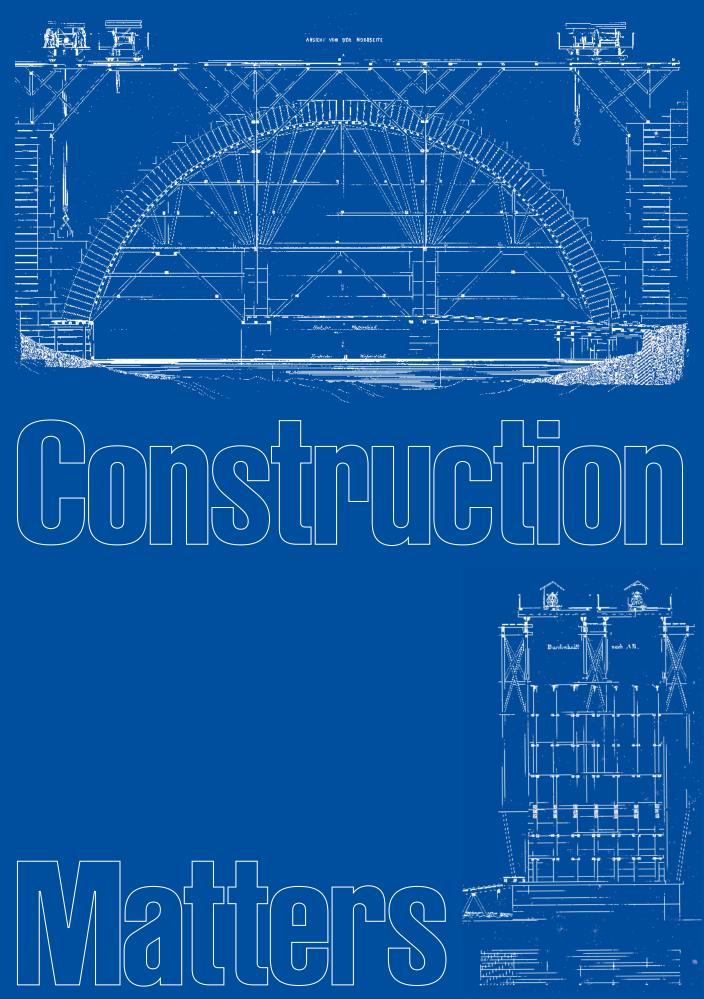
Proceedings of the 8th International Congress on Construction History Stefan Holzer, Silke Langenberg, Clemens Knobling, Orkun Kasap (Eds.)



Stefan Holzer, Silke Langenberg, Clemens Knobling, Orkun Kasap (Eds.)

Construction Matters

Proceedings of the 8th International Congress on Construction History



















Associazione Edoardo Benvenuo per la ricerca sulla Scienza e l'Arte del Construire nel loro sviluppo storico



Konstruktionsgeschichte

Bauforschung

pund

Konstruktionserbe

Denkmalpflege

und

CHSA Constructíon History Society of America

Bibliographic information published by the Deutsche Nationalbibliothek

The Deutsche Nationalbibliothek lists this publication in the Deutsche Nationalbibliografie; detailed bibliographic data are available in the Internet athttp://dnb.dnb.de.

This work ist licensed under creative commons licence CC BY 4.0.



Download open access:

ISBN 978-3-7281-4166-8 / DOI 10.3218/4166-8

www.vdf.ch verlag@vdf.ch

© 2024, vdf Hochschulverlag AG and the editors

All rights reserved. Nothing from this publication may be reproduced, stored in computerised systems or published in any form or in any manner, including electronic, mechanical, reprographic or photographic, without prior written permission from the publishers and editors.

Large construction companies in the widespread of modern housing. A comparative analysis between Lisbon and Luanda

Inês Lima Rodrigues¹, Francesca Vita²

¹Dinâmia'Cet-Iscte, University Institute of Lisbon, Lisbon, Portugal; ²Dinâmia'Cet-Iscte, University Institute of Lisbon, Lisbon, Portugal

Abstract: From the late 1950s, Lisbon and Luanda experienced an exponential population growth that intensified with the outbreak of the colonial war (1961–1975), with the independence of the colonies under Portuguese rule and the end of the dictatorship in 1975. Due to the inefficiency of the public apparatus in responding to the housing crisis and providing different "*housing for many people*", the state encouraged the private market (construction companies, cooperatives, developers, investors, etc.) to support the demand for housing in Lisbon and Luanda. The result was a boom in the construction industry, mainly through standardized high-rise buildings, which promoted access to the "home of one's own" and promised a modern and mechanized lifestyle in central and peripheral locations for the emerging middle class. The role of medium-sized and large construction companies in the spread of modern housing was crucial in both Lisbon and Luanda. The construction companies not only provided the know-how to build quickly and with good quality, but they were also agents in the promotion of a new way of life, in the exchange of expertise and constructive references between Lisbon and Luanda and in the mobilization of different actors (public and private) in the making of the modern city.

