

# Transcontinental Modernism. M&G as an *Unité d'habitation* and a factory complex in Mozambique

By Ana Tostões and Maria Manuel Oliveira

WITH the aim of contributing to the documentation and conservation of the modern architectural heritage, this paper presents *Monteiro & Giro Complex* (M&G), built during the 50's in Quelimane, Mozambique, with the goal of stressing the modernity of the social program and the technological approach. If one wants to gain a better understanding of the worldwide Diaspora of architectural modernism, it is essential to document and analyse the important heritage of sub-Saharan Africa. Modern architectural debates have been reproduced, transformed, contested and sometimes even improved in distant lands and overseas territories. These contradictory aspects of Modernist practice are revealed in the programmatic, technological and structural M&G industrial Complex.

## 1. context

In line with the ideological content of the Modern Movement revolutionary attitude of architecture, a new era was introduced in Africa's Portuguese colonies, responding to new political conditions after WWII. The link between architecture and revolution became a commitment for Portuguese architects and the statement of modern architecture became a political issue. It included solving the housing problem and extending architecture to the design of the city and land use planning. In fact, the formal, technological and ideological modern movement concepts began to be revealed in the expressiveness of works built in Lusophone Africa, since the late 40's. Personifying freedom and representing a symbol of hope and of a brighter future, modern architecture was envisioned as a means to fight heroically the totalitarian regime of Salazar's New State.

This modern cycle took place in the framework of the advancement of the industrialization process in the country and in the former colonies<sup>1</sup>. The emphasis placed on large-scale infrastructures was accompanied by a period of great plastic creativity, in which the renewed modern expression under

Brazilian influence went hand in hand with the technological universe of the Corbusian proposal. Such freedom was translated into a transformation of the modern movement codes in reference to the new Brazilian architecture. After the publication of *Brazil Builds* (1943), the large dissemination of Brazilian projects in foreign magazines, and their exhibition in Portugal, aroused the enthusiasm of the modern architects.

The use of a modern vocabulary acquired a different scale in Africa. The size of the territory (Tostões, 1997) as well as the geographical and climate specifics found their guidelines within this particular context. In a less restrictive society, away from the centre of power, these architects shared the possibility of building with a free attitude appropriating the universality of modern ideas.

Throughout the 50's, many Portuguese architects, who had strong beliefs in the social transforming power of architecture, travelled to Africa's Portuguese colonies where architectonic expression could be implemented more freely than in the old metropolis, where public powers inhibited or even prohibited modern architecture. The reason why architects embarked on this African venture is a paradox that is important to explain. Although most of this work was commissioned by official entities in African colonies which were run by the Fascist regime, these territories were more open to modernization as they were further away from Portugal's central power and influence. This period was a huge and wonderful challenge for this "African generation" of architects (Fernandes, 2002) as not only did they have the possibility to work according to a new modern language with a true progressive edge, but also in *avant-garde* large-scaled project commissions. Furthermore, stimulated by the large open immense African landscape, they had the chance to believe that they were building a new place, a new world, that would make the difference and plunge them into contemporaneity. Fiercely and audaciously, they would create the *Modern Utopia in Africa*.

## 2. Losa & Barbosa: building the modernity from Oporto to Quelimane

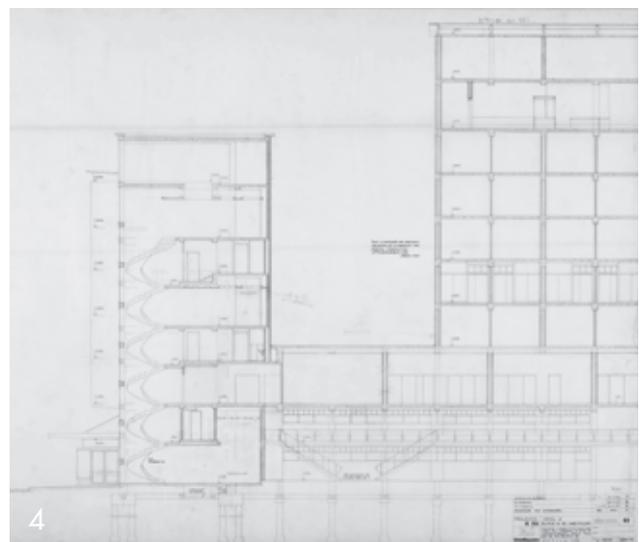
FROM 1945 onwards Oporto gathered projects of an unusual modernity. Arménio Losa (1908-1988) and Cassiano Barbosa (1911-1999) distinguished themselves as stimulating innovative designers and were to be the protagonists in a noteworthy intervention in the city. Manipulating imported models, they developed a new approach in terms of image, spatiality and functional organization, accompanied by rigorous mastery of construction technologies.

