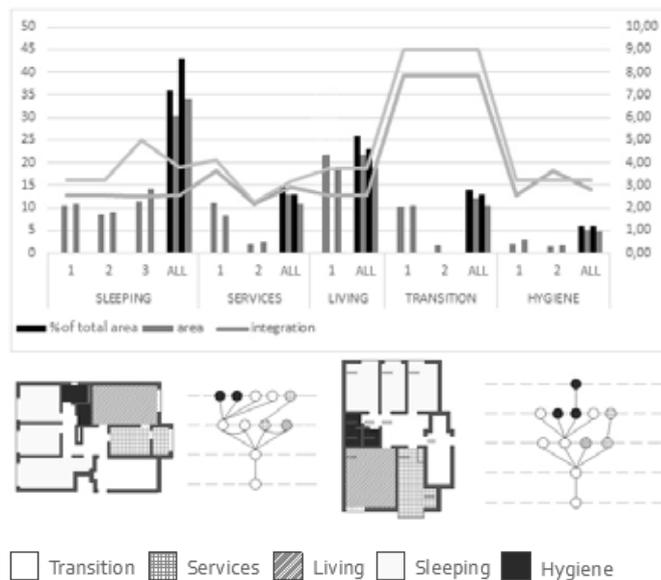
Figure 5 - cooperative housing apartment typology in Contumil (f) and CETA (d), justified graph and relation between rooms' areas and integration levels

In fact, housing co-operatives are the only cases in which living spaces such as the living and dining rooms are neither the largest nor the best integrated, displaying higher integration values on bedrooms and particularly on the kitchen. This seems to happen to the detriment of exterior spaces. In place of well-integrated areas in close relationship with either the living room or the house's entrance present in other cases, the housing co-operatives have small segregated semi-exterior utilitarian spaces which are accessible through the kitchen. This reflects a different take on the role of these areas from the other two types of housing development. While the smaller scale single family houses also have relatively large kitchens, these are less integrated and establish a closer relationship with the exterior, to which they are the closest functional area.

State and municipal enterprises, which seem to be more strictly concerned with the development of minimal areas, it was possible to identify two different approaches to the issue: the minimal kitchen, designed according to minimum regulated areas and showing low integration in relation to the rest of the house; and the overall negation of the kitchen as an autonomous area and its integration within the living or dining room.

Area economy seems to be the major point where state and municipal enterprises converge, resulting in small to non-existent kitchens, fewer and smaller transition spaces within the house and below-standard areas in bedrooms. In contrast to what was verified in housing co-operatives, the combination of high levels of integration and large areas in the sector living room, dining room and exterior seems to indicate a definition of these spaces as the collective areas of the house. An opposition seems to exist between the assignment of the major social role to the living room or the kitchen among all cases, and the definition of a social pole encompassing both areas appears to be rare. Only in two cases are the living and kitchen areas accessible through each other, and no difference in approach could be identified between housing co-operatives and state and municipal housing.
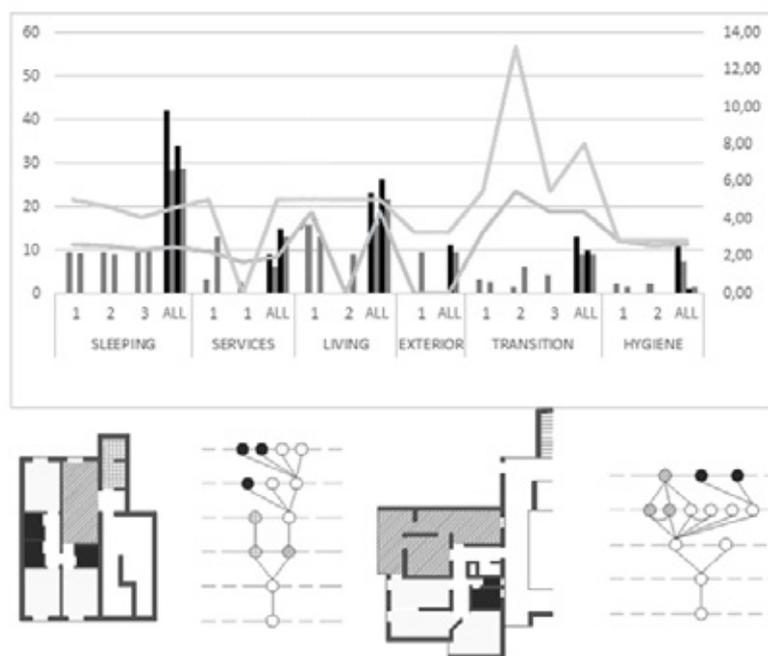

