

Introducing Modern Gallery Housing in Maputo: Design Experimentations, 1950–1968¹

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Modern architecture has recently been the subject of a more systematic analysis in the formerly Portuguese African territory. These studies aim at understanding the specific circumstances from which Modern Portuguese architecture first arose. Following the international debate on housing during the 20th century, Mozambique has been the arena of a new and experimental approach to collective housing in accordance with the guidelines set out by Le Corbusier. A singular social, economic and cultural territory, it adopted a tropical variant of the gallery typology, briefly introduced in this paper by means of select case studies built in Maputo between 1950 and 1968.

By Susana Gomes

One must not build collective houses towards streets, yet streets should be raised for houses.

Jorge Segurado, 1948

Context

It is important to introduce this paper by recalling the 1st National Congress on Architecture (1948), where the freedom of speech for Portuguese architects was won and Modern architecture gained an identity in Portugal. The lectures presented on this occasion reflected long-standing reservations and concerns within the discipline, as indicated by the two themes of the congress itself: "Architecture in the National Planning" and "The Portuguese Problem of Housing." Awakening to the industrialization of the constructive process, architects defended a rationalist approach to housing and urbanism. Collective housing was clearly favored, particularly the new vertical lodging typologies: the *aposementamentos*.² Furthermore, the idea of the *minimal* dwelling echoes the term "apartment" in the lecture given by J. Segurado (1898–1990), presented as a foreign-derived word of Brazilian use.

Based on his observation of modern experiences abroad, Segurado defended the construction of buildings up to 13 floors, which included a high-ceiling ground floor surrounded by open green areas, and accommodating a mixed-use program of housing, commerce and services. These buildings would meet insulation and hygiene needs as well guaranteeing an economy of construction. The apartment takes the form of a standardized unit cell and the circulation gallery is proposed as the system of horizontal access, supported by a vertical volume consisting of two complementary lifts and a double staircase.

Une grande époque vient de commencer. Il existe un esprit nouveau.

Le Corbusier, 1923

< Alberto Soeiro, Tap/Montepio building, view from main elevation.

The Gallery in Collective Housing

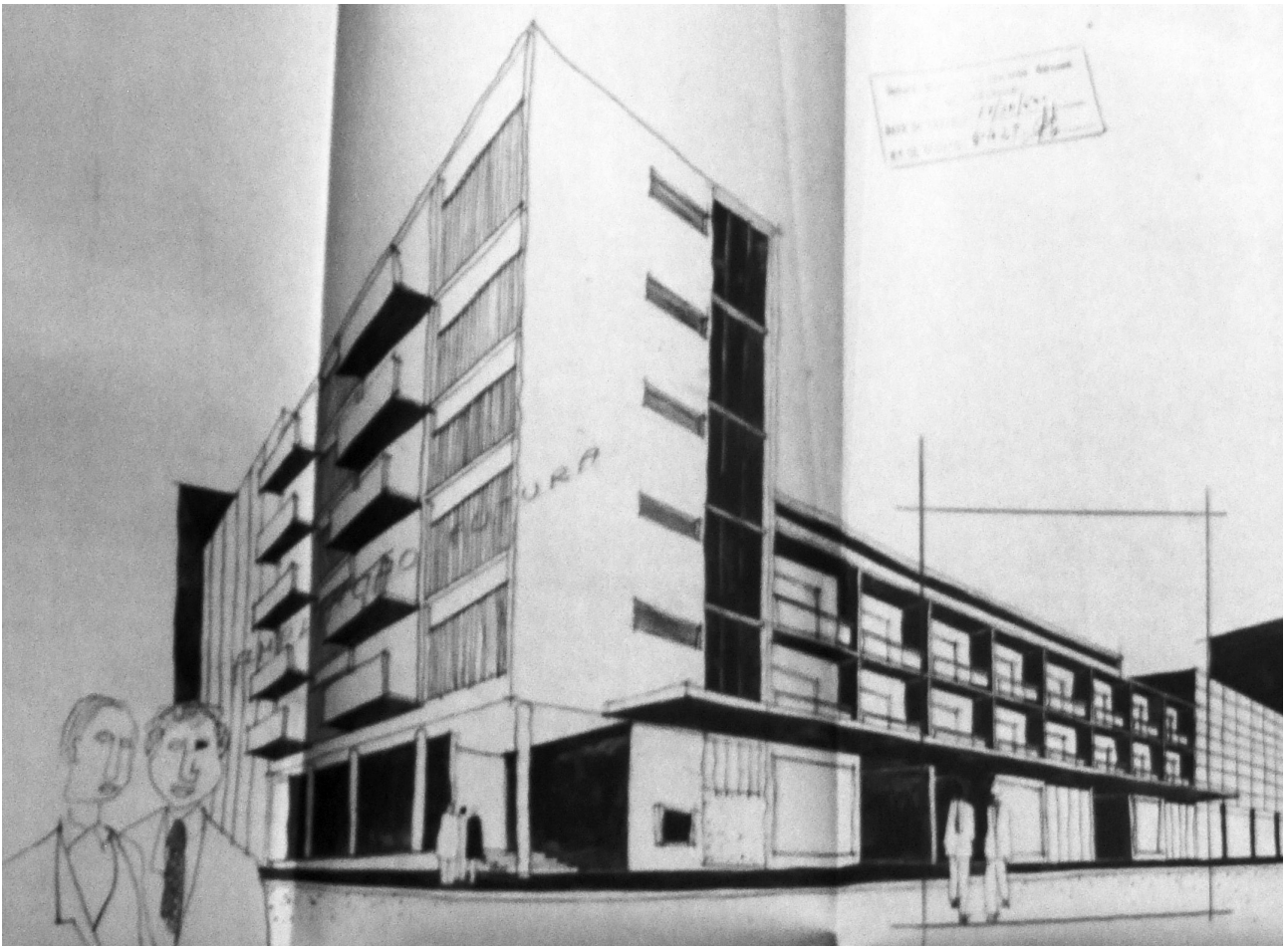
The prototype building of Segurado has obvious allusions to Le Corbusier's theories, and marks a break from former architectural ideologies in Portugal, seeking affinity with the *International Style*, seen as a unique, consistent and logical approach to architecture.

