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Celebrating the 30th anniversary of Docomomo and the 80th birthday of Prof. Stane Bernik, who made the first Slovenian connection with Docomomo International in 1990.
ABSTRACT
In Portugal, the single-family housing model remained a preference for most initiatives of state-provided housing until the first three quarters of the 20th century. Although some neighbourhoods in which modernist buildings were designed, the urban residential environment of the late 19th century was characterized by the prevailing single-family housing model, particularly as they concern the incorporation of multifamily buildings, the articulation of several housing typologies, and the quality of the buildings.

1. INTRODUCTION: A GENERAL APPROACH TO THE STATE-SUBSIDIZED HOUSING PROGRAMMES IN THE PORTUGUESE 20TH CENTURY
This article proposes the analysis of a set of multifamily housing buildings from different state-subsidized housing programmes that were implemented in Portugal during the first three quarters of the 20th century. The first section will approach the main characteristics of each housing programme and the specific Portuguese context from the 1940s to the 1990s. It is believed that these urban developments incorporated Modern Movement influences from foreign contexts through different approaches and in different degrees: urban concepts, programme, architectural language, materiality, and typologies. The second section will focus on the Modern Movement signs and their context and the articulation of several housing typologies, and the quality of the buildings.

1.1. State-subsidized housing programmes in Portugal
In Portugal, the single-family housing model remained a preference for most initiatives of state-provided housing until the first three quarters of the 20th century. The single-family housing model remained in place with the arrival of the dictatorship regime of the Estado Novo in 1933 when the government, through legislation, encouraged housing as a key element, although it was designed in a sort of rural arrangement. The first ‘Affordable Houses Programme’ (Casas Económicas, decree-law 23.052, dated 23 September 1933) proposed a gradual increase in the number of units by adding one story. In the early 1940s, the instituted housing models proved insufficient in meeting the needs in terms of the dwelling. A new programme was then created, one proposing smaller rental apartments, aggregated in housing blocks. A sense of collectiveness started to emerge, in the domestic space, includes a set of common and unique elements. The modern residential concept, generally aiming to valorise the domestic space, includes a set of common and unique elements. The modern residential concept, generally aiming to valorise the domestic space, includes a set of common and unique elements. This political change allowed for the introduction of new urban arrangements and city models and urban arrangements according to the Charter of Athens and, therefore, introducing communal systems, the articulation of several housing typologies, and the quality of the buildings. Relevant transformations can also be seen in the different grades of architectural quality residential systems, the articulation of several housing typologies, and the quality of the buildings.
2.1. Urban concepts

The Ramalde Residential Unit (early 1950s), built under the ‘Affordable Rent Houses Programme’ and developed by HE-FCP, is located near Boavista Avenue in the western part of the city of Oporto, occupying a lot of considerable size. The Municipal Council proposed a specific plan for the area, called the ‘Ramalde Partial Urbanization Plan’ (1948), including housing (106 blocks), commercial buildings, schools, and sports buildings. The plan also envisaged the existence of green areas and footpaths. The buildings would enjoy a rational layout so that their façades could benefit from the best solar exposure. The residential complex, very organized and cohesive from a morphological point of view, proposed a set of autonomous modern garden city, following the principles of the Charter of Athens, which in the late 1940s was a novelty in Oporto.

The plan was organized along two main structuring axes, perpendicular to each other: one perpendicular to Boavista Avenue and another crossing the centre of the composition, outlining its centrality. This plan underwent several adjustments and was reduced to the construction of 26 collective housing buildings, carried out in a two-stage process, with the project being awarded to architect Fernando Távora. The relationship between the exterior space and the height of the buildings was carefully defined, apparently following the studies of Walter Gropius presented at the 3rd Congress of CIAM (Congrès International d'Architecture Moderne) in 1930.

The Low-income Housing unit neighbourhoods of Paredão (1957-1960), Bom Sucesso (1956-1958), and Carrasqueira (1956-1958), commissioned by the Oporto Municipality, were built under the Improvement Plan for the city of Oporto, from 1956. Although being located on different sized lots and in distinct areas of the city, these residential complexes reveal similar underlying logics in terms of urban concept. While the housing blocks do not stand out in terms of architectural design, they do in fact propose a new residential model, questioning the traditional street and the urban closed block as the structuring principles in the urban system. The municipal land immediately outside the city limits was the primary option to build, and according to the Improvement Plan, the layout of the surrounding streets or the ones that would serve these residential units was meant to be fully coordinated with the urban fabric and the structure of the adjacent streets (existing or to be opened) defined by the Master Plan of Oporto.