The post-war atmosphere confirmed the Modern rupture. It was the moment when the regime was challenged within the context of the First National Congress of Architecture (1948), when architects started calling for the adoption of the Modern Movement Architecture principles and exalted the importance of a functional response to housing issues and city planning.

An analysis of the presented papers reveals the question of the "Utopia of Architecture transforming life and society" as being the most common theme raised by the 35 theses. The transformation of the world with the participation and the leadership of architects now seemed possible. Democratization was aiming for an architecture that "must be within the reach of the greatest number possible". Architecture acquires an eminently social role, overcoming the classical domains of an "architecture that could no longer be limited to serving a privileged few, but the whole population" (Losa, 1948). Losa states that "The country is marching in the rearguard of nations...it will therefore have to rush into a conquering position in the march of progress. What has not yet been done...can be entirely contemporary, modern, perfect. These great assignments include major works of construction: buildings shall rise for sheltering the machines that multiply men's labour, and for man himself, who makes them work; buildings shall rise for housing, for learning, for culture and for recreation of populations drawn by these new sources of production...there is the potential possibility of planning new cities or, at least, important urban sets...The future action field is vast, almost virgin. It provides a place for all conceivable activities...products of mere technique, are beginning to be conceived as if they were real works of art; the utilitarian initial goal is now followed by the unexpected of all human creations: emotion. Emotion that is aroused by great or small achievements...and that demands an appeal to all creative skills. His collaboration will be permanently required: in the dam, on the bridge, on the highway, in the workshop and in the factory."



1. Quelimane, Mozambique, aerial view, 1950's.
2. Monteiro & Giro Complex and Hotel Chuabo, Quelimane, Mozambique. Photo by Eduardo Figueirinhas Correia.
3. Hotel Chuabo hall, Quelimane, Mozambique. Photo by Eduardo Figueirinhas Correia.
4. Section, Hotel Chuabo, Quelimane, Mozambique. FAUP/CDUA/AL/ARQ 115-7. Photo Arménio Teixeira©.
5. Monteiro & Giro Factory, Quelimane, Mozambique. FAUP/CDUA/AL/ARQ 169-23. Photo Arménio Teixeira©.
6. Monteiro & Giro Factory, Quelimane, Mozambique. Under the dining hall dome. Photo by Maria Manuel Oliveira.
7. Monteiro & Giro Factory, Quelimane, Mozambique. Dining hall and housing cell view. Photo by Eduardo Figueirinhas Correia.
8. Monteiro & Giro Factory, Quelimane, Mozambique. Housing cell detail. Photo by Eduardo Figueirinhas Correia.



Losa's political convictions presented in his contribution to the Congress, express the dimension of his commitment.<sup>2</sup> M&G must be analysed in the scope of this transforming spirit inspired by the idea of building a brave new world where Brasilia stands as a reference.

**3. M&G, a innovative complex: city and factory**

**M&G** IS simultaneously an industrial complex and a community life proposal, applying the *Unité d'habitation* and the industrial city concepts.

M&G commercial emporium, with its head office in Oporto, dealt with several commercial activities in Mozambique, from raw materials exploitation, such as cotton and sisal, to machinery import. In the 50's, the idea of moving the head office to Quelimane lay both in the strategically geosition of this port city, which attracted the commercial activity output of Zambezia, and in the increasingly

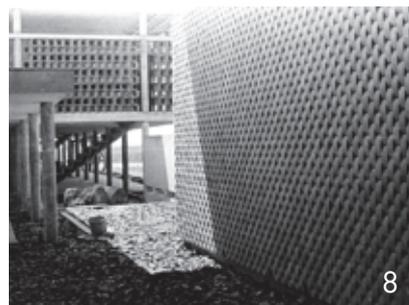
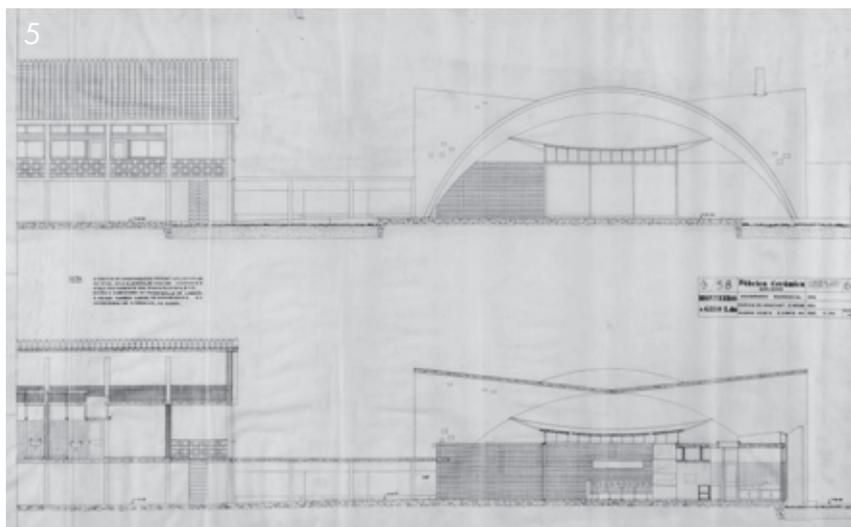
promising results of the business in Mozambique. The ensemble is composed of two distinct poles: the urban pole, located in the centre of Quelimane, facing the Cathedral and *Bans Sinais* river contains an Hotel, collective housing, commercial and social facilities and a garage plus gas station; the industrial pole, located on the periphery of Quelimane, comprises a ceramics factory, housing for the workers and engineers, offices and supporting facilities, where the social centre and dining hall stand out.