Gallery circulation in housing was tested in several countries in the inter-war period and subsequently throughout the 50s and 60s. The model was most probably based on Le Corbusier's project for the *Immeuble Villas* (1922), built as a prototype at the *Pavillon de L'Esprit Nouveau* and exhibited at Paris' International Exhibition (1925). In this project, a double gallery, in the form of two parallel corridors on each floor, separates the main circulation space from the services. Variations of this typology would arise, amongst others, in the designs of Moisei Ginzburg for *Narkomfim* (Moscow, 1928), Walter Gropius for *Siedlung Siemensstadt* (Berlin, 1929), Wells Coates at *Lawn Road Apartments* (London, 1932), or even at *Casa Rustici* (Milan, 1933), where Giuseppe Terragni designs a unique aggregation of galleried buildings with a central courtyard.

In tropical climates, the circulation gallery would be articulated with other strategies of sun protection such as balconies, sun baffles and louvers, combining Modern language with vernacular tradition.³ In Brazil for example, whose Modern experience influenced the new generation of Portuguese architects, the typology was defended by its suitability to climate conditions, justifying solutions such as Carlos Ferreira's *Casas para Operários* at Realengo (1942).⁴

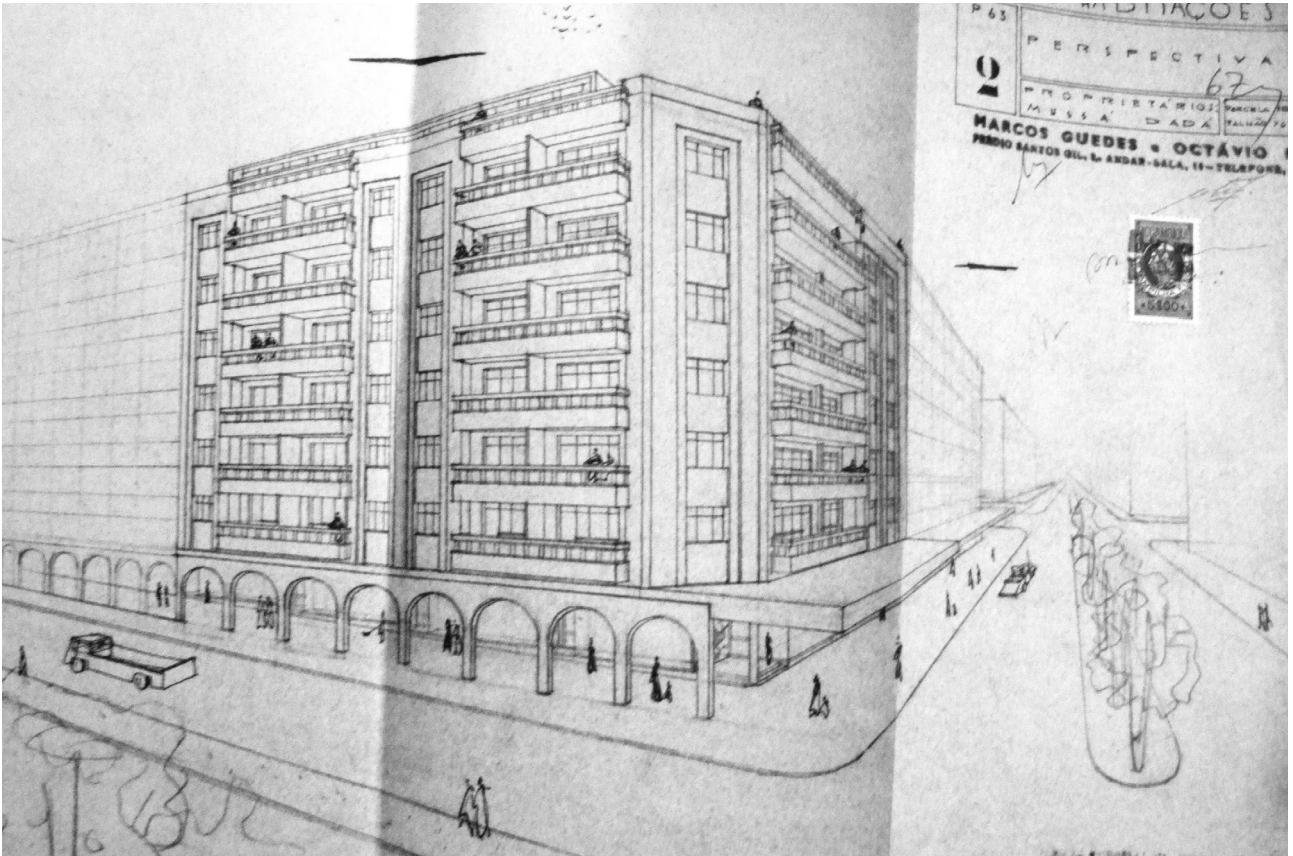
In Portugal, with the exception of a few buildings promoted by an enlightened bourgeoisie, most structures of collective housing were based on reproducing the single-family house on several kinds of assessments. This system recreated the ideology of rural revival promoted by the political regime at the time.