Introduction

At the end of the 1960s, the housing industry in both Lisbon and Luanda was dominated by a constellation of actors that guided the process of modernization of the city, its construction, and inhabitants. Among the actors responsible for this process, the medium-sized and large construction companies played a crucial role in compensating for the inefficiency of state initiatives and in shaping the urban environment and its future dwellers.

As a matter of fact, in both Lisbon and Luanda, at the end of the 1950s, the ineffectiveness of the state in meeting the demand for housing led to the final opening of the construction industry to the private market. Through the implementation of various instruments, the state provided space (literally and figuratively) for construction companies to operate. For example, urbanization plans through the expropriation of lands provided empty areas where new housing projects would be accomplished. State institutions shaped incentives on construction materials and tax relief for the private market to participate in significant housing operations. The regulation of the "horizontal property" regime was fundamental for opening the housing market and letting private companies, developers and realtors participate in the construction market. The legislation responded to the aspirations of builders who longed for a product on the market that would attract a population that didn't have enough savings to buy an income property and could thus realize the dream of home ownership, both in Portugal and in Angola.

Even if the urban contexts of Lisbon and Luanda were characterized by their own specificities, the modus operandi through which the state allowed construction companies to drive the housing industry and let the network of agents being involved in the construction history of that specific moment is similar, allowing a comparative analysis of the two major cities of the Portuguese empire at that time.

Regarding the topic of housing, the literature on the development and the making of the modern cities of Luanda and Lisbon in the second half of the twentieth century has mainly focused on the issue of public policies (Amaral 1971, Ferreira 2014, Antunes 2018, Pedrosa 2018) on specific housing complexes stressing the figures of particular architects or engineers (Tostões 2013, Rodrigues 2022, 2022b), on the urban planning in a broader sense (Milheiro et al. 2015, 2018), on Angolan modernity (Correia 2018, Rodrigues 2021) and on specific cases of mass housing for middle-class (Milheiro and Rodrigues 2022, 2023). The role played by medium-sized and large construction companies in the construction of the modern city between the 1950s and the 1970s has so far been neglected. However, their role in the construction history in both contexts has been crucial. Private construction companies not only ensured know-how and expertise to suppress the public deficit in responding to the housing crisis, but they also constituted one of the main actors in leading the modernization process in the field of housing. In addition, they acted as mediators between multiple forces and agents: the state interests in pursuing the urbanization of the city and the establishment of new residential areas, the private interests of investors and developers in exploiting the private market, and the aspirations of the potential buyers (future inhabitants) in achieving modern standard of living at an affordable price.

To understand the complexity of the construction history of Lisbon and Luanda in a pivotal time for the housing industry, this proposal goes beyond the analysis of the mainstream actors (the state, public institutions, and the architects). It opens a new line of investigation into construction companies, by revealing who they were, how they worked and what role they played in responding to the housing crisis and driving the modernization of the construction industry and middle-class lifestyle in both Luanda and Lisbon. How did construction companies act as mediators between private interests and public concerns? Which public and private partnerships did they activate to fuel the construction and housing market? How did they influence the construction knowhow and the architectural design that occurred after? How did they influence and responded to the living aspirations of an emerging urban middle-class? Finally, the research questioned how, after the independence of Angola and the end of the dictatorship (1975), the construction companies embarked in the process of democratization and decolonization, revealing that some of them still represent relevant players in the field of contemporary construction both in Lisbon and Luanda.

This article consists of exploratory research opening a comparative study on housing in Portugal and Angola through the paths of construction companies. To this end, in addition to reviewing the literature to contextualize the political and architectural activities of the construction companies, the research methodology is based on analyzing the different media through which the construction companies advertised their services, objectives and partners: newspapers and magazines of the time in both Portugal (Diário da República; Diário Popular; Arquitectura) and Angola (A Província de Angola), advertising and propaganda films, publicity and sales brochures. Thus, a critical review of specific case studies from previous research projects related to urban, architectural, social, and housing policy issues was conducted from a constructive path, dealing with archive material (private and public) and the collection of oral histories.

1. From public housing to private-oriented housing estates (1955–1974)

The boom of large construction companies in Lisbon's housing sector (1950s-1960s) occurred after a period characterized by the State's initiative to improve housing conditions in both central and peripheral areas. In the years following the Second World War, State-oriented housing programs were promoted by a series of decrees (e.g., Decree-Law No. 36212 of 7 April 1947, which introduced the policy of limited-income housing), which enabled the construction of (a) affordable housing, (b) affordable rental housing, (c) limited-income housing, (d) social housing for the middle class with maximum average rents, tax and land concessions, and the setting of prices for building materials (Antunes 2018). These developments excluded the involvement of construction companies and developers, and in the late 1950s, they revealed the inefficiency of the State in responding to the growing demand for housing. At the same time, in Luanda (the capital of Angola), the housing industry was still undeveloped, and state initiatives were limited to a few propaganda districts (Fonte 2007, Correia 2018).