Figure 6 - state and municipal housing apartment typology in Ramalde do Meio (e) and Aleixo (c), justified graph and relation between rooms' areas and integration levels

In two storey single-family houses living areas and bedrooms are located further apart, and contrarily to other cases where the living areas and the kitchen occupy similar places in the house's configuration, the kitchen is, if not topologically shallower, at least metrically closer to the entrance than any other area. Exterior spaces have particular importance – unlike other cases they are not an extension of the living area, but an intermediary space between the interior of the house and the neighbourhood. While balconies are places of living and reunion within the family, the front yard establishes a relation from within the house with outside actors. The interior of the house reflects characteristics of the neighbourhood, both presenting particularly deep spaces which are accessible only through well-integrated social areas.
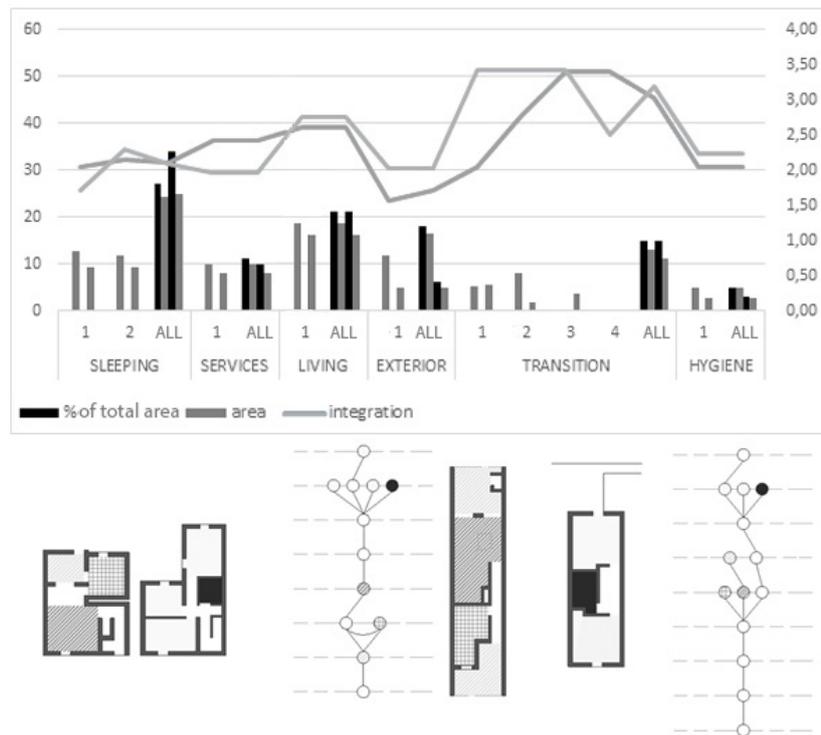
Figure 7 - SAAL apartment typology in Leal (a) and S. Vitor (b), justified graph and relation between rooms' areas and integration levels

4. DISCUSSION AND CONCLUSIONS

Three types of housing development emerged in the Portuguese post-revolutionary period. Developed with different objectives, they seem to respond differently to a common set of major social concerns. While in some cases these differences are explicit and come from a conscious response to outlined principles and objectives, they are often also due to each one's particularities and consequential material constraints. A good example of the processes leading to and resulting from these differences is neighbourhood integration in the city's configuration and with the city's infrastructures.

Even though social integration in the city and the establishment of desirable relationships between resident families and social groups outside the neighbourhood was a transcendent goal to all three types of development, different tendencies could be observed between groups. Occupation of un-urbanized and industrial areas by state and municipal enterprises seems to

have resulted in the qualification of those places, creating neighbourhoods which, even when remaining removed from the consolidated city, are mostly well integrated today. Inversely, housing co-operatives seem to have been less successful in integrating neighbourhoods with city development. While both originated from the same set of principles and objectives, concerned with global urban planning and city-growth and taking into account economic constraints, the characteristics of each program resulted in differences in the integration of the developed enterprises in the city.