In this context, the construction of *Bloco Saldanha* (Porto, 1937), a set of budget houses developed around



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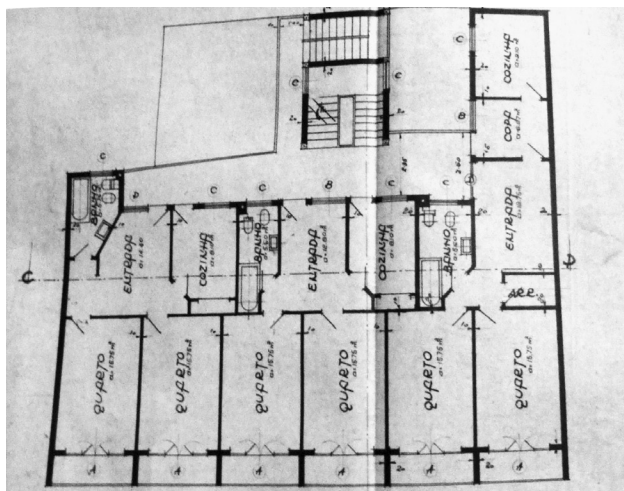


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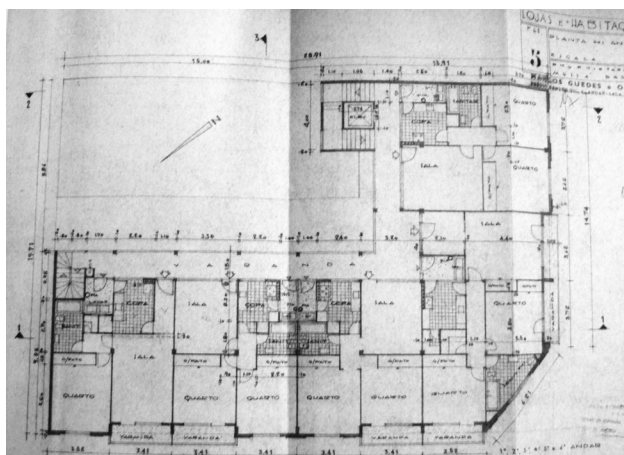
a central courtyard, accessed by a continuous outer circulation gallery, is particularly noteworthy. The project recalls one Dutch experience, prior to the already mentioned proposal by Le Corbusier, namely Michiel Brinkman's Spangen Quarter (Rotterdam, 1918), regarded as the first Modern example⁵ of this typology. The innovation of this markedly social example, expressed the maturation of the distinction between public and private space, through intermediate semi-public spaces—patios—designed in the block's interior and by the access system to the upper housing, composing a "high street" of sorts along the building's cluster. This model, which influenced Le Corbusier (William Curtis, 1986) and other protagonists of the Modern Movement, is emblematic of architectural reformation, a period of great socio-formal revisions, which would be taken up internationally in the second half of the 20th century.

All projects built in Colonies must be designed by Architects or have their higher orientation.

João Simões, 1948



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Experiences in Maputo

Focusing now on Maputo, formerly called Lourenço Marques, it is important to recall that the city did not differ from any Portuguese provincial capital where, upon new integrationist consolidation policies after World War II, there was significant investment in development planning and building construction.⁶ Housing accounted for most of these buildings, distributed in state or municipal operations, but mostly initiated by the private sector.

The conclusions made in the 1948 Congress and the consequent influx of architects to Mozambique from the 1950s, contributed to an increase in the quality and sophistication of construction (França, 2009). In fact, in the mid 20th century, most buildings subject to municipal licensing consisted of low-density housing, including single-family homes designed for wealthy families, 1 or 2 floors high. Houses organized in sets of 2 ("mirror") or more cells ("train houses", Lima, 1968), popularized in the late 19th century, represented a cheaper alternative for land optimization, and remained a common solution in many of the projects in the 50s and 60s.