The urban pole commission consisted of a compact volume that occupied the entire city block. However, the architects Losa & Barbosa proposed a set of different articulated volumes with different heights and sizes. Initially it was developed along three sides, shaping an "U" ensemble. With further development of the plans, the complex was arranged in a square shape surrounding a large courtyard, where the garage would be built. The programme was organized in layers: the commercial layer on the ground floor, the multifunctional layer on the floor above, and on the upper floors,

the residential area, organized according to various typologies; the circulation galleries, like "streets in the sky", connecting all the uses, are located throughout the interior façades of the buildings, opening onto the patio.

Losa & Barbosa's proposal intended to simplify the built structure's organization, reducing costs and purifying the architecture itself. At the same time, it aimed to detach the building from the rest of the city, granting autonomy and monumentality to the ensemble. The nine floor Hotel block follows the same layer concept, proposing a transparent double ceiling lobby on the ground floor, with a mezzanine, which connected social areas at the gallery level. This volume stands out, not only due to its scale, but also to the importance assigned to the last levels where the dining hall, the bar and the *boîte*, connected by a large terrace that opens onto the river and the immense surrounding landscape, are located.

The diversity of typologies, functions and layers expresses the modern idea of mixing uses. Two of the housing blocks foresaw duplex apartments over a shopping layer. The third block included offices and exclusively one-roomed apartments for single people. Finally, restoring the sense of an interior common patio – which in itself is one of the major planning elements within the African tradition (Kultermann, 1969; Nmandi, 1997) "the service station roof terrace is to be used as a playground for the housing blocks tenants. The access to this playground is directly established from each housing block."



This project was an opportunity to develop a symbiosis between different scales, ranging from the urban scale to the design, exemplified by Hotel *Chuabo*<sup>3</sup>, where the architects created a global design, from furniture, to cutlery, from graphic design to works of art. The contribution of European and native artists can still be admired in the entrance hall and in the huge mural of the *Chuabo* Hotel dance hall.

The industrial pole was developed around the Ceramics Factory, along a path that led to the dining hall, structuring an important axis flanked on both sides by housing cells. The dining hall area – in the centre of the building – consists of a square that is simply suggested by the ceiling: an inverted suspended concrete dome with a span of 21 meters, four-pointed star shaped. It is defined by large sliding glass surfaces opening the inner space towards the outdoors. According to the architects, the dining hall was “a special building, mainly characterized by a domed ceiling that gives volume and shape to it. The dome covers a square space, of which only a small area is compartmented and enclosed. The facilities are freely displayed under this dome, which plays the role of a large protecting sunshade. The non-compartmented areas are the extension of the main facilities that go beyond the protected covered area.”

The houses are very simple volumes, covered by tiled gable roofs. The domestic space exists on the first floor, a unique elevated level standing on slabs, creating a sheltered area on the ground floor, for servants accommodation, children's recreation, garage and access staircase. The apartments are organized according to sets of four or more housing cells, departing from a unitary volume, though maintaining their total independence.

The construction is designed in order to respond to the tropical climate, and to enjoy the magnificent vegetation. Besides the suspended level, a roofed balcony surrounds the house, and the gable roof is conceived to work as a refreshing air-box, taking advantage of the different ceiling heights and thus, assuring permanent air circulation that is enhanced by the prevailing winds. In fact, beyond the programme and the technological innovations, climate control is an important issue which the architects tried to relate to existing regional conditions. In fact, environmental control was undertaken in order to respond to comfort criteria. *Solair* orientation and solar control underpinned the design of shading devices in order to respond to economical factors (Olgay, 1963). The evaluating process of shading devices stimulated their creative design in the M&G complex.