By the end of the 1950s, the urban population exploded in both cities. Lisbon reached 783,226 inhabitants (Antunes 2018), while in Luanda, the population grew from 61.028 in the 1940s to 224.540 in the 1960s, doubling in the 1970s (Amaral 2015 [1968]).

The inefficiency of the public apparatus in responding to the new demand for housing in both cities was an undeniable fact that increased the pressure of public opinion on the ruling dictatorship. Aware of this situation, the State adopted a series of measures that, by the end of the 1950s, accelerated the private construction in the housing sector, the emergence of medium-sized and large construction companies and the opening to the private market in both Lisbon and Luanda. The urbanization plans freed new areas for construction exploitation, state incentives on construction materials and tax relief were adopted in order to incentive the private investors and the creation of the horizontal property regime in Portugal (by the Decree-Law No. 40333, in 1955), applied with slight changes in Angola (by the Order No. 15984, in 1956) fulfilled the desires of both private developers and buyers, mostly the emerging middle class.

The main public interventions were based on land expropriation operations in the Lisbon periphery and in Luanda's informal neighborhoods (called *muceques*), securing potential areas for economic exploitation. On the other hand, small private investors, especially after the generalization of "horizontal property" which made it possible to sell the apartments independently, promoted the broad construction of new housing by construction companies, mediators, and housing cooperatives.

From the 1960s onwards, the real estate market was left mainly to the initiative of private actors, and the role of the public sector was to facilitate them. The leading players that would end up being the most decisive in the housing market and its modernization process were a) medium-sized and large construction companies; b) small and medium-sized private developers; c) large property companies; d) realtors and e) cooperatives.

2. The creation of new urban voids: a fertile land for construction exploration

The deficit of quality housing for the middle classes in the center of the Portuguese capital led to the occupation of land plots along the city's northern periphery, outlining new metropolitan areas established in the Lisbon Region Master Plan (1964) (Ferreira 2014). Large-scale operations were carried out by local authorities to expropriate private lands and then sell them to private actors with incentives (e.g., buying land at a lower price than the market). The most paradigmatic examples of this type of process in Lisbon were the neighborhoods built along the outskirts of the city from the western periphery (Algés, Linda-a-Velha, Carnaxide, Amadora, Odivelas) to the north (Loures, Sacavém, Moscavide), among many others. It was in these areas, until then reserved only for the wealthiest classes, that property speculators began to operate and large companies to build.

One of the paradigmatic examples in the expansion of the north's periphery is the Portela urbanization designed by Fernando Silva. The architect established a benchmark standard: architectural, through language and technology, in its construction methods by defining a series of construction elements that offered a level of comfort still uncommon in residential architecture by setting a standard for housing for the middle classes living in Lisbon's suburbs. Besides the Portela neighborhood, Fernando Silva developed urban plans for Quinta do Marquês (1961–1975), Alto da Barra (preliminary plan in 1962, urbanization plan in 1964), and Quinta da Luz (urbanization plan in 1972, intervening from 1975 onwards) (Fig. 1).



Figure 1. Advertisement for the innovative construction systems of the Alto da Barra Urbanization, Lisbon. (CM Oeiras. Archive-D.P.G.U. S.L.O.P Process DF60H89).

In Lisbon, the sale of large estates by the great heirs of the nineteenth-century bourgeoisie to major property investors changed the urban landscape by allowing the construction of large housing complexes. In Luanda, real estate development began with the owners of large plantations (mainly coffee), who bought large sites to purchase or exchange with the Luanda City Council, which subsequently hired a construction company to carry out the design and execution of the work (Correia 2018, 147).

Luanda City's high demand for private investments was initially hampered by the lack of planning instruments that regulated new constructions, a gap that the creation of the Luanda Planning Office sought to fill (1963). The architect Fernão Simões de Carvalho, head of Urban Planning Office of the Luanda City Council, advocated for a better connection between the central road system and the city's neighborhood units announcing his futuristic vision of a "Luanda of the future" (Carvalho 1963, 28).

In line with urban planning strategies, Luanda City Council fostered public-private partnerships for the completion of major housing projects (Correia 2018, 147). Simões de Carvalho suggested exchanging municipal land in the center to expand new residential areas in the suburbs by attributing the construction to private companies, stressing the importance of applying modern theory to the dynamics of real estate construction (Carvalho 1963). The aim was to encourage private developers to exchange building permits on small plots of municipal land with massive development potential in the suburbs, to be applied on the urban plans developed by the Urban Planning Office of the Luanda City Council (Correia 2018, 147).