The first privately funded collective housing projects came about for two reasons: firstly the lack of houses for the new wave of immigrants, and secondly the financial incentive for the rising bourgeoisie to invest in construction on land acquired in the emerging quarters of the city. Initially, these consisted of buildings of 2 to 4 floors, with vertical access through two stairs⁷ and 1 or 2 apartments per floor. The buildings' planning was central, creating four independent façades and maintaining the philosophy of the single family house, articulated by a surrounding green area. Buildings with 5 or more levels appeared along the new structuring avenues of the city, consisting of mixed or exclusively housing programs. Only from the 60s onwards did buildings featuring more than 10 floors appear.⁸

Generally, in such buildings, vertical access was granted by two systems—left/right or gallery—the latter typology being the subject of extensive experimentation.

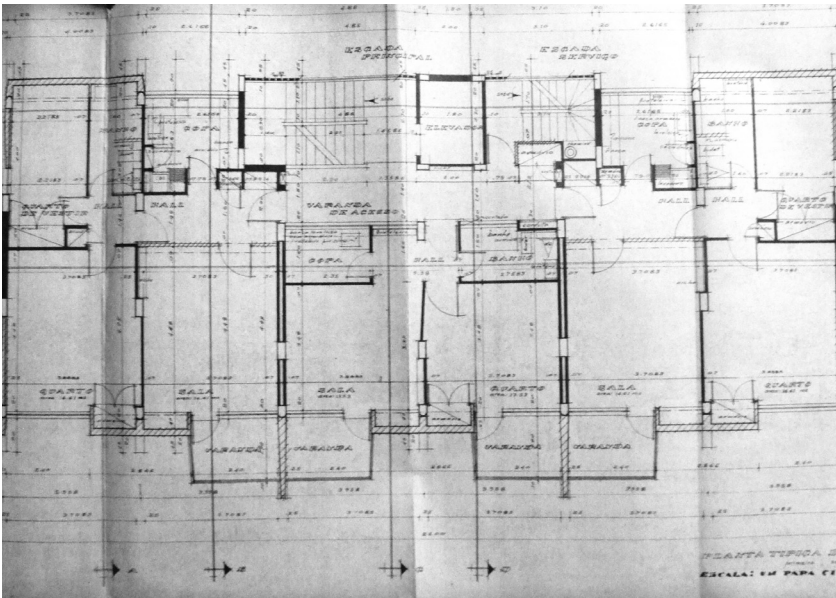
From our analysis of the projects achieved between 1950 and 1968, 74 buildings adopted a circulation based on a gallery or varanda (balcony).⁹ Of the 20

Figure 1. Perspective of a building's main façades, P.C. 166/50.

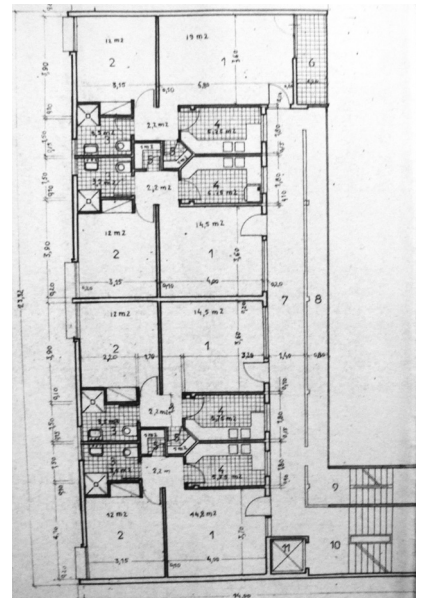
Figure 2. Marcos Guedes and Octávio Pó (P.C. 189/59), perspective of building's main façade.

Figure 3. Plan of housing floor, P.C. 166/50.

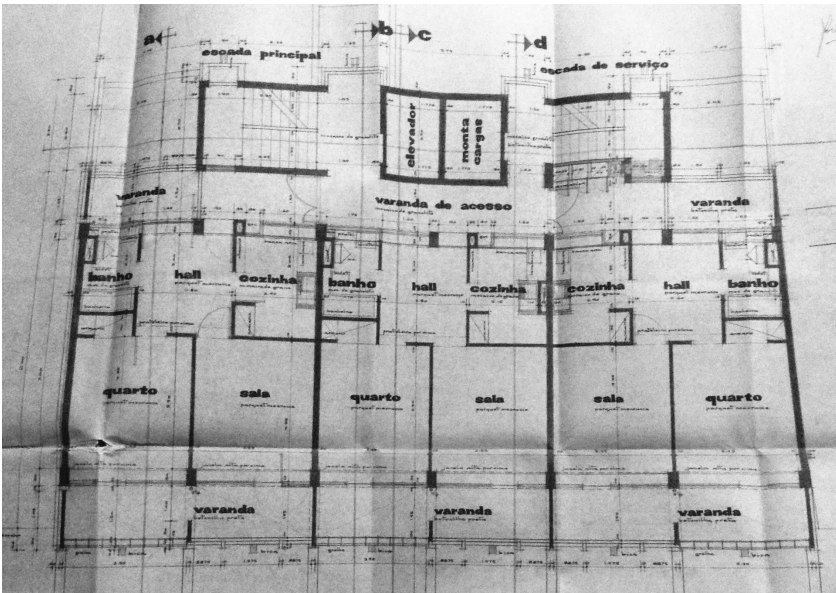
Figure 4. Marcos Guedes and Octávio Pó (P.C. 189/59), plan of housing floors.



