

I INTERNATIONAL CONGRESS

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

## PROCEEDINGS

Ana Vaz Milheiro  
Ana Silva Fernandes  
Eds.

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Cover image: Mansoa Bridge, Guinea-Bissau. Jorge Perloiro & José Jacinto Alves, 1959-1964, Ing. Edgar Cardoso [courtesy Carlos Ferraz]



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## INDEX

<b>INTRODUCTION</b>	<b>9</b>
The Congress	10
Scientific Committee	10
Organising Committee	11
The Project	11
<b>SESSIONS</b>	<b>12</b>
1. Projecting power in colonial and post-colonial Angola and Mozambique: architecture, urban design, public art and monuments <i>Jeremy Ball, Gerbert Verheij</i>	13
2. China in African, Latin American and Caribbean territories: Examining spatial transformations around diplomacy and economic aid <i>Valeria Guzmán Verri, Natalia Solano Meza</i>	14
3. Spaces in the Americas: current efforts towards a non-Eurocentric theory <i>Fernando Luiz Lara, Marcio Cotrim Cunha</i>	15
4. Planned Violence: Post/Colonial Urban Infrastructures, Literature and Culture <i>Dominic Davies, Elleke Boehmer</i>	16
5. Infrastructural development in the European Portuguese territory in the late colonial period <i>Paulo Tormenta Pinto, João Paulo Delgado</i>	17
6. Peripheral infrastructures in late colonial cities <i>Tiago Castela</i>	18
7. Single and collective housing as a modern laboratory in colonial territories: from public order to private initiative <i>Ana Magalhães</i>	19
8. Beyond Colonialism: Afro-Modernist Agents and Tectonics as Expression of Cultural Independence <i>Milia Lorraine Khoury, Diogo P. Henriques</i>	20
9. (De)constructing the Right to the City: Infrastructural policies and practices in Portuguese-speaking African countries <i>Sílvia Viegas, Sílvia Jorge</i>	21
10. The interrupted utopia. Landscapes of modern collective housing in Former European Colonies <i>Roberto Goycoolea, Inês Lima Rodrigues</i>	22
11. Globalized Regionalism: the inheritance of colonial infrastructure <i>Eliana Sousa Santos, Susanne Bauer</i>	23

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

12. Materiality & Mobility in the construction of Colonial Landscapes <i>Alice Santiago Faria</i>	24
13. The transnational live project: critical reflections on the ethics, politics and pedagogies of collaborations between the global north and global south <i>Jhono Bennett, James Benedict Brown, Peter Russell</i>	25
14. Colonial Spatiality in African Sahara Regions <i>Samia Henni</i>	26
15. Urban Legacies: linking enclaving and social identities <i>Anna Mazzolini</i>	27
16. The spatialization of population control in late colonialism: contexts, modalities, dynamics <i>Miguel Bandeira Jerónimo</i>	28
<b>PAPERS</b>	<b>29</b>
The Rise of a Maoist Pragmatism: Revisiting China's aid projects in the 1970s <i>Ke Song</i>	30
Infrastructures for Global Production in Ethiopia and Argentina <i>Elke Beyer, Lucas-Andrés Elsner, Anke Hagemann, Philipp Misselwitz</i>	39
Emergent geographies of expansion: Contested agro-extraction and the explosion of the soybean frontier in Brazil <i>Angeliki Giannisi</i>	60
Towards a Phenomenology of Urban Space in Contemporary Mexico <i>Juan Luís Burke</i>	80
The National Coach Museum and the question of <i>the other</i> <i>Nuno Tavares da Costa</i>	93
Infrastructure and earthwork between two capital-cities in colonial and postcolonial Brazil <i>Ana Luiza Nobre</i>	113
Petroleum Colonization on the Mexican Gulf Coast <i>Reina Loreda Cansino</i>	132
The UNOR 40 Plan (1971-1972) by Hestnes Ferreira - as a more structured expansion proposal for a planning unit in Lisbon <i>Alexandra Saraiva</i>	138
The Beginnings of the Polytechnic Institute of Covilhã (1973-1975): A Search For Continuity <i>Mariana de Oliveira Couto</i>	149

# COLONIAL AND POSTCOLONIAL LANDSCAPES

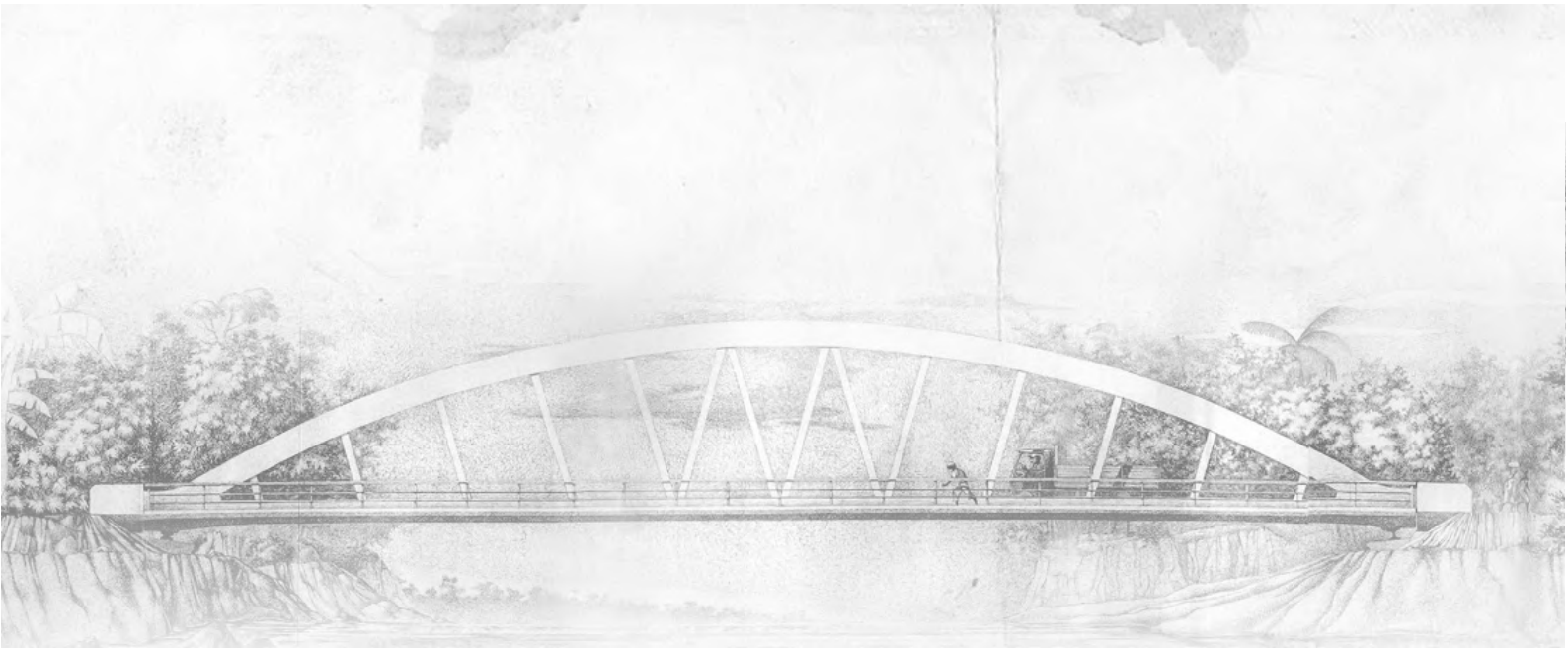
ARCHITECTURE, CITIES, INFRASTRUCTURES

The rise and fall of the colonial public railway on São Tomé and Príncipe <i>Cees Lafeber</i>	171
Colonial Calabar's Scattered Infrastructures <i>Joseph Godlewski</i>	194
"The water from which this city nourishes itself, is from the rain": On the struggle to bring water and sanitation to rich and poor in Ilha de Moçambique in the late colonial period <i>Silje Erøy Sollien</i>	220
Urban Dwellings in Post-Colonial Algeria: From a housing crisis to a crisis of identity <i>Hocine Bougdah, Ania Djermouli</i>	235
Transformation of Post-war/Post-colonial Housing in Ho Chi Minh City <i>Loc Tran, Dinh Quoc Phuong, Kirsten Day</i>	246
From mixed-use structures to hybrid housing buildings in Latin America: the cases of Lima, Caracas, Buenos Aires, Mexico City, and São Paulo <i>Marcio Cotrim, Fernando Lara</i>	262
A transcontinental process: healthcare facilities envisaged as postcolonial built heritage <i>Ana Tostões, Joana Nunes</i>	276
A neighbourhood that had everything to be happy... Rethinking the interrupted modernity of the neighbourhood for CTT's Employees (1968-2018) <i>Inês Lima Rodrigues, Fernão Simões de Carvalho</i>	290
The controversial landscapes of the Modern Neighborhood Units in contemporary Luanda. Prenda as paradigm. <i>Roberto Goycoolea-Prado, Carlos García-Gutiérrez, Paz Núñez-Martí</i>	310
"Material Surfaces" of the Modern Movement: Collective Housing facades in Rio de Janeiro and Lisbon, from 1930 to 1970 <i>Mariana Farias Costa Sampaio, João Nuno Pernão</i>	325
Architecture and race: Portuguese traditional house in the tropics <i>Inácio Dias de Andrade</i>	338
Building Jerusalem: British, Jewish and Arab Architects in a Neo-colonial City <i>Samuel D. Albert</i>	343
Zambia's Colonial and Postcolonial Railways <i>Giulia Scotto</i>	357
Reassessing heritage identities: Chinese entrepreneurship and the building of colonial Macao's urban landscape (1856-1875) <i>Regina Campinho</i>	366

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

Network: The Global Economy of the Kolar Gold Fields 1883-1960 <i>Shivani Shedde</i>	383
Construction, Maintenance, and Forced Labour: Laterite Roads in Mozambique and Angola <i>M. Luísa Sousa</i>	399
Mapping Patterns of Inhabitation: Visual ethnography as a tool for critical pedagogies of housing design in the Global South <i>Nelson Mota</i>	410
The North African Horizon of French Solar Architecture, 1945-1973 <i>Paul Bouet</i>	431
The cities of Western Sahara: their defining characteristics and evolution <i>José Antonio Rodríguez-Esteban, Diego Barrado-Timón</i>	443
Crown Land Rule as a means of Governance in Colonial Hong Kong <i>Juliana Yat Shun Kei</i>	452
The Resistance of Docile Bodies: The Indonesian Plantation System ca. 1900-1950 <i>Roel Frakking</i>	462
The Algerian Sphinx. Le Corbusier and the North African riddle. <i>Álvaro Velasco</i>	469
The Cathedral of Our Lady of the Conception in Lourenço Marques: a national-imperialist affirmation of Estado Novo in the colony of Mozambique <i>Ana Furtado</i>	481
Traditional colours and coatings in the colonial cities of Minas Gerais <i>Bárbara Moura Dias e Silva, João Nuno Pernão</i>	489
The Modern Collective Housing in Luanda and the role of private enterprise - 1950 to 1975 <i>Maria Alice Vaz de Almeida Mendes Correia</i>	501
Daguerian excursions in Jamaica: public space and emancipation in the work of Adolphe Duperly <i>Maria Fernanda Dominguez Londoño</i>	518
Beyond a “colonial apartheid”, French urbanism in Morocco: From social separation to spatial segregation <i>Najoua Beqqal, Fatima Zohra Saaid, Omrane Mohammed Chaoui</i>	534
Atlas “the world from the End”: how to map the “sertão”? <i>Natália de Sousa Moura</i>	552
Rifts in Borders: From Postimperial to Postcolonial imaginaries <i>Samar H. AlJahdali</i>	566



# INTRODUCTION

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

These Proceedings have been produced from the submissions to the ‘Colonial and Postcolonial Landscapes: Architecture, Cities, Infrastructure’ I International Congress, which took place from the 16<sup>th</sup> to the 18<sup>th</sup> of January 2019 at the Calouste Gulbenkian Foundation, in Lisbon, Portugal.

The parallel sessions resulted from an open ‘Call for Sessions’, being a selection of the submitted proposals. Thus, the themes, approach and description of each session – which can be seen in the section ahead – have been produced by their Chair(s), who have also been responsible for the selection of communications that took part in the panels.

The papers are organized according to the sequence of sessions, though they vary in number as some participants did not submit a paper or will have it published in a different format.

## The Congress

The infrastructure of the colonial territories obeyed the logic of economic exploitation, territorial domain and commercial dynamics among others that left deep marks in the constructed landscape. The rationales applied to the decisions behind the construction of infrastructures varied according to the historical period, the political model of colonial administration and the international conjuncture.

The congress sought to bring to the knowledge of the scientific community the dynamics of occupation of colonial territory, especially those involving agents related to architecture and urbanism and its repercussions in the same territories as independent countries. It addressed issues such as how colonial infrastructure has conditioned the current development models of the new countries or what options taken by colonial administrations have been abandoned or otherwise strengthened after independence.

The congress is part of the research project entitled "*Coast to Coast - Late Portuguese Infrastructural Development in Continental Africa (Angola and Mozambique): Critical and Historical Analysis and Postcolonial Assessment*" funded by ‘Fundação para a Ciência e Tecnologia’ (FCT - Foundation for Science and Technology), with the reference PTDC/ATP-AQI/0742/2014, which has as one of the partners the Calouste Gulbenkian Foundation (FCG). The aim of this congress was to extend the debate on the repercussions of the decisions taken by the colonial states in the area of territorial infrastructures - in particular through the disciplines of architecture and urbanism - in post-independence development models and the formation of new countries with colonial past.

## Scientific Committee

Ana Vaz Milheiro (FAUL, DINÂMIA’CET-IUL, CEAUP, Portugal) – **coordination**

Ana Cannas (Arquivo Histórico Ultramarino, Portugal)

Isabel Martins (Universidade Agostinho Neto, Angola)

João Vieira (Calouste Gulbenkian Foundation, Portugal)

Johan Lagae (Ghent University, Belgium)



# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

José Forjaz (Universidade Eduardo Mondlane, Mozambique)

Luís Lage (Universidade Eduardo Mondlane, Mozambique)

Paul Jenkins (University of the Witwatersrand, Johannesburg, South Africa)

Walter Rossa (Centro de Estudos Sociais, Universidade de Coimbra, Portugal)

## Organising Committee

Ana Vaz Milheiro (FAUL, DINÂMIA'CET-IUL, CEAUP) – **coordination**

Ana Silva Fernandes (DINÂMIA'CET-IUL, CEAU-FAUP)

Alexandra Areia (DINÂMIA'CET-IUL)

Beatriz Serrazina (FAUL, CES)

Filipa Fiúza (CES-UC)

## The Project

This conference is organized within the project 'Coast to Coast – Late Portuguese Infrastructural Development in Continental África (Angola and Mozambique): Critical and Historical Analysis and Postcolonial Assessment', funded by 'Fundação para a Ciência e Tecnologia' (FCT - Foundation for Science and Technology) with the reference PTDC/ATP-AQI/0742/2014.

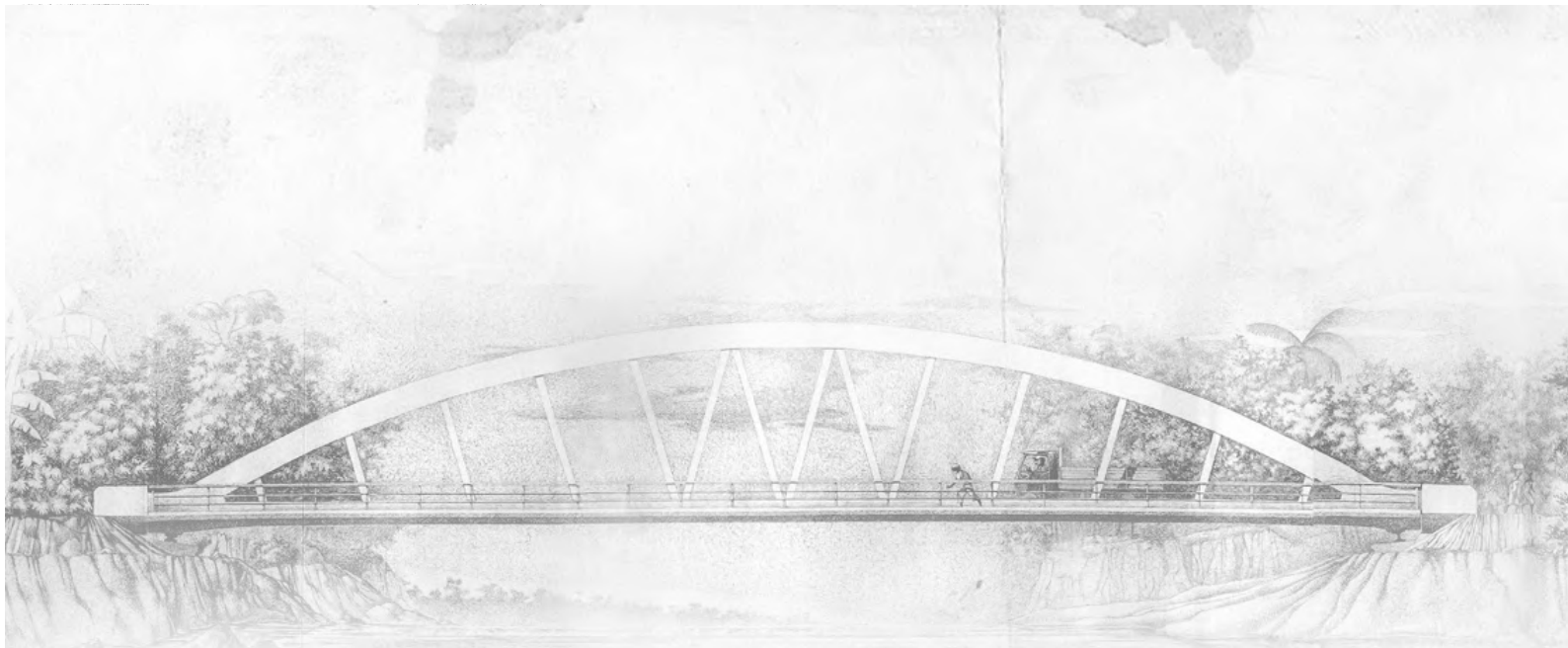
Based on the survey, cataloguing and contextualization of the infrastructural process of the former Portuguese colonial territory in continental Africa (Angola and Mozambique) in the last century of Portuguese colonization (1875-1975), the research aims at analyzing the influence of colonial strategies on the current developments in these two countries.

The project was undertaken through two phases: 1) analysis of the infrastructure process from the mapping of three specific typologies of colonial public works (described below), which will be approached from the perspective of archival and documentary analysis, cartography and historiographic description; 2) identification and critical analysis of the state of these infrastructures (reuse, reinforcement or abandonment) after independence in 1975.

The research is based on the thesis that colonial territorial infrastructure processes leave resilient marks in the post-colonial built landscape, whose impact must be analyzed in order to support future actions.

Three programmatic typologies are considered to be decisive in territorial occupation and are still visible today: (i) transport networks (highways, ports, railways and airports); ii) production of hydroelectric energy (dams and facilities); (iii) settlements associated with the exploitation of natural resources (mining and agriculture). The three programs are significantly interrelated, reproducing the Portuguese centralizing model of colonial exploration.

The team is made up of Portuguese, Angolan and Mozambican researchers, architects, historians and archivists. Partner Institutions are Calouste Gulbenkian Foundation, Arquivo Histórico Ultramarino, Universidade Eduardo Mondlane and Universidade Técnica de Angola.



# SESSIONS

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

## 1. Projecting Power in Colonial and Post-Colonial Angola and Mozambique: Architecture, Urban Design, Public Art and Monuments

Jeremy Ball, Gerbert Verheij

This panel will analyze the concrete and symbolic articulations of power expressed by the colonial and independent governments of Angola and Mozambique through the lens of public space, architecture, urban design and public art. We will interrogate whether there is an identifiable aesthetics to these urban spaces in which design and “art” represent power and convey messages of history and nationhood. To what extent such ideological demands affected the work of those agents involved in the production of urban space (planners, architects, but also bureaucrats or artists)? Have models of projecting power in urban space adopted by colonial administrations been abandoned, appropriated, challenged or continued since independence? We are particularly interested in exploring views which transcend a focus on the capitals of both countries, and/or link the different modes of urban design to the colonial development policies (including urban development) of the 1960s and early 1970s. We are also interested in the reactions to these spaces and symbols of power before and after independence. Monuments and other symbols of colonial power have been destroyed, removed, abandoned and substituted but also maintained, moved to museum contexts or given new meanings. Writers, photographers and others have interpreted and represented these symbols, often proposing different readings than those originally intended. To what extent, and by what means, did these spaces realize their political and ideological intentions? How and to what extent were their messages forgotten, eluded or appropriated?

*Jeremy Ball, PhD., is Associate Professor of History at Dickinson College, Carlisle, Pennsylvania, USA. His book *Angola's Colossal Lie: Forced Labor on a Sugar Plantation, 1913-1977* (Brill, 2015) examines the workings of forced labor and how it fit in to the business model of one of Angola's most profitable colonial companies. His current research examines Angola's post-independence, nationalist mythologies.*

*Gerbert Verheij is a researcher at the Institute of Art History (FCSH-UNL). He received his Ph.D. in *Public Space and Urban Regeneration* from the University of Barcelona; his thesis examines the link between aesthetic aspirations, urban design and institutional practices in early 20th-century Lisbon. His research interests include the placement and political use of monuments in colonial Mozambique.*

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

## 2. China in African, Latin American and Caribbean territories: Examining spatial transformations around diplomacy and economic aid

Valeria Guzmán Verri, Natalia Solano Meza

The key position China has come to occupy in the world economy has seen the implementation of transnational cooperation policies in the form of direct investment and concessional/soft loans for the construction of infrastructure space around the globe. A longer history of Chinese diplomatic strategies has played a major role in forging such economic alliances. Often presented as based on principles such as “mutual benefit,” these can carry development narratives, which are particularly sensitive in the case of countries with colonial pasts, notably those in Africa, Latin America and the Caribbean. The China-CELAC Cooperation Plan promotes “infrastructure development” in ports, roads, business logistics, broadband, radio/TV, agriculture, energy, housing and urban development. The One Belt-One Road initiative includes submarine cables between Cameroon and Brazil, a railway corridor in Tanzania, and hydroelectric and nuclear stations in Argentina. These projects, where extractivism, infrastructure and technology converge, makes them, as Keller Easterling argues, “too large to be assessed as an object with a name, a shape, or an outline.” In architecture, a methodological question arises as to how to examine these spatial situations. Might a possible approach lie in Easterling’s notion of disposition as “a tendency, activity, faculty, or property in either beings or objects—a propensity within a context”? Could disposition, as an agency in a process that may be diverted, adjusted or redesigned, thus serve as a means for examination? This session calls for papers on the potentially radical transformations in global infrastructure space following China’s recent diplomatic and cooperation strategies, mainly in Africa, Latin America and the Caribbean. We are interested in the methodological challenges that analysing these transformations might demand on the discipline, with special consideration of types of connection and interaction beyond reductionist “East/West” approaches. Proposals are welcome on the interplay of variables between: project implementation and logistics, diplomatic favours associated with building/infrastructure networks, transnational dynamics of goods, labour and know-how. Papers may also examine subjacent development/power discourses, histories of cancelation, postponement or concealed rejection, or discrepancies between declared (spatial, environmental, social) intent and undisclosed activities.

*Valeria Guzmán Verri (University of Costa Rica) has a PhD in Histories and Theories of Architecture from the Architectural Association School of Architecture (2010). Her research interests include the visual culture of modern and contemporary architectural design, and the relations between form, knowledge and power. She is Senior Lecturer at the School of Architecture and on the Society and Culture PhD Programme at the University of Costa Rica. Currently she is a Visiting Researcher at Southeast University, Nanjing, China.*

*Natalia Solano Meza (University of Costa Rica) has doctoral Studies on “Project, Theories and Histories” at FAUP, Porto, Portugal under the tutelage of Alexandre Alves Costa and Jorge Figueira. Her research/work topics are: Tropical Architecture, Postcolonial Studies, Colonial/Postcolonial Narratives, Architecture and Decolonisation, Architectural Pedagogies, Dissident Practices in Architecture, Latin American Regionalisms. She is Invited Lecturer and Researcher at the School of Architecture, University of Costa Rica.*

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

## 3. Spaces in the Americas: current efforts towards a non-Eurocentric theory

Fernando Luiz Lara, Marcio Cotrim Cunha

To study the built environment of the Americas is to deal with an inherent contradiction. While our disciplines of architecture, urban design, landscape, and planning share the fundamental belief that spaces matter; an overwhelming majority of our knowledge comes from another continent. As reminded by Edward Said in the classic "Orientalism" of 1974, European culture developed narratives about all other societies on Earth and as a result, established itself as the center of human knowledge. This session departs from asking what is the place of the Americas in a global history of the built environment? One possible answer is given by Roberto Fernández in his seminal *El Laboratorio Americano*. Fernández discusses how architectural theory, to this day, treats the Americas as the a special kind of periphery that turns into an eternal laboratory, in which experiences are systematically abandoned by new ones. America thus becomes the place of modernity par excellence, of eternal novelty, a perpetual state of infancy to use an ethnocentric Hegelian concept that should be outdated but insists in framing our narrative. Adrian Gorelik reinforces the idea of a laboratory, and specifically attributes to the city in Latin America the role of "the machine to invent modernity". Following this thought into Arturo Escobar's critique of colonialism as the B-side of modernization, this session plans to discuss different ways in which a unique American spatial concept was used as a lever to project modernity forward. The transversal view of certain typologies in urban centers of the Americas allows us to identify simultaneous processes of urbanization, industrialization, modernization and metropolization that, as a hypothesis for this session, have defined unique urban problems and has been capable of generating unique solutions suggesting more convergences than those drawn in European countries that have served (and continue to serve) as models. Examples are many: the radicalization of the suburban experience in North America; the verticalization of housing units all over the continent; the automobile-oriented cities such as Los Angeles and Caracas; and Brasilia as the climax of this singularly American process. We invite papers that look as comparatively as possible into modern experiences in the Americas in order to inch closer to a systematization of what it means to build modern spaces in our continent.

*Fernando Luiz Lara (University of Texas at Austin) is Associate Professor at the University of Texas at Austin. A Brazilian architect with degrees from the Federal University of Minas Gerais (BArch, 1993) and the University of Michigan (PhD, 2001). The author of several books and hundreds of articles. Prof. Lara writes extensively on a variety of issues regarding the Latin American built environment. In 2015 Prof. Lara published, together with Luis Carranza, the first comprehensive survey of Modern Architecture in Latin America.*

*Marcio Cotrim Cunha (Federal University of Paraíba - UFPB - Brazil) is Ph.D. in History of Architecture from the Universitat Politècnica de Catalunya (2008). Since 2011, he is a Full Professor at the School of Architecture and Urbanism, UFPB. He has published several papers in different journals and is the author of the books: 'Arquitecturas de lo cotidiano La obra de Ribas Arquitectos' (RG 2008); 'Vilanova Artigas: casas paulistas' (RG 2017). Currently, he is editor of DOCOMOMO Brasil Journal and a visiting scholar at the University of Texas at Austin.*

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

## 4. Planned Violence: Post/Colonial Urban Infrastructures, Literature and Culture

Dominic Davies, Elleke Boehmer

This session builds on Elleke Boehmer and Dominic Davies' co-edited collection, *Planned Violence: Post/Colonial Urban Infrastructures, Literature and Culture* (Palgrave, 2018), which brought the insights of social geographers and cultural historians into a critical dialogue with literary narratives of urban culture and theories of literary cultural production. It sets out to explore new ways of conceptualising the relationship between post/colonial urban planning, its often violent effects, and different forms of literature, art and culture. Inviting comparisons between the spatial pasts and presents of the post-imperial and post/colonial cities of London, Delhi and Johannesburg, as well as other city case studies such as Chicago, Belfast, Jerusalem and Mumbai, the session considers whether urban formations within the city, such as the square, the marketplace, the boulevard, or the grid, instead of fulfilling the emancipatory promise brought by colonial modernity, were actually the built expression of governmental strategies that exacerbated rather than contained social violence. While the session will explore the continuing violent legacy of colonial and neo-colonial urban planning in diverse contexts from several different continents, it will also just as importantly ask contributors to analyse how the literary writing of both the colonial and postcolonial eras, including poetry, fiction and theatre/performance, as well as graphic and visual cultures from graffiti to comics art, is able to reflect on this language of planning. Is it able to incorporate urban violence and civil unrest within its formal and thematic scope? Through interdisciplinary dialogue, the session therefore sets out to answer the following questions: what are the continuities between colonial urban planning and newer patterns of violence in postcolonial urban spaces, especially as relayed in literary writing? How are certain spaces of exclusion, containment and marginalization built into the governmental infrastructure of colonial and then postcolonial multi-ethnic cities? And how does literary and cultural production diagnose, subvert and resist these regimes? Might literary and cultural productions actively contest the infrastructures of planned violence, and perhaps even imagine alternative ways of inhabiting post/colonial city spaces?

*Dominic Davies is Lecturer in English at City, University of London. He is the author of Imperial Infrastructure and Spatial Resistance in Colonial Literature, 1880-1930 (Peter Lang, 2017) and Urban Comics: Infrastructure and the Global City in Contemporary Graphic Narratives (Routledge, 2018). He is also the co-editor of Planned Violence: Post/Colonial Urban Infrastructures, Literature, and Culture (Palgrave, 2018).*

*Elleke Boehmer is Professor of World Literature in English at the University of Oxford and Director of the Oxford Centre for Life Writing. She is the author or editor of over twenty books relating broadly to the fields of colonial and postcolonial literature and culture. She is the co-editor of Planned Violence: Post/Colonial Urban Infrastructures, Literature, and Culture (Palgrave, 2018), and her website is: [www.ellekeboehmer.com](http://www.ellekeboehmer.com).*

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

## 5. Infrastructural development in the European Portuguese territory in the late colonial period

Paulo Tormenta Pinto, João Paulo Delgado

The late period of the Portuguese dictatorship was marked by a vast economical impulse. The National Development Plans, launched in 1953 with the support of the Organization for European Economic Cooperation (OECE), introduced a shift, aligning the country in the same cycle of the European reconstruction through the Marshall Plan. In 1960 the accession of Portugal to the European Free Trade Association (EFTA) increased this development process, through the opening of the country to foreign investments. In 1968, Marcelo Caetano, who became the Prime Minister succeeding Oliveira Salazar, inaugurated the so-called 'marcelist spring' period. During those years the infrastructural investments were planned not only in the colonial overseas territories (Angola, Mozambique, Guinea-Bissau, Cape-Verde, São Tomé and Príncipe, East Timor, and Macao) but also in the European homeland. After the Salazar Bridge construction over the Tagus River, concluded in 1966, the port of Sines and the Alqueva dam were the most important investments of the regime. Those strategic infrastructures were part of a set of an ambitious plan which foresaw territorial domain, the exploitation of raw materials, and the growth of commercial dynamics. The role of the National Laboratory of Civil Engineering (LNEC) was determinant in this period, largely contributing to surveying the development of building technologies such as concrete and steel, and also to the homologation of other materials and components essential to national policies. This session is opened to proposals resulting from researches on critical and historical analysis concerning the infrastructural development in the European Portuguese territory in the late colonial period. Furthermore, the session welcomes any other related comparative studies, in order to jointly reflect upon synchronic processes taking place in other mainland and/or colonized territories.

*Paulo Tormenta Pinto (ISCTE-Instituto Universitário de Lisboa - DINÂMIA/CET-IUL). Architecture graduation at the Lusíada University, in 1993. Master degree and Ph.D. at the Polytechnic University of Catalonia, concluded 1996 and 2004 respectively. He is Associated Professor at the Department of Architecture and Urbanism. He served that Department as President, between 2007 and 2010, being also Director of the Ph.D. program, between 2011 and 2017. Currently he is the Director of the Integrated Master in Architecture and an Integrated researcher at DINÂMIA' CET-IUL.*

*João Paulo Delgado (Beira Interior University - Porto Architectural School Research Centre). Architect by the Lisbon School of Architecture (FAUTL), 1986. Master degree in by FAUTL, 1998. PhD degree in Architecture by the University Institute of Lisbon (ISCTE-IUL), 2015. Associate researcher at DINÂMIA' CET-IUL. Currently Invited Assistant Professor at the Beira Interior University, Department of Civil Engineering and Architecture, and FCT grant recipient for postdoctoral research project at the Porto Architectural School Research Centre.*

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

## 6. Peripheral infrastructures in late colonial cities

Tiago Castela

In European settler cities in occupied African territories, most black urbanites were forced by the colonial state apparatuses to live in self-built sections of the city described by expert knowledge as peripheral, even though such areas were sometimes central, and denser than settler sections. One of the main distinguishing characteristics of these unequally divided cities was the unbalanced state provision of public infrastructure, even though often the abyss between the two sections was more discursive than material: elements of privileged urban infrastructure like sewerage systems and sidewalks were often also lacking in settler neighborhoods. Nevertheless, it has often been assumed by scholarship that urban peripheries for African workers in late colonial cities had little or no public infrastructure. This session intends to understand the diverse ways in which situated state apparatuses engaged in the creation of public infrastructure in the African sections of settler cities, from the beginning of modern colonial occupation in the late nineteenth century to political independence. Papers examining the ways in which state practices articulated a graduated urban citizenship are welcome, as well as research that is attentive both to infrastructure creation by urbanites, or to “people as infrastructure,” to paraphrase Simone. Contributions based on innovative archival research methods, aiming at understanding actual state practices and everyday experiences of infrastructure vis-à-vis formal plans, are particularly appreciated.

*Tiago Castela (Center for Social Studies, University of Coimbra) is a historian of architecture and planning. He teaches and does research on the political dimension of urban space, with a focus on southwestern Europe and southern Africa in the Twentieth Century. He holds a PhD in Architecture from the University of California, Berkeley. He is a permanent Research Associate at the Center for Social Studies (CES) of the University of Coimbra, Portugal, where he is a member of the research group on Cities, Cultures, and Architecture (CCArg).*



# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

## 7. Single and collective housing as a modern laboratory in colonial territories: from public order to private initiative

Ana Magalhães

Architectural production in colonial territories, in Africa or in Asia, was a fertile breeding ground for the experimentation of new collective and single housing models, particularly during the second post-war period. While new universally tending languages associated with the Modern Movement were rehearsed, a response to the specificity of the climate and geography and the creation of bridges with local cultures were also sought. Researches around housing and context interpretation readings allowed for the creation of a vast architectural heritage that is as iconic as polemical nowadays. An example of this is *Maison Tropicale*, a standard prototype designed by Jean Prouvé for the former French colonies of Niger and Congo, or the *Sarabhai* or *Shodan* private houses designed by Le Corbusier for Ahmedabad city in the then recently-created Indian Union. But, while such houses, designed by foreign architects, correspond to importing international models that reflect interpretations of local contexts, one should also stress the role of local architects, many albeit with outside training, such as the case of the work of Geoffrey Bawa in Sri Lanka or Pancho Miranda Guedes in Mozambique, who, in a critical approach, assert a new sense of reality in their designs. This session intends to contribute to a critical comprehensive study of collective and single housing works erected in the former Asian and African territories during the last period of colonialism, in the transition to independence of the States, and allow for a contemporaneous insight of the works, procedures or authors, admitting a large range of themes or issues, for which we will welcome: case studies on collective housing or single houses, their programmes, models and typology variations and formal interpretations in colonial geographies; studies researching the role of colonial governments on housing policy; papers exploiting the relevance and incentive of the private order in house design; researches around the social, cultural and architectural impact, whether negative or positive, had by housing works on the construction of the identity of the new States; studies equating new uses for house space and examining contemporaneous housing building conversion, adaptation and re-use procedures.

*Ana Magalhães (Universidade Lusíada | CITAD). Architect (1988, FAUTL). Master's degree in Architectural Theory (ULL, 2001). Phd thesis: "Migrações do Moderno. Arquitectura na Diáspora – Angola e Moçambique" (ULL, 2015). Assistant Professor at Universidade Lusíada since 1990. Research Fellow at CITAD. Published the book "Moderno Tropical-Arquitectura em Angola e Moçambique, 1948-1975", ed. Tinta da China (2009), awarded with DAM Architectural Book Award 2010. Architect and partner at Atelier do Convento since 1989.*

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

## 8. Beyond Colonialism: Afro-Modernist Agents and Tectonics as Expression of Cultural Independence

Milia Lorraine Khoury, Diogo P. Henriques

*'I claim for architects the rights and liberties that painters and poets have held for so long.'* – Pancho Guedes. During the 20th century, several innovative experiments in architecture, infrastructure and cities developed in many African countries and particularly in the Lusophone African Countries. Both under the colonial rule of European countries and empowered by independence processes. Thus, it allowed for more free explorations in function, material and form, when compared to their European counterparts. These experiments defined not only Afro-Modernism but can also be seen as the tentative construction of an expression for cultural independence. Ranging from housing, public buildings and public space, to tectonic expressions that are fundamentally different from the ones proposed and built in Europe. For example in Mozambique, a key cultural agent such as 'Pancho' Guedes (1925-2015), a Portuguese architect and artist who received considerable international recognition, developed innovative experiments in Modernist tectonics that can be seen as an expression of cultural independence in Mozambique. While defining and redefining the expanding possibilities of the field of architecture and international networks (e.g. Team X) from a global perspective. This session aims to focus on the understanding of the key role of such 'cultural agents' from the perspective of architecture, urbanism and landscape. Discussing their role in the construction of cultural independence in Lusophone African countries and other African countries, both during colonialism and post-colonialism. These cultural agents can be both recognised individuals, such as the architects 'Pancho' Guedes, Cristina Salvador (1947-2011), and institutions or collectives not yet identified and studied in-depth.

The session will group such cultural agents, across countries and time. In order to discuss the potentials and pitfalls of the Modernist vision in colonial and post-colonial architecture, cities and infrastructure in Lusophone Africa and other former European colonies in Africa. Contemporary issues such as sustainability, climate change, public engagement and international networks will further frame the session for analysis and discussion. Thus opening new perspectives and thoughts to imagine landscapes beyond colonialism. These cross-time discussions can be significantly important when considering that several population projections foresee that the African continent will have some of the largest mega-cities in the future.

*Milia Lorraine Khoury She completed a BTEC Diploma in Foundation Studies in Art & Design at Central Saint Martins College (London) in 1999. In 2003 and 2008, she obtained a BA Fine Arts degree and a Masters of Philosophy in Fine Arts degree from Michaelis School of Fine Art, University of Cape Town. She has taught at tertiary level since 2003 and has published several articles on art, design and architecture and has presented papers at both local and international conferences within this field. She has also acted on the scientific committees of several international conferences. Currently, she lectures in History/ Theory of Art & Design at the Cape Peninsula University of Technology, Cape Town.*

*Diogo Pereira Henriques is a full-time funded PhD candidate and a former senior research assistant in the Department of Architecture and Built Environment, Northumbria University at Newcastle (UK). Prior, he was awarded his Diploma and MSc in Architecture, at the Faculty of Architecture, University of Lisbon, where he was also an assistant in a FCT funded research project, and an exchange student at TU Eindhoven and UPC Barcelona.*

*This session was developed with the help of Pedro Namorado Borges, currently a research assistant at Social Sciences Institute in Lisbon, working for the project "Housing. One Hundred Years of Public Policies, 1918-2018," funded by the Urban Housing and Rehabilitation Institute (IRHU). He is a PhD candidate with the project thesis approved at ISCTE and published in 2015 a book about the housing social projects from the Architect Vítor Figueiredo. He was awarded his Diploma in Architecture at the Faculty of Architecture of the University of Lisbon, and an exchange student at TU Berlin and the University of Tokyo. He also works on his independent architecture practice based in Portugal.*

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

## 9. (De)constructing the Right to the City: Infrastructural policies and practices in Portuguese-speaking African countries

Sílvia Viegas, Sílvia Jorge

Portuguese-speaking African countries, namely Angola, Mozambique, Cape Verde, Guinea-Bissau and São Tomé and Príncipe, faced important political-economic and social transformations after their liberations (1973-75). Given the geopolitical context, these countries went through a brief socialist period (1975/1985-90) before opening their national economies to (inter)national markets, totally in tune with the expansion and consolidation of a fierce global neoliberal matrix currently strengthening, enduring and prevailing. Regarding the development strategies and dynamics, these African countries were also puzzled by the relations established between them and with the ex-coloniser country. In its turn, Portugal's inflection towards Europe was contaminated by newly arrived Portuguese-speaking African populations carrying different cultures and ways of inhabiting. Given these complex dynamics, the analysis of these African countries' infrastructural policies and practices, as reverse to the housing question, is an important tool as it also configures an amplification lens for the comprehension of certain urban realities in Portugal, having as common ground of discussion the guiding notion of the Right to the City (Lefebvre, 1968). Regarding the urban and landscape affairs, these infrastructural options concerning both macro-level approaches and ground-based interventions were influenced, conditioned and/or determined by the legacies of the Portuguese colonial regime and its (so-called soft) logics of domination and, moreover, by massive migration movements heading towards central cities, motivated by civil wars or the search for better living conditions. Demographic issues also became important factors for the accelerated growth of major cities in Portuguese-speaking African countries. Given this framework, the (inter)connections between different urban contexts are of interest for this track as they pave the path for the ample reading of its suburban realities, also reinforcing the importance of infrastructural issues, such as those related to the public administration, its processes and agents, but also considering its spatial dimensions, particularly road systems, water and energy supply, sewages and urban facilities. These are vital complements to access adequate housing and, in a broader and transformative sense, to help to (de)construct the meaning of the Right to the City.

*Sílvia Viegas (Centre of Social Studies of the University of Coimbra (CCArq/CES-UC) and the Urban Socio-Territorial and Local Intervention Study Group (GESTUAL/FA-UL). She concluded a PhD thesis entitled 'Luanda, (un)Predictable City? Government and urban and housing transformation: Paradigms of intervention and resistances in the new millennium' (FA-UL, 2015). Currently Sílvia is an FCT scholarship holder and a postdoctoral researcher with the CES-UC and GESTUAL. Her research project, entitled INSE(h)RE 21, focuses on the socio-spatial inclusion of refugees in today's Europe with reference to the reception of the African diaspora in Portugal.*

*Sílvia Jorge (Urban Socio-Territorial and Local Intervention Study Group (GESTUAL) of the Research Centre for Architecture, Urbanism and Design of the Faculty of Architecture of the University of Lisbon (CIAUD/FA-UL). She concluded a PhD thesis entitled 'Prohibited Places: the Maputo's pericentral self-produced neighbourhoods' (FA-UL, 2017). Currently Sílvia is a FCT scholarship holder and a researcher of GESTUAL-CIAUD/FA-UL, integrating the project 'Housing Suburbs: New urban paradigms', coordinated by Isabel Raposo. Her research focuses on the space of Lusotopia, namely on its urban margins.*

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

## 10. The interrupted utopia. Landscapes of modern collective housing in Former European Colonies

Roberto Goycoolea, Inês Lima Rodrigues

The construction of large complexes or housing units led to a profound transformation of the landscape of the Former European Colonial cities; in the Portuguese context, this transformation occurred especially in the sub-Saharan region, not only affecting the morphology of the urban landscape but also its management and function. But, above all, it meant a radical change in the way of understanding and designing the habitable space, defined by the authors themselves as the development of a utopian project. These works not only meant to address the urgent housing needs but also the set up of a new model of city and society. In Angola, the struggle for independence and, above all, the subsequent civil conflicts interrupted this impulse, either because the projects were left unfinished, or because they were developed in a social and political context of great instability. In practice, these housing complexes continued inhabited but with increasingly worse conditions due to the lack of maintenance and control. Thus, the new landscape of modernity became a sad metaphor for the historical evolution of the different countries. After the end of the conflicts, a series of key questions have been put on the table: - What motivated and how to materialize these utopias; can we really consider them as such, in the manner of Pepetela's "The Generation of Utopia"? - Seen from a distance, how to value its most recognized project contributions: the tropicalization of modern models, the use of appropriate technologies for the climate and local economy, the recognition of pre-existing conditions...? - Did the type of promoter - public or private - influenced the type of project carried out and the way in which they were used and accepted? - What was the role played by its users (before and after the independence and their collective identity in this process? - What to do with these interrupted utopias today? Should we consider their landscape (real) and their (utopian) model of life as a heritage to be preserved or as a sign of the colonial stage to be eliminated, as in many cases it is happening? Although the session focuses on the former Portuguese colonial cities, as a case study and as an example, it intends to open up to other formerly colonized territories beyond the Lusophone countries. Generating knowledge and critical reflection about these issues is the main objective of the proposed session. Additionally, understanding that the disclosure of these works and their authors dignifies this heritage and allows us to expand the (re) knowledge about the interesting Portuguese modern housing and its utopian political, social and disciplinary motivations.

*Roberto Goycoolea (Escuela de Arquitectura, Universidad de Alcalá). Dr Architect Professor of Analysis of Architectural Forms at Escuela de Arquitectura, Universidad de Alcalá, Madrid. He has publications about his projects and researches in books and magazines from 11 countries, focusing on the conception and perception of the habitable space. In Africa, he has participated in cooperation projects and academic exchange actions, highlighting the research on modern architecture in Luanda, Angola, co-directed with Professor Paz Núñez.*

*Inês Lima Rodrigues (DINAMIA'CET-IUL). Architect and researcher, PhD on Architectural Projects in the field of Portuguese influenced modern collective housing, with recognized merit as the "Premi Extraordinari Doctorat 2013-14". She has published articles in magazines and book chapters and participates in national and international conferences. She is currently a postdoctoral researcher at DINAMIA'CET-IUL, deepening Portuguese-Angolan modern architecture through the legacy of Simões de Carvalho, Castro Rodrigues and Vieira da Costa.*

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

## 11. Globalized Regionalism: the inheritance of colonial infrastructure

Eliana Sousa Santos, Susanne Bauer

Issues, such as cultural engagement, authenticity, morality and politics are still connected to today's regional architecture. A globalized aesthetic today poses the question where regionalism in architecture ends and globalization starts. Throughout history, vernacular building styles, elements and aesthetics that can often be classified as regional, have emerged in different countries as cultural mementos of a rehabilitated region. Furthermore, in recent years, under the banner of social engagement in architecture, to detach oneself from the issues of colonialism, multiplicities of projects explore the advantages of local techniques and/or materials, blend them with 'international' aesthetics and import them into different cultural contexts. The aesthetic of a modern architecture today is thereby recreated using artisan and handmade products. In turn, modern elements of an 'international' aesthetic combined with local materiality are transferred in a mode of post-colonial development into exotic locations. The work of contemporary practices such as those of Solano Benítez, Bijoy Jain and Anna Heringer blend traditional low-tech building techniques with globally accepted aesthetics. With exponential globalization we witness the effect of a post-colonial infrastructure as a universal aesthetic is being created that can be exchanged throughout different countries and continents. This session aims to discuss issues connected to the aesthetics of architectural regionalism and its relationship to colonial infrastructures. We are interested to examine what historical developments have shaped regional architecture today and which might have overcome colonial infrastructures. Papers might also explore the question of regional or vernacular architecture and globalization and address the boundaries of regionalism.

*Eliana Sousa Santos (Phd, University of London) is an architect, a researcher and an assistant professor of architecture. She was awarded the Fernando Távora Prize 2016/17. She was the curator of the exhibition *The Shape of Plain* (Gulbenkian Museum Lisbon 2016/17). She was a visiting postdoctoral research fellow at Yale University in 2013/14, and is currently a researcher at CES, University of Coimbra and invited assistant professor at ISCTE-IUL.*

*Susanne Bauer (Birmingham School of Architecture and Design, Birmingham City University) has a Diploma (2002) from the University of Applied Sciences Augsburg, a Master of Arts (2003) in *Histories and Theories* from the Architectural Association and a PhD from The London Consortium, University of London (2014). She was Visiting Scholar at Columbia GSAPP in New York in 2013, a Visiting Scholar at the CCA in Montréal (2016) and a Post-Doctoral Scholar at the Federal University of Uberlândia in Brazil (2015-16). She worked as an architect for Foster+Partners and for AHMM.*

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

## 12. Materiality & Mobility in the construction of Colonial Landscapes

Alice Santiago Faria

This panel aims to discuss the material dimension of colonial landscapes and reflect on the impacts of these elements, and histories of materiality, in post-colonial times. Considering that material things and people are intertwined and that the social impact of materiality matters, the panel proposes to address connected histories of materiality across time and space.

While acknowledging that materiality is a thematically broad concept, for the purpose of this session, materiality will essentially include construction materials (new or re-used), buildings and parts of buildings, technologies, among others; however, it will not include texts, images, or other objects of representation.

Of course, most circulation of materiality occur together and along with several other types of mobilities (Guggenheim and Söderström, 2010). Without intending to undervalue these connections/relations, this panel will give preference to proposals that analyse paths, flows and geographies of material things. Proposals are also welcome that analyse the influences on material connectivity (trajectories, prices, durability, technologies, the mobility of people or other constraints of daily life or of a particular event) and how they influence the establishment and transformations of material mobility. The opening of the Suez Canal or the rise of prices during times of conflict are practical examples of such events. Similarly, the impact and importance of non-geographical/local movements of materiality may also be addressed.

*Alice Santiago Faria (CHAM, FCSH, Universidade NOVA de Lisboa) is currently a researcher at the CHAM, FCSH, Universidade NOVA de Lisboa, where she coordinates the “Art and the Portuguese Overseas Expansion” research group. Graduated in Architecture at Coimbra University, she holds a PhD. in Art History at the Université de Paris I. She is member of “Pensando Goa” research project, Universidade de São Paulo (FAPESP 2014/15657-8). Her research focuses on colonial public works in the Portuguese Empire during the long 19th century.*

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

## 13. The transnational live project: critical reflections on the ethics, politics and pedagogies of collaborations between the global north and global south

Jhono Bennett, James Benedict Brown, Peter Russell

A live project 'comprises the negotiation of a brief, timescale, budget and product between an educational organisation and an external collaborator for their mutual benefit ... structured to ensure that students gain learning that is relevant.' (Anderson & Priest, 2014) A transnational live project is one that involves an educational organisation in one country and a community in another. A number of recent contributions have enhanced our understanding of live projects. (Dodd et al, 2012; Harriss & Widder, 2014; Anderson & Priest, 2018) At best, live projects allow students to integrate their skills in a real world setting while building mutually beneficial partnerships with a commitment to a place. (Brennan et al, 1998) At worst, live projects can graft values and solutions onto communities rather than co-creating them. (Real, 2009) Stakeholders in transnational live projects in postcolonial contexts are invited to reflect critically on the ethical, political and pedagogical dimensions of their work. Contributors should articulate explicitly their pedagogical position, especially where critical, feminist, or alternative pedagogies have been used. What are the ethical, political and pedagogical issues at stake in transnational live projects? How are the power structures that operate in transnational live projects constructed, reproduced or subverted? How are successful transnational partnerships sustained? What characteristics do sustained transnational partnerships demonstrate?

*Jhono Bennett (ItoI Agency of Engagement / University of Johannesburg) is a Partner in ItoI Agency of Engagement and Unit Leader at the University of Johannesburg's Graduate School of Architecture.*

*James Benedict Brown (Norwich University of the Arts, Norwich England) is an academic with a research interest in architectural education. His PhD (Queen's University Belfast, 2012) developed a pedagogical critique of the live project.*

*Peter Russell (University of Nottingham, England) is Assistant Professor in the Department of Architecture & Built Environment at the University of Nottingham, England.*

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

## 14. Colonial Spatiality in African Sahara Regions

Samia Henni

This session investigates the ways with which European colonial regimes have shaped the design of African Saharan aboveground and underground territories, cities, villages, infrastructures, and societies over the course of the 19th and 20th centuries. These Saharan regions comprise Algeria, Chad, Egypt, Libya, Mali, Mauritania, Morocco, Niger, Sudan, Tunisia, and Western Sahara. Colonized by different European countries—including Britain, Italy, France, and Spain—these climatically challenging territories served primarily to search, extract, and transport the desert's multiple natural resources and assets. Yet, in what exactly consisted these designs? What were their impact on Saharan nomadic, sedentary societies and environments? And to what extent did these colonial territorial transformations affect the socio-economic future of the African countries in question? This session aims at addressing these questions and exploring the relationship between spatial planning, architecture, environment, and European colonial practices in African Saharan regions. We seek papers that critically analyze the involvement of European colonial civil servants, military officers, engineers, planners, and architects in shaping the design of one or more African Saharan regions. Of special interest are papers that disclose how particular projects or built environments had obeyed or disobeyed to Saharan or trans-Saharan colonial directives, and expose the multifaceted effects of such programs at national, transnational and international levels. We welcome papers that propose original methods for analyzing Saharan or trans-Saharan colonial spatiality in historical, political, economic, climatic and environmental terms.

*Samia Henni (Cornell University) is the author of Architecture of Counterrevolution: The French Army in Northern Algeria (Zurich: gta Verlag, 2017) and the curator of Discreet Violence: Architecture and the French War in Algeria. She received her Ph.D. (with distinction, ETH Medal) in History and Theory of Architecture from the ETH Zurich. Currently, she teaches at Princeton University's School of Architecture.*



# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

## 15. Urban Legacies: linking enclaving and social identities

Anna Mazzolini

The “Middle Class Urbanism” project research team would organise this session on the basis of the urgent need of interdisciplinary approach on themes as post-colonial urban routes, colonial spatial influences on physical reordering and social and physical boundaries in the cities of the global South. The interdisciplinary session will focus is the radical transformations of the built environment of major cities of the Global South integrating perspectives from anthropology, architecture, urban studies and history. The team is already investigating these themes in the city of Maputo where, in colonial and postcolonial times, the design, planning and regularization of housing developments have been used by both the state and private developers as a means to organize the city following particular models as well as for the socialization of urbanites. The session would accept presentations focusing on key drivers for the reordering the built environment in sub-Saharan Africa and on the new forms of citizenship that emerge as an outcome of these drivers. In particular, the session would welcome presentations belonging to the line of research of urban anthropology, architecture and design, sociology and history. In particular, the session would aim at tracing the routes of planning systems that influenced the materialisation of social differentiation, enclaving, urban imaginaries and new city models since late colonialism, based on particular histories of structural adjustments and related global connections. Fundamental questions for the call could be: When does spatial organisation promoted by authorities inform collective social values and vice versa in post-colonial cities? How does social differentiation come to assert itself in particular material forms that we can observe in post-colonial urban environment today? What is the relationship between spatial aesthetics and ideological concepts of individual or collective identities and how they changed from the colonial time? In which situations and through which cultural and historical routes does certain city models become a desired form of urban development? Which role past and present infrastructure play in the creation of city and lifestyle imaginaries? The session will cover all these themes through with the aim of creating a shared and interlinked conceptual framework, at the end, in order to enrich the debate with insights beyond urbanism.

*Anna Mazzolini (Aarhus University) is an architect and an Urban Planner. She holds a PhD in Planning and Public Policies and she worked several years in Mozambique in slum upgrading projects for NGOs and UN-HABITAT. She worked as consultant and housing policy expert elaborating the National Housing Strategy for Mozambique. In her work, she has always been trying to link research with practices on the field. She is currently Post-Doc Researcher at the Department of Anthropology of Aarhus University, Denmark.*

# COLONIAL AND POSTCOLONIAL LANDSCAPES

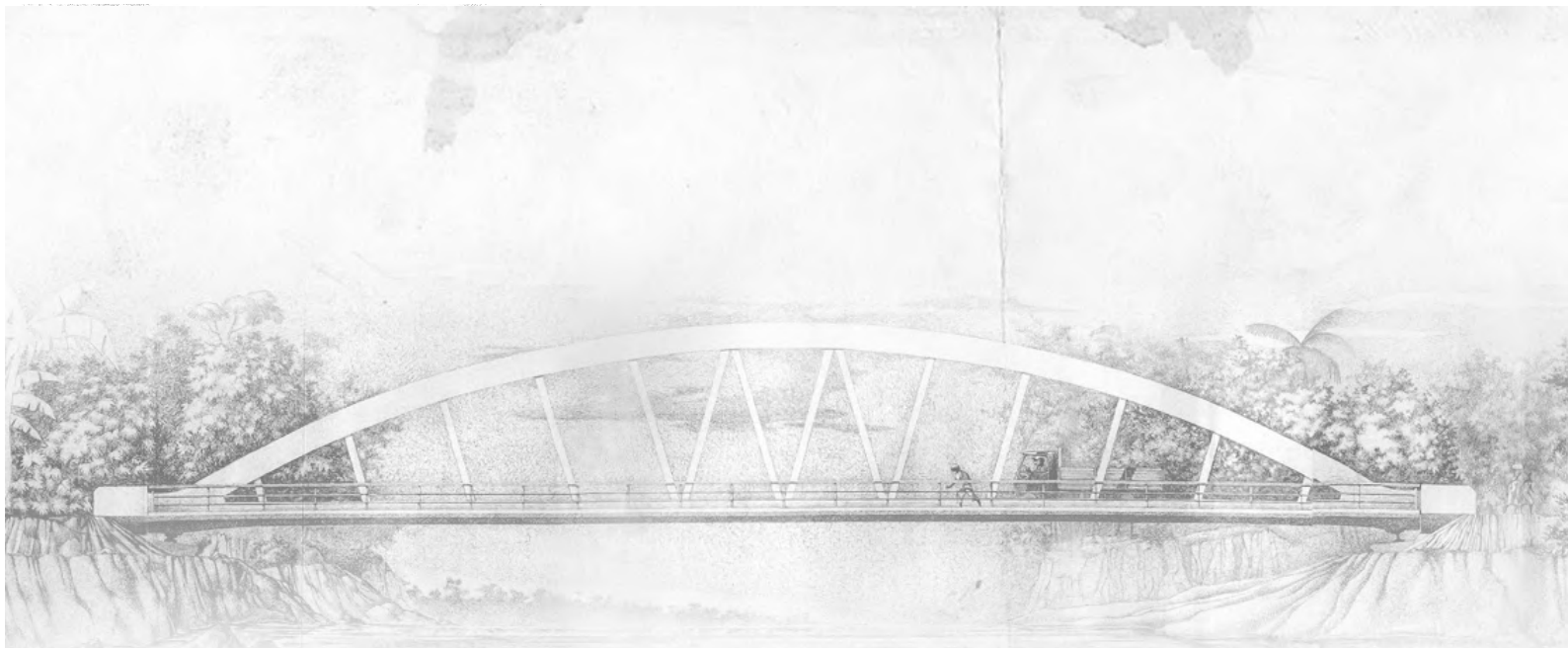
ARCHITECTURE, CITIES, INFRASTRUCTURES

## 16. The spatialization of population control in late colonialism: contexts, modalities, dynamics

Miguel Bandeira Jerónimo

This panel aims to assess the diversity of settings in which distinct modalities of administering difference emerged in late colonial societies in Africa, namely in what relates to dynamics of spatialization of population control, in rural and urban milieus, in contexts of developmentalism and, in certain cases, also of open conflict between colonial administrations and local communities. From *paysannats* and strategic villages, associated to other architectures of security and counter-insurgency, to “native” neighborhoods, urban and rural, such as those associated with specific economic activities (e.g. mining or cotton companies), there were many manifestations of projects of social engineering and spatial organization targeting more effective discriminatory forms of population politics, all entailing particular infrastructures. We seek papers that deal with these projects of socio-spatial planning, contextualizing their emergence and purposes, addressing the actors and institutions involved, and assessing their actual materialization, their effects (social, spatial, economic) and their appropriation by local communities.

*Miguel Bandeira Jerónimo (PhD King's College London, History, 2008) is a Senior Research Fellow at the Centre for Social Studies-University of Coimbra, Portugal. He is also a Professor at the PhD Program Heritages of Portuguese Influence (III/CES), University of Coimbra (since 2012), of which he is scientific co-coordinator. He has been working on the historical intersections between internationalism(s) and imperialism, and on the late colonial entanglements between idioms and repertoires of development and of control and coercion in European colonial empires. He is the author of The “Civilizing Mission” of Portuguese Colonialism (c.1870-1930) (2015), and the co-editor of The ends of European colonial empires (2015). In 2017, he co-edited Internationalism, imperialism and the formation of the contemporary world. He is also co-editor of the book series “História&Sociedade” at Edições 70 (Portugal) and “The Portuguese Speaking World: Its History, Politics and Culture” at Sussex Academic (United Kingdom).*



**PAPERS**

## **The Rise of a Maoist Pragmatism: Revisiting China's aid projects in the 1970s**

Ke Song <sup>1</sup>

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### **Abstract**

In recent years, China's aid projects overseas especially those infrastructure projects under the initiative of One Belt-One Road attracted increasing international attention. Many of these projects date back to the aid project constructed in the Mao era (1949-1976), including the railway corridor in Tanzania. This paper aims to examine the historical root of China's aid projects overseas by focusing on a critical transitional period from 1964 to 1976. In this period, China's aid projects increased dramatically due to the change of China's foreign policy in the context of international détente. In the 1960s, China exported "revolutionary experience" to the Third World. However, into the 1970s, China stepped out of the turmoil of the Cultural Revolution and began to promote "peaceful development" in the global arena of aid projects. A "Maoist pragmatism" matured, in which both Maoist ideology about communist revolution and a pragmatic approach were emphasized. The "Chinese model" of foreign aid that was identified by some scholars in recent years could be seen as a development of this Maoist pragmatism that took form in the 1970s.

This paper examines the aid projects overseas designed by Chinese architects in the 1970s, by focusing on the Tanzania-Zambia Railway (TAZARA) project, in particular the terminus in Dar es Salaam. The paper argues that in the 1970s, a Chinese version of modernism was created by Chinese architects working for the aid projects overseas, which further contributed to the multiple forms of the postwar modernism.

**Keywords:** China's aid projects; Southeast Asia; Africa;

In recent years, China's aid projects overseas especially those infrastructure projects under the initiative of One Belt-One Road attracted increasing international attention. Many of these projects date back to the aid project constructed in the Mao era (1949-1976), including the railway corridor in Tanzania. This paper examines the historical root of China's aid projects overseas by focusing on a critical transitional period from 1964 to 1976. In this period, China's aid projects increased dramatically due to the change of China's foreign policy in the context of international détente.

The aid projects overseas designed by Chinese architects in the 1970s were largely motivated by the Cold War politics. They are mostly highly visible, spectacular, and monumental buildings – the railway stations, town halls, institutional headquarters, and exhibition halls, with which the issues of national identity were often entangled. The paper focuses on the Tanzania-Zambia Railway (TAZARA) project, in particular the terminus in Dar es Salaam (Fig. 1). The paper argues that in the 1970s, a Chinese version of modernism was created by Chinese architects working for the aid projects overseas, which further contributed to the multiple forms of the postwar modernism.



Fig.1. TAZARA Terminus, Dar es Salaam, Tanzania, 1976. Designed by The Third Design Institute of Ministry of Railway, China. (Source: The Third Design Institute of Ministry of Railway, 1976)

### **Global Politics and China's Aid Projects**

China's aid projects were carried out by the central government systematically and strategically from the 1950s to the present. According to Brautigam (2009: 17-18), China's aid projects were done for a series of reasons, but ideology and political strategy were the primary thrusts behind the extensive aid programs in Mao era. For example, foreign aid was used as a diplomatic tool to help the Communist Party win the place in the UN in 1971 replacing the Kuomintang in Taiwan.

Since the Mao era, compared to the Western ties with Africa, China has been trying to establish a closer and more mutual-trusted relation with the Third World countries. It was largely a result of an alternative world view held by Chairman Mao, as opposed to the Western view of the “three worlds”. The Western view was based on the ideological confrontation between capitalism and communism: the Capitalist Bloc as the First World, the Socialist Bloc as the Second World, and the Non-Alignment countries as the Third World. However, Mao's view of the “three worlds” was based on the opposition between “hegemony” and “independence” (Reporter, 1974): the US and the Soviet Union, two super powers representing “hegemony” were the First World; developing countries and the suppressed countries fighting for “independence” were the Third World; and the Second World comprised of the developed states sandwiched in between these two. Though the Western view categorized China into the Second World, the Socialist Bloc, Mao officially declared that China belonged to the Third World, as one of the “poor brothers”. Mao's theory was supported by historical evidence: China as a semi-colonized country (according to the official propaganda) shared a history of colonization with other Third World countries. The aid projects provided by China to the Third World countries were therefore often described as “the poor helping the poor” and the “true gifts” in Chinese officialdom.

The shift in foreign policy of China after the high Cultural Revolution (1966-69) was of great impact to the aid projects. In the 1960s, due to the prevailing far-leftist ideology and the ongoing Vietnam War, China's foreign policy was based on a simplistic “friend-enemy” model. Mao identified “friends” as the developing Third World countries and “enemies” as the Western countries led by America (Armstrong, 1977: 79). Under such model, the aim of foreign aid was to help the Third World countries to gain independence from the Western countries through “armed struggle”. For example, China once provided military support to the guerrillas in the African countries. But this policy suffered a series of setbacks, culminating in the failure of the Second Asia-Afro Conference,<sup>1</sup> largely due to Mao's ignorance of the complicated and ambiguous relationship between the metropolis and colonies accumulated in the long history

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<sup>1</sup> The Second Asia-Afro Conference was scheduled in 1965 but lapsed due to the division among the countries.

of colonialism.<sup>2</sup> To cope with this difficult situation, the Premier Zhou Enlai led a diplomatic trip in 1964 to visit fourteen countries in Asia and Africa. During this trip, he proposed the Eight Principles for Economic Aid and Technical Assistance to Other Countries, hoping to make more reliable allies through providing aids (Xie, 1988: 393-404).<sup>3</sup>

The late-1960s became the turning point for the world and China. From 1968 onwards, the international arena was considerably more complex than the previous friends-enemies model, after Soviet Union invaded Czechoslovakia (Armstrong, 1977:110). In 1969, Mao declared the turmoil of Cultural Revolution should end and the economic construction resume. In terms of the foreign policy, from 1971 to 1972, Mao gradually accepted the more pragmatic foreign policy despite the ongoing Cultural Revolution movement. The détente and the triangular relations between China, Soviet Union and America, became the main conception of the new world view. According to Armstrong (1977: 236), into the 1970s the focus of foreign diplomacy shifted from the “external enemy” to the cooperative venture in “internal development”, from seeking the possibilities of “armed revolution” to the more pragmatic emphasis on “peaceful development”.

This shift of foreign policy directly led to the increase of China's aid projects in the 1970s, when the economic development and cooperation were more emphasized. Among the projects, the high-profile key public buildings with political and social significance were more often emphasized in this period (Zou, 2001; Information Office of the State Council of the PRC, 2011). It was actually the main form of China's foreign aid, with dozens of conference buildings, sports facilities, theatre & cinemas, schools, and hospitals built across the Asian-Afro continent. These physical buildings projected huge and long-lasting impact on the recipient countries, as the symbol of the economic cooperation and political alliance with China. As Zhou Enlai in 1965 indicated, the effect and influence of building a big project such as Tanzania-Zambia railway was incomparable with building many small projects (Ministry of Foreign Affairs (2014: 76).

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<sup>2</sup> Many leaders in the African countries studied in Europe, keeping good relation with the metropolis so they lacked the “revolutionary spirit” of Mao.

<sup>3</sup> The core content featured equality, mutual benefit and no strings attached, hence the basic principle for China's foreign aid was formulated.

## **TAZARA Terminus: a Chinese Version of Modernism**

In the 1970s, a modernism prevailed in China (Song and Zhu, 2016). Modernism was also evident among China's aid projects overseas, including the Tanzania-Zambia Railway (TAZARA) Terminus in Dar es Salaam built in 1976. This building clearly demonstrated a Chinese version of modernism alternative to both orthodox modernism originated in Europe and Western modernism in Africa.

Dar es Salaam was once a German colony for thirty years, from the 1884 Conference in Berlin to the end of World War I, then handed over to Britain in 1922. After 1964, it became the capital of the newly formed United Republic of Tanzania. During the mid-1960s, China helped Tanzania establish "people's army" to support the guerrilla movements in southern Africa including Rhodesia and South Africa controlled by the white governments. After the "Arusha Declaration" in 1967,<sup>4</sup> Tanzania followed Julius Nyerere to step on a socialist path, which consequently strengthened the tie with China and therefore, led to the large-scale Chinese aid in Tanzania in the 1970s, including the Tanzania-Zambia Railway as the most prominent one. China provided interest-free loans, expertise, work force and equipment, to build this comprehensive project including not only the railway but also the affiliated buildings, workshops, training school and related infrastructure.

The architectural design of the terminus demonstrated a distinctive "Chineseness" if compared with the Western modernist designs in Africa which started from the 1950s. In 1976, German architect Georg Lippsmeier first wrote about the success of a pragmatic approach after he saw the newly completed TAZARA Terminus in Dar es Salaam. Lippsmeier designed the Faculty of Engineering (FOE), the largest complex on the campus of the University of Dar es Salaam in 1974 (Fig. 2), built around the same time as the Chinese railway station. The FOE and the terminus demonstrated two distinctively different aesthetics: The FOE was a combination of brutalist concrete structure and exquisite façade details; it had a straightforward presentation of materiality and a rigorous articulation of tectonics. But the terminus demonstrated an alternative aesthetics of grandeur and elegance with careful composition of simplified horizontal and

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<sup>4</sup> In Julius Nyerere's "Arusha Declaration" in 1967, he set out a blueprint for a Tanzanian society based on socialism and self-reliance. After the declaration, banks and many large industries were nationalised.



vertical formal elements on the façade. Different from the rigorous articulation of the tectonics in the German design, the Chinese design had a certain ambiguity: the projected roof not only served for functional purpose of shading, but also for the formal compositional purpose to emphasize the horizontal lines on the façade (Fig. 3). In the Chinese design, modernist language was articulated with simplified and limited architectural components: thin concrete slabs, roofs, and big windows, which made the future maintenance much easier. The large-area glass curtain wall was made by numerous small pieces of glasses which are easier to repair and replace.



Fig.2. Faculty of Engineering, the University of Dar es Salaam, Dar es Salaam, 1974. Architect: Georg Lippsmeier. (Source: Folkers, 2010: 181-185)



Fig.3. Façade of TAZARA Terminus, Dar es Salaam, Tanzania, 1976. (Source: "TAZARA Railway." Retrieved May 17, 2017, from [https://en.wikipedia.org/wiki/TAZARA\\_Railway](https://en.wikipedia.org/wiki/TAZARA_Railway).)

Modernist aesthetics was also adapted into a Chinese version. In developing countries, the western aesthetics such as the reductive minimalism or the rough brutalism were often seen as primitive, unfamiliar and non-progressive, so simple decorations may be more welcomed by the local people. For example, the interior façade of the terminus was decorated with some simple colours and patterns (Fig. 4). The images of lovely African animals such as elephant and giraffe painted on the board between the balusters may look more exquisite and more “modern” for the local people. A pragmatic application of an adjusted technology and aesthetics, avoiding either ultramodern-western or romantic-traditional forms was what Africa needed and what the Chinese provided at that time.

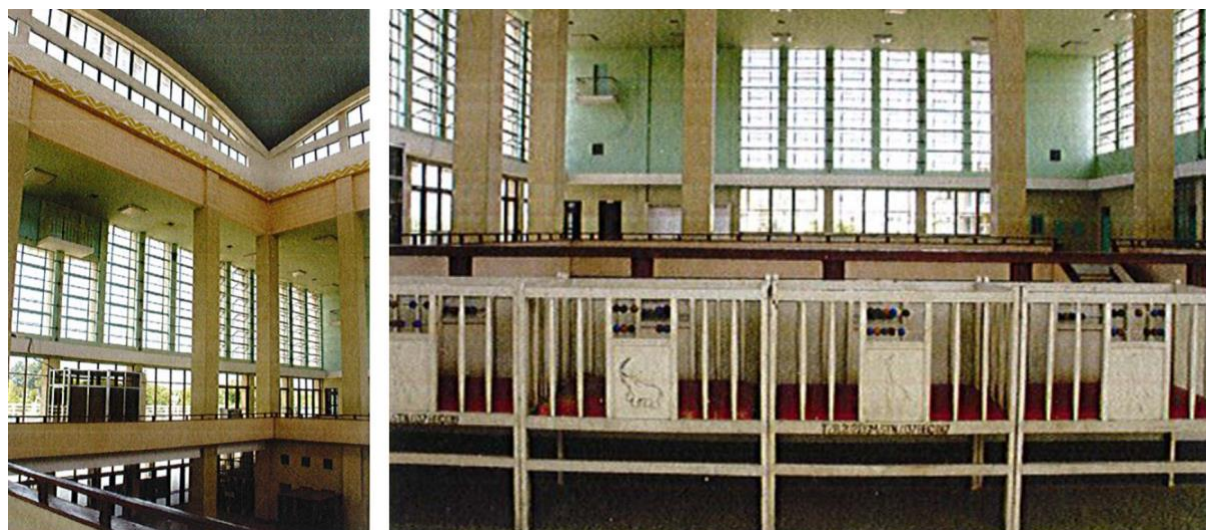


Fig.4. Interior of the main hall, TAZARA Terminus, Dar es Salaam. (Source: Folkers, 2010: 185)

The TAZARA Terminus was also an export of Chinese design expertise. If we compare the design of the TAZARA Terminus with the railway stations in China then, we can see conspicuous similarities. The TAZARA Terminus, even only designed for a capacity of 500 people, it was modeled after the super-large Chinese stations such as Beijing Railway Station (Fig. 5 & 6) that were designed for 4000 people. The plan layout of them were symmetrical and long in façade with the courtyards on both sides. Even the shell structure of the entrance hall was quite similar to each other. Along the railway line, many other stations including Makambako Station, Mbeya Station, Ifakara Station and the ending terminus, New Kapiri Mposhi shared similar language, layout, and construction techniques to the stations in China (Fig. 7).



# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

The Rise of a Maoist Pragmatism: Revisiting  
China's aid projects in the 1970s

Ke Song

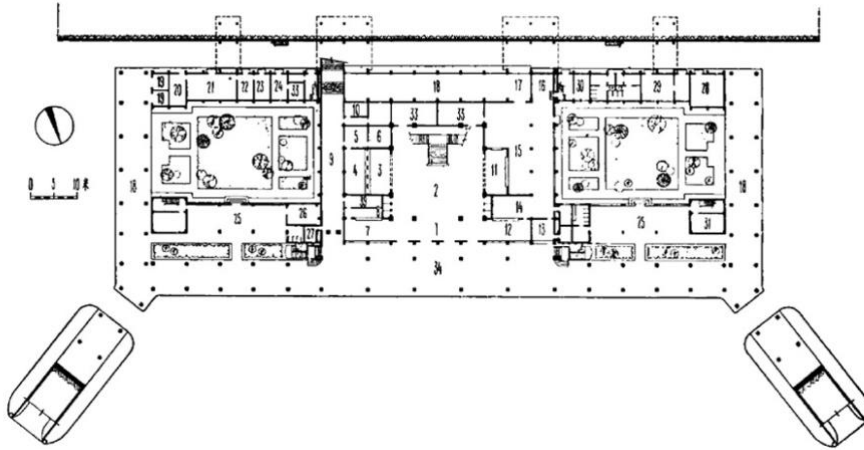


Fig.5. First-level floor plan, TAZARA Terminus. (Source: Third Railway Survey and Design Institute, 1976)

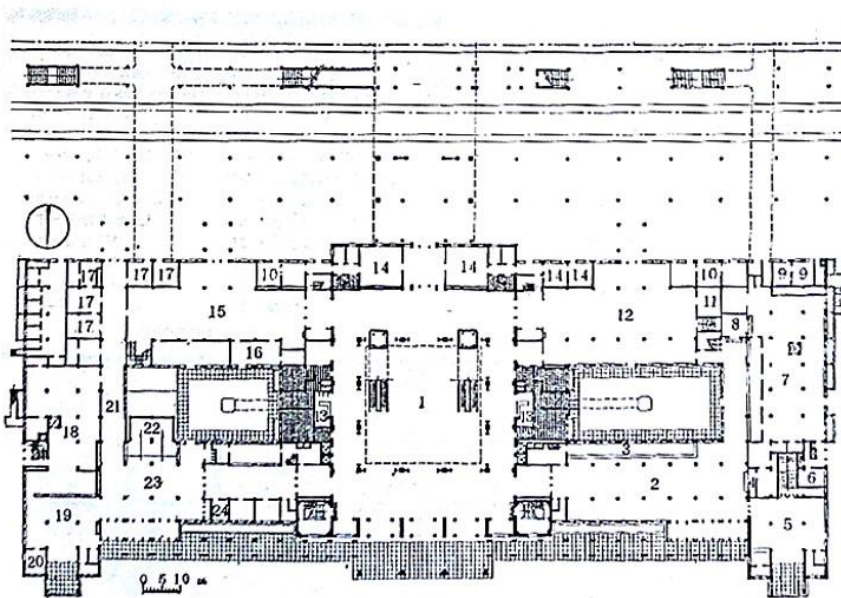
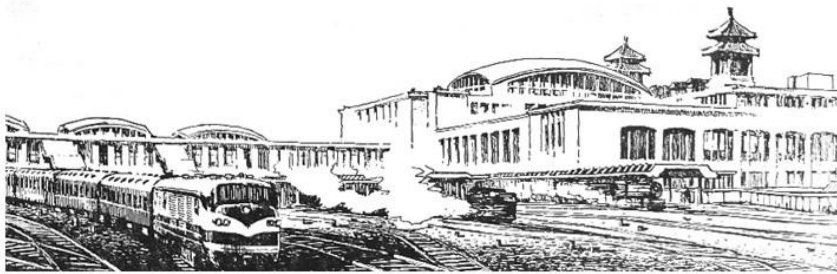


Fig.6. Beijing Railway Station, Beijing, 1959. (Source: The Third Design Institute of Ministry of Railway, 1977)



Fig.7. Stations in Makambako, Ifakara, and New Kapiri Mposhi along TAZARA Railway. (Source: Contributors. "TAZARA Railway." Retrieved May 17, 2017, from [https://en.wikipedia.org/wiki/TAZARA\\_Railway](https://en.wikipedia.org/wiki/TAZARA_Railway).)

## Conclusion

In the case of TAZARA Terminus, the “pragmatic approach” became more evident and confident. A Chinese adaptation of orthodox modernism manifest as the monumental composition, simplification of building components, and the adoption of suitable technology, proved to be suitable in the African context. This project demonstrated that a modernism with Chinese characteristics alternative to Western modernism achieved a mature presence in China's aid projects overseas in the 1970s.

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## Infrastructures for Global Production in Ethiopia and Argentina

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### Abstract

Chinese state and private companies are especially prominent among the multi-national development and industrial cooperation partners involved in planning and building spaces of globalized production in Africa and Latin America. In this paper, we take focus on specific infrastructures for processing, manufacturing and circulation in Ethiopia and Argentina which have been or are being developed in cooperation with Chinese companies and financial institutions in recent years. We discuss the physical architectures and urban context of these infrastructures, and situate them within different spatial and temporal layers of infrastructure and industry development. Moreover we intend to disentangle the complex web of actors involved in their planning and realization in an attempt to conceptualize them as transnational urban spaces. Ultimately, we aim to build an understanding how the material and immaterial infrastructures of globalized production articulate and embed a particular set of uneven spatial and social relations. Informed by recent debates on the role of space in Global Commodity Chains and Global Production Networks (Brown et al., 2010; Kelly, 2013; Kleibert & Horner, 2018; Phelps, 2017) and the frameworks' engagement with critical theory (Bair & Werner, 2011; Werner, 2016) we propose an approach which links concepts of global production relations with geographical thinking on uneven spatial development (Sheppard, 2016; Smith, 1984). The latter Marxist approaches offer promising entry points for examining relationships between the built environment and global production relations and for contextualizing these within the larger political economy of uneven spatial development.

The paper presents two current case studies of commodity hubs, i.e. infrastructure complexes enabling the circulation and processing of goods within global production networks, which are being built with significant involvement of multinational, specifically Chinese actors. The first case concerns building spaces of global clothing production in Mekelle, Ethiopia in conjunction with national communication and supply networks. The second case concerns grain shipping and processing facilities in Rosario, Argentina and their connections to agroindustry regions through rail and road networks. The concluding section lays out some theoretical and methodological considerations with the aim of building an analytical framework to compare and contrast the case studies as empirical entry points to study the nexus of globalized production, infrastructure provision and uneven development. The paper draws on recent research including site visits and stakeholder interviews in Ethiopia (Addis Ababa and Mekelle regions) and Argentina (Rosario and Buenos Aires).