The insertion of prefabricated design elements led to functional innovations that were equally formal and aesthetic, benefiting from foreign know-how. In Lisbon, Alto da Barra had the advantage of Silva's privileged standing as a founding partner of the construction and project management company Mercator, allowing greater control of the process during the development of the complex. In Luanda, the *Predial Económica S.A.R.L. (PRECOL)* company supported by the Ministry of Overseas Territories granted contracts for Prenda's or Rangel's neighborhoods. The use of industrial construction systems ensured economic viability. The buildings themselves revealed a pragmatic approach that matched architectural design to construction standards only achieved with the commitment and involvement of the large companies (Fig. 2).



Figure 2. Announcement of the different types of housing, collective buildings, and semi-detached single-family houses, in Neighbourhood Unit No. 1, Muceque Prenda (A Província de Angola, July 10, 1967).

3. The construction boom: promoting housing through large construction companies

The territorial transformation of the peripheral areas of Lisbon and Luanda that took place between the 1960s and the 1970s (including the aftermath of the April Revolution, 1974) was, however, almost exclusively undertaken by private agents and, within these, large construction companies.

The legislation responded to the aspirations of the developers, who were eager for a product on the market to attract a population without sufficient savings to buy an income-producing building and who could thus fulfil their dream of home ownership. The regulation of the horizontal property regime was fundamental in marking the transition from the rental market to the purchase market (Antunes 2018, 266). Large Portuguese firms became 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, allowing command of the real estate market, would exert a decisive influence on supply.

The State's promotion of Portugal's industrial development would eventually allow the entire sector to be restructured and large companies specializing in the housing sector of the real estate market to be set up in the different markets. The capital made available by the banking sector, which replaced individual savings, made it possible to carry out large-scale real estate operations, significantly contributing to the boom in the construction sector in the 1960s. The construction companies were the real productive agents of the property process both in Lisbon and Luanda.

The magnitude of the problem to be tackled, the housing shortage, wasespecially addressed in the peripheral areas of Lisbon where the country's largest property development companies would operate, such as J. PIMENTA- Empreendimentos Urbanos e Turismo, S.A.R.L., ICES.- Indústria de Construções e Empreendimentos S.A.R.L.; SOLÁTIA – Sociedade Nacional de Investimentos Imobiliários S.A.R.L.; Alves Ribeiro, Lda; URBACO – Urbanizações Construções Lda; HABITAT – Empreendimentos, Imobiliários, S.A.R.L.; SOGIN – Sociedade Gestora de Iniciativas Financeiras, Lda; SOGEL – Sociedade Geral de Empreitadas, Lda; SPOC – Sociedade Portuguesa de Obras de Construção, S.A.R.L.; ESTIL-Estudos, Investimentos e Urbanização S.A.R.L. (Ferreira 2014).



Figure 3. The built constructor *J. Pimenta, S.A.R.L.*, as "A symbol in Housing" (Arquitectura, 125, 1972).

The J. PIMENTA, S.A.R.L., one of the most famous building companies among many others that have operated mainly in Lisbon, but also in Luanda, 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 as "A Symbol in Housing" (Arquitectura, 1972, 125) (Fig. 3).

These large companies were joined by individual developers, such as Manuel da Mota or José Maria Duarte Júnior, who worked on large plots of land, as happened in the Portela Urbanization (Milheiro et al. 2018, 46). In exceptional cases, partnerships with international companies resulted in fruitful solutions for a new architectural research strand. One example was the partnership between the construction and project management company MERCATOR-S.A.R.L. and the Portuguese-Swedish construction company Sociedade de Construções LUSECA-S.A.R.L., allowing to benefit from foreign know-how. This collaboration promoted the application of innovative prefabrication systems, still unknown in Portugal, such as the "tunnel-type formwork" construction system applied for a complete cellular unit by a negative module (when the concrete is filled, fixed in once, the walls, structure, and slab) (Rodrigues, 2022a, 5). Architect Fernando Silva piloted this system in the Alto da Barra Urbanization where, as well as being the designer (as mentioned above), he was also one of the founding partners of MERCATOR, allowing for a high degree of control over the construction process during the development of the complex (Rodrigues 2022, 137).

Both in the case of the suburban real estate (Lisbon) or of the central high-rise buildings (Luanda), the construction boom and private market relied on the importance for the middle-class of owning its own house. Throughout the 1960s, Luanda also grew, with a "rhythm of urban progress that in some time will take it to a position of first importance among Atlantic city" (Diário da Manhã 1959). Among the large Portuguese construction companies that operated in Angola, in the vast amount of information available in local newspapers of the time, the intense activity of private cooperatives in housing emerged. Most advertisements insist on the image of the perfect couple to emphasize the dream home and the payment facilities to promote purchasing a "home of one's own". This aspiration was visible through housing advertisements carried out by COFINCA: "Modern constructions: within everyone's reach" (Fig. 4).

