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The Role of Construction Companies in Modern Housing. Precol's Footprint in Late Colonial Angola.

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Abstract. This article reflects on Angola's modern heritage and discusses its relevance to housing research, bringing to light modern projects still unknown in architecture in sub-Saharan Africa. During the Portuguese colonial period, mainly in the 1960s, Luanda was transformed into an urban laboratory of modern Western architectural experimentation. In this process, the role of neighbourhood units from the city centre to the suburbs stands out, announcing a futuristic and optimistic vision for urban living. Beyond the formal expression and the original adaptation of modern architecture to the climate achieved by Luso-Angolan architects, the aim of this paper is to outline the footprint of private promoters in the construction and property development of modern dwellings in Luanda. An example is a footprint of Predial Económica Ultramarina (Precol), a company engaged in the construction and marketing of large housing complexes, such as the neighbourhood's units of Prenda (1963) and CTT (1968), part of urban plans of public promotion launched by the urbanisation of the city of Luanda. Did the private promoters act as mediators between private contacts and state administrations? Had they influenced the choice of construction techniques and the following architectural design? These neighbourhoods, mostly of modern affiliation, represent the transversality of the Modern Movement, born in Europe and applied by Portuguese architects in other lands. Inhabited by the colonial upper-middle class, the "Precol neighbourhoods" could adapt to new living after independence. Today, they show their resilience through excellent construction techniques and architectural details, harbouring various forms of occupation. By rescripting the historical narrative of architectural modernism, highlighting the specific construction elements or systems relevant to the architectural design of dwellings, other futures may emerge as possible for new stakeholders who are committed to strategies for the renewal of modern heritage.

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1. INTRODUCTION

As an outcome of the Second World War, the Modern Movement had the assignment of building a *new society*, promoting *International Style*, looking forward to applying *standard* models in the construction of large housing estates. The future was envisaged as something better than the present, with the home being the architectural canvas through which comfort, domesticity and beauty were expressed.¹ With the epicentre in Europe, modern principles were implanted in Portugal and later projected in Angola. From the 1950s onwards, the collective housing block became a crucial element in Luanda's growth. Vertical density, modern urbanism and international architecture became synonymous with collective housing; the site's surroundings were planned as part of a new narrative between building and landscape, as a symbolic and functional affirmation of utopian turning dreams into reality. While the 1950s can be seen to embody optimism, the 1960s represented maturity of design that conveys how modern housing built the modern Luanda.

However, recent studies have recognised the relationship of modern production to colonialism,² in which Portugal undoubtedly played a representative role until 1975. It occurred later than in any other country in Europe and forced Portugal to redefine its relationship with its colonised territories.³ The same military overthrow that led to the end of the autocratic regime that ruled Portugal for over 48 years also marked the end of colonial occupation in Africa, leading to democracy and independence. During this period, architecture played an interesting part through two different architectural paths that do not oppose each other but are distant at a formal and programmatic level. On the one hand, the Colonial Planning Office (GUC)⁴ was used as a vehicle for modernising and simultaneously homogenising the built landscape according to the ideals of the *Estado Novo*⁵ in the various colonial territories. Conversely, as an outcome from the first National Congress of Architecture in Lisbon in 1948, a group of architects comprised of principals of the Modern Movement close to the doctrine of CIAM's and Le Corbusier emerged. During their architectural education, some had received international training at institutions such as the *Architectural Association* in London or the *Institut d'Urbanisme de l'Université de Paris*, setting up a practice to work in Africa after the Second World War.

Economic pressure, however, led Portuguese construction companies to seek new markets outside the metropolis, and African territories had enormous attraction. These construction companies became responsible for ensuring the modern housing boom in Angola. This activity was strongly supported by Oliveira Salazar's state policies, restraining international companies from operating in the colonial territories. The case of Luanda stands out, with former collaborators of Le Corbusier such as Fernão Simões de Carvalho, who had worked with private firms at the same time was head of the Luanda City Council's Urbanisation Office. Among others,

Predial Económica Ultramarina (Precol) engaged in the construction and marketing of large housing complexes, such as the Prenda neighbourhood (1963) or the CTT neighbourhood (1968). The residential blocks built in record time showed new forms of prefabrication and new construction systems in perfect symbiosis with the principles of modern architecture. Did Precol act as a mediator between private promoters and state administrations?

Furthermore, the influence of private enterprises allowed freedom of expression which was censored in Portugal, enabling original architecture of lightness and simplicity. The economy of building systems, the ordered repetition of modular and sustainable solutions and the accuracy in execution created a high level of visual and formal consistency in the residential field in Luanda. A cross-reading between the architecture-construction-promotion of residential complexes in modern Luanda arises with a proposal to show the home at the core of modernity as optimistic architecture.