**Keywords:** Global Production Networks; Infrastructures; Ethiopia; Argentina



## Introduction: Global production networks and infrastructures

This paper sets focus on specific architectures and infrastructures for the processing, manufacturing and global circulation of commodities which have been or are being developed in cooperation with Chinese companies and financial institutions in Ethiopia and Argentina in recent years – such as railway lines, terminals and industry parks. In order to analyse the relational and transnational constitution of such spaces of production, our research builds on the Global Production Networks approach (GPN). This conceptual framework shall be briefly introduced here to lay the ground for the discussion of our case studies and the future research potential they hold. The GPN approach has been developed in the field of economic geography in order to understand the increasingly fragmented organization and spatial dispersion of industrial production for global markets spanning national borders and different continents, with the aim of contributing “to explanations of patterns of uneven territorial development in the global economy” (Coe & Yeung, 2015, p. 22, emphasis in the original).<sup>1</sup> Global production networks are defined as “the nexus of interconnected functions and operations through which goods and services are produced and distributed.” (Henderson et al., 2001, p. 17) The analytical scope of the GPN concept includes not only the dynamic supplier relations of global lead firms, but also the territorial dimension of global production networks as well as the role of non-firm actors on various scales. It emphasizes the complex and multiscalar character of global production networks, and their embeddedness within the socio-spatial, historical and institutional contexts of specific places. In order to frame the enabling role of institutional actors in the integration of places into global production networks, GPN scholars have coined the term “strategic coupling” (Coe et al., 2004; Coe & Yeung, 2015). The “dis/articulations perspective”, proposed by Marion Werner and Jennifer Bair as a corrective to the GPN

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<sup>1</sup> Its antecedent is the concept of “commodity chains” initially introduced in the context of World Systems Theory in the late 1970s in order to reveal how the division of labour and exploitative trade relationships resulted in polarization between places in the “cores” and “peripheries” of the world. (Hopkins & Wallerstein, 1986) Building on this concept, Gary Gereffi and others coined the term Global Commodity Chains (GCC) as a framework to analyse empirically “interorganizational networks clustered around one commodity or product, linking households, enterprises, and states to one another within the world-economy” (Gereffi, Korzeniewicz, & Korzeniewicz, 1994, p. 2). The GCC concept was further elaborated in Global Value Chains (GVC) approaches, and the Global Production Networks (GPN) framework, recently updated as GPN 2.0. (Coe & Yeung, 2015)

literature, reminds us that the effects of this integration are not always positive. They draw our attention to the “*dark sides*” of network inclusion, local struggles, frictions and polarization, and to disinvestment and the relocation of production from specific places as a consequence of the constant restructuring of global production networks (Bair & Werner, 2011; Werner, 2016). Thus, the GPN approach offers many points of connection for research into spatial preconditions and urban impacts of globalized production. We have been exploring its potential as an analytical framework for urban research in an on-going research project<sup>2</sup> on urban impacts of transnational production arrangements of the clothing industry with a multi-local case study of production sites in Turkey, Bulgaria and Ethiopia (Beyer & Hagemann, 2018; Hagemann, 2015) and in current comparative research on the making of transnational “*commodity hubs*” in Ethiopia and Argentina. Trying to understand a place’s development in the context of a GPN, Maria Eugenia Giraudó characterizes spatial concentrations of industrial and logistics facilities and infrastructures, as well as the respective institutions linked to a specific GPN as commodity hubs (Giraudó, 2015). Building on her work, we define commodity hubs as infrastructure complexes enabling the circulation and processing of goods within global production networks. The main section of the paper discusses two current case studies of such commodity hubs, which are being built with significant involvement of multinational, specifically Chinese actors. The first case concerns building spaces of global clothing production in Mekelle, Ethiopia, in conjunction with national communication and supply networks. The second case concerns grain shipping and processing facilities in Rosario, Argentina, and their connections to agroindustry regions through rail and road networks. The concluding section of the paper discusses some theoretical and methodological considerations with the aim of building an analytical framework to compare and contrast the case studies as empirical entry points to study the nexus of globalized production, infrastructure provision and uneven development. The paper draws on

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<sup>2</sup> This research project is funded by the Deutsche Forschungsgemeinschaft (DFG) under research agreement No MI 1893/2-1.

recent research including site visits and stakeholder interviews in Addis Ababa and Mekelle regions in Ethiopia (2017 and 2018) and in Rosario and Buenos Aires, Argentina (2018).

### **Case 1: Global clothing production and infrastructure provision in Ethiopia**

Ethiopia's government currently pursues an ambitious economic development policy with the goal to become a middle-income country. This includes the agenda to place the country on the map of global production networks, especially of garment making and other light industries.<sup>3</sup> At the same time, and in conjunction with this agenda, major national infrastructure developments are under way in cooperation with diverse international partners (Map 1: Industrial park and infrastructure development in Ethiopia, 2018). This implies massive spatial transformations on different scales: While transport infrastructure systems of country-wide and transcontinental reach are being built, large export manufacturing zones are established in the peripheries of major cities, in some cases in conjunction with major residential development. China has become the most important international partner in providing financial liquidity and in designing and building the physical structures enabling global manufacturing and the required connectivity<sup>4</sup>, and also the biggest source of FDI in Ethiopia (Delz, 2015, 2016; Eom et al., 2018; Nicolas, 2017; I. Y. Sun et al., 2017; Ziso, 2017).

#### *Major infrastructure initiatives in Ethiopia: Railways, roads, airports, hydropower*

Ethiopia is spending a higher share of its GDP on infrastructure than most of African countries, fueling expectations it could become one of the largest markets for power, sanitation and road infrastructure in Sub-Saharan Africa (Delz, 2015, p. 234; Foster & Morella, 2011). The road

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<sup>3</sup> Export oriented industrial clothing production gradually grew in Ethiopia after preferential trade frameworks like the US Africa Growth and Opportunity Act (AGOA, since 2000) and the EU Everything but Arms Initiative (EBA, since 2001) permitted duty-free clothing export to Europe and the US (USITC, 2009). Chinese and Turkish textile companies were among the pioneers to build up individual factories. Initially, most foreign companies chose locations in the capital Addis Ababa or nearby municipalities (ETIDI, 2017).

<sup>4</sup> Transport infrastructure projects with Chinese financing and/or engineering and construction commissions include the Addis-Adama Expressway, the Addis LRT and Ring Road, the expansion of Addis Ababa International Airport, dryports in Mekelle and Dire Dawa as well as numerous smaller road construction projects in the capital and the regions (Delz, 2016; UNDP & IPRCC, 2015; Ziso, 2017).



network between cities and within them is being expanded and improved, as well as dryport facilities for international freight logistics (UNDP Ethiopia, 2017). A future national electric railway network is planned for incremental implementation with foreign financing and development partners. As the first 791km line, a new standard gauge railway connection between Addis Ababa and the port of Djibouti, the crucial entry and exit point of goods for the land-locked country, was built by the China Railway Construction Corporation and the China Civil Engineering Construction Corporation (CCECC). The project was financed to a large share by the China Export Import Bank and reportedly involved the import of about 1 billion USD worth of equipment and construction materials from China (Mohapatra, 2016; Y. Sun, 2017). In early 2018, passenger and cargo services started, operated for the time being by a Chinese-Ethiopian company on commission by the state-owned Ethiopian Railway Corporation (ERC). The second leg of the future network, extending northwards from the Addis-Djibouti line to Mekelle, is currently under construction: A 391km section from Awash to Weldiya is being built by a Turkish company with financing from Credit Suisse and the Turkish Exim-Bank, while the 216km connection to Mekelle is built by Chinese Communications Construction Company (CCCC), reportedly with Chinese financing. According to the ERC, other sections of the rail network were not yet commissioned at the time of our research. While the railway construction is a strong signal of Ethiopia's commitment to state-led infrastructural development and of Ethio-Chinese cooperation, its high cost and the question of its actual exigency for export producers in the prioritized textile sector are subject to contrarian debate among transport planners (Authors' interviews in fall 2018). In order to guarantee cheap and reliable power supply for manufacturing industries, Ethiopia's government seeks to turn its rivers into low-cost "renewable" energy supply with several giant hydropower dam projects.<sup>5</sup> All these projects deserve intense study regarding transnational actors, development aspirations and actual outcomes including environmental hazards, land use conflicts or dispossessions.

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<sup>5</sup> Major dams are under construction on the Blue Nile and the Omo rivers in cooperation with international engineering firms. Part of machinery at the Grand Renaissance Dam, the Genale river dam (GD3), as well as transmission lines to bring electricity generated at the dams to the cities and industries consuming are being financed through Chinese Exim Bank loans.

*Industry Parks for Export Manufacturing*

The Ethiopian federal government also aggressively pursues the development of another type of physical infrastructure to facilitate integration in global production networks: currently, eleven large state Industry Parks are starting operations or are under construction in several cities across the country (Map 1). These parks, usually starting with a first construction phase covering about 75 to 150 ha, but announced to be expanded to several hundred or up to 1500 hectares, are being developed by the Industrial Park Development Corporation (IPDC) in close cooperation with the Ethiopian Investment Commission (EIC) and their regional branches. Eight of the Industry Parks are specifically addressing export-oriented textile and garment producers, sometimes combined with food processing and other types of light manufacturing (IPDC, 2015). Chinese models and experience in Special Economic Zone development are an important reference (Fei, 2017; UNDP & IPRCC, 2015; Weldesilassie et al., 2017; Zhang et al., 2018). The Ethiopian government seeks to distribute industrial development to cities and regions beyond the capital and its surroundings. Around Addis Ababa, industrial sprawl without too much concern for local communities' interests or comprehensive urban planning proliferated in the decade after 2000 especially along the main transport corridor to Djibouti, and triggered sometimes violent land-use conflicts (Dadi et al., 2016; Seyoum, 2016). At the time of our research, the EIC declared it was now discouraging any FDI-led industrial development outside organized parks. The parks offer very competitive conditions for leasing sheds or land, cheap water and energy supply. In addition regionally differentiated incentives are available (also to private industry zone developers). For the design and construction of parks, mostly experienced Chinese state construction companies like CCC and CCECC were commissioned. Some parks were ready to start operations after less than a year's construction time.<sup>6</sup> Major Chinese textile producers are among the tenants in Hawassa, Adama and Dire Dawa IP, as potential fabric suppliers to garment making companies in the same parks and as such entitled to the same incentives as export producers.

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<sup>6</sup> The flagship "Hawassa Eco-Industrial Park" started operations in 2016/17; Kombolcha, Mekelle, Adama and Dire Dawa IP were already inaugurated at the time of writing.

In addition to the IPDC parks, there are several private Industry Park developments, including significant Chinese projects: The very first organized industrial park in Ethiopia, the Eastern Industry Zone (EIZ) with a mixed portfolio of industries in Dukem municipality south-east of Addis Ababa, was developed and is fully owned by private Chinese investors with strong institutional support by the Ethiopian and Chinese governments (Bräutigam & Tang, 2014; Dannenberg et al., 2013; Giannecchini & Taylor, 2018; Hou, 2015; Ziso, 2017).<sup>7</sup> Several more private Chinese developers or state companies are setting up or planning industrial zones in Ethiopian cities or their periphery (Xinhua, 2017).<sup>8</sup> All these projects are located on or near the privileged rail and road connections established with Chinese financing and engineering capacities.

National and international development agencies hope for multiple positive effects of industrial development in Ethiopia's new Industry Parks: great numbers of jobs with the potential to reduce poverty and migration, but equally profitable opportunities for investment, sourcing, as well as the export of machinery, technology and know-how from the agencies' home countries. However, the large-scale parks create monofunctional enclaves in the periphery of the bigger cities where hardly any housing or any other urban infrastructure is available for the expected tens of thousands of workers. Plugging these enclaves into the emerging networks of communication and supply emerges as a jolty process of (partly retroactive) infrastructure

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<sup>7</sup> The EIZ project was started in 2006 by the Qiyuan group, leader of a private Chinese consortium, and developed on an area of roughly 40ha in cooperation with the Ethiopian and Chinese governments based on a 2008 bilateral agreement, as one of the first six Chinese Special Economic Zones established in African countries under the framework of the FOCAC, and as a project included in the Sustainable Development and Poverty Reduction Program of Ethiopia. The private Chinese developers also took responsibility for building the infrastructures for power and water supply leading up to the park, at 30% cost reimbursal by the Ethiopian government. Most of the 66 companies in the zone are Chinese. An expansion of 167ha is planned.

<sup>8</sup> Huajian Light Industry City in Addis, near the new railway station and the continuation of the expressway, is designed as an industry zone specializing on leather goods plus residential quarters (condominiums and dormitories), commercial, educational and social infrastructure. In Adama city, the Ethiopia-Hunan Machinery and Equipment Industry Zone of 120 ha is under planning, to be built by CGCOC with a China Exim bank loan, based on an agreement between Chinese Hunan province and the Ethiopian state. CCCC develops an industry park in Arerti, a 100 ha project for building materials and furniture production; CCECC develops a 1500 ha mixed industry zone, reportedly aspiring to free trade zone status, in the periphery of Dire Dawa, the major Ethiopian city closest to Djibouti port, connected by railway. A Taiwanese shoe company is building an industry park in Modjo, in convenient proximity to the Addis-Adama expressway and Modjo dryport, currently the only logistics facility where containers can be put on the trains to Djibouti.



planning and provision, sometimes the first moment of serious interaction between transnational, national and municipal actors as well as the local residents whose livelihoods are fundamentally changed by the major spatial transformations.

*A commodity hub in the making: Mekelle*

Mekelle city in northern Ethiopia is an instructive case to study how infrastructure provision for manufacturing and global circulation of commodities contributes to the formation of global production networks, and how transnational actors become very significant players in negotiating and physically shaping urban space. Around this city with roughly 300.000 inhabitants, regional capital of well-to-do Tigray Regional State with about 1.5 million people living in a 50km radius, there are four sizable export-oriented industry zone developments under construction on greenfield sites (Map 2: Infrastructures of manufacturing and circulation in Mekelle, 2018; PWC et al., 2017). Three of them are private clothing production complexes aspiring to employ more than 10.000 workers each, developed by private investors from India, the United Arab Emirates, Bangladesh and Italy. One of them plans to develop a full-fledged private industry park for other companies in addition to its own integrated denim factory on the 170ha plot it received. The others would acquire industry park status due to their sheer size. Last but not least there is the state-developed Mekelle Industry Park (MIP), the first 75ha of which were recently inaugurated with 15 turn-key sheds. For the most part, it is suppliers of ready-made garments to global brands or retailers in Europe and North America who expand their production from South-East Asia or Egypt to Mekelle (or other Ethiopian cities) in order to profit from preferential trade agreements, low costs and incentives. Initially, all supplies are imported, but some companies plan to build up vertically integrated factories to be able to do most manufacturing steps on site. The integration of Mekelle in global clothing production networks is also supported by major European clothing retailers with a fresh CSR commitment, seeking a new and cheap production region not yet associated with inhuman and dangerous working conditions, in notable coalition with development agencies from European countries like Swedfund or Germany's Ministry for Development Cooperation who run projects to qualify and educate workers.

In our research, we focus on the development of MIP as a physical infrastructure for global clothing production, put in place by the Ethiopian Federal Government authorities aiming to

attract FDI and export manufacturing. Disputedly, the project was integrated with urban structural planning only in a somewhat retroactive fashion. This park also specializes on textile and garment, with companies from India, Bangladesh and Pakistan among the first tenants. According to the park management, the regional government delineated 1000ha in total for textile and garment production here among villages in the south-western periphery of Mekelle. 163ha are ready for the second expansion phase, to be financed through a 500 million USD contract signed for this expansion and Dire Dawa IP with the European Investment Bank.

Adjacent to the park, extensive residential construction is under way, but these condominiums are in all likelihood not affordable for the up to 60.000 workers mostly from rural backgrounds expected to be employed in MIP alone. A 5ha project for low-cost housing was designed by Mekelle University for the Regional Government, but so far the means or investors to realize the project have not been found. As a remedy, individual park investors are given several hectares of land on the park's perimeters to build staff housing and dormitories on their own.

The contract for the design and actual construction of the park including sheds, offices and engineering networks was won by Chinese CCCC, and executed within nine months with funding from the Ethiopian government. The same company is currently building the 18km trunk road which allows direct access to the main overland route towards Addis, Djibouti, and Eritrea. As already mentioned, it is also building the railway line to Mekelle and the future railway station east of the airport, far outside the city, right where the new circumvention road from MIP will join the main North-South overland road. Nearby the same future road junction, a new dryport is under planning by the Ethiopian state Shipping and Logistics Service Enterprise for customs procedures and transferring containers from road to rail – designed by CCCC. (Kang'ereha, 2017; PWC et al., 2017) Thus, yet another transnational production network seems to emerge with massive impacts on Mekelle's urban development: a global production network of infrastructure provision, involving diverse transnational actors like this huge and globally active Chinese construction corporation, European financing institution and development agencies collaborating in the making of an emergent commodity hub. Despite all the money and negotiations already invested to create physical infrastructures for the railway, however, the evolving commodity hub might ultimately adapt a different structure to link Mekelle into global supply chains: While building the railway is taking a lot of time, money and painstaking land procurement, the recent peace with Eritrea gives good reason to expect

that soon goods can be shipped through Massawa port, at a half-day truckride of just about 400km much closer to Mekelle than Djibouti at 670km.

### **Case 2: Infrastructures for soybean processing and logistics in Rosario, Argentina**

Argentina's economy has been based on the export of agricultural products for more than a century now. Since the cultivation of soybeans was established in Argentina in the 1960s the soy industry evolved to be the country's major export industry which made up for more than 25% of the national exports in the past years. Currently soy is cultivated on an area of about 20 million ha. The country is the third largest producer of soybeans in the world and the largest for processed soy-based products (Berndt & Bernhold, 2017; Lapegna, 2017). The soybean industry in Argentina can be regarded as a global production network with different lead firms in different stages. In the case of processing and trading a few transnationally operating companies dominate the industry and strengthen their position through vertical integration (Craviotti, 2016; Dobelmann, 2012). China is currently the most important market for Argentinean grains, especially soybeans (Bolsa de Cereales, 2018).

The development of transport infrastructure networks has been closely entangled with agroindustry development ever since: major road and railway corridors as well as inland waterways serve the needs of the export-oriented industries and are of great importance for the spatial expansion of large scale agroindustrial activities to regions that hadn't been integrated in these relations of production so far (Berndt & Bernhold, 2017; Lende & Velázquez, 2018). The agroindustry is also an important player regarding transport operations as large producers and traders operate port terminals, railway lines and dispose of large truck fleets. Currently soy is mostly transported by truck (Lende & Velázquez, 2018; Schweitzer, 2011). The railway only plays a marginal role as the network lost importance and eroded since the late 20th century due to neoliberal restructuring, privatization and the promotion of road-borne transport. Nevertheless, the railway had a massive impact on Argentina's spatial structure ranging from settlement patterns in rural areas to the structure of the build environment in the country's urban centers (Gordillo, 2014; Lende, 2009; Raposo, 2009). Currently the main corridors of the state-run Belgrano Cargas network which only moves a very small volume of goods now is being renovated and expected to improve the connectivity between the major grain ports in the Rosario area and the agrarian regions and reduce the needed times for the trips. The renovation



project is being financed by the Argentinean state and a 4 billion USD loan from the China Development Bank Corporation and the Industrial and Commercial Bank of China Limited and is employed through the China Machinery and Engineering Corporation (Ministerio de Transporte, 2017).<sup>9</sup> The project is part of larger Chinese infrastructure initiatives in Argentina which also include further railway projects and energy infrastructures. The financing contract for the Belgrano Cargas project foresees the acquisition of rolling stock and construction materials from Chinese companies. The project is the responsibility of Argentina's federal transport ministry and coordinated by a state-owned railway infrastructure company which is assigned to this ministry. Construction works are being realized by Argentinean companies. In December 2018 around one third of the planned 1.845km had been renovated.

### *Gran Rosario - a global center of the soy industry*

Gran Rosario is the third largest metropolitan region in Argentina with about 1.3 million inhabitants. The city evolved around a port at the Paraná river and has been a center of grain trade, transport and processing since the 1930s (Raposo, 2009). Therefore, its urban form has heavily been shaped by the transport infrastructures, especially several railway lines and grain ports, as well as by facilities for warehousing and processing grains, such as silos and mills (Galimberti, 2015). Besides being the centre of the country's agroindustry, a large industrial base including large manufacturing and oil processing facilities evolved in the 20th century.

In the metropolitan area of Rosario which stretches 60km along the bank of the Paraná river there are around 20 deep-water ports, mainly specialized in the shipment of grains, vegetal oil, biodiesel and flour. Most of these facilities are directly connected to processing facilities such as soy crushing plants and bio diesel refineries. Compared to facilities in the US and Brazil those in Argentina are characterized by large sizes and high volumes (Schweitzer, 2011). Altogether these terminals represent the world's largest port for soybeans in the world and the region dispose of the world's largest soy crushing capacities. Other ports in and around the city

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<sup>9</sup> The Development Bank of Latin America (CAF) is also financing the renovation of a few sections of the Belgrano Cargas network.

also ship containers, minerals and petrol. The city is connected to the province capital Santa Fe and the country's urban centers Buenos Aires and Cordoba through highways. A new highway is projected as a public private partnership to serve the grain ports in the north of the city and reduce the heavy traffic on the highway to Santa Fe.

The city is also a major node in Argentina's decaying railway network. In the metropolitan region of Rosario, the Belgrano Cargas project also implies new rail track to the ports in Timbúes, a small town on the northern fringe of Rosario's metropolitan area, and a large new rail yard at the same location. (Map 3: Infrastructures of manufacturing and circulation in the north of Rosario, 2018) This section will be financed by the three companies operating the ports and processing facilities (COFCO, Renova, LDC) and those planning to develop new facilities at the same location (AGD, ACA)<sup>10</sup>. COFCO is another major Chinese actor in the context of infrastructure development in the Rosario area. The state-owned food processing and trading company became a major player in Argentina's agroindustry in recent years through acquiring the grain trading company Noble agri and becoming majority shareholder of Nidera, a major company in the same industry, both operating and owning processing and logistics assets in Rosario. At its site in Timbúes, COFCO is planning to expand its operations and the respective processing and logistics complex.

The domestic, international and transnational companies whose terminals are being connected to the Belgrano Cargas network have been involved in the development of the project in several other ways: They are all members of the Rosario Board of Trade, a local business organization which represents the interests of the agroindustry. Although being organized on a local level it is highly influential on the level of provincial politics and manages to exert influence on the national scale. Being among the largest customers of the state operated Belgrano Cargas freight railway network it is those companies that define the demand that the services are planned for.

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<sup>10</sup> Renova is a joint venture of the Argentinean agroindustrial group Vicentin S.A.I.C and Oleaginosa Moreno Hnos. S.A, a subsidiary of multinational resource trading company Glencore, LDC (Louis Dreyfus Company) is a Dutch resource trading company majority-owned by the French Louis Dreyfus Group, AGD (Aceitera General Deheza S.A.) is a private Argentinean food processing and trading company, ACA (Asociación de Cooperativas Argentina) is an association of cooperatives representing around 50.000 producers of agricultural goods in Argentina.



The renovation of the Belgrano Cargas network is supposed to strengthen Argentina's agroindustry, the country's leading export industry and its most important source of foreign currency. However, the railway line and the other massive infrastructures that are being provided for the processing and transportation of grains reinforce a development model that produces social and environmental problems in the regions where the crops are cultivated (Gordillo, 2014; Gras, 2013; Lapegna, 2017) and also in urban areas where the processing and logistics facilities are located (Schweitzer, 2017).

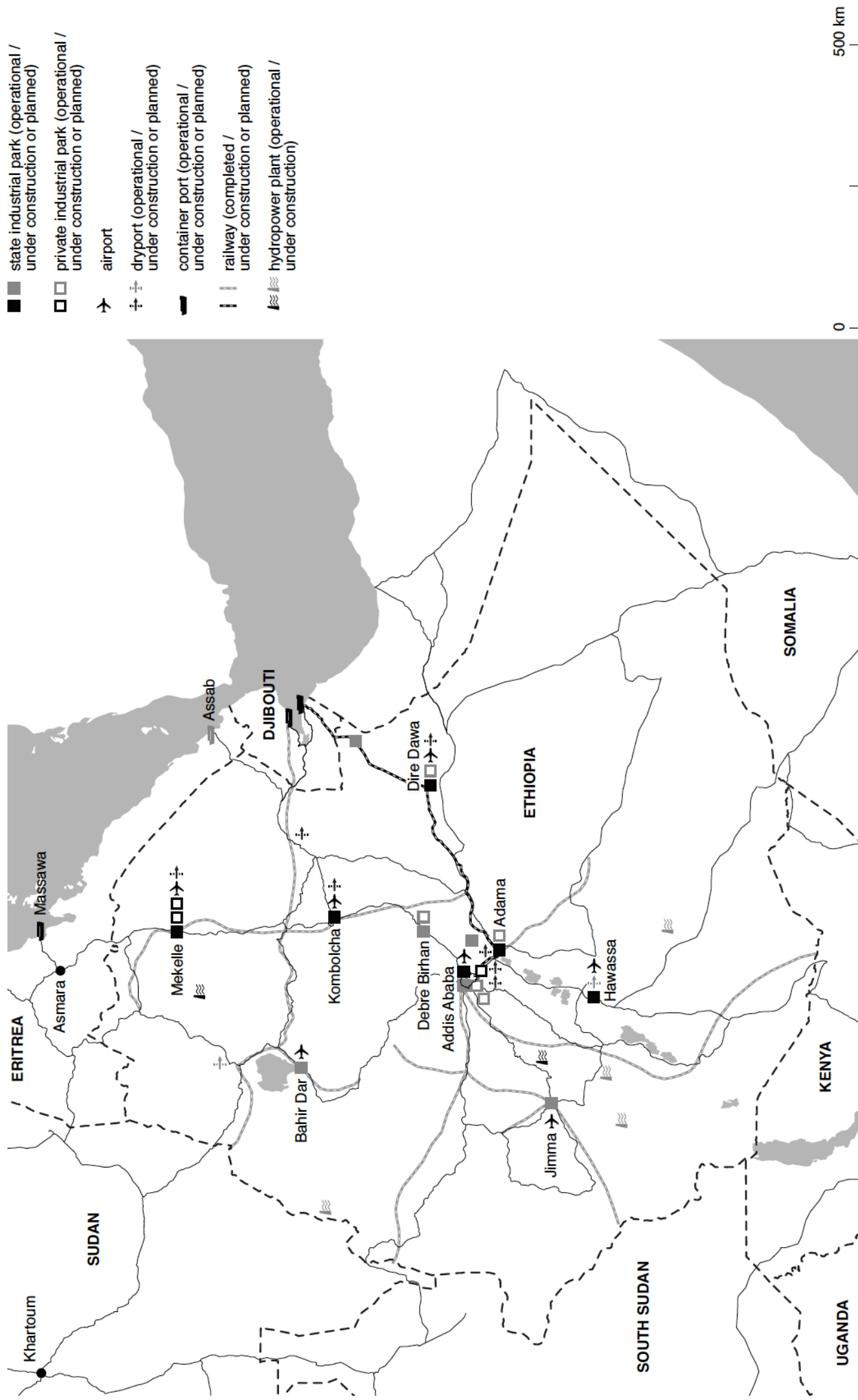
### **Outlook: An agenda for researching the infrastructures of globalized production**

The commodity hubs of Mekelle and Rosario are being reconfigured with significant involvement of Chinese actors in financing, expertise, technology and construction materials export in order to position these two places within specific global production networks. The infrastructure projects implemented there are among the largest in the respective regions and expected to contribute substantially to meeting national developmental goals. Their urban impact is massive in both cases, even though Rosario has been shaped by the grain industry's infrastructures for decades while in Mekelle a garment industry cluster is just starting to form. Obviously, the spatial logics and the transnational actor constellations of global clothing production and the soybean agroindustry differ in many significant ways. Enhancing connectivity in Rosario promises stabilization of China's import supply with agricultural staples, while infrastructure in Mekelle and other Ethiopian cities is built up to qualify them as destinations for the relocation of production capacities in the low-wage textile industry (not only from China, but also other South and East Asian countries) and simultaneously as export markets for commodities, industry supplies and construction technology. Although the precise roles and power relations of corporate and state actors in infrastructure provisioning vary, the two outlined cases also reveal instructive similarities regarding the context of larger bilateral cooperation initiatives with China and the leading role of planning authorities on the national level resulting in challenges for planning on the urban and regional scales.

To grasp these infrastructural constellations and their material dimensions we propose to bring the GPN framework in conversation with different strands of research on urban development: A valuable counter point to the GPN perspective is provided by work in a political economy tradition as it identifies the links between the physical, built infrastructures of transport and the

differentiated landscapes of connectivity (Smith, 1984). This strand of literature also addresses and theorizes the uneven developmental benefits emerging from a place's connectivity (Sheppard, 2016). For contextualizing the periurban infrastructural development in Rosario and Mekelle within a global dynamic of capitalist spatial development and to deepen the understanding regarding the interdependencies between such places of extended urbanization and the global urban "cores", the planetary urbanization framework (Brenner, 2016) provides helpful entry points. Valuable insights on how the provision of infrastructure networks aiming at global connectivity inscribes and reinforces spatial inequalities and transforms urban landscapes and governance regimes in the long-term has been offered by scholars working on urban infrastructures (Addie, 2016; Cidell, 2015; Graham & Marvin, 2001; Kanai & Schindler, 2018; Lara, 2012). Scholarship that focuses on the ways in which infrastructures determine interactions through inscribed logics, restrictions and possibilities allows for developing an understanding of infrastructures as "active objects" (Easterling, 2014) shaping trajectories of urban development. Several recent research contributions from the field of architecture and urbanism complement these literatures by providing models for innovative spatial analysis and maps of logistical systems and the way they articulate in the built environment on different scales (LeCavalier, 2016; Lyster, 2016; Hein, 2018).

Studying the provision of infrastructures for global production networks substantially adds to the knowledge on the precise links that mediate and co-produce interdependent dynamics of uneven spatial development and the resulting inequalities. The discussion of the two case studies has shown that the transnational actor constellations of infrastructure provision are crucial for understanding the uneven spatialities of global production networks as both networks are closely entangled. We argue that a comprehensive analysis of these spatialities requires an integrated approach considering both the networks of commodity production and infrastructure provision. Therefore, we propose studying the provision of infrastructures for globalized production as a GPN of its own, by tracing, mapping and analyzing the intersectoral and transnational connections of corporate and institutional actors. This provides a productive tool to deepen our understanding of the interdependent character of spatial inequality and its infrastructural dimension in particular. It also offers insights into the current role of spatial planning, specifically in processes of "strategic coupling", and the challenges it is facing regarding the re/production of uneven spatialities within the outlined constellations.

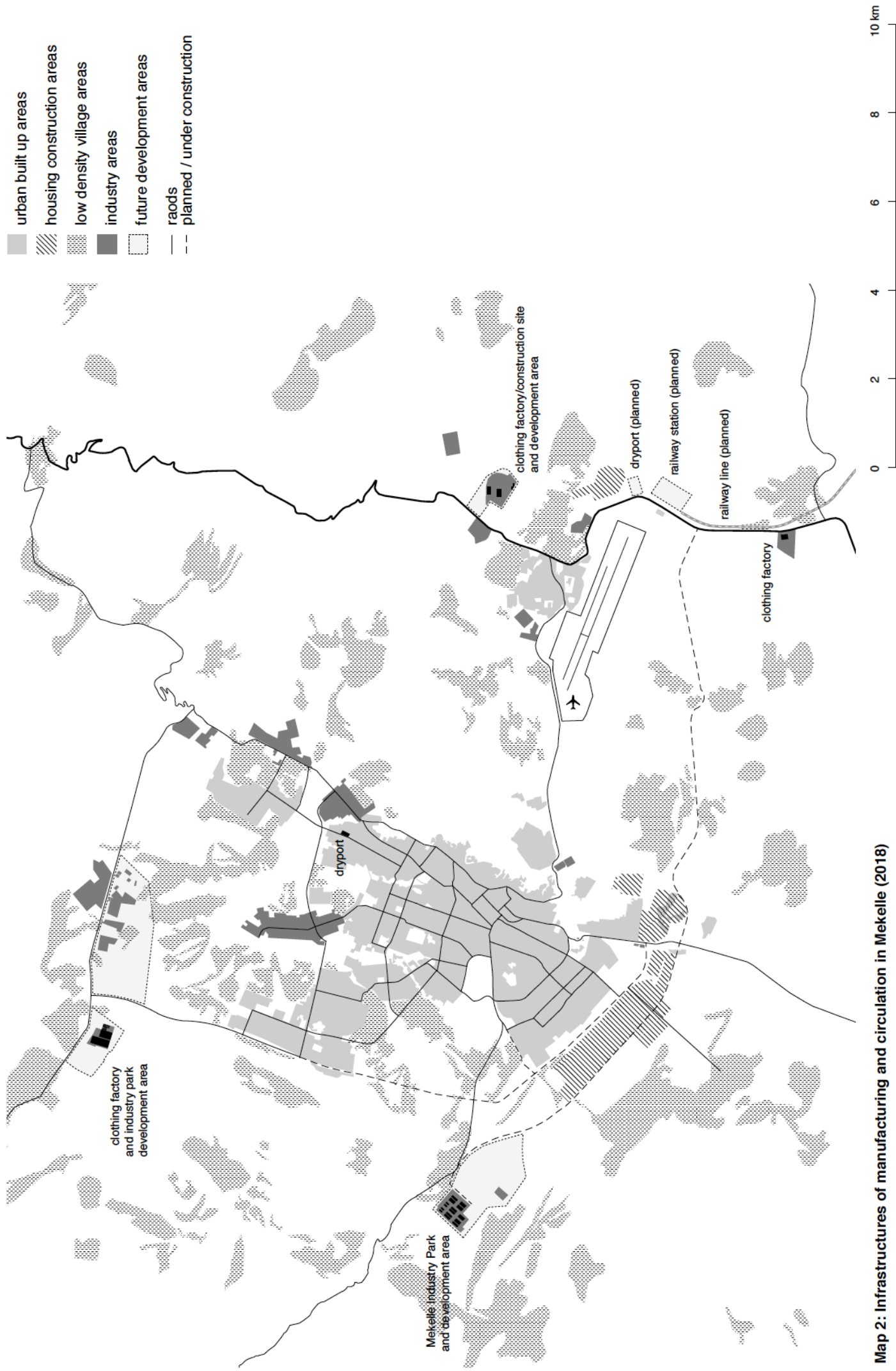


Map 1: Industrial park and infrastructure development in Ethiopia (2018)

Map: Anke Hagemann, Elke Beyer, Rucha Kelkar

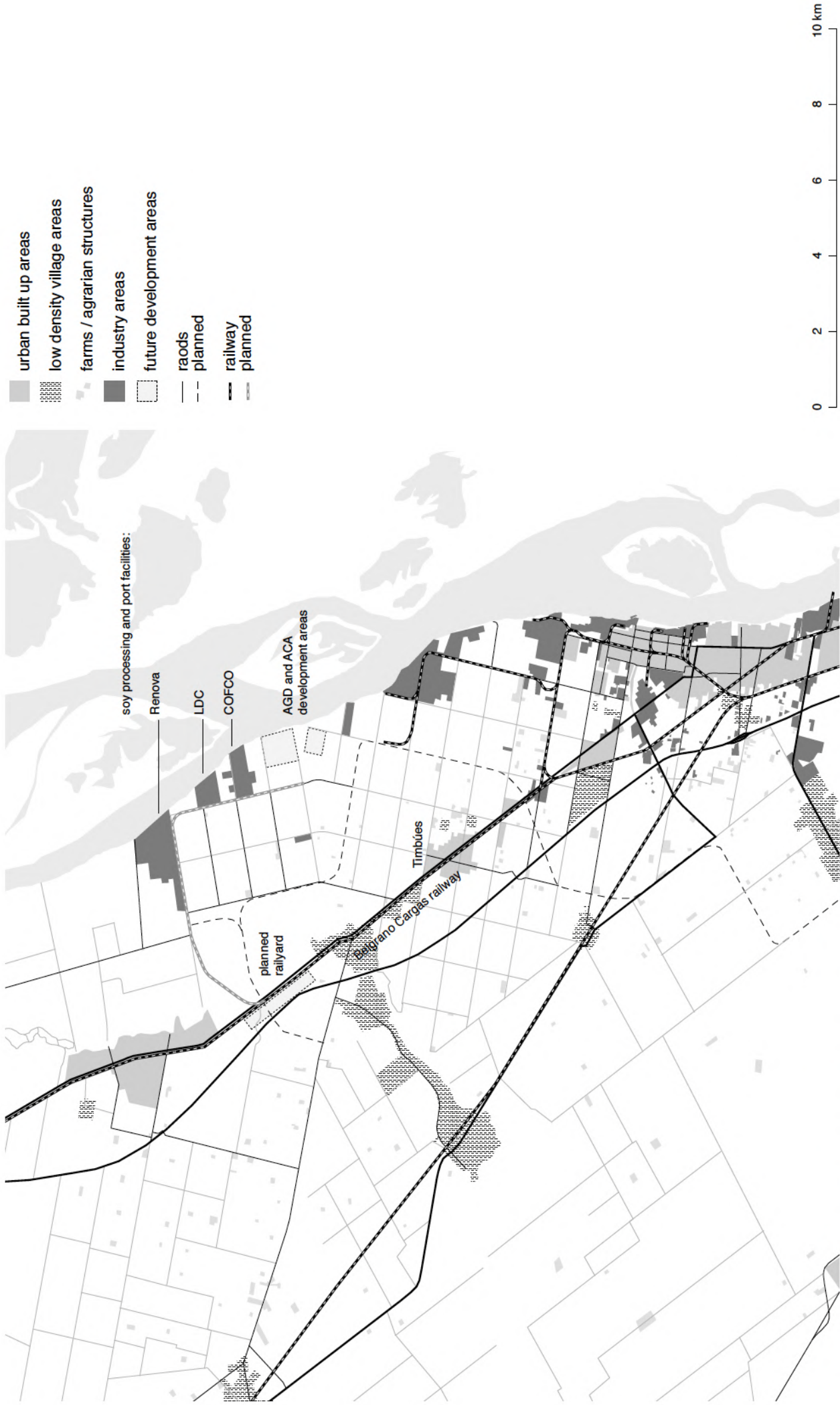
Sources: Google Maps, OpenStreetMap, maplibrary.org, EIC, IPDC, Embassy of Ethiopia (Brussels), Ethiopian Shipping Lines





**Map 2: Infrastructures of manufacturing and circulation in Mekelle (2018)**

Map: Anke Hagemann, Elke Beyer, Ilkim Er  
 Sources: Google Maps, OpenStreetMap, IPDC, PWC et al. 2017



**Map 3: Infrastructures of manufacturing and circulation in the north of Rosario (2018)**

Map: Anke Hagemann, Ilkim Er, Lucas Elsner

Sources: Google Maps, OpenStreetMap, Vialidad Nacional, Trenes Argentinos Infraestructura

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## **Emergent geographies of expansion:**

### **Contested agro-extraction and the explosion of the soybean frontier in Brazil**

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#### **Abstract**

Amidst concerns about the demarcation of the urban and institutionally constrained views of spatial reorganization, this paper aims to contribute to discussions on Henri Lefebvre's notion of planetary urbanization and the formation of new landscapes of extended and concentrated urbanization as a result of the dialectic implosion/ explosion of space. In this pursuit, the new geographies of resource extraction will be perceived as particular morphological expressions of market-driven processes of urbanization. This theoretical framework will be deployed to respond to the current debates on neo-extractivism as a methodological approach to natural resource extraction.

The "soy-ification" of Brazilian agriculture is used as a case study of agro-extractivism revealing the processes that have transformed Brazilian farmland into a highly complex global object comprised of relations involving a number of geo-strategic interests and actors. New geographies of extended and concentrated urbanization have been formed throughout the Brazilian landscape to sustain agricultural intensification and the circulation of soy. Operational landscapes in Brazil have been completely engineered to serve the ever-increasing demand for meat consumption through the development of agro-extractive activities such as GMO-dependent monocultures requiring extensive herbicide use; an unsustainable reliance on genetically engineered bio-property; politically tenuous forms of socio-spatial reorganization; and the transformation of labor relations. Paradoxically, this intensification is driven largely by the rise of the middle class in China and the changes of nutritional habits. The effects of China's influence in the region include a number of infrastructural developments to facilitate soybean exports; the acquisitions of numerous transnational agribusinesses operating in Brazil; as well as the reshaping of the Brazilian political landscape itself. By conceptualizing the current state of soybean production in Brazil, the paper aims to contribute to the literature on the variegated geographies of neoliberalism and emerging debates on planetary urbanization while responding to recent appropriations of the notion of neo-extractivism.

**Keywords:** agro-extraction; planetary urbanization; neo-extractivism; operational landscapes

#### **Introduction**

Manoel de Barros, one of the most prominent authors of contemporary Brazilian literature, was born in Mato Grosso and grew up next to the shores of the Paraguay River. His childhood was marked by its immense landscapes where time seemed to pass very slowly (Ioris, 2018).. In his words, his family lived "in a place where there was nothing (...) and we had to invent" the world; "invention was required to enlarge the world" and "disturb" the existing, normal



meaning of things (ibid.). His main proposition was that a place like Mato Grosso had yet to be ‘invented’ in order to decipher still unarticulated truths, reflect on the intense and sophisticated exchanges with nature and complement the small number of inhabitants with broader social intercourses and connections with wider Brazilian and international society (ibid.).

Manoel’s proposition about the ‘invention’ of a space like Mato Grosso conveys the philosophical and political urgency to move towards a re-invention of the concept of urbanization. Colossal landscapes such as Mato Grosso are traditionally depicted as ‘black-boxed’ space that should be justifiably occupied. Thus, the concept of ‘emptiness’ is presented as a means of legitimacy for the immense exploitation of natural resources in such regions. As Brenner suggests in his *Theses on Urbanization* (2013), “urban studies has traditionally demarcated the urban in contrast to putatively nonurban spaces and has rendered the nonurban as the ontological Other of the urban, its radical opposite, and as its epistemological condition of possibility, the basis on which it can be recognized as such”. Hence, amidst concerns over the morphological embodiment of urbanization, an emergent strand of academics and scholars builds upon the Lefebvrian notion of planetary urbanization (see Angelo and Wachsmuth, 2015; Brenner, 2013, 2014; Brenner, and Schmid, 2014, 2015; Merrifield, 2013; Schmid, 2014a, 2014b; Wachsmuth, 2014) to argue about a new analytical approach in the formation of new landscapes of extended and concentrated urbanization as a result of the dialectic implosion/explosion of space. A reinvented form of urban theory that recognizes the creatively destructive character of the “urban phenomenon” under capitalism and aspires to decipher newly emergent patterns of planetary urbanization is placed at the core of this analytical approach. In this sense, it is important to interrogate so-called ‘sacrifice areas’ that appear as nodes in a black-boxed network of operational landscapes and are fundamental for supporting processes of urbanisation unfolding at broader spatial scales.

On the basis of the analytical distinction between *concentrated* and *extended* forms of urbanization proposed by Brenner and Schmid (2013; 2014; 2015; see also Brenner, 2014; Brenner and Katsikis, 2014), this paper uses as its starting point the deepening of the extractive economy in Latin America and views geographies of agro-extraction as particular morphological expressions of market-driven processes of urbanization. By presenting current debates around the notion of (neo)extractivism, I aim to reconstruct a framework for the



spatialization of resource extraction and, thus, contribute to the literature on the variegated geographies of neoliberalism and emerging debates on planetary urbanization.

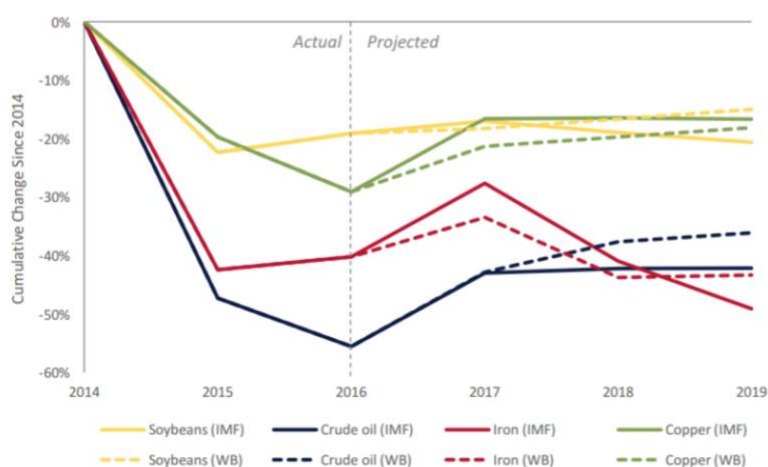
### **The commodity boom and emergent geographies of urbanization**

The commodity boom of the early 2000s included a wide array of raw materials (crude oil, metals, food) and according to the IMF (2011) is considered to have had remarkable effects due to its scale and magnitude regarding the rapid increase of commodity prices. In the Latin American context, this phenomenon has had a massive macroeconomic impact. From 2003 to 2012, foreign direct investment in Latin America has been on the rise reaching a historic peak of \$220 billion. This has sparked a vast wave of infrastructure, energy and mining operations so as to promote resource extraction at a massive scale (Arboleda, 2016a). According to Arboleda “because of the interplay of neoliberal governance frameworks, financial capital and technological developments such as sophisticated methods for land surveying, the mechanization of productive structures and the proliferation of open-cast mining and the rise of agri-businesses, the speed and the scales of territorial transformation have expanded to an unprecedented extent”.

South America’s dependency on the extraction of raw materials and increased expansion of agro-industrial modes of production has been, indeed, an important growth and export-orientated development strategy. Between 2011 and 2015, the extractive and agriculture sectors combined, amounted to 52 percent of total exports while exports of the same sectors to China correspond to 88 percent (19.2% soybeans, 16.8% iron ore, 11.8% crude petroleum, 21.4% copper and ores). These numbers reveal the rising importance of agricultural and extractive products for Brazil’s economy and point to the territorial transformations that have taken place in the past decade. The increasing economic importance of the resource sector has resulted in an unprecedented spatial expansion of mining and agro-industrial production into areas hitherto sparsely exposed to capital forces (Engels and Dietz, 2017b; Dietz et al. 2015a; Svampa 2012). Subsequently, with the emergence of large-scale industrial mines or agro-industrial complexes, formal and informal institutions, norms and rules of the recent past, as well as modes of exercising power, are transformed pointing to significant socio-spatial and socio-political transformation processes (Engels and Dietz, 2017b; Arboleda, 2016b). Land uses and property relations related to land are changed, social relations (such as labour, gender, class and ethnic

relations) and cultural identities are reconstructed, and new socio-economic expectations, dependencies and subjectivities are created.

In the post crisis period, global FDI has experienced a gradual decrease as the commodity cycle has reversed and economic growth weakened (IMF, 2018). According to ECLAC (2018), this steady fall since 2014 may be attributed to the fall in export commodity prices (fig.1), which has significantly reduced investment in the extractive industries, and to the economic recession in 2015 and 2016, which was concentrated in Brazil.



Source: IMF and World Bank.

Fig.1 IMF and World Bank Projections for Commodity Prices

Even though prices for metals, minerals, oil, food and energy crops have dropped since 2014, the ongoing crisis of the financial markets and the related high demand for valuation reserves and secure investment possibilities render mining and agro-industrial crop production continually profitable (Engels and Dietz, 2017b) and there is an array of infrastructural investments to ensure the smooth operation of those sectors. For example, the “Policy Paper on the Latin America and the Caribbean” (2018), released by the Chinese Ministry of Foreign Affairs, stresses out the need for additional infrastructure investment, in order “to build production lines and maintenance service bases in the region for construction materials, non-ferrous metals, engineering machinery, locomotives and rolling stock, electric power and communication equipment.” Even though Chinese foreign direct investment is decreasing at the global level, the acquisition of several assets in Brazil in 2017 indicates an increase of Chinese investment in the region (ibid.; CBBC, 2013). Notably, Chinese investment in Brazil reached a seven-year high of \$24.7 billion in 2017, according to the Brazilian planning ministry. Between 2012 and 2016, Chinese companies invested in Brazil more than twice as much as



U.S. counterparts (Biller, 2018; CBBC, 2012). In this respect, Presidents Xi Jinping's decision to include the country in his "One Belt, One Road" plan which will include investments of \$1 trillion in global infrastructure (Biller, 2018) presents one of the most significant investment plans in the region.

In this section, I have presented the contested geographies of extraction as particular morphological expressions of contemporary processes of capitalist urbanization through an exploration of the political economy of the commodity boom. Following, current debates about methodological approaches to the notion of extractivism will be presented.

### **Routes to extractivist re-spatialization: Planetary expansion**

As already discussed, the global resource boom was defined by high prices on the world market and increasing demands for raw materials from new and old centers of industrial production (China, Europe). The intensified demand for raw materials accompanied by an increased expansion of agro-extractivist modes of production has been promoted by national governments, regional development banks and international organizations as an important growth and export-orientated development strategy in the global South (Engels and Dietz, 2017b; Bebbington, 2009). It is in this context that the notion of extraction has gained increasing academic and political interest. The framing of extractivism has taken place by a diverse network of academics and activists which has resulted in different approaches according to disciplinary background and interests (Martin, 2017).

Latin American left-minded academics have focused on the particular trajectory of extractivism under different political regimes -from neoliberalism to post-neoliberalism or progressives (ibid.). The term of "neo-extractivism" was coined by Gudynas to describe resource extraction in Latin America (2009; 2010). Gudynas noted that the emergence of left-leaning governments (in Venezuela, Ecuador, Bolivia, Argentina, Nicaragua, Brazil, among others) paradoxically maintained and in some cases promoted policies for extractive expansion. He established an analytical distinction between conservative extractivism that deploys corporate social responsibility to build legitimacy, and progressive neo-extractivism that essentially develops a favorable profile arguing that the extractive activities are of the people and for the people. On a similar note, Svampa (2012) links both versions, i.e. conservative extractivism and neo-extractivism, with the corresponding models of liberal and progressive developmentalism



respectively and argues that neo-extractivism is based on a national-populist socio-political *dispositif* that strategically functions as a source of political legitimization. In other words, as an integral part of the development model, neo-extractivism is presented as the justification for the exploitation of nature and as a project that aims to promote national development, sovereignty, and social redistribution (Brand et al. 2016). What needs to be questioned at this point is the legitimacy of the term post-neoliberalism itself. The notion of post-neoliberalism was introduced by progressive intellectuals and leftist governments in Latin America, especially in Brazil, to describe the end of neoliberalism (Brand, 2016). Contrary to this idea, several scholars argue that post-neoliberalism is about the intensity of neoliberal shaping – that is, a break with some characteristics while maintaining others (Brand and Sekler, 2009; Gago and Sztulwark, 2009; Candeias, 2009; Brenner *et al.*, 2010; Buckel *et al.*, 2010). This view gains legitimacy considering the current right-wing turn for many countries of the region including Argentina, Chile, and most recently Brazil.

Despite its success in posing a radical critique of both the phenomenon of extractivism and of the national governments that have promoted it, the methodological strands of a ‘neo-extractivist’ approach exhibit shortcomings and contradictions that hinder a more encompassing understanding of the uneven spatio-temporal developments that extractivism implies. First, the spatial implications of extractive activities need to be understood and studied beyond a state-centered analysis based on the dichotomy between resource-dependent and industrialized societies (Martin, 2017). In this context, Moreno (2015) also questions the state-centered perspective on extractivism, which ignores transnational growth patterns such as China’s resource hunger. According to various scholars (Martin 2017; Machado Araoz 2015; Moreno 2015; Mezzadra and Gago 2015), the concept of neo-extractivism presents serious deficits since it neglects the dynamics of global capitalism as a constitutive element of extractivism. Machado Araoz (2015) argues that the theoretical and methodological shortcomings of neo-extractivism are related to the focus ‘on the social formations where these activities are carried out, omitting and disregarding the world system, the rules governing the rate and rhythm of extraction, the uses of these resources and the technology applied’ (Martin, 2017; Araoz 2015). In other words, state-centered perspectives with a focus on particular places of extraction, ignore the multiplicity and complex interrelations of territories of extractivism, which include the places where resources are mined, processed and consumed. In order to



transcend the ‘territorial trap’ (Agnew, 1994; Martin, 2017), we need to adopt a more comprehensive understanding of what extractivism is and the ways in which it has generated, transformed and materialized new geographies of capitalist urbanization that transcend the boundaries of the city, metropolis, region and nation-state.

To breach the limitations of neo-extractivism, it is useful to turn to Lefebvre’s process-oriented view of urbanization. Recently, an emerging strand of critical urban thought has reconceptualized the Lefebvrian notion of planetary urbanization in order to move beyond the entrenched epistemology of mainstream urban studies in which the urban is thought to be embodied only in cities while urban-peripheries and peri-urban zones are disregarded and presented merely as ‘ghost acreage’ (see Angelo and Wachsmuth 2015; Brenner 2013, 2014; Brenner and Schmid 2014, 2015; Merrifield 2013; Schmid 2014a, 2014b). Ibañez and Katsikis (2014) note that as urbanized regions expand and become denser, they extend their metabolic reach and “become increasingly interdependent with the development of specialized regions of service and supply (agricultural regions, resource extraction zones) ...” (2014:6; see also Brenner 2014; Arboleda, 2016a). Furthermore, they argue that the enactment of “operational landscapes” for resource extraction, agroindustrial production, energy and information circulation, waste management and geopolitical strategies is a corollary of the suspension of the urban/ non-urban divide (Brenner and Katsikis 2014). For that reason, the global urban condition should no longer be understood in terms of urban/non-urban, but in terms of concentrated and extended forms of urbanisation. The former refers to the formation and restructuring of densely concentrated agglomerations (ie cities, city-regions, megalopolises, etc) while the latter refers to the creation and reorganisation of operational landscapes that simultaneously facilitate and result from the dynamics of urban agglomeration (Brenner 2014; Brenner and Katsikis 2014; Brenner and Schmid 2014). As Brenner (2013) notes, “the emergent process of extended urbanization is producing a variegated urban fabric that, rather than being simply concentrated within nodal points or confined within bounded regions, is now woven unevenly and yet ever more densely across vast stretches of the entire world”. The distinction of concentrated and extended forms of urbanization aims to foreground the richly patterned ontological differentiation that results from the growth of the urban system (Arboleda, 2016a), and as the case of Brazil will reveal, it constitutes an important analytic to understand new forms and scales of urban fetishization.



Indeed, operational landscapes in Brazil, which have been completely engineered to serve the ever-increasing demand for meat consumption through the development of agro-extraction, are the geographical imprints of these expanded metabolic exchanges. The spatial transformations arising from these new cartographies of extraction stretch beyond established zones of agglomeration such as Sao Paulo or Rio de Janeiro and sometimes even extend to places as remote as the Amazon. The next section of the article constitutes a descent into the complex world of agro-extraction on the ground, because it is only in conjunction with the local scale that one can visualize the way in which extractives tend to fragment, differentiate and operationalize further territories (*ibid.*).

### **Implosions and Explosions of the Brazilian soybean frontier**

Contemporary Latin America is perhaps one of the regions of the world where the urban fabric has been expanding most intensely as a result of the commodity boom (*ibid.*). Extended urbanization in Latin America has had a severe impact over hundreds of places, communities and ecosystems, resulting in fragmented landscapes of extraction with their rhizomes of highways, railways, pipelines, satellite towns, power lines and heavy machinery (Arboleda, 2016). Brazilian urbanization intensified when industrial capitalism gained traction in the country and dynamized the economy based on the consolidation of large industrial cities, particularly Sao Paulo, the national hub (Monte-Mor, 2014). In the latter half of the twentieth century, Brazil went through an intense process of industrialization and modernization which has resulted in a profound reconfiguration of its built environment through large-scale territorial planning and infrastructure programs, land use and labour transformations, free trade zones, transnational growth triangles and environmental transformations. Thus, this extended landscape of urbanization became a force field of crisscrossing state regulatory strategies designed to territorialize long- term, large- scale investments in the built environment and to channel flows of raw materials, energy, commodities, labor, and capital across transnational space (Brenner, 2013).

After World War II, Brazil was led by a policy of import substitution and industrialization (De Sowa and Busch, 1998) which was driven by IMF's policy on debt expansion for various Latin American countries (Cooney, 2016). As a result, the system of agricultural production became more specialized, more monetarized, more open to the use of scientific and technological



knowledge, more commercialized, and more and more dependent on manufacturing (De Sowa and Busch, 1998). The development of the soybean network in Brazil is strongly related to the industrialization phenomenon because of numerous advantages related to livestock and poultry production. Soybean demand took off in the 1970s when soybeans became a key input for profitable meat production (Turzi, 2017) due to its use as an animal feed and flex crop, and its low cost. Agriculture and more importantly soybean production in Brazil was increasingly influenced by events taking place outside the sector, including trade liberalization, deregulation, credit reforms, and removal of price support policies (Ioris, 2017; Helfand and Rezende 2004). Brazil faced numerous fiscal shocks throughout the 60s, 70s and 80s and the value of the Real fluctuated dramatically, thus, the government deregulated all import and export markets in 1990 to start bringing in foreign capital (the dollar specifically) to stabilize the financial situation of the country. Especially, after the debt crisis of the 1980s, the region underwent agricultural liberalization as part of the stabilization and structural adjustment programs (Turzi, 2017).

During the next decade, previously discarded infrastructure projects for roads, bridges, and ports would be revived and new capital flows would be channeled into the agricultural sector (Turzi, 2017). In parallel with those infrastructure projects, the government gave incentives through various policies to attract immigrants from the southern states of Rio Grande do Sul, Santa Catarina, and Parana towards the midwestern part of Brazil and more specifically the state of Mato Grosso. From that point on, the soybean frontier has been making its way towards the north, and the more protected Amazonian west into southern Piauí, Maranhão, western Bahia and Rondonia to the west (Turzi, 2017). Land use change in those regions has been driven largely both directly and indirectly through the direct conversion of forest or natural land covers to cropland and indirectly through its ability to influence land use change elsewhere (Richards, 2015). Hence, the soybean boom has been driving deforestation of the Amazon not only through direct clearing but also through land-use displacement of small farmers or ranchers odd areas that are converted to large-scale agricultural systems (ibid.). The region was, consequently, opened up to public and private colonization schemes and rent-seeking companies in an intense place-making process boosted by the state through the construction of roads, airfields, storage facilities and the growing expansion of urban settlements (Ioris, 2018). The above were the first steps in a process of extended urbanization where infrastructures and built environments of this sort began to be projected aggressively across the once pastoral geographies of Brazil.



Due to a combination of policy instruments, favorable commodity prices, improved production techniques and expansion to new farming areas, agriculture became one of Brazil's strategic export sectors (Ioris, 2017). Brazil has consolidated its position as a global leader, and even as a 'model' of commercial, integrated crop management (Ioris, 2017; Collier, 2008). According to USDA data, Brazilian soybean seed exports have increased by 1621% from 1985 to 2016 accounting to 40 percent of the global production of the crop while the agribusiness sector, including the revenue generated by inputs, primary, industrial and service segments, accounts for one fifth of the Brazilian economy (Mano, 2017). According to Reuters, in 2017 Brazilian agriculture and agribusiness contributed 23.5 percent to the country's gross domestic product which is the highest in 13 years. These figures start suggesting how the frontiers of soybean agro-extraction are dramatically being projected into brand new geographies, and these operational landscapes are being linked ever more directly via infrastructures and built environments to global circuits of exchange.

Soybean production is an activity that requires large amounts of external outputs such as irrigated water, fertilizers and other chemicals, energy for processing, storage activities, and additional transportation routes for the efficient circulation of the soybean commodity, meaning that alongside agro-extraction, Brazil's infrastructure matrix has also shown a burgeoning growth during the last decades. Subsequently, investment in Brazil's infrastructure matrix has targeted the formation of low-cost transportation routes to major export ports as well as additional investment in storage facilities. As a response to the inefficient barge and railroad transportation systems that have led to a dependence on slower, and more expensive, overland trucking, recent initiatives to deregulate and privatize railways and ports have targeted in improvements in infrastructure (Huerta and Martin, 2002). Thus, in order to attract further agriculture investments, the country has sought to intensify the development of multiple infrastructure projects and supporting programs or agencies. One example, that illustrates this tendency is the creation of the Brazilian Investment Partnership Program (PPI) by the Federal Government in 2016. The PPI was created to strengthen the coordination of investment policies in infrastructure through partnerships with the private sector and the projects will be realized through concessions, PPPs, and privatizations (RENAI, 2018). The sectors with projects under implementation include not only those related to transportation such as railways, highways,

airports, and ports, but also to other extractive sectors such as hydroelectric power plants, electricity and mining (RENAI, 2018).

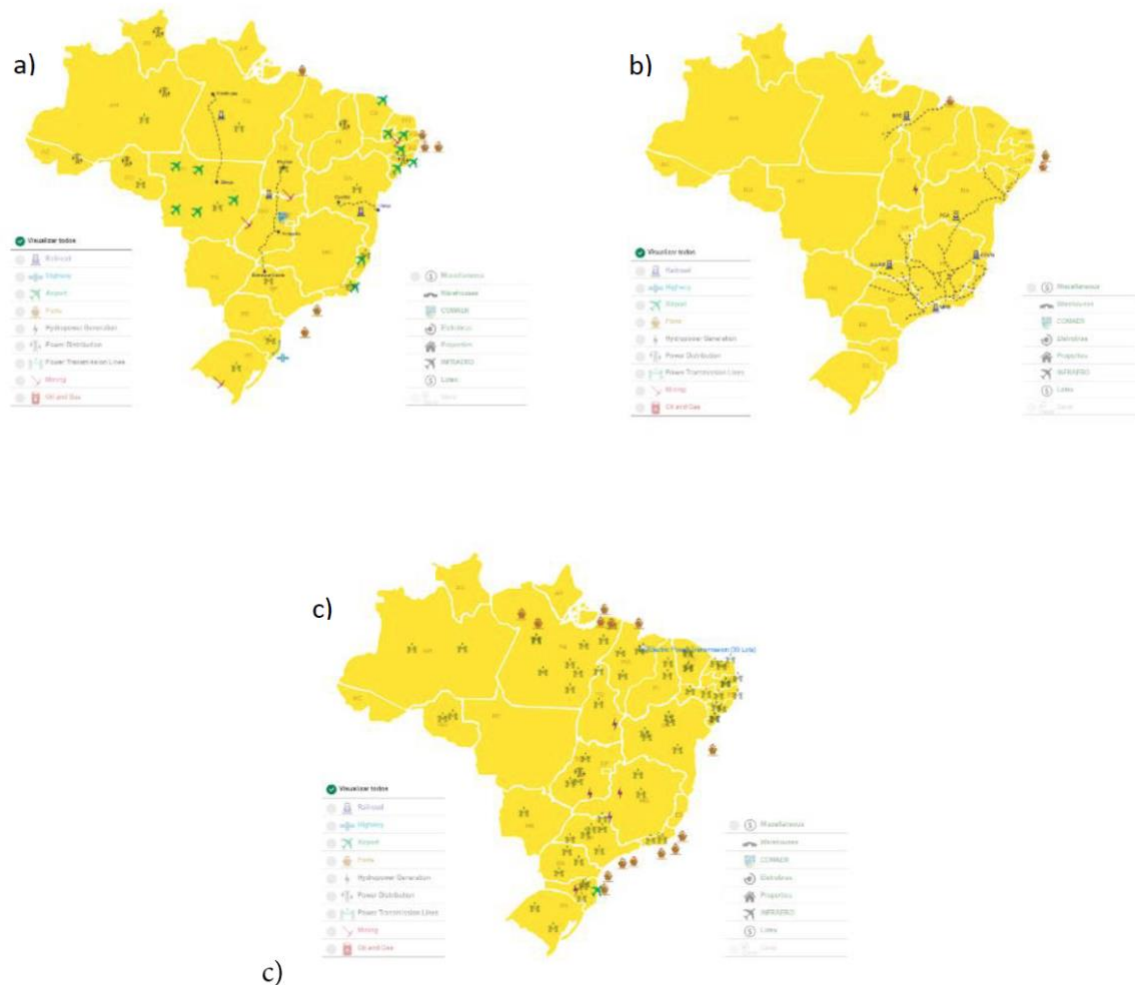


Fig. 2 (a) In Progress, (b) Extension projects, (c) Completed projects  
Source: Programa de Parcerias de Investimentos

In parallel to those projects, the Government has announced investments in infrastructure, as part of the Program of Investment in Logistics (PIL)'s, that will include 15 highway corridors corresponding to 7,000 km of highways and roadways to the private sector with an estimated investment of \$19 billion (33%), \$25 billion for railways (44%), \$11 billion for ports (19%) and \$2 billion for airports (3.5%) (fig.2). A known infrastructure project driven by soybean production is the paving of BR-163 road with a total length of 976km (Cuiaba- Santarem) in which Cargill is the principal actor interested. In order to efficiently transport soybeans from production sites to vessels that will ship the commodity to the EU, the company proceeded to



the infrastructural improvement of the BR-163 highway together with the modernization of the Santarem port (Turzi, 2017). Furthermore, a new strategic route, called Bi-Oceanic Railroad, for transporting Brazilian soybeans among other commodities via the Pacific Ocean, is included in a Memorandum of Understanding that was signed between Brazil, China and Peru (Grey, 2018). The planned 3,000 km route will run from the port of Puerto Santos in Brazil to Puerto de Ilo in Peru, crossing 1,700km of Bolivian territory in between (ibid.). The Brazilian segment connects Campinorte (GO) to the border with Peru, going through Lucas do Rio Verde (MT), Sapezal (MT), Porto Velho (RO) and Rio Branco (AC) (fig.3). Thus, it becomes evident how gradually the soybean sector and the intensification of agri-businesses in Brazil have driven the extension of urbanization beyond the cities and urbanized areas, making its presence felt throughout the national territory, particularly on the Amazon and Central-West frontiers.

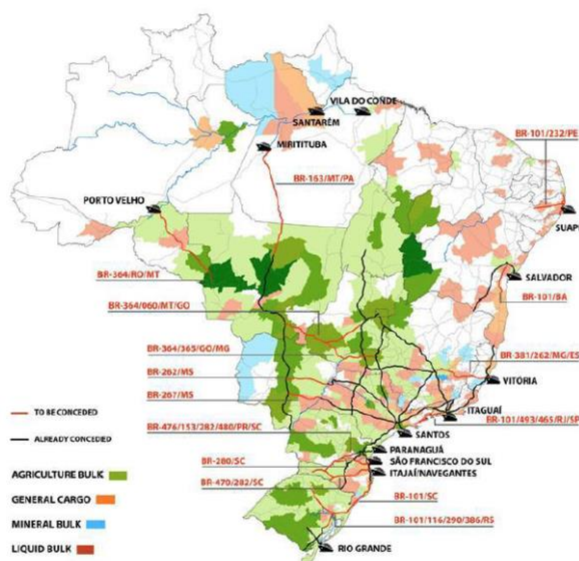


Fig. 3 Highways concessioned in 2016

Source: Brazil's Priority Transportation Projects. A resource guide for U.S. industry

Along with infrastructure projects, labour transformations are taking place due to the proliferation of intensive transnational agri-businesses in the region. Together the so called ABCD group (ADM, Bunge, Cargill, Louis Dreyfus) controls over 70% of the global grain market (Turzi, 2017; Murphy et al., 2012; Clapp, 2015). These companies are both integrated with chemical companies -such as Cargill's accord with Monsanto- and they supply food manufacturers and food service operators. Their presence in South America allows them to balance global presence and thus profit from differences in short-term costs, in labor and environmental standards, tax structures, subsidies, and price (Turzi, 2017). It is important to



note that these companies do not only function as grain buyers but also as retailers and oil and meal processors, establishing a variety of alliances with other actors in the chain. The companies finance 60% of the Brazilian soybean producers, although for the state of Mato Grosso that figure climbs to 85% and additionally, provide farmers with seeds, fertilizers, and chemicals in return for harvested soybeans (*ibid.*). Through this process, transnational agribusinesses provide the necessary funds for the farmer to adopt the soybean “technological package” and become an agent in the new agricultural economy. This technological package has had an enormous impact on labour relations, since large-scale monoculture is perpetuating a rural exodus. In essence, the larger the area cultivated, the less labor per hectare is needed (Soendergaard, 2018) and so with the proliferation of large-scale agro-industrial farms, in particular in the Center-West region, labour conditions have been altered dramatically. According to Turzi (2017), “the innovation contained in the package has become a technical and microeconomic tool through which chemical/ seeding companies and traders/ processors are increasingly controlling the conditions for production and are thus reorganizing the Southern Cone territory”.

These spatial and social reconfigurations in the Southern Cone need to be situated within the transnational arena of actors involved. Recent trends indicate that the ABCD dominance is weakening, losing their century-old dominance of the Southern Cone’s grains export market to their Asian rivals. Reports show that in 2015 Chinese trade houses, including state-owned COFCO, bought 45% of Brazil’s soybean, corn and soybean meal exports while by comparison the share purchased by ABCD corresponds to 37%. Major mergers and acquisitions of transnational Chinese seed companies (COFCO, Syngenta) with European ones that operate in Brazil point further to China’s increasing influence.

About 48 percent of all Brazilian exports to China are constituted of soybeans and soy oil, and Brazil supplies half of all Chinese soybean imports (Oliveira, 2016; UN–Comtrade 2014). The Brazilian and Chinese central governments have been holding increasingly more frequent government talks at all levels, including yearly presidential BRICS10 summits since 2009, and establishing multiple bilateral agreements under the umbrella of a Joint Action Plan to coordinate economic, cultural and political exchange in the future decade (Oliveira, 2016). More specifically, China is pursuing two strategies to strengthen its position within the largely



globalizing agri-food regime: first, to channel industrial exports to the markets of economies with greater potential for expanding consumption; and second, to redirect its flow of trade and investments to provide sources of supply for the strategic natural resources, raw materials, and foodstuffs it needs (Escher et al, 2018). With regards to the first strategy, China has increasingly been supplying Brazil with various commodities and services related to soybean production. As a producer of agro-chemicals, seeds and machinery and as a facilitator of storage and processing, China plays a significant role in the industrial value-chain agriculture for soybean production (ibid.). Referring to the second key strategy, Chinese companies increasingly purchase vast rural tracts of land resulting in concerns around concentration and ‘foreignization’ of land ownership in a context of ‘global land-grabbing’ (Oliveira, 2018).

In sum, the section presented above has focused on the operational landscapes of extended urbanization that ceaselessly proliferate throughout the region on the national and international scales, in conjunction with the local scale. Through an exploration of the spatio-temporal materialization of the processes of production and reproduction resulting from the confrontation between the industrial and the urban, I have sought to argue about the urban, or contemporary urban-industrial space that extends virtually throughout the territory via the urban fabric. In Lefebvre’s words:

*“The urban fabric proliferates, spreads, and corrodes the remains of agrarian life. These words, “the urban fabric”, do not strictly designate the built-up domain of cities, but the set of manifestations of the city’s predominance over the countryside. From this view, a second home, a highway, a supermarket in the middle of the countryside, are all part of the urban fabric” (Lefebvre, 2003: 17).*

## Conclusions

One can speak of a Brazilian landscape that encompasses all the tensions and contradictions that underlie the relentless extension of urbanization which imposes itself far beyond the cities, integrating rural and regional spaces with urban-industrial space. The relentless explosion of spaces is perceived in this paper as the morphological expression of market-driven processes of urbanization and a concomitant to the commodity boom. Based on this, the case study of soybean production and circulation in Brazil has aimed to show how extended urbanization has moved along various transportation corridors and services networks in “new” regions like the

Amazon and the Central-West, but also in “old” regions like the Northeast. Within this context, the paper has revisited Henri Lefebvre’s notion of planetary urbanization as well as some of its recent appropriations by critical urban theorists in order to make sense of the exploding urban morphologies that are rapidly changing the face of Latin America and in particular Brazil as a result of a voracious international demand for raw materials. Using this framework as a starting point, I have sought to respond to debates on the appropriation of the term of “neo-extractivism” that has been used to describe current extractive tendencies in the context of a Latin-American “post-neoliberalism” and foreground variegated geographies of neoliberalism in conjunction with the analytical distinction between extended and concentrated forms of urbanization.

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## Towards a Phenomenology of Public Space in Contemporary Mexico

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### Abstract

The arrival of European colonizers to Iberian America in the sixteenth century inaugurated an era in which notions of the built environment became hybridized. The urban and architectural ideals of the Renaissance became intertwined with pre-Hispanic understandings of space, territoriality, and the 'reading' of the natural and built environment through symbolic-mythical signs. Fast-forward to the twenty-first century, and Mexico, like other Latin American nations, is suffering the implacable shock of neoliberal economics, resulting in the privatization and factual disappearance of public space and the universalization of architectural identities, which hinder the possibilities of creating regional urban environments that could enrich human existence in the city.

Just as in other nations of the global south, Mexico's rich historical-cultural traditions of building and inhabiting have been effectively neglected in favor of adopting Westernized and universalizing building technologies, which are usually accompanied by Western-influenced ways of being-in-the-city. This paper will argue how postcolonial discourses have the potential of becoming an epistemological source that can be employed to shape and create public spaces in Mexican cities.

The essay starts by discussing how the colonial urban paradigm that Mexico inherited promoted segregation of differing social groups based on social and economic standing, as well as ethnic and racial differences. It continues by denouncing how neoliberal policies have aided in deepening some of the most negative aspects inherited from colonial urban practices, such as the pronounced social and cultural segregation. It moves on to unpack a series of phenomenological-postcolonial analyses carried out by philosophers that were part of the Mexican philosophical movement known as the Hiperión Group from the mid-twentieth century, which, I will argue, could act as epistemological sources that could inform the physical shaping of public spaces in Mexico, as a way to overcome its pervasive colonial state.

The final part of the essay discusses general ways that strategies based on the notions of *being-for-generosity* and the *suspension of seriousness* could be employed in shaping public spaces in Mexican cities, providing some case studies for reference.

**Keywords:** Urbanism, Mexico, postcoloniality, decoloniality, public space, Latin America, phenomenology.

### ***Introduction***

The arrival of the Spanish colonizers to the Americas marked the creation and re-configuration of hundreds of urban settlements during the three centuries of colonial rule. The principal urban centers across Latin America, founded during this period, continue to reproduce many traits of their colonial past, such as rigid hierarchical social and ethnic structures that resonated in their physical urban structures, designed to emphasize segregation and inequality. Fast forward to the early twenty-first century, where the principal urban centers in Mexico and Latin America have been shaped by neoliberal policies, which have tended to favor an unbridled form of market speculation with a tendency to the privatization and smothering of public spaces. Ultimately, some of those unfavorable aspects of centuries-old colonial urban models have been reproduced, replicating similar mechanisms of segregation and inequality and in many aspects, even deepening them.

This essay will suggest how a decolonized theory of urban space could be articulated, utilizing phenomenological studies on Mexicanness, in order to open avenues of effective actions for urban interventions in Mexican cities. The essay will commence by discussing the Mexican neoliberal city. Then, the discussion will shift in order to suggest a theoretical framework that supports a decolonizing model of appropriation of urban space, employing the writings of the Mexican philosophical group Hiperión, from the mid-twentieth century. The essay will then conclude by presenting some case studies of urban resistance to the neoliberal city that align with the ideas presented here, with the objective of trying to inform possible forms of future action.

### ***The Neoliberal Mexican City***

A primary notion to take into consideration regarding the colonial Mexican city is their rigidly stratified urban environments, which dictated how ethnic, social, and economic factors played central roles in determining where and how an individual and its community—whether indigenous, African, Spanish, *criollo*, or other—lived, roamed, interacted, and/or negotiated with other individuals and groups. Mexican cities continue to display some of the negative aspects of that urban paradigm, proving how pervasive the viceregal or colonial model has been (Hardoy 1978:110–111). The exponential growth that Mexican cities experienced in the twentieth century, following a century of tumultuous and adverse political, demographic, and



social upheavals caused by the Independence War, the French and American Intervention Wars, and the Mexican Civil or Revolutionary War, revealed that the hierarchical structures and segregated model inherited from the viceregal period—modified and under different guises—has not been eradicated, nor significantly reversed.

The crisis of the industrial and post-industrial city, as Angela Giglia has affirmed regarding Mexico City (which is the model for all major metropolitan areas in the country), is due to two main issues: increasing social inequality and the growth of the city to the extent of having the “impossibility of managing the entire city and relating to it as a whole”, thus having to “sever it into pieces inside of which the bonds of belonging are reconstructed and the urban experience is created” (Giglia 2008:66). This notion becomes evident in the way contemporary Mexico City’s viceregal central core, the *Centro Histórico*, where the ruling class operated and inhabited up to the early twentieth century, has now been replaced by an undefined center, or rather by various centers of wealth, what Tom Angotti calls “enclave urbanism” (Angotti 2013:6). These pockets of wealth are recognized by opulent development in the forms of retail, office, and vertical residential projects financed by private investment companies. In Mexico City, the case of the Polanco residential and retail district serves as a perfect example of this paradigm. The other prevalent model of self-segregation and inequality, which merely confirms and deepens the inequality and fragmentation of the city, are the isolated residential and commercial strongholds in the form of gated communities (Giglia 2008).

The overwhelming majority of the population, meanwhile, inhabits swaths of *vivienda de interés social* developments, which are low-cost, sometimes state-financed, minimal housing neighborhoods for the middle class. The even less-fortunate, on the other hand, inhabit self-constructed *barriadas* or shantytowns termed “*asentamientos informales*” in technocratic jargon. These are spawned by a process that commences with the ‘illegal’ occupation of rural lands and ends by having those same settlements eventually ‘legitimized’ by the State. The legitimization process, it should be noted, usually occurs through the intervention of populist politicians and organizations looking for political gains and leverage among the benefited populations. The cases of Ciudad Nezahualcóyotl and Chalco in Mexico City’s metropolitan area (and veritable cities in themselves), come to mind (Quiroz Rothe and Alcántar García 2017; Montehano Castillo 2017). These descriptions hold, incidentally, also true for all other



major metropolitan centers in Mexico today, none of them swaying in a significantly different direction.

In Mexico City, some of the most dramatic effects of neoliberal policies are today self-evident. The city, as Patricia Olivera affirms, shifted from being an industrial center in the first half of the twentieth century, to what she terms a “polarized city of services” (Olivera 2014:152). What Olivera refers to is that, starting in the late 1970s, the neoliberal strategies backed by the government authorities, promoted the financialization of big domestic and foreign capital, some of which poured into the real estate development market, producing residential and retail development mega-projects aimed at the middle and upper classes, which were accompanied by the effect of continual and increased segregation of the least fortunate into the metropolitan area’s periphery.

In this scenario, Mexico City, as well as other Mexican and Latin American cities, continue to suffer its most pervasive social ills: violence, environmental degradation, gender violence, and dramatic social inequality based on class and ethnic origin. While the built urban environment is not to blame solely for these ills, as Angotti has rightly pointed out in what he deems the “urban fallacy” (Angotti 2013:6–8), it is also undeniable that the vision of land as commodity, the capitalization of urban space, and the strangle on public spaces will never contribute to solving or even begin to promote or propose any alternative routes to ease the alarming levels of violence, segregation and poverty that accompany this urban paradigm. Quite the opposite, as Angotti claims, the annihilation of public space is ultimately a part of the elite’s shielding from the dispossessed: as long as people lack spaces for public manifestation, or alternative ways to appropriate space other than as privatized commodity, the present scheme will just continue to benefit a small elite and punish the majority of the populace (Angotti 2013:8–18).