The flurry of advertisements promoting the sale of apartments in "horizontal property" was a regular feature on the pages of the leading newspaper *A Província de Angola*.



Figure 4. The CONFICA company's promotion always maintained the image of the "happy couple", while the size of the housing blocks increased over the years (A Província de Angola, August 3, 1958; June 16, 1959; and July 7, 1967).



Figure 6. Publications in newspapers of various property promotions, "Edificio Alvorada", Invernosol company, J.R. Bizarro (A Província de Angola, January 3; February 10 and February 25, 1974).

With a cross-sectional analysis from the end of the 1950s until the independence era (1975), we can highlight several companies that promoted the building of apartments in horizontal property and credit facilities, and other kind of slogans such as "you will always find a solution for your home. Tell us your problem and we will solve it" by CONOL, a company responsible for the construction and promotion of three buildings in Luanda: 1) Building Bela Vista; 2) Building São Paulo and 3) Building Sagrada Família (A Província de Angola June 1967). Among other developers of several buildings and housing projects was the large company SICCAL (responsible for the Building Coqueiro, Luanda); the TECNATOMIUM company (in chief for the "Building Patria" in Luanda and the "Building Mirante" in Lisbon) and the TUDANGOL R.D., Girassol Constructions, Construções Horizonte Lda. within the most relevant in the housing market published in the most famous Angolan newspaper.

Even with the relative impact of the housing market in Luanda, the isolated buildings on prime sites in the city center competed with the large urban development operations that promoted housing for the middle class (mostly European

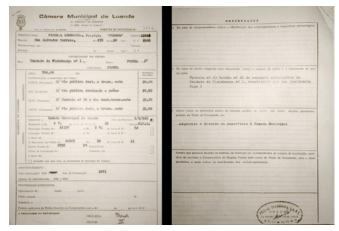


Figure 5. Deed of sale of land owned by Luanda Municipal Council in Neighborhood Unit no. 1 to the PRECOL company (IGPUL, Luanda Municipal Council, Luanda 1971).

population) in the periphery extending new areas of the city. As mentioned above, the land initially bought by the local authorities in the suburban areas would be sold at very competitive prices to private companies. It was the case of the company *PRECOL* that acquired land (still from individuals) in 1962 in the Rangel neighborhood, or when in 1971 it "acquired the right of the surface from the Luanda Municipality" of a plot in Neighborhood Unit no. 1 in Prenda neighborhood, which was one of the best examples of the engaging promotion of the *PRECOL* (Fig. 5).

In 1968, the Prenda neighborhood unit was publicized as a "public utility work" with private partnership. The sale of flats under horizontal property regime was advertised, created by the minister of overseas attributing the construction and promotion to *PRECOL*, under the Law 2.007 (*A Provincia de Angola* 1971). Gradually, the advertisements began to spread apartment typologies with the drawing of the floor plan and respective areas, with the sale price and monthly instalments. In 1971, the sale of flats was launched by *PRECOL* for five types of flats, advertising the excellent credit conditions, and emphasizing the exemption from various taxes.

It is important to note that the real estate activity undertaken by large developers was quite strong around the Revolution of 25 April 1974. Suffice it to say that in 1974 *Construções Jonar Lda*. advertised the "Prédio na Baixa", a ten-storey building in the city centre; the modern "Building Alvorada" (*A Província de Angola*, 3 January 1974), the *Invernosol* company as a large property organization (*A Província de Angola*, 10 February 1974) or the slogan by *J.R. Bizarro* "Win the dreams of your life" (*A Província de Angola*, 25 February 1974) in somehow heralding a new hope for the future (Fig. 6).

In Luanda, the activity carried out by cooperatives from their creation to the building boom until the 1974 revolution and even at the beginning of the independence process can be traced down in the country's leading newspaper, *A Província de Angola*. Some of the most representative cooperatives in Angola, such as "A Nossa Casa" [Our House] or "Alegria pelo Trabalho" [Joy for Work] used newspapers and magazines



Figure 7. Inauguration of the first building and later the "O Livro" [The Book] building by the Alegria pelo Trabalho Cooperative (A Província de Angola, April 1968; May 1967).

as official means of communication with their members, publishing information about the application process, admission proposals, tender conditions, results assiduously, calls for tenders and transfers of positions. The advertisements were constantly attracting mediation solutions for various, different and all possible purposes: "If those interested do not have land, the Cooperative will take care of getting it, both in horizontal property and in single-family residences. Do not build without consulting us, and you will be compensated" (A *Província de Angola* apr-1968). The promotion's aspirations were visible through housing advertisements, for example, when the Alegria pelo Trabalho cooperative advertised "The most beautiful and functional housing building in Angola, a 'Dream come true'" (A Província de Angola, May 1967), about the building in Guilherme Capelo Street designed by Pinto dos Reis (Fig. 7). Founded in 1963, Alegria pelo Trabalho in 1974 had around 400 houses built in various parts of Angola, most in Luanda (Maianga, "Livro Aberto" building, António Barroso building) but also in Nova Lisboa (now Huambo) and Cabinda (Paiva 1995).