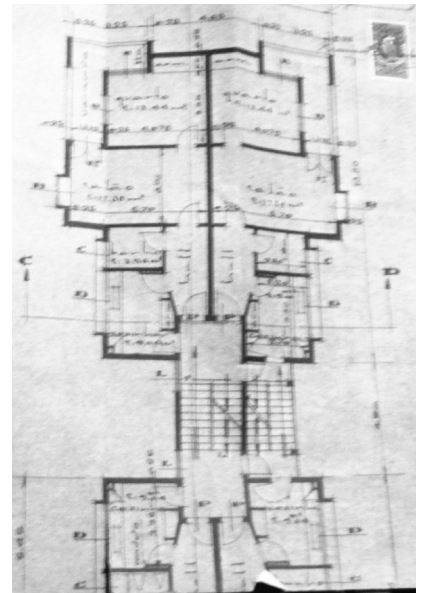
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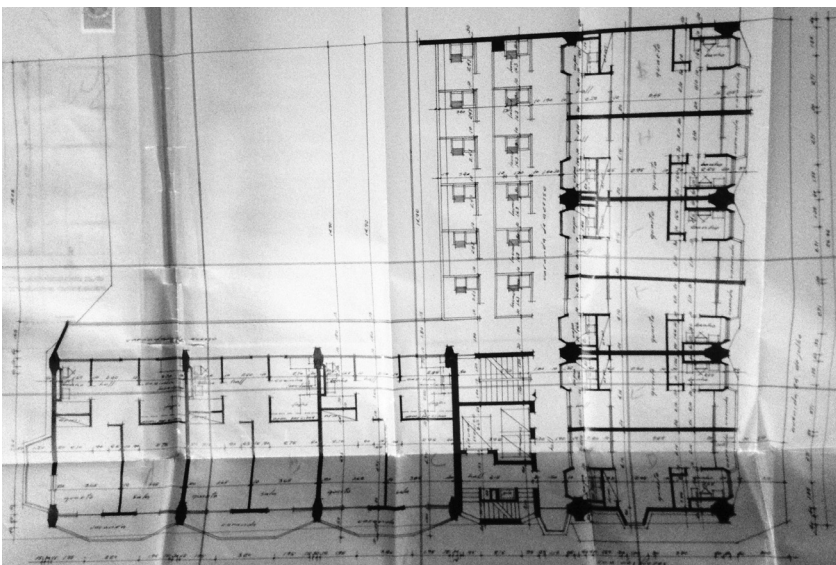


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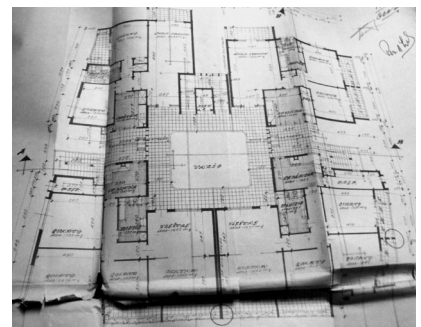
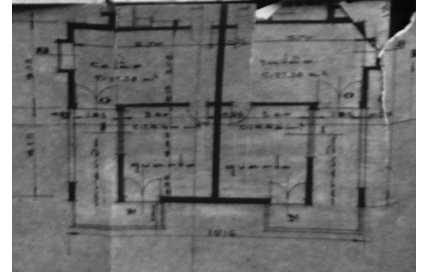


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buildings of more than 10 floors, proposed from 1960 onwards, half have adopted this type of access. The proportion increases when analyzing buildings of 5 to 9 floors, where out of a total of 42 cases identified, 29 of them had adopted galleries. We can therefore state that

to some extent a prototype was developed—a building type exploring circulation systems.

Amongst the many examples, we can distinguish the existence of two types of utilizing the gallery: projects where it serves as just one of the integrated access points and those in which the gallery provides the sole means of access to the housing units.

In the first subtype, we identified that the apartment's main access is made through the traditional left/right system. The gallery is designed specifically for the service circuit, where it joins the dwelling's kitchen, often by an intermediate space, called a *service balcony*. The facades with galleries define themselves as opposed to the main street layout, and infer, especially in the early years, some disability and formal framework for the set. In projects where the gallery is the only access system, variants can be observed as to how it relates to the apartment's distribution.

Gallery on every Floor. The design of the gallery on every floor represents the most common situation in single-storey apartments (simplex), allowing the development of

Figure 5. **Pancho Guedes** (P.C. 140/53), Prometheus, plan of housing floors

Figure 6. **Pancho Guedes** (P.C. 44/64), Dr. José da Costa, plan of housing floors

Figure 7. **Pancho Guedes** (P.C. 224/59), Isauro Lopes, plan of housing floors

Figure 8. Plan of third and fourth floors, P.C. nº 205/58.