2. FROM THE NEIGHBOURHOOD UNITS TO THE RESIDENTIAL BLOCK: MODELS OF MODERN LIVING IN LUANDA

The growing population in Luanda during the 1950s and onwards was revealed by the lack of effective responses to the housing shortage for most social classes, which was too serious about being ignored. The new legislation called for suburban areas and all public and private actors to respond to the housing crisis. From the 1960s onwards, Luanda was transformed into a huge urban-architectural laboratory in the experimentation of Western modernity, reflected in global visions of urban and territorial transformation.⁶

At that time, Fernão Simões de Carvalho, head of urbanisation of the city of Luanda, promoted a good relationship between the central road system and the city's key element: the neighbourhood unit, announcing Carvalho's futuristic vision about "Luanda do Futuro".⁷ Faithful to the Athens Charter doctrine, the neighbourhood units were interpreted as city design elements, avoiding excessive zoning. In line with urban planning strategies, the municipality of Luanda promoted public-private partnerships to carry out the projects.⁸ Simões de Carvalho suggested exchanges of municipal lands in the centre to expand new residential areas in the suburbs,⁹ awarding the construction to private companies, emphasising that the dynamics of real estate construction accompanied the modern impulse carried out by large construction companies.

He used this strategy in the case of Neighbourhood Unit nº1 with "3,000,000 m² of land sold by the municipality";¹⁰ it became the most

successful example of all the proposed units, known as the Prenda neighbourhood. The urban plan was designed between 1961 and 1963 by Simões de Carvalho and co-author Luis Taquelim da Cruz as a sustainable urban settlement unit which was "self-sufficient, based on three basic principles: hierarchy, nucleus and miscegenation".¹¹ The housing proposal supported facilities that ensured services in proximity, intending to bring together different social classes and family diversity. In sub-Saharan Africa, there are not many urban complexes like Prenda, which also gives it a unique heritage value (**Fig. 1**).

The last neighbourhood unit, designed in 1968 by Simões de Carvalho and Lopo de Carvalho, was developed for employees of C.T.T. (Post Office, Telegraph and Telephones), drew up different housing blocks and facilities in the environment. The regular square characteristics of the Modern Movement, like those in Prenda, were replaced by a fluid public space with a more organic configuration, suggesting a futuristic and organic vision of modern architecture. Only one block was built, on the eve of independence (**Fig. 2**).

Nevertheless, both neighbourhoods had a dispersed formalisation, the result of a lack of systematisation in the construction process as an urban place,¹² as they were never fully completed. It is interesting to add that it was thought of as a prototype of a new urban model to be applied in new expansion areas and put into practice in various locations around the city.¹³ In addition to the neighbourhood units, a new urban façade of modern filiation emerged from downtown to the city centre areas of the upper town. Architecture by name architects or anonymous and modern architecture of excellent quality could be witnessed following the new avenues.

2.1. An Architectural Grammar

Carvalho shared his modern knowledge acquired from his experience at the Corbusier atelier (1956–1959) to emphasise the mastery of the housing module. Associated with Fernando Augusto Pereira, and José Pinto da Cunha, he developed the residential blocks in the Prenda unit. The economy of resources and solutions adopted the orderly repetition of modular and sustainable solutions generated great visual and formal consistency in the whole complex. The tectonic issue appears justified by using concrete treated "intentionally and as a deliberate technique, definitive in the process of expression and constructive truth".¹⁴

The structure is actively involved in the composition of the façades, configured by the horizontal lines that balance the rhythm of the balconies, alternating the brise-soleils and windows. The architecture maintained a formal uniformity in the different sets, where the dilatation of the structural module (from 3.93 m in the smallest apartments (41.5 sq) up to 11.20 m in the largest typologies (121.7 sq) incorporates the main prefabricated

elements in cast concrete with the same architectural logic. The plastic potential of concrete was explored in its apparent structure or as a standard element (**Fig. 3**).

The example of the Prenda's neighbourhood can be multiplied to show Luanda's history of shading devices, *brise-soleils*, screen balconies and other attempts to control the way the sun enters the building. Systems were developed by architectural (rather than mechanical) means to ensure that, as Victor Olgay put it, "interception of the energy happens at the right place"¹⁵ when solar radiation is deflected at the façade before it enters the building. The building acts as a climate meter without air conditioning, resulting in excellent plastic expressiveness and structural audacity. We believe that for such success, the influence and know-how of the construction companies were essential, and without them, the "modern dream" would not have been possible.