The residential complex in Estados Unidos da América Avenue (1954) in Lisbon, a well-known residential set from the architects Pedro Cid and João Barros Vasoncelos Esteves, displays a more radical urban concept. Estados Unidos da América Avenue acts as the main axis of a rational composition where large buildings are placed parallel to each other, perpendicular to the main street, and smaller units stand at the back, configuring a U-shaped outdoor area. This complex was commissioned by the Lisbon Municipality, under the ‘Houses with Controlled Rent’ programme.

2.2. Access system

With respect to the access systems, it is noteworthy to highlight the distribution galleries in multi-family housing buildings for their experimentation and several solutions of exterior or interior galleries are identified. This system reveals its potentiality both for the economy of distribution, allowing the entrance to several apartments through a single vertical communication core, and for the development of more intense human relations.

The Rainha D. Leonor neighbourhood was part of the ‘Houses for Poor Families’ programme. The project was divided into two construction phases, with the second phase, concluded in 1995, consisting of 106 dwellings in 5 blocks of 4 floors with a distribution system with an outer gallery facing east. This set stands out for its relationship between the access system and the dwellings. The distribution galleries excel both for the significant width, compared to the volume’s depth, and for the near relationship to the daytime spaces, mainly the living room and the kitchen. As such, this area takes on multiple functions, such as a living space, storage or laundry area. In addition, it assumes a relevant social value, providing interaction among the inhabitants.

The Housing building, designed by architect Nuno Teotónio Freire at São Bento neighborhood, in Foz do Douro, was built under the ‘Affordable Rent Houses Programme’. The project from 1953 consists of 2 volumes with 4 floors each, with a distribution gallery associating them. Formally, this access system is distinguished by the occasional connections to the buildings and relationship with the autonomous volume of the stairwell. From the functional point of view, it consists of an intermediate space, one of crossing and intersection. Through the same ‘Affordable Rent Houses Programme’ the Casas de Presidência de Coimbra neighbourhood (1965, 1st phase) was also built and commissioned by HE-FCP. This set, from Jorge Albuquerque, comprises 9 multi-family housing units. 

Figure 1. Urban concepts
buildings with 4 and 8 floors, combining two distinct access systems: by vertical communication core and by distribution gallery. The larger buildings are composed of two entrance cores consisting of the main staircase on the façade and two interior elevators providing access to 3 dwellings per floor, each. In contrast, the remaining smaller buildings have an outer gallery and a central staircase, which allows the access to 4 dwellings per floor. This case stands out for its difference in height between the gallery and the dwellings, guaranteeing greater privacy in the interior spaces. This is mainly a crossing space, given the size, the configuration and the relationship with the adjacent spaces. However, it also serves as an extension of the interior service spaces.

2.3. Architectural language and materiality
The modern buildings have strong architectural language and materiality mainly resulting from the diversity of materials along with the combination of traditional materials and new application techniques. Also, the “Five points towards a new architecture”, defined in 1926 by Le Corbusier and Pierre Jeanneret, were fundamental for the constitution of a new lexicon.

In a brief approach to the building techniques, of particular note is the intrinsic connection between the structural system and the form/function of the buildings, and the progressive introduction of materials such as reinforced concrete and glass. In the Casa de Previdência de Coimbra (Coimbra, 1965), signs of modernity can be identified in the language and materiality, both by the diversity of the materials and colours, and by the volumetric composition of the ensemble and the absence of ornaments. In the larger buildings especially noteworthy is the use of elements such as the flat roof, the horizontal windows, the projected balconies and the marking of the floor slabs in the façades. But this demand for modernity is even more evident in the smaller buildings, characterised by the design of the distribution gallery, as well as the volume of the stairwell and the indentation in the side elevations. In addition, the lower finish stands out with a base in stone, whereas the upper finish is notable for its combination of flat and inclined roofops. Regarding the coating materials, it is important to mention the diversity of textures and materials used in the distribution gallery, in the wall of the common staircase and in the side elevations, highlighting the grilles for ventilation in the laundry: the Estace neighbourhood, located in cell 8 of the Abravida neighbourhood in Lisbon, was designed by Ray d’Albergaria and Sebastião Sanchez between 1949 and 1955, under ‘Houses with Controlled Rent’ programme, commissioned by the Lisbon Municipality.

In this case the relationship with the “Five points towards a new architecture” is evident, namely, the supports, the roof garden, the free design of the floor plan, the horizontal window and the free design of the façade, although may not have a direct relation.

The buildings are supported by “pilotis” and present a flat roof as a reference to the roof garden. In addition, it also seems clear the intention to design a “free façade”, by retracting the glazed plan, as well as the attempt to include “windows in length”.

The “free plan” appears here due to the absence of load-bearing partition walls as a part of the structural system.

2.4. Typologies
The spatial organization of most apartments associated to state-subsidised housing developments faces the challenge of reducing and simplifying the programme of the household, mainly through the introduction of multifunctional spaces and the elimination of unnecessary circulation spaces. The modern concept of the common living room, in some cases combining several functions, shows up in most solutions (in some cases including cooking).