Around the April Revolution in 1974, the two prominent cooperatives continued to publish their advertisements in the newspaper Boletim Informativo da Cooperativa a Nossa Casa (A Província de Angola, mar-1974). In September of the same year, the Alegria pelo Trabalho cooperative issued a statement saying that it would try to fulfil "at all costs its obligation to defend the interests of its members" by tackling the emerging problems so that "its fair expansion and prosperity in an independent Angola will be a very valid support for resolving the housing problem at various social levels" (A Província de Angola oct-1974). While in Angola, large and medium construction companies continued to operate after the 1974 Revolution, in Portugal, the housing program changed radically with the large-scale residential operations that would come to be known as "SAAL" (Serviço de Apoio Ambulatório Local), giving rise to the most critical movement of housing cooperatives in Portugal.

Conclusion

Large construction companies have played an essential role together with social organizations in shaping the urban environment and facing the housing demands in the 1960s and 1970s. Their role not only reveal the entanglement between public and private interests in the housing industry, but also how developers have produced changes in the urban landscape through housing development to the point of becoming part of its history (Fig. 8).

CONSTRUCTION COMPANIES				
ORIGINAL NAME	CURRENT NAME	Country of origin	Starting date	Activity countries
Alves Ribeiro, Lda	Alves Ribeiro, Lda	Portugal	1941 2016 opened construction company in Angola	Portugal Angola Brazil
CONOL	•	Angola	•	Angola
HABITAT – Empreendimentos, Imobiliários, S.A.R.L	HABITAT – Empreendimentos, Imobiliários, S.A.R.L	Portugal	1960	Portugal Angola
SOLÁTIA - Sociedade Nacional de Investimentos Imobiliários S.A.R.L	•	Portugal	1963	Portugal Angola
J. PIMENTA- Empreendimentos Urbanos e Turismo, S.A.R.L	J. PIMENTA Investimentos Imobiliários, S.A	Portugal	1960	Portugal Angola Brasil
PRECOL, Predial Económica S.A.R.L.	closed down after independence	Portugal	1956?	Angola
SICCAL	SICCAL – SOC. INDUSTRIAL E COMERCIAL DE CONSTRUCÕES ANDRADES	Angola	1956	Angola
SOGEL - Sociedade Geral de Empreitadas, Lda	SOCIEDADE GERAL DE EMPREITADAS LTDA – SOGEL	Brazil	1966	Portugal Angola Brazil
SOGIN - Sociedade Gestora de Iniciativas Financeiras, Lda	Sociedade Gestora de Iniciativas Financeiras - Sogin S.A	Portugal	1960	Portugal
SPOC - Sociedade Portuguesa de Obras de Construção, S.A.R.L.	•	Portugal	1956	Portugal
URBACO – Urbanizações Construções Lda	-	Portugal	1970	Portugal
Mota & Companhia	MOTA-ENGIL ÁFRICA PT	Portugal	1946 in Portugal and Angola	Portugal Angola, Swazilândia Gabão, Brazil

* We have no further information

Figure 8. Comparative table between some of the companies that have operated and/or still operate in Portugal and Angola (done by the authors).

It is noteworthy how the large construction companies collaborated with different actors/agents: public promoters, the state (local authorities and municipalities), private real estate agents and housing cooperatives, becoming the main driving force behind the construction of the outskirts of Lisbon and Luanda with notable buildings in the city centers to respond to the aspiration of acquiring a "home of one's own". Furthermore, the experience gained by repeating the process allowed for the optimization of a type of product by the large built companies, had led smaller developers and builders to replicate the same product According to the testimony of Simões de Carvalho, the quality of construction in Luanda was generally identical to that of European Portugal since the "builders are engineers from the Metropolis who found construction companies here", was strengthened by the quality of the local workers (Milheiro 2012, 96). An analysis of his works in Luanda, and the various oral histories gathered in the last years (Rodrigues 2022b, 308), there is no doubt that the quality of the construction and the excellence of the engineering were fundamental themes in understanding the value of this architecture executed at the end of the colonial period and the Portuguese dictatorship.

Therefore, private companies like PRECOL 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. In the aftermath of the Revolution and in the following decades until the contemporaneity some of the construction companies (i.g. Alves Ribeiro, J. PIMENTA, MOTA-ENGIL AFRICA-PT) are still relevant agents in the transformation of both Lisbon and Luanda, facing new challenges such as the liberal market. Currently, there are more than 150 Portuguese and Angolan companies actively involved in construction in both countries (CCIPA 2024). It is not a construction history outlined over the modern elements or a particular architectural movement, but rather the identification of a new objective for history by understanding housing during the property boom promoted by the large constructors and its repercussion until today.