3. THE ROLE OF THE LARGE CONSTRUCTION COMPANIES IN LUANDA, BY PRECOL'S FOOTPRINT

Although architects design only a tiny proportion of the current building stock, there is a void about the work of large construction companies in a global context, actors who, by definition, strive for economies of scale and avoid expensive cost. Because of their interest in quantity rather than quality, construction firms have received little attention in architectural history, despite having played a crucial role in shaping the built environment around the world since the end of the Second World War. Large Portuguese firms become political actors by building abroad, shaping the built environment in different geographic and political contexts. Attracting the participation of multidisciplinary professionals by combining design, construction, materials/components, marketing and advertising,¹⁶ allowing command of the real estate market, would end up exerting a decisive influence on supply. In exceptional cases, partnerships with international companies would be called upon¹⁷ to be fruitful objects of a new strand of architectural research.

In Luanda, real estate development began with the owners of large plantations (mainly coffee), who bought large sites to purchase or exchange from the Luanda City Council, which subsequently hired a construction company to carry out the design and execution of the work.¹⁸ Another key factor was the creation of the horizontal property regime in Portugal under the Decree-Law No. 40,333 (14/10/1955), which was applied with some minor alterations in Angola under Order No. 15.984 (6/10/1956). From 1958 onwards, since the first advertisement carried out by Cofinca,¹⁹ there was a boom in the sale of buildings under horizontal property ownership in Luanda.

Throughout the 1960s, the city overgrew, with a "Rhythm of urban progress that in some time will take it to a position of first importance among Atlantic

city".²⁰ Among the large Portuguese construction companies that operated in Angola,²¹ in the vast amount of information available in local periodicals of the time, the intense activity of private cooperatives in housing emerges. Most advertisements insist on the image of the perfect couple and the car to emphasise the dream home and the payment facilities to promote purchasing a "home of one's own". This aspiration was visible through housing advertisements, as for example when the O Lar do Namibe cooperative advertised "The most beautiful and functional housing building in Angola, a "Dream come true",²² about the building in Guilherme Capelo Street (Pinto dos Reis, 1974). The book building, as it is known, remains as an imposing landmark that combines housing with other social services. The vision of a better future was nurtured daily by a vast diversity of construction companies with the motto "Give reality to your dream... Solve your housing problem today".²³

Besides the isolated residential blocks, many of them by unknown authors, the main focus of promotion was on the announcement of the "new modern neighbourhoods", such as the Muceque Burity "for 5,000 people with all the amenities".²⁴ Indeed, the best examples are still the engaging promotion of the Predial Económica Ultramarina (Precol) in the construction and marketing of the Neighbourhood Unit Nº 1. In 1968, the Prenda neighbourhood unit was publicised as a "public utility work"²⁵ with private partnership; the sale of flats under horizontal property regime was advertised, created by the minister of overseas territory attributing the construction and promotion to Precol, under Law 2.007. Gradually the advertisements integrate the typologies with the drawing of the floor plan and respective areas, together with the sale price and monthly instalments. In 1971, the sale of the apartments was launched through the plans for five typologies, relaunching the excellent credit conditions and exemption from several taxes (**Fig. 4**).

Despite the fact that only the block built was the CTT neighbourhood unit proposed, Precol participated in constructing the neighbourhood since the first houses were built in the 1950s, formalising the first settlements in the Rangel neighbourhood. The company was so active that it generalised the name to the Precol neighbourhood. It can be seen that the industrialisation in the construction processes through the Modern Movement made it possible to define solutions for environmental comfort and sustainability in housing. These neighbourhoods and isolated modern buildings, symbols of architectural, technological and social aspirations, were trying to overcome the heavy historical colonial burden and, nowadays, have begun to be appreciated by users and authorities as an integral part of the current city. Combining design, maintenance or even rehabilitation questions, could new stakeholders be involved in the challenges and strategies to preserve modern collective houses?

FINAL NOTES

The neighbourhood units in Luanda, which can be understood as generalisable models, implicit in their urban-architectural proposal, are elements of analysis and rationality. They have shown that they are not simply based on pre-established schemes but on adapting to new solutions bringing sustainability and practicality of well-being. Indeed, the strength of Angolan modernity is representative of the Modern Movement's transversality on an urban, architectural, economic and social level. We acknowledge the failure of the neighbourhood units concerning their urban planning, mainly because none was fully developed. However, the numerous publications in local newspapers of the time show that the processes of construction and promotion of the flats were quite successful. The criteria for promoting housing sales highlighted the prime location, both in terms of mobility of vehicles and the surrounding landscape, self-sufficient in commercial and leisure facilities. Private companies like Precol eventually defined new, more specific real estate models with comprehensively planned solutions, seeking an appropriate commercial insertion in the potential buyer market and creating marketing and sales strategies.