Figure 9. **Pancho Guedes** (?) (P.C. 52/52), plan of first and second floors

Figure 10. **Pancho Guedes** (?) (P.C. 102/55), plan of housing floors

Figure 11. **Pancho Guedes**, Tonelli, view to rear façade with galleries

Photos by Susana Gomes, April 2011/13

two or three façades, and thus ensuring cross ventilation. The gallery can be situated on the front façade but is generally placed on the rear, less visible elevation.

Of note, one of the first examples of this type is the building at Av. Fernão de Magalhães, 1950,¹⁰ whose design was reproduced in 1951.¹¹ These projects present generous galleries that are nonetheless disproportionate with the reduced internal spaces of the dwelling. The vertical access of the building stands as an isolated volume.

In 1959¹² architects Marcos Guedes and Octavio Pó designed a block with an identical system. In this case, vertical access is incorporated into the main building, and both main and service stairs are positioned on opposite sides of the gallery.

In a later project (1966), the service staircase disappears, replaced by an additional lift and a single staircase located on the central axis of the building. The gallery, now understood as a public access, becomes a balcony (private space) anticipating the entrances to the apartments on the sides of the building. This solution brings about nobler spaces for the dwelling, more private and well shaded by concrete grids on the gallery.

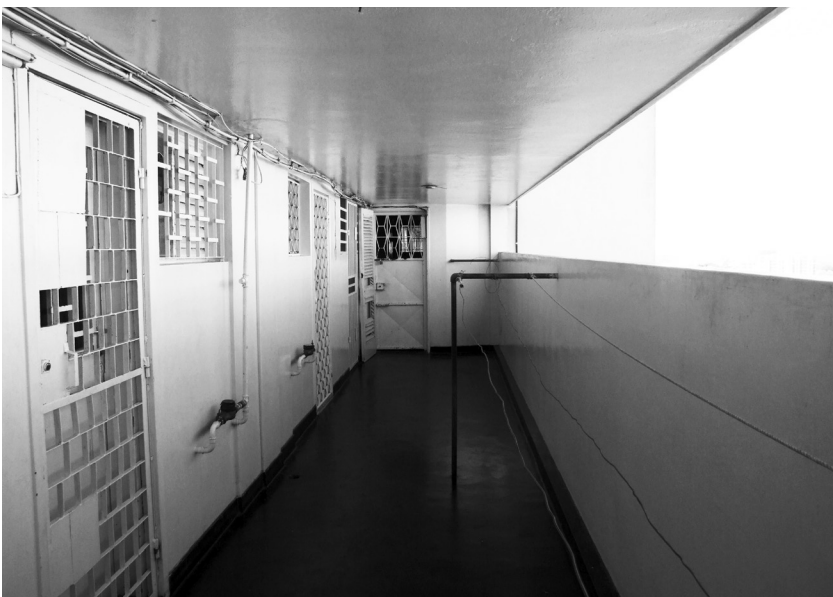
In 1953,¹³ in a well-known building named *Prometheus*, Pancho Guedes designed a circulation scheme as a “balcony” to the apartments on the rear façade, shielded by the vertical circulation volume. These balconies guaranteed continuous cross ventilation by adopting prefabricated grids in elevation. The same author, while



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designing *Dr. José da Costa* (1964),¹⁴ develops the layout, placing the gallery at the edges of the building.

In the similarly famous *Abreu Santos & Rocha* (1956),¹⁵ the architect's first project for housing, Pancho Guedes draws the gallery as a simple corridor with a grid wall of variable height, facing the interior of the lot. Finally, at *Isauro Lopes* (1959),¹⁶ he uses the gallery to enhance the status of the building's service façade, increasing its width, in order to include a second corridor for each apartment's laundry area.

Gallery at every Second or Third Floor. This subtype was used in buildings with apartments of more than one storey. The façade of the gallery acquires prominence in the set, and integrates the formal care given to the main elevation. One of the early designs dates from 1953¹⁷ and is probably by Pancho Guedes. In it, the minimum simplex apartments are combined with larger apartments in duplex. The former are repeated on all floors and are accessible directly by the lobby of the vertical circulation volume. The gallery acts as an extension of the lobby, as an open balcony on every second floor, giving access to other dwellings. While the main staircase integrates the central block, the service staircase and elevator constitute an autonomous volume, both by distance and their curvilinear form, breaking the rigidity of the main orthogonal set. In the absence of the odd floor galleries, the ensemble is aligned by advancing the façade of the upper floor duplex apartments.

Alberto Soeiro's remarkable *Tap/Montepio* (1956)¹⁸ presents the circulation system as a gallery on every third floor, giving access to the duplex and triplex apartments. While drawing on to Le Corbusier's *Unité d'Habitation*, as noted in the vertical grid façade and pillars, the project is made distinctive by displacing the *rue* corridor onto the main façade. The gallery, designed as an extensive cantilevered balcony, acquires a single access through a mid-floor system to the apartments, thus providing them with greater privacy.