### *Decolonizing Theory in Mexico and the Phenomenology of Mexicanness*

As noted before, segregation and inequality are inherent aspects of the viceregal urban paradigm in Mexico. The notion of the city brought by the Spanish to Mexico was that of implementing a ‘civilizing’ artifact that is closely related to Renaissance and Enlightenment aspirations of controlling and ordering the natural and built environments. These concepts have informed the development of Western urbanism since the early modern period and up to today. These



Western-centric models have tended to view all unplanned or unofficial space appropriations as uncivilized and disorderly, with the added tendency of criminalizing poverty and fearing the “other” (Angotti 2013; Bayón and Saraví 2013). Furthermore, the neoliberal policies that have perpetuated and exacerbated the diminution and privatization of public spaces in Latin American cities, have been enacted in Mexico out of a globalizing tendency in which ‘advanced’ capitalist countries exert economic (and cultural) control over ‘developing’ nations (Harvey 2005:55). It follows, therefore, that a genuine possibility of countering these tendencies would have to arise from regional, decolonizing theories.

A central tenet in decolonizing theory is that the creation of moral or ethical frames of action that can counter the colonization processes can hardly come from Eurocentric sources, given the difficulties in reconciling the self-expressed superior and civilizing nature of Western models in the face of the ‘inferiority’ of the Latin American cultures, which Europeans placed forward in the process of colonization (Quijano 2008:184–201). In other words, the tendency of colonial nations to establish a center of power from whence the governing historical narratives emanate, also tends to declare as irrelevant, or in best-case scenarios as derivative or subservient, the knowledge produced in the peripheral, colonized territories (Castro-Gómez 2008:279). As Walter D. Mignolo points out, “the limit of Western philosophy is the border where the colonial difference emerges, making visible the variety of local histories that Western thought, from the Right and the Left, hid and suppressed” (Mignolo 2008:234). Mignolo has put forward the premise of ‘geopolitics of knowledge’, that is, the dismantling of the space-time frame that has incorporated all Western understandings of the world, such as Greek philosophy, Christianity, the Renaissance, etc., in favor of regional, autochthonous interpretations of time, space, and the world (Mignolo 2008:235–237).

In a more reconciling tone, philosopher Enrique Dussel has argued for the Philosophy of Liberation project that he champions, which has at its core the questioning of the colonial being, in other words, the ontology of the colonized, without necessarily denying categories defined by Western thought, but rather, adopting and creating local philosophical discourses that can be meaningful to colonized nations. As Dussel explains, “localizing” the Philosophy of Liberation’s discourse has always been its principal intent, which reveals ontology as one of its root concerns (Dussel 2008:342).



Despite the recent attention that decolonizing theory has received by the likes of thinkers such as Enrique Dussel, in Mexico, the period following the Revolutionary War (1910-1920) was accompanied by a fervent search for a national identity that could bring an otherwise extremely diverse nation together under a coherent national discourse. In the mid-twentieth century, following the lead of thinkers such as Alfonso Caso, Samuel Ramos, and José Revueltas, the efforts to create a postcolonial philosophical discourse of what it meant to be Mexican, originating from within Mexico, and produced by Mexican thinkers, constituted the start of a modern search for a decolonizing theory in this country, which paved the way for discourses such as the Philosophy of Liberation to follow later. It is in this context that the members of the Group Hiperión, such as Emilio Uranga, Leopoldo Zea, Jorge Portilla, and Luis Villoro, among others, sought to edify a philosophical inquiry of what constituted the Mexican ethos, or rather, the ontology of Mexicanness, utilizing phenomenological and existentialist insights (Sánchez 2008:441–444). In fact, the Hiperión group's members were quite influenced by Heideggerian and Husserlian phenomenology, as their mentor, José Gaos, was a disciple of José Ortega y Gasset, and author of the first translation into Spanish of Heidegger's *Sein und Zeit* (Sánchez 2008:442; Sánchez 2012:9–10; Ziri6n Quijano and Bravo Gonz6lez 2018).

It would be impossible for the scope of this paper to undertake an analysis of the Grupo Hiperi6n's philosophical project, so I will briefly revise the work of two members of the group, Emilio Uranga and Jorge Portilla, in order to distill some elements or categories that can be employed to sketch out a phenomenology of urban space based on the analyses of Mexicanness that both philosophers carried out. In 1949, Emilio Uranga publishes what will be his most famous philosophical work, an essay titled *An6lisis del ser del mexicano*. In this essay, Uranga starts his argument by declaring that “the issue of Mexicanness (*lo mexicano*), cannot be said to be *close* to our preoccupations, but rather, to be fair, it can be said to be *constitutive* of us” (Uranga 1952:10). For this Mexican philosopher, an ontological reading of Mexicanness was not only an academic, self-reflective activity, in fact, the result of this analysis, Uranga thought, would have to be employed and deployed to produce real and palpable social changes. In his words: “More than a clean rigorous meditation on the Mexican being, what leads us into these types of studies is the project of operating moral, social and religious transformations with that being” (Uranga 1952:10). This is a central issue regarding Uranga's writing, that his



employment of Heideggerian philosophy has been critiqued for utilizing Heidegger's ontological structures of *Dasein* and transforming them into an ad hoc method for action in the world (Sánchez 2008:442; Ziri6n Quijano and Bravo Gonz6lez 2018).

However, this 'misappropriation' of Heideggerian ontology could also be where Uranga's originality lies, as Carlos Alberto S6nchez has argued (S6nchez 2008:444). In any case, Uranga's analysis of Mexicanness is valuable for various reasons, not least for establishing a decolonizing argument in the face of Western philosophy's claims for universality, or for its pretension to change Mexico's social reality, as opposed to remaining merely a philosophical discourse. Uranga's first confrontation with Mexicanness is to face the widely accepted premise of the alleged feeling of 'inferiority' of Mexicans, which Uranga transforms into an ontological category of 'insufficiency'. The colonized being will have a predisposition to feel a fundamental inability to look, act, or think like the colonial master, but to define this condition as a sense of inferiority would manifest the idea that there are inferior and superior societies. The idea of insufficiency, on the other hand, would allow for the possibility of attaining sufficiency, i.e., the satisfaction of a certain set of categories (Uranga 1952:52–55).

In his essay, Uranga employs other means of analysis, for instance, his phenomenological analysis of Mexicanness is complemented by carrying out hermeneutical readings of poetry, arriving thus at the conclusion that Mexicanness can be defined by a certain set of 'accidents' (understood here as *philosophical* accidents), such as emotivity, melancholy or anxiety (*zozobra*), a sense of insufficiency, and a lack of will to transform her world (*desgano*). He also claims that the self-realization of these characteristics or traits that constitute Mexicanness should be confronted and overcome if Mexicans desire to fulfill their ontology, given that those accidents would allow Mexicanness to 'open up' (*abrirse*) to core aspects of positive human facets: generosity, sympathy, and compassion, given that the Mexican "understands the human otherness (*ajeno*) by a transposition of her own life's sense" (Uranga 1952:41). Uranga's ultimate objective in his phenomenology of Mexicanness was to highlight and thus overcome the Mexican's state of indifference in order to allow for the possibility of bringing on change through generosity and through commitment to the Other, what Carlos S6nchez, in his study of Uranga's work has termed "*being-for-generosity*" (S6nchez 2008:447).



The other author, member of the Hiperión Group that I would like to briefly discuss is Jorge Portilla. His work, which has been largely neglected, is centered on his landmark work *La fenomenología del relajo*, printed posthumously in 1966. The term *relajo* is quite difficult to translate literally into English, as it entails both a verb and a noun describing what could perhaps be better deemed as an attitude. According to the RAE Dictionary, the term, a derivative of the verb *relajar*, comes from the Latin *relaxare*, to relax or loosen, and in Mexican Spanish, *relajo* refers to a pervasive attitude of dissipation, particularly in the face of a serious situation. Portilla defined it in these terms: “More than a noun, one can say it is a verb, since the expression denotes the unitary sense of a complex behavior, of an act or a set of acts performed by a subject, to which the subject itself grants a nonexplicit yet precise meaning” (Portilla 2012:128). But for Portilla, *relajo* is only a symptom of a much larger condition characteristic of Mexicanness, which, for him, referred to the Mexicans’ alleged lack of solidarity and responsibility that are distinctive of modern Mexico. For Portilla, *relajo* would inevitably hinder the fulfillment of values (“guides for self-constitution”), and instead promote nihilism (Portilla 2012:128–158). To put it succinctly, Portilla defined *relajo* as the “suspension of seriousness”, which was to say that systematically, *relajo* would always make it difficult for a subject to commit to the realization of a duty or commitment (Portilla 2012:130).

For Portilla, the Mexican’s inability to fulfill those values or duties would place them in what Sánchez calls “negated subjectivity”, characterized by marginality and powerlessness (Sánchez 2012:113). But furthermore, in Sánchez’s interpretation of Portilla’s phenomenology of *relajo*, Portilla was in effect denying Mexicanness the ability to ever become modern, something that, in Portilla’s eyes, was probably undesirable given that his teleological understanding of modernity was informed by “the promise of a progressive liberal philosophy” (Sánchez 2012:109–110), which by definition failed to recognize the colonial nature of such rationale. It is a case, according to Sánchez, of what Aníbal Quijano termed “the colonization of the imagination of the dominated” (Quijano 2007:169). However, sixty years after it was written, Portilla’s most valuable achievement could very well be his phenomenological reductive analysis of Mexicanness, which he carried out by identifying *relajo* as a central element of the Mexican being by reducing the concept of *relajo* to the “suspension of seriousness” (Portilla 2012:11–12). In effect, the value of this identification could reside in the idea of interpreting *relajo* as a strategy of resistance in the face of Western-centrism. Before exploring this premise,



we ought to identify the potential of *relajo* as the suspension of a commitment to the responsibilities to which the modern subject is forced into, such as productivity, efficiency, timeliness and individualization, in the context of our market-driven, industrialized societies. Whenever Mexicans are engaging in *relajo*, what they are doing is effectively dismissing, postponing, and/or suspending its efforts to fulfill those commitments. As Sánchez points out, the *relajiento*, the subject that engages in *relajo*, is certainly not a better suited individual to overcome our present world, as we need to engage in commitments that will drive our world-making, however, *relajo* does allow the subject to suspend her commitments and dwell, momentarily, in the spontaneity of the moment and access the possibility of making other commitments, be they social, familial, of individual reflection and/or contemplation, in other words, of invoking tranquility, as Sánchez affirms (Portilla 2012:117–118). Ultimately, *relajo* can thus be observed as a form of resistance to the ‘modern condition’ and therefore, as a mechanism for coping with the exigencies of our contemporary world. But furthermore, another dimension of *relajo* could be, as Sánchez suggests, that *relajo* could be “a particularly anti-Western form of liberation, a *reaction* to colonial seriousness” (Portilla 2012:121), and therefore could define a postcolonial attitude to the contemporary Mexican reality, dominated as it is by modern and post-modern attitudes that have all but brought fulfillment of any kind.

### *Towards a Phenomenology of Public Space in Mexico*

From Uranga’s and Portilla’s work I wish to recover the notions of *being-for-generosity* (to borrow Sánchez’s term), and *relajo*, understood here as the *suspension of seriousness*, in order to propose a series of general strategies for intervening public space in Mexico. I propose that both of these notions can be conceived as strategies in themselves to operate changes that could positively impact the quality of public space in Mexican cities. Given the declining number of public spaces due to neoliberal policies, where the effect is the commodification and privatization of public spaces, the concept of being-for-generosity should be interpreted as the desire to promote and demand a comprehensive, democratic right to the city. I propose that being-for-generosity should be understood as a broad category that encompasses three concepts that can inform the design of urban spaces: spaces for mobility, spaces for political action, and spaces for recognition. The objective would be that these concepts, applied in a practical manner in urban spaces, would in turn promote the categories of empathy, awareness, generosity and civility, in order to counter Uranga’s accidents, as conceived in his “Análisis del ser del



Mexicano”, which, as he argued, formed the basis for the disenfranchisement of the dispossessed Mexican, the notion of *desgana* (lack of will), *zozobra* (angst), indifference, melancholy and insufficiency, which together constituted the Mexican’s colonial being.

Spaces for mobility is the notion that promotes alternative ways of mobilization through the city other than private cars, principally pedestrian and cycling spaces, as a means to counter the colonial paradigm of segregation and inequality in the Mexican city; i.e., a “city generous”, where people can navigate the city where cars have taken over public spaces. Spaces for political action refers to public spaces that are conducive for the political life of a community; i.e., the generosity of providing spaces for the possibility of social change to counter *desgana* or indifference and insufficiency, masqueraded as political disenfranchisement. And spaces of recognition, which refers to a series of considerations that should go into the design of public spaces that would highlight characteristics often overlooked and/or neglected in the late capitalist city: the employment of materials that are texturally rich, warm colors, to human scale and rich in vegetation, strategies that run counter to the scenographic neoliberal city. In conceiving spaces for mobility, political action and encounters, the guiding design principal should be the ‘suspension of seriousness’, in other words, the capacity of those spaces to become spaces for resistance of the modern/postmodern condition.

A good example of how the notion of the suspension of seriousness can be a successful public space strategy is demonstrated in initiatives such as “Ándale”, a pedestrianization program carried out in the city of Puebla, Mexico, from August to September 2018 (Ayuntamiento de Puebla 2018). The city authorities aimed at barring vehicular traffic to the downtown’s main arteries in favor of pedestrian and bicycle traffic. The result was the overwhelming appropriation of space by people of all ages, where, spontaneously, they began occupying the streets to chat, perform music, chalk-paint the streets, and generally to suspend the seriousness of their daily lives. In Santiago, Chile, the Paseo Bandera project took a busy downtown street and transformed it into a pedestrian, colorful and playful environment endowed with benches, artistic installations as well as vegetation, which together provided Santiagonites with a respite from their daily routines (Taggart 2018). For all of their virtues, projects such as Paseo Bandera and Ándale’s successes stem from the ideas of democratizing urban spaces, although as with



other “tactical” urbanism projects, both of these initiatives are localized in urban spaces that are not under-privileged nor do they necessarily serve the people that need public spaces the most.

While many projects labeled as ‘tactical’ urbanism can have immediate results, in reality their spontaneous, low-budget and ephemeral nature end up preventing them from becoming actions that have long-lasting consequences. A good case study of how medium or long-planned projects with substantial financial investment can make a deeper social difference is Comuna 13, the famed project that provided a marginal barrio in Medellín, Colombia, of a set of electric stairs to counter the isolation produced by a steep climb the inhabitants had to endure to travel to and from the city center. Other actions in Medellín, such as the creation of public parks in particularly problematic urban areas has been termed as ‘urban acupuncture’ by one of its ideologues, Jaime Lerner (Ramírez and Kapstein 2016). The success of these and other types of urban transformation initiatives are apparently localized in their efforts to reduce social inequity, promote social action and communal solidarity, and in general, to improve the citizens’ experience of the city, creating affects and links to their built environment. However, for all of these urban strategies’ successes, they all lack a theoretical framework that addresses the particular shortcomings associated to the postcolonial Latin American being.

The virtues of articulating theories such as *being-for-generosity* and the *suspension of seriousness*, are that they originate out of postcolonial philosophical discourses that take into consideration the ontology of Mexicanness thereby responding and trying to reconcile the insufficiencies exposed by postcolonial philosophers such as Portilla and Uranga, such as lack of will to transform the world, indifference, melancholy and insufficiency. Further, their success would also depend on more ambitious and programmed scales, to be deployed in socially and economically challenged communities, and with medium and long-term planning phases. Public spaces that responded to the notions of being-for-generosity would be generous with the human scale, generous in providing possibilities of mobility, generous with vegetation, generous in materiality rich with tactility, colorful, with iconography and symbols that would obey a community’s history or sense of place, in order to promote the rootedness to a community. In essence, public spaces informed by these Mexican postcolonial discourses could be in turn encapsulated in the notion of the suspension of seriousness, where ludic, social spaces would allow people to indulge in and promote their resistance to the negative conditions



and demands exerted by modern postcolonial societies, namely, increasing individualism, loneliness, continuous attachment and dependency on technological connectivity, increasing consumerism demands, among others.

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## The National Coach Museum and the question of *the other*

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### Abstract

Brazilian architect Paulo Mendes da Rocha recurrently refers to the need of a critical reappraisal with respect to colonialism policies, particularly from the architecture and urbanism point of view. The discovery of America was one of the events that most influenced the character of the modern era. According to Mendes da Rocha, it was the moment to stand for a shifting point in the history of humanity. For architecture, it was the moment to reinvent. The rise of modern man should have corresponded to a new architecture: modern, settled on human needs. Instead, colonialism insisted on repeating the same old models, imposing its cultural ideas and credos in the new discovered land. Mendes da Rocha is conscious of this particular moment of history and sums it up in the body of knowledge that he uses in his work.

Mendes da Rocha is the heir of the Brazilian modernist heroic generation. In this emblematic period, Brazilian architecture raised upon the urgency and opportunity of constructing a new way of living, settled on local inherent characteristics. “*Climate, habits and sensibility*” in Oscar Niemeyer words; but also, with a social concern like in Artigas proposition. The confrontation Architecture-Nature and Architecture-Society is strongly rooted in Mendes da Rocha work.

His project for the Coach Museum in Lisbon is not an exception. The fact that it is one of his rare works outside Brazil gives it a different meaning: a strange proposal in the context of the old continent, where, traditionally, repetition remained. The museum appears as a *stranger* in the monumental site of Belém, a symbolic place in the country's history, from where the Portuguese ships departed to expand their influence all over the world. It was here that in 1940 the dictatorship organized the Portuguese World Exhibition, in many aspects a celebration of the colonization process. It is also interesting to note that the only country that was represented there (instead of what was initially intended) was Brazil. The Brazilian pavilion displayed a canvas from the painter Candido Portinari – “*Café*” (1935) – showing the hard work and misery of the coffee pickers. José Augusto França referred to this work as a “*Trojan Horse*” in the context of the Portuguese exhibition. Can one look at Mendes da Rocha museum in the same way? Perhaps it appears as an opportunity to return to the America's modern experience, an alternative that still resists.

**Keywords:** America; National Coach Museum; Otherness; Paulo Mendes da Rocha;



# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

The National Coach Museum  
and the question of *the other*  
Nuno Tavares da Costa

In 1990, in a testimony to the first issue of the journal *Caramelo*<sup>1</sup>, Paulo Mendes da Rocha noted that the peculiarity of modern Brazilian architecture is largely due to the country's colonial past. Mendes da Rocha (1990: 34) adds, "*the whole issue of Brazilian culture goes around this false dilemma, which is not to be or not to be, but to have or not consciousness of the absurd that was the colonialist adventure.*"<sup>2</sup> The question of consciousness always underlies Mendes da Rocha discourse. It constitutes an intrinsic motivation to the architect's logic. The exercise of this consciousness, which we can characterize as ideological, as founded on strong convictions, ideas and principles (philosophical, social and political), is made through discourse and drawing. This critical way of being remained firm since early years and is emphasized when the discourse is aimed to the youngest, students. He is aware that the hope of transformation for a better and desired world relies on the education of future generations, hence the dimension of his commitment to this task. The task that Mendes da Rocha chose for himself: to warn the other. Warn about what?

From the position of someone who is dedicated to the study (theoretical or practical) of architecture, it is necessary to understand what the individual has to say, and what is really said. Or even if he has anything to say at all, because that may not be the case; "*it would be better*

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<sup>1</sup> *Caramelo* is an academic journal that emerges in the 90's by the initiative of a group of students from Faculdade de Arquitetura e Urbanismo da Universidade de São Paulo. The name is allusive to *Salão Caramelo*, a symbolic and representative space of the building designed by Vilanova Artigas and Carlos Cascaldi, in 1961, where the light entering through the skylights had this caramel tone.

<sup>2</sup> Translated by the author: "*toda a questão da cultura brasileira gira em torno desse falso dilema, que não é ser ou não ser, mas ter ou não consciência desse absurdo que foi a aventura colonialista.*"



# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

The National Coach Museum  
and the question of *the other*  
Nuno Tavares da Costa

to have,"<sup>3</sup> warns, however, Mendes da Rocha, namely about what was the colonial policy in his country, as it is in that sense that one can understand the peculiarity of a Brazilian architecture.

After the testimony to *Caramelo*, in the second moment where the world recognized Paulo Mendes da Rocha as a unique figure of architecture<sup>4</sup>, the theme of colonialism is by him elected to manifesto purpose. In the conference of the RIBA Royal Gold Medal (London, 2017a), Mendes da Rocha revisits the theme to talk about architecture. This time he warns about the need of everyone, "*especially the colonizer countries*"<sup>5</sup>, addressing what he calls a "*critical revision of colonial policy*"<sup>6</sup>, an issue that he considers obvious in the descendants of colonized people.

The history of colonial cities in America shows us, through exploitation and usurpation, the conquerors intentions; followed by the defence of those possessions, of the territory and of their people. In some cases, history can be deduced from the toponymy of the villages and cities. These cities reflect the result of a colonial policy, facing the desire of dominating the other, dominating what was different. Dominating what is different - otherness - has always been the hidden ambition of colonialism: the overlap of a civilization over other civilizations, a manifestation of moral superiority that has not disappeared yet, assuming today paternalistic tones. While exploitation of the other and of what is of the other goes on, we condescend to help the poor to develop. What we take with one hand, we give with the other. The question of the other, which Tzvetan Todorov (1982) speculates in his book "*The Conquest of America*", remains, therefore, in contemporaneity. The misconception that indigenous people would not be able to develop without the help of the first world, is a misunderstanding that persists in the so-called developed societies.

For Todorov (cf. 1982: 34), Europeans departed for discovery with a pre-conceived idea of what they would find (which is different from what they actually found). The Indians that Christopher Columbus (1451-1506) finds upon disembark are, for him, an integral part of the tropical landscape: an object, a thing. For the Indians, on the other hand, contact with the *foreign* can be understood from a symbolic point of view. The *foreign* would be, on that case, something

<sup>3</sup> Translated by the author: "*seria melhor que tivesse*"

<sup>4</sup> Between 2016-17 Paulo Mendes da Rocha was awarded the *Royal Gold Medal* by the *Royal Institute of British Architecture*, with the *Golden Lion of Lifetime Achievement* at *La Biennale di Venezia*, and with the *Praemium Imperiale* of Japan in the architecture category. This is not surely strange to the fact that new National Coach Museum in Lisbon, was opened to public a year earlier.

<sup>5</sup> Translated by the author: "*principalmente para os países colonizadores*"

<sup>6</sup> Translated by the author: "*revisão crítica da política colonial*"

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

The National Coach Museum  
and the question of *the other*  
Nuno Tavares da Costa

incomprehensible, close to a demigod figure. According to Todorov, the initial fear felt by the Indians when they contacted the Spaniards can reside here, as well as explain their defeat in battle, even if they outnumbered the Spaniards who were also unaware of the territory. The Indians did not understand white people, their costumes, their customs or their manners. They also did not understand what they came for and the value they attributed to things that, for them, had different value. An example of this idea can be portrayed by the meeting of Hernán Cortés (1485-1547), the Spanish conqueror, with Montezuma (1466-1520), the last Aztec emperor, a meeting that ended with the total subjugation of the latter to Cortés. However, Todorov explains that Cortés and the Spaniards had great admiration for the pre-Columbian civilizations, particularly for the Aztecs, an admiration described in personal testimonies. This admiration, however, remained the perspective of a foreigner, as it resulted in nothing more than destruction. For Todorov, this situation is comparable "*to today's tourist who admires the quality of Asian or African craftsmanship though he is untouched by the notion of sharing the life of the craftsmen who produce such objects.*" (1982: 129). Thus, if there was recognition of the things founded in America, there was no interest in those who produced them, showing that the encounter with the other is dominated by the desire for conquest.

Transposing into the field of architecture, one verifies that colonial cities in Latin America can be organized into two groups: those that already existed, established by primitive civilizations (Incas, Maya, Aztecs...) and that were, most of them, dismantled by the Spaniards; and those inaugurated with the sole purpose of serving the exploitation and commodification of raw materials. Slavery was the main tool in those cities. They represent, for Mendes da Rocha (2000: 16), a "*succession of horrors and tragic errors, of slavery, of the extinction of local populations, of colonial enterprises laying waste to land*", that have to start being recognized. The summit of this policy, tragically inscribed in the history of America by the Portuguese and the Spanish, was the signing of the *Treaty of Tordesillas* in 1494. This imaginary line represented in *Planisfero di Cantino* (F. 1), dividing the discovered and undiscovered lands, also divided people and the natural resources on a continent that was, for the rest of the world, absolutely *new*.

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

The National Coach Museum  
and the question of *the other*

Nuno Tavares da Costa



F. 1 – Anonymous Portuguese (1502). *Planisferio di Cantino*.

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

The National Coach Museum  
and the question of *the other*  
Nuno Tavares da Costa

For Mendes da Rocha, the treaty prevented American cities from becoming what they should have been. “*The American city, the Brazilian city that is now brought again into discussion, as to remake, rebuild old historical cities (...) as to build new ones, maybe in Pantanal, nearby the great navigable rivers*”<sup>7</sup>, became a main concern “*which is, among us, a fact, that perhaps doesn’t reach the European mentality and concerns*” (2012: 44). It prevented the transformation of nature according to the desires and synergy of all people.

It cannot be said, at that time, that Europeans did not know Africa, or Asia, or even some of the stars that were still incomprehensible to them, as they are not today in the eyes of science. America, for Europeans, simply did not exist. Columbus believed that, by sailing to west, he would discover a quicker path to the East. Discovering a new world, in 1492, was, for him, an absolute surprise. Perhaps it justifies considering this event as inaugural of the modern era. The moment man contacts with the other is also the moment when we are part of a whole. Until then, they and we were part of a totality that was strange to us, because unrevealed (cf. Todorov, 1982). Only then, the world as we know, was completed. That feeling of *novelty* is deeply rooted in the development of American culture, from north to south. For most Americans, History *was born* at the precise moment of its own discovery, ignoring, or even denying, the history of Europe itself (cf. Sena, 1969), also mentioned by Hannah Arendt (1958: 312) as one of the three events that determined the modern era:

*"On the threshold of modern age there are three great events that have determined its character: the discovery of America and subsequent exploration of whole Earth; the Catholic Reformation that by expropriating ecclesiastical and monastic properties triggered the double process of individual expropriation and accumulation of social wealth; and the invention of the telescope, allowing the development of a new science that considers the nature of Earth from the Universe point of view."*<sup>8</sup>

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<sup>7</sup> Translated by the author: “A cidade americana, a cidade brasileira que agora se retoma como discussão, tanto para refazer, recompor as velhas cidades históricas, como – o que entre nós é um fato que talvez não atinja a mentalidade, a preocupação dos europeus - para construir novas cidades, talvez no Pantanal, junto dos grandes rios navegáveis.”

<sup>8</sup> Translated by the author: “No limiar da era moderna há três grandes acontecimentos que lhe determinaram o carácter: a descoberta da América e subsequente exploração de toda a Terra; a Reforma que expropriando as propriedades eclesíásticas e monásticas desencadeou o duplo processo de expropriação individual e acumulação de riqueza social; e a invenção do telescópio, permitindo o desenvolvimento de uma nova ciência que considera a natureza da Terra do ponto de vista do universo.”



# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

The National Coach Museum  
and the question of *the other*  
Nuno Tavares da Costa

Interestingly, Mendes da Rocha also invokes these three events in his discourses on architecture, particularly the discovery of America, due to the need of a critical revision of colonial policy.

The discovery of America (not to be confused with the discovery of the Americans), by Portuguese and Spaniards, and the subsequent land dispute, resulted in the current map of Latin America. In it we find cultural, social and political differences reflected in towns and territory development. In the Atlantic side of America, for example, the African presence is more noticeable, perhaps due to the smaller number of Indians (when compared to the Pacific side and Central America). It is also at the borders of this map that the main obstacles to territory development are located. The predatory appetite for discovering new lands and its imagined richness, namely gold, prevailed in the two empires. This resulted in the infamy of exploitation and annihilation of indigenous people, because they opposed to occupation, refused to *integrate* in the laws and customs of the conquerors, and even due to diseases imported from Europe. For the territory, this event was equally tragic, as it meant the dismantling of the indigenous habitat, from small villages to entire cities. The mission of the recently arrived westerners, in addition to the usurpation of natural resources (human, as well) through prospecting and commerce, once cohabiting with the Indians, was that of Christianization and imposition of their social mechanisms, including the question of language, which has great relevance here. To be able to understand each other, *Indians had to be taught how to speak*, which implied a shocking submission from one culture to another, as the Indians had their own language, incomprehensible to Europeans, who regarded them as savages. After the imposition of their own language came the submission to European rules, laws and customs, facts sufficiently described in history that often became legends.

The Portuguese and Spanish adventure in the American continent had two stages: the first one, of exploratory and maritime nature; and the second one, of “conquest”. If in the first stage the settlements were temporary, used as harbours to extend expeditions along the coast (and later inland), it is during the second stage that territory occupation, particularly by Spaniards, gains an urban dimension. The Spanish settlements were not always successful, depicting a certain lack of understanding for the territory they were facing. The combination of an inappropriate choice of sites, natural phenomena (disastrous for foreigners) and Indian resistance resulted in failure, which triggered the occupation of the capitals of indigenous civilizations. Nonetheless, the Spaniards managed to introduce new spatial structures in these

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

The National Coach Museum  
and the question of *the other*  
Nuno Tavares da Costa

cities, whose most evident example is the rectangular grid. This strategy was eventually generalized by most of the Spanish colonial cities, as well as by some Portuguese colonial ones. The aims for founding these cities were always three: extraction, trade and gold administration. Later, in the 18<sup>th</sup> century, this policy started to include the need of defending its territorial positions, whether from indigenous, or from other foreign powers.

In the discovered Brazil, things went differently. The lack of developed civilizations and the (initial) Portuguese interest in Pau-Brazil, and, later, in sugar cane, coffee and cotton, so determined. In fact, the implementation of a landowning policy eventually organized the colonized territory under a rural assumption. The territory was organized to serve the purpose of land cultivation and exportation of natural products to the metropolis and to European markets. The same happened in North America, with the large plantations near the Atlantic and the establishment of export routes to the respective metropolises. After the exploratory settlements, from 1530, Portugal began the period of colonization, under French threat. This resulted in an effective development in urbanization of colonial towns and villages, enhanced by Pombal's policies, already in the 18<sup>th</sup> century, where the gold cycle prevailed.

Some authors found significant differences between Portuguese and Spanish colonial cities. The Spanish seemed more planned in relation to the Portuguese, because they were guided by specific legislation: Felipe II *Ordenanzas*<sup>9</sup>. Betina Schürmann (1999) has doubts about this theory. According to her, the "*controversy about the lack of planning in the towns and cities of Brazil should be revised*"<sup>10</sup>. Schürmann (1999: 173) shows a "*difference in the dynamism of the colonial economy*" of the two empires: "*the Portuguese centred in the countryside and the Spanish in the city.*"<sup>11</sup> Still, the colonial cities in Latin America have inscribed in their genealogy two inescapable purposes: on going exploitation and on going war. Practically everything in American colonial cities (whether they were founded or transformed to serve this purpose) was done with the intent of pillaging and trade. Colonial policy is based on looking for ways to take advantage, what we now commonly call speculation. Today, we

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<sup>9</sup> Ordinance. The *Ordenanzas de descubrimientos, nueva población y pacificación de las Indias*, well known as *Felipe II Ordenanzas*, for being proclaimed by him in 1573, sought to regulate the Spanish settlements, already consolidated or to be erected in the foundation of new cities in America. It is this body of legislation that establishes the orthogonal grid layout in Spain Cologne

<sup>10</sup> Translated by the author: "*polêmica sobre a inexistência de planejamento nas vilas e nas cidades do Brasil deve ser revista*".

<sup>11</sup> Translated by the author: Schürmann (1999: 173) nota uma "*diferença no dinamismo da economia colonial*" dos dois impérios: "*o português centrado no campo e o espanhol na cidade.*"

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

The National Coach Museum  
and the question of *the other*  
Nuno Tavares da Costa

are still descendants of these policies, in a different way, perhaps disguised as corporate and private initiative, which came to replace (at least in the western world) the public initiative of the State. The states, now less exposed, cover these actions by signing commercial treaties. At the same time, they have a complacent attitude towards themselves, as an attempt to ignore or excuse their colonial past. At the top of this perverse situation, already tragic, is the posture adopted by the ruling classes of the colonized countries, descendants of the imperial administration, interested in concealing their roles in this infamy, and having even promoted the independence of their countries on the ambition to perpetuate their exploitation (cf. Sena, 1969: 315). The social disaster in the former colonies continues unscathed, now diabolized by the capital and the exercise of *auctoritas* on the other.

According to Todorov, here lies the great misconception of the other, as it is by recognizing on *the other* a subject comparable to *the self*, that dialogue becomes possible. Otherwise, "*grasping is accompanied by a full acknowledgement of the other as subject, it risks being used for purposes of exploitation, of 'taking'; knowledge will be subordinated to power*" (1982: 132), as was the case of the Spanish and Portuguese discoverers. The idea of dialogue between people rests in the idea of city. For the Greeks, *polis* meant city, and defines, as we know, an urban way of life, which is the basis of western civilization. As Arendt recalls (1958: 41), in those times, "*living in a Polis, meant that everything was decided by words and persuasion, and not through force or violence.*"<sup>12</sup>

Further questions arise with the arrival of the discoverers to America. The case of land property is also important, by the absurdity of the *first to arrive* symbolic act of placing a flag (even in mankind upcoming achievements).

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<sup>12</sup> Translated by the author: "o viver numa polis, significava que tudo era decidido mediante palavras e persuasão, e não através da força ou violência."

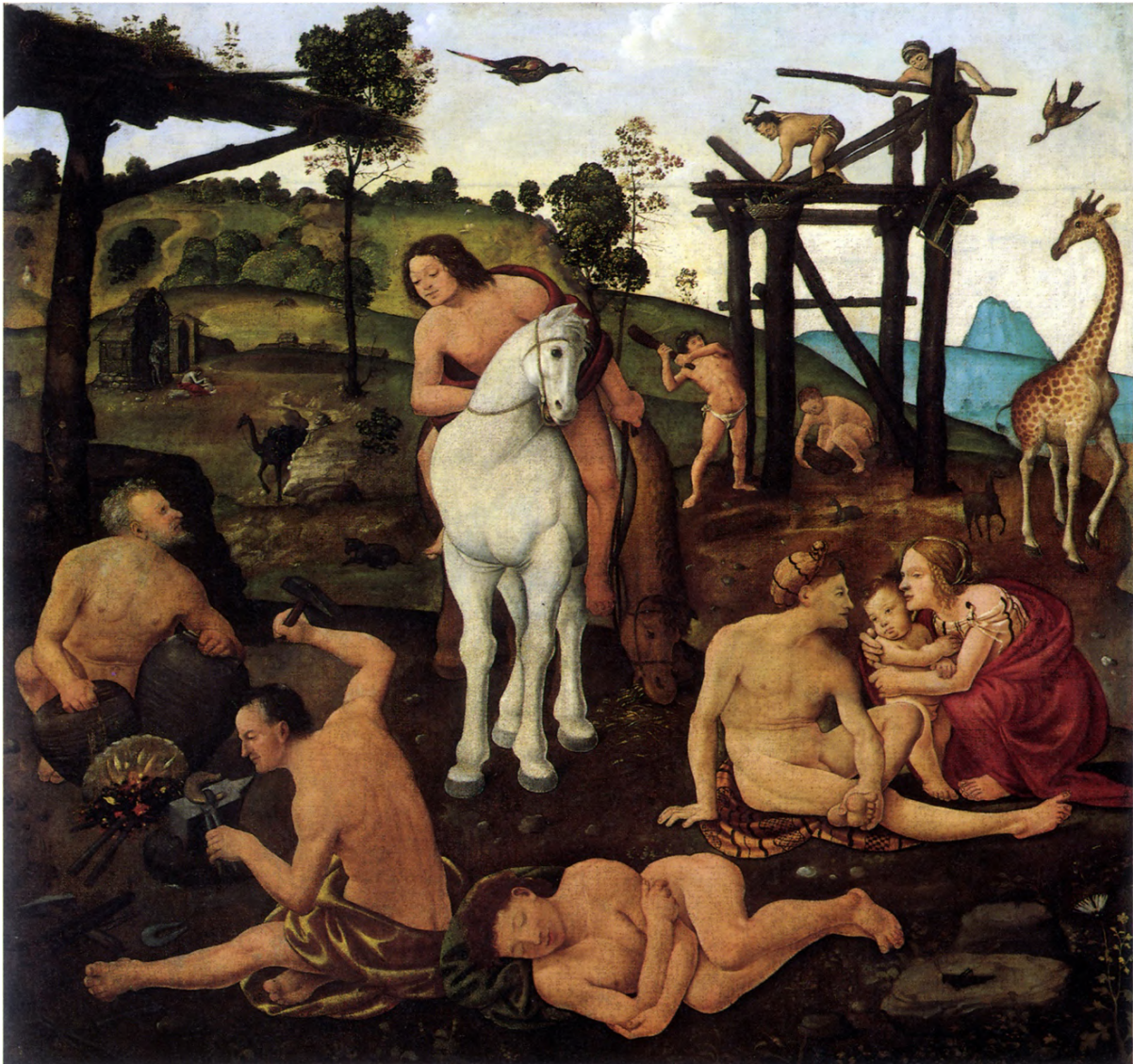


# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

The National Coach Museum  
and the question of *the other*

Nuno Tavares da Costa



F. 2 – Piero di Cosimo (1490). *Vulcano ed Eolo*.

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

The National Coach Museum  
and the question of *the other*  
Nuno Tavares da Costa

But as there is also the idea of conquest, whether of uninhabited territories (e.g. the moon), or inhabited territories taken from other people, marking the territory is, in its essence, an animalistic idea. If we consider the challenges that emerge in an increasingly urgent way – hunger, climate changes, natural disasters, excess of population, etc. – where land (and planet) management play a decisive role, to whom does the world belong? In what circumstances can those who arrived first define land possession? This cannot be the argument that legitimizes the right of possession, which, incidentally, on arriving to the New World, presupposes the denial of any civilization, society or individual considered as equal, even if these people were already there before the *foreigner* arrived. In the future, as in the past, the idea of possession is also a misconception generated in western ideology, because everything ends with death, where material possession ceases immediately, and it is necessarily transmitted to a second individual, and so on. Somehow the discovery of America anticipates the romantic idea of the Good Savage, theorized by Jean-Jacques Rousseau (cf. 1755). The corruption of man that lived in harmony with nature happens, according to Rousseau, through the convention of private property, originating, from there on, social inequality.

For Mendes da Rocha, it is precisely in the review of all these issues that lays the interest of an architecture that aims to be different, transformative that avoids coexistence with man's exploitation. Architecture founded in peace and in the will of being together as people. What is the point of talking about architecture when war destroys everything? In a 2005 interview to Mexican magazine *Arquine*, titled in a most intriguing way "*The giraffe paradox*"<sup>13</sup>, Mendes da Rocha resorts to a painting by Piero di Cosimo – *Vulcano ed Eolo maestri dell'umanità*, c. 1500<sup>14</sup> (F. 2) – to demonstrate that an architect should broaden his research field beyond architecture. The giraffe is invoked by Mendes da Rocha to exemplify, simultaneously, the success and failure of human relations. On the one hand, the giraffe is an offer: "*a caliph had sent her as a gift to the ecclesiastical power of Venice*"<sup>15</sup>; meaning, therefore, the desire for approximation and dialogue between cultures. On the other hand, the death of the giraffe, bumping its head in an arch of the city of Venice, as told by Mendes da Rocha, turns out to be a paradox with the initial idea, because it also results of the misunderstanding of one another: the giraffe was not from there, that's why she died.

<sup>13</sup> Translated by the author: "*La paradoja de la jirafa*"

<sup>14</sup> The canvas integrates the author's series devoted to the history of mankind - *Storie dell'umanità primitiva*.

<sup>15</sup> Translated by the author: "*un califa la había mandado de regalo al poder eclesiástico de Venecia*"

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

The National Coach Museum  
and the question of *the other*  
Nuno Tavares da Costa

It is easy to recognize that Europeans have imposed their presence in America and over the Americans, but more difficult not to see the failure of this conquest through the clear misunderstanding of the other's point of view. It is a denial of modernity itself, always connoted to the discovery of the new continent. The whole episode of America's discovery is built upon this ambiguity that Todorov (cf. 1982: 97) identifies: by imposing on the whole Earth what was his superiority, the European destroyed in himself the ability to integrate the world.

In independent Brazil, on the threshold of the 20<sup>th</sup> century, the country is no longer the result of the mixture of Indian, African and Portuguese, and their descendants. Strong immigration brings industrialization to the rural country and the consequent enlargement of the interracial cultures. Modern Brazilian artists, influenced by the Anthropophagic Movement (cf. Andrade, 1928), are aware of the presence of the *foreign other* in the country's culture. They don't deny it, although, they prefer not to repeat it, retrieving only the positive aspects by *swallowing*. By eating the *foreign*, Brazilians can take possession of the good things and eliminate the bad ones through the *digestive process*<sup>16</sup> (F. 3). Brazilian architecture also opens to modernity, marked by Le Corbusier. The country builds an architectural language that quickly becomes identitarian and native. The "*Reasons for the new architecture*"<sup>17</sup>, as Lúcio Costa speculated (1936), oppose the European canon and are overanalysed. Meanwhile, it will not be excessive to reinforce that this new architecture is associated, in its origin, to the desire and opportunity to construct novelty, with capacity, inclusively, to export.

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<sup>16</sup> The Anthropophagic Manifesto by Oswald de Andrade was a literary manifesto that aimed to criticise the external cultural dependency of Brazil. It intended to promote balance between the country primitive culture and the modern and industrialized civilization.

The manifesto main argument proposes to take *cannibalism* over other cultures as a way for Brazil affirm itself against European post-colonial cultural domination.

<sup>17</sup> Translated by the author: "Razões para a nova arquitetura"



# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

The National Coach Museum  
and the question of *the other*

Nuno Tavares da Costa



F. 3 – Theodor de Bry (b. 1562). *The sons of Pindorama.*

As Mendes da Rocha (2017b) refers, the so-agreed modern Brazilian architecture "*could not fail to be an invention, since here, [in Europe], by tradition, there were only repetitions.*" What is then the meaning of the construction of modernity in Brazil? Certainly, all these questions, which we raised so far, would be part of the answer.

The work of Mendes da Rocha emerges in the inheritance of this Brazilian modernity. It is guided by a tenacious necessity to always return to a first convention: modernity. Mendes da Rocha is one of those people for whom the modern project is an unfinished project. Thus instituted, it ended up (at the service of private interests), like all good things, by degenerating. After all, America has been cyclically constituted as a territory for rehearsal of a perpetual Modernity, not only in its architecture and urbanism, but also in its cities.

The Museum of Mendes da Rocha configures news from the Americas, refocusing the issue of architecture in the assumptions of modernity. Having *disembarked* like that in the Old Continent, exotic and of primitive appearance to the eyes of the western man, he reminds us that the essential issue of architecture in the modern age was not preservation, but transformation. This transformation, formal and discursive, is dialectically exercised in two fundamental plans of confrontation: architecture/nature and architecture/society, inherited from Niemeyer and Artigas, respectively. The Coach Museum, therefore, becomes an opportune discourse "*on issues that they [Europeans] have already abandoned for lack of hope, or even for lack of models within the scope of these cities that are already fully configured*" (Rocha, 2012: 50). That seems to be the case of Lisbon and the monumental place of Belém. In all these questions is undoubtedly the necessity of a critical revision on colonial policy.

We cannot resist introducing another association that emerges as an allegory of this idea: the opportune return to Portugal of the painting "*Café*" (1935, F. 4)<sup>18</sup>, by Cândido Portinari, 78 years after its controversial exhibition in *Exposição do Mundo Português* (1940), brings to mind some similarities with the Coach Museum condition. The two episodes occur in the monumental area of Belém, thus reinforced for the exaltation of the achievements of the Portuguese people and the fascist regime.

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<sup>18</sup> Portinari's "*Café*" is presented in Museu do Neo-realismo, Vila Franca de Xira, between 20 October 2018 and 3 March 2019, integrated in the exhibition "*Candido Portinari in Portugal*".



# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

The National Coach Museum  
and the question of *the other*

*Nuno Tavares da Costa*



F. 4 – Candido Portinari (1935). *Café*.



Portinari's painting awakened, at the time, contradictory emotions. If on one hand it was regarded as a "*curious Trojan Horse in the middle of the official festivities*"<sup>19</sup> (França, 1991: 356), on the other hand it was seen with some reservations by the exhibition's ideological plan. "*Café*", which portrays Brazil's harsh social reality and the reminiscences of colonial policies, became an emblematic work for the country (through international recognition) and for Portuguese neorealism (cf. Lehmkuhl, 2011). Such as on Portinari's canvas, the museum of Mendes da Rocha can be brought into this contradiction between the exaltation of a brave, new, modern world, of which the Portuguese tend to consider themselves responsible for – let us remember that Brazil was the only country invited to expose – and the miscomprehension of the inherent message, critical to the observed reality.

The two confrontation plans aforementioned – architecture/nature and architecture/society – can be analysed through a characteristic of the museum, which arises, unexpectedly, as in the novel by José Saramago, *Raised from the ground* (1980). In the architecture/nature plan, this option is noted by demonstrating, through the project, all the technical and scientific logic implicit to the act of constructing. In particular the attraction Mendes da Rocha always had (like other Brazilian architects) by countermeasure gravity, through the *suspension* of its constructions. To put *a stone in the sky*<sup>20</sup>. This overcoming of nature is already *tradition* in Brazilian modern architecture, that considers the structure (the *skeleton*) autonomous from the walls. What Lúcio Costa (1987: 46) called the "*independent skeleton*"<sup>21</sup>. The way structural design acquired reinforced prominence in the projects of Brazilian architects of this heroic period can be understood as the praise of structural success. In the museum, this exercise is not done without a second intention. It is by demonstrating all the knowledge to transform this *predicament to man* - gravity - that the consciousness of human condition arises. On the architecture/society plan we chose to observe the issue of land private property. The suspension of volumes in the air and the intended absence of a walled boundary make the limits diffuse at ground level, between what is public and what is private. This is something that does not cease to be strange in relation to the place and to European culture, which also pursues a different idea of common ground.

<sup>19</sup> Translated by the author: "curioso cavalo de Tróia no meio das festividades oficiais"

<sup>20</sup> Translated by the author: "*Uma pedra no céu*". Name of the exhibition (2017) in MuBE, São Paulo, that traces parallels between art and architecture on Paulo Mendes da Rocha.

<sup>21</sup> Translated by the author: "*ossatura independente*"

**COLONIAL  
AND POSTCOLONIAL  
LANDSCAPES**

ARCHITECTURE, CITIES, INFRASTRUCTURES

The National Coach Museum  
and the question of *the other*  
*Nuno Tavares da Costa*

If in “*Café*”, men raise from the ground and with them their hopes, in a movement of resistance against slavery and oppression, the museum rises as well, insurgent, uncovering what was covered, rescuing the ground of one and offering it to everyone. By doing this it contradicts what is the European tradition of overlaps, which can be also interpreted as an attempt to impose its own moral superiority.

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

The National Coach Museum  
and the question of *the other*

*Nuno Tavares da Costa*



F. 5 – New Coach Museum during the construction phase (2011).



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F. 3 Private collection / Wikimedia Commons:  
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F. 4 Nuno Tavares da Costa. Vila Franca de Xira: Museu do Neo-Realismo, 2018.

F.5 Nuno Tavares da Costa. Lisboa: Museu Nacional dos Coches, 2011

## Infrastructure and earthwork between two capital-cities in colonial and postcolonial Brazil

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### Abstract

The Bus Station Platform of Brasília (1957), by Lucio Costa (1902-1998), stands out as a unique work in Brazilian architecture, whilst still underestimated. While Oscar Niemeyer's palaces sit on a concrete slab that prevent direct contact with the ground, and the apartment buildings in the so-called *superquadras* (superblocks) are raised on Corbusean *pilotis* that keep the ground free, the Bus Station – located exactly at the two intersecting axes that give birth to the new Brazilian capital – merges with the ground, shuffles the boundaries between architecture, landscape and infrastructure and turns out to be almost invisible, both in physical and historiographical terms.

Due to this rooting in the ground and its overall horizontality, the Platform builds an impressive and unmatched modern space, one that seems closely related to an automobile-oriented city and to a notion of landscape that is essentially American.

On closer inspection, however, it is not difficult to find traces of the colonial past of Brazil in the Platform. Particularly when we consider some urban operations that had a profound impact in the landscape of Rio de Janeiro, the former capital which served as administrative core of the Kingdom of Portugal for 13 years (1808-1822).

Our aim here is to explore the possible affinities between Brasília's Bus Station Platform and infrastructure works related to Portuguese colonial policy in Brazil, from one side, and to a notion of landscape that was growing in the 1960's in America, from another. To what extent have earthworks that shaped Rio de Janeiro's landscape in its colonial period fueled the imagination of an architect such as Lucio Costa, and particularly the project of a key work for Brazilian architecture such as the Bus Station Platform of Brasília? To what extent this project reflects the apex and limits of the colonial logic in Portuguese America? And to what extent it recasts an American notion of landscape? Is the limited attention this project has received so far – specially in Northern countries – related to an Eurocentric approach of the Americas that remains rather unchanged? These are some of the questions this paper wants to address, while engaging in the call to rethink colonial and postcolonial cities and landscapes.

**Keywords:** Brasilia; Rio de Janeiro; Lucio Costa; earthwork



## **Infrastructure and earthwork between two capital-cities in colonial and postcolonial Brazil<sup>1</sup>**

*“The farmer or engineer who cuts into the land can either cultivate it or devastate it.”*

*Robert Smithson, “Frederick Law Olmsted and the dialectical landscape” (1973)*

The idea of moving the capital of Brazil to the central region dates back to the colonial times. Apparently the idea was brought about in the eighteenth century by Marques de Pombal, as a strategy to stimulate the colonization of the hinterland and avoid attacks by the sea. This idea would gain strength in the following century, when José Bonifácio de Andrada e Silva, the statesman who played a major role in the independence of Brazil (1822), reinforced the proposal to transfer the capital into the underdeveloped hinterland and suggested for the first time the name "Brasilia".

It was not before the 1950's that the decision was taken, though, when Juscelino Kubitschek – the third democratically elected president of the Republic - dared to fulfill the 1891 Brazilian Constitution's directive to transfer the capital to the country's high interior plateau. The exceptional conditions that allowed the building of a capital city from scratch in only three and a half years can hardly be fully grasped today. But we must bare in mind that Kubitschek was born in the southern state of Minas Gerais, whose capital - the city of Belo Horizonte (Beautiful Horizon) was also planned. Actually, the new city, first known as Cidade de Minas (“the City of Minas”) was planned and constructed at the outset of the Republic, in the 1890s, to replace Ouro Preto as the capital of Minas Gerais. Engineer Aarão Reis, to whom the urban design was commissioned, sought inspiration in Washington, D.C to lay out a grid system that established an octagonal urban network cut by diagonals with wide, tree-lined avenues and squares. The idea was to build a city based on a *ratio* that would bring order to a new society that rejected Ouro Preto for its association with the colonial past and embraced avenues and railroads as symbols of modernity.

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<sup>1</sup> This paper is part of a larger ongoing investigation carried out by the author with the support of CNPq/ Conselho Nacional de Desenvolvimento Científico e Tecnológico.

The 1940's saw the expansion of Belo Horizonte past the original boundaries envisioned by Reis, though. This was translated into the creation of new suburbs, such as Pampulha and Cidade Jardim, the residential areas of the *elite*. Thanks to then-mayor Kubithschek, the city would become known ever since then for hosting a number of modern architectural icons, most notably the widely acclaimed Pampulha Complex, designed by a young Oscar Niemeyer in collaboration with Roberto Burle Marx as landscape architect.

Somehow the mythical building of Brasilia can therefore be linked to the building of Belo Horizonte, as both represent key moments in the search for modernity in Brazil. This becomes clear when we look at some images that document the construction of large scale infrastructure projects carried out in these two cities in the name of development. Wilson Baptista's photographic series "Abertura da Avenida Amazonas" (Opening of Amazonas Avenue), dated 1941, present intriguing images of Belo Horizonte as it advanced west. In one of them, we see a Martian landscape made of cone-shaped hills with a solitary man wandering around. (fig 1) Less than 20 years later, Mario Fontenelle portrays a group of men standing in front of an impressive landform that is also the outcome of ground manipulation in order to open space for the city. In contrast to the lonely man in Baptista's image, however, this group has a heroic posture that glorifies their triumph over nature. They pose as the pioneers of Brasilia. In the center of the picture we can easily identify the President himself and Israel Pinheiro, chief engineer of the construction of Brasilia. There is no place for a construction worker among them, a so-called *candango*<sup>2</sup>. To our surprise, we see nevertheless a child, that both reinforces the sense of transformation and represents the promise of future growth. (fig. 2)

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<sup>2</sup> The term *candango* refers broadly to the anonymous builders of Brasilia, the mass of construction workers who immigrated to the site from other Brazilian states. The word is rooted in colonial times, though, coming from *candongo*, used in the Southwestern Bantu of Angola to refer to the Portuguese colonizers. See Holston, James. *The modernist city. An Anthropological Critique of Brasilia*. Chicago: University of Chicago Press, 1989. p. 209-210.

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

Infrastructure and earthwork between two capital-  
cities in colonial and postcolonial Brazil

*Ana Luiza Nobre*



fig. 1. Belo Horizonte, Opening of Avenida Amazonas, 1941, Photo: Wilson Baptista

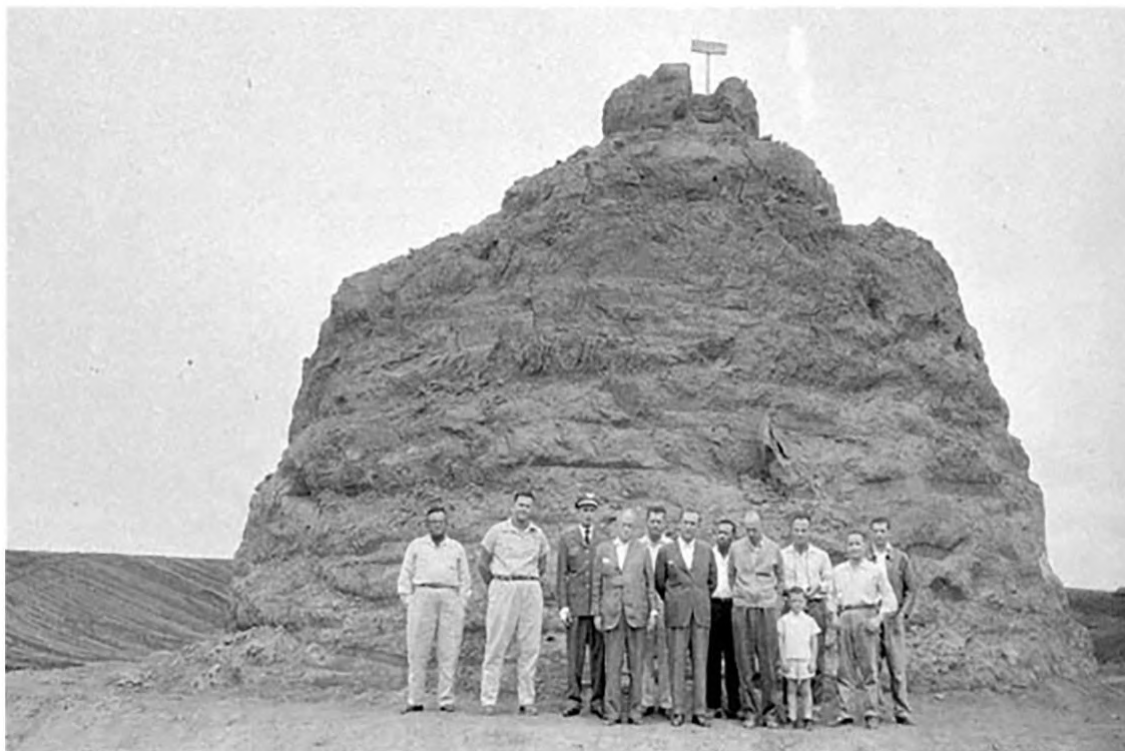


fig 2. Brasilia, Ground Zero, October 1958, Photo: Mário Fontenelle (Arquivo Público do Distrito Federal)



In both images, human presence highlights the human force implied in the endless dynamic of urbanization processes and the destructive nature of any building activity. The most emblematic image of modern Brazil is nevertheless another photo of Mario Fontenelle, an aerial view of the cross that gave birth to Brasilia. (fig. 3) Two lines that point out to the exact intersection between the two axes represented in Lucio Costa's preliminary sketch. The ground zero of the city imagined by the architect. The first footprint on the virgin cerrado vegetation of Brazil's Central Plateau. A cross that marks a flat territory apparently devoid of any other human presence, indicating no single direction but a point; the very idea of "taking possession", as defined by Lucio Costa himself in his *Pilot Plan*<sup>3</sup>. (Costa, 1995: 284) (fig.4 and 5)



fig. 3. Brasilia, Ground Zero, July 1957, Photo: Mário Fontenelle (Arquivo Público do Distrito Federal)

<sup>3</sup> Lucio Costa's Pilot Plan for Brasilia is the winning entry in the design competition for the urban project of Brazil's new capital. It consists of a few sketches and a short text with 23 bullet points. The very first affirms that Brasilia "was born of the primary gesture of one who marks a place or takes possession of it".

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

Infrastructure and earthwork between two capital-  
cities in colonial and postcolonial Brazil

Ana Luiza Nobre

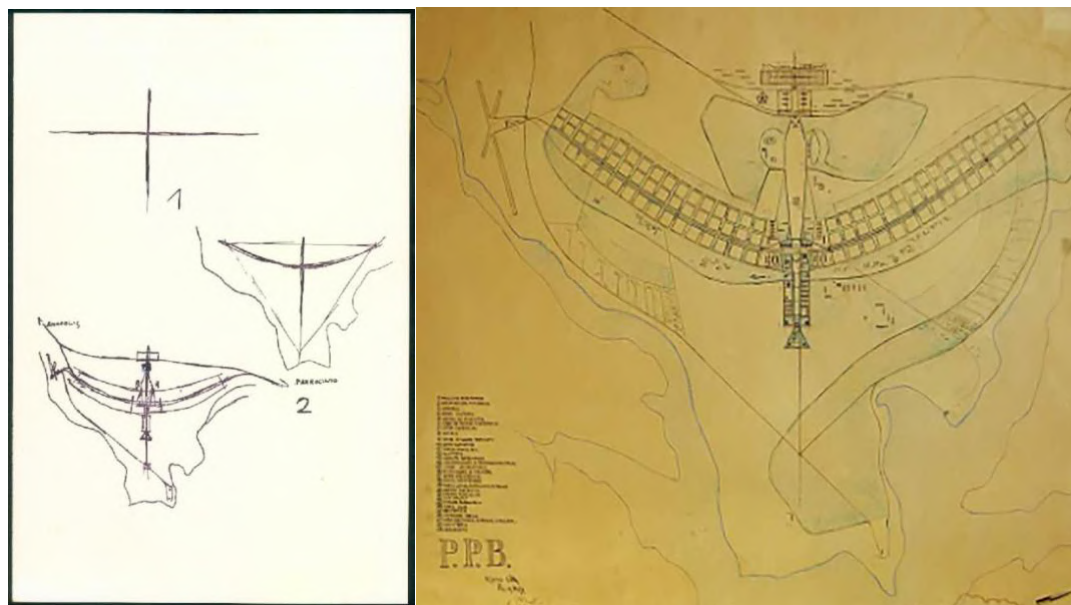


fig. 4 and 5. Lucio Costa, Pilot Plan for Brasilia, March 1957 (Casa de Lucio Costa)

Exactly here the architect decided to install a building that stands out not as a free-standing object (such as the ones placed along the capital's Monumental Axis) but rather as a large-scale and formless complex that provides a central activity/mobility node within Brasilia's unique urban system. This "bus platform", as Lucio Costa calls it, is actually both a building *and* a road. Architecture *and* infrastructure. By using the term "platform", Costa conveys the idea of a life support to the city-to-be. In this sense, the platform summarizes the whole infrastructural system that enables the city itself: streets, railroads, bridges, as well as provision of water, energy and information, mass transit and waste management. There is to say, something that allows for the city's constant flows of people, goods, energy and information. In the constant interplay between physical facilities, operating procedures, management practices, development policies and so on. (fig. 6 and 7)

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

Infrastructure and earthwork between two capital-  
cities in colonial and postcolonial Brazil

Ana Luiza Nobre



fig. 6. Brasília, Bus Platform, Lucio Costa, 1960's (<https://extrapauta.com.br/o-bau-nosso-de-cada-dia/>)

As a platform, it assumes itself as a kind of artificial ground, an horizontal structure that remains carrier of the uncertain and the unpredictable that are at the heart of urban life. As a piece of infrastructure, it suggests the idea of something that, despite its fundamental role, lies beneath and may be less visible or even pass unnoticed. In any case the strenght of Lucio Costa's design lies not only in the way it refuses the traditional figure-ground relationship but in the way it establishes a new multi-level ground plan for a new city. A ground plan that stretches out of sight and extends infinitely, at an unpreceding scale, forming a platform made of horizontal planes that overlap and run parallel to each other and the horizon. Instead of reducing the contact points with the earth's surface by lifting the building – due to the need of protection from floods or animals, to the intention of touching the ground in the least intruding and permanent way, or to the desire to preserve a platonic geometry – here Lucio Costa merges ground, topography and building in a way that emphasizes the ever-changing operations, processes and relationships – in brief, *chance* and *change* - which in effect are inherent to whatever we call city.





fig. 7. Brasilia, Bus Platform, Lucio Costa, 1960's (<http://conversapiaba.blogspot.com>)

If the crossing of the two axes refer to the primitive act of taking possession, the adherence to the horizon refers to a preliminary and crucial act of design (Berlanda, 2014: 107). Working together, both create a site that keeps alive the city's essential sense as a place of exchange. Here, landscape is no longer the neutral background against which architectural objects stand out, but the subject itself of its transformation over time (Berlanda, 2014: 6).

To some degree the operation can be seen as a counter motion to the liberation of ground so obsessively pursued by Le Corbusier<sup>4</sup> and many other modern architects in the first half of the century. In Brasilia's Bus Platform, not only ground is revealed and made visible. Building and ground are one. The result is a sheer size structure that acts together with massive earthwork in order to magnify the modernizing force of the new capital city. No wonder the so-called "ground zero" was not removed during the excavation works to build the Bus Platform, as

<sup>4</sup> From the standpoint of the relationship between architecture and ground, it is interesting to note the difference between early projects such as the Ville Savoye (1927) and later ones such as the Carpenter Center for the Visual Arts (1959-63) and the monastery of La Tourette (1956-60).

shown in Fontenelle's photos. It served as a comparative to the original ground level, a time scale to the landscape. A trace of a past that in Brazil is always about to be bulldozed. (fig. 8)



fig. 8. Brasília, Ground Zero, Blus Platform and Esplanade of Ministries under construction, October 1958, Photo: Mário Fontenelle (Arquivo Público do Distrito Federal)



fig. 9. Brasília, Bus Platform under construction, 1959, Photo: Mário Fontenelle (Arquivo Público do Distrito Federal)

Yet this building process of both the city and the landscape was not done without controversy. In a letter to Engineer Israel Pinheiro, dated 1958, Lucio Costa refers to “worries from technicians ‘of this and that’ about the earthworks in Brasília”, and argues that these operations are indispensable in order “to undertake from the outset the fundamental works conceived as a function of the future, in such a way that the clear and harmonious ordering of the design proves, in fact, a consequence of them.” And he goes on, restating that “Brasília is not meant to be a provincial capital, but the new capital of a Country that will still be a great nation.” (Costa, 1958: 8) (fig. 9)

As usual, Lucio Costa sustains his argument with undisputed authority: it is not merely a matter of architecture or urbanism; it is most of all a political matter, expressed by a colonizing logic of territorial domain and the laying of foundations for the future. Unique as it is, Brasília would then be unthinkable apart from a lineage of urban operations that trace back to colonial times in Brazil, on one side, and from a sense of promise associated to the New World, on the other.



Looking at the images of the Bus Platform construction site one cannot fail to be struck by all the earth-moving brought to the heart of Brasilia. As we become aware of the strength and violence involved in the process of shaping nature by excavating and displacing sheer amounts of earth, it is hard not to think of ancestral Indian structures such as the cliff dwellings in Mesa Verde and the mounds in Ohio. Or even the parks designed in the 19<sup>th</sup> century by Frederick Law Olmstead - which Robert Smithson calls "America's first 'earthwork artist'", somehow anticipating works of artists as himself, Michael Heizer and Walter De Maria (Smithson, 1973: 164).

There is no question that this wide array of earthworks differ in many aspects from Lucio Costa's work in Brasilia. It might be argued, among other aspects, that most Land Art works were built a decade or so after the inauguration of the Brazilian capital, with a sort of anti-urban sentiment that follows the path of Jefferson and Thoreau. Even so, when we look at Michael Heizer's "Double Negative"<sup>5</sup>, we find an unexpected connection with Lucio Costa's Bus Platform. In its own way, the two facing ramps cut into the steep flank of Mormon Mesa share with Brasilia's Bus Platform a deliberate confrontation with a kind of vastness that characterizes the American landscape, as well as a monumental impulse and a profound attraction to the site geomorphology. Both displace substantial amounts of mass and consider ground not abstractly, as a geometrical surface, but as matter. And both place themselves in such a way that nature and artefact complement each other, building a powerful and artificial topography which calls our attention to the traumatic impact of man's action on earth.

But if the Bus Platform - an earthwork in itself - somehow points out to an American sense of landscape, it also evolves from a sequence of massive manipulations of ground that finds its peak in Brazil precisely in Rio de Janeiro, a city that remains deeply connected to the life and work of Lucio Costa. Installed on a wetland that encompasses two large rocky massifs, the city is marked by a series of radical urban operations, including landfillings, drainage of swamps and opening of tunnels that over the centuries created the conditions for its existence while also altering its natural landscape with rare concern with the environment.

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<sup>5</sup> In *Double Negative* (1969-70) Michael Heizer used blasting and heavy equipments to cut two huge ramps on either side of a natural canyon. Estimated 240,000 tons of rhyolite and sandstone were displaced to do so.

Certainly the most striking earthwork in Rio de Janeiro was the leveling of the so-called Castle Hill, began in the first decade of the 20<sup>th</sup> century. To sanitize the capital and turn it into a metropolis following the Parisian model, Mayor Pereira Passos conducted a series of large-scale urban interventions during his term from 1903 to 1906. These included the opening of Avenida Central (currently Rio Branco) at the cost of removing everything that was on its way, be it people or the first bits of the historical hill where the city was born. Two decades later, the complete razing of the hill to the ground would be achieved by Mayor Carlos Sampaio (1920-1922), whose main goal was the preparation of Rio de Janeiro for the celebration of the first Centenary of Brazil's Independence, in 1922. (figs. 10 and 11)



fig. 10. Rio de Janeiro, Castle Hill under demolition, 1922, Photo: Augusto Malta (Instituto Moreira Salles)

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

Infrastructure and earthwork between two capital-  
cities in colonial and postcolonial Brazil

Ana Luiza Nobre



fig. 11. Rio de Janeiro, Rio Branco Avenue and Castle Esplanade (after demolition of Castle Hill), c.1929  
Photo: Augusto Malta (Instituto Moreira Salles)

Lucio Costa followed these massive transformations as a student of architecture at the School of Fine Arts in Rio de Janeiro, where he graduated in 1924. Like many of his contemporaries, he must have been profoundly impressed by the eradication of a whole hill with water jets in just a couple of years. All of the sudden there was an immense esplanade in the heart of the city and several new embankments along the coastline, built with the muddy soil extracted from the hill.<sup>6</sup>

The tremendous impact in Rio de Janeiro's landscape that resulted from these operations witnessed by the young Lucio Costa helps to understand his later suggestion to build the

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<sup>6</sup> For a digital reconstruction of the origins and conformation of the Castelo Esplanade, see Villas Boas, Naylor Barbosa (2007), *A esplanada do castelo: fragmentos de uma história urbana*. Tese de Doutorado. Rio de Janeiro: Prourb/FAU-UFRJ.



university campus inside the picturesque Rodrigo de Freitas Lagoon. Actually, there were even more radical proposals in the late nineteenth century, when Brazilian sanitarian Oswaldo Cruz considered the lagoon a threat to the health of the “Cariocas”<sup>7</sup> and included its landfilling in his crusade against diseases such as yellow fever and smallpox.

But we must also consider that, more intensively than any other Brazilian architect, Costa was actively engaged with the study of Portuguese architecture from the colonial period. So although he has vaguely indicated as one of his sources of inspiration in Brasilia some terraces and embankments seen in photographs of China from the beginning of the century (Lucio Costa, 1995: 282), we cannot help looking at the Bus Platform as the unfold of a long tradition rooted in the colonial landscape of Rio de Janeiro.

In a certain sense, the Platform may be seen actually as a dialogue – whether or not intentional – between Lucio Costa and the so-called Mestre Valentim (Valentim da Fonseca e Silva, ca. 1745-1813), the main sculptor and urban planner of Rio de Janeiro in colonial times. Among other works, Valentim designed *Passeio Público*, the oldest public park in Brazil and one of the oldest in the Americas, created only a few years after the seat of government of colonial Brazil was transferred from Salvador to Rio de Janeiro, in 1763. Among other improvements in the new colonial capital, Viceroy D. Luis de Vasconcelos decided to create a public park inspired by the *Passeio do Rossio* that was under construction in Pombaline Lisbon around the same time<sup>8</sup>. But while the park in the capital of the Empire was part of an effort to overcome the trauma of the Great Lisbon Earthquake, the park in Rio de Janeiro was considered a major improvement in the urban conditions of a city still characteristically colonial, both in terms of urban spaces and social practices.

Rio de Janeiro’s *Passeio Público* was built with abusive labor practices, in a regime of extreme oppression and despotism well described by Joaquim Manuel de Macedo (Macedo, 2005: 102)<sup>9</sup>.

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<sup>7</sup> “Carioca” is the term given to those native to the city of Rio de Janeiro.

<sup>8</sup> The demolition of the *Passeio Público* of Lisbon began in 1879, to give way to Avenida da Liberdade.

<sup>9</sup> According to Joaquim Manuel de Macedo, the building of *Passeio Público* was done by “very cheap workers”, who received no wages “but only the bread that should feed them.” In addition, most of the money for its building came from “sums which the lords paid for the slaves’ whips in the dungeon.” Because in Brazil, since the late seventeenth century, whipping slaves was considered a public service that both meant the maintenance of the slavery system and payed for public works.

But at the same time it embodied a new approach in Portuguese colonial policy, one that produced a remarkable public space in Colonial Brazil. Of course *public* by then meant not a common domain, accessible to all. The park was actually intended for *elite* groups that identified themselves with Europe. But it certainly represented a fundamental innovation in comparison to other urban spaces replicated in Portuguese colonial cities and mostly related to a disciplinary and/or religious nature (such as the pillory plazas or the churchyards). (fig.12)



fig. 12. Passeio Público, Rio de Janeiro, Joseph Alfred Martinet, mid-XIXth century (Biblioteca Nacional)

The park was built on land reclaimed from a lagoon (*Lagoa do Boqueirão da Ajuda*) located by the Guanabara Bay and considered a major source of diseases. Conceived as a *belvedere* by the seaside, it turned the city outwards and highlighted its landscape attributes. The whole urban operation comprised the provision of infrastructure to the central area (mainly access to water, distributed in its artificial fountains), and contributed to stimulate the expansion of the city towards the south. But most of all, it represented a fundamental change in the socio-territorial organization of Colonial Rio de Janeiro: the seeds of a new kind of urban living, grounded in public space.

The landscape composition of the garden, planned in the French garden style, used rectilinear pathways arranged in a geometrical and symmetrical form, as a hexagon with irregular sides.

This would be profoundly modified in the 19<sup>th</sup> century by French architect Auguste Marie François Glaziou (1833-1906). Later, a series of land fillings nearby also distanced the park from the sea and destroyed its view of Guanabara Bay — greatly altering its original intention as an urban contemplation terrace.<sup>10</sup>

Two main features of Rio de Janeiro's Passeio Público would reappear in the Bus Platform of Brasília, though: the idea of a public terrace in the heart of the city, reaching out to the horizon, and the sheer manipulation of ground. In this way, in spite of the great distance in space and time, both can be considered analogous in terms of their symbolic dimensions as powerful representations of capital cities in colonial and postcolonial Brazil.

A couple of years after the inauguration of Brasília, we find Lucio Costa dealing again with the ground in his design for the path that gives access to the church of Nossa Senhora da Glória do Outeiro, one of the most noted Baroque legacies of the colonial period. The small 18th century church stands on a hilltop not far from Passeio Público, commanding great views out over the Guanabara Bay. Some of its more fascinating features are its vivid tilework, its octagonal plan with single tower and its elaborately carved altar.

In a certain way, the dialogue between Lucio Costa and colonial works is thus reestablished here. In effect, if the Bus Platform can be linked to Passeio Público, so the pathway to the church itself. In this case, Lucio Costa's intention was to create an architectural promenade leading to what he called "one of the masterpieces of Portuguese architecture in the Colony" (Lucio Costa, 1995: 411). The building of the access included demolition, displacement and reuse: while several houses were removed to unblock the view, the stones of a dismantled wharf nearby served as the new hillside park paving. (fig.13 and 14)

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<sup>10</sup> For a digital reconstruction of Passeio Público, comparing its original design with the one implemented in the 19th century, see Villas Boas, Naylor Barbosa (2000), *O Passeio Público do Rio de Janeiro: análise histórica através da percepção do espaço*, Dissertação de Mestrado. Rio de Janeiro: Proarq/FAU-UFRJ.



# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

Infrastructure and earthwork between two capital-  
cities in colonial and postcolonial Brazil

Ana Luiza Nobre



fig. 13 and 14. Lucio Costa, Pathway to the Church of Nossa Senhora do Outeiro da Glória, Rio de Janeiro, 1960's  
(Photo: Ana Luiza Nobre)

As we follow the pathway to the church, we are indeed struck by its resemblance with Portuguese historical urban sites such as the São Jorge Castle in Lisbon. Or José Marques Loureiro's *Jardim das Virtudes* - a 19<sup>th</sup> century vertical garden that stretches out on the steep slope terraces towards the Douro river in the heart of the Portuguese city of Oporto, which the Brazilian architect had visited around those same years. At the same time, the topographical sensibility shown by Lucio Costa here leads us to Dimitris Pikionis' ascent to the Acropolis of Athens (1951-57), where Kenneth Frampton has found a remarkable example of a contemporary kinetic experience of the surface of the ground through the gait (Frampton, 1995: 8-9). Indeed, in both works a irregular stone tapestry constitutes a promenade that leads to a sacred space and must be experienced through the slow locomotion of the human body as it negotiates the surface of the site.

But Lucio Costa's pathway cannot be seen apart from the massive earthworks that simultaneously opened space for Flamengo Park, a large green area of approximately 1.200.000 square meters built in the early 1960's on the Guanabara Bay with earth coming from the

dismantling of another central hill (Santo Antônio Hill). This mega-operation – led by a woman (Lota de Macedo Soares) and designed by a team of professional headed by Affonso Eduardo Reidy and Roberto Burle Marx – is again linked to an infrastructure and landscape design carried out with huge displacements of earthmass in order to create the Flamengo Landfill (*Aterro do Flamengo*). This meant an expressway linking the historical Centre to expansion areas to the South, an artificial beach, the Museum of Modern Art (MAM), several public facilities and the largest urban public park in Brazil, completed just as the democratic period drew to a close.

The iconic status *Parque do Flamengo* achieved makes the invisibility of Brasilia's Bus Platform even more symptomatic, tough. As if the Platform had turned out to be a blind spot that somehow matches Adrian Gorelik's reading of Brasilia itself, in terms of the neglected place it has had in urban thought (Gorelik, 2011: 172-201). This relationship could trigger many directions of reflection. Specially when we consider that Lucio Costa's urban design for Brasilia remains undeniably tied to a modernist approach, while the Bus Platform seems to anticipate what in the last two decades is being described as a "turn toward infrastructure" (Stan Allen, 1999: 46-89).

By overlooking for so long both the Bus Platform and the access to the Outeiro da Glória we have therefore not only limited Lucio Costa's work to a modernist frame, or disregarded him as a landscape architect. We have also missed important clues that can help us in reassessing the contradictions and singularities related to the complex processes of colonization, urbanization and modernization in the Americas. The issue at stake here seems to remain in any case one of the greatest challenges for Brazilian architects: the call for a dialectical relationship between colonial and postcolonial landscape. One that responds to a long history of land exploitation and dispute by restating the power of public space amidst a political struggle that is more than ever critical today.

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## **Petroleum Colonization on the Mexican Gulf Coast**

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### **Background: Gulf of Mexico**

The geopolitical limits of the Gulf region have varied throughout history and were much greater than what we recognize nowadays. Between the fifteenth and seventeenth centuries one could speak of a greater or circum Caribbean region. By the eighteenth century, international conflicts, piracy, smuggling and a lack of investment caused a notable decline in a maintenance of infrastructure development in the region. The Gulf-Caribbean then became merely a network of meeting points between the New and the Old Worlds, which through an efficient naval system brutally looted the continent. It was thus that Gulf-Caribbean region began to fall apart, leaving Spanish domination behind and giving way to a more European formation in the region incorporating new cultures, languages, and ways of life into the native and mixed cultures, and through its economic system and internal culture continued with regional exchanges.

Once Mexico's independence was established, the subsequent administrative and territorial reorganization modified the geopolitical limits of the Gulf-Caribbean region, but not the regional formation that had been in place since the colonial era: if independence meant the end of the political order in the region, the social and cultural links did not disappear, and the cultural frontier, with its multiple but enormously porous filters, remained open and was a witness to a constant interaction of regional influences including behavior, musical tastes, cuisine and dances.

Thus, the definitive geopolitical fragmentation of the region began in 1848 with the war with the United States and Mexico's loss of almost half of its territory along the Gulf Coast. However, the states in the Gulf coastal region would maintain similar development schemes during the following decades until the arrival of petroleum exploitation, of which part of that process would be agricultural modernization.



### **Petroleum Colonization**

The exploitation of the first deposits (Tamaulipas, Veracruz and Texas, 1901-1910) were carried out at a pace which was moderated by the nascent petroleum industry's lack of technology and organization. By the end of the seventies, the petroleum industry along the Gulf had become the driving force of the economy and played a fundamental role in the organization of regional and national space, eventually managing to establish an urban model that was repeated along the length of the Gulf Coast, finally conforming with the spatial system that Prévot Schapira (2009) coined as the petroleum archipelago.

The coastal area's re-assessment as economically productive has brought about its radical transformation, submitting the populace and the local economy to extraordinary changes such as in the organization of urban-regional space. From that point on, the exploitation process acquired a disproportionate rhythm, in addition to causing serious socio-environmental changes in the region (Tudela, 1989; Loredó & Bartorila, 2021).

Petroleum activity in all of its stages: exploration, drilling, refining, petrochemical distribution and commercialization, along with the arrival of large economic investment without any territorial zoning policies to support this accelerated rate of growth has developed in the study zone with which we are dealing. Once the petroleum expropriation (1938) was consolidated and the Petroleum Workers Union of the Mexican Republic was created, STPRM, (1935), modernization and industrial development came to be viewed as an area of common destiny for the people of the Gulf. Since then, Pemex and STPRM have become the new colonizers, the main actors in the political and social construction of the oil territories including the spatial organization in the same way foreign companies had always done.

The establishment of colonies is a very old phenomenon, developed by many civilizations and presented in a wide range of types, although all of them participated in an identical initial motive: generate a new place that would facilitate the exploitation of an endogenous resource of that space discovered by and for the interests of the demanding community which provides, as the original identity of a new foundation, its own inheritance. According to Checa-Artasu and Soto (2015), the oil-producing cultural landscape is a political landscape, in which spaces and structures are conceived to impose unity and order, as opposed to the vernacular landscape. In political landscapes, power is deployed in the act of colonization, and petroleum industry installations are a symbol of this power. Objects pertaining to oil industry activities such as wells, tanks, ducts, housing, hospitals, administrative buildings, etc., also complete this

landscape of architectonic objects directly or indirectly related to the production of petroleum. The functional organizations of these settlements as well as the relational system among the architectonic objects composing that system reflect the historical and ideological apogee of the colonizer.