The experience gained by repeating the process allowed for the optimisation of a type of product by a large real estate company that would eventually lead smaller developers and builders from other developers to replicate this same product. Furthermore, large construction companies have played, and continue to play, a significant role in the process and discourse of international 'development'. According to Simões de Carvalho's testimony, quality of the construction and engineering excellence are fundamental themes in understanding the value of this architecture executed at the end of the Portuguese colonial period. As we have seen, it was a choice of the property developers and the Luanda City Council itself, which was trying to fight against the stylistic and formal impositions proclaimed by the Colonial Urbanisation Office.

Characterised by adventurous experiments in using new materials and techniques that accompany the creation and innovation of everyday living space, today, many of these complexes require mechanical and safety improvements, such as infrastructure, systems and lifts in compliance with current regulatory standards. Moreover, these buildings have often been intensively used and modified, corroborating their degradation. Without any maintenance for the last 50 years, this housing infrastructure's resilience is due to the rigour of the architectural design as per the demands of the tropical climate, showing a spatial and tectonic value that has allowed it to survive the test of time. The large quantities and high quality of these modern housing complexes and their ensuing worldwide dissemination make them a prime target for urban regeneration.

It is not a history of triumph over the elements or a particular architectural movement; instead, it identifies a new object of history and a new subject of

design practice taking climate into consideration. Its interest lies in redefining the constructional methods to extend the architectural discourses on the changing climate patterns of the past and present. However, today's debate focuses mainly on how to keep these complexes alive and at the same time improve them according to contemporary standards of comfort. Would it be possible to reassert the original innovative and sustainable building systems by involving new stakeholders committed to the new energy challenges? Instead of discussing demolition, can the growing phenomenon of the valorisation of heritage capture new financing markets? I end with more questions than initially, hoping this research will become fruitful and open the discussion of histories and possible futures: from climate management techniques to new contributions from students, architects, and researchers involving the know-how of large construction companies in the techno-cultural challenges of mitigation and adaptation to climate instability. Can we not still be modern?

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¹ Tostões, "The Home at", 3

² Lagae & Avermaete, *L'Afrique*, 1

³ In 1951, the 1933 Constitution is amended, changing the Colonial Act, where terms such as "Empires" or "Colonies" are replaced by "Overseas" and "Provinces".

⁴ Cf. DECREE no. 34:173 Colonial Ministry created the Colonial Planning Office, based in Lisbon, a standard office to serve all colonies in Africa, and defined its attributions. *Diário do Governo*, I série, n. 269, 6 December 1944, 1167–1168. Cf: Milheiro, 2012:326.

⁵ *Estado Novo* is the name of the political, authoritarian, autocratic state regime that was in force in Portugal for 46 years without interruption, with freedom proclaimed with the Revolution of 25 April 1974. In 1975 the process of independence of the Portuguese African colonies began.

⁶ Rodrigues, "Modern Colonial...", 87

⁷ Carvalho, "Luanda do Futuro", 27–29.

⁸ Correia, *O património...*, 147.

⁹ Nóbrega, "Ora se me dão licença", 9–20

¹⁰ *A Província de Angola*, 15-2-1962

¹¹ Data gathered in an interview with Fernão Simões de Carvalho, Queijas, 27/07/2011.

¹² Rodrigues, "Cuando la vivienda colectiva" 147.

¹³ Milheiro, 2015, 215.

¹⁴ Rodrigues, "O Betão nú e o Lobito", 8.

¹⁵ Olgyay, *Design with Climate*, 4.

¹⁶ In Portugal, as an example, the *J. Pimenta* firm, which in addition to the building materials yard, would set up its own design office (which would take responsibility for all projects) and a section for management of condominiums and rental apartments.

¹⁷ For example, MERCATOR, SARL called on LUSECA – Sociedade de Construções, SARL with know-how in the tunnel formwork construction system, developed in Sweden, for the promotion of the Alto da Barra Urbanisation, Fernando Silva, 1962–1979, Lisbon, Portugal.

¹⁸ Correia, *O património...*, 147.

¹⁹ *A Província de Angola*, 16-06-1959.

²⁰ *Diário da Manhã*, 1959

²¹ Mota & Companhia has been in business since 1946, and in Housing the following stand out among many others: Pastorinha, Precol, Construções Cofinca, or J. Pimenta, founded in 1956 and still in activity today.

²² *A Província de Angola*, 10/05/1967

²³ *A Província de Angola*, Sociedade Cooperativa “O Lar do Namibe”, 1971

²⁴ *Ronda da Cidade*, 02/05/1959.

²⁵ *A Província de Angola*, 29/04/1971.