Acknowledgements

The authors would like to thanks to the Angolan researcher Maria Alice Correia, for her valuable sharing of the survey of newspapers of the time carried out in the scope of her PhD "O modelo do urbanismo e da arquitetura do movimento moderno—Luanda 1950–1975" University of São Paulo, https://doi.org/10.11606/T.16.2019.tde-18012019-094308.

This article has been developed within the research project "ARCHWAR — Dominance and mass-violence through Housing and Architecture during colonial wars. The Portuguese case (Guinea-Bissau, Angola, Mozambique): colonial documentation and post-independence critical assessment" http://doi.org/10.54499/PTDC/ART-DAQ/0592/2020. It was also developed in the scope of Scientific Employment Stimulus funded by FCT: Beyond Modern Housing Heritage of Portuguese Influence... https://doi.org/10.54499/2022.00268.CEECIND/CP1750/CT0007.

Bibliography

- Amaral, Ferreira do. 1971. Cooperativas de Habitação [Housing Cooperatives]. Lisbon: Sociedade Nacional de Fomento Imobiliário.
- Amaral, Ilídio. 2015 [1968]. Luanda. Estudo de Geografia Urbana. Luanda: Kilombelombe.

- Antunes, Gonçalo. 2018. *Políticas de Habitação 200 Anos*. Lisbon: Caleidoscópio.
- Carvalho, F. Simões de. 1963. "Luanda do futuro" [Luanda of the future]. *Ronda pelo Ultramar, Angola terra de Portugal*, 27–29, Tapete Mágico.
- CCIPA. 2024. "Diretório das empresas associadas da CCIPA, em Portugal e em Angola" [Directory of CCIPA member companies in Portugal and Angola], https:// www.cciportugal-angola.pt/associados/directorio-deassociados/. consulted 30 January 2024.
- Correia, Maria Alice. 2018. "O modelo do urbanismo e da arquitetura do movimento moderno—Luanda 1950– 1975" [The heritage of the modern movement—Luanda 1950–1975]. PhD diss. University of São Paulo. https:// doi.org/10.11606/T.16.2019.tde-18012019-094308
- Ferreira, Bruno. 2010. "(In)formar a cidade contemporânea: A criação de uma imagem/modelo de periferia com a obra do arquitecto Fernando Silva" [(In)forming the contemporary city: The creation of an image/model of periphery with the work of architect Fernando Silva]. Master diss. Iscte–IUL. http://hdl.handle.net/10071/2292.
- Ferreira, Bruno. 2014. "Plano Director da Região de Lisboa: O primeiro instrumento de planeamento territorial para a Área Metropolitana de Lisboa" [Lisbon Region Master Plan: The first territorial planning instrument for the Lisbon Metropolitan Area]. Arquiteturas do Mar, da Terra e do Ar, II (13/14/15), 246–258.
- Fonte, Manuela. 2007. Urbanismo e arquitectura em Angola – de Norton de Matos à Revolução. [Urbanism and architecture in Angola – from Norton de Matos to the Revolution PhD]. Thesis. Lisbon: FAUTL. https://www. repository.utl.pt/handle/10400.5/2027
- Milheiro Ana V., Fiúza Filipa, Almeida, Rogério Vieira, and Félix, Débora. 2015. "Radieuse peripheries, a comparative study on middle-class housing in Luanda, Lisbon and Macao". In *Middle-class housing in perspective from post-war construction to post-millennial urban landscape*, Gaia Caramellino and Federico Zanfi eds., 211–240. Lausanne: Peter Lang.
- Milheiro Ana V., Fiúza Filipa, and de Almeida, Rogério Vieira., eds. 2018. *Optimistic suburbia 3: Researchers' perspective*. AMDJAC.
- Milheiro Ana V. 2012. Nos Trópicos sem Le Corbusier Arquitectura luso-africana no Estado Novo [In the Tropics without Le Corbusier Luso-African architecture under the Estado Novo]. Lisbon: Relógio D'Água.
- Milheiro Ana V., Rodrigues Inês L., coord.; Serrazina Beatriz; Matos Silva Leonor, eds. 2022. "What architecture for the middle-class?". *Cidades, Comunidades e Territórios*, Spring Special Issue. https://revistas.rcaap.pt/cct/about
- Milheiro, Ana V., Rodrigues Inês L. 2023. Editorial "Optimistic Suburbia 4. Full Papers' Booklet". Optimistic Suburbia 2 – International Conference Middle-Class Mass Housing Complexes. 5–7. Lisboa, Publisher: AMDJAC. https://ai-research.pt/publications/
- Paiva, Flávio Furtado de. 1995. "O Dilema das Cooperativas de Habitação: Observância dos princípios ou eficácia económica? O Caso de Lisboa" [The dilemma of housing co-operatives: Observance of principles or economic efficiency? The case of Lisbon]. Master diss, Universiade Técnica de Lisboa, ISEG, http://hdl.handle. net/10400.5/22367