### **Petroleum Cities in Tamaulipas and Tabasco**

Mexico was the third-leading petroleum producing country in the world between 1910 and 1919. The accelerated growth in the Gulf coastal region between 1920 and 1951 is comparable to no other city or region in the country. In no other place has such industrial concentration and/or demographic, commercial and financial growth ever been recorded (Hernández-Elizondo, 2006). However, this exceptional development presented urban, environmental and service limitations comparable to other petroleum cities in Latin America such as Maracaibo and Cabinas in Venezuela. The implanting of new cultural, ideological and economic values linked to the modern urban medium resulted in the crushing of many of the local constructive traditions and ways of life that were part of the local cultural fabric. In addition, it dramatically and visibly separated two worlds that functioned as a result of the modernization phenomenon: the industrial elite, dominated by foreigners, and the workers. Thus began the stratification of the urban space following the pyramidal logic of corporate control.

Industrial, port, real estate, infrastructure and equipment projects were carried out in an almost rural context to which outsiders arrived, attracted to employment opportunities. Arriving in waves to the entire region beginning in the first decade of the twentieth century, those who participated in the construction of these projects, a difficult number to calculate, at first found provisional lodging. These new residents found work in cleaning and land clearing, later becoming construction workers in the oil field plants and installations. Subsequently, they found relatively stable work in industrial production. Finally, these workers were able to establish themselves in settlements reflecting the diverse value systems according to an historical conjuncture determined by the ideological order of the new foundational space.

As opposed to Tamaulipas, Tabasco's relationship with petroleum was born after 1950 and reached its height in the seventies and the eighties. Ciudad Madero, in Tamaulipas, originally a petroleum exploitation colony, has been completely re-dimensioned, increasing in population, services and functions to the point of becoming a true city with a now recognized social identity. Ciudad Pemex, in Tabasco, also a petroleum exploitation colony but constructed by the State,

has evolved in a very different way, maintaining its circumstantial character which has led it to its current situation of utter depopulation.

In both cases, urban stratification separated society into three groups: the first two are the corporate elite and the specialized employees whose homes are concentrated within the limits of company-owned land in exclusive neighborhoods offering houses with multiple rooms, modern sewer systems, potable water, etc. Not all enjoyed the same buildings, but they were at least integrated into the same urban space.

The third group is composed of the workers and the unemployed. These settlements of the transient population are worked out as small, transitory and seasonal nuclei, functioning exclusively as living quarters for whatever labor is needed at a given moment, which without a doubt generated a new society functioning as a reflection of the values the petroleum market gave to its workers. Three types of living quarters can be identified for them. The first two are shacks for workers, constructed with flammable materials and installed dangerously close to railway workshops and petroleum tanks, and homes for qualified workers built close to refineries. Both types were company property and were either rented or temporarily ceded to workers. Finally, there are the self-constructed houses.

The form and order of the new nuclei and their relationship with the placement and zone of influence of the plants tells us much about the true moral epicenter of the petroleum cities. The case of Ciudad Madero is an example clearly illustrating the idea of the petroleum industry landscape thanks to the social control of the petroleum union. The administrative office building of Section 1 of the STPRM, which was constructed in the middle of the downtown area across from the cathedral in one of the main squares, is an obvious declaration of its power. The Ciudad Madero Convention Center was inaugurated in 1985. The powerful volume of emulates the Houston Astrodome, which was built in the sixties. The almost 10,000m<sup>2</sup> construction project with a capacity of up to 15,000 persons is monumental and completely off the contextual scale.

In Ciudad Pemex, when it comes to area and symbolic character, communal spaces (parks, churches, markets, etc.) can hardly compete when lined up against this giant, the Plant, which occupies 50% of the settlement's land area. When one takes into account volume and social presence, the building with the greatest counterweight is the Ciudad Pemex General Hospital, which also forms a part of the services installed by the quasi-state entity. It is an edifice that complies with the typology established for Pemex hospitals throughout the country: robust

concrete structures, horizontal development, emphasis on the main entrance (which includes the Pemex logotype), etc., and has nothing in common with the mediocre residential architecture surrounding it. Thus, a crushing cultural homogenization process, to which is added the standardization of architecture, leads to the expression of hierarchy and generates separate environments reflecting parallel realities between colonizers/employers and the general population.

## Conclusions

Modernization, which was brought about mainly by the systematic exploitation of natural resources by a capitalistic oligarchy and under the auspices of the national government, brutally and almost explosively accelerated the pace and rate of growth of the petroleum cities along the Mexican Gulf Coast. The seriously precarious housing conditions and the massive auto-construction projects in the southeastern oil cities are a clear result of the region's accelerated modernization. These conditions and processes, always brought on by the installation of a plant or drilling operations, dramatically contrast with the organization of a traditional settlement. The development of housing, public works, industrial buildings, etc., in the oil towns is defined through a specific type of architecture, which is, without a doubt, the testimony of aesthetic and cultural models imposed by the modern canon and its formal vocabulary. It is a type of architecture that covers a longing for modernity and is imposed in peripheral contexts, but ends up undermining local cultural expression. For this reason, the territories, landscapes of oil industry towns are interesting in themselves as they constitute the most complex territorial configurations in the history of the Gulf, a history of colonization that began with the arrival of the Spanish and has continued to this day.

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## The UNOR 40 Plan (1971-1972) by Hestnes Ferreira - as a more structured expansion proposal for a planning unit in Lisbon

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### Abstract

The aim of this paper is to present the work of Hestnes Ferreira and his team, namely for the UNOR 40 planning unit in Lisbon, as a study case of an infrastructural enhancement in Mainland Portugal during the early 1970s. The UNOR design teams were recruited outside the municipal staff. For UNOR40 the team was coordinated by Raúl Hestnes Ferreira and included architects Rodrigo Rau and Vicente Bravo, landscape architect Gonçalo Ribeiro Teles, and urban geographer, Jorge Gaspar. These oversaw the planning of a large area between Campo Grande and Benfica, using a traffic study developed by French consultants. The main results of the UNOR 40 Plan were to redefine the layout of the North-South Hub, Combatentes and Lusíada Avenues, as a way of ordering the urban network of this sector, including the urban access to Telheiras. The plan also comprised the creation of an institutional square, based on a program that included museums, institutes, office buildings, and a church. However, the applicability of the UNOR 40 Plan was practically nil, with the exception of the layout of some road links.

**Keywords:** UNOR 40 (1971-1972); Institutional Square UNOR 40 (1973); Hestnes Ferreira; Lisbon

### Introduction

This article highlights the importance of the various plans developed for Lisbon, after reviewing the PDUL (Urban Development Plan of Lisbon, 1959), focusing the research on the Unit of Spatial Planning - UNOR 40, coordinated by the architect Raúl Hestnes Ferreira. Thus, the proposal presented by the team is analysed, which included, besides the planning of this unit the creation of an Institutional Square. However, political inertia and lack of public investment, prevented this UNOR plan from being implemented. However, it is important not to forget the importance of this study and the impact that it would have had on the city of Lisbon, if it had been implemented.

## Urbanism and Hestnes Ferreira

The educational and professional background of transcultural Hestnes Ferreira, from Finland to the United States of America, provided a distinctive understanding of the urban issues.

In Finland, in the 1957/58 school year, Urbanism classes with Otto Meurman and those of Architecture Studio with Heikki Siren, were fundamental to realize that urbanism did not depend only on the relation between buildings, but also on the establishment in the city and economic and social issues.

In 1960 the first conference focusing on the problem of housing<sup>1</sup> was held in Portugal. Among the various presentations, Nuno Portas stressed "... *the need to establish a "Section of Psycho-sociological Problems of the Habitat "and of an "Institute of Housing and Urbanism [...]"*". (Bandeirinha, 2011: 65)

In March 1960, Hestnes Ferreira knowledge of Finnish Architecture led to the invitation to hold a conference and the publication of an article in the magazine *Arquitectura* during the Finnish Architecture Exhibition<sup>2</sup>. Hestnes Ferreira refers to the importance of this exhibition as one of the few "*events capable of contributing to the elucidation of a non-specialized public*" with the aim of finding out about the "*importance of the modern architectural movement and the vast field architects have for their achievements*". (Ferreira, 1960: 60-61) In the article Hestnes Ferreira describes the atmosphere of the exhibition, where there was a recreation of a universe that suggested the Finnish landscape, as a way of understanding the nature of that architecture. Before going to the United States of America, Hestnes Ferreira collaborates in Urbanization office of the Municipality of Almada, between 1960 and 1962, coordinated by architect José Rafael Botelho, in the design of the Master Plan for the Municipality of Almada. (Saraiva, 2011: 119)

In the United States of America, in 1962, he attended Yale University as a fellow of the Calouste Gulbenkian Foundation. And the following year he attended the University of Pennsylvania to study at the Architecture Studio, with Louis Kahn, with the support of Rice and Le Ricolais. He attended the subjects of City History, Gutkind, Urban Structure, Perkins, Urban Sociology,

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<sup>1</sup> This conference was organized by the National Union of Architects, at Galveias Palace, between February 11th and 14th. In addition to Nuno Portas, Peres Fernandes, president of the Union, Rui Mendes Paula, Raul Ramalho, Bartolomeu Costa Cabral, Octavio Filgueiras and Coutinho Raposo attended. Besides, architect and urban planner Robert Auzelle and sociologist Chombard of Lauwe attended as guests.

<sup>2</sup> Architects like Aalto, Meurman, Kivinen, Lindgren, Kraström, Ervi, new generation of Ahola took part in this exhibition, as well as those directly linked to the architecture school: Siren, Kraks, Tröm, Petäjä.

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

The UNOR 40 Plan (1971-1972) by Hestnes  
Ferreira - as a more structured expansion  
proposal for a planning unit in Lisbon

Alexandra Saraiva

Rapkin, Concrete, Komendant, and Patton Landscaping Structures, which contributed to increasing his knowledge of Urban Planning. Between 1963 and 1965, Hestnes Ferreira collaborated in the office of Louis Kahn in Philadelphia and participated in different projects. After returning to Portugal in 1966, Hestnes Ferreira shares some thoughts on the American city in the national magazine, *Arquitectura*, number 91, dividing the article into five points: "*Conflict and Dilemma*", "*Dispersion and Increase of Suburban Life*", "*The current situation of large cities*", "*Needs for structural reforms for urban planning*", "*The city, technological evolution and location of cultural centers*" and "*Leisure and remodeling urban life*".

The following year, Hestnes Ferreira's published in the same magazine, number 99, an article on "*The aspects and currents of American architecture*", where he demonstrates the need to adapt cities to the new experiences and demands of modern society, reflecting on the importance of urban planning, and the intervention of sociologists, geographers and anthropologists in the teams of designers other than planners and architects.

Nine years later, in 1969, the first Conference on Housing Policy was held, an important milestone as far as the analysis and the influence of the interpretation and solution of the housing problem are concerned. The main objective was to "*establish a set of measures*" and try to outline an "*integrated strategy for problem solving*", which Hestnes Ferreira describes with some regret in his essay on the National Meeting (Ferreira, 1969).

In Portugal, Hestnes Ferreira works in the Housing Technical Office (GTH) of the Lisbon City Council, in the Lisbon Master Plan and in projects for Chelas between 1966 and 1967. In 1969, during the preliminary stages of the revision of the Chelas Urbanization Plan (PUC) Hestnes Ferreira already indicated that there was a need to make corrections to the integration of Chelas and to the internal articulation of the fabric, proposing a more coherent linking system, achieved by the exchange between the outer cores. As Ana Moreira states, for Hestnes Ferreira the solution, "*would allow the increase of the density that the fabric needs to stabilize, generating activities that would direct the population movement to the residential areas*". (Moreira, 2010: 79)

During the 70s he integrated the General Administration of School Buildings, participating among other projects, in the review of the Plan of the University City of Lisbon. Coinciding partly with this period, between 1976 and 1986, he was an external consultant of the Municipality of Beja, supporting the Department of Urban Management.



In the area of Physical and Urban Planning, in 1971, he developed the UNOR 15 plan for Campolide (Fig. 1); as an integral part of the Lisbon Master Plan, interrupted in 1972 due to indecisiveness of the municipality. In the same period, he develops the Plan for the new Administrative and Institutional Center UNOR 40, until 1972, which is the focus of this article. This introduction contributes to framing the academic and professional path and justifying the solutions adopted by Hestnes Ferreira for the development of the UNOR40 plan.

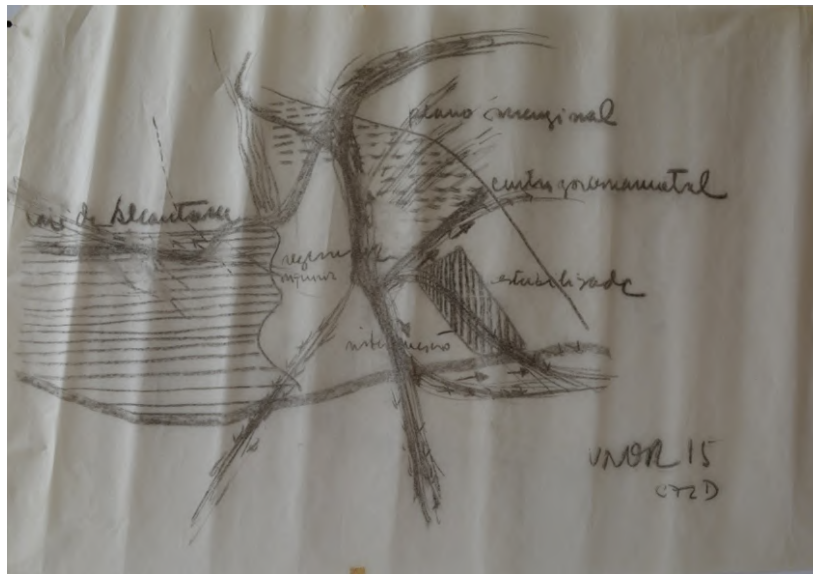


Fig.1 Masterplan UNOR 15

(Dimension: 74x50cm; Support: Vegetable and charcoal pencil)

Source: Raúl Hestnes Ferreira Estate, Marques da Silva Foundation

## The Lisbon Urban Development Plan (PGUCL)

Between 1959 and 1967 Lisbon underwent many changes, such as increased car traffic, the start of operation of the subway, the construction of the bridge over the *Tejo*, the proposal for *Olivais Sul*, the growth of the peripheral areas of the city (*Olivais, Moscavide, Sacavém, Ameixoeira, Lumiar, Pontinha, Carnide, Benfica* and *Amadora*) and the tertiarization of the centre.

During this time, with the explosion of the peripheral centres, the need to create a ring road, the current 2<sup>nd</sup> ring road, already covered by the PGUEL<sup>3</sup> plan 1948 of Etienne de Gröer. Although it was built in a phased way, it is possible to observe, through the comparison of the military

<sup>3</sup> In 1938 under the presidency of Duarte Pacheco, the architect and town planner Étienne de Gröer, defined the main lines of development of the city. In 1948 the plan was completed and approved by the CML, although it never received governmental approval.

letters of 1951 and 1971, the intense urban explosion that followed and the total construction of the road links that would conclude the entire ring road of the city.

In 1967, the Lisbon City Council (CML) commissioned the architect and urban planner Meyer-Heine to review the PDUL<sup>4</sup>, which again resulted in a plan that had strategic lines of intervention in Lisbon, adopting the name General Urbanization Plan of Lisbon (PGUCL). As a result, a territorial planning instrument covering the entire area of the county between 1963 and 1967 was created, but only published in 1977, with some changes, enforced through Ordinance No. 274/77, dated May 19.

The main strategies were the creation of a traffic hub with a link to the north to Porto motorway (A1) and to the south to the *Tejo* Bridge, passing through the airport (current north / south link); the creation of Avenida da Liberdade which would be a freeway, with the purpose of reducing traffic in the city centre through a direct connection to *Sete-Rios* at the top of the park (this solution was not implemented in its entirety); continuation of the criterion zoning proposed by De Gröer in 1938, through the Creation of Territorial Planning Units (UNOR), which divided the territory into "*base planning units*"; and building a ring road to connect all the main links of the city (future 2nd Ring Road).

We can state that the UNOR plans were a consequence of the Urban Development Plan of Lisbon (PGUCL), developed by the architect and urban planner Meyer-Heine. This, in turn, was conceived as an instrument that would respond to new urban realities, the increase of car traffic; the start of the metro network; the construction of the *Tejo* bridge; the process of the service industry moving to the city centre; and the growth of its surroundings.

Between 1968 and 1970, the president of the Lisbon City Council, Santos and Castro, following the drive of the so-called "*Marcelista's Spring*", and after seeking internal advice, decided to hire some young architects to develop urban plans for the city, UNOR plans.

### **The Territorial Planning Unit - UNOR 40**

The UNOR 40 team was coordinated by Raúl Hestnes Ferreira and included the architects Rodrigo Rau and Vicente Bravo, the landscape architect Gonçalo Ribeiro Teles and the urban geographer, Jorge Gaspar with the cooperation of the 3rd Bureau (Master Plan) of Urban

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<sup>4</sup>The 1959 Urban Development Master Plan (PDUL) kept most of the proposals of the previous Plan, although it made important changes. It was held at CML, in the Office of Urban Studies (GEU) by Engineer Guimarães Lobato.

Development Services (D.S.U.) of the Lisbon City Council (CML), including the Sector of Traffic Studies.

According to Hestnes Ferreira the proposed plan respected the existing fabric, integrating it, but at the same time trying to respond to the constraints imposed by the construction of the Lisbon University City, the *Universidade Católica*, Santa Maria Hospital, as well as the presence of the 2nd Ring Road and the scheduled link *Eixo Norte -Sul*, the two main roads.

The base program, provided for the establishment of an Institutional Square, located at the confluence of two urban roads of great importance. In addition to the physical space of the square, there were spaces for leisure and culture, a temple, as well as administrative spaces - public and private -, commercial and *Torre do Tombo*<sup>5</sup>.

Hestnes Ferreira (1972) states that the general guiding principle of the proposed plan was "*the coexistence of tertiary and residential activities*", pointing out that the separation of uses "*is contrary to the urban Lisbon tradition*" leading to imbalance in the cycle of day-night life, residential marginalization and the excessive specialization of leisure and work areas. However, he stressed that each of these functions should have both accessibility and environmental conditions.

The plan proposed the delimitation of the area of intervention, by means of a definition of priorities. Therefore, they defined subareas, emphasizing a new proposal for a road system. Thus, the plan proposed occupancy and quantification bearing in mind the previous constraints, ensuring a definition of the location and number of facilities and green areas to be built, not forgetting promotion, as well as the expected stages and the suggestion of the necessary foundation works to implement, for the success of the plan. Thus, we describe these elements, based on the specification of the first plan delivered by the designer team in 1972, which are part of the legacy of the architect, consulted at Marques da Silva Foundation.

Essentially the proposed team of designers evidenced the Institutional Square as an aggregator and driver of the whole plan. The square was delimited to the North by the 2<sup>nd</sup> *Circular* (Ring Road) to the East by the Games Park of the University City, by Street 2, parallel to *Avenida do Centro Governamental* and to the West by the road, which was the main regional distributor link.

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<sup>5</sup> This public facility was later built in the University City.

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

The UNOR 40 Plan (1971-1972) by Hestnes  
Ferreira - as a more structured expansion  
proposal for a planning unit in Lisbon

Alexandra Saraiva

As previously mentioned, the road traffic systems for this UNOR resulted from the overlapping and interconnection of two systems, following the principles of the Master Plan and the new requirements for east-west communication systems. They were comprised of the Traffic Distributors at the level of metropolitan areas, and the other of urban routes of general importance, and finally of local roads.

The first corresponded to the future North-South link, the Ring Roads and the *Via de Telheiras*, the second *Avenida do Centro Governamental*, currently called *Av. Lusíada*, *Av. António Augusto de Aguiar* and *Av. dos Combatentes*, and the latter would correspond to the secondary streets proposed in the plan. (Ferreira, 1972: 3-4)

This concept was supported by the team created in the 3rd Bureau of Urban Development Services (D.S.U.) of Lisbon City Council (CML), for the design of these two overlapping systems, allowing the desired hierarchy of routes and the definition of the most suitable routes. (Fig. 2). Thus, they contemplated the extension of *Av. António Augusto de Aguiar*, to *Avenida do Centro Governamental* and to *Av. de Telheiras*, and the intended direct link to *Av. da Liberdade- Fontes- Av. República*. (Ferreira, 1972: 4)



Fig.2 Road Network Study Plan

(Dimension: 74x50cm; Support: Vegetable and Felt Pens)

Source: Raúl Hestnes Ferreira Estate, Marques da Silva Foundation

The proposed Institutional Square would be located at this junction granting "*physical, visual and psychological viability of the new axis of expansion of Lisbon*" (Ferreira, 1972: 4). The



# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

The UNOR 40 Plan (1971-1972) by Hestnes  
Ferreira - as a more structured expansion  
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*Alexandra Saraiva*

*Avenida do Centro Governamental, future Av. Lusíada, would directly connect to the Av. da Liberdade axis and the Av. da República to Carnide and Benfica areas. This link offered a new urban meaning, facilitating connections, by means of both public and private transport.*

The descriptive report also stresses the importance of this new route to public transport, connecting different points of the city and the Santa Maria Hospital, designated as a School Hospital. In the descriptive document we see the importance of the local parking areas, from the road to the pedestrian system, and at the same time we perceive how environmental quality was foreseen and respected, with the creation of exclusive routes *"from the park areas to the areas of urban concentration, from the tracks along the urban avenues to the exclusive routes, the pedestrians will find in this zone a real receptivity, documented in the square where pedestrians and cars will move to different levels."* (Ferreira, 1972: 5)

The Institutional Square (Fig. 3) proposed an independent road and pedestrian system, linking shopping areas, museums and cinemas, providing a panoramic view of the south of Lisbon and the *Monsanto* area.

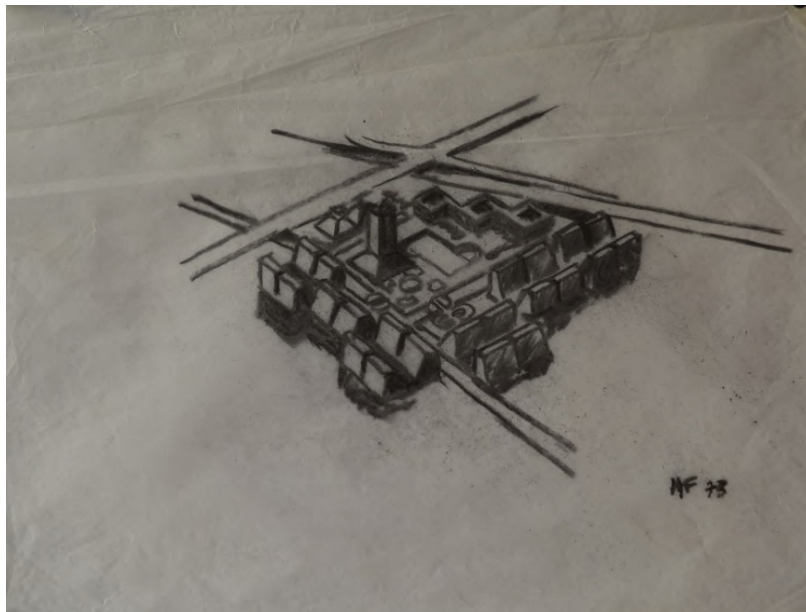


Fig.3 Perspective of the Institutional Square

(Dimension: 33x25cm; Support: vegetable paper and charcoal pencil)

Source: Raúl Hestnes Ferreira Estate, Marques da Silva Foundation

In terms of balance, the occupation structure of UNOR 40 contemplated keeping the green areas in the flat areas at the highest level and that the densified Tertiary zones were distributed along

the main urban roads, while the Residential areas would be located on the slopes and valleys, involving the Institutional and Tertiary zones, and the proposed Institutional Square.

Green and sports areas were distributed throughout, relating to each other from the Campo Grande to the green area that stretched between the Zoo and the eucalyptus *Quinta de Bensaúde*, expanding their cultural and leisure areas.

In the descriptive document, point "3.5 - *Promotion of the Project, stages and land policy*", the team stressed the relevant role of the Lisbon City Council to ensure the coordination and execution of the plan, so that "*foundation works*" of the project "*according to the best interests of the city, of its municipal body, that is, ultimately of its present and future inhabitants*". (Ferreira, 1972: 11)

Nevertheless, the design team assumed that the priority of the area to be studied and programmed depended on the absence of definitive studies of occupation and the start-up of the viaduct of *Av. António Augusto de Aguiar*.

The material produced for this Plan was vast and diversified, in addition to the various models at different scales, several oils were also made with different variations of the urban fabric as well as a large number of rigorous designs with different scales that included plants, cuts and elevations.

### **Concluding note on non-implementation of UNOR 40**

Between 1960 and 1964, the Master Plan of the Lisbon Region was concluded and the "*purpose of the Administration was to articulate the economic development in a model of Planning for the Region*". (Pereira, 2004: 138)

However, the first objective analysis on the dynamics of soil transformation in the metropolitan area occurred between 1972 and 1973 by Juan António Solans in the framework of the Review of the Master Plan of the Lisbon Region. In terms of dynamics, the city of Lisbon could not resist the pressure and land and real estate speculation, which had great impact at political and social level. There were consequences for the planning and management of the Public Administration which generated permanent contradiction between collective and private interests, in addition to conflicts between developers, citizens / users and public administration. This meant the required objectives to generate balanced and sustainable changes were not achieved.

The UNOR 40 plan was not completed in its entirety, only some of the proposed road characteristics were used and implemented. The global understanding of an area and the creation of multidisciplinary teams was very important for the success of the projects. Likewise, this success depended on the commitment and effectiveness of government policies relating to land policies to be promoted by the executive city council, as well as national agencies. The understanding of mixed zoning as a driver of the current urban experience, associated to the recognition of the automobile as a decisive factor in the development of the city, was very important, as well as the definition of the hierarchy of roads, by quantifying traffic and urban design established for its profile and the location and number of parking lots provided for the entire area of intervention. The main point was to favour the creation of a large institutional Square as a factor adding to the whole plan of this UNOR.

The development of the Plan of the new Administrative and Institutional Centre UNOR 40 had an impact on the work of Raúl Hestnes Ferreira and was the main reason for his nomination as the leader of the SAAL team, for the FONSECAS and CALÇADA Neighborhood, due to his prior knowledge of the site.

### **Acknowledgements**

To Raúl Hestnes Ferreira for making available and accessible all the necessary material, as well as the support given throughout my research process. To his family, more specifically to his daughters Sílvia, Adriana and Ingrid, who, after the death of their father, in February 2018, allowed me access all the estate until donation and transfer to the Marques da Silva Foundation Institute (FIMS), in July 2018.

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## THE BEGINNINGS OF THE POLYTECHNIC INSTITUTE OF COVILHÃ (1973-1975): A SEARCH FOR CONTINUITY

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### Abstract

This paper focuses on the early stages of the Polytechnic Institute of Covilhã (IPC), between 1972 and 1975. It addresses the Global Preliminary Study (1973) and the project (1973) and construction of the first phase, which proposed the transformation of an empty industrial building – an ancient Pombaline-style factory later transformed into military facilities – with a recognized historical value.

This institute was born of local popular efforts of the Working Group for the Planning of Cova da Beira and, later, of the Working Group for the Creation of Higher Education in Covilhã (Grupo de Trabalho Visando a Criação do Ensino Pós-Secundário na Covilhã, GTVCEPSC), to counteract the economic decay and abandonment of the interior of the country by the younger strata of the population and was created in the context of political education reform (Reforma Veiga Simão) associated with the “democratizing of education,” by the Ministry of Education (MEN).

The program resulted from several meetings held between 1972 and 1973 between MEN, the Ministry of Public Works (MOP), the GTVCEPSC, and technicians from the Grupo de Planeamento e Arquitectura (GPA), the architectural office which would be commissioned to complete the projects). Finally, in 1973, the GPA proposed a base program, which was developed simultaneously with the Global Preliminary Study.

The Global Preliminary Study offered a first proposal for the internal organization of the whole, taking the full functioning of the Institute into consideration. The criteria for the intervention included careful placing of the volumes on the hillside (forming platforms), preserving the character of the existing building, the multifunctionality and permeability of spaces, and opening its use to the local population. In this study, the group of buildings was organized around an axis defined by a new walkway, an element of continuity (but not imitation).

The plan for the first construction phase (1973) proposed the transformation of the north building, called Pilão. In keeping with its experimental character, the project tested several solutions that would be adopted in the subsequent projects for the Institute, while applying many others that had been tested in previous projects, such as the primary school near São Jorge Castle in Lisbon (1959-1970).

Construction began in February 1974. During the demolition, discoveries about the structure forced changes to the project, leading to delays in the building process. Difficulties related to the acquisition of materials (especially during the months of June, July, and August), workers’ strikes, and the diminishing of the weekly number of working hours also delayed the completion date.

Classes began on February 17, 1975, on the upper floor. Work on the ground floor was finished on the 30th of March. The building was completed on June 10, 1975 and is the first of the complex that today forms the University of Beira Interior.

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

The Beginnings of the Polytechnic Institute of  
Covilhã (1973-1975): A Search For Continuity

*Mariana de Oliveira Couto*

It is a part of a wider group of higher education buildings produced by the GPA, which includes the buildings for the School of Engineering of the University of Minho (1983-1991), the School of Agriculture (1982-1986) and the School of Higher Education (1993-1996) of the Polytechnic Institute of Bragança, and the Agriculture School of the Polytechnic Institute of Santarém (1990-1995). In his own office, Bartolomeu Costa Cabral also designed buildings for the School of Technology of Tomar (1988-1990), a pavilion for Lisbon's School of Agriculture (1991-2000), and the Engineering School for the Catholic University, in Sintra (1995-2001).

The Institute was Bartolomeu Costa Cabral's first building for higher education and his first project facing the problem of transforming a building of recognized historical value. It was developed in the same year he found his own office, where he simultaneously conceived the designs for the Empresa Pública de Urbanização de Lisboa (EPUL) building at Martim Moniz 1973-1984) and the studio house at Rua da Verónica (1973-1975), and it materializes his search for continuity, which manifested itself in his words and in his buildings over time.

**Keywords:** Bartolomeu Costa Cabral, Covilhã, higher education building, continuity

*Introduction*

The Polytechnic Institute of Covilhã (IPC) was officially created by Decree-Law no. 402/73 on August 11, as were institutes for the cities of Faro, Leiria, Setúbal, Tomar, Vila Real, Coimbra, Lisboa, Porto, and Santarém, when the “city of snow and wool” was enduring one of the greatest crises of its history (AA.VV., 2005: 7). This decree-law arose in the course of a reform of the education system, Reforma Veiga Simão, supported by Law 5/73 on July 25, 1973 (Lei de Bases do Sistema Educativo) as part of a political strategy of openness by then-Prime Minister Marcello Caetano. This reform was presented by Minister of National Education Veiga Simão as a necessary measure to eradicate the “spiritual crisis” caused by the growing materialism and the consequent absence of humanism in Portuguese society and was emphasized as a way to bring democracy into the education system, thus expressing the ascension of the popular movement (Stoer, 1983: 818-819).

This was Bartolomeu Costa Cabral’s first building for higher education and his first project facing the problem of transforming a building of recognized historical value. It was part of a wider group of buildings for higher education produced by the Grupo de Planeamento e Arquitectura (GPA), which includes the buildings for the School of Engineering of the University of Minho (1983-1991), the School of Agriculture (1982-1986) and the School of Higher Education (1993-1996) of the Polytechnic Institute of Bragança, and the Agriculture School of the Polytechnic Institute of Santarém (1990-1995). In his own office, Bartolomeu Costa Cabral also designed buildings for the School of Technology of Tomar (1988-1990), a pavilion for Lisbon’s School of Agriculture (1991-2000) and the Engineering School for the Catholic University, in Sintra (1995-2001).

The Global Preliminary Study and Phase 1 (1973) of the plans for the IPC were developed in the same year Costa Cabral found his office, where he simultaneously conceived the designs for the Empresa Pública de Urbanização de Lisboa (EPUL) building at Martim Moniz Square (1973-1984) and the studio house at Rua da Verónica (1973-1975)

*The GTVCEPSC and the choice of the Pombaline-style building*

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

The Beginnings of the Polytechnic Institute of  
Covilhã (1973-1975): A Search For Continuity

Mariana de Oliveira Couto

If the IPC was only made official in August of 1973, it began long before that. When Covilhã, the “city of snow and wool,” was enduring one of greatest biggest crises, Dr. Duarte Simões (then the secretary-general of the Group for the Regional Planning of Cova da Beira, formed in the 1960s), had the idea to create an institution for higher education in an attempt to stop economic decline and to prevent young people from leaving the region. Thus, in 1970, the Minister of National Education visited the city of Covilhã and appointed the Director General of School Administration and the President of the Municipal Council of Covilhã (who was also president of the Group for Cova da Beira Planning) to a new group to study the possibility of providing higher education in Covilhã (Grupo de Trabalho Visando a Criação do Ensino Pós-Secundário na Covilhã [GTVCEPSC]).<sup>1</sup> To this group – directed by Vicente Borges, President of the Municipal Council of Covilhã (Câmara Municipal da Covilhã [CMC]) and including technicians from the Ministry of Public Works (MOP) and the Ministry of National Education (MEN) and representatives of public and private interests in Covilhã<sup>2</sup> – was entrusted the definition of the courses to be offered by the Institute and the selection of proper facilities.<sup>3</sup>

The municipal council donated to MEN<sup>4</sup> the ancient industrial Pombaline-style building, which had been housing military facilities (Quartel do Regimento de Caçadores 2) and was, at the time, empty. This building was visited in the summer of 1972<sup>5</sup> by MEN technicians, who determined that it satisfied the necessary requirements.<sup>6</sup> Later, after MEN had decided to create a Polytechnic Institute in Covilhã,<sup>7</sup> on November 21, 1972, it was also inspected by technicians

<sup>1</sup> GPA, Simões, Duarte, “Programa para a Adaptação a Instituto Politécnico da Covilhã do Antigo Edifício do Regimento de Caçadores 2 Actualmente Propriedade da Câmara Municipal da Covilhã”, November 29, 1972, p.1

<sup>2</sup> GPA, Simões, Duarte, *Ibidem*.

<sup>3</sup> SGEC, Ministério da Educação Nacional, Direcção-Geral da Administração Escolar, Ofício n.º 5020, November 7, 1972

<sup>4</sup> GPA, Simões, Duarte, *Op. Cit.*, November 29, 1972, p.2.

<sup>5</sup> SGEC, Crespo, Vítor, Ministério da Educação Nacional, Direcção-Geral do Ensino Superior, “Informação Sobre o Programa de Obras de Adaptação de um Edifício da Câmara Municipal da Covilhã (Antigo Quartel de Caçadores, 2) a Instituto Superior Politécnico da Covilhã”, December 30, 1972

<sup>6</sup> SGEC, Direcção-Geral da Administração Escolar, Ministério da Educação Nacional, Ofício n.º 5020, November 7, 1972; SGEC, Crespo, Vítor, *Op Cit.*, December 30, 1972

<sup>7</sup> According to “Ofício n.º5020”, although the financial means to build it was not yet guaranteed; these would only be requested to MOP in January 1973 (when the State budget was already approved and about to be implemented). In April 1973, MOP confirms that the building costs would be supported by Chapter 20<sup>th</sup>, Art.400, n.º2 of the State Budget for 1973 (“rubrica orçamental de Ensino Superior e Investigação Científica, capítulo 20º, Art.º400, n.º2”). Cf. SGEC, Direcção-Geral da Administração Escolar, Ministério da Educação Nacional, November 7, 1972, *Op. Cit.*; SGEC, Direcção das Instalações Universitárias, Direcção-Geral das Construções Escolares, Ministério das Obras Públicas, Ofício 693, April 6, 1973



# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

The Beginnings of the Polytechnic Institute of  
Covilhã (1973-1975): A Search For Continuity*Mariana de Oliveira Couto*

from the Directorate General of School Building (Direcção-Geral das Construções Escolares [DGCE]) of MOP. The latter recognized its historical value<sup>8</sup> as well as its suitability for adaptation to the proposed use; however, as a great deal of work would be required,<sup>9</sup> MOP technicians suggested a repetition of existing “decorative elements” in the process of restoration.<sup>10</sup>

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<sup>8</sup> SGEN, Pereira Brandão, Augusto, “Relatório da Vistoria a um Edifício Pombalino na Covilhã para nele se instalar o Instituto Politécnico”, December 28, 1972, p.1

<sup>9</sup> SGEN, Direcção das Instalações para o Ensino Secundário e Médio, Direcção-Geral das Construções Escolares, Ministério das Obras Públicas, Parecer n.º E 1/73, May 5, 1973, p.2

<sup>10</sup> SGEN, Pereira Brandão, Augusto, “Relatório da Vistoria a um Edifício Pombalino na Covilhã para nele se instalar o Instituto Politécnico”, December 28, 1972, p.2

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

The Beginnings of the Polytechnic Institute of  
Covilhã (1973-1975): A Search For Continuity

Mariana de Oliveira Couto

## *Defining the building program*

In the face of the urgency of this task – for the Institute was to be opened as soon as October 1973<sup>11</sup> – in November 1972, the GTVCEPSC contacted the GPA<sup>12</sup> to request a building program consisting of a general study for the group of buildings and projects for Phases 1 and 2.<sup>13</sup> The coordination of the project within the GPA was assigned by Maurício de Vasconcellos to Bartolomeu Costa Cabral.

In the same year, the GTVCEPSC proposed a preliminary document in order to establish a basis for the general program.<sup>14</sup> In considering the renewal of the Pombaline-style building, it specified the courses to be offered, recommended that the work be completed in two phases, suggested that the spaces should be thought of in terms of their adaptability, presented some requirements of space and equipment, and offered a draft for a hypothetical distribution of the functions within the buildings. It did not, however, suggest any curricula for the courses.

This document was soon approved by MEN, which, given the novelty of the Institute, could not immediately provide a suitable program. Nonetheless, MEN stipulated that should the program be entrusted to a private architectural firm such as GPA, there had to be close cooperation between the Directorate General of School Administration (Direcção-Geral da Administração Escolar [DGAE], MEN), the Directorate General of School Construction ([DGCE], MOP), the Directorate General of Higher Education (Direcção-Geral do Ensino Superior [DGES], MEN), and GTVCEPSC, in order to follow the definition of the program and to facilitate its approval.<sup>15</sup> For that reason, the decision was made to hold regular meetings<sup>16</sup>

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<sup>11</sup> Even though this deadline was immediately considered, by DGCE (MOP), not possible. Cf. SGEC, Leão de Almeida, Rogério, Informação n.º 849/72/DIS de December 28, 1972

<sup>12</sup> The invitation would be addressed to Maurício de Vasconcellos in January 1973, by Adolfo Pinto Eliseu, State Secretary of Public Works.

<sup>13</sup> SGEC, Simões, Duarte, letter from GTVCEPSC to José Manuel Protes da Fonseca, Director General of School Administration, November 30, 1972

<sup>14</sup> GPA, Simões, Duarte, *Op. Cit.*, November 29, 1972, p.15

<sup>15</sup> Cf. SGEC, Crespo, Vítor, *Op. Cit.*, December 30, 1972, p.3

<sup>16</sup> At least nine meetings were held between January 24, 1973, and March 8, 1973, although only eight meetings are officially recorded. According to notes found in the GPA archives, the meeting in January 24, took place at the DGAE headquarters, with Arch. Alçada Baptista, Bartolomeu Costa Cabral and Hélder Camacho (GPA), Dr. Silveira Botelho and Dr. Maria da Graça Fernandes (MEN), Arch. Augusto Brandão (MOP) and Dr. Duarte Simões (GTVCEPSC).

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

The Beginnings of the Polytechnic Institute of  
Covilhã (1973-1975): A Search For Continuity

Mariana de Oliveira Couto

(from February 1<sup>17</sup> to March 8, 1973) between Maria da Graça Fernandes (DGAE), Augusto Pereira Brandão and Rogério Leão de Almeida (DGCE), João Silveira Botelho (DGES), Duarte Simões (GTVCEPSC), Alfredo Fernandes (MOP Inspector), and the GPA (namely, Bartolomeu Costa Cabral, Hélder Camacho, Luís Alçada Baptista, Lopo Pratas and Maurício de Vasconcellos) to develop the Institute's program.

A first document<sup>18</sup> was presented at the third meeting, on February 12, 1973, by the DGES-MEN. It addressed teaching methods and included provisional curricula; it also suggested the organization of the program according to several "zones," expanding from the "teaching zone". A second document was prepared by the GPA for the next meeting (on February 15), with a list of the required spaces. This was the basis for a new document, proposed by MEN<sup>19</sup> and debated at the meeting held on the 1st of March, even though there was still no officially defined curricular program for the Institute. At this meeting, it was also decided that the museum (deemed too static and outdated) and the Students' Association, contemplated in the GPA program and adopted in the proposal by MEN, were to be removed, as was the word "social" from "Social and Medical Services." The playing field, the parking lot, and the gymnasium were also omitted (the latter being replaced by a properly equipped gymnastics room).<sup>20</sup>

A final program was presented by the GPA, along with the global Preliminary Study and based on the meetings with the MOP,<sup>21</sup> MEN and the GTVCEPSC and the preparatory documents, the bibliography provided by the MOP,<sup>22</sup> and the information gathered during visits to similar

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<sup>17</sup> At this meeting Bartolomeu Costa Cabral insists on the creation of a (extraordinary) Coordination and Approval Committee which was to include elements of CMC, DGAE, DGCE, State Secretary of Public Works and GTVCEPSC. It was, however, refused. Cf. SGEC, "Instituto Politécnico da Covilhã, Reunião de 1.2.73 para esclarecimento de Programa preliminar e definição do Programa Base, Acta N.º1", February 1, 1973, pp.2-3; GPA, "Projecto do Instituto Politécnico da Covilhã, Relatório-proposta, Relatório n.º1", January 1973, p.2; SGEC, Leão de Almeida, Rogério, Ofício 632, January 31, 1973, p.3.

<sup>18</sup> GPA, "Elementos para o programa-base do Instituto Politécnico da Covilhã", n.d.

<sup>19</sup> SGEC, "Programa de Obras do Instituto Superior Politécnico da Covilhã", February 27, 1973

<sup>20</sup> SGEC, "Instituto Politécnico da Covilhã, Esclarecimento dos documentos 'Programa de Obras do Instituto Politécnico da Covilhã' (Ministério da Educação Nacional) e 'Plano de trabalhos na presente situação' Grupo de Planeamento e Arquitectura, Acta n.º7", March 1, 1973

<sup>21</sup> There were also meetings held between GPA and the DGCE (MOP) technicians alone. Cf. SGEC, Direcção das Instalações para o Ensino Secundário e Médio, Direcção-Geral das Construções Escolares, Ministério das Obras Públicas, *Op. Cit.*, May 5, 1973

<sup>22</sup> At the meeting held in February 6, 1973, GPA requires bibliography from DGCE's Documentation and Information Centre. In the list of requested publishings (given by GPA to Rogério Leão de Almeida), there are articles by "Laboratory Investigation Unit" (Papers n.º1-5) and other documents by the english

institutes in Madrid, Barcelona (Escuela Técnica Superior de Ingenieros Industriales de Tarrasa, organized with the GTVCEPSC), and Lisbon (Instituto Industrial de Lisboa). The GPA document defined, through “successive particularizations,” the required spaces and presented, diagrammatically<sup>23</sup> (and within each “level”), the interrelations between various spaces. It also included spreadsheets in which the number of users and the unitary surface per user could be read, along with a table synthesizing all the qualitative and quantitative structures of the building.<sup>24</sup>

### *Global Preliminary Study (“Estudo Prévio”, 1973)*

The Global Preliminary Study [Figs. 1-5] laid out the program, in spite of a general ignorance of the actual conditions of the existing building.<sup>25</sup> It included a first proposal for the internal organization of the whole, taking into account the full functioning of the Institute. It also defined the first phase of construction. It included schematic plans, photographs of the existing buildings and of the model [Figs. 2-3] and drawings on the scale of 1:200 [Fig.4], since (due to the required urgency) it had to provide a basis for the first phase of construction to begin immediately.<sup>26</sup>

Among the criteria that guided the proposal, the following can be underlined: creating the optimum lighting and ventilation conditions; minimizing the inconveniences of the differences in elevation by properly grouping the spaces (as previously suggested by the GTVCEPSC program); providing clarity of horizontal circulation spaces and strategically locating vertical communications to allow for easy access; promoting a good integration of the buildings in the

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Department of Education and Science, such as the “Building Bulletin” (n.ºs 24, 33, 42, 44, 25). References to the English “Bradford Technical College (Department of Textiles)”, “University of Bradford” (“Undergraduate Honours Course” and “Research Textile Technology and Textile Science”) and “University of Leeds” are also found in the GPA archive, as well as to the book by Douglas Cooke and James Dunhill, “School Organisation and Management”, published in 1963 by the University of London Press. There is, therefore, a focus on the English experience. Cf. GPA, Listing of bibliographical references, February 6, 1973

<sup>23</sup> Evoking, perhaps, the diagrammatic methodology frequently associated with “Bauhaus” (and disseminated by Gropius at Harvard) or Christopher Alexander’s approach (whose “Notes on the Synthesis of Form, of 1964, had been studied by Bartolomeu Costa Cabral in 1967), these diagrams were to provide the complex problem with a presumable objectivity or “scientific neutrality” independent of architectural forms, and to allow for a transparent communication of the relationships between spaces.

<sup>24</sup> SGECE, Direção das Instalações para o Ensino Secundário e Médio, Direção-Geral das Construções Escolares, Ministério das Obras Públicas, *Op. Cit.*, May 5, 1973, pp.7-8

<sup>25</sup> Cf. GPA, “Instituto Politécnico da Covilhã, Projecto - 1ª Fase, Vol. I - Arquitectura”, June 8, 1973, p.3

<sup>26</sup> SGECE, GPA, “Instituto Politécnico da Covilhã, Vol. II - Estudo Prévio”, “Instituto Politécnico da Covilhã, Memória Descritiva”, April 14, 1973, p.1



# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

The Beginnings of the Polytechnic Institute of  
Covilhã (1973-1975): A Search For Continuity*Mariana de Oliveira Couto*

landscape by carefully placing the volumes on the hillside (forming platforms and evoking a modernist language, particularly as depicted in works by Denys Lasdun<sup>27</sup>); preserving the character of the existing buildings; not interfering with the surrounding area of the Romanesque church, which was classified as a national monument; and placing the more technically demanding spaces (such as laboratories and workshops) in the new buildings and most classrooms on the highest floors of the existing constructions (lit by natural zenithal light).

In addition, to solve the problem of the building being interrupted by the road, the decision was made to build a second, raised passageway. This new walkway was a key element in the organization of the whole, an axis around which almost all the common spaces (such as students' gathering spaces) were placed; it is an element of continuity (but not imitation), establishing a connection with the existing raised path. Furthermore, it promotes continuity of movement, relationships between spaces, and socializing places for users.

The intention to provide wide and varied circulation spaces to grant permeability and to make it possible for multiple situations to occur, including small group meetings, was manifest,<sup>28</sup> and it acquired particular strength in the political context in which this project was developed, considering the news of police invading higher education institutions and constantly arresting and striking students, as described in "Circular no. 16" of the National Commission for the Relief of Political Prisoners (Comissão Nacional de Socorro aos Presos Políticos) published on May 31, 1972, which can be found in the archives among the documents concerning the redevelopment of this building.

Also significant is the intention to open the use of the institute's spaces, such as the gymnasium (in spite of the previous recommendations at the meeting held on the 1st of March) to the population of the city<sup>29</sup> (as Costa Cabral had proposed in his previous project for the primary school near São Jorge Castle in Lisbon and as would also be proposed later regarding the library and amphitheater in the second phase of construction).

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<sup>27</sup> Bartolomeu Costa Cabral had been in London in 1965 to work at the London County Council and had met Denys Lasdun, whose work is addressed by William Curtis (Curtis, 1994).

<sup>28</sup> Cf. SGEC, GPA, *Op. Cit.*, April 14, 1973, p.4

<sup>29</sup> Cf. SGEC, GPA, *Op. Cit.*, April 14, 1973, pp.1-2

*First Phase: Project (1973)*

The design [Figs. 6-12] for the first phase of construction (except the architectural detailing, which would be provided during construction, on February 20, 1974) was completed in June 1973. It concerned the building at the north of the national road, selected for the ability to easily isolate it from the other parts of the complex, thus allowing for the execution of the work of the second phase to begin while the Institute was functioning. It was also selected because it had independent access, and it was believed to be more easily adaptable to satisfy the requirements of the first year of the Institute.

Allowing for a maximum of 210 students, it was stipulated that, in order for the building to open in 1973/1974, it must include (in spite of the scarcity of the space): a Type I classroom (for 60 students and with an area of 120m<sup>2</sup>, for the teaching of mathematics, physics, general chemistry, and accounting); three Type II classrooms (for 30 students and with an area of c.60m<sup>2</sup>, for the teaching of mathematics, inorganic chemistry, organic chemistry, law, economics, and foreign language); one Type III classroom (for 30 students and with an area of c.60m<sup>2</sup>, for the teaching of raw materials), two special classrooms (both with an area of c.60m<sup>2</sup>); a drawing room (c.90m<sup>2</sup>); and a laboratory (c.170m<sup>2</sup>, for the teaching of physics, general chemistry, inorganic chemistry, and organic chemistry).<sup>30</sup>

These spaces were organized on two floors, according to a modular grid of 1,55x1,55m. All the spaces on the upper floor were definitive, while all the spaces on the ground floor were temporary; therefore, and “as an experience,” they were not physically isolated but divided by cabinets, allowing for adaptable and continuous spaces.

The intention of protecting the building’s character was reaffirmed; the maximum possible number of functioning elements were preserved. Also reiterated was the importance of clearly distinguishing the previous construction from the new. The materials and building technologies

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<sup>30</sup> Cf. GPA, *Op. Cit.*, June 8, 1973, p.6; GPA, “Cálculo do Número de Espaços” (spreadsheet), n.d.

were selected according to their economy (building and maintenance costs), “simplicity,” durability, adaptability, and execution speed.<sup>31</sup>

Reinforced concrete was chosen for all structural elements, including the new staircase connecting the floors. As for the roof, Marseille tiles were retained as the chosen material for cladding; eaves were also preserved (with Mission roof tiles). However, should the existing wooden trusses be found in poor condition during construction, new Marseille tiles over mortar slats and concrete slabs (with cork sheeting, as used in previous works, such as the primary school near the castle in Lisbon and the building housing the Portuguese Society of Authors) supported by precast reinforced concrete beams would be used to rebuild the roof.

In some of the existing outer walls, granite stone would be revealed; in other cases, the plaster coating would be retained. (In these latter cases, new coatings would be done).<sup>32</sup> The new outer (cavity) walls would be formed of concrete blocks, plastered, and whitewashed. Light concrete blocks would be used to build the inner partitions. Enameled galvanized iron was chosen for all the window and glass door frames. Windows with southern exposure would be protected with wooden sliding panels.

In this design, hydraulic tiles were still considered for the floors, as well as rubber, which, according to its documents, would be applied on the corridor next to the classrooms in order to absorb sound. Plasterboards would be suspended from the classrooms’ sloped ceilings, reducing room height while allowing for uniform distribution of zenithal light. Plasterboards would also be suspended above the corridors, forming dropped ceilings. As in the previous project for the primary school next to the castle in Lisbon, the entire building was equipped with boards, benches, and cabinets, as well as cable trays both embedded in the floor and suspended from the ceiling to allow for increased adaptability.

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<sup>31</sup> GPA, *Op. Cit.*, June 8, 1973, pp.10-11; GPA, “Instituto Politécnico da Covilhã, Projecto – 1ª fase, Vol. II – Estabilidade”, June 5, 1973, p.1

<sup>32</sup> GPA, “Instituto Politécnico da Covilhã, Projecto – 1ª fase, Vol. V – Condições Técnicas Especiais”, June 1973, p.5

The building would allow for experimenting with possible solutions that were repeated in subsequent projects, namely the suspended cable trays, the enameled galvanized iron frames, the use of light concrete blocks for interior partitions, and clay tile flooring (ultimately chosen instead of the previously selected hydraulic tiles).

*First Phase: Construction (1974-1975)*

The construction of Phase 1 began in February 1974, after a restricted tender procedure (in October 1973) to select the building company and after DL735/73 (December 31) authorized the contract between the winner, Construtora Abrantina, and DGCE. This contract established a period of six months for construction, including Sundays and holidays. However, in February 1974, when demolitions were “rather advanced”,<sup>33</sup> some discoveries were made, such as the underground galleries and the absence of parallelism between the longitudinal exterior walls (north and south). These circumstances forced a revision of the architecture and stability projects and thus a delay in the construction work. The roof structure was also found to be in poor condition, and a new way for the trucks to access the building site had to be created, the latter project leading to the elimination of the support wall between the north façade and the adjacent property. Additionally, after the Carnation Revolution of 1974, some difficulties in acquiring materials (mainly in June, July, and August), workers’ strikes, and a reduction in weekly labor hours also contributed to the postponement of the deadline.

The upper floor was finally completed in August 1974,<sup>34</sup> and classes began on February 17, 1975. Work on the ground floor was finished by the 30th of March. Construction was completed on June 10, 1975 (approximately 18 months after it began).

During the construction, on June 6, 1974, the GPA also presented the General “Base Project” with some small changes. In April 1975, the design of the second phase, contemplating the so-called “Parada” building, was also completed. (This project would also undergo transformation during construction because of archaeological discoveries.)

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<sup>33</sup> SGEC, Minute of the first meeting at the construction site (held between Bartolomeu Costa Cabral and Hélder Camacho, from GPA, a government technician (“Direcção das Construções Escolares do Centro”) and a representative from the building company (“Construtora Abrantina”), February 15, 1974

<sup>34</sup> SGEC, Construtora Abrantina (request), August 14, 1974; SGEC, Direcção-Geral das Construções Escolares do Centro, Direcção-Geral das Construções Escolares, Ministério das Obras Públicas, Informação n.º 73, n.d.



Phases 3 (1975-1982), 4 (1976-1988), and 5 (1988-1991) and the Information Center (1984-1996) would soon follow, constantly adapting to the evolving needs of the Institution (which was, by 1979, Instituto Universitário da Beira Interior<sup>35</sup> and, by 1986, Universidade da Beira Interior<sup>36</sup>).

At the end of the 1990s, after leaving the GPA, Bartolomeu Costa Cabral developed the designs for the Central Library (1996-2003) and the Wool Museum (2000-2003) at the University of Beira Interior at his own office.

### *A Search for Continuity*

These first projects for IPC, characterized by careful interventions in the existing buildings – seeking to preserve the maximum number of elements and to distinguish the new buildings from the previous ones – and by valuing collective spaces, reveal a search for continuity (but not imitation) that marks the architectural position (Landau, 1981:111-114) of Bartolomeu Costa Cabral. This search for continuity is manifested in his words<sup>37</sup> and works, through time, and is, perhaps, rooted in the cultural context of his formative years.

Continuity of a “modern” architecture, free from prejudice and “humanistic,” focusing on the interpretation of human lacks and needs, continuity of space, and continuity of movement, all of which are part of a search for historical continuity, which presupposes the observation of the works of the past in order to address the problems of the present: This search, anchored in reason, is, for Bartolomeu Costa Cabral, the only way forward for a truly modern architecture, reflecting the continuity of human experience itself and a profound desire for permanence.

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<sup>35</sup> Law n.º44/79, September 11, 1979

<sup>36</sup> Decree-Law 76-B/86, April 30, 1986

<sup>37</sup> As an example: BCC, Costa Cabral, Bartolomeu, “Arquitectura – passado, presente, futuro”, Conferece held at Lusíada University, Lisbon, March 2015

**Images**

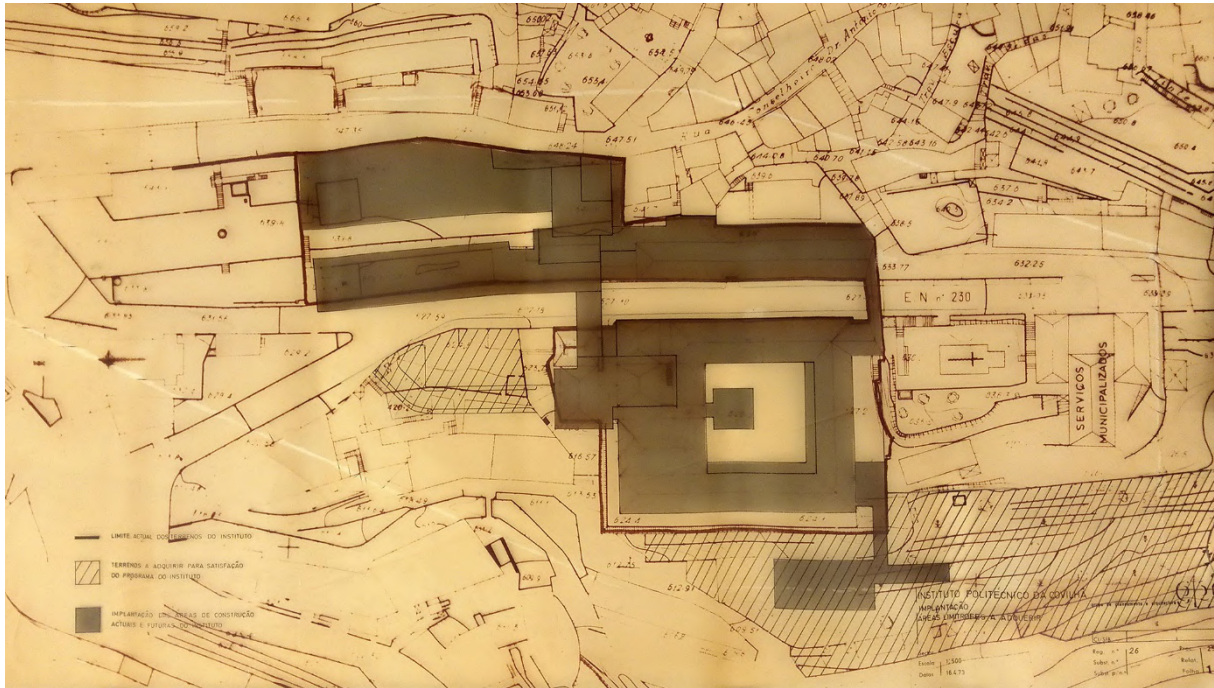


Fig.1. Global Preliminary Study (“Estudo Prévio”), 1973. Site Plan. Source: SGEN Archive.

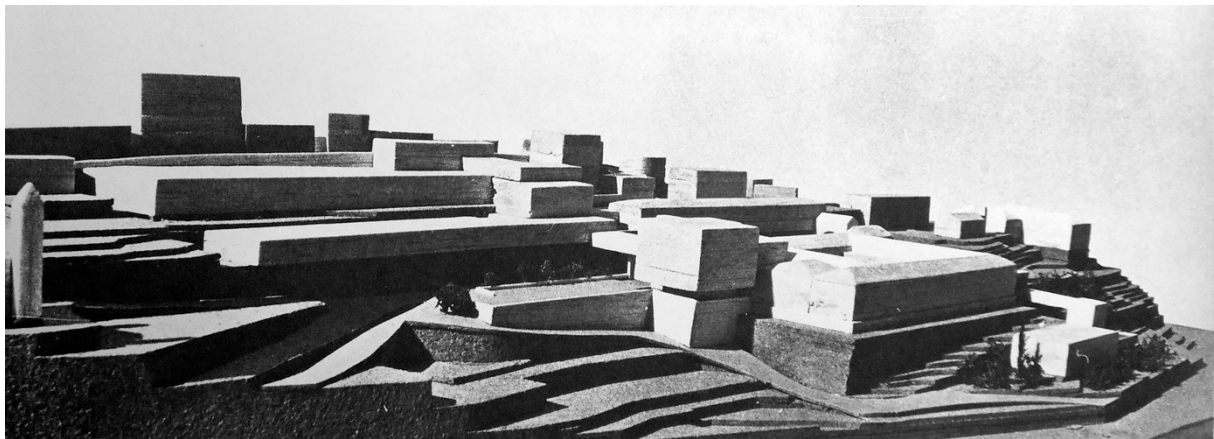


Fig.2. Global Preliminary Study (“Estudo Prévio”), 1973. Photography of the model. Source: SGEN Archive.



# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

The Beginnings of the Polytechnic Institute of Covilhã (1973-1975): A Search For Continuity

Mariana de Oliveira Couto

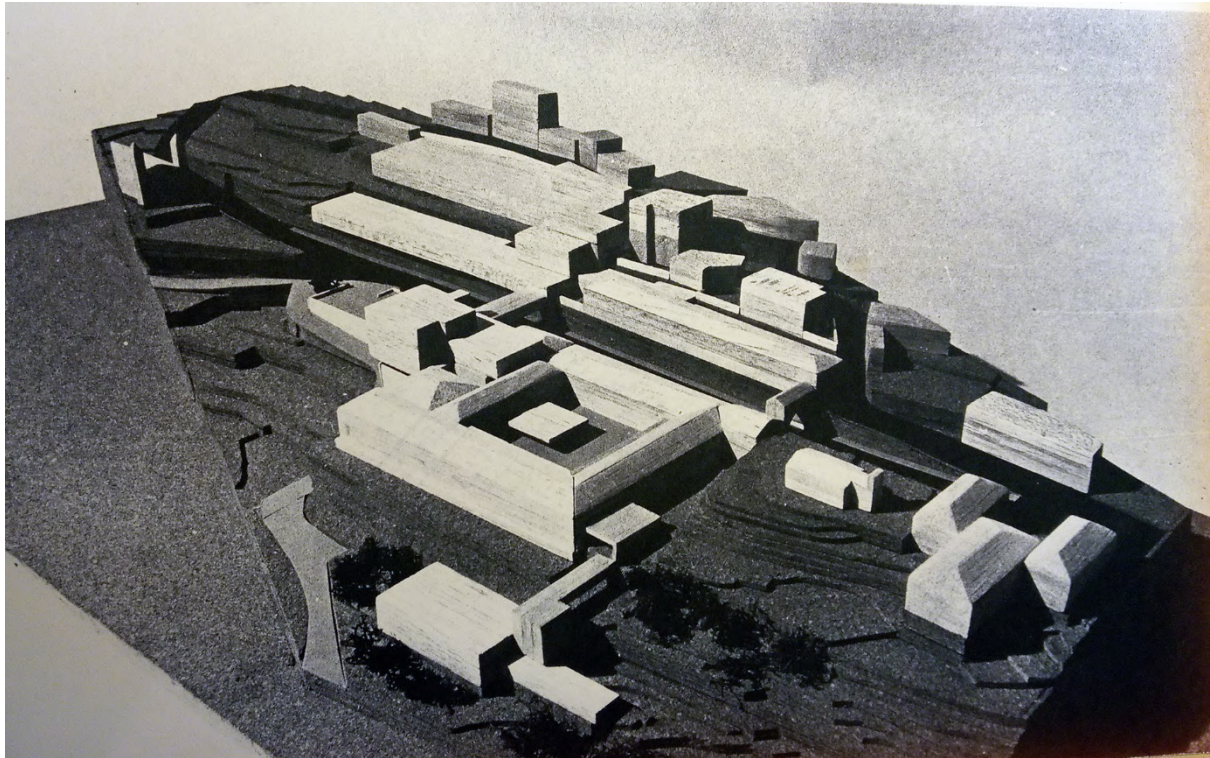


Fig.3. Global Preliminary Study (“Estudo Prévio”), 1973. Photography of the model. Source: SGEC Archive.

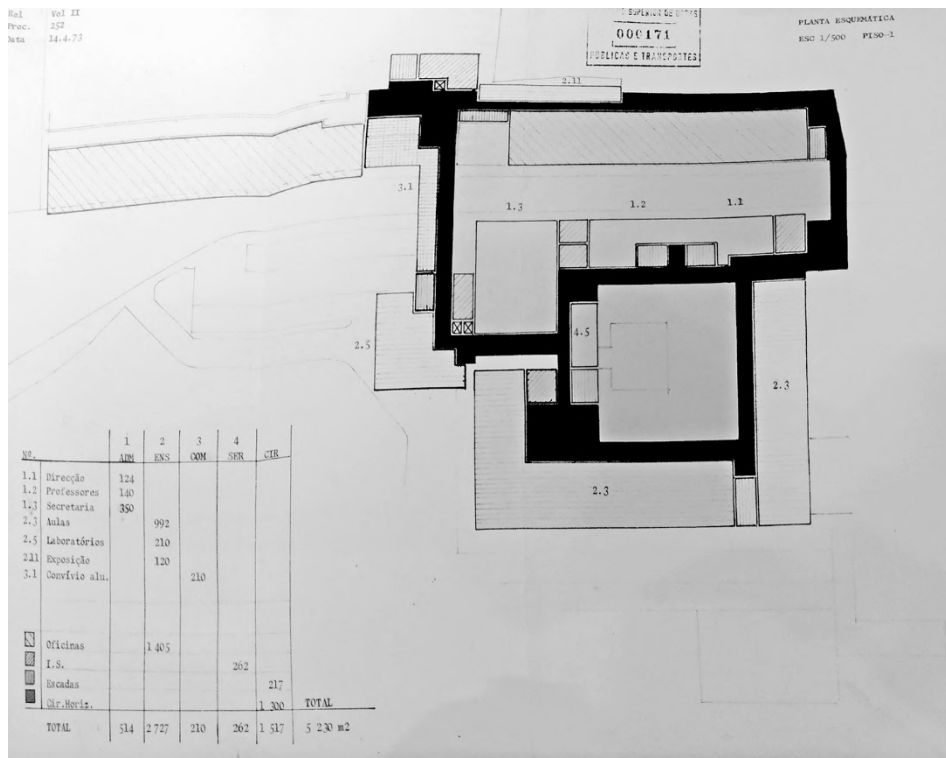


Fig.4. Global Preliminary Study (“Estudo Prévio”), 1973. Schematic plan of the 1<sup>st</sup> floor. Source: SGEC Archive.



# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

The Beginnings of the Polytechnic Institute of  
Covilhã (1973-1975): A Search For Continuity

*Mariana de Oliveira Couto*

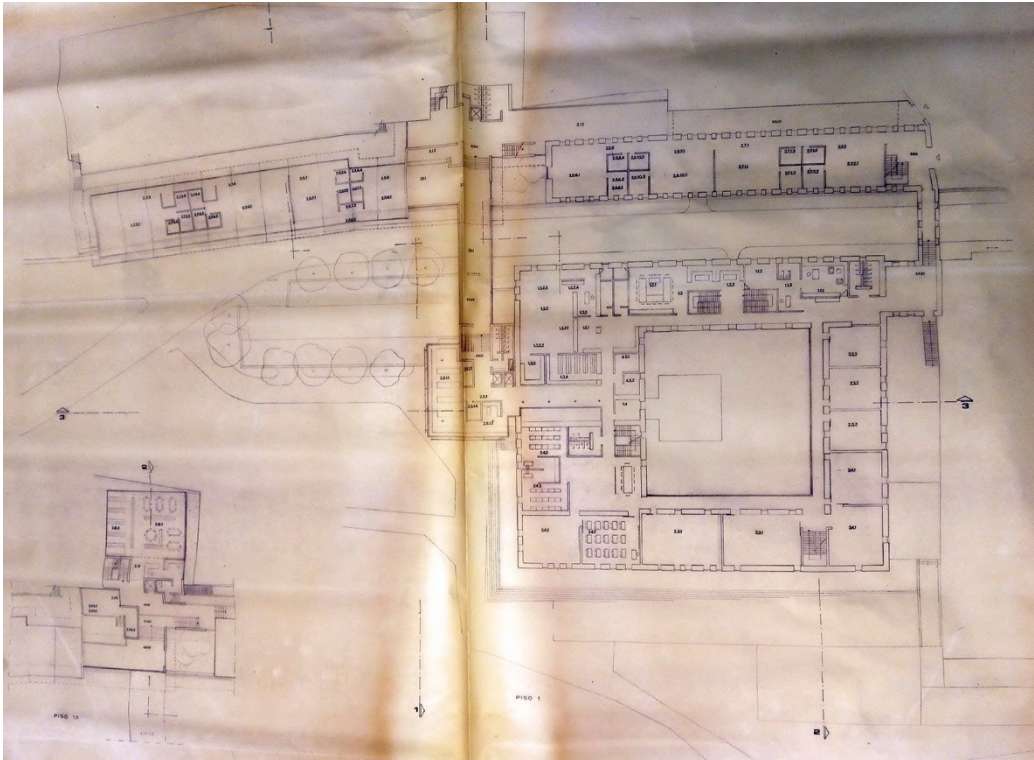


Fig.5. Global Preliminary Study (“Estudo Prévio”), 1973. Plan of the 1<sup>st</sup> floor. Source: SGEC Archive.

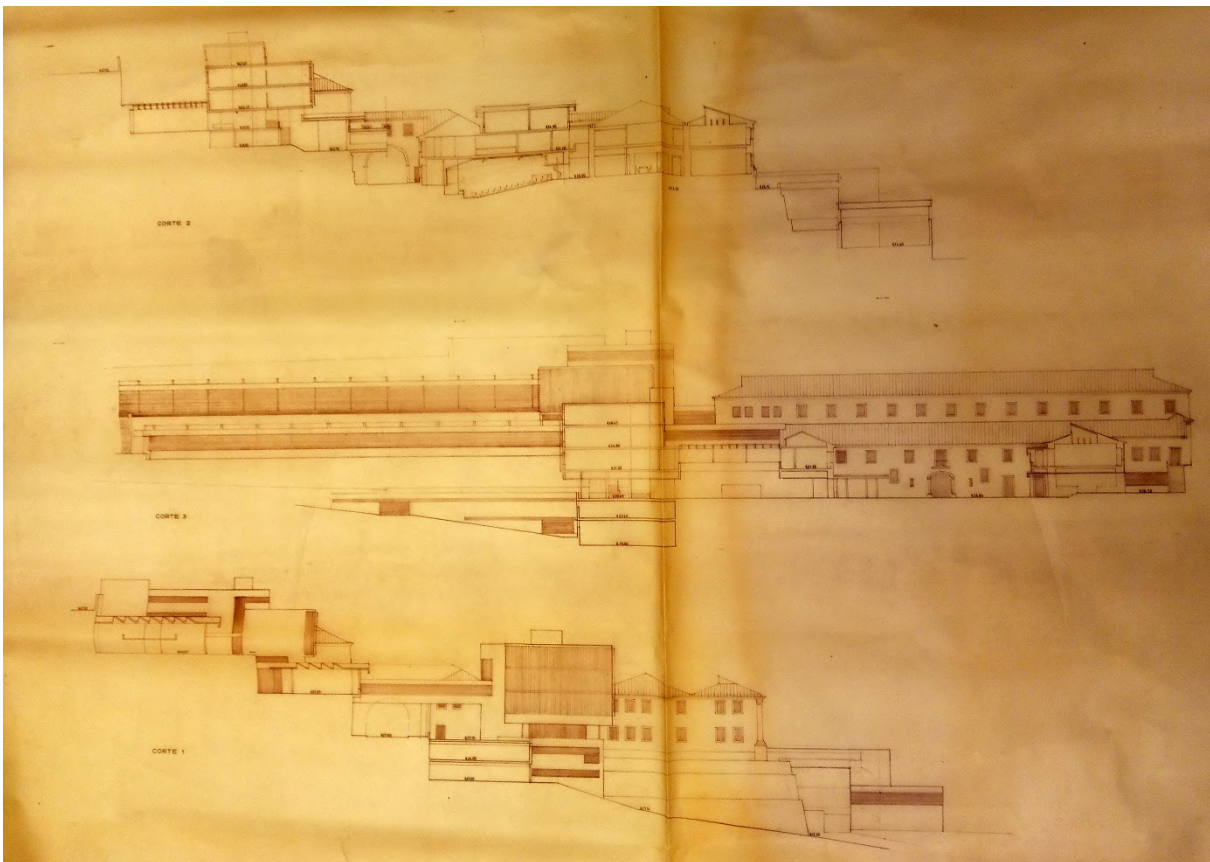


Fig.6. Global Preliminary Study (“Estudo Prévio”), 1973. Sections. Source: SGEC Archive.



# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

The Beginnings of the Polytechnic Institute of Covilhã (1973-1975): A Search For Continuity

Mariana de Oliveira Couto

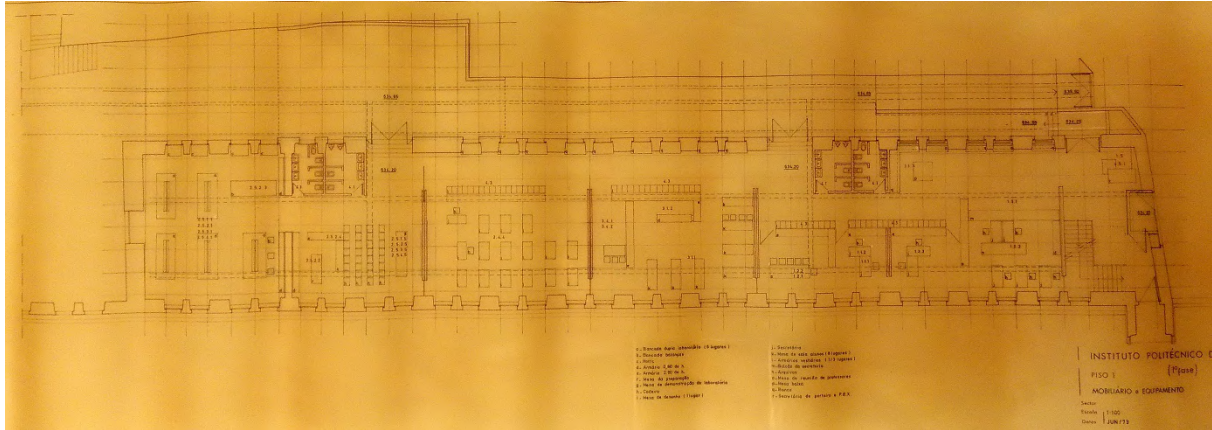


Fig.7. Phase 1: Project (1973). Ground floor. Source: GPA Archive.

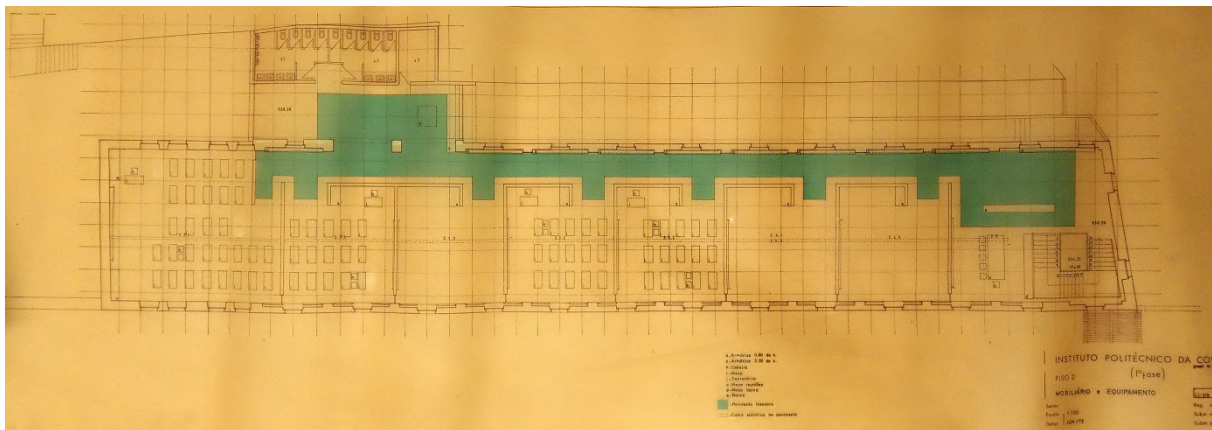


Fig.8. Phase 1: Project (1973). 2nd Floor. Source: GPA Archive.

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

The Beginnings of the Polytechnic Institute of  
Covilhã (1973-1975): A Search For Continuity

*Mariana de Oliveira Couto*

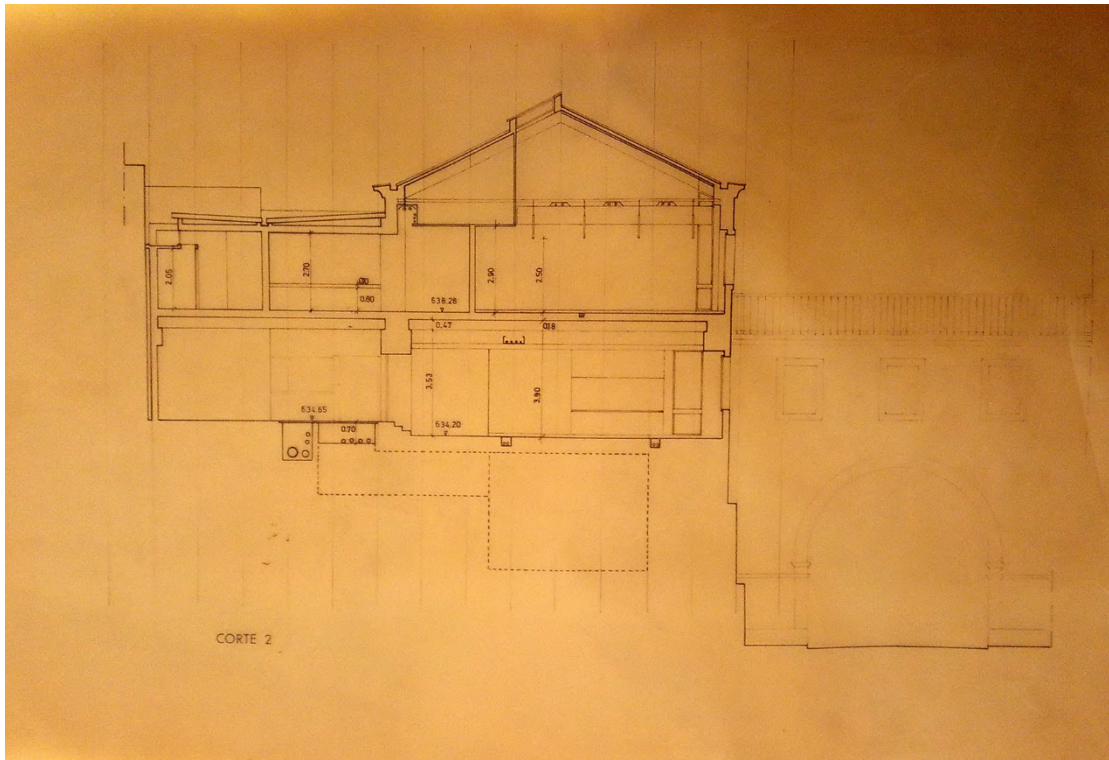


Fig.9. Phase 1: Project (1973). Section. Source: GPA Archive.



# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

The Beginnings of the Polytechnic Institute of  
Covilhã (1973-1975): A Search For Continuity

Mariana de Oliveira Couto

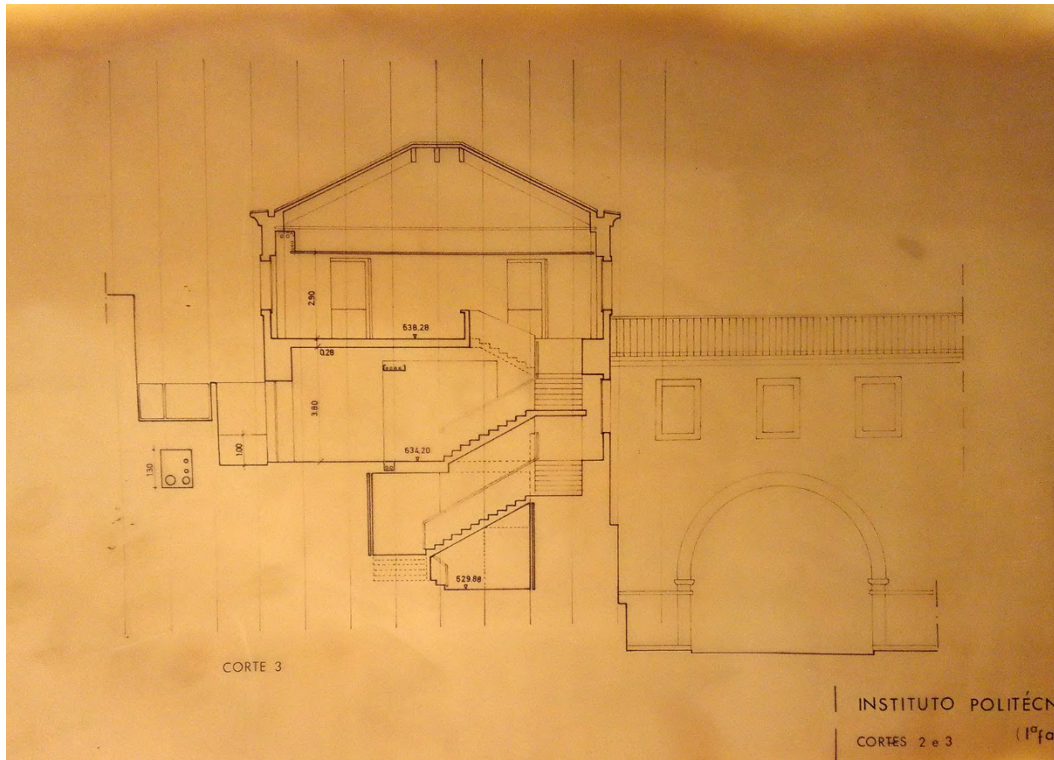


Fig.10. Phase 1: Project (1973). Section. Source: GPA Archive.