SAAL neighbourhoods take on forms which explicitly reflect a different approach to the idea of integration and urban planning. While urban infrastructures and accessibility are assured by the particular integration of these neighbourhoods in the city centre, it is interesting to verify how discrepancies between architects' objectives, residents' references and the site's characteristics are visible in the configuration of these spaces. For example, both the design of highly integrated spaces controlling accessibility in the neighbourhood, and the way accesses reflect nearby public spaces, seem to be formal strategies developed by architects to oppose the inhabitants' resistance to collective spaces and public equipment within the neighbourhood (Portas, 1969) and the constraints inherent to the need to occupy blocks' interiors with no immediate contact with the main road structure.

Regarding the neighbourhood-city relation, the study encountered well-defined neighbourhood limits and enterprises located around main city-axis. Regarding neighbourhood-house relations, the hypothesis is advanced that these may shift the social relationships happening inside the house. In order to understand the effects these different strategies have in the development of neighbourhood relations and in integrating its inhabitants in city dynamics, further analysis of the neighbourhood and the relations it establishes with the home and with the city is currently being conducted. It is expected that the study of interior-exterior dynamics will make it be possible to understand, for example, whether the front yard of the analysed single-family houses extends the social areas of the house to the collective space or acts as a transition space increasing the depth of the private spaces in relation to the neighbourhood.

Regarding the domestic space, conclusions regarding explicit state concerns were possible to be drawn from the relations and relative importance of each domestic sector, as well as how each functional space seems to be perceived as either social, private or service. For example, the integration and area of the kitchen in relation to other spaces in the house may indicate different approaches to the 'shift in the woman's role in the household', as presented in LNEC's guidelines. In fact, it was verified that neighbourhoods with some sort of participation in the design process by its future inhabitants tend to have larger and better integrated kitchens. It has been indicated before that, in participatory processes, future inhabitants might be resistant to change in recognizable spatial patterns. Architects have registered a strong resistance against planned exterior collective spaces by a population used to a pre-existent type of coexistence based on the street as the main space of social interaction. Likewise, this kitchen configuration may have to do with the perpetuation of this area as the traditional main social pole of the house. In contrast, the minimum kitchen present in state-developed enterprises, if unaccompanied by this period's shift in paradigm relating to women and household chores, seems more likely to result in a segregation of the woman in relation to a social area which is clearly intended to be the living-room. Even though both area economy and woman's integration in family life were two of the stated objectives of social housing during this period, only one case of a kitchen integrated in a larger living room was verified. Further analysis of municipality-developed typologies is expected to contribute to the understanding of the extent to which this question was explored.

Family life seems to be a concern in these neighbourhoods. State and municipal enterprises present the better defined domestic sectors as introduced by the modern movement, with a clear separation of a private area defined by bedrooms and bathrooms, a social area mainly consisting of the living and dining room, but sometimes also of a separate dining-room and balcony, and a services area defined by the kitchen. This division in different sectors is characterized by a relatively larger and better integrated living area, while for example, co-operative housing's focus on the kitchen as a more likely space for social interaction is counterbalanced by relatively

larger and better integrated bedrooms, which, added to a probable difference in target social classes, might suggest different family relations in housing co-operatives and other types of social housing development.

The analysis seems to make clear that the different housing programs which shaped Porto and its adjacent cities in the years after the revolution served different purposes and attempted to provide solutions for different urban and domestic questions. While the SAAL was undoubtedly notable as an institutional and exhaustive materialization of the ideals of popular participation in architecture, the place of uniqueness it has achieved in the historiography of Portuguese post-revolutionary architecture may for this very reason be detrimental both to the historical understanding of this period, and for the full reclamation of its teachings.

On the contrary, further research on the particularities of each different solutions and methodological approaches might contribute to inform the future of social housing development in the country. An analysis of how the questions of urban planning and economy of resources, which were thoroughly explored during this period but have been overlooked in subsequent theoretical production, have translated into the contemporary urban space and social dynamics, seems likely to be an asset both for housing studies in general and for a more comprehensive understanding of the highly studied participative typologies.

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