- Pedrosa, Patrícia Santos. 2018. "As cooperativas de habitação portuguesas: o jogo dos possíveis". In Habitação: 100 anos de Políticas Públicas em Portugal, 1918/2018, edited by Ricardo Agarez (ed.), 280–315. Lisboa, IHRU. http://www.portaldahabitacao.pt/opencms/export/sites/ portal/pt/portal/100anoshabitacao/af_IHRU_Habitacao_ Social.pdf
- Rodrigues, Inês Lima 2022. "When Modern Housing Built Optimistic Suburbia: A Comparative Analysis Between Lisbon and Luanda". Urban Planning, 7(3), 130–143. (ISSN: 2183-7635). https://doi.org/10.17645/ up.v7i3.5221
- Rodrigues, Inês Lima. 2022a. "The Role of Construction Companies in Modern Housing. Precol's Footprint in Late Colonial Angola". In Proceedings 17th International Docomomo Conference Modern Design: Social Commitment & Quality of Life, Valencia: Docomomo Internacional, 276–286. (978-84-19286-581). https:// docomomo.com/proceedings-17th-idc/
- Rodrigues, Inês Lima; Carvalho, Fernão Simões. 2022b. "A neighbourhood that had everything to be happy. Rethinking the interrupted modernity of the neighbourhood for CTT's Employees (1968–2018)", Ana Vaz Milheiro, Ana Silva Fernandes (eds.) *I Colonial and Postcolonial Landscapes International Congress*, Lisboa: Dinâmia'Cet, Iscte-IUL, 290–309 (978-989-781-614-7). https://repositorio.iscteiul.pt/handle/10071/26996
- Rodrigues, Inês L. 2021. "New Housing in Angola, From Modernity to Contemporaneity. The role of the Portuguese star system in Luanda's urban growth". Paulo Tormenta Pinto, Ana Brandão, Sara Lopes, eds., *Proceedings of Grand Projects. Urban legacies of the late 20th century*, Lisboa: Dinâmia'Cet, Iscte-IUL, 273–287 (978-989-781-551-5) http://hdl.handle.net/10071/23862
- Tostões Ana, ed. 2013. Arquitectura moderna em Angola e Moçambique [Modern architecture in Angola and Mozambique], Lisbon: FCT.

Archival sources

- A Província de Angola. October 3. 1958.
- A Província de Angola. June 16. 1959.
- A Província de Angola. May 10.1967.
- A Província de Angola. June 6. 1967a.
- A Província de Angola. July 7. 1967.
- A Província de Angola. July 10. 1967.
- A Província de Angola. April 6. 1968.
- A Província de Angola. April 29. 1971.
- A Província de Angola. January 3. 1974.
- A Província de Angola. February 10. 1974. A Província de Angola. February 25. 1974.
- *A Província de Angola*. October 29. 1974.
- A Provincia de Angola. October 29. 1974.
- A *Província de Angola*. March 21. 1974.
- J. Pimenta, SARL, Um Símbolo em Habitação. Revista *Arquitectura*, 125. 1972.

Construction History is still a fairly new and small but quickly evolving field. The current trends in Construction History are well reflected in the papers of the present conference. Construction History has strong roots in the historiography of the 19th century and the evolution of industrialization, but the focus of our research field has meanwhile shifted notably to include more recent and also more distant histories as well. This is reflected in these conference proceedings, where 65 out of 148 contributed papers deal with the built heritage or building actors of the 20th or 21st century. The conference also mirrors the wide spectrum of documentary and analytical approaches comprised within the discipline of Construction History. Papers dealing with the technical and functional analysis of specific buildings or building types are complemented by other studies focusing on the lives and formation of building actors, from laborers to architects and engineers, from economical aspects to social and political implications, on legal aspects and the strong ties between the history of construction and the history of engineering sciences.

The conference integrates perfectly into the daily work at the Institute for Preservation and Construction History at ETH Zurich. Its two chairs – the Chair for Building Archaeology and Construction History and the Chair for Construction Heritage and Preservation – endeavor to cover the entire field and to bridge the gaps between the different approaches, methodologies and disciplines, between various centuries as well as technologies – learning together and from each other. The proceedings of 8ICCH give a representative picture of the state of the art in the field, and will serve as a reference point for future studies.

Prof. Dr. Ing. Stefan M. Holzer, Chair of Building Archaeology and Construction History, holzer.arch.ethz.ch Prof. Dr. Ing. Silke Langenberg, Chair of Construction Heritage and Preservation, langenberg.arch.ethz.ch Dr. Clemens Knobling, Chair of Building Archaeology and Construction History, IDB, ETH Zurich Orkun Kasap, Chair of Construction Heritage and Preservation, IDB, ETH Zurich