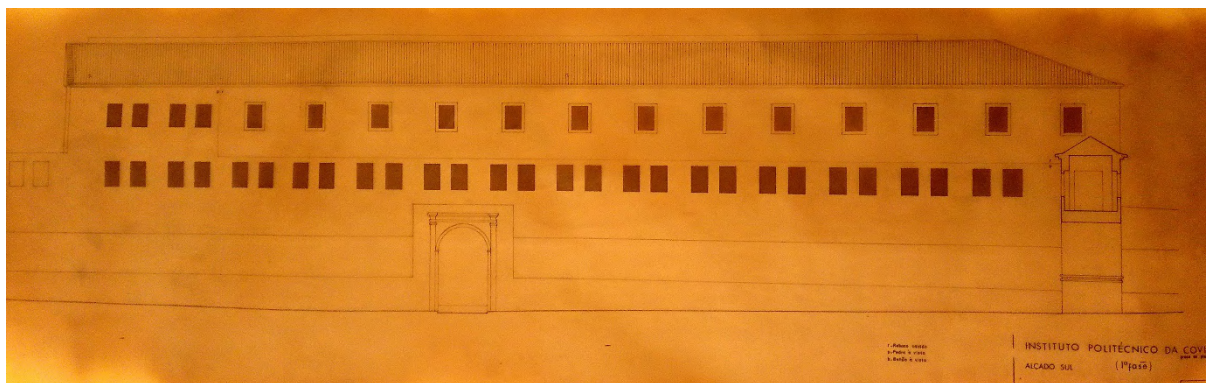


Fig.11. Phase 1: Project (1973). South Elevation. Source: GPA Archive.

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

The Beginnings of the Polytechnic Institute of  
Covilhã (1973-1975): A Search For Continuity

*Mariana de Oliveira Couto*

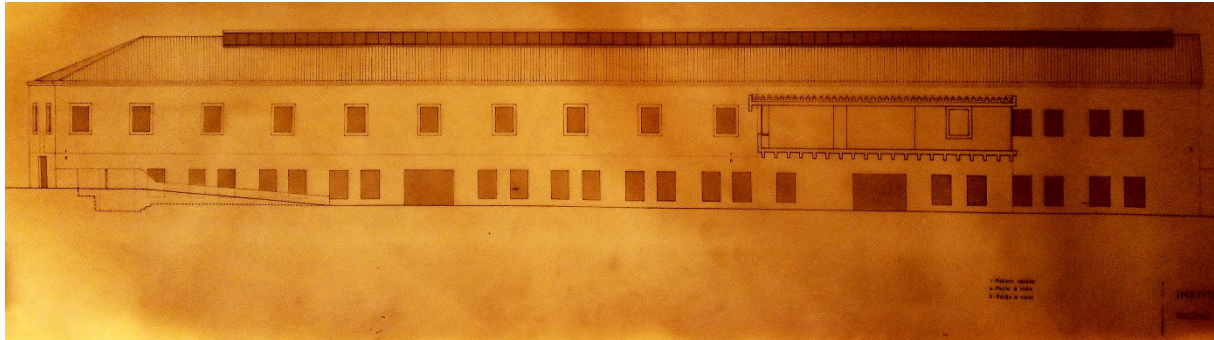


Fig.12. Phase 1: Project (1973). North Elevation. Source: GPA Archive.

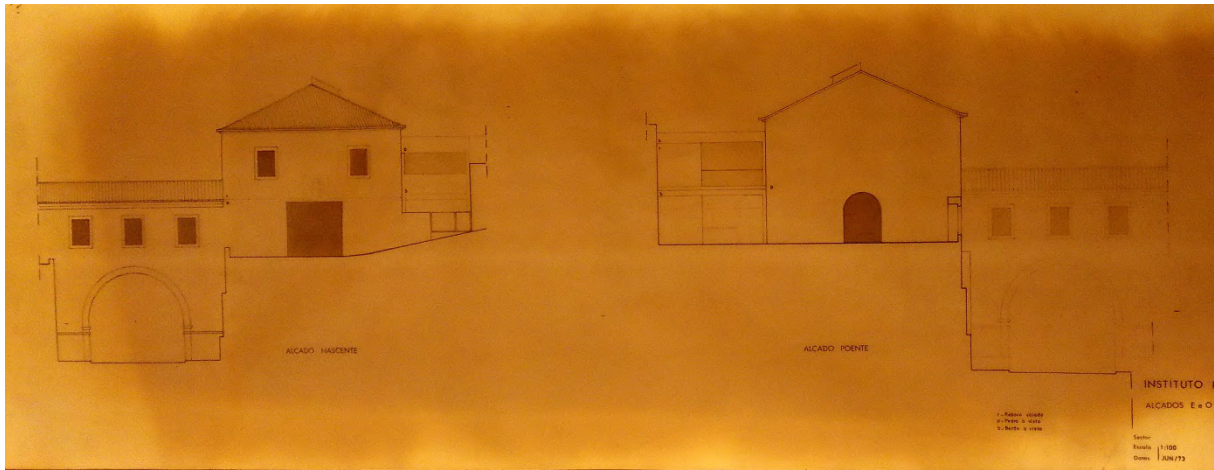


Fig.13. Phase 1: Project (1973). East and West Elevations. Source: GPA Archive.



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# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

The Beginnings of the Polytechnic Institute of  
Covilhã (1973-1975): A Search For Continuity

*Mariana de Oliveira Couto*

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Crespo, Vítor, Ministério da Educação Nacional, Direcção-Geral do Ensino Superior, “Informação Sobre o Programa de Obras de Adaptação de um Edifício da Câmara Municipal da Covilhã (Antigo Quartel de Caçadores, 2) a Instituto Superior Politécnico da Covilhã”, December 30, 1972

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GPA, “Instituto Politécnico da Covilhã, Vol. II – Estudo Prévio”, “Instituto Politécnico da Covilhã, Memória Descritiva”, April 14, 1973, p.1

Minute of the first construction meeting (held between Bartolomeu Costa Cabral and Hélder Camacho, from GPA, a government technician (“Direcção das Construções Escolares do Centro”) and a representative from the building company, “Construtora Abrantina”), February 15, 1974

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## The rise and fall of the colonial public railway on São Tomé and Príncipe

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### **Abstract:**

This paper investigates the origin, inception and closure of the colonial public railway on São Tomé and Príncipe (STP), a Portuguese-speaking island nation off the western equatorial coast of Central Africa. The discussion centres on the planning and construction phases between 1890 and 1910 of said railway, which was built for the purpose of hauling cocoa.

Early 20th century STP, then a Portuguese colony, was one of the leading cocoa producers in the world. Concurrently, the country had become internationally known for controversial working conditions of contract labourers on its plantations. International pressure on Portugal made building a state railway on São Tomé and Príncipe ultimately an escape hatch to reduce the dependency on manual labour for cocoa transport

This paper commences with an introductory chapter. The 2<sup>nd</sup> chapter outlines STP's historical context, from its 15th century discovery to its heyday as a plantation powerhouse around 1900. In the 3rd chapter the architectural design and functions of STP's agricultural estates, locally called "roças" is described. These roças are set in the socio-political perspective of their plantation economy. Similarities with older plantation economies on the Caribbean islands are examined. The roça labour system is investigated, as it triggered the decision to build the state railway. The final chapter charts railway planning, construction, opening and closure. The extensive planning phase made the Portuguese engineers discover an extremely insalubrious urban infrastructure at São Tomé town, bringing about concerted attempts to redesign and clean up the civic environment. These infrastructural regeneration efforts are investigated. The work ends with a conclusion.

**Keywords:** architecture; infrastructure; plantation; railway.

## 1. Introduction

São Tomé and Príncipe (STP) is a Portuguese-speaking island nation in the Gulf of Guinea, off Central Africa's western equatorial coast. It consists of two archipelagos around two islands, São Tomé and Príncipe, located 140 kilometers apart. The islands have a surface area of approximately 1000 square kilometers, with a population of around 200.000 people (2018).<sup>1</sup> STP is considered a developing small island state with a fragile economy; the main cash export crop is cocoa.<sup>2</sup>

Early 20th century STP, then a Portuguese colony, was a world leading cocoa producer. Simultaneously, building a public railway for the purpose of hauling cocoa became a must to address the dependency on manual labour for cocoa transport.

This paper investigates the origin, inception and closure of the public railway on STP. The discussion centres on the railways' planning and construction phases between 1890 and 1910. The railway's business case is explained in the context of social, political and economic conditions.

Following this introduction, the 2<sup>nd</sup> chapter outlines STP's historical context of from its discovery to its cocoa plantation powerhouse heyday. The 3<sup>rd</sup> chapter investigates the cocoa plantations. Focus is on how these plantations functioned and on their architectural organization. Similarities with plantation economies in the Caribbean are examined. The manual labour system triggering the public railway is investigated.

The next chapter considers the railway's planning and construction. It examines how initial railway planning lead Portuguese engineers to discover an insalubrious urban environment at São Tomé town, prompting attempts to redesign and clean up this town. This chapter then goes on to discuss the public railway that was built, and closed after a few years. The work ends with a conclusion.

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<sup>1</sup> According to Worldbank data - <http://www.worldbank.org/en/country/saotome/overview>

<sup>2</sup> According to Worldbank data - <http://www.worldbank.org/en/country/saotome/overview>



## 2. Historical context

### *Sugarcane and slave trading – 1500-1850*

The STP archipelagos were discovered by Portuguese navigators around 1470. Then they were, and decidedly still are now, lush tropical islands with high rainfall, waterfalls and exuberant vegetation. Mountains, plateaus, lowlands, forests, rivers and beaches dominate the land.

Between 1490 and the 1630s island settlers pursued an economic model based on acting as port of call for the slave trade, and exploiting sugarcane plantations. The sugarcane cycle reached its peak late 16th century, declining during the 17<sup>th</sup> century.<sup>3</sup> Economic prosperity dwindled, due to falling sugar output and external disruption through slave uprisings and attacks by the Dutch. An economic slump persisted through the 18<sup>th</sup> century. Sugar plantations on the islands were reduced to subsistence agriculture. Remaining prosperity came from slave trading, with islanders buying slaves along the West African coast and STP acting as a slave trade entrepot.<sup>4</sup>

### *Cocoa economy – 1880-1920*

Around 1850, a steady rise in world demand for tropical products triggered a plantation revival in tropical Africa. On STP, rising market prices for products like coffee, and cocoa led islands merchants to commence plantation agriculture. At first coffee became the predominant crop. After the 1880s cocoa ruled supreme.

Cocoa, easier to grow, had become significantly more lucrative than coffee. Cocoa beans had become important to the Western food industry, after melted chocolate was invented in

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<sup>3</sup> Disney 2009: 113-114.

<sup>4</sup> Hodges et al., 1988: 24-25. STP slaves were destined for plantations in Brazil.

Switzerland.<sup>5</sup> Cocoa production got another boost, when the British Cadbury Company began producing solid chocolates in 1866.<sup>6</sup>

By 1900 STP was a global leader in cocoa, producing for years approximately 15% of the world's cocoa output, *primarily destined for* Britain and Germany. Market dominance lasted until 1918.<sup>7</sup> During the 1920's production plummeted.<sup>8</sup>

The colonial trade profits assisted colonial 'motherland' Portugal, to balance its books. Portugal, facing financial difficulties since the 1870s, suffered from chronic budgetary deficits and depressed industrial and agricultural markets.<sup>9</sup>

### 3. Plantation infrastructure - 1880 -1920

#### *Roças rising*

From the 1880s onwards Saotomean cocoa exports grew substantially. The Portuguese government, instrumental in facilitating a burgeoning plantation economy, sold state land to Portuguese immigrants looking to establish plantations. Abandoned sugar estates were around, virgin tropical forest was abundantly available.

Planter immigrants spent their money chiefly on land purchase, labour recruitment and erecting lavish estate houses. Huge agricultural plantations with large numbers of unskilled

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<sup>5</sup> Clarence-Smith 2000: 55. Roderich Lindt (1855-1909) was the inventor.

<sup>6</sup> Welcome 2013: 78.

<sup>7</sup> Hodges et al., 1988a: 34. Official figures between 1908 and 1919 show an annual production of cocoa averaging at 31,000 tons.

<sup>8</sup> Hodges et al., 1988b: 32-33. It was reduced to less than 10.000 tons in 1930.

<sup>9</sup> Hodges et al., 1988c: 35-36. Between 1890 and 1914, half of Portugal's re-export of colonial products was accounted for by STP cocoa.

black labourers emerged, locally referred to as ‘*roças*’.<sup>10</sup> By 1910 there were 138 *roças* on STP.<sup>11</sup> Nearly all cultivated cocoa as the main crop.

The cocoa boom was not unique to STP. In tropical Central America, cocoa cultivation had spread from Venezuela to the Caribbean in the 17<sup>th</sup> and 18<sup>th</sup> century.<sup>12</sup> Caribbean islands such as Trinidad, Jamaica, Dominica and Grenada had working cocoa plantations 150 years prior to those on STP, often coupled with sugarcane plantations. This was a marked contrast with STP, where a cocoa plantation economy started from scratch late 19<sup>th</sup> century.<sup>13</sup> However, the general landscape appearance of São Tomé around 1900 seemed similar to Caribbean islands as Grenada, St. Lucia, or Dominica.<sup>14</sup>

### *Roça design and function*

The generic architectural design of the *roça* complex reflected the servile Saotomean society order. Commonly plantation buildings were assembled around a gently sloping square, close to the sea. On the highest part of the square resided the main, intermittently grand plantation house, sea facing and overlooking *roça* activities reflecting the hierarchic order. The other three sides of the square were made up of administrative buildings, produce drying sheds, warehouses and rudimentary barracks serving as workers quarters. The central courtyard had the effect of centralizing most plantation activities. Simultaneously it emphasized the fact that a *roça* represented a self-contained community. A coastal location made transporting produce by sea convenient. Roads barely existed.

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<sup>10</sup> During the sugarcane heyday the *roça* term was used for fields cleared of forest and prepared for agriculture.

<sup>11</sup> Vieira 2005: 20.

<sup>12</sup> Grivetti 2009: 482.

<sup>13</sup> Hodges et al., 1988d: 22, 28.

<sup>14</sup> Cadbury 1910: 20. British chocolate manufacturer William Cadbury, when visiting STP in 1909, noted: ‘*The general appearance of the island is very similar to that of the West Indian Islands, Grenada, St. Lucia, or Dominica; cultivation nearly to the water's edge, a strip of fairly level country varying in width, and then the deep valleys running up into the central mountain group; the highest peaks constantly veiled in cloud or hanging mist.*’.

A pattern of land holding enabled planters to diversify production: coffee needs high land, cocoa thrives at intermediate altitudes, and palm products need low-lying areas. The *roça* layout featuring sea frontage, with grand to rudimentary dwellings for inhabitants depending on their ranking coupled with buildings for processing and storage of produce, and stratified crop production delineated the distinctive aspect of the STP *roça* system.

Coupling grandiose planter buildings, with basic workers buildings was not unique to STP. It was a throwback variation of plantation structures existing in regions like the Caribbean and Louisiana, as set up by the main colonial powers there. In keeping with this varied origin of the plantation concept, *roça* residential architecture drew inspiration from randomly assorted European styles, with tropical features used in colonial architecture from established plantation societies. The usage of wide, open verandas around colonial houses probably originated in the Caribbean.<sup>15</sup> When the cocoa boom began on STP, various Caribbean plantation islands were already renowned for their grand estate houses on sugar plantations.<sup>16</sup> However, on STP there was virtually nothing left of its sugarcane heyday.

*The island of Príncipe, 1/6 the size of São Tomé island, had numerous cocoa plantations at the time. These were agro-industrial too, with the main houses designed in a variety of architectural styles.*

From the 1900s onwards, hospitals emerged as major *roça* components. These were commonly established on a grand scale, on the estates highest grounds (figs. 2, 3).<sup>17</sup> After the unhealthy living conditions of *roça* contract labourers (*serviçais*) had received increased international attention, some planters attempted to confront this problem.

Chocolate manufacturer William Cadbury (1867-1957) visiting various STP plantations during 1909, noted yearly mortality on many *roças* ran at a rate of 110 per 1000, the largest *roças* having the worst death rates. He blamed their housing in basic, overcrowded barracks for the ease with which epidemics spread.<sup>18</sup>

<sup>15</sup> McAlester 2014: 179-186.

<sup>16</sup> Jamaica, Trinidad and Barbados for example.

<sup>17</sup> Examples include hospitals on Roça Água Izé, Rio do Ouro and Monte Café.

<sup>18</sup> Cadbury 1910a: 57.



# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

The rise and fall of the colonial public  
railway on São Tomé and Príncipe

*Cees Lafeber*



Fig. 1, Roça Vista Alegre, areal view of the plantation square with the main grand plantation house in the center, circa 1910 (Photograph: CACAU collection, São Tomé and Príncipe).

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Fig. 2. Roça Augustinho Neto (Rio do Ouro), view from the location of the main plantation house towards the massive hospital building in 2015 (Photograph: author).





Fig.3, Roça Água Izé, hospital building façade, 2015 (Photograph: author).

### *Contract labour scandal*

Following the phasing out of slavery in Portugal and its colonies in 1875, STP landowners advocated the cost of importing free labour from West Africa was prohibitive. The Portuguese authorities reacted by allowing a covert slave trading system to resume. Labourers were obtained in the back lands of Portuguese colonies, in particular Angola. These people were obliged to sign a labour contract. Subsequently these labourers, called *serviçais*, were shipped to STP, and allocated to individual plantations. After 5 years contracts were automatically renewed. Some 80.00 to 100.000 *serviçais* were thus imported between 1880 and 1908.<sup>19</sup>

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<sup>19</sup> Clarence-Smith 1985: 107-108. Labour imports were needed to maintain a workforce on the islands of around 40.000 heads.

# COLONIAL AND POSTCOLONIAL LANDSCAPES

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Growing cocoa was labour-intensive, and the plantations' success depended on the supply of unskilled, cheap manual labour. A continuous labour supply was necessary, since poor *serviçais* living conditions were conducive to the spread of deadly diseases.

The recruitment of *serviçais* in mainland Africa was similar to the abolished slave trading. STP cocoa buyer William Cadbury, a Quaker committed to ending slavery in any form, could not ignore the *serviçais* situation following official reports that slave trading was again being conducted in Angola. In turn Cadbury's envoy Joseph Burt (1870 -1940), conducting an in-depth investigation, visited Angola and STP in 1905 as did Henry Nevison (1856-1941). Nevison, a well-known British journalist, had embarked on a West African tour on behalf of Harper's Magazine.

These visits became the catalyst for growing international humanitarian agitation. Initially criticism focused on the Angolan labour recruitment as slave trading. Following Burtt's reporting and Nevison's magazine articles, the extremely unhealthy labour conditions on STP were exposed, plus the fact that labourers were never repatriated. An international scandal erupted centring on Portugal, STP and Angola.

The international agitation prompted Portugal's decision in 1906 to consent to constructing the STP's public railway, after more than 15 years of vacillation. The railway was ultimately inevitable, to phase out the dependency on manual *serviçais* labour.

The international press challenged the leading chocolate producers too; by late 1909, a Cadbury led consortium of British and German chocolate manufacturers, agreed to boycott STP cocoa.





Fig. 4, Roça Augustinho Neto (Rio do Ouro), labourers cleaning cocoa pods, circa 1908. (Photograph: CACAU collection, São Tomé and Príncipe).

### 3. Railway planning, construction, opening and closure - 1880-1926

#### *Infrastructure debates*

By the 1880s it became pressing that goods transportation between the plantations and São Tomé town was difficult. People and produce moved to and from the capital along haphazard rough-strewn roads, frequently inaccessible due to tropical rains. There were no railways connecting the capital. The continuous rise of cocoa tonnage coupled with increased prosperity of the planters caused the capital's port to process ever growing business volumes – owing to the increased cocoa export, and the import of goods from Lisbon for the *roças*. Both harbour and city were poorly equipped to deal with these business flows. Increased trading necessitated a master plan for improved connections between *roça's* and the capital.

From 1890 onwards, numerous studies were drafted to analyze the possibilities of a public railway on both São Tomé and Príncipe. Leading planters drafted a first plan in 1890 proposing various infrastructural works, including a railway line connecting certain *roças* to São Tomé town. Planter thinking was the Portuguese government should fund such railway, since Portugal was dependent on the profits of the Saotomean trade. After nearly 10 years of a perpetual dance among Portuguese bureaucrats and *roça* planters, a milestone was reached in 1899 when the Lisbon government authorized a master plan for infrastructural developments called “Transport on São Tomé and Príncipe” (*Viação em S.Tomé e Príncipe*).<sup>20</sup>

Portugal had been reluctant to get involved in another railway project, having burned its fingers with lossmaking colonial railways during the 1880s.<sup>21</sup> However, STP’s financial rewards had become crucial for Portugal’s budget. Between 1890 and 1914, foreign exchange earnings from the re-exportation of colonial produce were critical for Portugal to avoid defaulting on foreign payments.<sup>22</sup> By the 1900s STP’s cocoa export value was worth more than any other colonial staple.<sup>23</sup> STP was small in terms of population size though, with only 42.130 inhabitants around 1900. Most people lived on *roças*; São Tomé town, the main urban settlement, had a population of 1000 around 1900.<sup>24</sup>

### *Railway planning spurring urban renewal*

The 1899 master plan’s main recommendation was commissioning a study for a general transport plan, connecting the main cocoa plantations to São Tomé town, by roads or railways. The island of Príncipe was left out of the equitation; there creating regular roads was the proposed solution.<sup>25</sup>

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<sup>20</sup> Vieira 2005: 27-31.

<sup>21</sup> Clarence-Smith 1985a: 98-100. The Luanda railway in Angola had been such loss making railway.

<sup>22</sup> Clarence-Smith 1985b: 87.

<sup>23</sup> Clarence-Smith 1985c: 87.

<sup>24</sup> Nunes 2011: 44.

<sup>25</sup> Vieira 2005a: 32.

As a first, the Ministry of Overseas and Maritime Affairs (*Ministério dos Negócios da Marinha e Ultramar*), sent a team of engineers to STP for a reconnaissance mission in 1899. From these engineers Ezequiel de Campos (1874-1965) would emanate as the instrumental figure in advocating structural infrastructural works on STP.<sup>26</sup>

Campos' initial remit was to explore the possibilities of setting up a public railway on STP. This actually did not come to much: he and his colleagues fell ill with tropical diseases. Six months after his arrival, a convalescing Campos became Public Works Director of the Province of STP (*Director das Obras Públicas da Província de S.Tomé e Príncipe*). As Campos had discovered firsthand, São Tomé town was an unhealthy place. He felt tackling the town's unhealthiness was more urgent than the railway project. Campos' extensive report on São Tomé town's sanitation *Saneamento da cidade de S.Tomé* was published in 1900.

Through diagnosing the sources of the town's unhealthiness Campos laid bare pressing São Tomé town ills. The town had been laid out in a reticular matrix along the coastline, with several, often flooding, dirty rivers floating through the town, making for an unhealthy location. The unhealthiness was compounded by being surrounded by mosquitos attracting swamps. Adding insult to injury, there were no gutters, no sewage system nor clean drinking water.<sup>27</sup> City housing was haphazardly constructed, not designed for a tropical climate and lacking adequate ventilation, with backyards used for dumping waste.<sup>28</sup>

This general insalubrity spread disease aplenty, including malaria and yellow fever transmitted by swamp mosquitos. Campos, exasperated by this sorry state of STP's capital, called for the Portuguese state to stop the rot as it endangered the islands's prosperity.<sup>29</sup> William Cadbury

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<sup>26</sup> Between 1899 and 1912 Campos emerged as a prolific, outspoken writer about Saotomean infrastructure, publishing various works on how to resolve São Tomé town's ills, and how to best construct STP's railway system.

<sup>27</sup> Campos 1910: 17-19.

<sup>28</sup> Campos 1910a:10.

<sup>29</sup> Campos 1910b: 22 "A prosperidade da Ilha de S.Tomé impõe que, sem demora, se trate do saneamento da cidade. É tempo de sobra para deixarmos a incúria e ignorância que sempre revelamos na nossa expansão colonial, para começarmos a fazer alguma coisa com ordem, duradoura e útil".

confirmed Campos' observations regarding the sorry state of the capital when visiting in 1909, he thought the town badly built and unhealthy, with sanitation at a "most elementary level"<sup>30</sup>

Specific recommendations to improve the town's quality of living were provided. The book of work included filling in all swamps around town, tearing down foul houses in the center and resettling local people to the outskirts. Campos endorsed creating a new neighbourhood for Europeans, with new bungalows this time suitable for the tropical climate, with shutter boards, verandas, and palm trees providing shade. Campos' quest for the clean-up and modernization of São Tomé town his report was poorly received by the government officials, his recommendations were not followed up on.<sup>31</sup>

Decades later some recommendations were implemented. The swamps around the city were drained. Various housing stock was demolished on account of public health reasons, with poorest city dwellers moving to the town's outskirts.<sup>32</sup> The center's street grid was rebuilt with elegant colonial buildings, inspired by dwellings in other tropical locations.<sup>33</sup> Finally, in the 1950s a neighborhood for Europeans appeared, on top of former swamps.<sup>34</sup>

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<sup>30</sup> Cadbury 1910b: .20.

<sup>31</sup> Nunes 2013: 84.

<sup>32</sup> Morais et al., [2013: 53](#).

<sup>33</sup> An abundant usage of verandas, high ceilings, colonnade walks, fretwork, hipped roofs and louvers are a case in point.

<sup>34</sup> Morais et al., [2013a: 206](#). [This was](#) the so-called *Bairro Salazar*. What was realized here was an architecture of affluence, with substantial bungalows that indulged in the tropical landscape.



# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

The rise and fall of the colonial public railway on São Tomé and Príncipe

Cees Lafeber



Fig. 5. Roça landownership on São Tomé circa 1918, with large roças like Rio do Ouro and Monte Café clearly demarcated. Note the railway line in black dots, top right from São Tomé town, accessing only smaller roças (Photograph: Arquivo Histórico de São Tomé e Príncipe, São Tomé and Príncipe).

## *Railway planning, construction, opening and closure*

By 1904 engineer Campos was re-employed by the *Ministério dos Negocios da Marinha e Ultramar*), to focus on STP railway planning. Another study “Transport on S. Tomé. Notes” (*Viação de S.Tomé. Apontamentos*) emerged, laying down a marker as to what the public railway should entail: providing leading *roças* with speedy, efficient means for transporting their produce to *the capital*. The critical reasons for the railway’s construction were highlighted: reducing manual labour for goods *transportation*, and safeguarding STP’s place as a global *cocoa* producer. Campos understood, prior to the Cadbury blowup, that using *serviçais* for goods transportation would not remain a ‘free of charge’ solution in the near future.<sup>35</sup> As he stated, “the majority of goods transport was done on the heads of black people”.<sup>36</sup>

The railway should begin in São Tomé town, where the main harbor was located from where cocoa was loaded onto ocean vessels, to go inland connecting with the main *roças*. Inland, the line was to be split into two branches. One branch should link southwestern high lying *roças* whilst the other branch line should connect lower lying *roças* southeast. The planned railway’s length was 30 km. Following completion, a 2<sup>nd</sup> phase was proposed, with additional railways linking up *roças* further southeast, to support the forecasted growth of agricultural production.

The railway track gauge was fixed at 75 cm, identical to the Belgian Congo Railway, regarded as a benchmark by the Portuguese. Campos advocated building an electrical railway; given the need to go through the highly accidented terrain, steam traction was deemed unsuitable. It was argued too that creating railway lines was more cost-effective than creating new roads.<sup>37</sup>

The *roça* stakeholders received Campos’ proposals with apathy. The Portuguese administration was wary, hampered by political and financial fragility, and an apparently incompetent colonial

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<sup>35</sup> Campos 1904: .7.

<sup>36</sup> Campos 1904a: 7. “*Como se sabe, a maior parte dos transportes em S.Tomé, se não dos de exportação e importação, pelos menos os de culturas, é feito à cabeça dos negros.*”.

<sup>37</sup> Nunes 2011a: 95.

bureaucracy.<sup>38</sup> Eventually some planters commissioned a study from German railway manufacturer Koppell. This company proposed just a single railway line, from the capital going inland to the village of Trindade, and then further inland with halts for plantations along the route. Curiously, Trindade, was deemed to require a proper train station. It had become favored by the Portuguese; given its hillside location it offered a cooler and healthier location than the capital.

Both the Koppell and Campos proposal were discussed in the Portuguese Parliament in 1904, leading to a law (*Decreto 17-B*), authorized by King Dom Carlos in March 1906. It ordered construction of a public STP railway, to be exploited by the state. Building the STP public railway line was speedily approved, just a few weeks after the latest bout of embarrassing international publicity about the *serviçais*' working conditions on STP.<sup>39</sup>

Ultimately the Portuguese government had been forced to solve the STP railway conundrum. The need for facilitating healthy living conditions for Portuguese by means of railway access from the insalubrious capital town to the pleasant village of Trindade was firmly on the agenda, as was the awareness that whilst roça labour was very cheap, it was unlikely to remain that way.

A railway master plan was created swiftly by the *Ministério dos Negocios da Marinha e Ultramar*. On STP the Directorate of Public Works (*Direcção de Obras Publicas de São Tomé*) established a designated STP Railway section team (*Secção Especial do Caminho de Ferro de S. Tomé*). Campos was appointed section head, his tenure only lasting a few months.<sup>40</sup>

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<sup>38</sup> Nunes 2013b: 156-159. The kingdom of Portugal in the years up to the establishment of a republic in 1910 was unstable, with frequent changes of government up to 1910.

<sup>39</sup> Morais et al. [2013b: 176](#). The covert labour recruitment system and appalling working conditions of the *serviçais* on the STP roças had gotten increased international exposure between August 1905 and February 1906.

<sup>40</sup> Nunes 2013c:161-162. Campos took office in September 1906 but returned to Portugal in March 1907.



Campos's successor was another engineer, Joaquim Granger (1880-1957). With tangible implementation results, Granger outperformed Campos; under his leadership construction started, with the first branch of the railway completed in 1908. This was a stretch of 6,6 km from the capital to the interior, with a 75 cm track gauge, as Campos had advocated. However, it was a steam railway, not one supported by electric traction.<sup>41</sup>

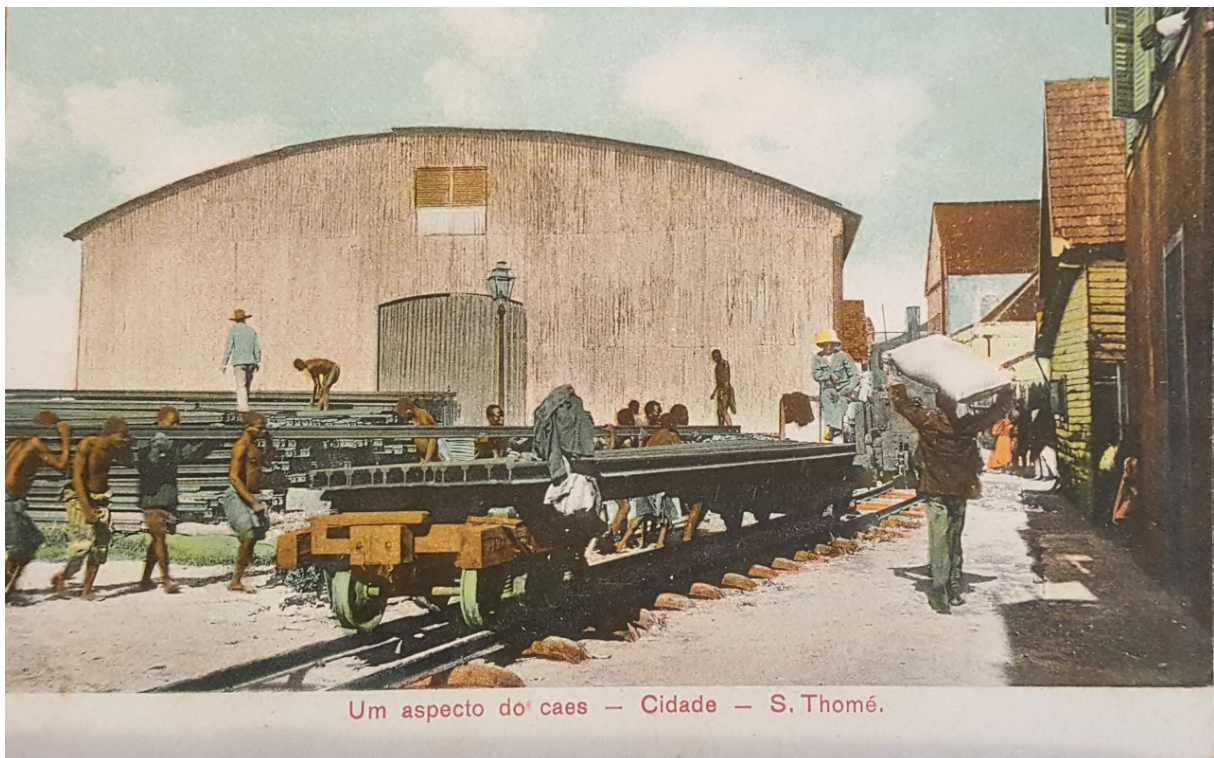


Fig.6. Labourers constructing the actual railway line , in São Tomé town circa 1910. (Photograph of a post card, CACAU collection, São Tomé and Príncipe).

Eventually the official Railway of São Tomé (*Caminho de Ferro de São Thomé*) was completed, opening to traffic in 1913. It was a single track railway line, from the coastal capital to the hillside village of Trindade. The railway line had just a total length of 14 km. In 1924 an extension between Trindade and Milagrosa was opened, which brought the railway's length to 18 km. The line commenced at the S. *Sebastião* Maritime Terminal Station (*Gare Maritima de S. Sebastião*), opposite the eponymous fortress. The nerve center of the railway incorporated a cluster of imposing buildings serving railway tracks, rolling stock, railway staff and customers. It was a very substantial station serving an island railway which had panned out as

<sup>41</sup> Vieira 2005, pp. 46-47.



less substantial. The line had three stations. In addition to the *terminal station* there was a station at the village Lemos, then the terminus station of Trindade. There were some halts along the way, to mark stops where *roças* could load produce onto wagons.

The railway was indeed used for the shipment of cocoa from the *roças* to the capital, its original *raison d'être*. Transporting passengers was provided for too, well appreciated by those who could afford to seek refuge from the insalubrious environment of the capital. The 1913 timetable showed two daily departing trains from the terminal station to Trindade, and two in the reverse direction. From 1916 onwards it was just one daily train in both directions.<sup>42</sup> This railway's life was to prove a short one; it remained in service for 13 years. In 1926 it was over, and the railway was shut down.

What caused this early closure? The railway line was lossmaking, a drain on the Portuguese state's precarious coffers. Not enough money was made from transporting agricultural produce; with 138 *roças* on the island, only 15 used the railway to transport their plantation freight to the capital.<sup>43</sup> The refusal to adopt Campos' earlier proposal to make the railway a viable long term solution, through a network of lines and connecting the largest *roças* to the port in the capital, eventually backfired. Simultaneously the cocoa boom was tailing off rapidly, marginalizing freight traffic.<sup>44</sup>

After the railway's closure, the main *roças* were gradually equipped with proper roads to São Tomé town. These roads confined the STP railway to history.

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<sup>42</sup> Vieira 2005b: 161

<sup>43</sup> Vieira 2005c: 214.

<sup>44</sup> Campos 1955: 9. In 1925 STP cocoa export amounted to 10.000 ton whilst during 1909-1912 it stood at above 30.000 ton.

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

The rise and fall of the colonial public railway on São Tomé and Príncipe

Cees Lafeber



Fig.7. Map of São Tomé, 1920, with the actual railway line between São Tomé town and Trindade marked in black. (Photograph: Arquivo Histórico de São Tomé e Príncipe, São Tomé and Príncipe).

## Conclusion

The article's aim has been to obtain an in-depth understanding of the history of the colonial STP public railway, in particular the social, political and economic conditions leading to the establishment of this infrastructural project.

Formal discussions on constructing a public railway on STP commenced in 1890. The objective was to provide its cocoa plantations with a mechanical way of transporting their produce to the capital. Ten years later, Ezequiel de Campos one of the engineers working on planning the railway, became well-known within the Portuguese colonial administration when he advocated resolving the general unhealthiness of capital São Tomé town was more pressing than a railway project.

Campos' template for the clean-up and modernization of the capital was initially ignored. Much later, during the 1<sup>st</sup> and 2<sup>nd</sup> decade of the 20th century, were his recommendations followed though. The current appearance of São Tomé town dominated by tropical cottages taking the wet and hot climate into account is indebted to Campos' farsighted infrastructure work. The STP railway preparation ultimately delivered the cleanup and redesign of the capital.

Definitive approval for constructing a public railway connecting the plantations with the capital came in 1906, following 16 years of deliberations. The Portuguese government's official go-ahead for constructing the STP public railway was given weeks after an international scandal on plantations' labour conditions had erupted. Portugal, needing to safeguard its colonial income from STP's cocoa, consented to the STP railway as an escape hatch to phase out the dependency on forced labour akin to slavery for cocoa transportation.

*A not so substantial railway of 18km was constructed, with the S. Sebastião Maritime Station in São Tomé town as its substantial epicenter. It closed in 1926, after a life span of only 13 years. Only a handful of cocoa producing roças had been connected to the railway. As opposed to connecting to all main roças, as Campos had recommended..*

It represented a structural design flaw of the state railway. This became acute when in the early 1920s the cocoa boom was tailing off, and production shrank dramatically.

The STP public railway had turned out to be a real dud investment.

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## Colonial Calabar's Scattered Infrastructures

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### Abstract

The city of Calabar, Nigeria has a long history as a busy trading port and with substantial European connections. As a busy slaving port which transitioned to a palm oil based economy during the period of British colonial occupation in the early part of the twentieth century, the urban fabric today bears the unmistakable imprint of particular colonial architectural and planning practices. The few histories which have examined the built environment in Calabar tend to concentrate on the stylistics of distinct structures, many of which are in what was once the European Reservation and Government Hill section of the city. What these analyses overlook, however, are the multifarious ways indigenous and European spaces and infrastructures interpenetrated. The impermanent and decentralized character of traditional compound structures and spatial practices of the Efik people inflected the practices of the colonial administration. The fiction of the European Reservation in Calabar was that it was seen as an island of modern society, hygienically distinct from the context in which it was set. It was seen a corrective zone to the narrow passageways and crooked hovels of the native settlements which had upset European observers since the era of the slave trade. The administration and layout of the zone, however, was as scattered and *ad hoc* as the architecture and urbanism which preceded it and its boundaries were just as porous. Moreover, these configurations were not unlike the traditional compound configurations found in the area. Additionally, colonial experiments at this time tested new environmental technologies, planning measures, and trade arrangements, but it was also a period of rapid advance in tropical medicine. These endeavors were necessarily intertwined. As with the attempts to spatially compartmentalize the city along race and class lines, plans to eradicate disease through segregation were difficult to implement in the administrative, economic, and geographic context of Calabar. The spaces of encounter that emerged at this time involved complex processes of feedback, hybridization, and overlap. Utilizing archival evidence from a number of foreign agents during this time, this paper argues European installations mixed and adapted to the local socio-political and geographic context. Traditional spatial practices in this context were recalibrated to the constraints established by foreign agents.

**Keywords:** architecture; city planning; Nigeria; infrastructure

## Introduction

The abolition of the slave trade and the transition to trade in raw products were two defining aspects of Euro-commercial relations during the nineteenth century. Old Calabar and its environs were enmeshed this economic transformation. In 1851, the British captured Lagos and established a consulate, beginning a process that led to the conquest of Nigeria (Falola, 1999: 44). After the long period of slave trade and the abolition of slavery in the U.S. in 1864, British commerce and its colonial entrepôts transitioned to a period of legitimate trade. In 1884, the Berlin Conference effectively parceled out the continent to European powers, conferring the protectorate of Nigeria on Britain. It wasn't until 1886, though, that the Royal Niger Company was established in London. The aim of the company was to gain monopoly control over the export of palm oil from the Niger Delta and further inland, and the import of manufactured goods from Britain. Trade brought more Europeans to Nigeria and led to major socio-political reorganizations of its diverse societies. While missionary endeavors in Old Calabar were outwardly premised on moral grounds, the civilizing mission of *Pax Britannica* was more vested in the economic and scientific benefits of its colonial outposts. The colonial city served as a terrain of experimentation in botany, sanitation, medicine, manufacturing, and warfare. But as Fassil Demissie argues, "More than steamboats, machine guns, cameras, and other material objects of colonialism, architecture and urbanism made the empire visible and tangible." (Demissie, 2012:6)

By the 1890s, the Royal Niger Company had monopoly control of the export of palm oil from ports such as Lagos and with it a growing infrastructure to house colonial elites and accommodate the administration of extraction. Rowell, Marriott and Stockman argue persuasively that the contemporary dominance of Shell, the largest producer of oil in Nigeria, is a historical consequence of Britain's colonial legacy. They trace a similar geographic pattern of extraction between the Atlantic Triangle slave economy of the seventeenth and eighteenth centuries and what they call the "new Atlantic triangle" connecting flows of gas, oil, and money in and out of Nigeria to the United States and Britain (Rowell et al, 2005). Further, it was during the colonial administration that companies like Shell set up the massive infrastructure necessary for extracting Nigerian crude. The economic gains to be reaped from Nigeria were potentially massive.

To administer its African territories, particularly Kenya and Nigeria, the British relied on a system of indirect rule. The ideological assumption was that British and Nigerians were

culturally different and the best way to govern them was through institutions which they themselves had invented. British authorities ruled through native chiefs or traditional authorities who came to be regarded as integral to colonial apparatus. These ideas and others were developed in Sir Frederick Lugard's book, *The Dual Mandate in Tropical Africa*, a handbook on the justification and implementation of indirect rule (Lugard, 1922). As Mahmood Mamdani argues, the introduction of indirect rule sought to co-opt traditional power structures into the British colonial project deploying regional variations across the newly created state to reflect different types of indigenous political organization in a kind of "decentralized despotism" (Mamdani, 1996). Akin Mabogunje's classic study of Nigerian urbanism was one of the first to comparatively study the effects of these policies on cities which often had a long history prior to colonial occupation. Moving away from conventional representations of traditional urban forms, he viewed the city as economic entity and was critical of theories which placed undue emphasis on the idea that cities were simply central locations which provided services to surrounding areas. Instead, he viewed the city as a complex resultant of multiple socio-economic factors with different urban patterns emerging from cities with varied histories (Mabogunje, 1980: 116-120). Urbanistically, indirect rule necessitated building fewer and less expensive buildings to control a larger indigenous population as well as actively keeping these populations distinct. Sites for European residences were chosen on the basis of distance from native quarters and higher elevations which were seen as conducive of cooling breezes and ventilation in tropical climates. A more developed, formalized planning mechanism which would involve the movement of native settlements, however, was considered politically inexpedient (Nwaka, 1976: 23-40).

The economic objectives of British rule were to make Nigeria financially self-sufficient, produce raw materials, and consume manufactured goods. Essential to the attainment of all objectives was modernized transportation and communication services. As important as Nigeria was within the region, not a single railway line connected it with other African countries. This uneven deployment of infrastructure in many ways presaged the type of "splintered urbanism" described by Graham and Marvin in that it effectively "bypassed" colonial subjects (Graham et al., 2001). The policy of actively segregating the native population from colonial administrators, though, had to adapt to urban conditions in which they were implemented.

Historians of African cities have classified patterns of development and the role of colonial policies on these patterns (O'Connor, 2007). In the Nigerian context, a useful distinction is



made between dual cities and hybrid cities. The ancient Muslim city of Kano, for example, displays characteristics of a dual city. In 1903, the British divided Kano between the ancient walled city and the new city outside of the walls. The new city was further subdivided by race into European townships and strangers' quarters or *sabon gari*. These areas housed migrants from southern Nigeria. Northern cities such as Kano generally followed a stricter policy of segregation. Here, Europeans had to comply to policy, whereas in Southern provinces they were persuaded to comply (Olukoju, 2003: 266).

In Nigeria's Southern Provinces, physical separation was also implemented, though in more hybridized manner. Uneven processes of development existed in parallel and closer in proximity. Geographer Matthew Gandy explains how this took shape in Lagos:

*From its earliest development as one of the leading centers for trade and commerce in West Africa, Lagos was imprinted with a persistent and striking disjuncture in living standards between European elites and the African majority. Successive colonial administrations from the middle of the 19th century onwards failed to tackle the problems of overcrowding, disease and inadequate urban infrastructure. The British colonial administrators sought to transform the port into the Liverpool of West Africa' yet attempts to improve urban conditions were hampered by lack of financial support from the British Treasury, regional political instability and wider economic perturbations affecting the price of commodities such as cotton oil and palm oil (Gandy, 2005: 44).*

Gandy continues, "*The disjuncture in living standards between colonial elites and the African majority in Lagos was always extreme. European villas with wide verandahs and sweeping gardens contrasted the congestion of the 'African quarter'. While the advanced gas, electricity and street lighting of the high-class commercial and residential districts compared favorably with the colonials' homelands.*" (Gandy, 2005: 45) Colonial administrators thus implemented indirect rule differentially in cities across Nigeria.

### **Calabar's Colonial Enclaves**

During this time, Calabar competed with Lagos for political and economic supremacy. As a port city with a history of decentralized forms of governance and urbanism, it is understandable that Calabar's urban development resembled Lagos more than Kano. Similar to Gandy's analysis of Lagos, historian Geoffrey Nwaka offers a cutting analysis of colonial Calabar

arguing the “anti-urban” policies of the British administration neither anticipated nor approved of the growth of cities. He describes the pattern of development promoted by the early colonial administration as chaotic, haphazard, and *ad hoc* (Nwaka, 1990: 63). Joseph Uyanga similarly argues that under British rule, older traditional towns were hardly interfered with and any planning which was implemented happened in piecemeal fashion with very little coordination (Uyanga, 1989: 161). As a city that had developed a robust trading community and for years had been associated with Europeans, Calabar was a natural choice for the headquarters of the Oil Rivers (later Niger Coast) Protectorate in 1885 (Nwaka, 1990: 63-65). Traders, explorers, and missionaries had collected information relating to the culture, economy, and geography of the region (Figure 1). An ordinance establishing European Reservations went into effect in major towns throughout the colony in 1902 and in 1904, the name of Old Calabar was shortened to Calabar (Njoh, 2007: 73). In 1915, Lugard passed the Town Council Ordinance which created European Reservations and in 1917, the Township ordinance No. XIX was passed which made segregation compulsory in Nigeria. But even before Lugard's decree, Old Calabar witnessed a policy of segregation expressed by the existence of European and Native settlements, hospitals, and cemeteries (Nwaka, 1990: 65).

Evidence of British intervention in the urban landscape of Old Calabar was soon apparent. In the 1880s, an area between the settlements of Duketown and Old Town known to harbor leopards was cleared of brush. The British Colonial Office imported prefabricated houses, bricklayers, joiners, and a plasterer for the purpose of developing the new area known as Government Hill (Braide et al., 1990: 145). Within a few years, numerous government establishments were constructed (Braide et al., 1990: 166). Raised story buildings with verandahs sat atop the hillside with a commanding view of the Calabar River. A plan of the Township of Calabar drawn by British officials in the early twentieth century provides some of the clearest documentation of the urban fabric and the new colonial interventions (Figure 2). Colonial infrastructure including buildings, roads, drainage ditches, lighting, and gardens were developed unevenly across the Calabar landscape.

Anthony King's account of the bungalow as “the footprint of capitalism” provides particularly vivid insights into the spatial manifestation of the colonial administration in Nigeria. King writes:

*The essential feature of a township is that it is an enclave outside the jurisdiction of the native authority and native courts which are relieved of the difficult task of controlling*

*alien natives... When laying out the townships, each compound... was to be enclosed by a live hedge, mud wall or substantial fence...*" (King, 1995: 215-216).

The regulation of health was an integral function of these enclaves and often seen as justification for segregation. The compound area was surrounded by a non-residential area "to segregate Europeans so that they were not exposed to attacks of mosquitoes infected with germs of malaria or yellow fever." King concludes that much of the modern form of West African towns can be seen to "derive from the bungalow-and-compound-idea" (King, 1995: 216).

A prime example of this type of development is the Old Residency constructed in 1884 (Figure 3). Similar in construction to King Eyamba V's Iron Palace and other prefabricated houses owned by traders in Duketown, the cast iron structure was shipped from Macfarlane and Co. Iron Works in Glasgow. Surrounded by a defensive wall, brick canalization, and a guard house, the manicured lawn and carefully preserved gas lamps presented an interiorized environment distinct from its immediate surroundings (Ajejekigbe, 2002: 97:). As a two-story structure, the Old Residency technically was not a bungalow, though it manifested the objectives of British colonial urban policy at the time. Bassey explains that colonial builders thought that by raising the habitable rooms above the ground they were safe from malaria which they believed was caused by the bad air near the ground (Bassey, 1979: 29-30).

Prefabricated buildings like the Old Residency projected an image of power, acted as a sanctuary for colonial administrators, and experimented with modern techniques in prefabrication and ventilation. As foreign as they seemed in the landscape, British houses were not entirely alien technologies unilaterally imposed on the city. They were built of the same techniques and materials as the already extant imported European houses of local traders and missionaries. But they also unwittingly mimicked the scattered, expedient, and enclaved qualities of the traditional architecture already existing in Old Calabar. While The Old Residency operated as a colonial enclave, it did so while taking on aspects of a traditional Èfik compound.

Examining the plan, the presence of patterns common to colonial development elsewhere are evident; however a number of parts deviate from this configuration (Figure 4). The boundaries of the Township, the location of various native settlements, buildings, as well as the European Reservation are indicated on the plan. The boundaries of the quarters, though clearly marked, were less defined in practice. Native settlements inhabited Government Hill and European houses are found in Duketown. A photograph taken on Mission Hill looking toward

Government Hill indicated the agglomeration of native thatched structures and colonial story buildings intermixing on the slope ascending north from Duketown (Figure 5). Nwaka points out that the kind of zoning imagined by Lugard could not be established on the ground because native settlements and European areas were already abutting each other. Attempts to legislate an order to the plan, subdividing native settlements into smaller wards were frustrated (Nwaka, 1990: 65). Boundaries were fuzzy in practice, constantly negotiated and redrawn (Nwaka, 1976: 36). Ayodeji Olukoju goes further, arguing the policy of urban segregation at Old Calabar was an utter “farce” (Olukoju, 2003: 273). Facilities that housed natives such as the prison and African quarters were all within the so-called European Reservation. Indeed, inspecting the plan the remnants of a dual city layout can be detected, but is undercut by the presence of structures for natives within the bounds of the Government Hill territory. The boundary of Duketown seeped up the hill and contained native compounds and colonial story structures. District Officers Quarters, a Masonic Hall, “Experimental Gardens”, and “Economic Gardens” occupied parts of Duketown while Married Officers Quarters were located in Leopards Town. Other colonial installments were located in neither the European nor native settlement. The barracks at Akim Town was located at the eastern edge of the township and a “Lunatic Asylum” and Target Rifle Range were located at the southern edge abutting Henshaw Town. Evidence was lacking of the required 440-yard gap, or neutral zone between European and African settlements. While not as explicitly embedded as the missionary houses and churches, colonial structures in Calabar did not strictly abide by segregationist logic. The designation of separate quarters in Calabar was at best an approximation.

A significant portion of Government Hill was dedicated to what can best be described as resort-like recreational facilities (Figure 6). The plan of the European reservation indicated space allocated for a golf links, tennis courts, a croquet lane, and parade and sporting grounds (Figure 7). Recreational facilities were placed in close proximity to the formal government houses, administrative offices, and police and military barracks. Consistent with the English landscape tradition, the layout of neatly trimmed lawns and verandahs were placed in a picturesque setting with winding, criss-crossing paths. A tram line cut across the reservation connecting a military installation with Queen Beach. The pattern of these so-called “self-contained architectural complexes” were repeated in nearby outposts like Itu, Uyo, and Eket (Braide et al., 1990: 145). In practice, however, these zones were anything but self-sufficient. One of the ironies of these amenities set apart and contrasting nearby native settlements is that they required constant



maintenance and support, usually carried out by the indigenous population. For example, a photograph from the British Museum documents a colonial official accompanied by his young caddy on the golf links in Calabar (Figure 8). This kind of European-native relationship regularly occurred within the confines of Government Hill. Moreover, in order for the system of indirect rule to function, it required a supporting cast of native political agents and staff. Originally recruited from Lagos, the Gold Coasts and Sierra Leone, eventually English-speaking natives were educated in mission schools. At a time when the British aimed to strengthen the administration but lacked adequate staff, the system of appointing African political agents was indispensable (Nair, 1972: 203-210). The clarity expressed by the plan of the reservation was belied by these entangled relationships.

The fiction of the European Reservation was that it was seen as an island of modern society, hygienically distinct from the context in which it was set. It was seen as zone of order, commerce, leisure, and cleanliness—a corrective to the narrow passageways and crooked hovels of the native settlements which had upset European observers since the era of the slave trade. The administration and layout of the zone, however, was as scattered and *ad hoc* as the architecture and urbanism which preceded it and its boundaries were just as porous. Moreover, these configurations were not unlike the traditional compound configurations found in the area. Despite changes in scale, materiality, and tectonics, they attempted to create smaller, scattered enclaves of order and commerce, across the Calabar landscape. An image of temporary prison set up by the British administration in the 1880s provides visual evidence of this (Figure 9). Reminiscent of the improvised slave barracoons utilized during the Old Calabar slave trade, it established a penitentiary compound composed of mud and thatch. In contrast to the centralized slave castles of the Gold Coast, the prison architecture of Old Calabar was smaller, less centralized, and more expedient. The police and judiciary functions had informally been carried out by members of the Ékpè society, many of which were recast as native agents by the colonial administration. The exclusivity and expediency of traditional Èfik society adapted to and was continued by the British administration in a different form.

### **Experimental Terrains and Porous Boundaries**

Also during this time, commerce and trade were refashioned. The method of mooring ship hulks in the Calabar River slowly transitioned to the installation of more permanent factory facilities owned by European trading firms. The smooth transaction of goods from Old Calabar and the

hinterlands necessitated the establishment of factories onshore (Imbua, 2012: 71). The robust implementation of infrastructure by trading firms paralleled and was aided by the colonial regime. Less transitory prefabricated structures composed of a mix of wood and corrugated zinc, rather than docked ships, began to line the water edge. In the plan of the city, at least four major clusters of factories can be noted along the shoreline (Figure 4). European factories and warehouses constituted a thin zone unto itself, lying just beyond the border of areas designated for native settlement and Government Hill. The image from Welsh explorer and journalist Henry Morton Stanley's memoir probably depicts the grouping of European factories adjacent to Henshaw Town with the cliffs of Mission Hill serving as a backdrop (Figure 10). To the north, the area from the Cliff House in Eyamba Town to the base of Government Hill housed several facilities including those of Elder Dempster. Queen Beach housed at least a dozen factories including the African Association, Mission Beach, Fort Stewart, and Millerio. Further to the north, the Patterson and Hope factories sat adjacent to Old Town. Braide and Ekpo note that by the twentieth century big commercial firms like John Holt and Elder Dempster had "large compounds" along the river with compartmentalized spaces housing their agents' residence (Figure 11), office, shop warehouse, and workshops (Braide et al, 1990: 146). The top floor contained living quarters while the ground floor was usually dedicated to shops and storage (Figure 12). The backyard served as a workshop and warehouse for assembling wooden casks and storing palm oil and other trade goods (Braide et al., 1990: 146). The previous offshore system of canoes and trading hulks transitioned to a system of European factories lining the coast.

As in the case of the colonial reservation, the factories and trading houses of Calabar were not exclusively European entities. Segregating populations was seen by foreign merchants as a hindrance to commerce. Olukoju relates:

*The solicitors of a Calabar-based firm explained that the custom of trading factories in Nigeria was to have a large number of indigenous employees resident on the premises. If a European trader arrived at a factory with produce—and this was quite common—after trading hours, it was customary to spend the night on the beach. (Olukoju, 2003: 266).*

Colonial experiments at this time tested new environmental technologies, planning measures, and trade arrangements, but it was also a period of rapid advance in tropical medicine (Curtain, 1992: 235-255). These endeavors were necessarily intertwined. The Thompson Yates

Laboratory sanitation expedition saw the proximity of European factories to native settlements as a scourge to be eradicated. Malaria and yellow fever were understood to be transmitted by mosquitoes harbored in unsanitary tropical environments. Maps and photographs documented the location of native huts and dug-out canoes which were seen to attract anopheles mosquito larvae (Figure 13- Figure 14). The 1901 plan of Duketown drawn by the team proposed the construction of streets and a newly reserved foreshore in an attempt to remedy to the situation (Boyce, 1902). The report noted that innumerable larvae were found in the native villages, but were also “found in fire buckets and other vessels inside the houses of Europeans” (Boyce, 1902: 234). Despite concerted efforts, boundaries between factories, native settlements, and natural features intermixed. As with the attempts to spatially compartmentalize the city along race and class lines, plans to eradicate disease through segregation were difficult to implement in the administrative, economic, and geographic context of Calabar. Nonetheless, the colony served as a laboratory and register of the state of tropical science. Enclaves established by the colonial administration at the turn of the twentieth century joined the network of competing offshore spaces.

### **Conclusion**

The legacy of colonialism in Calabar, however, runs deeper than the physical appearance of architectural fragments lodged in the urban fabric. Colonial planning policy remained in place until Nigeria gained independence in 1960. The combination of missionary activity and colonial policy implemented in the late nineteenth and early twentieth century has had a profound impact on Calabar's urban fabric, but it is a mistake to construe either of these endeavors simply as imperialist penetration or the universal spread of capital. The spaces of encounter that emerged at this time involved complex processes of feedback, hybridization, and overlap. Foreign installations mixed and adapted to the local socio-political and geographic context, and traditional spatial practices recalibrated to the constraints established by foreign agents. The post-independence era struggled with processes set in motion during this time, but also grappled with a new set of challenges in Calabar's built environment.

The aim of this article has been to trace the spatial transformations coinciding with the rise of the palm oil trade in Old Calabar in the first half of the nineteenth century and into the twentieth century. Space at this time simultaneously consolidated under fewer sovereigns and expanded to cover a wider footprint. As an era of collaboration and conflict between European and

African traders, the Calabar landscape existed as a threshold space of encounter between the Atlantic and the interior of Black Africa. Its infrastructures were scattered and mobile and belied the image of a central colonial command. With the arrival of Presbyterian missionaries and the first European foothold on land in 1846, indigenous territorial sovereignty was challenged for the first time in Calabar's history. Despite the clarity of spatial relationships evidenced in plans, etchings, and photographs of the architecture from this time, the boundaries created were porous and riven with socio-political tensions. These zones of encounter produced hybrid environments and friction between competing spatial paradigms.

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## Images

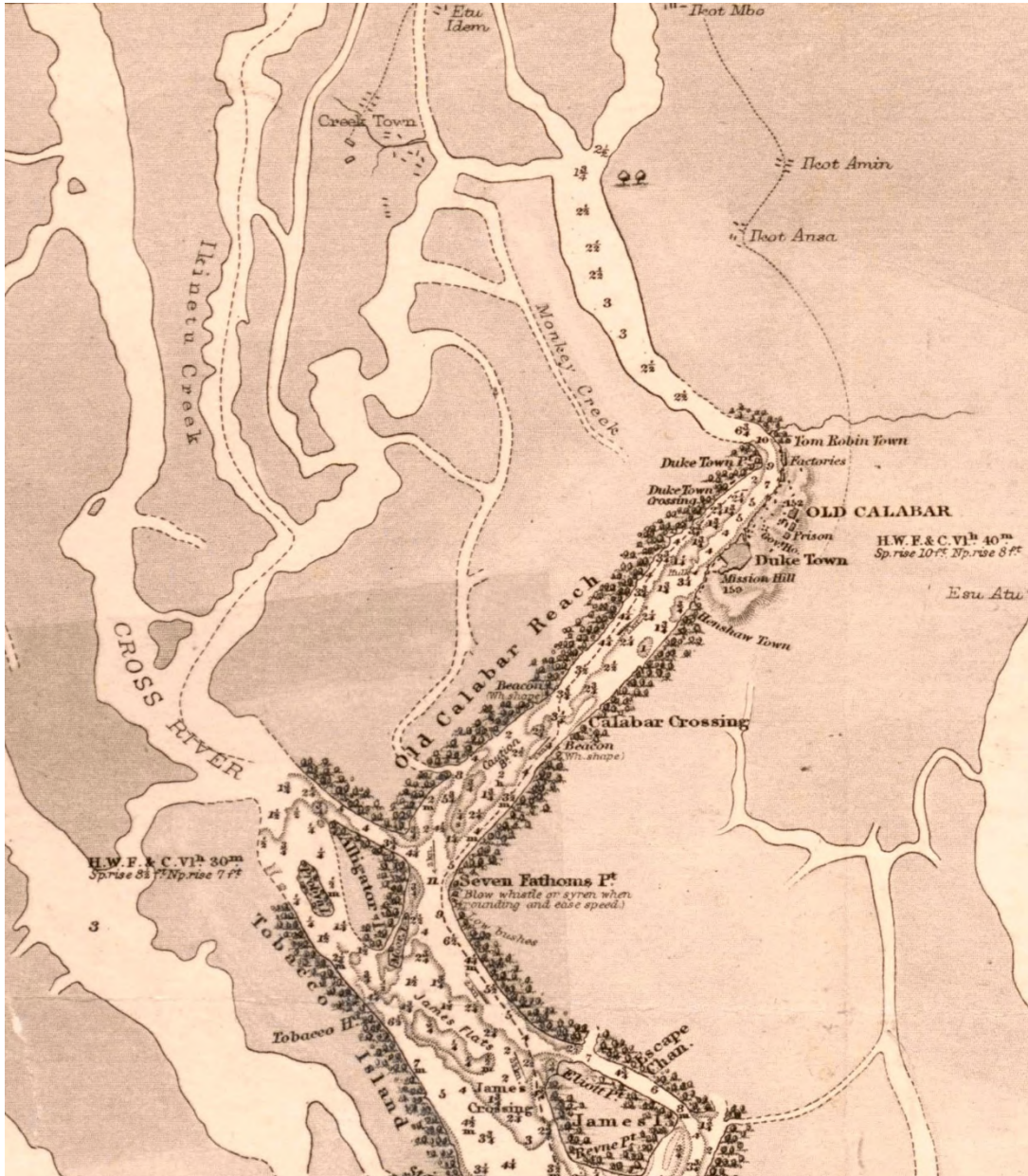


Figure 1. Detail of Map 'Africa - West coast. Approach to Old Calabar [now in Nigeria] surveyed by... ..': map. Originally enclosed in a Colonial Office letter, 25 July 1908. Calabar (1890-1908) (Source: The National Archives, Kew, MFQ 1/410/8).



# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

Joseph Godlewski



Figure 2. Detail of “Plan of Calabar” (1911-1920) (Source: National Archives, Kew, MPGG 1/129. Extracted from CO 583/87. Plan of Calabar, detail, 1911-1920).



Figure 3. Government House, Old Residency, Old Calabar (1890-1905) (Source: The British Museum, Af,A51.31).



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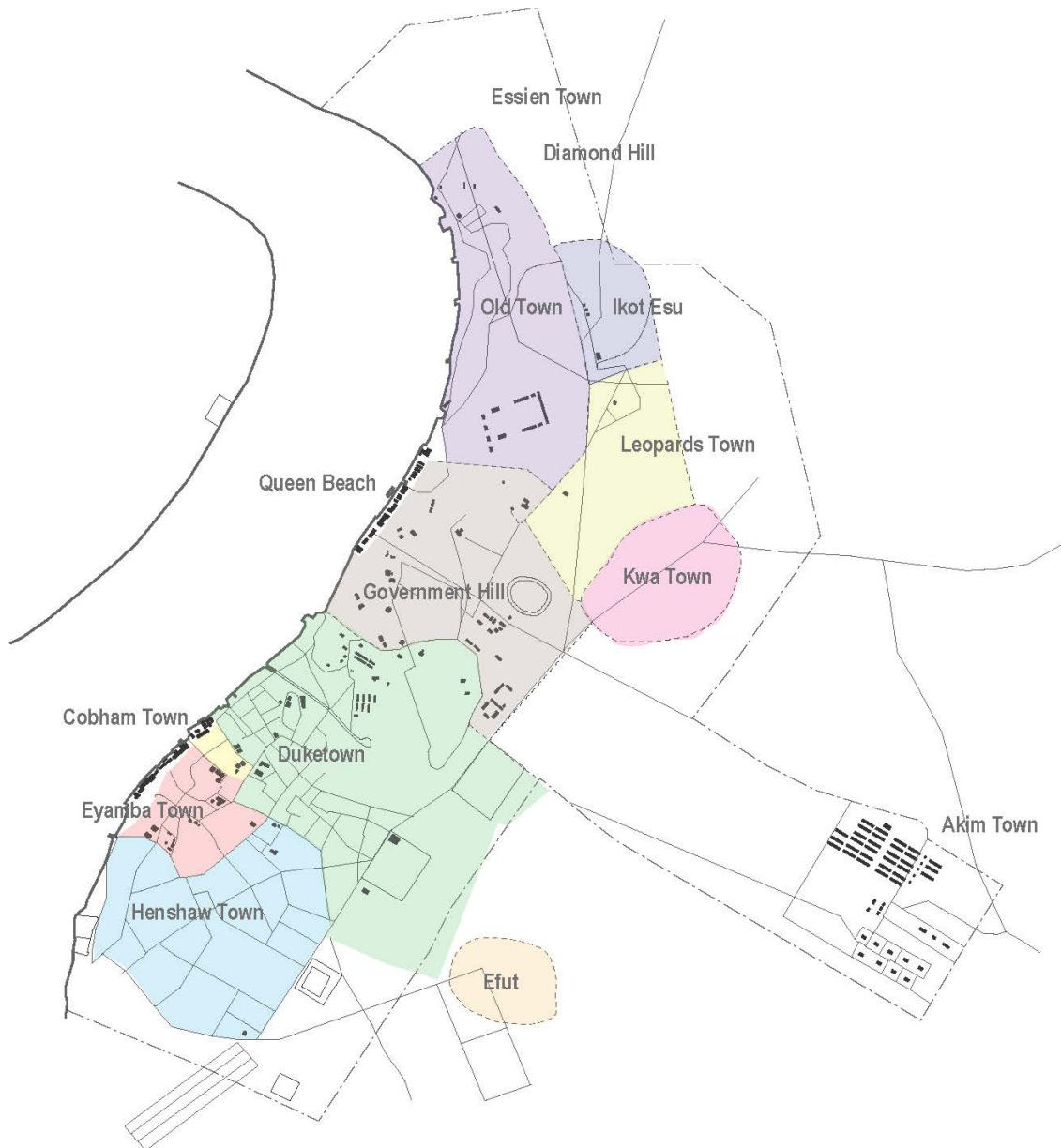


Figure 4. Diagram of "Plan of Calabar" (1911-1920) (Source: Diagram by Joseph Godlewski based on National Archives, Kew, MPGG 1/129. Extracted from CO 583/87. Plan of Calabar, detail, 1911-1920).

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

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Figure 5. Native Settlement, Old Calabar. View of Government Hill from Mission Hill (1890-1905) (Source: The British Museum, Af,A47.7). View of native town of Old Calabar showing a settlement of thatched rectangular shelters and corrugated iron shelters with two to four stories.

# COLONIAL AND POSTCOLONIAL LANDSCAPES

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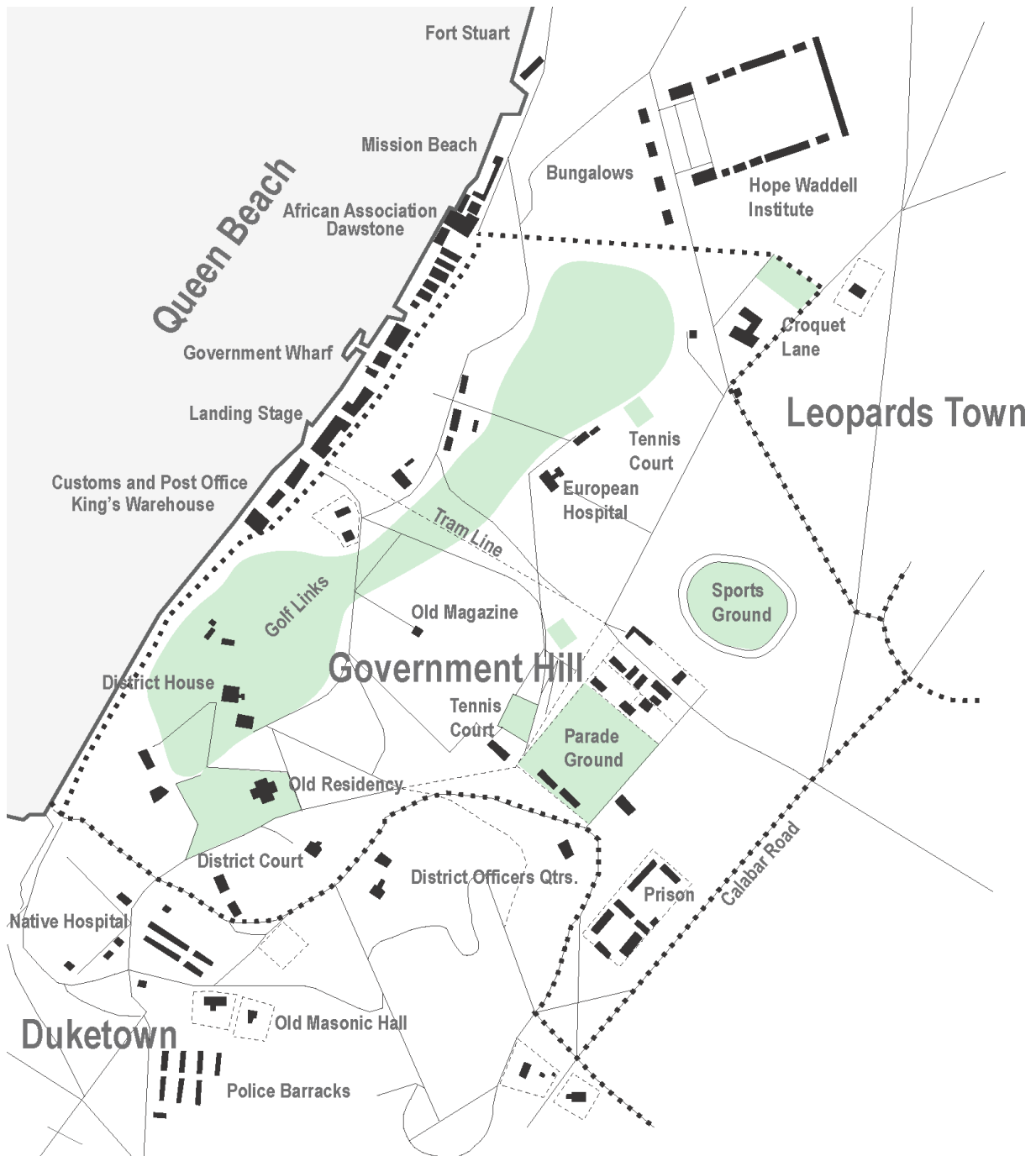


Figure 6. Diagram of Government Hill, Calabar (1911-1920) (Source: Diagram by Joseph Godlewski based on National Archives, Kew, MPGG 1/129. Extracted from CO 583/87. Plan of Calabar, detail, 1911-1920).



Figure 7. Tennis Courts at Government House, Calabar, with the Provincial Secretariat Buildings in the foreground (1909-1910) (Source: National Archives, Kew, 1069/57/4).





Figure 8. Golf, Old Calabar (1890-1905) (Source: The British Museum, Af,A50.140). Picture of a man on golf course in Calabar. Young caddy holding his golf-clubs at right.



Figure 9. Temporary Prison, Old Calabar (1890-1905) (Source: The British Museum, Af,A51.18). Picture of the temporary prison in Calabar showing a line of men standing in the compound. European man at the head of the line. Some prisoners in white prison uniform at center. Local troops at the end of the line. Gate in fence at rear has notice which reads "SILENCE". Mud building with thatched roof and several doors at right.

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

Joseph Godlewski

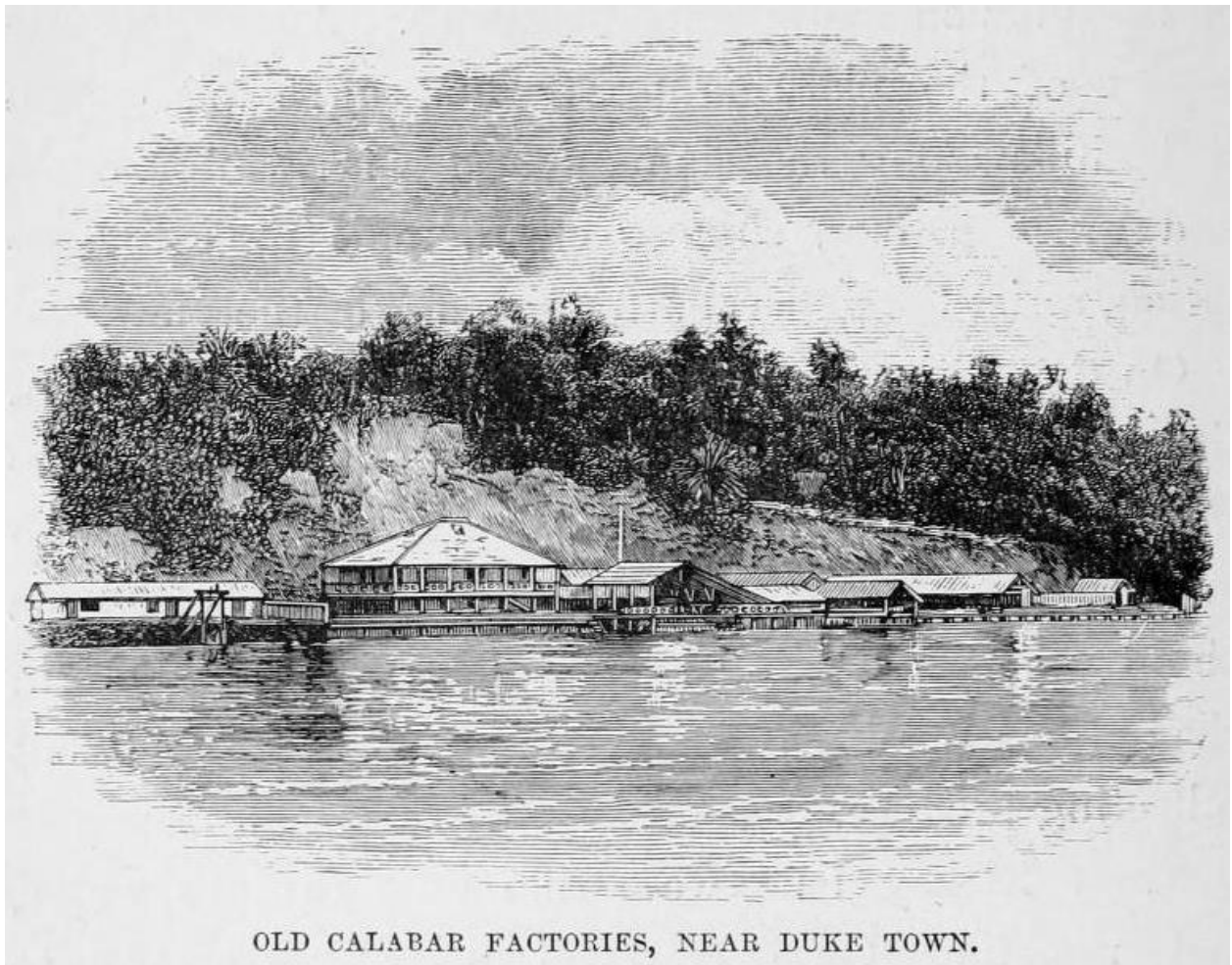


Figure 10. Old Calabar Factories, Near Duketown (1885) (Source: Stanley, Henry Morton. *The Congo and the Founding of its Free State: A Story of Work and Exploration*, Volume 1. London: S. Low, Marston, Searle & Rivington, 1885. 232).



# COLONIAL AND POSTCOLONIAL LANDSCAPES

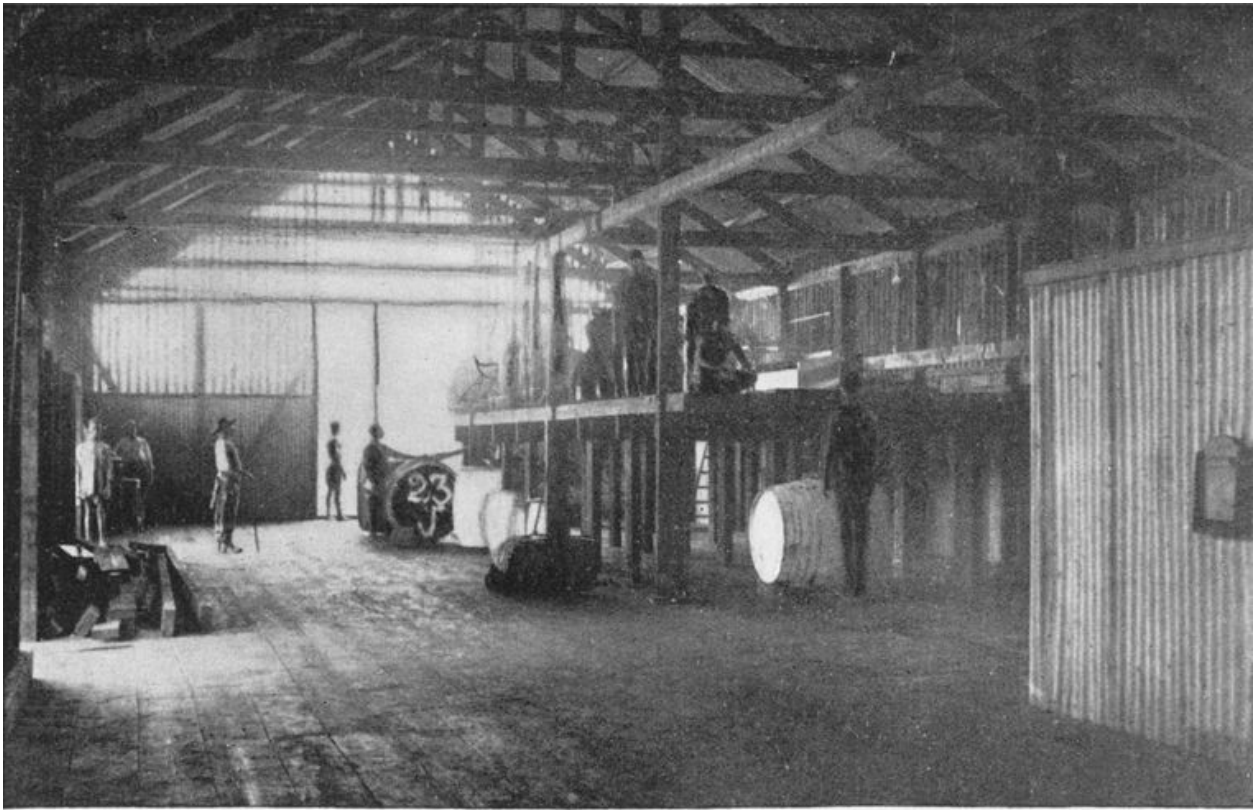
ARCHITECTURE, CITIES, INFRASTRUCTURES

*Joseph Godlewski*



Figure 11. Interior of Miller Brothers' Residential Premises at Old Calabar (1895) (Source: National Museum at the Old Residency, Calabar). The trading agent Powls was killed during the attack on the British trading expedition to Benin in 1896.