The execution of the Low-income housing complex of Carvalhido started in June 1957 with the construction of 264 units. This neighbourhood was followed by a much bigger intervention, the building of the Pasteleira Housing Complex, which comprised 600 dwellings, whose construction started in April 1958. The Bom Sucesso project, for example, contained only 128 units.

The proposed typologies in these three complexes, although following the same principles regarding the compactness of the floor plan, reveal some differences in terms of the apartment distribution, resulting from different options in the access systems. In the apartment design of the Carvalhido and Bom Sucesso units, for example, the living room/ kitchen acts as the central distribution area. This solution allows the design of a three-bedroom apartment in only 46 square meters. The same solution can be found at the Rainha Dona Leonor Neighbourhood (2nd phase (Opp.)) in 1952.

The Pasteleira buildings develop a different solution, although being also designed with similar minimum areas. Each floor has two apartments with a kitchen, one bathroom, one common living room, and a varying number of bedrooms. Al-
though having roughly the same floor space as the Carvalhido and Bom Sucesso solutions, these apartments allowed for distinct spatial organization, probably more consistent with Oporto life style habits at the time: an independent kitchen near the entry and a sheltered common living room.

The usable areas of the apartments located in Estados Unidos da América Avenue, a ‘Houses with Controlled Rent Programme’ residential development, are quite distinct, as well as the target- ed inhabitants. Each central staircase/elevator opens up to the entrance to two apartments, each with two bedrooms, a common living room, bathroom and a generous service area, with kitchen, maid’s room and laundry area, similar to the typical bourgeois apartments popular in the 1940s. The common living room is the key compartment in this plan. It connects both façades, articulating large balconies.

These dwellings stand out for their clearly defined division of service, common, and private spaces.

3. CONCLUSION

In most residential solutions associated with state-subsidized housing programmes implemented from the 1940s to the 1960s, we can observe the renewal of the institutional patterns associated with the promotion of public housing carried out through collective housing, which focused on the building’s language and experimentation with a set of typological models. The housing programme was fully reviewed through engagement with international references, namely with those most associated with the Modern Movement paradigm. The degree of innovation or the overall architecture quality of the built examples appears to be profoundly connected with the authorship of the projects. This is quite remarkable in the solutions found in the ‘Affordable Rent Houses Programme’, with the involvement of architect Fernando Távora (Ramalde Residential Unit) or architect Nuno Teotónio Pereira (Soda

Figure 3. Architectural language and materiality
Caixa de Previdência de Coimbra neighbourhood, Coimbra, Portugal. Details. Type B © Maria Teresa, 2012 (top row)
Estacas Neighbourhood, Lisbon, Portugal. General views, 1958 © Lisbon Municipal archives (down row)

Figure 4. Typologies
Ramada Dona Leonor Neighbourhood, 2nd phase (1952), Oporto, Portugal, type floor plan. © Oporto Municipal Archives (down row)

Gisele Lameira, Luciana Boche Portuguese State-subsidized Multifamily Housing Projects
production is disseminated all over the country. This field are not isolated cases but are ones that are part of international references in the Modern Movement. In fact, innovate and establish a modern language influenced by in grammes served as an important experimental field in archi complexes built under the state-subsidized housing pro therefore, we may conclude that the multi-family residential sion area of the interior spaces. the specific needs of these programmes, serving as an exten tion gallery seems to be an economic system that adjusts to minimum dwelling design. Also, the access through distribu cient, clearly focused on the ffi the apartments is particularly e ban fabric. Nevertheless, the typological concept revealed by these last two are considered fine representative examples of Athens principles, the achieved urban model is not strong urban concepts, although following some of the Charter of Movement paradigm under fewer resources. With regard to urban concepts, although following some of the Charter of Athens principles, the achieved urban model is not strong enough to promote the articulation with the pre-existent ur fabric. Nevertheless, the typological concept revealed by the apartments is particularly efficient, clearly focused on the minimum dwelling design. Also, the access through distribu tion gallery seems to be an economic system that adjusts to the specific needs of these programmes, serving as an exten sion area of the interior spaces. Therefore, we may conclude that the multi-family residential complexes built under the state-subsidized housing pro grammes served as an important experimental field in archi tecture, mainly for a generation of architects who sought to innovate and establish a modern language influenced by in ternational references in the Modern Movement. In fact, some of the most paradigmatic concretizations in Portugal in this field are not isolated cases but are ones that are part of large public programmes whose resulting architectural pro duction is disseminated all over the country.

BIBLIOGRAPHY

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Gisela Lameira, Luciana Rocha - Portuguese State-subsidized Multifamily Housing Projects
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