The industrial pole buildings run roughly north-

east/south-west so as to catch the prevailing breeze and send it through the block's diverse openings. The social facilities of the Factory complex, such as the dining hall, which is covered by a large dome with open sides, have features throughout to allow maximum shading and ventilation. The comprehensive plan and the individual buildings are attempts to adjust to the extremely hot and humid climate of the Zambezia region by adapting traditional buildings features, such as the pierced walls, or breathing walls, which are used in the factory complex houses as well as in the Quelimane-Chuabo city block. The buildings have the same features allowing shade and ventilation for the interior by means of the deep verandas and *brise-soleil* through all floors on both sides of the building.

#### 4. transcontinental: the modern diaspora

THE M&G Complex in Quelimane must be perceived within the African architectural context, in a wider transformation process. The work of F. Maxwell Fry (1899-1987) and Jane Drew (1911-1996), at the University College of Ibadan, Nigeria (1956), is an obvious reference. In fact, the open language of International Style was introduced but modified by a compromise between cultural, technological and climate considerations, revealing how Western and African traditions were being merged in an attempt to find a new unity. In this context African Modern architecture began to be recognized by the architectural critic, thus stimulating research and comparative studies. Ernst May's (1886-1970) stay in Tanzania and Kenya, the reference work of Rex Martiensen (1905-1942) during the 30's in South Africa or Denys Lasdun's (1914-2001) contribution to advanced technology in Ghana, and Vasco Vieira da Costa (1911-1982), in Luanda, Angola, are examples that help identify a specific Southern African Modern architecture. The Mozambique architect Pancho Guedes (1924- ) was one of the architects who contributed to develop symbols of the very essence of a new African design as he created imaginative solutions relating cultural local identity to the basic elements of space, considering that “buildings should belong to the people, architecture should become real and alive, and beauty should be warm and convulsive”.<sup>4</sup>

In fact, for Quelimane, M&G complex represents a masterpiece of a new era as it reveals the growing signs of the attention given by modern architects to new contexts, taking advantage of the specific opportunities arising in Africa. The will and possibility to work according to a new modern language with a true progressive edge, and to have *avant-garde*

large-scaled project commissions, represented a huge and wonderful challenge for this generation of architects. It also provides an account of a whole generation of artists, who, as we all know, were partnered by great engineers as well as important and audacious *entrepreneurs*. Connecting and exchanging different world visions, from European's to Brazilian's, or Colombian's, or Mexican's architecture as an inspirational source, one must not forget the affinity Portugal had with its great friend Lúcio Costa, who produced important written work and above all, conceived Brasilia which became, in the end of the 50's, the symbol of the Modern expression in the world.

\* This paper integrates the research project EWV Exchanging World Visions: modern architecture in Lusophone Africa looking through Brazilian experience (PTDC/AUR-AQI/103229/2008) developed by IST-UM.

#### Notes

1. The political situation in Portugal after WWII must be analysed in the frame of the foundation of the United Nations (1945) which stressed intense reverberations on the changing status in several parts of Africa. In fact, after WWII, when Portugal was still living under a dictatorship, anachronistically valuing its empire and its colonies, a number of architects went to Africa's lusophone countries and affirmed a modernity that was far from the State-sanctioned architectural models.
2. Losa and Barbosa technical commitment with the modern project and their confidence on a skilled design project communication led them to believe that a local team (arch. E. Figueirinhas and eng. R. Costa) would succeed carrying out the project execution, as it actually happened.
3. E. Maxwell Fry was an expert on tropical design and went to West Africa in 1944 becoming the most active practitioner of new architecture which he, along with Jane Drew, tried to relate to climate conditions.

#### References:

- docomomo Journal*, Paris, n.28, March, 2003  
 Fry, Maxwell, *Tropical Architecture in the Humid Zone*, London, 1956  
 Kultermann, Udo, *New Directions in Africa Architecture*, NY, 1969  
 Losa, Arménio, “A arquitetura e as novas fábricas”, Tostões(ed.), *1º Congresso Nacional de Arquitectura, Teses*, Lisboa, OA, 2008 [1948].  
 Nnamdi, Elleh, *African Architecture, evolution and transformation*, NY, 1997  
 Olgay, Victor, *Design with climate, Bioclimatic approach to architectural regionalism*, Princeton, 1963  
 Tostões, Ana, *Os Verdes Anos na Arquitectura Portuguesa dos Anos 50*, Porto, FAUP, 1997