INTERIOR OF PALM OIL FACTORY, OLD CALABAR

Figure 12. Interior of Palm Oil Factory, Old Calabar (1895) (Source: National Museum at the Old Residency, Calabar).



# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

Joseph Godlewski



Figure 14. Portion of the Foreshore at Old Calabar (1901) (Source: Boyce, Rubert and C.S. Sherrington, eds. *The Thompson Yates Laboratories Report*, Volume 3, Part 2, 1901. London: Longman, Green, and Company, 1902. 233). The unused dug-out canoes are more or less full of water containing *Anopheles* larvae. On the right is the factory of a European trading firm; the native huts are built close up to its walls.

## “The water from which this city nourishes itself, is from the rain”: On the struggle to bring water and sanitation to rich and poor in Ilha de Moçambique in the late colonial period

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### Abstract

In the late colonial period, Ilha de Moçambique received renewed attention from Lisbon as an important symbolic city for the Portuguese empire, as well as a minor strategic location in the north of Moçambique as the war of independence erupted. Efforts to restore its cultural heritage were implemented in the 1960s. At the same time, plans for improving the public infrastructure of the city were drawn up and partly implemented. The provision of piped drinking water was brought to the island for the first time, as a bridge was constructed to connect it to the mainland. The water provision was extended to the houses in different parts of the city on different terms at different times, reflecting topography but also the different classes of citizens in Ilha. Sanitation has also affected the citizens differently, mainly due to topographical features which favour some areas of the city to construction of drainage not requiring large investments of technology. The city is still today struggling to come to terms with this divided history of infrastructure provision.

**Keywords:** urbanism; infrastructure; Mozambique; colonialism

### Introduction

This paper discusses the relation between the development of water and sanitation infrastructure and citizenship in Ilha de Moçambique in the late colonial period<sup>1</sup>. When piped freshwater was finally brought to Ilha de Moçambique in 1967, the system was dimensioned for the population

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<sup>1</sup>The paper is based on Ph.D research on vernacular housing and urban heritage planning in Ilha de Moçambique 2011-2014. Local archive sources have been limited, as both municipal and district archives from the late colonial period mostly have been destroyed by termites, water infiltration and neglect. See Sollien, 2014.



# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

“The water from which this city nourishes itself, is from the rain”:  
On the struggle to bring water and sanitation to rich and poor in  
Ilha de Moçambique in the late colonial period  
*Silje Erøy Sollien*

according to two classification groups with different water needs: People “of European habits” were estimated to use 150 l/day, while what was termed the “autochthonous” population was estimated to use 50 l/person/day (DGOPC, 1968: 4). This clearly illustrates how there were groups of people expected to use the essential public infrastructure in different ways. This may not necessarily directly be stated as different rights to water, but in practice, the provision of water was made easier for the people “of European habits” and with the means to pay for the necessary installations. Along with the water project, storm water drainage for the whole Island and a sewage system was planned. However, implementation has been complicated until this day, affecting mostly the population in the southern part of the island. The island with no freshwater source and a difficult geology for digging drains, is an example of a city losing its centrality in the colonial project and thus losing the focus for public infrastructure planning, on one level affecting the whole population, but to a much stronger degree affecting the economically poor population living in the topographically less favourable parts of the island. In order to discuss the relationship between public infrastructure and different groups of the population further, we need to look at how the concept of periphery changed over time both within the city of Ilha de Moçambique and for the city in relation to the imperial project. The little island of ca 3 km length, 600 m width, has had a small cosmopolitan urban settlement for many hundred years, related to the shipping trade between the Arabian peninsula and the African east coast. (Fig.1) Since ca 1500 it has been part of the Portuguese trading system with India and functioned as the capital city of Portuguese Mozambique from the beginning of more modern colonization and territorial control. Ilha saw the initial growth of modern urbanization and initiatives for implementing technical infrastructure as a capital city, but already in the 1890s, gold was found in Witwatersrand and the capital of the colony moved south to Lourenço Marques. Decay set in in Ilha, and in 1935 the island lost its status as district capital as to the new inland city of Nampula and steps were taken to plan for a new deep-water harbour for the north in Nacala. Ilha was to become a tourist-historic city, and by the 1960s, had acquired a new symbolic centrality as the oldest city in a threatened empire, as well as some strategic importance as the war for independence was breaking out in the north of Mozambique. For the first time in almost 100 years, it seemed important to the colonial project to develop the public infrastructure of the little island, along with a large heritage conservation project to restore the buildings of the historic city in the 1960s.

## Creation of the divided city

A hundred years before the bridge brought piped water to Ilha, modern urban planning was called upon to create more hygiene in the city, and a dividing line creating a morphological ceasure between “city” and “suburb” was introduced in 1868 (Governo Geral, 1868b; 131-134). The city was at this time concentrated on the northern third of the island, near the Fortress and the harbour and consisted of limestone perimeter housing blocks up to two stories, with wattle and daub and thatch constructions in the courtyards. In 1855 initiatives were taken to clear huts out of the crowded city by moving slaves living in the lands of the Convent of S. Domingos beyond the hospital to *Ponta da Ilha*, “the end of Ilha” (Sopa, 1988: 114). There was a general perception that the congested living conditions in the courtyards of Ilha de Moçambique were unhealthy and a fire hazard, and after a cholera outbreak in the 1859 focus was put on housing and annexes being “cleaned up” and if not susceptible to this, to be destroyed and burnt to avoid bad air and “miasmas”<sup>2</sup> (Governo Geral, 1859). Measures for regularising ownership of the land further south were being taken, and in 1868 a line was drawn south of the hospital area, and the land on *Ponta da Ilha*, including the quarries which have been used to extract material for the houses up until then, was being defined as a “suburb” (*arrabalde*) of the city. Beyond the line was permitted the construction of straw huts, cow pens, slaughterhouses, lime kilns, charcoal deposits and other fuels and explosives (Governo Geral, 1868, 131-134). At the same time it was decided that thatched huts should be destroyed within the city north of the line. This division between “*cidade*” (city) and *Ponta da Ilha* has taken on different designations in the years to come, but is clearly both a morphological and social dividing line, resulting in different urban planning measures and different public infrastructure.

It is important to note here, that *Ponta da Ilha*, even if a form of suburb, has always been considered part of the planned city, with building code applying to the constructions as well as building tax being levied on the constructions in the area. There has, however, been more of a success in implementing alignment and regular roads in the eastern part of *Ponta da Ilha*, which consist of government land. Also water and sanitation issues have been easier in this part, as it is higher and on sandy ground. The areas to the west of the main north-south road is in private lands, a large part in the old lime stone quarries, and from the map of 1878, you can see that

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<sup>2</sup> The cholera outbreak in London in 1854 was the first time it was documented that cholera was a waterborne disease.

there is physically a different development in these areas already then. (Fig.2) The areas along the quarries also have large warehouses lining the road and the coast towards the mainland, where trade and industry have been important activities near the harbour. Also along the roads are some larger shops and double story buildings. The different neighbourhoods each have their own characteristics and identities<sup>3</sup>. At the end of the colonial period ca 2/3 of the population of 12.000 people, lived in Ponta da Ilha.

### Sanitation in the divided city

Large parts of the western *bairros* of Ponta da Ilha were from the beginning situated in the depressions of the old lime stone quarries. From the first decisions made on the issue in the 1850s, it was agreed that the quarries should be filled in and leveled with the ground before construction was started. This was never done, and is still being debated today. The urban plan finally developed in the late 1960s also prescribed filling in the old quarries with at least 2,5 meters, to correspond with the highest sea level, sometimes causing the buildings in the old quarries to be practically under sea level (DGOPC 1968: 6). These areas, as well as other areas of the island practically lower than the quarry areas, are frequently flooded, causing sanitary problems and cause damage to the houses in the area. The drainage project drawn up in the 1968 sanitation plan, was according to the Aarhus report from 1985, partially initiated in several parts of the city, and this led to roads being dug up, asphalt taken away and never replaced (Aarhus, 1985: 55). Drainage of flood water was partly constructed in the area near the hospital, but this never worked. The city has been struggling with this ever since, and discussions have been made in report after report by NGO after NGO, UNESCO and national aid agencies. Surface water drainage has never been a particular problem in the northern end of the island due to its topography.

As the capital of the colony moved south around 1900, immigration to the island from the mainland was increasing, but with the administrative centre gone, Ilha was left a bit in a limbo with regards to planning for the future. There were complaints about the sanitation situation in the old quarries where people were living in a "quasi- incredible agglomeration of *palhotas*, disposed in unhealthy depressions, necessarily anti-hygienic, and compromising the lustre of

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<sup>3</sup> Today there are seven *bairros* in the area of Ponta da Ilha, each with a local leader each. These have changed slightly over the years but are roughly the same as at the end of the colonial period.

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

“The water from which this city nourishes itself, is from the rain”:  
On the struggle to bring water and sanitation to rich and poor in  
Ilha de Moçambique in the late colonial period  
Silje Erøy Sollien

any colonial people which didn't have the past which ennobles us”, a report from a visit by the minister of the colonies states. (Agencia Geral, 1932: 555) They were experienced flooding and mosquitos breeding in the stagnant water. In the early 1940s public toilets were built both in the *cidade* and in Ponta da Ilha, and the first school for what since the 1920s is called 'native' children is built adjacent to the hospital gardens<sup>4</sup>. The area in front of the school also has the old laundry house and the biggest public washing area on the island.

From the 1940s, there were initiatives starting to prepare Ilha for a tourist-historic future<sup>5</sup>. Public spaces in the stone and lime city were improved with plants and greenery, and modern designs along the art deco style appearing in the new district capital of Nampula, slowly started appearing in some of the new houses in the city, both north and south of the dividing line<sup>6</sup>. Bringing water to the island via a bridge is discussed, but appears a more theoretical possibility at this point, even if it is considered fundamental for development (Gomes e Sousa, 1945: 45). However, in a list presented by the new Gabinete de Urbanização Colonial in 1946, Ilha appeared as the very last priority when it came to develop and urban plan among cities in Mozambique<sup>7</sup>. Focus was on new cities where agriculture and industry was being developed. The initiatives for heritage conservation were at this time taken in Lourenço Marques, rather than in Lisbon, as was the decision to publish a book on the history of Ilha (Lobato, 1945).

The use of the beaches for removal of sewage – after 21 hours and at demarcated sites – “has already been described as degrading and antiquated”, and the indigenous inspection report of 1949 called for construction of septic tanks in all courtyards, houses without courtyards being unfit for habitation (de Sousa, 1949: 48). This serious problem was not solved in colonial times. It is worst in the old quarries, where it is not very easy to dig latrines, and the risk of flooding is high. By 2011 this is still “*the most infamous aspect of life on the island*”, and a well-functioning scheme to deal with this without being terribly expensive and complicated, is not yet found (Forjaz, 2010: 78). Houses with permeable septic tanks work in large parts of the

<sup>4</sup> The concept of the '*indigena*' appearing, taking on a legal status of defining the rights of the native population from 1926 and developing in different legal documents. This term is formally abolished in 1961. See discussion a.o. In Sollien (2014), Section 7.2.

<sup>5</sup> The monuments commission was formed in Lourenço Marques, starting excavations in Ilha, where the main monuments of the colony were, Alexandre Lobato's history of the island was published in 1945, and general urban upgrading initiatives were slowly started.

<sup>6</sup> See eg. Sollien (2014), p. 116 and 225

<sup>7</sup> Letter Governo Geral de Moçambique - Repartição do Gabinete NO. 1743/G-6 Para: Gabinete de Urbanização Colonial, in PT/IPAD/MU/DGOPC/DSUH/2084/12989 *Elementos de estudo de urbanização na colónia* (vol. 1) 1945-1947, Instituto Português de Apoio ao Desenvolvimento



island, and some have pit latrines. This is up to each house owner, according to his means.

### Water in the divided city

In 1868 the water supply in Ilha was entirely from rain water, as the island has no fresh water source. As is described in a letter in Boletim Oficial as part of a discussion on how this glorious city again can arise from obscurantism with the help of modern urban planning:

*“The water from which this city nourishes itself, is from the rain, deposited in cisterns generally well constructed – The poor population also drinks water from some wells with better depth. – The cisterns are sufficient for the use of the city; but it would be very appropriate to multiply them more, so that the use of cistern water could extend itself to all the classes, for the purpose of by this important means of benefiting the life of the population with less resources.”* (Governo Geral, 1968a)

Having a cistern and regular maintenance of this, is inscribed in the urban code of 1878, as soon as your house is more than 100 m<sup>2</sup> (Governo Geral, 1878). Very large cisterns existed in the fortress, later with the construction of the hospital, and in the governor's palace. Also in Ponta da Ilha large cisterns were constructed, but these appear to consistently have been not of large enough capacity for the whole population.

The 1949 ISANI inspection report stated regarding water on Ilha de Moçambique, how “it is not necessary to exaggerate the seriousness of this problem, how it is felt from the most modest municipal inhabitant to the President of the city” (de Sousa, 1949: 48). The city without a drinking water source needed more capacity to store water, and a suggestion was to build a new big cistern near the Mercado Municipal and repair the cistern at the Fortim at the southern tip of the island, in particular for the native population. Cleaning and repair of the wells in the native quarters could also help reduce the dependence of water from the cisterns, even if the water in the wells is saline. In fact, large parts of Ponta da Ilha have always depended on these wells, as seen in an earlier reference. There were also larger houses in Ponta da Ilha which had private cisterns by the time piped water was brought<sup>8</sup>. By the Aarhus survey in 1981, these had however, generally gone in disrepair and out of use, as the population had changed to piped water.

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<sup>8</sup> This is both mentioned in the Aarhus report and could be seen during fieldwork in 2011-2013.

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

“The water from which this city nourishes itself, is from the rain”:  
On the struggle to bring water and sanitation to rich and poor in  
Ilha de Moçambique in the late colonial period  
*Silje Erøy Sollien*

In 1954, one of the very few municipal meeting records still preserved<sup>9</sup>, describes how there was a water crisis, which in fact affected the whole city and how the city was trying to find a freshwater source on the island through deep boreholes. At this point Ilha received fresh water from the mainland in large tanks transported on a boat. The president of the municipality is quoted stating: “As is known to everyone, unfortunately the samples collected were always saline. All in all the work was not lost, as the large number of terrain samples collected will serve geological prospecting of the island.” A third borehole will be initiated (CMM 1954: no.11). This is a project which appears entirely local, where local businessmen and the municipal council work together to make the best out of a not optimal situation, without much assistance from central authorities.

Later in the same year, problems of water supply for the general population were discussed three times. There was not enough capacity in the two tanks of in total 14 tons used for water transport on motor boat currently used for the purpose. The district governor had permitted distributing water from the cisterns of the Palácio de S. Paulo, but this still had to be rationed. It was agreed to suspend the sale of water in jerry cans and water provided to the municipal employees, since an emergency provision is needed. Later some of the private companies of the city helped solve the situation, by sending a regular extra tugboat to Lumbo to collect freshwater. Also the railway company stepped in, and the crisis abated. In these municipal discussions, there is, however, no mention of possibilities of other ways of transporting water or of the bridge which starts construction ten years later.

It is interesting to note that in the same book of municipal meeting minutes, the year 1954 marks the annexation of Dadra and Nagar Haveli in India by pro-Indian forces, claiming them to the independent nation of India. Loud patriotic protests erupt in Ilha de Moçambique, and people of non-portuguese origin are particularly noted in the meeting minutes as filing patriotic sentiments with the Portuguese. This political occasion is in fact one on the way to make Ilha important again in the eyes of Lisbon, resulting in there finally being invested in infrastructure in Ilha de Moçambique in the 1960s. When Goa leaves Portugal in 1961, Ilha de Moçambique

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<sup>9</sup> In what used to be the municipal archive in Ilha de Moçambique, I was able to find one volume of intact weekly municipal meeting notes from each decade from the 1920s to the 1970s. These thus give an impression of issues discussed during the time and what kind of requests were approved etc., but more comprehensive analysis is difficult.

becomes the oldest remaining city from the time of the “discoveries” and the Estado da Índia. Ilha in fact takes on a propaganda significance as the fight for independence intensifies (Sollien, 2012).

By 1963, it has been decided to build the bridge from Lumbo to Ilha, and one was looking for ways to plan for this new location in Lumbo. The bridge would arrive in the southernmost end of Ilha, changing the arrival point from the port in front of the old Governor's Palace to the end of Ilha behind the gunpowder storage and the cemeteries. A new road was constructed along the *Contra Costa*, and along this road and the existing roads leading from the entry point of the bridge, the visibility of parts of Ponta da Ilha would then become much greater. The “end of Ilha” now becomes the entry point from the bridge, rather than the areas further from the entry point for boats. Thus, for the restoration project on its way on the island, the houses along the entryways also need to be restored, and are in fact included in a project to “fully restore” the historic city<sup>10</sup>.

A water supply project was designed in 1962 to bring water across the bridge to Ilha (Aarhus, 1985: 55). Mario da Oliveira, distinguished urbanist of the Gabinete de Urbanização visits northern Mozambique including Ilha, in 1965, and sanitation, along with the development of pluriracial settlements, is according to him essential is the current socio-political situation, meaning by 1964 war with FRELIMO<sup>11</sup>. The water project was later extended to reach the houses in 1968 and implemented from 1971. By 1974 not all *bairros* have yet received piped water, including Esteu, according to a meeting of the traditional leaders with the colonial inspection (Raposo, 1974: 138). The Aarhus survey shows that quite a number of houses in Ponta da Ilha had piped water in 1981. The government-owned lands of Marangonha, Areal and Unidade were well served, while Esteu, except for the large house along Passo Mar located above the old quarries, didn't have piped water in the houses, corresponding to the complaints from 1974 above.

### The divided citizens

The 1965 visit by Mario da Oliveira was meant to lead to an urban plan for Ilha, including Ponta da Ilha. In the report this is referred to as “*áreas a urbanizar*” or areas for the “economically

<sup>10</sup> The term “fully restored” was used by my informants during Ph.D research in Ilha in 2011-2013.

<sup>11</sup> PT/IPAD/MU/DGOPC/DSUH/2084/14408, Relatório da Missão a Moçambique para Pareceres e Estudos de Planos de Urbanização, do Arquitecto Mário de Oliveira.

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

“The water from which this city nourishes itself, is from the rain”:  
On the struggle to bring water and sanitation to rich and poor in  
Ilha de Moçambique in the late colonial period  
Silje Erøy Sollien

weak”. At the same time heritage restoration works were taking place on Ilha, and a Portuguese architect is for several years stationed to overlook the work. The urban plan drawn up by Oliveira basically calls for erasure of the settlement in Ponta da Ilha, filling in the quarries and resettling large amounts of people in the new to appear on the mainland. The ca 12 000 inhabitants are intended reduced to ca 10 000, considered the carrying capacity of the island. The plan is, however, considered “extreme” by the Mozambican authorities. When an urban plan is finally drawn up, Oliveira's design is scrapped and Ponta da Ilha generally left as it was, with small upgrading measures of enlarging public squares and walkways, adding green and removing a minimum number of houses (Fig.3 and 4).

The term “autochthonous”, used in the water project referred to in the initial paragraph of this paper, appeared after “native” (*indígena*) was abolished as an explicit class of citizens. For a period, Ponta da Ilha, or at least parts of Ponta da Ilha, had been termed “native quarters”, or *bairros indígenas*. The “native” appear as a legal term during the third decade of the 20<sup>th</sup> century, and the laws surrounding this status of *indígena*, evolve until the official abolition of the term in 1961. There was developed a system whereby you could qualify to “assimilate” to European customs and habits, and thus in a way “grow out” of your native status. This was linked to your command of the portuguese language and habits, among other things, how you organised your house like, for example, eating at a table or not (Cabaço, 2010: 100). The legal abolition of the term, while there still clearly was a division in the population, made the use of terminology difficult, official documents of this time thus looking for other terms like “autochthonous” or “economically weak”, mentioned above, one referring to origin, the other to class. In 1967 there were 12 000 inhabitants in the city, ca 4800 of them of “European habits” (D.G.O.P.C/D.S.U.H. 1968: 3), mainly living in the northern part of the island. This may in fact be a clever way to get around a completely deterministic ethnic use of terminology while at the same time acknowledging that there were different classes with what in practice materialised as different rights to infrastructure.

It is important to note that looking at the *Monografia* from 1945, it is clearly shown how only certain parts of the native quarters were seen as problematic in terms of sanitation, and several parts of Ponta da Ilha are described as interesting and colourful (Lobato, 1945). There is a differentiation, not just the Portuguese and the natives. The fact that the population on Ilha is mixed Indian, Arab and African, as well as Portuguese, makes the situation more complicated.



# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

“The water from which this city nourishes itself, is from the rain”:  
On the struggle to bring water and sanitation to rich and poor in  
Ilha de Moçambique in the late colonial period  
Silje Erøy Sollien

We see that the sanitation project used as main reference in this paper, extended piped water to part of what had been the native quarters – the parts where it was easiest because of topography and because they were government owned land, and where people with most economic means in this part of the population was living. Many government employees lived in the neighbourhoods of Marangonha and Areal.

As a form of conclusion to our discussion, we may say that the provision of water and sanitation in Ilha de Moçambique as a public good, reflects first of all Ilha de Moçambique as a peripheral city in large parts of the 20<sup>th</sup> century, struggling to reach a capacity to build important infrastructure needed for the basic dignity of its people. The division of the city into several parts is often referred to as a division in two, while in fact the division is more fine-tuned. There are certain areas in the southern part of Ilha, which may never have been entirely suitable for habitation, and the people living there are suffering more than the rest of the city. The division is due to economic power but also some coincidences around which families settled when<sup>12</sup>. There are large houses also in the areas which suffer most from flooding too, and some of the most important cultural history of the muslim associations comes from these areas. The first settlement, where the city originally grew, was the most favourable with regards to drainage and making septic tanks. The building of the bridge with piped water in the mid 1960s was a big lift for Ilha, but as war intensified and then the colonial government left, the sanitation project was left with just small pieces constructed. After independence Ilha was again a complete periphery in the new independent nation, and unfinished infrastructure was left to decay, along with a whole historical centre.

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<sup>12</sup>Some of the families of Arab missionaries which came just before 1900 seem to have settled in Litine, for example. Probalby this is where there was land at the time.

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

“The water from which this city nourishes itself, is from the rain”:  
On the struggle to bring water and sanitation to rich and poor in  
Ilha de Moçambique in the late colonial period  
Silje Erøy Sollien

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# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

“The water from which this city nourishes itself, is from the rain”:  
On the struggle to bring water and sanitation to rich and poor in  
Ilha de Moçambique in the late colonial period

Silje Erøy Sollien

de Sousa, Hortênsio Estêvão, Inspector Administrativo, (1949) *Inspecção dos Servicos Administrativos e dos Negócios Indígenas: Relatório da Inspecção Ordinária à Comissão Municipal de Moçambique*, Colónia de Moçambique 6. March 1949

## Images



Fig.1 – Plan from the Aarhus report, 1985.



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Fig.2 – Map marked João Maria Pereira, original probably from 1878. Photographed at the Museum of Ilha de Moçambique (MUSIM).

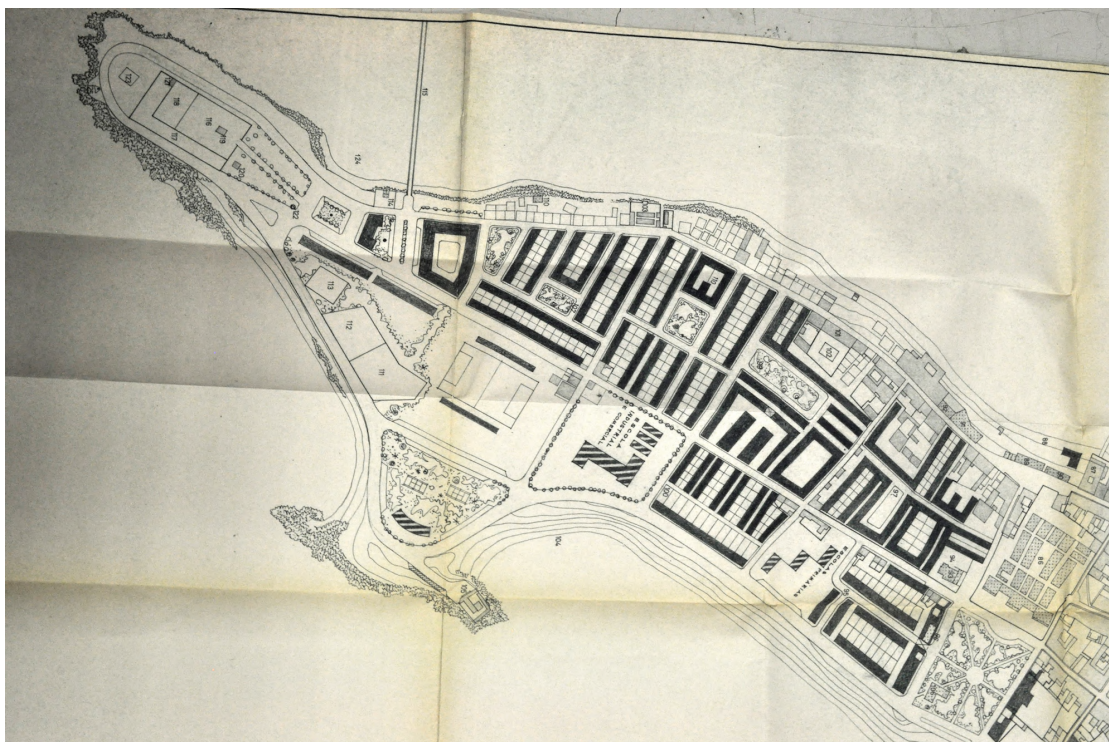


Fig.3 – Plan proposal, Mário da Oliveira, 1965, photographed at IPAD archive, Lisboa



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Fig.4 – Upgrading plan, 1974, photographed at MICOA archives, Maputo



Fig.5 – Houses in the old quarries, 2011



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Fig.6 – Women waiting for water, *Bairro Unidade*, 2013

## **Urban Dwellings in Post-Colonial Algeria: From a housing crisis to a crisis of identity**

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### **Abstract**

Algeria, like other countries in the Middle East and North Africa region, has a long and rich history of successive civilisations that existed in those parts of the world for the last few millennia and left behind a rich architectural heritage. However, this heritage does not seem to inform the architectural identity, in general and urban dwellings in particular, of the post-colonial era. This research is particularly interested in looking at the impact of the colonial urban housing models, with their social and cultural dimensions, on the design of post-independence urban dwellings.

This project will explore some of the issues relating to the lack of cultural relevance in post-independence urban dwellings, whether be it as a consequence of colonial housing models or an inability to reinterpret traditional urban architectural typologies in a contemporary context. The paper will begin with a review of the colonial housing models and policies by way of an introduction that sets out the context that will inform the progress of the research. After a brief overview of the urban change in Algeria since independence in 1962, the paper will focus on exploring the design of post-independence dwellings and urban spaces associated with them, to establish the extent to which these share their design principles with the colonial 'Grand Ensembles'.

Using both secondary research (literature review) and qualitative methods to conduct field work in the form of semi-structured interviews and observations, the paper will seek to explore the transition from colonial housing models to post-independence urban dwelling programmes primarily driven by quantity and the need to mitigate against the effects of an uncontrolled demographic explosion in the large Northern urban centres. Those programmes, be them publicly funded or privately initiated and driven, seem to fail to deliver on both architectural quality and socio-cultural needs of the community. It is hoped that the work presented here will begin to ask questions that can inform the architecture-culture-identity debate in Algeria as a typical North African former colony. Matters of the role of heritage in informing contemporary urban housing models are of particular interest to this research programme.

**Keywords:** Urban dwellings, Architecture, Culture, Heritage

## **Introduction**

Algeria has a long and rich history of successive civilisations that left their traces on its rich architectural heritage. The Arab-Islamic civilization has had the most impact on the architecture of urban centres in Algeria at the scale of both the buildings and the city. Compared to the two neighbouring North African countries (Morocco and Tunisia), the French colonial administration in Algeria did not encourage or adopt heritage inspired urban dwelling models. The colonial era housing models were continued in the aftermath of the independence. Furthermore, the Algerian administration did not prioritise housing related issues, until they became a pressing need for which quantity was preferred to both quality and quantity. This has led to having a housing stock of poor architectural quality and does not address the socio-cultural needs of the dwellers. The work presented in this paper attempts to compare dwellers attitudes to and experiences of urban dwellings in two different cities, Algiers and Ghardaia, with a view to test the idea that culturally inspired dwellings, could show the way to address the issues relating to urban dwellings and faceless, soulless suburban housing schemes that currently characterise most urban centres in Algeria.

## **Colonial Housing Policies and Models**

In general, French colonial policies in Algeria tend to be different to those adopted in other colonies, as Algeria was administratively governed as a French department rather than a colony. The first serious steps by the colonial administration to take responsibility for the housing conditions in Algeria date back to the 1930's as part of the administration's centennial reform package (Celik, 1997). While the housing policies of the colonial administration may seem to have a humanistic façade as alluded to by Sarrault (1931), their primary aim was to exercise control over the local population to bring it in line with strategic objectives of the colonial administration to strengthen its hold on Algeria.

While the discussion of colonial housing policies and models, undertaken here, is related to the conditions in Algiers, their adoption is significant for the rest of the country. Given the breath of issues relating to the topic of the paper, ranging from urban, socio-cultural to economic matters and the word limit, the description of policies and models is restricted to generalities rather than specific details. According to Celik (1997), in terms of urban and architectural terms, the various colonial policies concerning urban dwellings, for Algiers, revolved around three main issues. The first of these is regarding the search for prototypes, be



it a choice between European and indigenous ones or a combination of both. Among the influential writers of the time were Seiller and Lathuillière (1936) who asked whether to create new Casbahs, like in Morocco or to create the same type of settlements as those reserved for Europeans? In the end, they argued against the indigenous house and called for an architecture that would "prepare the way toward a progressive assimilation of European habits" by the indigenous population while attempting to Pacify them. The second issue that characterised colonial housing policies is the physical separation of European and Algerian housing developments, which left its mark on the urban fabric well beyond the colonial era. Celik's analysis of this issue (Celik, 1997) is based on the writings of prominent architects of the time such as Socard (1946) and Scelles-Millie (after Celik, 1997) who argued for the separation of Muslims and European settlements, while suggesting connecting them by means of a commercial and administrative buildings open spaces. Finally, there were some efforts by colonial architects and urban designers to depict what could be an "appropriate" style of urban domestic architecture for Algiers. The debate on the forms of urban housing continued to be influenced by the strategic and political priorities of the colonial administration. A 1944 report on Muslim reforms<sup>1</sup> highlighted the need to build housing settlements, equipped with amenities for modern comfort and sensitive to local conditions as well as aesthetic and traditional values. This was further reinforced by the 1948 Plan d'Urbanisme (Deluz, 1995). However, reality on the ground was different, particularly when the Plan de Constantine was introduced in the late 1950's. Building fast and in large numbers became the priority of the colonial administration. Housing estates formed of high rise buildings became the norm for urban housing.

Algiers saw three housing schemes for the indigenous population in 1930, that can depict the urban dwellings models being advocated by the French administration's architects and urban designers. The first of these schemes is the first *cit  indig ne* by Bienvenu, which was a low rent housing scheme that consisted of sixty-two apartments, located on the Boulevard de Verdun in 1930 (Figure 1). The scheme failed to serve as a model for other housing schemes of the era. The second of these schemes is by Seiller and Lathuill re on the Clos Salembier hill in 1935. Unlike the previous scheme, this one was horizontal and consisted of attached individual units, each with its own small garden and courtyard (Figure 2). Earlier intention to

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<sup>1</sup> Direction de l'Int rieur et Beaux-Arts, 3 me Bureau, "Proposition de la Commission des R formes musulmanes," 4 March 1944, "Projet de d cision soumis au gouvernement," 4 April 1944.

include neo-Islamic references were diluted and the built scheme was closer to Garnier's early modernism than a new tradition inspired urban housing model for Algiers. The last housing scheme of this period is the Ste Corinne housing project for indigenous population in the Maison-Carree suburb of Algiers by Bonnefour. The scheme consisted of single storey houses sharing side and back walls. Each dwelling consisted of two rooms opening onto a courtyard with toilet, water outlet and a covered area (Figure 3). According to Deluz (1995), some aspects of the scheme, such as the minimal living spaces and the inner courtyards with hygiene facilities, were later incorporated into high-rise blocks as was the case in the Boucle-Perez housing scheme, another design by Bienvenu, but different to its previous one, as it borrows from the spatial organisation of the Ste Corinne scheme adapted to high rise living.

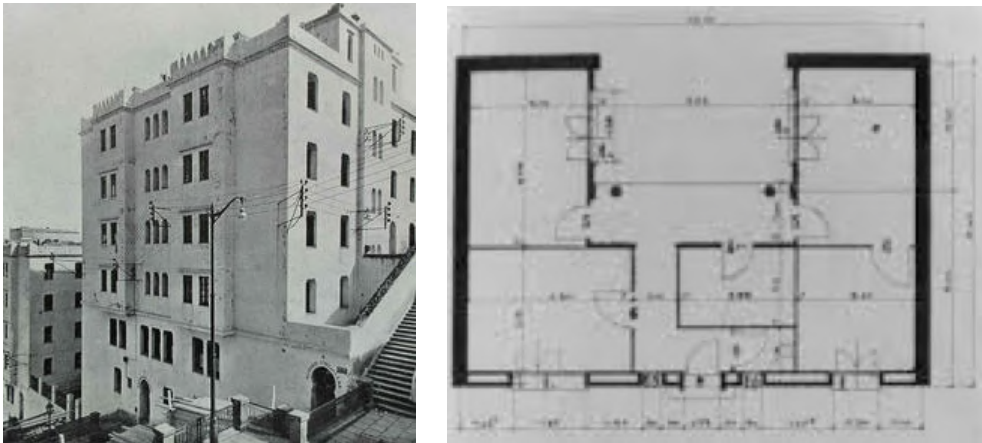


Figure 1. The Boulevard de Verdun low cost housing by Bienvenu. (Source: <http://halimede.huma-num.fr/node/2555>)

Figure 2. The housing project in Clos Salembier, in 1936 by Seiller and Lathuillière. (Source: Celik, 1997)

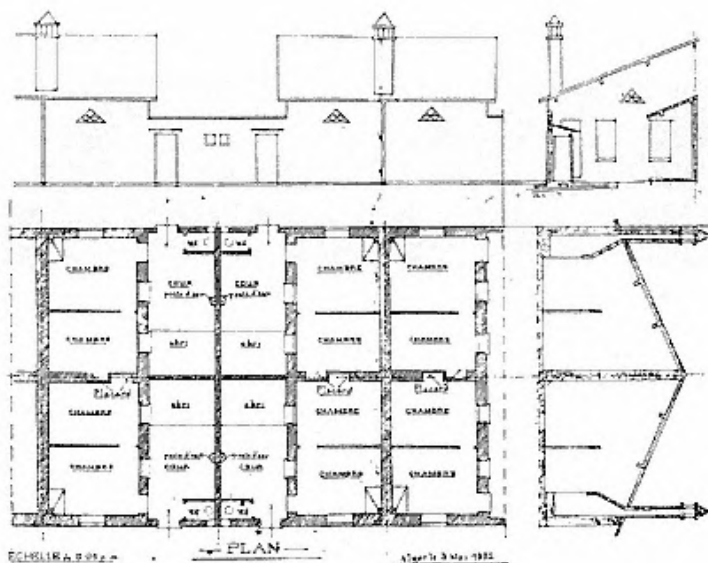


Figure 3: Ste Corinne indigenous housing in Maison-Carrée. (Source: Celik, 1997)

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

Urban Dwellings in Post-Colonial Algeria:  
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While the Algerian housing construction came into a halt in the 1940's (due to France being preoccupied with the second world war, the 1950' was marked by a change in the colonial administration policies, which was marked by an intense housing programme starting under the stewardship of Algiers' mayor Chevalier (1953-1958) and complemented by De Gaulle's 'Plan de Constantine' in 1958 up until the independence. The chief architect for Mayor Chevalier was Fernand Pouillon, whose work in Algeria outlived both the mayor's tenure and the 'Plan de Constantine' well into independent Algeria. For Pouillon, Chevalier's vision for Algeria was complete separation from France while keeping a federal status with cultural and economic links. His much celebrated project for the housing scheme in 'Diar el-Mahçoul' consisted of 1,454 units, 542 of them for Europeans and 912 for Muslims. The development comprises of two quarters divided by means of a main road. To the south of the corniche is the *cit e confort normal*, with its good views of the bay, was reserved for Europeans. The *cit e simple confort*, designated for the indigenous population, faced the highway and the valleys. He designed two separate quarters with different levels of architectural comfort for Europeans and Muslims (Figures 4, 5 and 6).

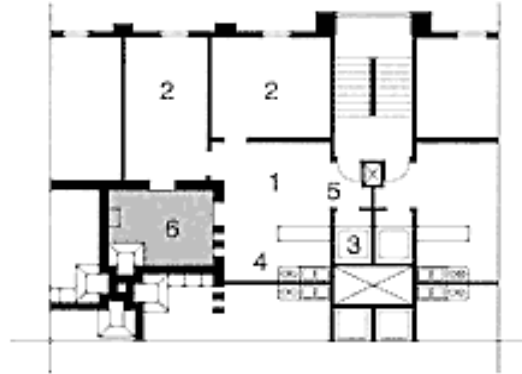
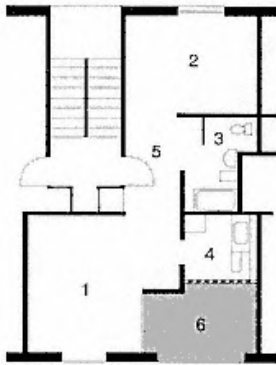


Figure 4: Diar el-Mahçoul, plan of a one-bedroom 'normal comfort' unit: (1) living room, (2) bedroom, (3) bathroom, (4) kitchen, (5) entry, (6) patio. (Source: Celik, 1997)

Figure 5: Diar el-Mahçoul, plan of a two-bedroom 'simple comfort' unit: (1) living room, (2) bedroom, (3) bathroom, (4) kitchen, (5) entry, (6) patio. (Source: Celik, 1997)



Figure 6: Diar el-Mahçoul, general view (Source: Celik, 1997)

While on the face of it, there was a debate around what constitutes housing models for the Muslim population of Algeria, the colonial policies ended up being concerned with quantity rather than quality in terms of housing provisions.

## Post-independence Urban Dwellings

The issue of housing in Algeria, in general and urban dwellings in particular is still seen by the decision makers as one of quantity which in itself is a contributor to an even more complex problem that of the search for culturally meaningful and socially relevant dwelling models that would add quality and structure to otherwise faceless urban sprawls that continue to blight most of the urban centres since the independence in 1962.

Despite the colonial administration's efforts to embark on the building of 100,000 dwellings as part of the 1958 'Plan de Constantine' that came as "*an ultimate attempt by the French to retain their position in Algeria*", (Hadjri and Osmani, 2009:41), the country was still experiencing a housing shortage in the aftermath of the independence. By the 1966 general census, the housing country's stock amounts to 1,980,000 units for a population of 12,096,347, which gives an average occupancy rate of 6.1 people per house (Benmatti, 1982:161). Despite the acute need for housing units, the attention of the Algerian government was turned to what was seen, at the time, as a priority; economic development. While some scholars (Chaline, 1996) argue that this decision is partly justified by the 100,000 dwellings built as part of the 'Plan de Constantine', others such as Pagan et al. (2003) argued that 100,000 houses should have been built for every year that followed the independence in order to eradicate the precarious housing, to renew the housing stock and to rebuild what was destroyed during the war of independence. According to Benameur (2010), the worsening of the housing conditions is due to four main factors; rural migration, fast urbanisation, demographic growth and non-prioritisation of the housing sector. Through her analysis of some housing projects of the colonial era by Pouillon and Simounet, Djiar (2007) refuted the previous assumptions that the design principles of these two architects were based on a typical Algerian house reinterpreted in a modern context. On the contrary, she argued that these new typologies were an attempt by French politics to promote a series of cultural changes in Algerian society that the author identified as; the encouragement of a greater sense of individualism amongst community members, redefine the female's role through reconfiguration of space and pressurise the native population to reject the patriarchal family



type. The socio-cultural changes introduced during the colonial era and the housing projects that continued into the aftermath of the independence seem to have their impact on the post-independence urban housing typology.

Deluz (2010) describes the main typologies as being; Identical Blocks typology – a less successful adaptation of the colonial *Grand Ensembles*- (Figure 7), Tower typology (Figure 8), Villa typology with its two main categories, an upper category (Western inspired villas (Figure 9) and those with inappropriately adapted Islamic architectural elements (Figure 10) and a lower category (with a less pleasant appearance (Figure 11) and finally Shanty towns typology.



Figure 7. Example of a neighbourhood with identical housing blocks



Figure 8. An example of a 15 floors tower block in Algiers



Figure 9. A typical example of a western style villa



Figure 10. Example of a house with borrowed features from traditional architecture



Figure 11. The excessive use of balconies and terraces in houses

With the deregulation of the construction and housing market and the move away from the centrally controlled economy, the housing market in Algeria seems to be facing new challenges other than those traditional ones of satisfying the needs to provide basic shelter for the ever expanding population. The challenges include; failures on the urban scale, technical failures leading to poor quality dwellings, affordability for the lower income and socio-cultural failures. This latter one is of a particular importance to this paper, as it will be discussed through the research work described in the next section.

### **Urban Dwellings: A crisis (of needs) within a crisis (of identity)**

In a report about the housing provisions, Heraou (2012) explains that despite the efforts to construct tens of thousands of housing units, the housing programmes, apart from being costly and of poor quality, their high density, the choice of high-rise block and the lack of basic infrastructure have contributed to their failures. Furthermore, these housing developments failed on the cultural level, by offering dwellings based on European models lacking any adaptation to the local way of life. In order to better understand the socio-cultural failures of the urban dwelling provisions, a research project was undertaken, using semi-structured interviews and observation in two Algerian cities; Algiers and Ghardaia (Djermouli, 2018). Although the research included the views of dwellers, decision makers, educators and designers, the discussion here is focused on the former only. All four types of formal urban dwellings were covered. These include; self-built individual houses, apartments from both the privately and publicly funded schemes as well as apartments from social housing programmes. In total 17 participants, each from a different household, were interviewed. Out of these, 10 were in Algiers and 7 in Ghardaia. The reason for choosing these two cities, is to try and unearth any effects of the local socio-cultural differences on the way urban dwellings are acquired, used and perceived. The semi-structured interviews were conducted in Arabic and French, transcribed in French then translated into English for analysis. They covered a range of issues relating to one of the questions that the research was interested in investigating. Of particular interest to this paper was the the ways socio-cultural factors can inform the spatial experience of the city dwellers and the creation of the urban environment.

The main findings of the interviews with the dwellers will be presented for each of the two cities respectively. The findings were grouped under themes that came out of the analysis of the semi-structured interviews and observations.

For the dwellers from Algiers the main issues that came out of the interviews are as follows:

- The need for privacy inside the house
- The need for a second living room
- The inadequacy of the balcony as a spatial feature
- The lack of storage space
- The inadequate spatial arrangement of the floor layout
- Poor condition of communal spaces (internal and external)



*Figure 12. A typical example of alterations to the balcony*

Seven semi-structured interviews were conducted in Ghardaia; five of the dwellers live in self built dwellings and two in apartments. The former ones are culturally inspired dwellings. The issues raised by the interviewees were as follows:

- The importance of the guest room
- The entrance hall or *Sqifa* as a culturally and functionally important feature
- The central courtyard and/or backyard as an important spatial feature
- The roof terrace as a climate related feature
- The importance of using traditional building materials

The work undertaken in Algiers and Ghardaia had, though using the same methodological

approaches, it dealt with two differing socio-cultural and urban contexts. The post-colonial urban fabric in Algiers is a mixture of the three main dwelling typologies of identical blocks, towers and self-built houses. The picture in Ghardaia is different in terms of both housing typologies and ways of financing/acquiring the dwellings. While a form of identical blocks exists, it offers more variety, less repetition and certain elements of traditional architecture. Furthermore, the introduction of the *K'sour* initiative saw a new way of producing (financing, design, construction etc.) urban dwellings based on community led initiatives and heritage inspired design. As expected, the findings of the study showed a difference in the issues that preoccupy urban dwellers in both cities and the way they experience both the domestic and urban space. The design of urban dwellings in Northern urban centres, as seen through the Algiers case study, does not make any references to traditional housing typologies. If the views of the dwellers are anything to go by, such dwellings fall well short of the dwellers wishes and desires as most of the issues raised are about what is lacking (privacy, dwelling size, storage space, inadequacy of the balcony, etc.). On the other hand, dwellers in Ghardaia seem to have a better spatial experience, as their conversations have a more positive tone describing the importance of the features they appreciate in the dwelling, which one could take as an indicator of a better spatial experience of heritage inspired dwellings. Such features include the guest room, the entrance hall *sqifa*, the courtyard, the roof terrace and the use of traditional building materials.

### **Discussion and concluding remarks**

The issues discussed in this paper were part of the findings of a research project into the architecture-culture relationship on post-colonial Algeria, through the lens of urban dwellings as experienced by the dwellers and perceived by other stakeholders (decision makers, designers, educators). The review of colonial housing policies and models has shown that unlike the case of Morocco and Tunisia, the colonial administration in Algeria did not encourage the development or construction of heritage inspired housing policies or models. The post-colonial administration did not fare any better. The issues of housing still remain a quantitative one, which led to inadequately conceived and built urban sprawls with no real cultural value and did not inspire any social engagement. The comparison between the North of the country (Algiers) and the South (Ghardaia) clearly indicated that differences in dwellers attitudes towards urban dwellings as well as ways of providing such dwellings. With regard to the first issue, Ghardaia



dwellers still tend to prefer and seek heritage inspired dwellings, while in the North, the emphasis seems to be on having a dwelling regardless of what it offers in terms of facilities or cultural significance. The way urban dwellings are provided seem to offer more variations in the culturally conscious South than in the North. Community driven urban housing in Ghardaia offers better alternatives to the conventional methods of financing and construction adopted in the North and produces more culturally, socially environmentally relevant architecture.

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# Transformation of Post-war /Post-colonial Housing in Ho Chi Minh City: A Case Study of Nguyen ThienThuat Apartment Blocks

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## Abstract

Ho Chi Minh City (HCMC), also known as Saigon, is the largest city in Vietnam. While the city is characterized by fast urban transformation, its colonial and war vestiges are still influential as the result of almost 100 years of French colonization and several decades of post-colonial development with American support. Medium-size apartment blocks, locally called *Chung Cu*, were initially developed as an immediate response to the population boom and housing need during the post-colonial period from the late 1950s to early 1970s. *Chung cu* has changed significantly since the end of Vietnam War (1975) with North-South reunification and the socialist influences from Northern Vietnam. Even though *DoiMoi* (economic reform) did not show a significant impact on *Chung Cu* as they did to their counterpart in Northern Vietnam the reopening of Saigon to global market since 1986 does bring a certain changes to this housing typology.

While *Chung Cu* represents the global modern movement in public housing architecture, such as those designed by Le Corbusier during the post-colonial period, spatial and formal changes in *Chung Cu* reflect the social, economic and cultural resilience and resistance of the local residents whose post-war experiences are under-presented in post-colonial literature. This paper looks at the architectural transformation of Nguyen ThienThuat housing blocks in central Saigon as a case study. This includes firsthand observation of architectural changes to the exterior/interior of the housing blocks, and how these changes have driven by the spatial practices and daily life of local communities. This examination will be integrated into a review of urban history of Saigon as well as relevant urban and post-colonial theories. Implication from the review hopefully will add to current literature in post-colonialism housing.

**Keywords:** Ho Chi Minh City, housing, postcolonial, architecture

## I. Introduction

Ho Chi Minh City (HCMC) is undergone fast and dynamic transformation. While Hanoi, the capital of Vietnam, has more than 1000 years of history, HCMC is almost 400 year old (Lien, 2013: 2). Initially, HCMC was built as a military fortress named *Gia Dinh* under *Nguyen* Dynasty from the 17<sup>th</sup> to 19<sup>th</sup> Centuries. In 1858, French colonized Vietnam and renamed *Gia Dinh* as Saigon (Bao et al., 2016: 17). French colonial government developed Saigon as the capital of the southern part of Vietnam with new road networks, administrative and public buildings and transportation infrastructure. French's remnants can be observed now in District 1 (Central Business District), District 3 and District 5 (the Chinatown called Cholon). Some key buildings from this era include Saigon's Opera House, Central Post Office and Parliament Buildings. Postcolonial era marked its first milestone with the cease of French's colonization in 1954 when Vietnam was divided into two parts: the South with Saigon as its capital – influenced by capitalism with American supports (1954-1975). The North with Hanoi as its capital – influenced by socialist ideology with supports from China and Russia (Nghia, 2011:125). Many public apartment buildings, locally called *Chung Cu* (CC), were built in Saigon by the American-supported government following the increasing demand for homes brought by the population boom around 1960s (Thai, 2017: 114). In 1975, the departure of American led to the reunification of Vietnam and South Vietnam, including Saigon is under socialist ideology with the subsidized system (Bao et al., 2016: 17). Saigon was renamed as Ho Chi Minh City and Hanoi becomes the capital of the whole Vietnam. In 1986, the government introduced the *Doi Moi* policies (or economic reform) by which the 'closed-door' policies during subsidized periods replaced by the opening of Vietnam to foreign trades and investment. This marked the return of capitalism characterised by an open-market economy under socialist ideology.

*Chung cu* has changed significantly since the end of Vietnam War (1975) with North-South reunification and the socialist influences from Northern Vietnam. Even though *Doi Moi* did not show a significant impact on *Chung Cu* as they did to their counterpart in Northern Vietnam the reopening of Saigon to global market since 1986 does bring a certain changes to this housing typology. While *Chung Cu* represents the global modern movement in public housing architecture, such as those designed by Le Corbusier during the post-colonial period, spatial and formal changes in *Chung Cu* reflect the social, economic and cultural resilience and resistance of the local residents whose post-war experiences are under-presented in post-

colonial literature. This paper looks at the architectural transformation of Nguyen Thien Thuat housing blocks in central Saigon as a case study. This includes a snapshot of the history of the CC and firsthand observation of architectural changes to the exterior/interior of the housing blocks, and how these changes have driven by the spatial practices and daily life of local communities. This examination will be integrated into a review of urban history of Saigon as well as relevant urban and post-colonial theories. Implication from the review hopefully will add to current literature in post-colonialism housing.

## II. Chung Cu Nguyen Thien Thuat and ‘Home-based Businesses’

According to the report from the Department of Construction of HCMC, there are almost 480 CC, which were built before 1975. Twenty-one of them were built during French colonization period and more than 400 were built during American supported period, most in the late 1960s and early 1970s. CC Nguyen Thien Thuat was one of largest and earliest to be built in 1968-69 with American support and funding in response to the increasing numbers of migrants coming from the nearby provinces (Thai, 2017: 174). The site of the CC is over 4 hectares. It comprised of 11 four-level blocks with 1396 flats, which was planned to provide homes for 4000 residents (PADDI, 2012: 19).

The site of CC Nguyen Thien Thuat, which is the in-between areas of Districts 1 and 3, was neglected to some extent by the French colonial government in their plan for Saigon (Lien, 2013: 19-30; Thai, 2017: 30-68; Quang, 2016: 8). It is believed that this area was informal settlement with self-built thatched houses characterised by a maze-like network of laneways (Cu, 2016). The construction of CC Nguyen Thien Thuat was initiated as part of the US government’s redevelopment plan for Saigon, by which, the urban grid layout developed by the French in Central Business District was extended to Nguyen Thien Thuat area – popularly known as *khu ban co* or ‘chessboard area’ for its layout like a chessboard. Blocks of apartments were built on the site of the informal settlements in accordance with the grid layout. The architecture of CC Nguyen Thien Thuat was very similar to its ‘siblings’ around the city with reinforced concrete structure and similar building façades. They had some internal amenities, such as park, grocery stores, medical clinic, cinema, etc. (Thai, 2017: 114)

The end of Vietnam War with the departure of America in 1975 followed by wave of people leaving their home for America as refugees. This included those who lived in the CC.



Abandoned flats were taken over by the new socialist government of unified Vietnam. They were then allocated to those who were employed by the new government under subsidised housing scheme, which had been practiced in North Vietnam since 1960. Like most other parts of HCMC, CC provides home for both: existing residents who were under housing scheme with American support and new residents who came under socialist housing system.

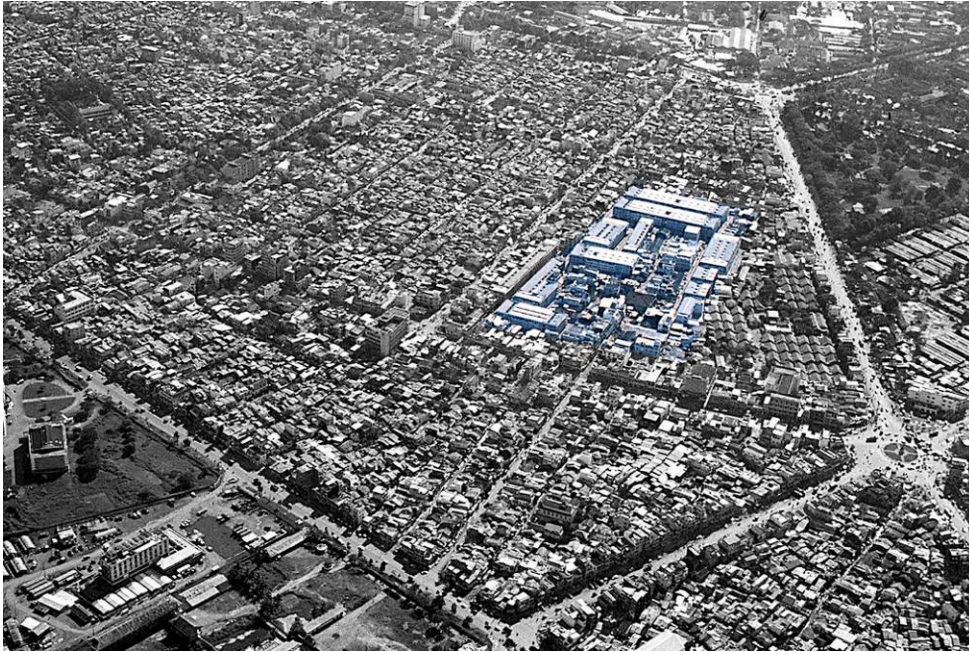


Figure 1. Aerial views over CC area taken in 1968 - highlighted in colour (Manhhai, 2011)



Figure 2. Public park in front of Block D of CC Nguyen ThienThuat - taken in 1968 (Manhhai, 2012)

'Home-based business' is, perhaps, one of the most common and traditional aspects of everyday life in HCMC. The term, 'home-based business' is used in this paper to describe commercial and business activities that run by local residents in their homes. The local historian Vu Hong Lien suggested that, prior to the French Colonization in 1858, the local residents made the livings from selling hand-crafted buckets, oil lamps and other general house-hold items at their thatched houses (Lien, 2013: 27). Historians Nguyen Thanh Loi and Nguyen Duc Hiep also suggested that 'home-based business' was booming from the late 18<sup>th</sup> to early 19<sup>th</sup> Centuries. Home businesses could be found in almost all housing typologies, such as detached house and row houses (Hiep, 2016: 139; Loi, 2015: 85-87). This practice was an essential part of urban experience that was accepted by both the French colonial government and the American supported government (Drummond, 2000: 2382; Baoet al., 2016: 17; Thai, 2017: 73-74).

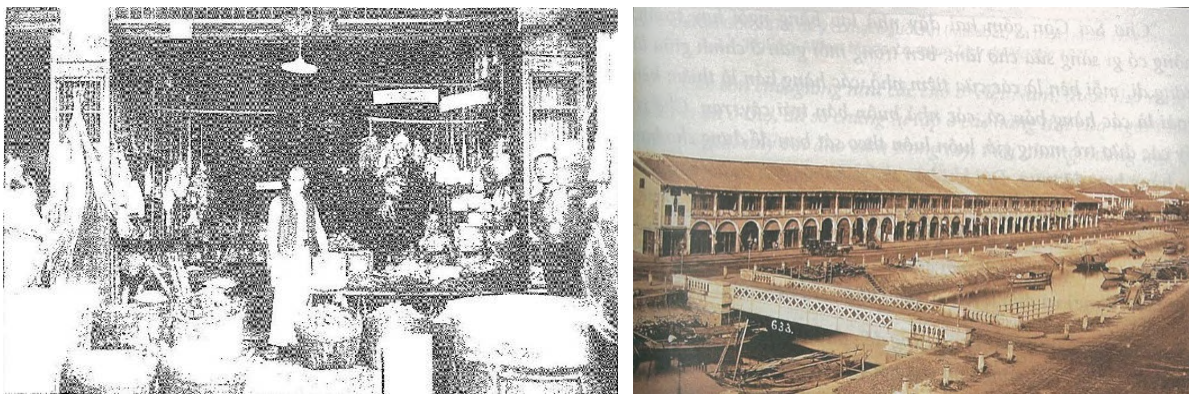


Figure 3. (Left) Grocery store in 1931 with display in front, living space at the back - located in ChoLon (Loi, 2015: 85); (Right) Row houses built by French with shops located at ground level, residential space located at second level (Hiep: 2016: 139)

Home-based businesses also could be found in CC. During the subsidized period under the socialist ideology (1975-1986) while private business was strictly controlled, many residents living in CC still operated home-based businesses in their apartment units. Present days changes to the CC's architecture are significant because the once monotonous facades were changed due to home-based businesses. The changes including additional structure to both exterior and interior spaces of flats were made by local residents to accommodate 'home-based business' activities. This paper continues with some observations of everyday life between the apartment blocks with a focus on home-based business taken place in the flats. It will also examine Flat 204 in Block B in detail.





Figure 4. Public Park in front of Block D. On the top right, rows of residential house were built at the heart of the CC's area (Photographed by Loc Tran, 2016)

### III. Spatial Transformation and Local Resilience

#### *Life in the between*

Current survey done by the Centre of Urban Research and Forecast (PADDI) estimates that there are 7420 people living in this CC. The apartment blocks are similar with rows of flats with shared corridor running the length of the blocks. In each block, three staircases, two on both ends and one in the middle, provide accessibility to upper levels. Local roads of approximately 6-metre wide were planned and used for pedestrian pathways between two blocks.



Figure 5. Overview of the between spaces of Block D and E (Sketched by Tran Trang Thao and collected by Authors, 2018)



Figure 6. The area of CC Nguyen Thien Thuat are highlighted in red, Retrieved from the Planning Department of People's Committee of Ward 1, District 3 - 2018. Reproduced by Loc Tran, 2018



As explained earlier, changes have been made by local residents with their self-built structures that applied to both interior and exterior spaces. Landing areas near staircase of all levels are commonly used as commercial space to sell daily grocery. Small items such as snacks, soaps, and cleaning detergents are being hang on the balcony, or display on built-in shelves that are attached to the walls. This space is sometime used for selling café. Street vendor brings their furniture, such as small plastic stools, tables, and sometime, even a sofa to accommodate their consumers. These changes also extended to the shared corridor areas where flat owners adapt the balconies in front of their flats for everyday needs. Balcony with different looks are created by adding temporary structures such as steel clothes lines, overhang shelving for storage, small gardens, spaces for pet, awning systems, steel frames to exhibit business signs on upper levels, etc. In some cases, the front walls of some flats are also demolished and replaced with completely new structure (Figure 7).

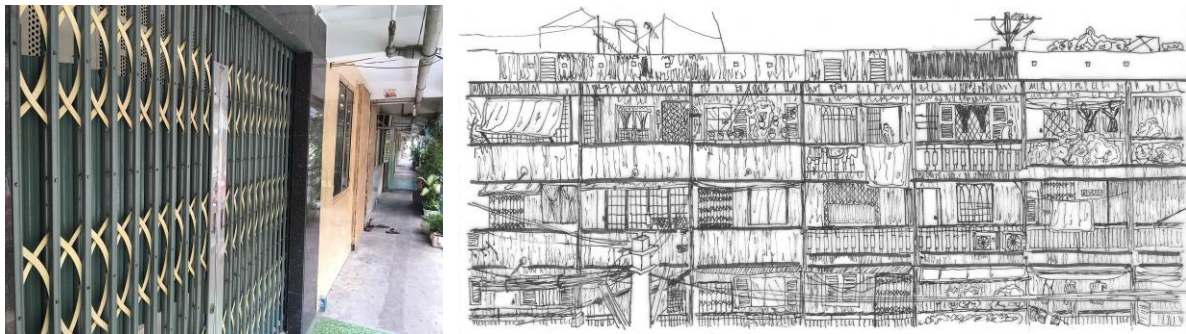


Figure 7.(Left) Front wall of this flat has been replaced with steel sliding panels and granite cladding, (Right) Recording of CC's façade at present day (Photographed and sketched by Loc Tran, 2016)

The outdoor environment in CC Nguyen Thien Thuat is socially and economically nourished by everyday life activities. Wandering around to observe this area presented first-handed experience of how the once monotonous building façade are now architecturally and culturally adapted to local life styles and everyday need. Local residents, particularly elders use the shared corridors located on the second level of the CC as leisure spaces. For example, a male elder was sitting on a rest chair at the corridor of the second level of Block C while watering his small gardens of pot plants hanged all over the balcony of his flat. The neighbours passed by to have a chat and praised him for his great care of the garden. Their conversation was occasionally interrupted by other neighbours who 'shouted' at them to ask about the garden while walking on the ground level. The shared corridor areas are community spaces, which sometime are

informally used for private needs that encourage human interactions within and across the levels.

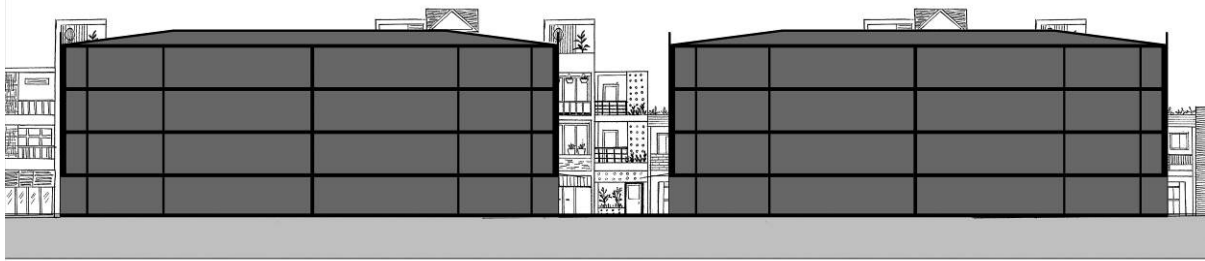


Figure 8. Section through the courtyard of Block A and B (Produced by Loc Tran, 2016)

Examining old photographs and observing the present-day condition of CC Nguyen Thien Thuat present a contrast view. Local changes to both public and interior spaces can be seen almost at every corners of the CC and its surrounding. In the interview with Mr. Nguyen, he suggested these changes has been occurring since his family moved in<sup>1</sup>. We also interviewed Mr. Hien, who frequently visited to the CC Nguyen Thien Thuat in the 1980s. He suggested that many ground-level units in this CC were restaurants, beverage shops, and groceries shops<sup>2</sup>. Owners of these shops made changes to their interior spaces to accommodate their home-based businesses.

However, Mr. Nguyen said that these changes are not encouraged by the local officials as they claimed that these changes negatively affected CC's structure and look. CC are public properties and all these changes need formal permit approved by local government. Furthermore, the procedures to apply for a permit for structural changes were complicated, local flat owners like Mr Nguyen's families would do it without notifying the officials. After decades of use, the CC ran down and over-populated due to the lack of maintenance support from the official (Thai, 2017: 114). Locals had no other choices but to make these 'informal' changes as they were the most immediate and practical respond to everyday life need of local residents. Mr. Nguyen also made changes to his flat to accommodate 'home-base business' activities between the 1990s and 2000s. Mr. Nguyen's mother has been running private tutorial classes for local students at primary level since the late of 1990s. His flat, which is No.204 in Block B will be examined in detail to have a better understanding how 'home-based business' activities, can be integrated, adapted and refined the living space of in CC. The following section will

<sup>1</sup>Interview with Mr. Nguyen in 2016 by Loc Tran

<sup>2</sup> Interview with Mr. Hien in 2018 by Loc Tran

look at how the physical changes to his flat accommodate the family everyday need for home-based business, such as Mr. Nguyen's mother tutoring services.

### *Changes to Flat 204, Block B*

The flat is currently occupied by three people: Mr. Nguyen, who works as financial advisor for a local company; his father who is a lecturer in Japanese language; and his mother who is a teacher at a local primary school. She also run private classes at home. The family migrated to HCMC from Khanh Hoa province in 1988. They purchased the flat and have lived in it since then. The previous owner did not make any substantial change to the flat interior before selling it to Mr. Nguyen's family. The flat is 3.5 metres wide, 10 metres long and 2.4 metres high. It has a shared space for living, dining and bedroom at the front, kitchen in the middle and opposite to the bathroom. At the back, there was a void for ventilation that circulates all levels (Figure 9).

The original sizes of the flats were not sufficient for the growing families, including Mr. Nguyen's family of three members. Mr. Nguyen's father suggested to his family that he needed to make some changes to the interior space. Hence, he limited the changes to interior spaces. This is also because it is more practical to improve the spaces they spend most of the time living in. The following section will examine these changes in detail.

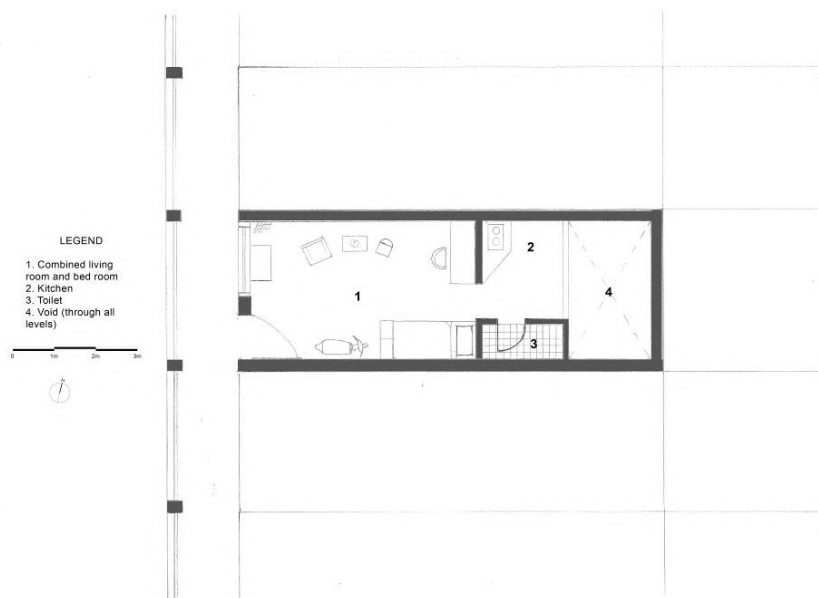


Figure 9. Original floor plan of the flat (Produced by Loc Tran, 2018)

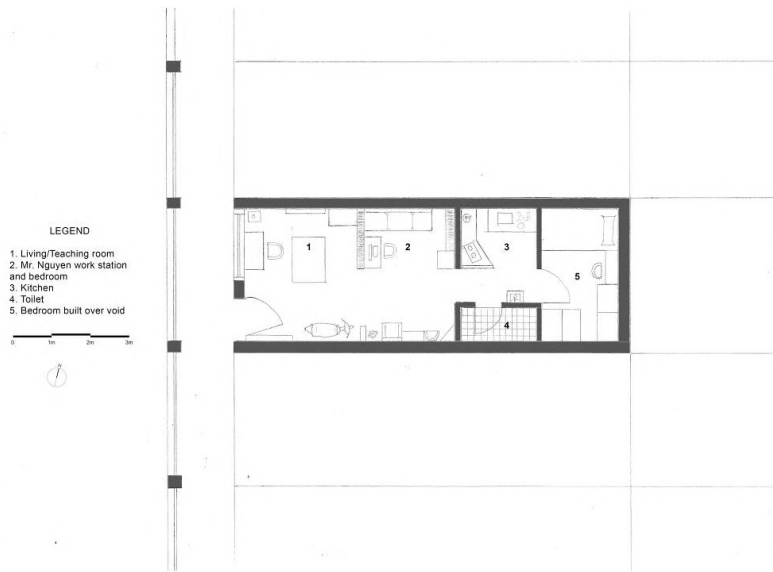


Figure 10. Current floor plan (Produced by Loc Tran, 2018)

When the family first moved in, Mr. Nguyen's father anticipated that the flat needed an extra bedroom. He asked a local builder to build a light concrete slab over the void at the back of the flat. Then they built 100mm brick wall to contain the kitchen. As most other flats also faced the same needs of expanding their room and most families wanted to fill up the void spaces at their flats so mutual agreement were made, by which they could build up the void spaces. The open space for living and dining was divided into smaller spaces by a wooden bookshelf. The flat now has a living room at the entrance, a combined working and sleeping space for Mr. Nguyen in the middle – next to the kitchen area. The bedroom for his parents is at the back. There are piles of books at almost every corners and built-in shelves in the flats. All changes were managed by Mr. Nguyen's father. He suggested that the family did not hire any architectural or engineer consultants because these services were out of the family's budget. His father asked local builder to do the job following his ideas. His father also discussed with the owners of neighbouring flats directly above and below his flat to make sure that they agreed to fill up the voids as he did. Both Mr. Nguyen's father and his neighbours made these building changes without notifying the local officials due to the complicated process to get approvals from local government.





Figure 11. (Left) View from the living/teaching room. (Right) View from the kitchen looking at the living/teaching room (Photographs provided by Mr. Nguyen 2016, 2018)

Mr. Nguyen's mother has been running extra tutorials for local primary students outside of school time in the living room of their flat for almost 20 years. Student's parents knew her teaching from the school, and sent their kids to her flat for extra tutorials. Throughout the years, Mr. Nguyen's mother has attracted more and more students, who not only live the CC's area, but also come from other areas thanks to recommendations of the student's parents. Some local officials who managed the CC's area also send their kids to her tutorials. Her tutorials are usually between 5pm and 7pm with an average of 12 students per session. Students sit around a large foldable table. However, the number of students can exceed the average with a peak of 20, especially during examination period. These extra students will make use of the shared corridor as their temporal study spaces. While her class is on, other family members would use other spaces of the flat for domestic activities as normal such as having dinner or nap. They, however would need to do it silently so the students can concentrate on the lessons.

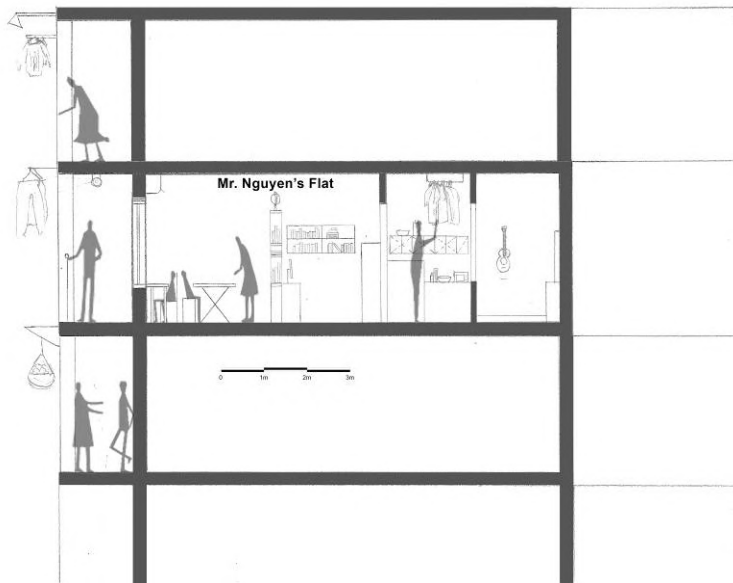


Figure 12. A section of Mr. Nguyen's flat illustrating an on-going tutorial (Produced by Loc Tran, 2018).

From our observation in 2016, there were a motorcycle and a bicycle parked in the living room. However they need to be moved out when the class is on. Mr. Nguyen would normally ride them down the stairs. He parked them at a ground-level flat, which runs parking service for the whole blocks. When the class is done, he rides the motorcycle back to his flat. It is a very dangerous task as the stairs are very narrow and steep, but he gets used to this practice after doing it for a long time.

#### IV. Discussion and Conclusion

Spatial transformation in CC Nguyen Thien Thuat with the local practices of 'home-based business' during postcolonial period presents a mixed cultural and architectural experience. The construction of the CC under American capitalism represents a global model of mass housing development in the 1960s and 1970s. The end of Vietnam War in 1975 brought in the impact of socialism with rather rigid policies that rejected private businesses and property ownerships, including home-based businesses. Part of the CC was turned into post-war collective housing for socialist government employees. While, in the North of Vietnam, this postcolonial experience was very obvious as socialism came several decades earlier, it seemed less rigid in HCMC where socialist practices were 'blended' into the remaining experiences of American-style capitalism and consumerism. For examples American products, such as domestic appliances,

were up for private sale, mostly underground, in HCMC even when the city was under the rigid socialist ideology from 1975 to 1986.

Local adaptation and changes to this housing typology, such as those driven by the official return of 'home-based business' after 1986 are architectural representations of *Doi Moi*, Vietnamese style capitalism in which open market economy is blended into the less-rigid practices of socialism. Study of spatial changes to CC under this context evoke ideas illustrating the theory of *third space* and, to a certain extent, the notion of *hybridity* coined by Homi K. Bhabha in his book *The Location of Culture* (1994). The significance of referring to Bhabha is his idea of 'in-between' cultural space – *third space* as he defined it as a space where two (or more) cultural agents involved in the making of *hybrid* culture – a cultural spheres where identities and meanings of makers can be traced back and also new possibilities can emerge (Bhabha, 1994:20; Ashcroft et al., 2013: 71). Each profession might refer to Bhabha's concepts differently and depending on one's specialization. Much discussion on this theory of *third space* and *hybridity* is centred on colonial and postcolonial experiences. This paper discusses the spatial changes to CC in relation to Bhabha's theory of *third space* from different standpoints. This hopefully shows the potential use of the theory for better interpretation and understanding of the nature of changes to the built environment during post-colonial and post-war period in HCMC.

Regarding HCMC's cultural context, the home-based business activities themselves represent one dimension of *third space* whereby the meaning and experiences of home and work are blended to make a *hybrid realm* for home and work to co-exist in both physical and mental senses. Physically, flats as home places are adaptively used for daily works, such as shops, workshops and classroom. Mentally, family-based retail has been part of local tradition for years. It is worth noting is that this specific aspect *third space*, home-based business, is very resilient to social, cultural and political changes made by different agents, such as American capitalism and socialist ideology. This is evident in local attempt to transform an imported housing model, apartment flats in CC Nguyen Thien Thuan, into spaces for family business as described earlier.

The political changes to HCMC, either from American capitalism to rigid socialism in 1975 or the return of market economy from 1986, set the social context that seems representing another dimension of *third space* and *hybridity*. HCMC's *third space* was first 'created' in 1975 when the practices of socialism were 'blended' into the fading- out experiences American capitalism

and consumerism. Part of CC Nguyen Thien Thuat was turned into socialist-style collective housing for new comers who were state employees. While private businesses were illegal, local residents in the CC still opened shops informally selling American goods and items for everyday need. HCMC's *third space* could also be experienced since 1986 when socialist practices were a lot more open to market economy marked the formal return of consumerism with private businesses. Spatial changes to CC Nguyen Thien Thuat characterised by the mushrooming of private shops and home-based businesses are architectural representation of another *hybrid realm* in which socialist and capitalist experiences appear to co-exist. Architectural changes to CC in response to the emergence of this *hybrid realm* are significant as they reflect the resilient changes that are socially, culturally and economically closer to local everyday need and tradition of home-based businesses.

Together with other CC in HCMC, CC Nguyen Thien Thuat represents an important architectural layer of the city. While the government has minimum attempt to maintenance the CC, changes to this housing typology made by local residents should be acknowledged as one of the most practical and immediate solution to the on-going issues of overcrowded population, downgrading buildings and home-based business. Furthermore, these changes as discussed in this paper represent another dimension of the *third space* that adds characteristics, liveability and convenience to local everyday life during postcolonial and post-war era in HCMC. Any plan to redevelop CC in HCMC should really take into account the spatial experiences as conditioned by some interpretation of *third space* and *hybrid realm* discussed in this paper.



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## **From mixed-use structures to hybrid housing buildings in Latin America: the cases of Lima, Caracas, Buenos Aires, Mexico City, and São Paulo**

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### **Abstract**

In its more general terms, this text is dedicated to what we have called the hybrid housing building. The term may sound strange, composed of two adjectives of which the latter - hybrid - derives from another disciplinary field, biology and in particular from genetics. More specifically we will deal with the differences and the process of emergence and development in Latin America of the hybrid building in the 1940s, 1950s, and 1970s. This latter understood as a metropolitan building.

Behind the purpose of understanding a phenomenon and a specific type of buildings, this text proposes a revision of historiographic nature, in which the inclusion "in the game" of certain projects and works constructed in important cities of Latin America alter a narrative apparently consolidated. Therefore, it is evident how transversal points of view supported in comparative analyzes can reveal processes hidden by North-South perspectives, the central objective of the processes of decolonization of the history of the architecture.

Layered city and Density, works by the visual artist Alina Sonea, which refer to the Pianta Grande di Roma drew between 1736 and 1748 by Giambattista Nolli - serve as abstract images of some characteristics associated with hybrid buildings that will be analyzed more closely throughout the development of this text. Momentarily, these images serve as a starting point to delimit some themes: the diverse texture generated in the plan by overlapping typologies, by the permeability, density, and continuity between urban fabric and buildings.

Regarding the motivations, at least three areas serve to delimit the interest for this specific type of building in a continental geographic cut as Latin America: from the theory of architecture; the history of architecture and urbanism; and historiography.

**On architectural theory**

From a strict point of view of the architectural problem, mixed-use buildings (hence also the hybrids as will become clear later) generate an inevitable design problem: to organize the overlaps of their different uses. In fact, this implies separating and joining, through access and distribution spaces, controlled or not, the different users and their different peculiarities.

**On architectural and urban history**

As far as the history of architecture and urbanism are concerned, the hybrid buildings are articulated with the phenomenon of the renovation of the central areas of large cities of Latin America, occurred mainly during the second and third quarters of the 20th century. Taken together, both the operations of large impact such and the changes in urban codes supported the emergence of new vertical typologies. The renewal of the central areas was also associated with the growing interest in high-rise buildings by the middle and upper classes after the 1950s, contrary to what happened in the United States as a consequence of policies that fostered suburbanization around the same time. This interest was supported by numerous technical aspects related to industrialization and the development policies that marked most Latin American countries.

**On historiography**

Many of the buildings studied here were left out of the historiography of architecture and urbanism, which occurred even in the local context, for reasons that are explained later. However, we should stress that the prevailing narrative in the historiography of global modern architecture, determined by the opposition between corporate private capital (North America) versus bureaucratic state capital (South America), is not able to explain the complex and dynamic processes that occurred in the main centers of Latin America, where the private initiative simultaneously saw and built buildings that jointly met the demands of services, commerce, and housing.