Double Gallery. Given the socio-functional peculiarities of the time, we can also consider the aforementioned *Tap/Montepio* building as embodying a double gallery

system. Aiming to specialize the access and ensuring the privacy of the inhabitants, Soeiro designs a second gallery circulation, exclusively for service access on the rear façade of the building. With direct access to the apartment through the kitchen, the system of cantilevered balconies is repeated, narrower, but this time shielded by occasional shading produced by the intercalated terraces of the apartments.

The system of a double gallery on opposite façades was also tested in 1958,¹⁹ although in a building with simplex apartment typologies only. The main entrance to each dwelling is granted half a floor lower, while the service one maintains the gallery level. Once more, the gallery employs the design of a porch on the front façade, this time integrated into the ensemble.

At *Tonelli* (1957),²⁰ Pancho Guedes reiterates the philosophy of the aforementioned project (1953), combining simplex and duplex apartments. In this building, the simplex flats are distributed across four levels, while the duplex apartments spread over four others. In the first part, the main gallery is complemented with the service one. In the duplex system, the gallery duplicates on the same façade, on different levels with a separation corridor. The service entrance is situated on the lower floor of the apartment, while the main entrance is positioned midway between the social and private areas. This gives rise to different heights within the galleries, reinforcing their diverse functions and defining a distinct rhythm in the building's rear elevation.

Finally, in another building designed in 1958,²¹ the distinction between the various access points is reinforced by doubling the gallery on the same floor and façade. In line with the philosophy of Le Corbusier's *Immeuble Villes*, the corridor is extended, positioning the service area along the façade, and separating it from the main one by using a grid wall for shading.

Gallery Singular Variants. In addition to the three subtypes exposed, it's important to identify the existence of unique variants or adaptations. Here, we identify examples where access is not granted by a corridor alongside a façade, but by its adaptation to other forms of access and/or experience of outer space that this circulation model provides.

In analyzing the period 1950–68, we identified two unique projects, both most likely designed by Pancho Guedes. The first one, from 1952,²² consists of a building adapted to a rugged topography, divided into two volumes positioned at mid-height with respect to one another. Every floor's access is granted by two staircases—main and service—that emerge from the entry lobby. Although no hallways exist, we can read in the open space

Figure 12. Pancho Guedes, Tonelli, photo from main gallery

Figure 13. Pancho Guedes, Tonelli, photo from service gallery

Figure 14. Alberto Soeiro, Tap/Montepio, photo from main gallery

Figure 15. Alberto Soeiro, Tap/Montepio, photo from service gallery

Photos taken by Susana Gomes, April 2011/13

designed by the stairs, an outdoor gallery. In the other block, from 1955,²³ the flat's access is carried out in the building's core, which opens in the form of an exterior courtyard. Recalling Terragni's Casa Rustici, the gallery is shown as a balcony access but also as a living space, thus promoting community life.

Conclusion

The study of the above mentioned projects confirms the existence of design exploration on gallery access since very early on. Naturally fitting to the tropical climate, it assumes its practical and functional character—day lighting and ventilation, shading and the provision of more than one façade to the apartments. It also contributes to the social character of the ensemble by encouraging community living, expanding the houses to outer spaces through balconies. Thus, the gallery sometimes arises as a “disguised” corridor in elevation through a system of grid shading, or, more often, as a balcony delimited by a low-high wall.

The adoption of a double vertical access system is common in buildings regardless of the income threshold of the residents, ensuring the separation of the general circuit from the service one. This will tend to disappear after the beginning of the armed conflict, already in the mid 1960s. Where circulation occurs horizontally along a gallery, this duplication of access points has not always existed. Nevertheless, the examples found demonstrate formal and functional exploration, maturing over time, particularly in the work of Pancho Guedes.

In summary, we understand that the gallery on every floor, with distinct access points only in the vertical circulation, is adopted in buildings aimed for smaller apartments. Sometimes, apartments are situated on the edges of the ensemble with more rooms benefiting from three façades and a possible entry by private balcony that extends the gallery. As these dwellings are intended mainly for single residents, small or low income families, they do not justify the separation of circuits along the gallery.

The gallery on every second or third floor appears only in housing buildings with multi storey apartments, destined for larger families or higher yields. They embrace specialization of housing spaces, organizing social and service areas on the gallery floor and private areas on another level. In some cases, the distinction of general and service access is only maintained in vertical circulation. This situation is reversed in the examples of buildings with a double gallery, either on the same floor for simplex dwellings or on different floors or duplex or triplex apartments. They are intended for more economically privileged residents, requiring unequivocal separation of circuits. The treatment of the façades bears witness

to the evolution in adapting the gallery to the language of the ensemble, though in most cases, it applies to the rear façade. The contradictory and, therefore, singular example, is the building *Tap/Montepio*, where the general access gallery takes the form of a large cantilevered balcony on the main façade.

Finally, the exploitation of this metamorphic system circulation that is the gallery, is achieved in their adaptations, or simulations, “disguising” it with other spaces or circulation areas, either by ladder or the balcony around the courtyard.

Visiting the existing buildings in Maputo, we can observe that the gallery has earned its status as an outdoor living space. On the one hand, the apartments are appropriating a shared balcony, promoting interaction between neighbors; on the other hand, the street is transported into the building as the apartment becomes a house, a ‘villa’ almost, appropriated by the residents, either with customized paintings in the bays or by the façades that define the boundary of each house.

Notes

1. This paper is based on documentation acquired at Maputo's City Hall archives, aimed for an architecture PhD thesis developed by Susana Gomes at FAUP. The investigation lies on collective housing project's study, presented for municipal license. Documents (writings and drawings) were photographed from 164 projects aimed for “prédios de rendimento” (income buildings), between 1950 and 1968.
2. *Aposentamentos* is a former Portuguese word for Apartment, presented in Jorge Segurado's theme at the 1st Portuguese Architecture National Congress, titled “A solução vertical na habitação coletiva e os aposentamentos” (Vertical solution on collective housing and apartments).
3. “Remember the Moroccan window openings arranged like a pack of cards set up at right angles in the depth of the wall: the same sculptural and architectural results can be achieved with modern techniques.” Le Corbusier's writings about his travels to Morocco.
4. “The upper floors contain small flats turned to open galleries. Only the high level kitchen and bath windows open towards it. Rooms and living rooms communicate with the east side. This type of plans, widely developed in Europe several years ago, is admirably adaptable to Brazil's climate, for each apartment acquires the most complete and free ventilation.” Extract of author's description of architecture solution.
5. According to several widely published authors, such as Roger Sherwood (1978) or *Docomomo Italia Journal* (2010).
6. Since 1920 the city of Lourenço Marques has assisted the consolidation of its urban shape, increasing through developing plans its limits to suburbs. Existing public spaces have been rezoned, dignified in the 40s by the construction of remarkable public buildings. This results mostly from the creation in 1944 of the “*Gabinete de Urbanização Colonial*” (Colonial Urbanization Office), afterwards named of “*Ultramar*” (Overseas) that assures the architectural and urban designs to Portuguese colonies from the metropolis. In 1947 “the city launches itself definitely in the conquest of height with the construction of the *Palácio Municipal and Prédio Fonte Azul*.” (Alfredo Pereira de Lima, 1968).
7. Following the example of buildings in Portugal, these examples stand out the double circulation, by separating different accesses—main and service—developed at all typologies—single or multi-fam-



Figure 16. **Alberto Soeiro**, Tap/Montepio, detail from service elevation. Photo taken by Susana Gomes, April 2011/13

ily housing—, replacing the internal maid (at metropolis) by the native-born, pointing a colonial society. Only around the mid 60's, will the first projects appear that invert this condition, designing the circulation access with a single staircase.

8. Of all projects analyzed at the Municipal archive, Pancho Guedes' *Tonelli* (1957) is the first building over 10 floors (11). But other projects such as this appear more frequently only during the 60s.
9. "Varanda" (balcony) was the term commonly used in the drawing's legend to define gallery circulation.
10. P.C. nº 166/50, signed with authorship by Eng. Victor Barbosa da Silva Carvalho.
11. P.C. nº 108/51, same authorship, to be located at Av. da República, currently named Av. 25 de Setembro.
12. P.C. nº 189/59, designed for a mixed use building with 7 floors, located at Av. 24 de Julho with Av. Luciano Cordeiro.
13. P.C. nº 140/1953, to formerly named Av. Massamo de Amorim with Av. A. W. Bayley, currently Av. Mao Tse Tung and Av. Julius Nyerere.
14. P.C. nº 44/1964 located at old Av. Pinheiro Chagas, now Av. Eduardo Mondlane.
15. P.C. nº 50/1956 at Av. General Machado with Praça Mac Mahon (currently Av. Guerra Popular and Praça dos Trabalhadores), was initially designed for a mixed use program (housing and stores) with 4 floors. Currently the building is 8 floors and was changed to commercial and office use. This increase of height can be witnessed on the "blind" façade turned to Av. Guerra Popular, specifically on the different colors presented at the artistic panel's stones designed by Pancho Guedes.
16. P.C. nº 224/59 located at Av. 24 de Julho with Rua das Flores.
17. P.C. nº 43/1953, signed by engineers, does not reveal its architecture authorship. However, the graphic design of its drawings reveals the singular style of Pancho Guedes. The building is located at Av. Paiva Manso, currently named Av. Filipe Samuel Magaia.
18. P.C. nº 119/1956, at Av. Fernão de Magalhães with current Av. Samora Machel.

19. P.C. nº 312/58, at Av. General Machado with Av. Fernão de Magalhães.
20. P.C. nº 117/57, at former Miguel Bombarda with Av. Elias Garcia, now Av. Patrice Lumumba and Av. Vladimir Lenine.
21. P.C. nº 205/58, at Av. Fernão de Magalhães.
22. P.C. nº 52/1952, at former Av. Dr. J. Serrão, now Av. Emília Daússe. Signed by Eng. Vitale Moffa, offers the same particular graphic representation used by Pancho Guedes.
23. P.C. nº 102/55, at former Av. Pinheiro Chagas, now Av. Eduardo Mondlane. Signed by Eng. Luís Reis Costa, also presents evidence of Pancho Guedes architecture authorship.

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