Another opposition, clearly linked to the previous one, concerns the term metropolitan building, or the metropolitan dimension of the buildings studied. The term can be thought of as a

counterpoint to bureaucratic architecture, an expression coined by Hitchcock in *Latin American Architecture since 1945* to refer to the US corporate building transplanted to Latin America, characterized by the lack of personal expression and the search for efficiency and effectiveness.

The metropolitan building would be one that is associated in some way with the emerging metropolis, which seeks to account more on new demands of growing urbanization (housing and service in particular) and less on corporate or state bureaucracy. Therefore, in this case, it matters less the physiognomy aspects or the international expression of this architecture and its programmatic aspects and more its urban repercussions.

This idea is suggested in the discussion about the Polar Tower, built in Caracas, Venezuela, between 1951 and 1954 (architects Martín Vegas and José Miguel Galia). The authors highlight the fact that it is a "modern international aesthetic" building, as well as the first glass curtain built in Venezuela. However, they also indicated that the Polar Tower is not only an office glass tower of impersonal expression and high technology, but a building marked by a complex program and a strong relation between public and private: an auditorium, restaurants, and retail an public spaces (CARRANZA, LARA, 2015:143).

### **Latin America as unit of analysis**

Another necessary starting point is the fact that Latin America is understood in this work with a certain degree of unity and, therefore making possible the comparative analysis of diverse components. The image that opens the book of Sartoris dedicated to the Americas clearly indicates this difficulty by including as "Americas" practically all the rest of the planet other than the Europe.

We do not propose the idea of Latin America as a unit based on identity, but as a cultural construction supported by simultaneity in relation to certain socioeconomic processes of urbanization, industrialization, modernization and metropolization that defined, throughout the 20th century, similar urban problems capable of stimulating responses - rehearsed by architects, builders, buyers and developers - suggesting more convergences than those designed in European and North American countries and which have served (and continue to serve) as models, but linked to private initiative and, therefore, separate from the official architecture of their respective States.



In the specific context of this text, *El laboratorio americano. Arquitectura, geocultura y regionalism* by Roberto Fernández, galvanized the debate in the late 1990s. Fernández treats America as the desired periphery that becomes an eternal laboratory, in which experiences are systematically abandoned by new ones. America thus becomes the place of modernity par excellence, of eternal novelty with the city as its locus. Gorelik (1996) reinforces the idea of a laboratory, and specifically attributes to the city in Latin America the role of "the machine to invent modernity".

Modern architecture as a by-product - and therefore inseparable - from the American city is a central idea, and as a hypothesis, the hybrid housing building of the 1940s, 1950s and 1960s in its metropolitan dimension is seen as an essential part of the invention of modernity in Latin America.

In this sense, the pertinence of a comparative look over architectures produced in the main urban centers of Latin America is highlighted. Through a critical-comparative perspective, buildings such as the Galeria Metr pole in S o Paulo, the Centro Internacional Tequendama in Bogot , and the Galeria Jard n in Buenos Aires are treated as products of cities in a process of urbanization and serve to understand transformations typologies driven by specific programmatic aspects and by juxtapositions between private spaces and seasonal public use that alter the urban dynamics of the places where they are inserted.

### **From the French H tel to the Hybrid Building**

MIT professor Michael Dennis (1986) has been researching a particular type of building, the French H tel, dating back to the sixteenth and nineteenth centuries since the late 1970s. In the most general terms possible, the French H tel in the period delimited by Dennis refers to the building of residence of French nobles, near the palace or real residence. The key to Dennis's reading is the division into three types over four centuries, in which the relationship between the building and the initially intrinsic urban fabric is gradually eroded until it is isolated as an object in more suburban areas.

According to the author, the French H tel and its transformation over the four centuries studied serves as a prelude to a wider and more generalizable movement in which the private sphere gradually transcends the public sphere in modern Western societies. This move would,

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therefore, be “from French Hôtel to the city of modern architecture”, as indicated in the subtitle of his book. The prevalence of the private sphere over the public is delimited by the approximate dates of 1775 and 1975 but intensified in the second and third quarters of the 20th century, when the functionalist urbanist theories whose matrix was the CIAM gained track. For our specific purpose, the French Hôtel can be seen as a building that gradually loses an essential part of its architectural complexity in that it stops talking with the pre-existing urban fabric.

At the same time as Michael Dennis, authors such as Steven Holl (1985, 1997), J. Fenton (1985), Martin Musiatowicz and Javier Mozas (2008, 2013, 2014), among others since 1980s (following the critical way opened by TEAM-X), warned us of the growing presence of hybrid buildings in the last quarter of the 20th century as a possible answers to the supposed failures of modernist urbanism.

Fenton (1985), like Dennis, proposes to analyze the role of a particular type of building in a specific historical and geographic context. In his studies, he analyzes the emergence, in the last quarter of the 19th century in the United States, of what he defined as a hybrid building. For the author, this type of building was a direct result of the technical possibilities of the industrial city and disappeared from North American cities after the 1930s as a result of the functional city ideas promoted, but also by the New York zoning of 1916 and the financial crisis of 1929. According to Fenton:

Hybrid buildings, inherently multi-functional and responsive to the constraints of the American urban grid, can be offered as models for the stimulation and revitalization of American cities [...] From its introduction in the 1880's, the hybrid building had a rich and varied development until the depression of 1929, when virutally all new construction ceased. By the time the economic crisis had passed, the Congres Internationaux d'Architecture Moderne (CIAM) IV was advocating systematic segregation of dwelling, work and recreation, an argument propagated through the Athens Charter. These theories filtered down into post World War II reconstruction of American urban centers, forcing the hybrid building into rapid premature decline. (FENTON, 1985, p.5)

The fall of this type of buildings has dragged much of the urban vitality of the American cities as Steven Holl describes:

Geographic dispersion has had a centrifugal effect on American cities. Dispersion, evident in the countless examples of freeway deformed towns, has been the typical mode of development in the past three decades. Free-standing corporate headquarters, industrial 'parks', shopping centers and suburban housing are now scattered throughout what was once rural countryside. The negative consequences of

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

From mixed-use structures to hybrid housing buildings in Latin America:  
the cases of Lima, Caracas, Buenos Aires, Mexico City, and São Paulo

*Marcio Cotrim and Fernando Lara*

this type of development have now become apparent: the dissipated centers of towns, drained of activity, call for revitalization. (HOLL, 1985, p.3)

Based on a series of categories: high density, large dimensions, complexity, creation of public spaces for public use, among others, Steven Holl (1985, 1997), Martin Musiatowicz and Javier Mozas (2008, 2013, 2014) argue that hybrids buildings have resurfaced since the 1970s, not only in the United States and Europe but mainly in Asia in the 1990s. The experiments printed by these buildings have played a key role in contemporary urban theories. According to Mozas, quoting Steven Holl in the presentation of Fenton's book:

A large number of current projects-particularly speculative ones-require multiple functions to be housed together.

The concentration of various activities into one structure, as Steven Holl has written, places pressures on the architecture and has a capacity to '....distend and warp a pure building type'. The current boom in High. density buildings has in part been fed by exploding economies, astronomical rises in land value and the rise of emerging economic zones, In particular China, over the last twenty years. The increasing tendency among designers in dealing with this problem has seen the re-emergence of the hybrid building, in preference to a 'sum of all parts' mixed-use solution, a level of concentration and hybridization is increasingly, understood as a way of activating the building, its individual uses, and the surrounding urban fabric. (MOZAS, 2008, p.5)

If the French Hôtel, according to Dennis, is fundamental to delimiting the initial moment of the process of gravitation from the public to the private sphere, the hybrid building present in the last quarter of the 20th century acquires an inverse opposite role as a prelude to a new reorientation, now towards again to the experience of public space by stressing public / private relations. There is no doubt that it is an optimistic and redemptive vision for twentieth-century cities.

Since that time [1929], hybrid buildings have persisted only to a limited extent. Today, these segregationist urban planning policies are being re-evaluated. A renewed interest in the hybrid building is being reflected in revised zoning laws and in an actual increase in new examples (FENTON, 1985, p.5)

However, considering that the contexts studied are European (Michel Dennis) and American (J. Fenton), our hypothesis is that certain solutions, linked to the hybrid housing building - and here we have already added the term housing - were tried and tested have developed simultaneously in the major centers of Latin America in the years between 1940 and 1970 moving from the mixed-use building towards the hybrid housing buildings.

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This phenomenon, due to factors that we will try to elucidate next, precedes the discussion about urbanity, density, and hybridity, precisely in the midst of the moment of greater vigor of the modern movement in these countries. The factors that point to this phenomenon can be divided into two types: (1) those that are more specific and which made possible the emergence and particular development of hybrid housing in the Latin American context, such as (a) the violent urbanization process between 1940 and 1980 (b) associated with changes in legislation, (c) political developmentalism with economic repercussions on industrial production, and the gradual (d) process of acceptance by the middle and upper classes to live in multifamily apartment buildings; (2) and others that indicate the reasons why a good part of the studied buildings had little repercussion even in the historiography of the modern architecture in Latin America. On the one hand (a) because they have been eclipsed in specialized magazines by other programs more attractive from different points of view, such as the great social-state experiments of the Housing Set and the bourgeois dream of the single-family house. On the other hand (b) the fact that, by conjugating uses and inserting themselves into the traditional urban fabric, they are led to give up some formal purity, in favor of a hybridism that in many cases is the result of the dialogue of the traditional and pre-existing city with precepts urbanistic buildings.

There was, therefore, a fundamental intermediate condition between the 1940s and 1970s, radically different from the absence of housing in the downtowns of US cities and from the material and financial capacity for urban renewal in that country, but which also differed from European experiences, to a lesser extent and conditioned by the strict rules of protection of historic sites, having to take advantage of the possibilities opened by the necessary reconstruction of many areas after the tragedy of World War II, as illustrated by the multifunctional complex in Corso (Luigi Moretti, 1949-1956), Torre Velasco in Milan (BBPR, 1954), both in Italy, or Barbican Complex in London (Peter Chamberlin, Geoffry Powell, Christof Bon and Arup, 1955-1983).

Assuming the risks of this anticipation, the hybrid housing buildings in large Latin American cities between 1940 and 1970 are seen in this research as a product invented in the laboratory of Latin America anticipating - in many ways - a phenomenon that first manifested itself in the critical theories of functionalist urbanism and which consequently supported many constructed projects that occupy the pages of the global architectural magazines.



## Which buildings are we talking about anyway?

We are well aware that mixed-use building is not a product of the twentieth century, rather it is present in virtually the entire history and in a huge diversity of societies and regions. Carlos Marta Arís, for example, uses the house among "medianeiras" of the Gothic merchant to explain the evolution of mixed use types built in the city of Barcelona, especially in the Eixample designed by Ildefons Cerda in the 19th century. However, how different are these structures from what we call hybrid buildings? A starting point is that every hybrid building - at least as treated in this text - is also a mixed-use building; however, the reverse is not true, and not every mixed-use building can be considered to be a hybrid.

While one definition is contained in the other, both Holl and Fenton associate the hybrid building at the end of the 19th century and especially the 20th century. According to Holl:

Hybrid Buildings developed most rapidly in the twentieth century. The modern city has acted as fertilizer for the growth of architectures from the homogeneous to the heterogeneous in regard to use. (HOLL, 1985, p.3)

Fenton was even more precise on linking it to the real estate pressures typical of the metropolitanization process of cities like New York:

The hybrid type was a response to the metropolitan pressures of escalating land values and the constraint of the urban grid. With horizontal movement restricted, the city fabric moved skyward. The building form became taller, larger than ever before. Its only constraints were the zoning ordinances and the orthogonal grid itself." (FENTON, 1985, p.5).

Horizontal growth (limited by consolidated urban fabric) and vertical growth (limited by constructive techniques and legal aspects) directly implied a combination of previously incompatible programs.

Unable to occupy these vast new volumes with an individual usage, functions were combined. The hybrid building emerged. Within a relatively short period of time hybrid buildings enveloped many of the institutions which comprised the Nineteenth Century city: dwellings, offices, theaters, museum. (FENTON, 1985, p.5).

These definitions approximate hybrid buildings from the idea of complex building in particular those known as mixers. According to Mozas:

Mixers are complex buildings loaded which, when inserted into a rundown urban fabric, mix up the entire organism and exert an influence which goes far beyond their physical scope and which manages to exponentially revitalize the whole built environment. (MOZAS, 2017, p.82)

The supposed revitalizing role of hybrid buildings, as suggested by Mozas, depends to a great extent on its urban permeability, which allows the alternative flow of passers-by and a greater number of combinatorial possibilities with respect to the paths defined by perimeter sidewalks, a fact that is guaranteed by the overlap between spaces of private property and collective use associated with commerce and urban equipment.

Mozas also points out three fundamental aspects of this type of buildings: high density, large scale and urban nature. For the author, "a hybrid, by its scale, can be applied proper strategies of urban composition" (MOZAS, 2017, p.41), such as streets, blocks, bridges, walkways and squares.

In the case of America, on these characteristics that together define the idea of hybrid building - (a) are a response to the real estate pressures typical of the process of metropolization of the 20th century; (b) its vertical aspect, the large scale and the density; (c) the combination of different uses; and (d) the permeability of the building with the urban fabric at its zero (but not only) level that triggers urban design strategies - the unequivocal presence of housing should be added as a central part of the program, the reasons for which we shall see below.

### **From the city to the metropolis**

For José Luis Romero, in *Latinoamérica, las ciudades y las ideas* (1976) after the 1940s the main urban centers of Latin America exceeded the line of 1 million inhabitants while in the 1970s, cities such as Buenos Aires, Mexico and Sao Paulo already had exceeded 8 million. Montaner (2014), listing "basic concepts for a critique in Latin America" indicates the passage from "the city to the megalopolis" as one of the inevitable themes. For this author, the 1960s are the end of a period of urban experimentation: "unfortunately, from the 1960s on, a wild growth predominated, a maximum expression of capitalist growth laws and inertia" (MONTANER, 2014).

Between the 1930s and 1970s, Latin America's main urban centers experienced population growth and expansion of geographical boundaries with unprecedented speed and scale. The

continent's eight largest urban centers reached the mark of one million, of which only two, Buenos Aires and Rio de Janeiro, did so before the 1930s, while Bogota, Lima and Caracas, only in the 1950s, when the demographic growth and expansion of the urban fabric of these cities acquire even more strength. Caracas, for example, between 1940 and 1970, had a population growth of almost 300% and its urban area expanded ten times in the same period.

The exponential increase in urban sprawl and population has led to an inevitable process of metropolization which has been largely motivated by industrialization - generally from grassroots industries - fostered by national policies of a developmental nature founded since 1948 by the Economic Commission for Latin America and the Caribbean (ECLAC).

The process of urbanization of the great centers of Latin America, intensified between 1940 and 1970, significantly altered the urban quality of these cities and highlighted the problems faced in the socioeconomic processes and the consequent peculiarity of the urban and architectural configuration (SEGRE, 1991) .

This transformation has put pressure on the private real estate market, self-employed professionals, and public agencies experiencing exits in the face of violent growth. In this context, the debate about housing gains a lot of relevance in the pages of the magazines, either through theoretical debate or through the construction of state housing complexes that occupied the peripheries of the big cities seeking to face the problem of housing frontally, in particular, the one destined to workers. However, in parallel to the construction of these complexes and the debate that accompanied them, another issue related to land use and occupation legislation was present in the pages of the journal, to feedback and to the new installment plan that was often stimulated by large urban interventions figure As an example of this kind of interventions, generating new centralities and new installments, we can mention:

- a) Plan of Avenues of São Paulo that between many results favors the occupation of what we call new center (from 1930)
- b) Paseo de la Reforma and Avenida de los Insurgentes in Mexico City (asphalted and significantly renovated in the 1940s and 1950s)
- c) Calle Décima in Bogotá
- d) Avenida Tacna/Miraflores in Lima
- e) Calle Florida in Buenos Aires

In fact, these interventions created conditions from the point of view of the renewal of colonial or rural parcels, which added to a set of more or less simultaneous laws in the different cities, allowed the occupation of the central areas (mainly the areas of the first expansion suffered in the first quarter of the 20th century) by new types of vertical buildings.

It is noteworthy that this set of laws favored the investment in high-rise buildings by promoters and incorporators, guaranteeing the legal mechanisms of sale and rent, but also induced a portion of the population to live in the central areas of the city.

### **The phenomenon of skyscrapers**

Tall buildings as a phenomenon that profoundly marks the twentieth century is something well known. However, in South America, before the end of World War II was rather a punctual event compared to the United States. It will be effectively in the second half of the century that the process of verticalization of cities in Latin America acquires power, fomented more comprehensively by the resumption of production in the postwar period and, in an objective way, by the urban interventions and the legislation both commented previously

### **Live in heights**

Another relevant aspect is the favorable technical condition for the middle class (and upper class in specific situations) to choose to live in apartment buildings. At least two aspects can be seen in the pages of the published journals:

- a) the comfort of the single-family residence transplanted to the apartment building
- b) decreasing prices and greater control of the execution

And at the intersection of the two cases, security aspects. Thus, elevators, industrially standardized windows with light control system, intercoms, appliances, water heaters and hydro-sanitary facilities are added to the pre-molded slabs, the cheapening of steel coming from the USA, hydro-paints, etc.



### **Urban morphology and architectural typology**

More and more mixed-use housing buildings rose in the landscape of the large cities of Latin America - and here we will deal only with São Paulo, Mexico City, Bogotá, Lima and Caracas - in their central areas or immediately around them. As a first way to present them - remembering that this is a work still in process - we organize in the two basic categories of this research: mixed and hybrid, as already explained previously:

Mixed-use buildings would be more or less the height reproduction of the mixed building (house / work) seen throughout the history of civilization.

In some cases, attention is drawn to the juggling of both accesses -public and private - and to accommodate them on narrow terrain.

From the relations between architectural typology and urban morphology - or, in other words, between building and lot - as a rule occupied the whole lot and its monolithic form was the result, justifying the presence of courtyards that solved the problems generated by the occupation maximum of the lot. With the exception of some adjustment in corners .

As it has existed throughout history in different contexts and societies, in this case mixed-use buildings assume varied languages. However, proto-modern or art-deco experiments prevail.

### **Hybrids**

With regard to hybrid buildings, the first aspect that catches our eyes is the fact that they are clearly larger and taller. This is not a fact per se, but rather a result of the plots boundaries as we have said before, which has potentiated lots with more than two faces for streets. A number of other typological possibilities are triggered by releasing part of the land, whether for private or public use. E, F, L type deployments are quite common. However, attention is drawn to the use of the platform, or podium. In this case, on which the variations described above or isolated towers rise. The language of these buildings is increasingly restricted to the universe of modern architecture. And certain models tried in those years or earlier, support the choice of towers on platforms. In this case the idea of hybridity is present even though in a different direction than

the one we discuss here. To the extent that this solution can be read as a hybrid between the typologies and morphological elites confronted through the traditional city and modernist city.

It is possible that this typological variety is the result - whether on a platform or not - in addition to the dimensions and shapes of the lots, as well as the degree of complexity from the point of view of the significant number of activities. As trade, services and housing are juxtaposed in large dimensions and qualities there is a need for a series of mechanisms of control, separation and articulation of users. That is, if on the one hand the individual should be induced to access the commercial zones, at the other extreme should be curbed.

Still with regard to the activities developed, the presence of cinema as a great attraction and a brand of modernity as a novelty stands out.

## Conclusions

Steven Holl, identifying the problem of loss of urban vitality by the demise of the multipurpose building proposes looking at 18th and 19th century Europe.

“ New concentrations of activities would invigorate the towns socially as well as providing the physical architecture to rebuild common spaces.....What then are the models for this urbanism? Should we look to the eighteenth or nineteenth century European city?”

If we were not so Eurocentric in our discipline Holl would know that he doesn't need to travel in time, it would be enough to catch a flight that same day to São Paulo, Ciudad de Mexico or Buenos Aires.

What we intend with this research is precisely to demonstrate that taking the North Atlantic as a unique parameter to measure the excellence of the architecture is a blatant limitation. The hybrid building has been alive all this time in Latin America, transforming itself and adapting to local conditions as every good architecture has ever done. By insisting on using NATO-centric categories of analysis, we lose all, the southern and the northern, an understanding of a typology we have always known is extremely beneficial to the decision to live in community and proximity, commonly called a city.

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## **A transcontinental process: healthcare facilities envisaged as postcolonial built heritage<sup>1</sup>**

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### **Abstract**

More than ever, it is urgent to expand the new emerging consciousness focused on the need to include other territories in our efforts to achieve a comprehensive understanding of the modern diaspora. Recently, the development of concepts such as “hybrid” or the “otherness” has been promoting historical analysis on architecture and politics in the 20th century beyond a

Eurocentric vision, sustaining the idea of a transcontinental modernity. To further understanding the worldwide modern diaspora, it is essential to document and analyze the sub-Saharan Africa heritage in its relationship with other peripheral universes: Portugal and Brazil.

The formal, technological and ideological principles of the Modern Movement emerge through the 50s in the Portuguese African colonies (Angola and Mozambique) as a cultural stimulus articulated by geographic and climate specificities promoting modern vocabulary in acquiring new expression and scale. Those territories were geographically distant from the repressive control of the metropolis, representing a new world whose dimensions and need to be inhabited sponsored a vast field of experimentation and innovation in the areas of urban planning and construction. The lexicon of modern architecture seemed especially appropriate for dealing with the tropical climate: influenced by the Brazilian modern architecture, followed by Fry and Drew, or Koenigsberg’s researches, this architecture witness a serious concern with the adjustment to the particularities of the hot and humid climate of the tropics.

The healthcare Equipment’s were among a large infrastructural strategy development conducted in Mozambique after the WWII. Lourenço Marques (nowadays Maputo) and Nampula hospitals

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<sup>1</sup> This paper is the result of the research conducted in the scope of the FCT Project PTDC/ATP-AQI/2577/2014, entitled “CuCa\_RE: Cure and Care\_the Rehabilitation”



represented the goal to overcome the patent underdeveloping of the colony. The aim of this paper is to analyse and compare these two facilities addressing three scales: landscape, city and architecture. The buildings considered as planning keypoints will be evaluated from its geopolitical localization decision, to the urban questions involved and finally inquiring the building complex hospital as a machine for cure. Addressing at what extend tropical architecture networking and specif knowledge was in the base of the work of the architects

Assis and Vasconcelos, the argument is to realise how these building complexes survived during the postcolonial period till nowadays.

**Keywords:** Modern Movement Architecture; Hospital; colonial; healthcare equipment

The colonial politics of the *Estado Novo* had a strong impact in the post-World War II period. Indeed, both the retention of power by the dictator Salazar, and the ideological continuity of the *Estado Novo* that survived the end of fascism, cannot be dissociated from the cold-war atmosphere into which the western world was plunged in the late 1940s. Colonial politics were adapted to this new situation.

Research on the debate and practice of urban planning in a modern context in African cities, particularly regarding the design and construction of healthcare facilities, is particularly stimulating, since traits can still be found of an urban laboratory and an experimental utopia, despite the fast and violent process of transformation they are going through (Tostões, 2013). This is the case of Lourenço Marques (now Maputo) and Nampula in Mozambique, which underwent significant development in the period between World War II and the Revolution of 25 April 1974, which led to the independence of these countries, the following year. This development occurred in tension with a background of supervised colonialism by a fascist-style political regime (Tostões, 2015). This paper will examine, from a comparative perspective, the knowledge of healthcare architecture and urban planning during the post-WWII period until independence, with the aim of revealing the importance of health facilities for the development of the city and its image.

Until the 1940s, tropical architecture was seen as a matter of hygiene, written by doctors, sanitary engineers and scientific researchers. This approach was linked to the need to protect European colonizers from the aggressions of the tropical climate. After World War II and the

democratic triumph over fascism, this concept assumed more global characteristics, while also seeking to provide physiological comfort to native citizens. The main goal was no longer the prevention of diseases, but urban comfort and well-being. In the late 1950s, the main aim was climate design, taking maximum advantage of resources and energy efficiency.

The architects who worked for the colonies were Portuguese and trained in the Schools of Lisbon and Porto. In general, the influence of French urbanism was the most significant, especially following the approach of the *Institut d'Urbanisme de l'Université de Paris* in the 1920s. African colonies in the southern hemisphere were geographically distant from the repressive control of the metropolis. Furthermore, these territories were a new world whose size and need for development provided a vast field for investigation and innovation in the area of urban planning and construction (Tostões, Bonito, 2015). Finally, the lexis of the architecture of the Modern Movement seemed particularly appropriate to dealing with the tropical climate and environment. In fact, the formal, technological and ideological values of the Modern Movement had been present in structures built in Lusophone Africa since the late 1940s. Symbolizing freedom and hope for a democratic future, modern architecture was seen as a way to fight against the totalitarian regime of Salazar. This cycle took place in a modern context when Portugal's politics were being strongly contested internationally<sup>2</sup> and the country and its colonies were belatedly undergoing industrialisation. The emphasis on large-scale infrastructures was accompanied by a modern expression, now renewed under Brazilian influence after the publication of "Brazil Builds" (1943) and the diffusion of South American work. During the 1950s, many architects who strongly believed in the transformative capacity of architecture, visited the colonies in Africa - where the architectural expression was freer than in the metropolis where the regime still condemned the spread of modern architecture. Moreover, the geographical and climatic characteristics in Africa allowed different meanings to be conveyed in the modern vocabulary, which acquired new expression and scale (Tostões, 1997). These territories were available for modernization, away from the direct influence of the central government. In an apparently less restrictive society, architects shared the opportunity to build on the universality of modern ideas (Tostões, Oliveira, 2010).

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<sup>2</sup> After World War II, the orientation of Portuguese colonial politics was under intense United Nations pressure. Trying to minimize this criticism, the dictatorship sought, throughout the fifties, to pass on the idea of a Portuguese identity, including references to the Luso-Tropicalist discourse of Gylberto Freire, the famous Brazilian sociologist (Tostões, 2014).

This period presented an extraordinary challenge for the *African Generation* of architects (Fernandes, 2002), who not only had the opportunity to use a system based on a progressive language but were also working on large-scale projects. Encouraged by the vastness of the African landscape, one can imagine that these architects also believed they were involved in building a new place, a new world that would satisfy their desires and delve into the contemporary. The challenge of building to respond to the sub-Saharan environment implied adaptation to the local climate. In this context, the construction experience in Brazil became an obvious reference.

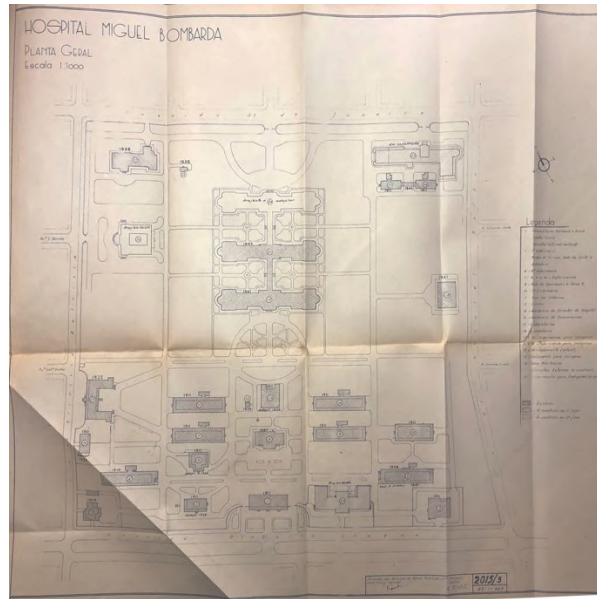
Unlike Brazil and India, the occupation and foundation of cities in Africa was a delayed process that only developed significantly after World War I. With the exception of Lourenço Marques, present day Maputo, which had its first urbanization plan in the late nineteenth century, developed by the military engineer Araújo, according to the doctrines of the Portuguese school of urbanism; the plans that followed in the twentieth century were influenced by the French school. As in the case of earlier plans for colonies in the late 1920s by itinerant urban planners, their characteristics followed the imperial model and reflected a historicist rhetoric<sup>3</sup>.

## 1. Lourenço Marques, the Mozambican capital and the Miguel Bombarda Hospital

The first general plan for the Hospital Miguel Bombarda, designated as the Central Hospital of Lourenço Marques, dates back to 1900. Conceived according to the pavilion model so common at the beginning of the twentieth century, it was organised into 6 double infirmaries, a pharmacy, laundry, kitchen, a residence for the hospitable sisters, a residence of the director, a house for doctors and a morgue<sup>4</sup>. By 1922, all parts of this project were under construction. But a decade later, the hospital was no longer felt to meet the needs of the population. Thus, in 1937 and 1938, the maternity building for indigenous people (Arch. António Rosas) and another for surgery and radiology for indigenous and non-indigenous people came into service.

<sup>3</sup> For example, the Bank of Angola, a pavilion built for the exhibition of Luanda, by Vasco Regaleira. It is an 18-meter high building with a "monumental aspect and the beautiful result of a happy combination of traditional Portuguese architecture with a modernist feeling at the art of building." *cit in* Revista Arquitectura, 41, February-March 1938 (Tostões, Quintã, 2018).

<sup>4</sup> AHU – Alguns dados sobre a evolução da construção do Hospital Miguel Bombarda em Lourenço Marques. PT/AHU/UM/DGOPC/CDTE/OP01570, 8/43-2/3



1. Plan of Miguel Bombarda Hospital, Maputo, Mozambique, 1943  
PT/AHU/UM/DGOPC/CDTE/OP01570

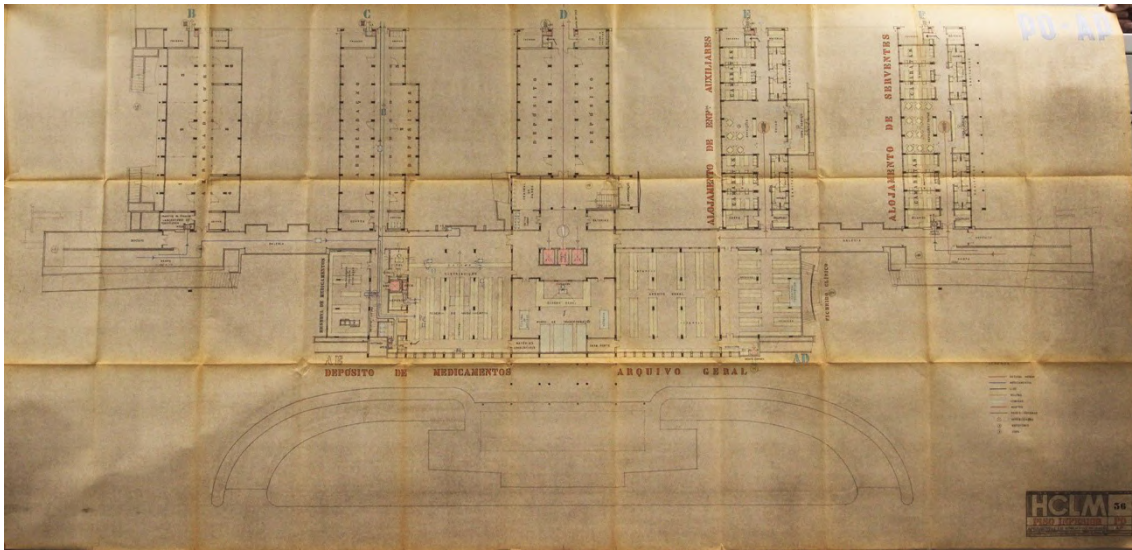
In the 1940s, the Hospital for natives and the Hospital for Europeans, designed by the Mozambican *Repartição Técnica de Obras Públicas* (Technical Office of Public Works), produced a gesture of surprising modernity that "*results not so much from its internal organization but rather from the role played by the use of concrete, especially in the pronounced balconies*" (Duarte, 2014: 12). It was expanded in 1966, according to the plans of the architect Fernando Mesquita, and served as a Teaching Hospital to provide support to the Faculty of Medicine of the University of Mozambique. During this period of economic exuberance, the Central Hospital of Lourenço Marques was undoubtedly one of the most impressive examples of its kind, due to its scale and presence in the city.

In fact, the large central building designed by the architects Francisco Assis and Luís de Vasconcelos came to define a new front in the city of Lourenço Marques, creating a symbolic and literal access of reference, and extending the occupation of the central south-west axis with the large block for the hospital that brought together all the city's medical capacities. This new entrance, placed on 31 de Janeiro Ave. (current Agostinho Neto Ave.), marked the latest development of the city, with respect to the previous one, on Pinheiro Chagas Ave. (now Eduardo Mondlane Ave.), and would "*confirm the strategy of expansion to the northeast, [previously] begun in the mid-thirties*" (Ferreira, 2006: 183). At the urban level, the shape



imprinted on the ground at the entrance area of the building is essential for directing the visual perspective to the centre of the structure.

The south-east axis reinforces its modern monumentality through two symmetrical ramps that allow vehicle access to the first floor, along with a central staircase.



2. Plano of the lowest floor (P0), Miguel Bombarda Hospital, Maputo, Mozambique, 1958  
PT/IPAD/MU/DGOPC/DSUH/1940/13500

The symmetrical plan is composed of five volumes perpendicular to 31 de Janeiro Ave., crowned by a central block, which forms its urban front to the avenue. Public access is via this central, 4-floor volume, which also contains the operating room. At the edges of the central body, facing the avenue, two pairs of symmetrical 2-floor volumes, contain the circulation for the whole built structure, with large ramps that impart a powerful dynamic to the group of buildings.



3. View of the circulation ramps, Miguel Bombarda Hospital, Maputo, Mozambique, 2012  
EWV, Ana Tostões, 2012 (<http://ewv.tecnico.ulisboa.pt>)

The perpendicular volumes are oriented towards the dominant winds, thus providing good ventilation. Also consisting of 4 floors, this is where the medical specialities are located (floors 1 and 2), laboratories (floor 3) and maternity (floor 4). Only construction phases 1 and 2 were built, although a third phase was planned that envisaged the construction of a new building to expand the hospital ward areas. The architect Francisco Assis even requested permission to travel to Nigeria to carry out a study visit, because "*in Ibadan is the most modern unit of this kind built in Africa*"<sup>5</sup>. The trip ended up not being authorized and the third phase also never happened.



4. Exterior view, Miguel Bombarda Hospital, Maputo, Mozambique, 2012  
EWV, Ana Tostões, 2012 (<http://ewv.tecnico.ulisboa.pt>)

<sup>5</sup> AHD – Deslocação do Arquitecto contratado, Francisco da Costa Feio Assis, a Ibadan, 1961.  
PT/AHD/MU/GM/GNP/RRI/0727/12243-002

The modern image of this composition is evident both in the wide use of glass transparencies, in the creative shade systems (*brise-soleil*), the magnificent ramps, the sculptural roofing with a solarium, in the colourful ceramic panels and the remarkable low-relief sculptures.



5. Exterior view, central staircase, low-relief sculptures, Miguel Bombarda Hospital, Maputo, Moçambique, 2012

EWV, Elisário Miranda, 2012(<http://ewv.tecnico.ulisboa.pt>)

## 2. Nampula, Egas Moniz Hospital as the core of the city

Also designed in the 1960s by Francisco de Assis and Luís de Vasconcelos, the Egas Moniz Hospital in Nampula, results from a plan outlined in the early 1940s when Portugal was intensifying its investment in Mozambique. What stands out in the architects' written description (1941)<sup>6</sup> are their thoughts on the nature of the hospital. They discuss its vertical scale, and the pavilion organisation. The design was heavily criticised by the doctor Francisco Gentil<sup>7</sup>.

<sup>6</sup> AHU – Hospital Provincial do Niassa, Nampula. Ante-Projecto. Memória descritiva e Justificativa, 10-12-1941. PT/AHU/UM/DGOPC/CDTE/OP01580, 8/43-2/3

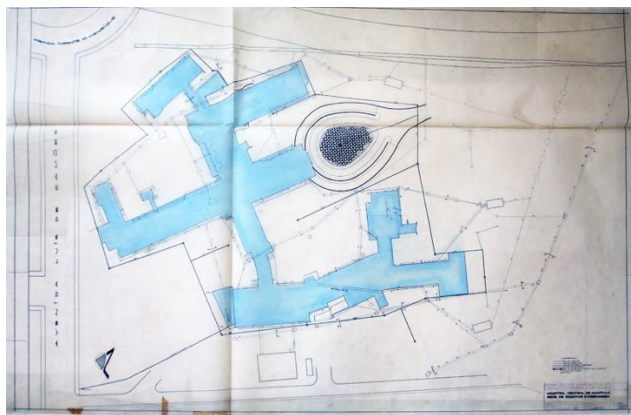
<sup>7</sup> President of Comissão Técnica dos Hospitais Escolares



6. Perspective of the Hospital's first plan, Nampula, Mozambique, ca. 1941  
MOP-RM/EWV (<http://ewv.tecnico.ulisboa.pt>)

Despite the favourable opinion of the *Direcção dos Serviços de Obras Públicas* to the Preliminary design for the Niassa Provincial Hospital, this plan was not pursued.

In 1960 it was resumed by the architects Assis and Vasconcelos. Construction started in 1961, and it started operating in 1967, when the colonial war had already been running for five years in Mozambique. However, it remained incomplete, because the last hospital admissions section was never constructed. The financing of its construction was funded in the budget for 1961 of the *II Plano de Fomento* (Miranda, 2013).



7. General plan, Nampula, Mozambique, ca. 1960  
MOP-RM/EWV (<http://ewv.tecnico.ulisboa.pt>)

The Hospital is sited at the end of the visual axis of the current Paulo Samuel Kamkhomba Ave. The volume of the central administration block is the extremity adjacent to the avenue and next to the plaza, and the whole complex was subsequently developed, with smaller rhythmic



# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

A transcontinental process: healthcare facilities  
envisaged as postcolonial built heritage

Ana Tostões; Joana Nunes

transversal elements that connect the sequence of four main buildings: administration, laboratory, operating room and wards, which are oriented in the northwest-southeast direction. The separation of the four parts, combined with the different volumes generated by the different programmes, allows us to visually disassemble the building and, in parallel, it generates an optical illusion of monumentality.

In the volume for hospital wards, which metaphorically crowns the final focus of the Hospital's visual axis along Paulo Samuel Kankhomba Ave., a relationship is established in height, that incorporates the design of the building into an infinite city. It develops a sinuous movement that knits Tete Street with the perpendicular of the building marked by the avenue, along two axes and three orientation moments (the ends parallel to Tete Street and the central movement parallel to the volumes of the operating room and laboratory). The volumes of the hospital wards together with operating room create opens spaces for a green area that is repeated, asymmetrically, between the common block and the volume of the laboratory. These green spaces, in addition to their hygienic and sanitary functions, determine the lowest levels of the site.



8. Exterior view, Nampula, Mozambique, 2010  
EWV, Ana Tostões, 2010 (<http://ewv.tecnico.ulisboa.pt>)

The main access ramp of the hospital complex is thus perpendicular to the visual axis of Paulo Samuel Kamkhomba Ave. – crowned by the third volume (the operating room). This move could be interpreted as the most striking point and form of the building, and might even be considered dissonant, given the geometry of the complex and its urban context. However, the importance of this volume can best be understood by the way it attempts to knit together Dar

es Salaam Street with Samora Machel Ave., breaking the existing urban mesh between this avenue and 25 de Setembro Ave.



9. Aerial view Egas Moniz Hospital, Nampula, Mozambique, s.d.  
MOP-RM/EWV (<http://ewv.tecnico.ulisboa.pt>)

Modular metrics, *pilotis*, *fenêtres en longueur*, *brise-soleil*, prefabricated concrete grills, reinforced concrete structure and ceramic murals are the elements that once again evoke the Modern Movement at its peak.



10. Exterior view, façade details, Nampula, Mozambique, 2010  
EWV, Ana Tostões, 2010 (<http://ewv.tecnico.ulisboa.pt>)

### 3. Health facilities and the colonial and postcolonial city

The modern language of both hospital complexes is striking in both its architectural and urban scale, highlighting the fascinating rhetorical and monumental expression of the hospitals that were built in Portugal: Santa Maria Hospital, in Lisbon or São João, in Porto. The modern

expression of the Mozambican buildings was not only inspired by tropical architecture and the universal construction language of the new African nations at that time, but also by what the new Brazilian image had come to represent after its recently-built capital, Brasilia, had become a symbol of the nation.

The strength of these two complexes at the urban level became imprinted on the city as a symbolic and functional reference: the new block of the hospital complex of Maputo (formerly Lourenço Marques), besides extending the urban axis of the old Araújo plan with the hospital complex, established a monumental access capable of affirming a modern intensity.

In the case of Nampula, the scale of the hospital complex made it a crucial city-organizing element, assuming a colossal dimension that represented the neuralgic centre of Mozambique during the period of colonial war and liberation.

In both cities of colonial origin, the hospital complex as a healing machine became, through its functional importance, its colossal scale, but also through its architectural design, a key urban organizing element.

In the post-colonial context, from 1975 onwards, the paradigm changed (Tostões, 2017), and the hospital was increasingly seen as part of an urban complex and a stimulating place for the exercise of prophylactic functions, rather than just a space of convalescence. Considered as a living institution, its mission was widened to evolve with ongoing scientific and medical revolutions.

To this day, both the facilities analysed maintain the function for which they were built and designed. However, doubts about their future remain: will those who intervene in them have sufficient information and knowledge to properly rehabilitate them (Tostões, 2018), so that their architecture is respected and honoured?

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IPAD – Instituto Português de Apoio ao Desenvolvimento

MOP/RM – Ministério das Obras Públicas, República de Moçambique

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# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

A transcontinental process: healthcare facilities  
envisaged as postcolonial built heritage

Ana Tostões; Joana Nunes

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## A neighbourhood that had everything to be happy... Rethinking the interrupted modernity of the neighbourhood for CTT's Employees (1968-2018)

Inês Lima Rodrigues <sup>1</sup>; Fernão Simões de Carvalho <sup>2</sup>;

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### Abstract

The privilege of knowing and admiring the Architect Fernão Simões de Carvalho gave me a unique and incredible opportunity. I proposed to the Architect Simões de Carvalho, who is now 89 years old, to collaborate on a project rethinking together the Urban Plan for the CTT's Employees' Neighbourhood (1968), restoring the Interrupted Modernity, half a century later. He accepted (Carvalho, Rodrigues (2018), Queijas) this unprecedented proposal, which is still surprising to me. Since then, we have held work sessions where we think and talk about architecture and how we could intervene. Let's see where we get with this "Work in Progress". The Neighbourhood for the CTT's Employees was designed as a modern residential unit (about 40 hectares), structured based on the hierarchy of the Le Corbusier 7V system. The residential buildings were combined with green spaces and with new or existing equipment. The shape of the urban space was valued, the importance of squares and small communion squares and buildings that meander the terrain through a marker element: the vertical access core; are some of the key elements of the project.

This urban experience was not built on its planned size or scale, which in itself reveals its failure. Today, where there should be "a neighbourhood that had everything to be happy", there is the insecure and dangerous Rangel's Neighbourhood. For these reasons, and after an analysis of the plan drawn up in 1968 and the overlap with the present precariousness, we have decided that the best way forward would be to re-establish the modernity of the old plan, expanding the limits to *Rua da Brigada* e *Rua Tunga Ngo*, on the east and west sides of the plan. We defined a new area of intervention of about 59 hectares, keeping the modern premises, the key elements identified as generators of space and urban form, however having to define the new population density. We aim to reach the scale of architecture, using the systems used by the architect, between universality and adaptation, functionality and economy, the truthfulness of materials, particularly of *béton-brut*, and the sincerity of the structure, using the *Modulor* system as a measure unit. With this venture we would like to contribute to the reconfiguration of the landscape and the urban memory, analysing what could have been done, what was accomplished and, more importantly, what could be this "piece of city" of Luanda, taking advantage of the master Fernão Simões de Carvalho's genius.

**Keywords:** Modern Architecture, Collective Housing, Luanda, Fernão Simões de Carvalho

## A neighbourhood that had everything to be happy...

During the sixties, the urban peripheries of Portuguese cities embodied a deep transformation process, and Luanda was one of the most peculiar cases. Strangely enough, with the beginning of the Colonial War in 1961 a big urban and territorial transformation period also started in Angola, mainly in the capital. In a way, this was the Portuguese State tactic to reverse and justify the lack of openness to the decolonization process that was taking place all over the other European colonies<sup>1</sup>, dragging the independence process until 1974<sup>2</sup> (Rodrigues: 2014,101). During this period, one witnessed the construction of big public buildings, as well as important railway and road infrastructures. This urban expansion paired with a huge migratory movement, demanded the creation of new residential complexes. In one of the Portuguese colonial cities with the biggest population density, emerged dense urban agglomerations, mainly in the suburbia, acting in rural landscapes. (Milheiro, 2016: w.p.).

At the same time, vertical density, modern urbanism and international architecture style became synonymous of collective housing. The economy of constructive means, the ordered repetition of modular and sustainable solutions and the accuracy in execution created a high visual and formal consistency of the residential field in Luanda, also taking a fundamental role in the characterization of the city's urban places. In fact, the tectonic issue is justified and the use of concrete is intentionally treated "as a deliberate and definitive technic of the expression process and constructive truth" (Rodrigues, F., 2012: 5). Actually there was a path that pertained to align the specificities of the Modern Movement, born in Europe and based on Le Corbusier's work, and to apply them to a tropical climate, "humid and without winter" (Fry:1956:36) without big temperature variations but with high levels of air humidity, commonly known in Africa as *cacimbo* (Rodrigues, 2014: 620). The climate issues overstated the concerns of style, adapting the project to two main principals: the implantation according to the sun's rule and the crossed ventilation (Rodrigues, 2011:142). Due to the huge distance from the central State and

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1 In 1951, the Colonial Act of 1933 was replaced by a new political guideline that proposed a "clear way of effort for overseas colonial integration". However, it was only with the constitutional revision of 1971, initiated by Marcelo Caetano's government, that some social and political openness was approved.

2 The *Red Carnations Revolution*, on the 25th of April 1974, marks the end of Salazar's regime, the start of the democracy age in Portugal and the end of Portugal as a imperial and colonizer country. In 1975, the end of the colonial war starts the independence process of the African colonies. However, just after this, Angola begins a violent civil war that will only end in 2002.

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

A neighbourhood that had everything to be happy...

Rethinking the interrupted modernity of the  
neighbourhood for CTT's Employees (1968-2018)

*Inês Lima Rodrigues, Fernão Simões de Carvalho*

power but also to the extension of the territory, where “everything needed to be made”, the Luso-Angolan’s modern urbanism and architecture reached much bigger a quality and dimension than at the capital of the empire.

Fernão Simões de Carvalho was one of the protagonists of Luanda’s transformation into an urban laboratory for modernity experimentation. One has to highlight the mastery he had applying imported modern models and technics to the local characteristics and to the specifics of the tropical climate. One of his worries and main challenges was to reduce the economic, social and racial segregation, which he tried to shorten through architecture, contributing to a more fair and balanced society. He had an urbanism graduation from the *Institut d’Urbanisme de l’Université de Paris* (Sorbonne) and was the Head Office of Urbanization of the City of Luanda - (1961), and participated on the creation of the Master Plan for the City, draw more than a 100 Partial Plans for the City, building a "Luanda do Futuro" (Carvalho, 1963: 27). His collaboration with Le Corbusier and André Wogenscky (1956-1959) definitely influences his work that we can acknowledge in the building of Radiodifusão de Angola (1963) or the Caputo’s Market (1952-1965), among others. On the residential field, we can underline the neighborhood units, where we can find the Prenda’s neighborhood, maybe the most accomplished project although still far away from the goals set for the project.

Still in the residential ambit and with the main objective of responding to a huge demand for housing, Simões de Carvalho, along with Lopo de Carvalho, designed the last significant housing complex built during the colonial period in the old São Paulo neighbourhood, today Rangel neighbourhood. Designed for the CTT employees, the project began in 1968 and based on Le Corbusier's 7V hierarchical system, defined the location along one of Luanda's main exit roads, in the northern direction, as well its internal traffic scheme, for vehicles and pedestrians.

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

A neighbourhood that had everything to be happy...

Rethinking the interrupted modernity of the  
neighbourhood for CTT's Employees (1968-2018)

*Inês Lima Rodrigues, Fernão Simões de Carvalho*



Fig.1. Sketch of CTT Neighbourhood. Fernão Simões de Carvalho, Luanda, 1968 (Archive: FSC)

In the sketch developed by Simões de Carvalho for the Urban Plan, we find the pre-existences of a "Garden City", characterized by a symmetrical layout based on a central axis marked by a Catholic church and a club (Milheiro, 2016, w.p.). The urban plan is complemented with some facilities as well as a primary school, commercial and sports equipments, which were accessed by an axis perpendicular to the main road. The significant alteration to the Set Plan presented, is based on the bifurcation of this perpendicular axis, accentuating the organic character of the urban structure that characterizes the neighbourhood, and encompassing in the plan the Technical School (that appears already as a pre-existence), concretized by Manolo Potier in 1964, nowadays known as *Escola Ngola Mbandi*.



# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

A neighbourhood that had everything to be happy...

Rethinking the interrupted modernity of the  
neighbourhood for CTT's Employees (1968-2018)

*Inês Lima Rodrigues, Fernão Simões de Carvalho*



Fig.2. Set Plan of the CTT Neighbourhood –, Fernão Simões de Carvalho, Luanda, 1968 (Archive:FSC)

We can identify three new residential areas that adapt to the existing neighbourhood. In the north area, around one-family houses, there are the four-floor blocks that show in the territory in a free and organic way. The composition is possible due to the core stairs that works as a joint or kneecap that articulates the different urban lots. The south area shows three apartment blocks with eight floors connected by a four-floor building for housing and commerce that snakes around this sector. On the southeast front we have two towers and another set of four-floor blocks. Despite the proposals for the eight story buildings, or the fifteen story towers, are not known, the plan intention stated 846 apartments, distributed along 41 hectares.

From the initial design only one housing block was built.

Nowadays, it is a lost block in the city web that, despite all, manages to keep the modern identity, dignifying the life of the ones that inhabit it. Although it has gone through several alterations (closed balconies, empty spaces occupied without maintenance at all) the block still states the singularity of the modern principals applied to the urban and architectural scale. Composed of four blocks articulated by a central core stair, working as a kneecap that allows a natural articulation to the territory (Rodrigues, 2011:152) the neighbourhood for CTT's Employees proves that the modern project in Luanda was interrupted and was far from completion. Inevitably, with today economic crises, there is a need for reconstructing and correcting its flaws as a starting point for new ideas or statements.

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

A neighbourhood that had everything to be happy...

Rethinking the interrupted modernity of the  
neighbourhood for CTT's Employees (1968-2018)

*Inês Lima Rodrigues, Fernão Simões de Carvalho*



Fig.3. Collective Housing Block built. CTT Neighbourhood, Fernão Simões de Carvalho, Luanda, 1968 (Archive:FSC)

## **Rethinking the interrupted modernity of the neighbourhood for CTT's Employees (2018)**

### *Urban Proposal*

The forced interruption of the modern process, along with the current absolute need for affordable housing in Luanda took us - project's author and me – to rethink the neighbourhood once draw for the CTT employees. We were driven by our love for architecture and by the goal of improving people's lives, utopic in reality but possible in the field of ideas. The great opportunity for thinking architecture combined with the goal of “building houses”, in a wide and more sensitive sense, as the right to a dignified house and living took us to (re)think the current Rangel neighbourhood, (re)building the modernity of this city's stripe. The idea was also supported by the fact that this project is a case study of the research project “Middle Class Mass Housing in Europe, Africa and Asia - Ref.<sup>a</sup> PTDC/ART-DAQ/30594/2017, that was recently distinguished for funding by the FCT and that has Ana Vaz Milheiro as head researcher, and me as co-coordinator. And so, we had a set of strong motives to go trough and present a proposal.

Limited by the geographic distance and the unfamiliarity of the present-day reality of neighbourhood Rangel, we supported our research on digital resources and public data so we could deliver our “recognition report”, just as Arq. Fernão used to do, preparing himself and

gathering information before starting any project. Based on satellite images (2018) we could verify that the neighbourhood was only started, and 50 years later, interestingly enough, the main roads were naturally drawn creating its own road structure, without any type of pavement, proving the efficiency of the urban plan.

We have widen the limits of the urban intervention to the existing main roads, suggested on the Set Plant of 1968, trying to formalize the stated expansion areas that today are composed by a disperse and fragmented tissue, taken over by the *musseques*. In this way, from the 41 hectares proposed half a century ago, we started to work with 58 hectares. The plan has its north limits on *Rua N'Gola Kiluange*, the east-west road of the city that connects the Bairro de São Paulo to the *Estrada do Cacuaco*, and its south limits on *Rua N'gola Mbandi*, both with 20m wide (V2). The crossroads from north to south have on west *Rua Tunga Ngo* and on east *Rua da Brigada* (V3), a little bit narrower with 14m, progressively reducing as approaching the housing units (V5-V6) to around 6m.



Fig.4. Fernão Simões de Carvalho. *Atelier*, Queijas. Work Session 18.06.2018

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

A neighbourhood that had everything to be happy...

Rethinking the interrupted modernity of the  
neighbourhood for CTT's Employees (1968-2018)

*Inês Lima Rodrigues, Fernão Simões de Carvalho*

We have begun with some basic principles that we could not do without: 1) Introduction of a 50m green lane along the main roads; 2) Promote the community through a public space design, the core of the Neighbourhood Unit meeting; 3) Keep the road system with the Le Corbusier's 7V rule, trying to draw new roads perpendicular to the main axis, when ever is possible; 4) Design and pin the crossroads in order to avoid traffic jams; 5) Consolidate existing/proposed infrastructures 6) Introduction of new housing blocks with different kinds of occupation; 7) All buildings should be elevated from the ground using *pilotis*, assuring natural ventilation and allowing the continuity of the public space on the ground floor; 8) Promote development trough urbanism.



Fig.5. Re-drawing of the main and lateral Facades-Lots 6, 7, 8 of the Urban Plan proposed by FSC (1968)

Having our set of goals in mind and after analysing the plan, almost empirically, we have decided to widen the sector next to the four-floor blocks with the same typology. We have accentuated the *cluster* feel, turning the blocks to the interior of the sector, promoting public space and limiting the collective housing sectors at north and east. The constructive logic of the sixties allowed us to easily follow the neighbourhood modernity and prove the system's efficiency. With the same "kneecap" stair system, the same structural system and typologies, we have defined the new collective housing system of medium high on the sectors next to one-family houses. At the same time, we have followed the existing road structure without falling into the impetus of drawing straight lines. And by performing "fundamental gestures" as the pull away of the pre-existing houses and small industries area on the northeast sector of the plan, we were formalizing the urban plan. The northeast extension to the plan's limit, on *Rua da Brigada*, allowed us the necessary enlargement of the spots zone with the creation of new play fields for different games, pool and covered gym. Next to the pre-existing Primary School and Technic School we have set an area for new structures, such as a kindergarten and a playground, completing the childhood supporting infrastructures.



# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

A neighbourhood that had everything to be happy...

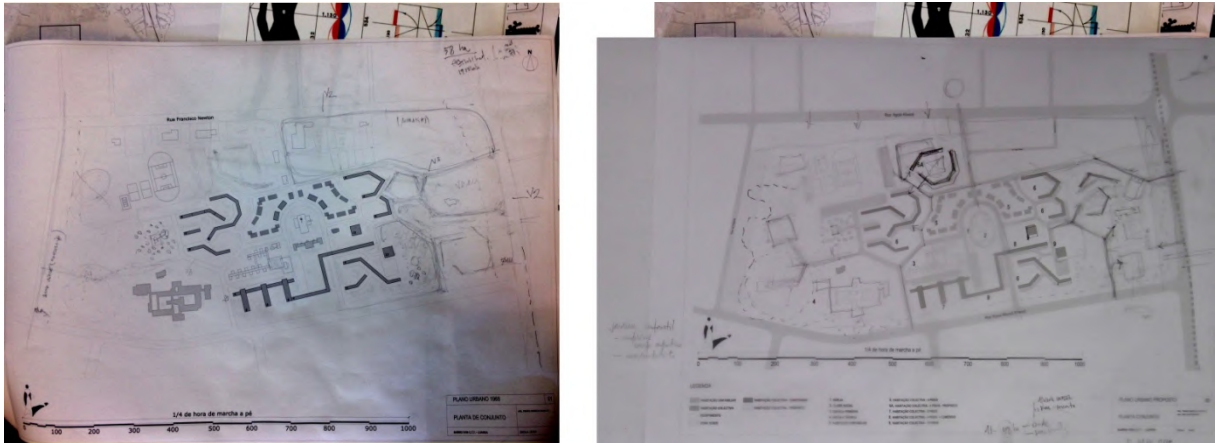
Rethinking the interrupted modernity of the  
neighbourhood for CTT's Employees (1968-2018)*Inês Lima Rodrigues, Fernão Simões de Carvalho*

Fig.6. Sketches on the Urban Plan. FSC, ILR, *Atelier*, Queijas, Works sessions 28.06.2018 | 12.07.2018

To promote community and leaser activities we were influenced by the Brazilian modern universe to create an outdoor theatre and a dance floor that we have placed between the spots zone and the childhood supporting infrastructures. We were backed up by the urban project of Francisco Bolonha for the collective housing unit Vila Isabel in Rio de Janeiro (1952-1955), highlighting the proposal of a long linear block along the neighbourhood relating with the different structures and buildings (its stair's nucleus also functioned as a “kneecap”). The only residential block built was the one on east (Rodrigues, 2010: 44). The three eight-storey blocks that interrupt the four-story buildings that snake the southern sector of the plan are maintained, proposed in 1968. The scale gradually increases to the south, marking the territory with the relation of the high housing blocks with the height average neighbourhood, announcing at the same time the high density in the west views of the plan.

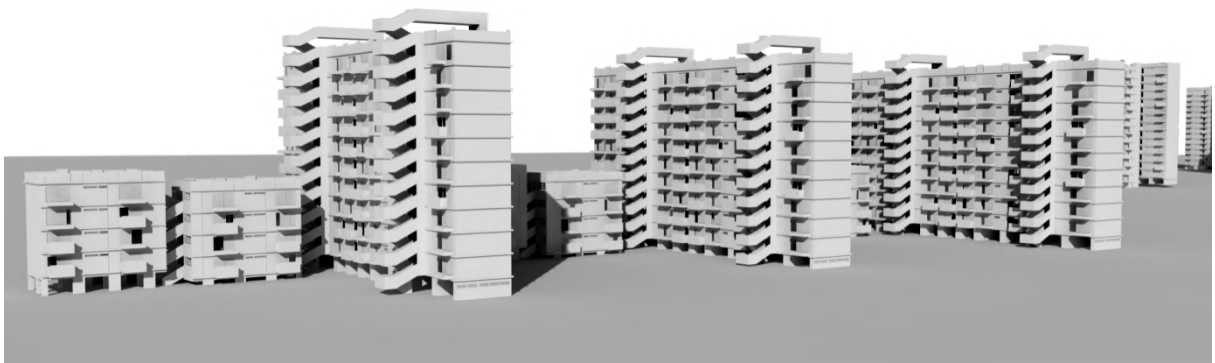


Fig.7. 3D View of the set of eight-story blocks proposed for the southern sector. FSC, ILR, *Atelier*, Queijas, Work session 12.07.2018



# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

A neighbourhood that had everything to be happy...

Rethinking the interrupted modernity of the  
neighbourhood for CTT's Employees (1968-2018)

*Inês Lima Rodrigues, Fernão Simões de Carvalho*

For the southeast sector we pondered the hypothesis of an Office Tower backed up by new structures like a police station, or even a mall, but we're still not sure. Before that we needed to calculate the housing density with the creation of more than 116 family units on the north sector and 92 family units on the southeast sector, and we noticed that we're far away from our housing density goal since we had just around 70 inhabitants/hectare.



Fig.8. Proposal Urban Plan. FSC, ILR, *Atelier*, Queijas, Work session 31.07.2018

So we have decided to keep the idea of a set of four-floor blocks (north), consolidating the collective housing sector of medium high around the one-family pre-existing units but also to increase the housing density of the northeast sector with the introduction of three fifteen-floor towers, instead of the four-floor blocks previously proposed. Between the two lower bodies there are public spaces, creating small socializing squares between the blocks. For the towers set, one chose a central main public space, releasing the sector extremes for residential car parking. The rise of density justifies the introduction of new road axis (V3) that purposely connects to the main roads (V2). The majority of the other roads lead to car parking or alleys to emphasize the residential nature of the neighbourhood (V5, V6), avoiding city traffic crossings.

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

A neighbourhood that had everything to be happy...

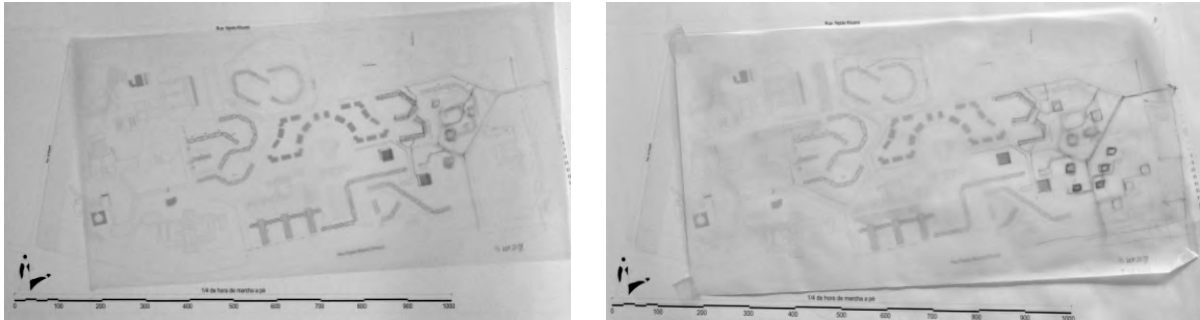
Rethinking the interrupted modernity of the  
neighbourhood for CTT's Employees (1968-2018)*Inês Lima Rodrigues, Fernão Simões de Carvalho*

Fig.7. Sketches on the Urban Plan. FSC, ILR, *Atelier*, Queijas, Works sessions 29.09.2018 | 04.10.2018

We assumed a mass-housing proposal with the introduction of 6 towers instead of new structures for the southeast sector, accomplishing one of the proposal goals. Between the different towers we have established green fluid and continuing spaces that connect each other through collective spaces and walk lanes, consolidating the urban plan (2108). If we only considered the tower sector, we would be talking about huge densities with around 3000 inhabitants/hectare that are balanced out by an area reserved to green spaces, protection zones, public spaces and infrastructures. The implementation of the new sets planned to insert more 1504 houses (instead of the 846 proposed in 1968) for a population of approximately 7000 inhabitants, within limits set for the Neighbourhood Units. (Carvalho, 1963: 28).

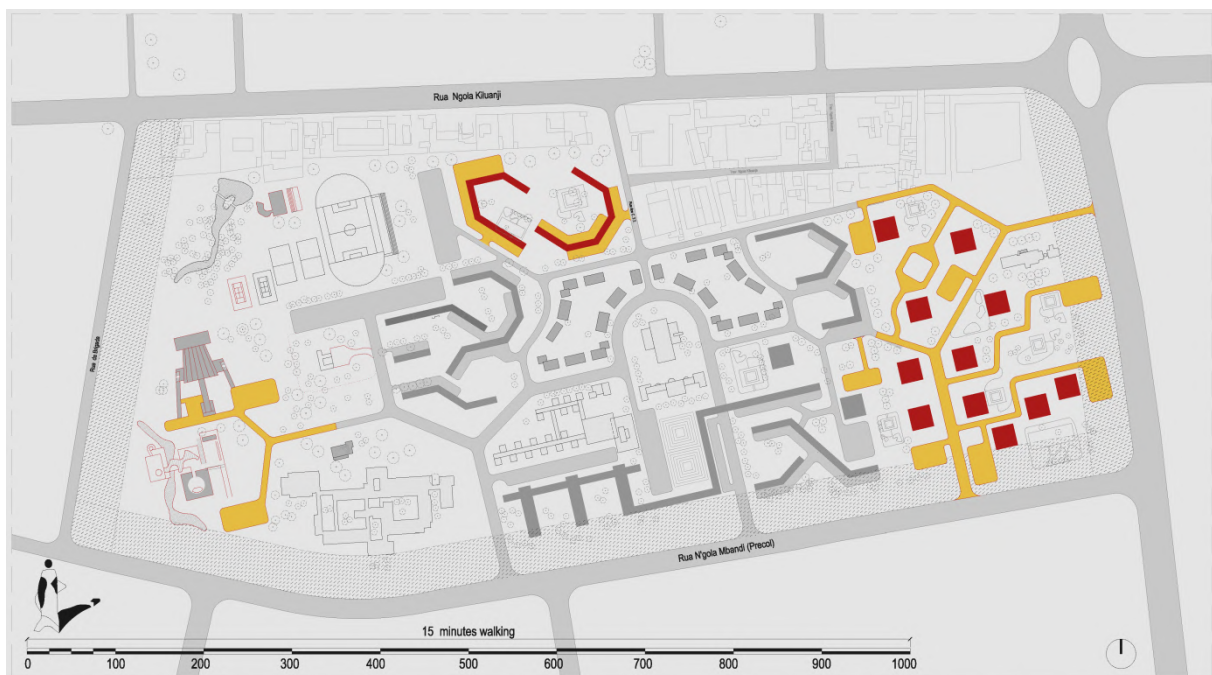


Fig.8. Proposal Urban Plan. FSC, ILR, *Atelier*, Queijas, Work session 25.10.2018

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

A neighbourhood that had everything to be happy...

Rethinking the interrupted modernity of the  
neighbourhood for CTT's Employees (1968-2018)

*Inês Lima Rodrigues, Fernão Simões de Carvalho*



Fig.9. 3D View on 15-storey towers for the west sector. FSC, ILR, *Atelier*, Queijas, Work session, 25.10.2018

## *Architectural Proposal*

The architectural proposal stands on a 1,40x1,40m grid that sets the project's dimensions aligned with the Le Corbusier Modulor system which Arq. Fernão never stopped using. The module doubles itself in height to set the height between floors (2,80m) with beams of 54 cm, one defines the famous *corbusiano* height ceiling of 2,26m. "Where is structural we can see the concrete, the filling is brick." (Carvalho, 2018). These are the two dominant materials on the project, reducing the production costs.

All the buildings stand on *pilotis*, freeing of the main floor plant, just occupied by bathrooms that adapt to the structural system of the module and support the users of the public space. Buildings that reflect a degree of freedom won with great modern spirit, proving Castro Rodrigues's statement: "*both pillars are seen from the now independent structure [...] and the brise soleis were the bases of tropical architecture and propagated and generalized as an imperative necessity*" (Rodrigues, F, 1961:w.p.). The structure actively engages in the facades' composition, characterized by the nakedness of the *betón brut* and the free layout of the flower/plant pots and balconies that work "creating shadow elements for the inferior floors and giving rhythm to the facades". To these goals, adds the basic need for ventilation, assuring a good air circulation trough the crossed ventilation in all houses.



# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

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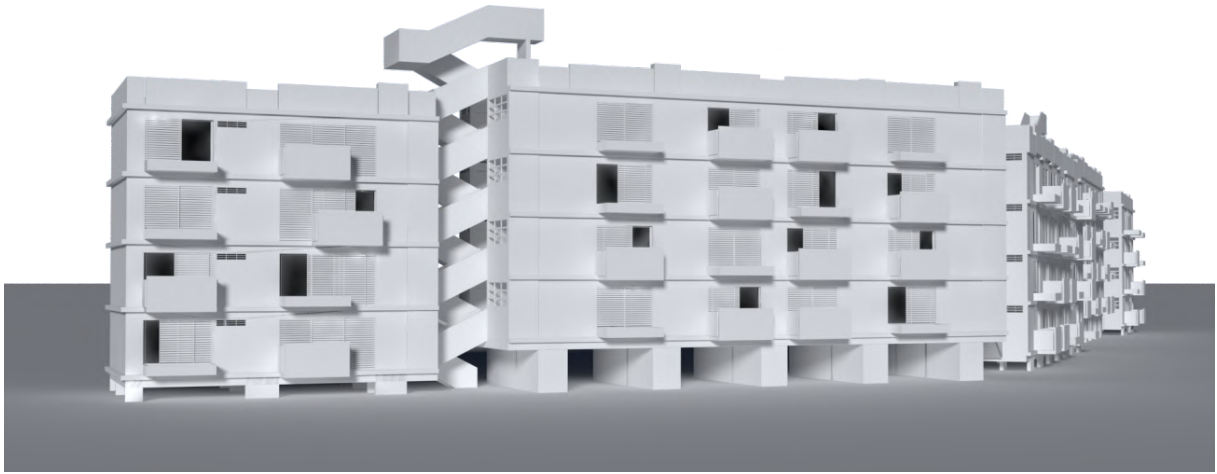
Rethinking the interrupted modernity of the  
neighbourhood for CTT's Employees (1968-2018)*Inês Lima Rodrigues, Fernão Simões de Carvalho*

Fig.10. 3D View of the built block (Lots 2, 3, 4, 5)

As mentioned before, the stair nucleus works as an articulation element of the different urban landscape lots, simultaneously creating a gap in the implantation quota of the two side by side lots. Besides providing a bigger dynamism to the façade, this solution would create parking spots for the residents (when there were still a few automobiles) on the higher buildings, and before being occupied.



Fig.11. Photograph of the built block - Staircase core and the relationship with floor level of the two buildings that compose each lot (Archive Modernidad Ignorada)

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

A neighbourhood that had everything to be happy...

Rethinking the interrupted modernity of the  
neighbourhood for CTT's Employees (1968-2018)

*Inês Lima Rodrigues, Fernão Simões de Carvalho*

All apartments have been developed with modular logical structural systems and therefore convey an extraordinary sensitivity of space, volume and relationships between the interior and exterior. Regarding the residential typologies, just the two and the three-bedroom apartments were accomplished, respectively with 108,90 m<sup>2</sup> and 122,70 m<sup>2</sup>. However, to accomplish greater diversity, we also draw the single bedroom apartments (60,30 m<sup>2</sup>) and its variant (78,90 m<sup>2</sup>). The variant of the T3 keeps its square feet although presenting a different layout for the balconies and the flower-pots (on just one module). These three new defined typologies identified on the Houses Distribution Plant (1968) never got even drew, according to the archive and memory.

The houses' access is indented of the stairs circulation, creating a pre-chamber that also communicates with the two service areas of the apartment. The flats were organized from the entrance, crossing the social area to the more private zones. The wardrobes and built-in furniture are an integral part of the project and we can find them in the bedrooms, living room, kitchen and bathrooms.



Fig.12. New typologies developed T1 and T1A (2018) and redesign of typologies T2 and T3 (1968)



The flat's independence is assured by the strategic location of the structure with the pillars (1,4mx0,2m) integrated on the façade, supporting the built-in closets and the integration of the installations inside the apartment. The natural light is filtered by the system of painted white wooden blinds proposed for the exterior spans (balconies, windows or flower pots), occasionally defined by 1 module (T3A typology) but mainly represented by 2 modules (2,8 m) that allows the so needed breeze to enter trough the crossed ventilation, with the filtered light controlled according to the situation.

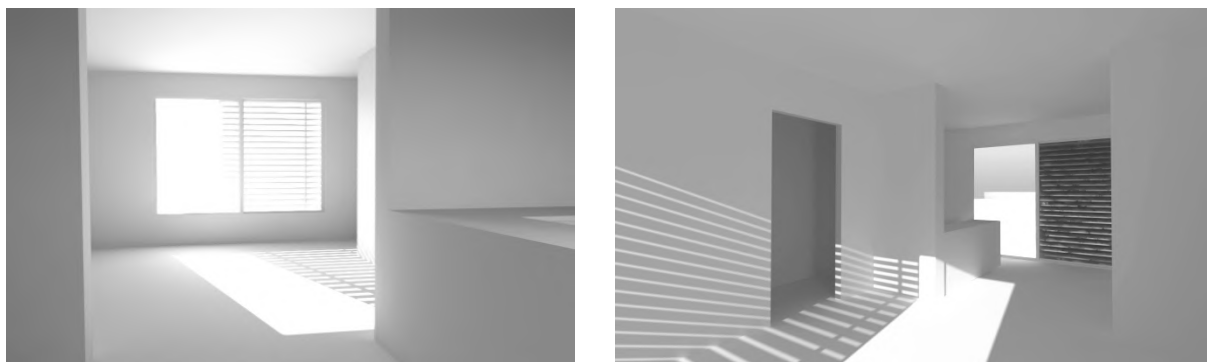


Fig.13. 3D views of the social areas of the apartment's interiors

Naturally, these were our premises in terms of typology to draw the eight-floor blocks, as well as the fifteen-floor towers. Naively, I had the idea of a gallery system with duplex apartments for the eight-floor blocks but Arq. Fernão immediately said: *“Leave it! This must be thought with the same typology!”* The challenge was launched.

We have followed the implantation proposed on the urban plan, regarding the three eight-floor blocks perpendicular to the four-floor blocks and next to the block that snakes around the south sector, which also intends the introduction of small commerce. The towers have a 40,8m distance from each other, a dimension that comes from the *Modulor* system.

After several approaches to the definition of the blueprint of the eight-floor block, we have decided to free the stair nucleus on a salient volume, and on the opposite side, the elevators' block. Here, the vertical access looses the “kneecap” character presenting itself as a break-up element along the linear block, although it keeps the similar structural and formal characteristics of the four-floor blocks. Underlines the superior element that crowns the stairs-elevators nucleus as it was a loose and detached element and as Le Corbusier liked.

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

A neighbourhood that had everything to be happy...

Rethinking the interrupted modernity of the  
neighbourhood for CTT's Employees (1968-2018)

*Inês Lima Rodrigues, Fernão Simões de Carvalho*

Each one of the three bars has T1, T2 and T3 typologies and two access-nucleuses. In total, we estimate 32 house units per block, which totalizes 96 apartments. The typology diversity allows us to control the longitude of the proposed blocks, avoiding confrontation with the proposed green protection area and the pull away of 50m from the main road.



Fig.14. 3D View, Main Facade, Plant of proposed eight-story blocks. FSC, ILR, *Atelier*, Queijas, Work session 27.09.2018

The big challenge of defining different kinds of buildings with the same structural logic and typology intensified itself with the Tower's drawings. As usual, we looked for support on our architectural references, like the *cluster block* of *Keeling House* (Fry, Drew, Drake e Lasdum, 1959), the *Balfron Tower* (Ernõ Goldfinger, 1963) both in London, or the *Girádez*, López y Subías and the Towers for the *Polígono Sudoeste Besós* in Barcelona, as well as other examples like Teotónio Pereira e Costa Cabral on *Olivais*, in Lisbon.

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

A neighbourhood that had everything to be happy...

Rethinking the interrupted modernity of the  
neighbourhood for CTT's Employees (1968-2018)

*Inês Lima Rodrigues, Fernão Simões de Carvalho*



Fig.15. 3D Views, Proposal for the fifteen-story Towers of Rangel's neighbourhood, FSC, ILR, *Atelier*, Queijas, Work session 18.10.2018

Logically, the established web (1,4x1,4 m) is the base modulation to also set new accesses. The high number of users (300 inhabitants per tower), distributed by 4 apartments per floor, justifies the doubling of elevators (4), supported by the service stairs that tries to keep its formal characteristics. In the towers, the accesses nucleus shows itself like the houses access galleries “dorsal spine”, working as an internal kneecap of the fifteen-floor towers. The created galleries allow new relationships between the residents and also “internal” remarkable vistas of the building, as well as over the neighbourhood.

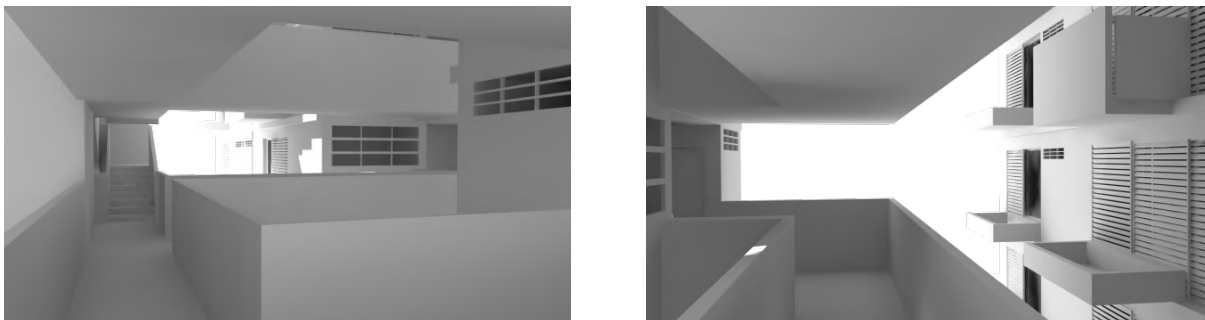


Fig.16. View of the galleries of access to the apartments in the Proposal for the fifteen-story Towers, FSC, ILR, *Atelier*, Queijas, Work session 18.10.2018

The four sides of the tower stand for their similarity since all of them have a *blind wall* of one of the units, opposing the opening composition and rhythm of the balconies and flower boxes

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

A neighbourhood that had everything to be happy...

Rethinking the interrupted modernity of the  
neighbourhood for CTT's Employees (1968-2018)

*Inês Lima Rodrigues, Fernão Simões de Carvalho*

on the other sides. Different viewpoints will be possible according to the perspectives, which intensify the visual diversity in a neighbourhood that is defined by the same constructive system and materials. The blueprint is parallel to the band type, allowing different types of implantations and providing a bigger diversity to the urban set. In this way, the unevenness of the lots' implantation is kept. The lots are organized in pairs with access assured by the two-elevator nucleus and a shared stair. We propose the introduction of 2 and 3 bedroom apartments to accomplish the maximum density; however we could also introduce smaller size apartments.

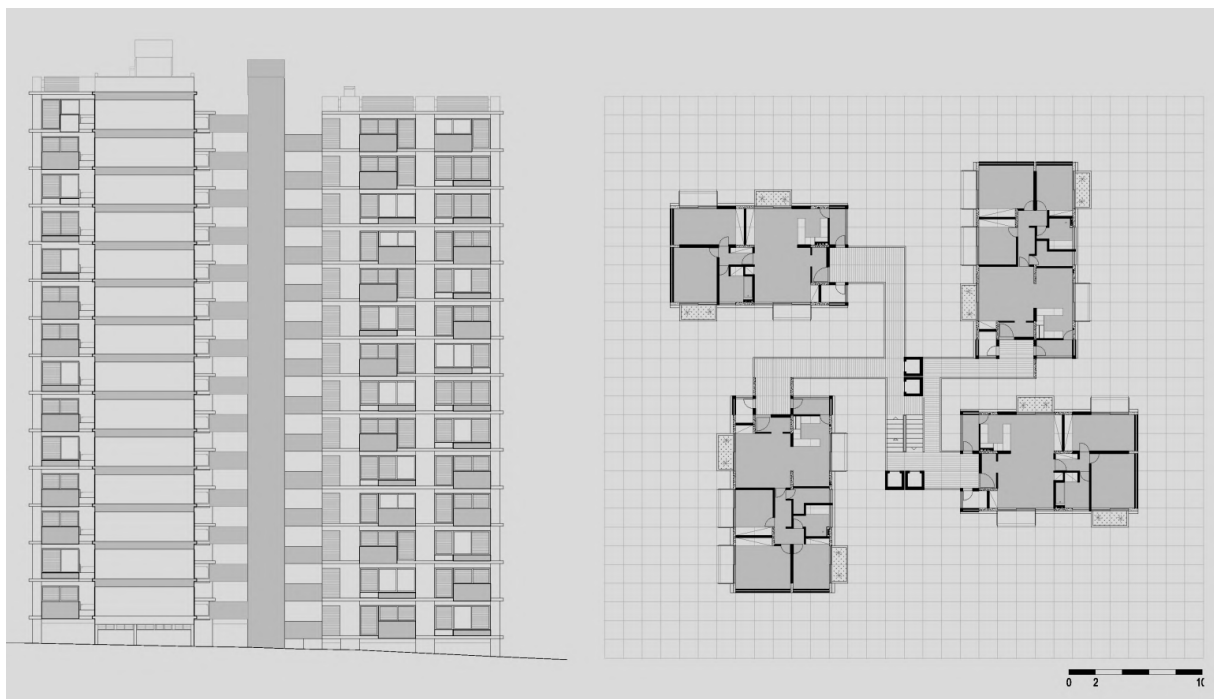


Fig.17. Facade and Plan of the fifteen-story Towers FSC, ILR, *Atelier*, Queijas, Work session 31.07.2018

We have (re)thought the modernity of the old neighbourhood for CTT's Employees with systems developed between universality and adaptation, functionality and economy, the truthfulness of the materials and the structural logic. We have showed the desire of organized and functional surroundings, replacing the existing chaotic and disperse urban context. We have highlighted the importance of the modular structure and of the concrete for the formal conception of the buildings, boosting the reversibility of the interior composition and the use of standardization (Rodrigues, 2014:750). So we can easily say that modern architecture not only does not fail towards the city but it actually finds a suitable stand for collective housing, stressing that the right typology project, builds the place, orders and marks the territory.

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

A neighbourhood that had everything to be happy...

Rethinking the interrupted modernity of the  
neighbourhood for CTT's Employees (1968-2018)

*Inês Lima Rodrigues, Fernão Simões de Carvalho*

Due to the outstanding constructive level developed by Arq. Fernão, we can relate, in a coherent and logic way, the construction to the form, putting it to service of a specific model, it being a city or a housing project. We have proved that the modern living is a dream that could have been real. With this proposal, we hope to diminish the truth of the “uncompleted modernity project” of Jurgen Habermas and the “Ignored Modernity” of Roberto Goycoolea and Paz Núñez (Rodrigues, 2015:355).



Fig.18. Fernão Simões de Carvalho, Inês Lima Rodrigues. *Atelier*, Queijas. Work session 04.10.2018

It was an enormous privilege to have the opportunity to (Re)think the modernity of the neighbourhood for CTT's employees in Luanda with the project's author. The 7V's Le Corbusier system and the modular system have gone from the theoretical and universal field to become fundamental project tools. The experience and interchange of knowledge during this process crossed generations, overlapping original elements with third-dimensional models contributing to the understanding and promotion of modern architecture.

However, I must recognize that it was the love for architecture, the power of the draw and a big friendship the real and great engines of this project.

Thank you, Arq. Fernão!



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## The controversial landscapes of the Modern Neighborhood Units in contemporary Luanda. Prenda as paradigm.

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### Abstract

The capital of Angola is a unique example of a modern city. Its authors were a generation of young Angolan and Portuguese architects with a strong political and professional commitment, who used architecture as an instrument of social change. Their works sought to solve the housing problems generated by rural immigrants and new metropolitan settlers. The *Gabinete de Urbanização da Câmara Municipal* was the organism in charge of the public housing promotion. By 1960 the Neighborhood Units began to be projected as solution. They were large urban complexes with residential, productive, commercial and leisure areas that would let the city grow to south, freeing the congested historic center according to the guidelines set in the City Master Plan (1962). The *modern* way of life was promoted, setting up the urban landscape of the last colonial period.

The purpose of this communication is studying the origin, development and current status of the first Neighborhood Unit planned in Luanda: the one projected for Prenda neighborhood (1962-65). It was an ambitious project with a utopic character, including a mixture of races and social classes and a configuration of local urbanism with spaces of coexistence and common activities. The Angolan armed conflicts (1962-2002) forced to leave the project unfinished, which led to a progressive overcrowding (people displaced of war) and degradation, due to lack of maintenance and services. Today *Bairro Prenda* is debated between renovation and demolition.

Prenda synthesizes the change from colonial to postcolonial landscapes. Planned at the same time as the modern and utopic Luanda, it received the occupation by the native population of those properties abandoned by the Portuguese who left the country after Independence. Later, Prenda suffered the degradation caused by the war and today it is threatened by the process of urban renewal. Today, Luanda is experiencing an intense renovation process that sees in the degraded modern neighborhood units an opportunity to build new urban projects, without even appreciating their renovation. New buildings and new urban landscapes are being developed in a city politically postcolonial but urbanistic and socially immersed in the new and subtle structures of colonization of the globalized financial capital. A

phenomenon that would require more attention than it is being provided because of its tendency to be reproduced in many other contemporary processes of urban renewal.

**Keywords:** Angola, Luanda; modern architecture; urban utopia, landscape.

## Background

Since Diogo Cão landed in Angola (1483), Portugal maintained a very small administration and hardly made any important investments in the colony, except the consolidation of the ports of Luanda and Lobito as two important gates in the slave trade with America and raw materials business with Europe (Alcoy, 2007). After the independence of Brazil (1822) the Portuguese interest in African and Asian colonies increased, but still was nothing relevant. In the Berlin Conference of 1884, the European hegemonic countries agreed to divide the African continent (Ceamanos, 2017). In this distribution Portugal obtained a large portion of Africa, with Angola and Mozambique as prominent territories, especially coveted by the rest of the powers for their natural riches and excellent location in two different oceans. This new international context led the Portuguese authorities to “*build a new colonial system, as a guarantee of the existence of Portuguese nationality, and a continuity of the imperial heritage*” (Fonte, 2012).

Among the different policies proposed to consolidate the rights acquired in Berlin stand out those which aimed to stimulate metropolitan emigration to overseas territories. At first, wealthy landowners arrived attracted by the large African extensions of fertile land. After World War II, the government of António Salazar impulse emigration by encouraging “*free men to go to Africa in search of economic survival*” (Birmingham, 1993). During *Estado Novo* almost 300,000 Portuguese decided –or were forced– to search in the colonies a prosperous future denied by post-war Europe (Alcoy, 2007).

In Angola, to accommodate all those new settlers, several *ex novo* cities were founded, and the existing ones grew exponentially in just a few years. Such a growing demand for construction professionals generated a singular phenomenon in the history of architecture: the *African*

*Generation*, as it was named afterwards (Fernandes, 2009). They were a group of young Angolan and Portuguese architects who found in the colonies a laboratory where they could experiment with the premises of the Modern Movement. Free of the conceptual and formal chains imposed on the continent by the dictatorship of Salazar, in Africa they made new architecture and urban proposals from a utopic vision. They thought that “*architecture could really transform society*”, integrating and improving the quality of life of the different classes and races. (Spencer *et alii*, 2011).

Despite being born in a colonial regime and having imported many of their principles and models from the modern European and American movement, these architects developed a lucid adaptation to the local climate and to the economic and cultural conditions. “*An architecture and tropical urbanism of Portuguese expression*”, that ended up configuring the urban landscapes of the last colonial period (Fonte, 2012). The complex decolonization process and the following consolidation of independence, led to a physical degradation and a social disjoint of the “*modern tropical*” phenomenon (Magalhães & Gonçalves, 2009). Today, this important landscape due to its historical, social and disciplinary interest, is debated between those who stand up for its adaptation to postcolonial aspirations and those who demand its replacement. . This communication analyzes the characteristics and concepts of the different stages of this process, when the ideals and urban landscapes were deeply altered. This aim is achieved through the study of one of the examples that, in our opinion, best condenses the virtues, problems and tensions of the change from colony to independence: The Neighborhood Unit of Prenda in Luanda, designed at the *Gabinete de Urbanização da Câmara Municipal* (GUCML) by a group of architects headed by Fernão Lopes Simões de Carvalho.

### **Simões de Carvalho and the GUCML**

Different causes –like the international demand of raw materials, the promotion of emigration and the rural exodus to urban areas under industrialization– led to a fast demographic expansion in colonial cities. Luanda grew up from less than 20,000 inhabitants around 1935 to almost 225,000 in 1965 (Fonte, 2012). The capital was not ready for such a big transformation. Huge informal settlements of self-built substandard housing were erected and known as *musseques* because of the red color of the sand where they settled. Inside them, “*not only natives lived, but also Europeans*” who could not access to the formal housing market (Tostões and Braga, 2014). Seeking to improve the living conditions of the colonist and natives living in slums, the

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

The controversial landscapes of the Modern Neighborhood  
Units in contemporary Luanda. Prenda as paradigm.  
*Roberto Goycoolea-Prado, Carlos García-Gutiérrez, Paz Núñez-Martí*

authorities created several urbanization cabinets in charge of materializing a new housing policy. The technicians hired in these organisms belonged to the previously mentioned African Generation. Influenced by the ideals of the Modern Movement, they took “*collective housing as a vehicle for social change*” (Lima, 2011).

In the capital housing policy, Simões de Carvalho was a prominent protagonist. Born in Luanda (1929), he courses his secondary and university studies in Lisbon. After finishing architecture at the School of Fine Arts (1955), he travels to Paris to study urbanism at the Sorbonne University, although his real desire was to work with Le Corbusier. He achieves this goal when he becomes a key element in André Wogenscky's atelier, the place where the Swiss master's projects were made a reality. Working with Wogenscky, between 1956 and 1959, he has the privilege of participate in the construction of three emblematic works of modern architecture: The Brazil Pavilion in the University City of Paris, the Housing Unit of Berlin and the Convent of La Tourette. Once the course of urbanism is finished, 1959, he returns to Angola to attend the position of director in the recently created GUCML. Despite certain initial complications, he obtains the job and direct the Urbanization Cabinet between 1961 and 1967, when he left Luanda to settle in Lisbon for personal reasons. Simões de Carvalho leads in the GUCML “*a team with six architects, three engineers, a surveyor, a painter, ten draughtsmen, one model maker and administrative personnel*”, working on municipal urban planning and its development (Tostões and Braga, 2014). According to his words, the Cabinet was conceived as a “*true school of urbanism*”, where Simões himself directed the work and made the guidelines to be continued by the rest of the team (Spencer *et alii*, 2011). Their proposals followed the premises of the Athens Charter and the principles of integration and “*contextualization of the socioeconomic and demographic factors in the city*”, learned by Simões de Carvalho when he took part in Robert Auzelle's lessons in the Sorbonne (Vaz and Alves, 2013). In the task carried out by the GUCML, he stands out the Luanda Master Plan (1962) at a general level and the Neighborhood Units at a specific level (Fig. 1 and 2).



# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

The controversial landscapes of the Modern Neighborhood  
Units in contemporary Luanda. Prenda as paradigm.

Roberto Goycoolea-Prado, Carlos García-Gutiérrez, Paz Núñez-Martí



Fig. 1. Luanda Master Plan (1962). Prenda area highlighted. Source: Simões de Carvalho archive (edited by the authors).

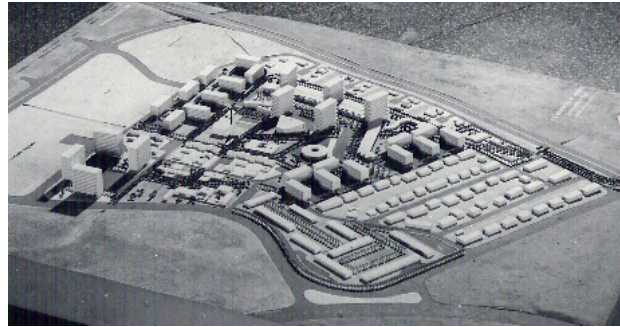


Fig. 2. Neighborhood Unit No. 1 for Prenda (1963). Source: Simões de Carvalho archive.

In the article *Luanda do futuro* (1963), Simões de Carvalho defines the Neighborhood Units as autonomous urban elements: “neighborhoods from 3 to 10,000 souls with their own equipment -primary schools, nurseries, health centers, cinemas, churches, commerce and crafts- for everyday needs, gardened open spaces, playgrounds, etc.”. Although their name and inspiration remind the housing units proposed by Le Corbusier, they are not isolated units (such as Berlin and Marseille) but the rules for an integral urban proposal. The entire city would be divided into neighborhood units, whose nearby facilities would reduce daily commutes. Among them there would be working areas: large extensions of industrial fabric near housing, as a continuity to the urban will of proximity. This planning broke with the previous Urban Plan for Luanda, based on the “separation of functions and the mobility of the population towards satellite cities” (Tostões and Braga, 2014).

The first Neighborhood Unit designed by the GUCML was the one for Prenda area. Its history summarizes the conflictive course of Luanda (and Angola) from colonial city to independent and contemporary metropolis. It had a first stage of hopeful splendor, followed by an uncertainty during the long years of war, and ending with the current doubts about the way to intervene.

## Stage 1. The modern utopia: 1963-1967

Projected between 1963-1965 by Simões de Carvalho in collaboration with José Luis Pinto da Cunha and Fernando Alfredo Pereira, the Neighborhood Unit No. 1 was conceived as a model to follow in the upcoming urban promotions that would fill the city up. Its author defines it as “a complete functional unit, with residential, work, commercial and leisure areas” (Spencer *et alii*, 2011). In an area of 30 hectares, occupied by a consolidated *musseque* by then, Prenda would go from 5,000 to 10,000 inhabitants in its different stages. A sustainable and self-sufficient neighborhood based on three great ideas: hierarchy, nucleus and miscegenation. A new urban landscape where the e Corbusier norm of the 7 V’s defined the road system, taking intense traffic to the perimeter to provide the interior a friendly space for pedestrians and social encounters (Fig. 3).

Proposing racial and social mixture as the guiding principle of the project was a bold bet in the segregated colonial society. It was expected to do so by combining three housing typologies: low density single-family houses for the wealthy population, high blocks for the middle classes and patio houses for the native population, some of them in self-construction regime. The initial proposal set out 2/3 of the native population and 1/3 of European. At the end it was the other way around. The Portuguese authorities responsible for the project considered unacceptable a white minority in the main public housing promotion in the capital of the most important Overseas Province. (Lima, 2011)

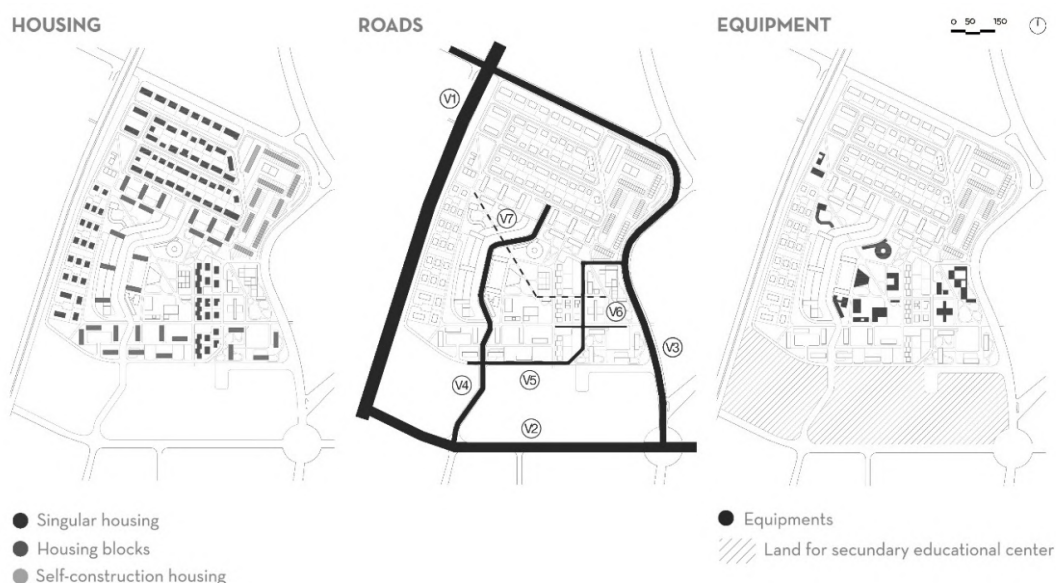


Fig.3. Planning analysis for Prenda neighborhood. Source: authors.

In its architectural aspects, Prenda display a large formal and typological catalogue of housing blocks (Fig.4), as well as a harmonious relationship between them and their implementation in the pre-existing urban fabric. Simões de Carvalho incorporated in Prenda those lessons learned in the years he worked in Paris: raised blocks over *pilotis* to create shaded public spaces on the ground floor, the extensive use of the *brise-soleil*, the protected shaded windows and the dimensions of Le Corbusier *Modulor* as a fundamental project tool. The height of the blocks varied between 6 to 12 floors with different sizes of houses depending on the number of family members. Inspired by the Narkomfin by Moisei Ginzburg (Moscow, 1928-32) and the Housing Unit by Le Corbusier (Marseille, 1946-52), dwellings were predominantly half-height (*semi-duplex*). This typology allows two different sun orientations, cross ventilation (fundamental in the area) and a clear functional hierarchy, as well as it reduces the number of stops of the elevators.

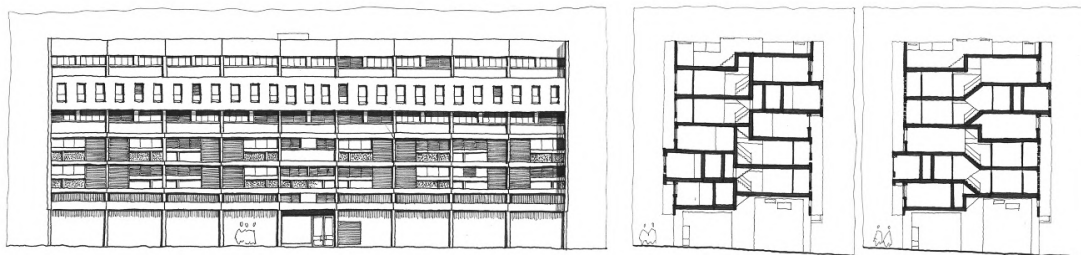


Fig.4. Type B: one of the different designs of original housing blocks. Source: N. Campillo, E. Hernández, G. Sanz.

## Stage 2. Construction and decline: 1967-2002.

When Simões de Carvalho leaves Luanda (1967) the construction of Prenda had just begun. Taking advantage of its absence and alleging economic reasons, the construction company decided to modify the design of the blocks by hiring an architecture studio in Lisbon. Despite sharing volume, materials and some elements of architecture language that give some coherence to the whole, the last constructed buildings do not belong to the original project. These new buildings removed two key aspects of adaptation to the local climate: the *semi-duplex* typology and the setbacks of volumes in facade (Fig. 5).

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

The controversial landscapes of the Modern Neighborhood  
Units in contemporary Luanda. Prenda as paradigm.

Roberto Goycoolea-Prado, Carlos García-Gutiérrez, Paz Núñez-Martí

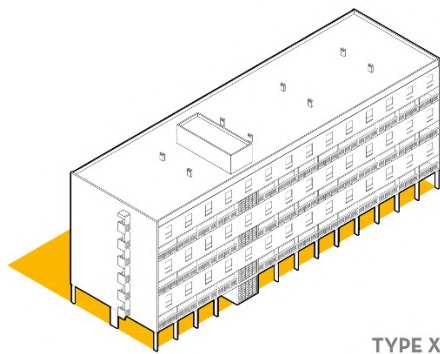


Fig.5. Axonometry of the housing block modified by the construction company.  
Source: authors.



Fig.6. The Prenda neighborhood today (2013).  
Source: C. García.

The Neighborhood Unit No. 1 construction was slowed down in the last years of the War of Independence (1962-1975) and paralyzed during the Civil War (1975-2002). Many facilities and public spaces were not built: from 28 blocks projected only 20 were finished and 3 were abandoned under construction. The houses for the indigenous population did not even get drawn (Venâncio, 2013), but several single-family houses were built, including the one Simões de Carvalho designed for his family in 1966, where he never got to inhabit.

In addition to the stop of the works, the Independence changed the inhabitants. On 06/19/1976 the new Republic of Angola approved an important law for its future, nº 43, which allowed the State to confiscate the real estate of those citizens who were absent from the country more than 45 days without authorization. The agency in charge of managing and assigning this vast nationalized patrimony on rent was the Secretary of State for Housing (Venâncio, 2013). In Prenda, as in the whole country, there was a distribution and legal occupation of the houses abandoned by the Portuguese. For the new tenants, who came from the *musseques* or the countryside and who never had the services of a modern home before, the hope of a more comfortable life was huge.

Two circumstances linked each other by the civil war soon destroyed the initial joy: (a) the State, focused on the warfare, and the tenants who had no work to pay rents and communal expenses, stopped maintaining the buildings and public services. (b) The half-built buildings were occupied, and the free lots were filled up with substandard housing, built by the Angolans fleeing from the war front. The degradation was deep, and it reaches our time. It is enough to

walk any street, square or building in Prenda to verify the characteristic urban landscape of this hard stage of the history of Angola (Fig. 6).

The appropriation of modern heritage by this local population that, after independence, occupied a city, an architecture and a way of life previously forbidden for them, has not been deeply studied. Those who have done it emphasize the way these neighbors, from “*informal processes*”, have contributed an ethnographic component to the neighborhood, achieving a substantial sense of belonging despite the adversities. (Díaz *et alii*, 2013)

### **Stage 3. Current status and perspectives: 2002-2019**

Without peace there is no future. After the peace agreements derived from civil war in 2002, Angola began a path of economic growth that has allowed the country to start a necessary renovation of infrastructures and buildings. In this process, both the government and individuals have been (and still are) in the position to decide what to do with the large and poorly maintained modern heritage. It is an interesting question because the way of dealing with this problem is defining postcolonial urban landscapes in both formal and social terms.

Because of its social dimension, urban significance and architectural interest, the dilemma about what to do with the Neighborhood Units, including Prenda, is especially instructive. On the one hand, there is an agreement whereby it is necessary to act because current situation is socially unsustainable. The differences on the way to do it are extreme: they orbit between those who consider that they should be rehabilitated and those who understand that it does not make sense to preserve them. In summary:

a) Considered the actions carried out until now, it can be declared that “*at the institutional level, modern architecture does not matter as a heritage to be conserved, neither as an economic good nor as a model to be followed*” (Goycoolea, 2011). This affirmation can be easily qualified as there are some good examples of recovery of modern heritage. However, Luanda has experienced in recent decades a process of urban renewal where the value and profitability of the land overcomes any consideration of the pre-existing. From this perspective, Prenda is a threatened heritage. Its singular landscape could be replaced by high steel and glass skyscrapers like those whose have transformed the landscape of the nearby Marginal. Buildings designed according to the patterns of corporate images demanded by large multinationals, indistinguishable from many other contemporary metropolitan landscapes (Fig. 7).



The lack of consideration over the sites, local climate and idiosyncrasies in the current dynamics of urban renewal could be considered as new forms of colonialism. Díaz, Martín and Rodríguez (2013), for example, consider that they are “*adopting solutions imposed by an urban neo-colonialism coming from Europe or, in recent years, from the BRICS countries (Brazil, Russia, India, China and South Africa)*”. A process approved by local authorities and indifferent to any search for an own urban identity.



Fig.7. New skyscrapers in the Marginal of Luanda (2013). Source: C. García.



Fig.8. National Assembly of Angola shortly before its inauguration (2013). Source: C. García.

It is hard to know if this landscape of glittering skyscrapers will be the new image for Prenda. However, in the framework of a congress that studies the processes of colonialism and postcolonialism, it's important to emphasize that there are not only globalized models. In recent years several attempts to define an architectural style which reflects Angolan identity have emerged by reviewing the country's historical architecture. It is surprising that in this search for an Angolan style, traditional architectures and the modern legacy have not been kept in mind –in many cases with the authorship of Angolan architects–, as the forms and ornaments from *Estado Novo* architecture have been. The most disturbing result of this identity search is the recent National Assembly (2015), a building that reproduces on a superlative scale the Bank of Angola, designed by Vasco Palmeiro Regaleira in 1952. It can be affirmed that the new postcolonial republican identity is based on a historicist pastiche from the fustiest salazarism (Fig. 8).

b) In an opposite position, there are people who advocate to preserve them. They defend the value of these buildings as unique cases of the African Modern Movement. Singular testimonies

of an attempt of social transformation from urbanism and architecture. They comprehend that it is technically and economically viable to rehabilitate them and recover many quality spaces for their inhabitants and the city. In Luanda, the defenders of modern heritage –although they are not very numerous yet– have the social speaker that the university supposes.

In spite of being a position supported by local academics, intellectuals and institutions such as ICOMOS and DoCoMoMo, it's a difficult stance to maintain for several reasons: (i) From a legal perspective, there is no legislation which could grant protection to modern heritage even though some buildings of the twentieth century, such as the Bank of Angola, are already protected (Goycoolea, Núñez, 2017: 39). Without this legal protection, the decision to preserve or rehabilitate Prenda is in the hands of investors and local authorities. (ii) The social ignorance about the value of the Neighborhood Units does not help its conservation; despite its social, political and architectural interest it is an unknown heritage. (iii) The stigma of modern architecture as symbol of Portuguese colonialism. Its political ideals and the architects who designed them, many of whom decided to remain in the country and continue to practice in the new republic, are not reason enough to change this inclination.

c) It's ometimes forgotten that Neighborhood Unit of Prenda is an inhabited neighborhood, an urban environment which requires improvements. The living conditions of its residents, like the large part of the almost 7 million dwellers in Luanda, demand attention. The solution provided today by the authorities is a combination of expulsion and gentrification, based on the destruction of existing neighborhoods to replace them with others of "higher quality". That means huge population movements to new housing developments located outside Luanda. Some inhabitants appreciate the change as a real possibility to improve their living conditions –like owning a toilet or running water at home, services forbidden to many people in Luanda– and a liberation of a colonial past still present. Many other inhabitants observe these transfers as forced evictions whose break their established social and labor ties.

In this process -accentuated in recent decades- the postcolonial housing policy foments social and spatial segregation at a regional level: (i) isolated single-family houses for the economic elites in closed condominiums with high standards of construction, equipment and security, like those in Luanda Sud or Talatona. (ii) Housing in low and medium height blocks for the recent middle classes located outside the urban center with Kilamba Kiaxi as a paradigm. (iii) Finally, for the evicted population from central and pericentral slums: sets of prefabricated minimal

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

The controversial landscapes of the Modern Neighborhood  
Units in contemporary Luanda. Prenda as paradigm.

*Roberto Goycoolea-Prado, Carlos García-Gutiérrez, Paz Núñez-Martí*

housing in geometrically aligned rows located tens of kilometers from the capital. By now, these areas practically have not amenities or green areas, such as the cases of Panguila or Zango. The comparison of this housing policy of “new centralities” –the official designation of these new neighborhoods– with the one which supported the Neighborhood Units strategy is, without any doubt, paradoxical. Modern colonial proposals sought, at least in design phases, their integration into the existing urban fabric and the proximity to equipment and jobs, in addition to create large shared spaces for social encounter. Although it did not work, they proposed the social integration and racial mixture among the residents, with different models of housing within the same Neighborhood Unit. In contrast, the new postcolonial developments are located miles away from the outer suburbs, and they are the spatial materialization of the existing segregation between the different social strata of the city and the country. It must be added the development of housing typologies that pay very little attention to the local climate or culture, regardless of the social stratum to which they are destined.

To warn of the spatial and social consequences that each policy implies, it's enough to compare a panoramic vision of the Neighborhood Unit of Prenda with another of Panguila, as an example. (Fig. 9 and 10). Correctly, some associations and local NGOs have joined the demands for the permanence of the population evicted, warning of the social and spatial segregation generated.



Fig.9. Prenda under construction (1960 decade).  
Source: Simões de Carvalho archive.



Fig.10. Panguila (2012). Source: Paulo Moreira.  
<http://www.estudoprevio.net/en/papers/16/paulo-moreira-.-participatory-research>

## Epilogue

In order to avoid superficial comparisons which may lead to reinforce established prejudices based on the final image of Luanda's colonial and postcolonial urban landscapes, the two

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

The controversial landscapes of the Modern Neighborhood  
Units in contemporary Luanda. Prenda as paradigm.

*Roberto Goycoolea-Prado, Carlos García-Gutiérrez, Paz Núñez-Martí*

historical periods and their respective housing policies must be put into perspective. As mentioned, the modern urbanists started from a utopic vision of the urban discipline. Although it did not reach all the economic and social classes, it sought -at least as an ideal- to be the main element that would create a real change in the circumstances of the time. They proposed an integrative response to housing problem as a matter of public policy. Postcolonial urban policies, on the other hand, focus on a neoliberal (economic) concept of the city and on a quantitative approach to urban problems. It should be noted, that it is not only a phenomenon of the transition between the colonial and postcolonial city but a change in the way of understanding the city that is reproduced in many other parts of the globe, which requires further investigation. Examples such as Brazil or Mexico -among others- show urban development's similar to those in Luanda, despite the fact that their colonial past has already been amortized. Both countries developed housing public policies in the middle of the last century based on the construction of large Neighborhood Units that materialized the democratic ideals of modernity, in the way the promoters of Prenda pretended in Luanda (Fig.11). Today, as in Angola, the housing policy is limited to complying the statistics by building minimal shelters where any social, urban or environmental consideration is a chimera (Fig.12).



Fig.11. Multifamiliar Presidente Alemán (1949) Mexico DF. Architect: Mario Pani.

Source: [https://www.researchgate.net/figure/Figura-8-Mario-Pani-Multifamiliar-Presidente-Aleman-1949\\_fig4\\_277242214](https://www.researchgate.net/figure/Figura-8-Mario-Pani-Multifamiliar-Presidente-Aleman-1949_fig4_277242214)



Fig.12. Urban expansion in the outskirts of Mexico DF.

Source: <https://www.arenapublica.com/articulo/2018/07/23/12661/detener-el-crecimiento-de-vivienda-en-la-periferia-objetivo-del-infonavit-con-amlo>

According to the Luanda urban situation, it would not be strange if the Neighborhood Unit of Prenda ends up dismantled and its neighbors relocated to one of the new neighborhoods of state



promotion. It's not a baseless assumption. Few years ago, the director of the *Instituto de Planeamento e Gestão Urbana de Luanda* (IPGUL) informed to Prenda's neighbors that they could stay in its houses until the "Vida Urbana" company finished the houses where they would be transferred. He concluded by explaining the future of the zone: "*this neighborhood, which I can call an area in ruins, will be transformed into an area with five-story buildings, with good access roads, shops, sports space and leisure*" (Jornal O PAÍS, 14/05 / 2010).

As reality shows, demolitions and forced evictions are being a short-term solution with huge economic, social and patrimonial loss costs. Although the current state of Prenda demands a profound renovation, there are less traumatic alternatives for the neighbors and the city than expulsions and replacement. The Neighborhood Unit, like much of Luanda's modern heritage, retains many of the projected qualities. They are not only alive buildings that maintain their use, it is an urban landscape with enough dignity to be appreciated. The architectural value of this modern heritage and its premises, together with the rich social fabric that inhabits it, deserves greater attention. As we understand it, a true postcolonial policy should recover the modern ideal of integration, dealing with the renewal from the empowerment of the population through processes of Social Production of Habitat.

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# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

The controversial landscapes of the Modern Neighborhood  
Units in contemporary Luanda. Prenda as paradigm.  
*Roberto Goycoolea-Prado, Carlos García-Gutiérrez, Paz Núñez-Martí*

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## “Material Surfaces” of the Modern Movement: Collective Housing facades in Rio de Janeiro and Lisbon, from 1930 to 1970

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### Abstract

The 20th century's Modern Movement architecture in the cities of Lisbon and Rio de Janeiro, specifically between the 1930's and the 1970's, results from a mutual influence, in different periods, and inherits part of its characteristics from colonial architecture. The historical connection between Portugal and Brazil is the genesis for the development of an architecture internationally recognized as the Brazilian Modern Movement. This movement, at one time, will incorporate some constructive and material elements from the colonial traditional architecture, using the concept of Modern "Regionalism". At another time, it will influence the Modern Movement produced in Portugal, consolidating itself in a new language developing new materials and re-interpreting the traditional ones.

The cities of Rio de Janeiro and Lisbon, the only two cities that were once capitals of Portugal, were selected to identify similarities and differences in the Modern Movement architecture, namely in the facades of their collective housing. Knowing that this typological and morphological structure is an important example of the Modern Movement history, this paper tries to compare, classify and emphasize the characteristics of the architectural formalization – its language - through the study of materiality, texture and colour.

This study aims to develop a better knowledge of material expression in Modern Movement facades, in the two studied cities, and its importance to the qualification and identity of the architecture. This will allow us to establish strategies for the protection and conservation of the referenced elements. This action is urgent due to the threat of continuous loss of identity and quality of these buildings, through rehabilitation actions where, for instance, the original materials are replaced or "masked" with paint.

Unfortunately, these buildings are too recent to be recognized as Heritage value for the contemporary society, hence needing valorisation actions, that should start from the academic community, as this study intends to be.

**Keywords:** Modern Movement, Colonial Luso-Brazilian Architecture, “*Escola Carioca*”, Materiality

## INTRODUCTION

The publication of the *Brazil Builds* exhibition’s catalog, held in 1943 at the MoMa in New York, by Goodwin was a recognition of an architecture that was taking its first steps in the Modern Movement under the “*corbusian*” influence. This publicity raised several Brazilian architects to the international recognition, with an architecture that was distinguished by the integration between the new assumptions of Modern Architecture and the adaptation to the tropical climate, with solutions of inspiration in the traditional architecture of Portuguese origin. The dissemination of this architecture, at a time when the self-destruction of war was the reality, surprised the world by exposing a lighter language and elements correspondent with its tradition and local adaptation, produced by an underdeveloped country and outside the European-American circle, usually the architectural presuppositions definer’s.

The present article intends to identify the main innovations implemented by the Brazilian Modern Architecture for the "material surface" of the facades, as well as the main reasons for the application of the building materials used by this movement, initially through the “*Escola Carioca*”, and the elements that later influenced the Portuguese Modern Movement.

### *Reasons for “this” new Architecture*

In 1934, Lúcio Costa writes a text entitled “*Reasons for a New Architecture*”, which will have been the theoretical basis for the Brazilian Modern Movement; movement that will obtain, later the international recognition. This text will be the point of the “stylistic” change of Lúcio Costa, almost like a manifesto in favor of the Modern Movement. In the words of Lúcio Costa himself, “*this long text is a period document that reveals the climate of professional*” holy war “*that marked the beginning of the architectural revolution.*”<sup>1</sup>

In the text, Costa talks about the moment of transition in progress (1934<sup>2</sup>), a vibration captured by the artists (who act as antennas of the changes that are to come), is questioned by the most conservative averse to change. When we overcome this phase of questioning “*the ascent of the*

<sup>1</sup> Introductory note by the Author in the transcription of this text in his autobiographical book “Record of an Experience”, republished in 1991, pp. 108 to 116

<sup>2</sup> Written in 1934, the text is only published in 1936. This text was written for a postgraduate course of the Institute of Arts of the University of the Federal District

*slope*”, the mission will have been fulfilled: *“to overcome the slope”, “taking us from an already arid plan to another, still fertile”*. The great change of this new change is, for Lúcio Costa, the way to build: what always supported the previous changes was manual labor and muscular strength; now, however, with the advent of the machine, new constructive methods have become possible and should not be overlooked. Costa argues that this new architecture should be based on two main points: *“to be integrated to the social and technological transformations of his time”*, where, through constructive methods, must respond to urban needs, be adapted to the climate, features without which, the building does not work and is not habitable.

Before his total conversion in 1934, and to become the main mentor of the Brazilian Modern Movement, Lúcio Costa was known at the beginning of his career (in the 1920s) for his Neocolonial aspect. His ability led him to carry out some projects and win some contests in this style, where he met José Marianno Filho, the main promoter of the Neocolonial, in Rio de Janeiro<sup>3</sup>.

Following a trend that occurred throughout Latin America (Natal et al., 2009: 4), Brazil sought to retake its history and tradition by rescuing the architecture produced in the colonial period of predominantly Portuguese influence. A “trajectory interrupted” with the arrival of the French Missions and the foundation of the School of Fine Arts of Rio de Janeiro in 1816, which instituted the teaching and encouragement of constructions in the neoclassical style (Santos, 2006: 37).

In São Paulo, this tendency to combat or react to foreign styles began with Ricardo Severo, a Portuguese engineer who was definitively eradicated in Brazil in 1908. With a strong performance in defense of a “national architecture”, Severo conference, in 1914, in defense of the Neocolonial, a year that can be considered the beginning of style in Brazil. In *“The Traditional Art of Brazil”*, Severo discusses *“the Portuguese origins of Brazilian culture”*, where he defended *“the study of colonial art as a guide to the perfect crystallization of nationality”*<sup>4</sup> (Segawa, 1998: 35).

With a reduced production in the area of civil construction in the country, as a result of the First World War (1914-1918), these conferences did not obtain an effective consolidation in the

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<sup>3</sup> Rio de Janeiro was then the capital of the country, and remained until the transfer to Brasilia in the 1970s

<sup>4</sup> Author’s griffin

constructions, but were, essentially, fundamental for the expansion of the knowledge about the architecture produced in the Brazilian territory.

Marianno Filho, was more successful in spreading the Neocolonial style, which he baptized. Encouraging architects and artists, he promoted contests, financed<sup>5</sup> trips of young architects to the cities of Minas Gerais to record the details of colonial architecture and managed, together with the government, that several calls for tenders for public buildings were mandatory in this style. The passion of Son before an intellectual elite of the Federal Capital eager for novelties, where eclecticism disappears, finds space to flourish a scholarly style of national character (Bruand, 1981: 54).

The Neocolonial style rescued the traditional constructive forms of the colonial of Portuguese origin and transposed them to that contemporaneity, in an eagerness to produce an architecture that was genuinely national. The transposition of elements by the architects, without a full understanding of Luso-Brazilian colonial architecture and an indiscriminate use of colonial details, resulted, however, in an essentially decorative style. *"Archaeological trends predominated sharply"* (Bruand, 1981: 58).

Despite being a little creative style and based on the transposition of elements, in a matrix and copy relationship, the Neocolonial was fundamental to awaken an interest in National art. Since the French Missions, the styles employed were those imported, without any adaptation to the local circumstances. Through the Neocolonial, a discussion begins on the excesses of foreignisms and on the little relation between the local culture and the importation of styles.

It is Lúcio Costa who will better understand what the Luso-Brazilian Colonial has to offer, as a model of inspiration and not as an array of decorative elements.

His professional career began as a Neocolonial architect, part of a deep taste for colonial architecture and leads him to study these popular architectures in more depth. This interest for the colonial will endure even after his conversion to the Modern Movement, through the post of SPHAN director that Costa takes on in 1937, and which he will maintain until his retirement in 1972.

The conversion of Costa to the Modern Movement gradually began in the late 1920s. When Lúcio Costa assumed the direction of the School of Fine Arts in 1930, he was already

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<sup>5</sup> As President of the Brazilian Society of Fine Arts, in 1924 (Natal, 2009: 4)



approaching Modernism, having developed the first project of contemporary sense, the House E.G. Pontes (Costa, 1995: 60).

As director of the ENBA, they propose the reformulation of the teaching then carried out and seek to correct the differences between what is taught and what is constructed. Costa is opposed to the existing detachment between the constructive method and the adopted styles and defends the honesty in the use of materials. It seeks to approximate the constructive and structural needs of the aesthetics of architecture, without the need to hide the structure with *"scenography"*. About the reformulation that they propose in the ENBA states:

*"I think it is indispensable that our architects leave the school knowing perfectly our architecture of the colonial time - not for the purpose of the ridiculous transposition of their motives, not to make false rosewood furniture - the real ones are beautiful - but to learn the good lessons she gives us of simplicity, perfect adaptation to the environment and function, and consequent beauty."*

Later in this same interview, granted at the end of 1930, Costa states that it is necessary to know this *"movement"* that identifies as *"primitive phase of a great age"*, to understand its *"true meaning"* *"Let it come from the inside out and not from the outside in, for false modernism is a thousand times worse than all academism's."* (Costa, 1995: 68).

Between 1931, when he left the post of ENBA, and in 1936, when he started the project for the Ministry of Education and Health, were years of penury. Costa and Warchavchik<sup>6</sup> will constitute a *"construction firm"* for a short period, because *"work was scarce"* and those that appeared were in *"such stylized modernism that no longer appeared to conform to the true Corbusean principles"* to which they clung.

The writing of *"Reasons"* is his declaration of the adoption of modernism, not only for its stylistic character, but for believing that architecture must accompany the technological innovations of its time: it must be linked to the standardization logic of the industry, reproducible in scale and with less cost, in what defined as social role of the architecture.

The understanding of the main constructive characteristics of styles, whether modern or colonial, results in a fusion of the constructive logic of the two styles. The technical novelty of the modern structure, the *"independent bone"* leaves the facade free and defines new formal

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<sup>6</sup> First Architect to build architecture in the modern style, in Brazil. It was through a publication that Lúcio Costa learned of this first residence (the modernist house), built in São Paulo. When he became director of the ENBA, Lúcio Costa invited Warchavchik to teach at the school.

possibilities that must be explored. On the other hand, the Luso-Brazilian colonial architecture was suitably adapted to the Brazilian climate and brought technical answers that should not be ignored. This, then, is the reason in Lúcio Costa for the predominance of the colonial and the negation of the Neocolonial: rather than reproducing a copy, it was necessary to reproduce the logic.

*"Lúcio Costa had understood that it was not necessary to stick to the literal interpretation, but also to try to find the spirit that had presided over the birth of this colonial architecture: now its main value was to have brought, mainly for the construction industry, a satisfactory answer to the problems arising from the needs of the time" (Bruand, 1981: 58).*

### *Influence from the Colony to the Capital*

The exhibition *"Brazil Builds, Architecture New and Old: 1652 - 1942"*, held in MoMA in New York in 1943, and the resulting catalog, attracted architect's attention at a time when the world was focusing its attention on destruction.

The publication of the Modern Architecture of a country without "architectural tradition" on the international scene, renews the Brazilian self-esteem and elevates the responsibility on the young group of architects who looked for a new architecture, with a truly national identity and reinforces its modernist discourse against those who criticized the Movement. It would have been a necessary external recognition of the architecture that was being produced, as validation of the new language.

This language that is projected internationally as Brazilian Style is internally identified as *"Escola Carioca"*. This "school" is born in the city of Rio de Janeiro, hence the *"Carioca"* gentry, but it is not limited to the location in the city, because the inspiration remains in the architect who follows it and not in the place where it is built. Declared "Corbusian", this architecture incorporates the *"points of modern architecture"* into the local climate, conditions and traditions. This results in an architecture that incorporates a lighter language and integrates traditional and vernacular materials with new materials and new construction techniques. A movement that incorporates the technical-formal innovations of the international *"avant-garde"*, mixed with details of its Portuguese-Brazilian colonial past.

Lúcio Costa, which created the "theoretical" bases of this current activity through the aforementioned *"Reasons for a New Architecture"*, written in 1934 and published in 1936. It is

the architecture produced by this "school" that is published internationally in the 1940s and will project an image that will guide and inspire other countries. Brazil Builds is rather a sample of what is being produced, it is *"a presentiment, not a retrospective"* (Milheiro, 2005: 269).

And it is with enthusiasm that the Portuguese architects are aware of this *"revolution that the Brazilian architecture begins to produce"*. The historical and obvious relationship between the two countries will facilitate the interest and dissemination of this new architecture, through the circulation of foreign magazines and exhibitions held in Portugal. The widespread dissemination of this architecture, which *"values the coexistence between the old and the modern"* and is *"accepted in its most bold expressions by the official entities themselves"* has two arguments strengthened to provide acceptance by the current political regime in Portugal, which exercised control also about the architecture that was produced (Ramos, TB, Matos, MC, 2016: 10).

Tostões, Milheiro and Ramos argue that the influence of Brazilian architecture is decisive in the development of Portuguese Modernism, either through the influence of the traditional language *"not being necessary to refound a tradition"* (Milheiro, 2005:), or through the aesthetics achieved to adapt the architecture to the climate.

The identification of this new language, which is expressed by volumetry, by the inclusion of the idea of lightness to the built, the game between full and empty, transparencies, sun protection and shading elements, explores *"matter versus dematerialization"* as transmitters of an image and defining a language.

New opportunities for the closing of the facades are generated by the *"independent skeleton"* and free facades. The Modern Movement, then Brazilian, refutes the idea of ornament as an element of overlapping the built. The beauty of architecture must be expressed by the quality of the construction and be the result of the constructive technique itself.

### *The “Escola Carioca” – The façade composition and the materials*

The *"independent bone"* will define the basis of the Modern Movement. The basis of the *“Escola Carioca”* is based on the understanding of the new structural logic that will allow a revision of traditional plastic values. The wall ceases to be structure and lightens; is no longer support and becomes lighter: once *"free"*, the facade can receive new materials of consolidation.

As a consequence, there is a new understanding of the composition of the façade, which may contain three compositional elements: *i*) the effort, now represented by the figure of the pillar; *ii*) the wall ceasing to be support dematerializes and *iii*) the gaps that are no longer limited by the structural wall.

The pillar as a compositional element could present itself more punctually and be explored in its form, generate rhythm in the facade and release the building from the ground through the concept of pilotis. The structure has become an element of architecture and should not be hidden behind ornaments or thinned in the facade closing cloth. It should appear apparent and be assumed to generate interesting contrasts between full, empty, and now material surfaces.

The facades are no longer conditioned by the use of construction materials with the capacity to withstand the structural load and, above all, the sealing function. Without the structural concern, being only responsible for the closure of the interior space, it becomes an optional element of the volume. This understanding leads to the perception that the wall, consolidated with new materials, is itself defining the aesthetics and integral of a plastic ensemble and not a mere support of the "ornament". It becomes a surface whose materiality matters to the plastic assembly.

The ornament itself undergoes a change in its concept, already combated, years before by LOOS (1905), when being produced industrially is no longer an artistic record of his time. In "Reasons for the New Architecture" Lúcio Costa (1934) states that the absence of ornamentation *"is a logical consequence of the new constructive technique"*, where industrialized ornamentation, produced in series in this "Machine Age" is not acceptable, : *"The nineteenth century, vulgarizing the molds and forms, industrialized the ornate, turning it into a serial article, commercial, thus taking away the main reason for being - artistic intention - and stripping it of greater interest as a document human."*

Thus, the fence being a necessity of architecture, when stripping itself of the structural function, could accommodate other functions and other materials, since now it no longer needs to be consolidated with "structural materials". Beauty becomes an attribute of matter whose aesthetics comes from the very quality of constructive technical finishing. It was also possible to integrate new relations with the plastic arts, either through the re-inclusion of painting or the re-inclusion of the statuary, which should go beyond ornamentation, in a new pictorial expression through the inclusion of new textures and volumetrics. The ornament should not be

deliberated as an added element, but the result of the aesthetic itself, the formal and constructive options.

The openings are no longer limited to the factual or rhythmic elements of the façade: the total glass facades can dematerialize the openings or the openings may be elongated openings, such as the horizontal windows defended by Le Corbusier. In Brazil, plastic innovation arises precisely from the use of glass in facades. A tropical country, glass generated a thermal discomfort, a problem that the architects of the “*Escola Carioca*” overcome with mastery and that highlight this architecture of the others.

*"Although the first modern impulse arrived by import, soon Brazil found its own way. His great contribution to the new architecture lies in the innovations designed to avoid heat and light reflections on glass surfaces by means of external, special lights."* (Goodwin, 1943: 84).



Figure 1: Guinle Park, Lúcio Costa, 1953. Brises and different formats of *Cobogos* used in the closing of the volume. Fig.2: Brothers MMM Roberto, Housing Building, 1945. These architects made different uses of the sunshades as aesthetic for the building. Fig 3.: *Pedregulho* Housing Set, Affonso Eduardo Reidy, 1943. Social housing building, of the few that makes use of a curvilinear plant to suit the land and uses the raw ceramic bricks to close the building and ensure natural ventilation.

The thermal discomfort of the glass has been softened by the use of shading elements such as blades, shutters, balconies and sunshades; the latter will give many plastic possibilities to architecture. The sunshades were extensively explored in the “*Escola Carioca*” and specifically by some architects, such as the MMM Roberto brothers, who make extensive use of these elements as an aesthetic and plastic party of the architecture they produced.

The formal freedom generated by the curve - a consequence of the independent structure - although very characteristic of the Brazilian Modern, is not so explored in collective housing buildings, buildings that usually present plants with more rigid geometries, with polygonal and rectangular volumetries. Few architects exploited this plastic freedom in this program, but the



architect Affonso Reidy tried to integrate it into the collective building in two housing estates of Rio de Janeiro, being "*Pedregulho*" and "*Minhocão*", social housing projects, both of the decade of 50. Perhaps the most singular case is the COPAN Building, in São Paulo, inaugurated in 1966 and designed in the 1950s, with the original feature of Oscar Niemeyer<sup>7</sup>.

Once the experimentation of the new constructive logic has been overcome and the new plastic language has been understood - in which the apparent ornamentless structure is also an integral part of aesthetics - space is created for material experimentation.

The new architecture understands and assumes the new structure, adjusts to the climate and incorporates the materials they have, many of them inspired by Portuguese colonial architecture. Addressing the conditions of the tropical climate (hot, rainy and abundant insolation) guided such material choices, which added to the vernacular knowledge, innovated with the creation of new solutions from known materials. The geological constitution and abundance of certain natural elements throughout the Brazilian territory will also condition the material choices (Bruand, 1981).

As an example, we have the ceramics produced from soils, which are distributed with abundance in Brazil. These constructive elements were produced from relatively easy processes, initially artisan processes, later industrial, have their reason for adoption by the Modern Movement. In addition to traditional use such as tiles and ceramic blocks, this movement has innovated with the use of "mural" tiles, as support for artists' intervention, and "cobogós", called "grills" in Portugal.

Armed concrete, the new constructive material, finds in Brazil an ideal scenario for its rapid propagation through the territory, whose factors we can mention (Bruand, 1981):

i) Of the natural materials available in the territory, only land was more exploited by traditional construction. There is no great offer of stone in the territory, and wood, although abundant and varied, was not properly exploited, since the Portuguese inheritance was not great possessor of this knowledge.

ii) The ease of execution of the concrete, molded at the site of the work, did not require specialized labor or an accurate finish.

iii) Sand and gravel abound throughout the territory.

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<sup>7</sup> Niemeyer conceived the original plan, but did not follow up the executive project, having given in to other architects, for not agreeing with the changes that appeared in the program.

Modern Brazilian architects complained about the industrial constructive elements, but while industry did not "understand" the need, the Modern Movement was born through known and existing constructive materials, but with new uses and new versions.

*"First and foremost, everyone - architects, engineers, builders and the public - must understand the advantages, possibilities and beauty that the new technique allows, so that industry can take an interest in it and provide us - economically - with the materials lightweight and noise-proof features that reality needs. We cannot expect it to take all the risks of the initiative, striving to produce what the only interested parties have not yet claimed."* (Costa, 1934: 113)

## CONCLUSION

The adaptation to the climate was fundamental for the definition of a new image for Brazilian architecture in the Modern Movement. Eager to produce under the new language, the international *Le Corbusian* assumptions were imported and exploited as guides of Modern architecture by the group of architects of the “*Escola Carioca*” and who produced the architecture of the Brazilian Style. This architecture combined, from the 40's, new and traditional constructive materials to create an aesthetics that became internationally known.

The need to overcome the climate (abundant rainfall - which causes wear and tear on the facades - tropical heat with intense solar incidence - that causes wear on the paintings) led to preference for compositional elements of inspiration in Portuguese colonial architecture, consolidated elements and domination of already known.

New construction materials (eg.: reinforced concrete) had the ideal opportunity to be explored in Brazil, in a country whose construction industry was confronted with the growth of urban areas. The lack of natural building materials helped popularize reinforced concrete, easy to work material with little or no demand for skilled labor or accurate finishing.

The combination of new building materials (which allow the creation of buildings with free facades without load-bearing walls) combined with innovation in the use and application of traditional materials, has defined this new aesthetic.

The innovation introduced by the "independent skeleton" that Lúcio Costa defends as the structural basis of the new architecture brings with it an understanding that the *façade* no longer needs to contain a closing "weight". Elements that seal the interior space can be light and

transparent, allowing the building to breathe. With this new approach to the boundary wall, the materials that make up the facade are no longer a "support element plus a covering", and elements that "enclose" the interior are assumed to be materials and authentic materials ("material surfaces") the image of the building. The decoration is therefore discarded. It is matter that attributes beauty to the building.

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# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

“Material Surfaces” of the Modern Movement: Collective  
Housing facades in Rio de Janeiro and Lisbon, from 1930 to 1970

Mariana Sampaio, João Pernão

Tostões, Ana ( ), *Construção Moderna: as grandes mudanças do Século XX*  
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ENBA – Escola Nacional de Belas Artes

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## **Architecture and race:**

### **Portuguese traditional house in the tropics**

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#### **Abstract**

The paper, based in a still ongoing archive research, will address how colonial understanding about different types of races and the dangerous relations supposedly existing between them forged the ways that architecture styles emerged in Portuguese colonies. The constant apprehension about the traditional settler household reveals a larger concern about purity of races and the anxiety that metropolitans officers had about settlers losing their civilized habits and whiteness. For colonial administrator and architects, stylistic elements of Portuguese traditional house – and, latter, the aesthetics of modern architecture – should functioned like an anchor preserving European civilization in African hinterlands. In this sense, the common idea that ultramarine territories were places of pernicious habits that could undermined the Portuguese culture led to the management of private life, designating a porous but segregated space for each race.

**Keywords:** Maximum of four keywords, separated by semicolons

In 1953, the Portuguese colonial government initiated a bidding process to construct new houses for metropolitan rural settlers in Mozambique and Angola. Under the responsibility of General Direction for the Development of Ultramarine Provinces (Direção Geral de Fomento do Ultramar), the public tender aimed to reproduce in Africa some of the features of traditional Portuguese housing practices and architectures. The committee selected to evaluate the proposals should account for: “(… ) *the strongly rustic and traditional composition that perfectly suits the character and personality of the [Portuguese] settler*” (Concurso, 1953:1).



At the end, the committee finalized the bidding process without a winner project. Although the houses “*well translated the nature of its people*” and “*materialized the ways that our people work, eat, dress and sleep*”, the members of the assessment commission considered that financial restrictions led to houses with rooms considered too small - “*even smaller to rooms placed in lesser hostile climates or even those destined to natives residences*” (Concurso, 1953:2).

For jury members, despite the efforts of the proposals, due to the budget restrictions the “*white families’ houses*” were designed in the “*detriment of their comfort and hygiene*”.

This little account is also described by Ana Vaz Milheiro in her book “*Nos trópicos sem Le Corbusier*” (In the tropics without Le Corbusier). According to her, the attempts of colonial administration in established a strong and affective connection between Portugal and its ultramarines territories by promoting an official architecture style was challenged by the professionalization, sophistication and self-determination with which Portuguese colonial architects pursued their own expression, building in the tropics a unique set of modern buildings.

For Milheiro (2012), the transference and adaptation of Portuguese traditional house in Africa was one of the earlier stages of the architect’s search for their own expression, which would be eventually found in a specific reinterpretation of modernist Tropical Architecture.

In this sense, for Milheiro, the committee final decision highlights the controversies that emerged when the Office for Colonial Urbanization promoted its first attempts to construct a traditional Portuguese house in remotes lands. Although the proposals displayed Portuguese traditional elements, such as decorative tiles, window grills or Portuguese fabrics for the curtains, the absence of large terraces or eaves, that could offer shelter in hot days and an open space for circulation, was determinant for the result. For Milheiro, the following bidding procedures would find a better balance between budgetary restraints and stylistics choices, enhancing the dispute between colonial administration and architects for the stylistics choices that would define the Portuguese architecture legacy to colonial territories.

However, I would like to suggest that the stylistics controversy hides one of the main reasons for why the bidding process failed. Hidden under the disagreement about the genuineness of traditional Portuguese elements presented by the proposals, the committee conclusions reveal that, for administration officers, the colonial enterprise was always interpreted as a dangerous project that putted at risk the very nature of European culture. The constant apprehension about

the traditional settler household reveals a larger concern about purity of races and the anxiety that metropolitan officers had about settlers losing their civilized habits and whiteness. Administration officers conceived colonial lands as promiscuous and dangerous environment drive poor white settlers to a degenerate lifestyle.

In excerpts not mentioned by Milheiro, the committee observes the importance of Portuguese traditional house for preserving "the living conditions of the settler-worker who among blacks wants to remain white" (Concurso, 1953: 7). The general concern with the privacy of intimate areas, hygiene and comfort of the spaces of the house and the attention paid to wideness of the circulation areas discloses the diligence with which colonial administration tried to established healthy environments for the daily encounter of individuals of different races. By controlling the intimate circulation and living spaces, the colonial officers sought to mitigate the pernicious influence of climate and black culture in the relations built between white and blacks, in the daily interactions of white settler's families and, latter, in the organization of black families in native neighborhoods. The stylistics elements of Portuguese architecture would functioned like an anchor to preserve European civilization in African hinterlands. In this sense, the common idea that ultramarines territories were places of pernicious habits that could undermined the Portuguese culture led to the necessity of promoting wide private spaces clearly designated for each race. In 1953, year of the bidding process, this idea was not particularly new and the problem of promiscuity in multiracial coexistence spaces have already orientated different projects in colonial countries.

This was especially true to housing projects destined to rural settlers. During the XIX century, accounts of Portuguese farmers that lived among black populations and adhered to indigenous' traditional and cultural habits arrived in the metropolis. These stories brought astonishment and aversion to colonial authorities, who was constant suspicious about the real possibilities of cultural and civilizational regression of their compatriots.

To avoid this "*kaffrealization*" process – the movement of becoming black native (*cafre*) –, metropolitan administrators decided that houses and public buildings should carry meanings and elements that would function as a civilizational guide for rural settlers and indigenous populations. Besides, the internal disposition of the houses should help to avoid undesirable social relations. Actually, even the increasing urbanization process in the beginning of the XX century did not stop metropolitan technicians to try to solve the issues of civilizational regression and promiscuity supposedly inherent to the colonization process. In fact, the

problem of race would still guide architects stylistic choices during the heights of the autonomous and authorial phase of Portuguese modernism in the tropics, the so-called *Arquitetura Tropical* (Tropical Architecture), and the solutions it proposed to the collective housing in Mozambique.

In 1938, the Portuguese administration decided to put an end to what they considered the worst case of promiscuity and lack of hygiene in housing units for colonial workers. The project aimed the construction of housing units to residents of Vila Gorjão, collective house unit for railway employees built in 1903. Vila Gorjão was built for supply the need for "*economic housing near the station to Railways Company employees, whose poor salaries compel them to look for dwelling at the ends of the city*" (AHM, 1904). However, already in 1908, the colonial officers, astonished by the overpopulation of the units, realized that its construction was a "bad idea". In the official report for the new houses in 1938, the administrators recognized that the number of families living in "*promiscuity and bad hygiene conditions*" was unacceptable. To try to solve this questions the colonial technicians suggested the construction a neighborhood of single-families residences with rooms as wide as possible "*to avoid the risk of promiscuity of Vila Gorjão*".

Until the increasing of the urbanization process of Lourenço Marques and the consequent rising of land prices, the idea of collective housing units was seeing as inadvisable. This officially changes in the Urbanization Plan of Lourenço Marques in 1955, when João Aguiar, director of Office for Colonial Urbanization, published general standards to collective housing projects for the city. The plan decided the minimal measures for apartments, the dimensions required for the buildings and its localization in relation to the mains streets. However, the normalization procedures by the colonial office created another controversy in Mozambique. For the constructors, the parameters of the new builds did not leave enough living area, obliging the edification of apartments without room for the black household servants. In this sense, the new buildings created a designated space, located in the top floor, to accommodate the white families' black employees. However, how once putted by a colonial administrator in the urbanization assessment report for the colonies, "*if the distance generates ignorance, indifference and displeasure; forced living reveals more than is convenient*".

In this sense, the white population started to complain about the promiscuity of black people living without Portuguese supervision in the top floors of collective units. This bad example for young white population could put the authority of white man rule at question in the colonies.

Trying to overcome these issues, the parameters for collective housing units were adjusted. However, the increasing land prices and the scarcity of usable areas led to the maintaining of especial floors for indigenous population in some modernist buildings.

In the Portuguese colonies, although the stylistic discussion about modern elements and techniques constituted a big part of the urbanization process and helped to create a local architecture style, the development of modern building units and the internal disposition of its households also obeyed the constant concern about races and the management of intimate relations. In 1938, the project for Vila Gorjão inhabitants was turned down for colonial authorities. Despite the distress caused by the straight lines of housing units and the absence of Portuguese decorative elements - leading to houses that resembled a “*factory or deposit*” or even a “*Arab house*” -, the main reason for the rejection of the proposal was the internal disposition of the rooms in the house. For the technicians of the General Direction for the Development of Ultramarine Provinces, the white families would be obliged to live in houses without the proper privacy, leading to promiscuous intimate relations typical of black households.

The perception that stylistic debates were marginal to the building process in the colonies seems to be confirmed by the Director of Office for Colonial Urbanization. In 1953, regarding the discussion about Portuguese traditional houses expressed in the bidding procedures for settlers units in Mozambique and Angola, E. Sanches da Gama states that “*since the decree 38:300 of July 15, 1951 [Salazar enactment that transformed colonies in ultramarine Portuguese territories], that I tried to understand what should define the ‘Portuguese colonial style’, and I confess that I don’t quite understand yet*” (Concurso, 1953b:1).

In my presentation, based in a still ongoing archive research, I pretend to show how understanding about different types of races and the dangerous relations supposedly existing between them forged the ways that architecture styles emerged in Portuguese colonies.

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## **Building Jerusalem: British, Jewish and Arab Architects in a Neo-colonial City**

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### **Abstract**

This contribution considers the construction activity of Britons, Jews, and Arabs in Jerusalem during the British Mandate. It explores the ways in which each group used an understanding of historical architecture to create structures that tectonically justified and legitimized their presences in the Holy Land. Working within the neo-colonialist restraints imposed by the Mandatory government, innovative ways to use the required local material were developed to differentiate the structures of the various groups.

**Keywords:** British Mandate, Jerusalem, Architecture, City planning.

### **Introduction**

On a cold and rainy December morning in 1917, just outside of the city of Jerusalem, two British Tommies scouting for breakfast eggs spotted a ragged band in the distance. Carrying a white sheet mounted on a pole, it was Hussein al-Husayni, the Mayor of Jerusalem, and his senior staff seeking to surrender the city to the rapidly advancing British forces. (Illustration 1) The soldiers, uncertain as to what to do, accepted the surrender and alerted their immediate superior. For the next several hours, as the news moved up the chain of command, the city was repeatedly surrendered to officers of ever-higher rank, as befitted a city of Jerusalem's historical significance. With these surrenders, four hundred years of Muslim domination of Jerusalem --250 of it under the Ottoman Turks-- came to a sudden end. Though military campaigning would continue in Palestine for several more months, on December 11, 1917, two days after the city's surrender General --later Lord-- Allenby, accompanied by his



senior staff, entered the city on foot, through the Jaffa Gate. (Illustration 2) He immediately began assembling a new municipal government. This transition marked the beginning of a new era in the history of that ancient city, an era which would last almost 40 years and which has left its mark on the city in numerous ways. Jerusalem's architecture, Jerusalem's construction materials and techniques, indeed, Jerusalem's very urban form trace their roots back to the British rule of the city.

The city the British found was in shambles. Its dire state was not just the result of the four years of war and its accompanying privations, they had only intensified and amplified the long-standing impoverished urban condition and continued neglectful management of the Ottoman Turks. Public health and sanitation conditions were precarious and the local population had been weakened by four years of war rations, leaving them susceptible to outbreaks of illness. For water, the city was still reliant on a medieval system of household and public rainwater cisterns whose cleanliness was, at best, highly questionable, and whose utility was greatly limited. The cisterns refilled naturally during the winter rainy season, but at the end of the summer --earlier in particularly hot years-- they would either dry out or reach the level of the bottom-lying muck which rendered their contents impotable. Potable water would then be trucked in by cart and sold in the streets. The greatly limited water supply further compounded the problem of urban sanitation, both street cleaning and sewage. (Ashbee, 1921:1)

### *Modeling Jerusalem*

The city which the British found was at once foreign and familiar. Jerusalem and its surroundings were known throughout the world in a variety of ways. In Great Britain, as in much of the Christian world, there was a biblical familiarity, particularly of the sites of Christian significance: the Garden of the Passion, the Cenaeculum, or Christ's tomb. The familiarity though was more literary than physical; more imagined than experienced. Britons, and Christians, knew of the sites, but they did not know the sites themselves; the image the site evoked was not necessarily in any way connected to its actual appearance, only to its symbolic appearance. In the British and world population's imaginations there existed a Jerusalem of the mind, a kind of spiritual relief map which featured familiar biblical sites standing out starkly in a landscape otherwise uncluttered by reality; distance between the structures non-existent and the forms of the structures themselves undetermined.

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Samuel D. Albert

This constrained vision of the Holy Land was reinforced in the 1800s. There is a long tradition of pictorial representations of the Holy Land, especially of sites of religious importance, but the quantity and quality of these works were, for centuries, limited. Emerging technologies made portrayal of Holy Land sites cheaper, more convenient, and more accessible for mass popular consumption. Photography, and the related developments of the postcard and the magic lantern slide meant that actual visual images, not biblical or literary ideals, nor artistic interpretations, but actual representations of the sites in question, were now readily available and circulating

In a postcard or lantern slide, framing, cropping and other techniques could reduce --or at least obscure-- some of the visual irrelevance, but the recorded visual actuality was still accurate. The physical city, however artfully presented, would still have the religiously extraneous trappings of reality: the non-Christian buildings, the garbage, the generally poor state of repair, would all be clearly visible and detract from the spiritual experience. This mental Jerusalem had a religious and physical clarity --a visual simplification and rectification-- absent from the real and historic city. In the place of a clear and logical Christian city, with the well-known and meaningful sites clearly and lucidly laid out, the English observer of the genuine Jerusalem faced a tumultuous, multi-religious, Middle-Eastern city. The familiar artifacts and structures of the Christian city were present, but they were overlaid by an Ottoman city whose urban values and urban form differed from those of a western city.

### *British Town Planning in Jerusalem*

The new military governor invited the Alexandria City Engineer, William McLean, to design a plan for the newly-conquered city. McLean's Jerusalem plan, though never fully implemented and quickly supplanted by more practical plans, was nonetheless a critical document for the development of the city under the British. It made tangible the British vision of the imagined Holy City and inscribed it onto the actual, physical Jerusalem. The Old City, contained within its historic walls, was to be isolated, surrounded by a green-belt and preserved as a historic monument, protected from the baneful influences of modernity. The area outside the wall, the New City, which at the time consisted of a handful of isolated settlements and some connecting roads, was to be transformed. McLean planned a grandiose European-style capital, featuring grand boulevards, distinct residential and administrative districts, and a war monument centered on a rond-point. He imagined a Jerusalem whose physical form would

mirror its significant spiritual importance. (Albert, 2016: 441) (Illustration 3)

Though treated in many ways by the British as a colony, Palestine was not; it was Mandate awarded Great Britain by the League of Nations and the British expected it to be self-financing. The imperial monies necessary to realize the plan would not be forthcoming, so little of the plan was physically realized. Instead, existing structures in Jerusalem were commandeered and converted to governmental functions. The High Commissioner and his bureaucracy, for instance, were housed in the Augusta Viktoria Hospital, a building erected a decade before the War by the German Empire to commemorate the Emperor Wilhelm's visit to the Holy Land which had recently been seized as enemy property. The Mandatory government operated out of a building whose interior decoration literally apotheosized the recently-defeated German Kaiser. (Meyer-Meril 2006: 78-79) (Illustration 4).

To overcome the lack of imperial funding and to encourage foreign engagement in the Holy City, Ronald Storrs, military, then civilian, governor of Palestine founded the Pro-Jerusalem Society. The focus of the Storrs' concern was primarily aesthetic, centering on the face of Jerusalem, with its restoration to his, Western, vision of the city and the preservation and maintenance of that vision. This was clear from the start of his tenure: one of the first orders he promulgated was a statute limiting to Jerusalem stone alone the allowable material for construction within 2500 meters of the Damascus Gate to preserve the character of the city. (Storrs 1943: 326-327).

The object of the Society's work was primarily but not only, the Old City. Much of the achievement of the first years was simple maintenance and cleaning, particularly in the area around the Tower of David which had been used by the Ottoman Turks as a barracks and prison. Under the aegis of the Pro-Jerusalem Society, after being cleaned, it was converted into an archeological museum, while the surrounding fosse, filled with centuries garbage and debris, was cleaned out, planted, and converted into a park. Another improvement the Pro-Jerusalem Society made to Jerusalem was the creation of the Rampart Walk, which necessitated not only repairing broken or decrepit sections of the city Wall, but removing encroachments which had been allowed to blossom under the Ottoman Turks and reclaiming the space for the public. (Ashbee, 1921: 2)

In a city with rancorous relations among its British, Jewish, and Arab populations, even the most innocent-appearing activities of the Pro-Jerusalem Society were fraught with controversy. A committee was tasked by the Society with street-naming. Previously, most

streets of the Old City simply had numbers or no name at all. Street naming, while a seemingly innocuous activity is one of the fundamental ways government asserts control over the population. The naming of streets and the numbering of structures makes them legible to government, allowing for greater control.

The Society chose names, attempting to respect the cultural differences –or at least, not incur the cultural wrath– of the inhabitants of Jerusalem.

Not just the naming, but the actual fabrication of the signs themselves was problematic as well. Storrs, on the advice of his friend, Sir Mark Sykes, invited the Ohanessian family, Armenian potters from Kutayha in Turkey who had previously provided the tiles for Mark Sykes' "Turkish Room" at his country estate, Sledmere, to settle in Jerusalem and manufacture tiles for the restoration of the Dome of the Rock, another Pro-Jerusalem Society endeavor. When the Armenian potters received the commission for the Jerusalem street signs, the potters of the Bezalel School, a Zionist Art and Crafts Academy, which had produced much of the decorative architectural ceramic for Tel Aviv, objected. Solomonicly, the commission for the signs was split between the two groups. (Carmiel 1996: 71)

The impracticality of McLean's city plan was clear and the need for a new, implementable plan obvious. Storrs invited Patrick Geddes, who designed an unrealized plan for the Hebrew University campus on Mount Scopus and later produced the city plan for Tel Aviv, to devise a new, more feasible city plan for Jerusalem. One of the key architectural recommendations Geddes made was the removal of the Turkish clock tower from the Jaffa Gate, where it had been erected in 1907 to celebrate the 25<sup>th</sup> year of the rule of Sultan Abdul Hamid II. One of seven such clock towers in the region, the Jaffa Gate clock tower was characterized by Geddes as "one of the ugliest structures ever built." The tower was dismantled. The clock mechanism was salvaged and erected in a simpler tower that was part of a small market structure in Allenby Square. (Illustration 5) A few years later, in 1934, as part of a traffic reorganization, it was demolished. (Levanony 2003: 614)

Seemingly a simple aesthetic decision, the removal of the clock tower, is representative of a more profound series of political decisions underlying the architectural, urbanistic, and aesthetic work in Jerusalem of the Pro-Jerusalem Society and the British mandatory Government. The Society worked towards a "restored" Jerusalem, seeking to uncover and exhibit "historical" fabric, fabric all too often obscured by Ottoman Turkish additions. By "returning" Jerusalem to an earlier appearance –though one that was partially artificial-

evidence of the Ottoman Turkish rule, evidence of an Islamic interim in the Holy City-- was removed, but for ostensibly for aesthetic, and not political reasons.

While the British controlled Palestine for an almost 30 year period, little construction was undertaken by the Mandatory Authorities itself. Only in a few instances, particularly where specific and unique requirements had to be met, were purpose-built structures created. The Post Office, the Government Printing Office, and the High Commissioner's Residence are the major buildings in Jerusalem constructed by the Mandate Government. The Rockefeller Museum, though designed by Austen St. Barbe Harrison, supervising architect of the Department of Public Works was primarily financed by John D. Rockefeller but its design can be used to support our discussion of style and construction as it was despite outside funding, essentially a Government building. (Fuchs 2000: 311)

These three structures in Jerusalem, all by St. Barbe Harrison: the Residence, the Post Office, and the Government printing plant, all built within years of each other are in three very different styles. The printing plant is a modernist, white plastered building. Its external structure plastically representing interior divisions and hierarchies. (Illustration 6) The Post Office, located on the Jaffa Road, the main street of the day, is a more decorated, but still rather functional building, using a modified Western architectural vocabulary. The basement course indicated by a different color stone and the wings of the building set back slight from the central pavilion, decorated with large arches. The fenestration of the building is regular and emphasizes the horizontality of the structure. (Illustration 7).

It is the High Commissioner's residence which shows what St. Barbe Harrison and the Mandatory Authorities saw as an appropriate and fitting architecture for the Mandate. A *Country Life* article describes the Residence, located on the "Hill of Evil Counsel"<sup>1</sup> as a "modern Crusader castle." (Illustration 8)

The Residence is of a grandeur and scale befitting its location above Jerusalem. The grounds feature a sunken garden and extensive landscaping. The interior is designed with the pomp and circumstance that a colonial power would demand, with a rich variety of public rooms, impressive in both their size and their starkness, with all the necessary private rooms an English gentlemen worthy of the title High Commissioner would require. (Illustration 9)

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<sup>1</sup>A name it bore before construction, but one exploited mercilessly by the Zionist press.



# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

Building Jerusalem: British, Jewish and Arab  
Architects in a Neo-colonial City

*Samuel D. Albert*

Though constructed of Jerusalem stone, the building is clearly a modern addition to the landscape. Its external plasticity reflecting something of the internal organization, but primarily emphasizing the grandeur of the building.

While the Residence is the most significant of the Mandatory Buildings of Jerusalem, mention must be made of the Rockefeller (Palestine) Archeological Museum. The museum, though privately financed, was also designed by St. Barbe Harrison and can be understood as a further development of his Mandate style. (Illustration 10) Because it was not truly a representational public structure, Harrison was slightly freer in his possibilities. Harrison's design is actually the second for the museum which was originally to have been built in Cairo, to designs by Welles Bosworth, Rockefellers' family architect. In the museum's form Harrison expanded his stylistic scope; not just employing local materials and local construction techniques, but modeling interior spaces on historic sites of the Holy Land, sites whose histories would be presented and documented within the museum. The library, for example, is modeled after the Feasting Hall in the Crusader Castle of Akko. The tower, similar in disposition to that of the coeval High Commissioner's residence is far more decorated, a clear evocation of earlier, historic structures. (Illustration 11)

Though not a project of the Pro-Jerusalem Society, which, with Storrs' departure in 1926 to become Governor of Cyprus, fell into desuetude and eventually dissolved, it nonetheless shares that same fascination with the Arts and Crafts ideal so dear to Storrs and Ashbee. The decorative plaques of the Museum's courtyard, illustrating the cultures of the Middle East were designed and realized by Eric Gill. The font used in the interior signage of the museum, was also designed by Gill though it should be noted that his lack of familiarity with the Hebrew alphabet resulted in two different letter, resh and dalet, resembling each other enough to cause great confusion.

Though the British, through their privileged position in government, were able to control many aspects of architectural production in Jerusalem, they were not the only group building in the Holy City. Jews and Arabs were also active, building for their expanding and increasingly self-aware communities. While the British authorities ultimately approved construction and planning, there was a certain amount of latitude in the choice of treatment of materials and style.

While most architectural histories and architectural historians focus on Tel Aviv, currently renown as the "White City" because of its more than 4000 inter-war modernist

buildings, or Haifa, which, during the Mandate was one of the most important cities of the region, Jerusalem nonetheless the site of architectural innovation.

Jewish architects, constrained by the British-imposed building requirements, developed two distinct architectural vocabularies, though they shared the same starting point. In contrast to Tel Aviv, where concrete, a material beloved by modernist made rapid construction of smooth walled structures possible, Jerusalem architecture was, at least in principle stone-based; generally, it was stone-clad and it was this distinction which allowed for the specific stylistic vocabulary of Jerusalem to develop.

How the stone was textured, how the stone was used, in what style the structure was designed was not stated in the building regulations. Among British, Jewish and Arab architects, these allowable differences were exploited to create structures that spoke of the originating community's vision of itself and its place in Jerusalem. Each group sought, through architecture, to justify its presence in the Holy Land through the development and promulgation of a distinct architectural idiom

The question of style and material can be seen in two distinct but equally representative structures, located actually quite close to each other: the National Library (Wolfson) Building of the Hebrew University 1926-1930 by Benjamin Chaikin and the Hadassah Hospital complex, 1934-1939 by Erich Mendelsohn both on Mount Scopus. Chaikin's building, derived from the Geddes plan for the University, which foresaw a massive structure whose form would physically represent the cross-fertilization of Eastern and Western knowledge he envisioned taking place at the school, is a far simpler and more practical structure. (Dolev 1998: 223-224).

In both structures, the locally abundant and legally prescribed building material, Jerusalem stone, is used, but the way in which it is used and the styles of the buildings, differ greatly.

Chaikin designed a building which was a kind of condensation of the building styles of the region. Its polychromy is reminiscent of the Old City's Mameluke architecture and its variegated surface evokes the hand works stone of local traditional houses. (Illustration 12) In contrast, Mendelsohn's Hadassah Hospital complex, located just to the West of the Wolfsohn building Mendelsohn's hospital employ similar material and a similar aesthetic, but one moderated through a modernist lens. (Illustration 13) The building, constructed on a framework of steel and concrete, is faced with Jerusalem stone, complying the legal dictates, but the facing is affixed vertically, not horizontally, emphasizing to the knowledgeable eye its purely

decorative function.

Like Chaikin, Mendelsohn too evokes traditional forms of Jerusalem architecture, but not through the texturing of the stone, rather, through the use of domes. Traditional architecture in the region, stone-based, used a modular form capped by a dome, an architectural element which is a natural outgrowth of the stone design. Mendelsohn –and others of the day—liberate the dome from its structural origins and elevate it to a decorative sign, a symbol of the *genius loci*. (Illustration 14)

The two structures on Mount Scopus are particularly meaningful ones. They are evidence of the realization of the Zionist dream of the return from exile. They are physical manifestation of the emergence of a secular Jewish cultural life in Jerusalem. But in more mundane housing as well, the influence of the emerging European modernist styles was visible. While the Jerusalem work of architects such as Erich Mendelsohn is rather well known, works by local (though usually foreign-trained) architects demonstrates the same attempt to adapt international modernism to Jerusalem conditions. Tropes and techniques familiar to modernism such as flat, undecorated surfaces or strips of windows emphasized within the façade were translated from their native concrete to stone, creating a modernist visual vocabulary unique to Jerusalem.

While there is no clear Arab equivalent either to the High Commissioner's residence or the Hebrew University –although there was a plan, never realized, for an Arab University in Mamillah-- similar forces can be discerned in Arab effected construction. Perhaps the nearest parallel can be found in the Palace Hotel, designed in 1928 by the architects Tuvia Donia and Baruch Katinqa and constructed by the Supreme Muslim Council. The building served a number of demonstrative purposes; it also provided spaces for nationalist and pan-Arabist meetings and congresses, it provided and income for the Supreme Muslim Council, and was a manifestation of the presence and economic power of the Council, which, at this time, was working to fight against an increasing Zionist presence in the Mandate.

Rather than evoke earlier forms of local architecture, as the High Commissioner's residence or the Scopus buildings had, the Palace Hotel directly quotes earlier architectural forms. But rather than citing the Mameluke polychromy which is so visually intriguing, the Palace Hotel evokes the late Ottoman Turkish era, supplanted by the British Mandate only a decade earlier. (Illustration 15) This citation is, in its own way problematic as Ottoman Turkish architects had, as the turn of the century themselves been struggling with the question of

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

Building Jerusalem: British, Jewish and Arab  
Architects in a Neo-colonial City*Samuel D. Albert*

creating a historically-informed by modern architecture. The Ottoman origins of the building are clearly expressed, not just in the forms of the decoration on the façade with its late Ottoman, but also by the large plaque looming high over the entrance. The building, taken in conjunction with its coeval constructions, loudly proclaims an Arab presence, one which evokes not the distant past of the Crusader Castle or the Mameluke Jerusalem of 300 years earlier, but a Jerusalem of recent memory, a Jerusalem ruled, ultimately, by the Caliphate which traces its ancestry back to the Prophet.

The Mandate of Palestine, particularly Jerusalem, present an intriguing problem to the architectural historian. The British, who dictated the condition of construction, were clearly envisioning maintaining and expanding a Jerusalem of the historical past, evoking in spirit, if not form, the Crusader Kingdom. In both their official and non-official capacities, they sought to impose this image, a vision of Jerusalem which essentially effaced the previous 700 years of history. Their own architectural production though, limited by finances, very clearly distinguished between representational and functional buildings. Where representation was required—and the finances available—modern crusader was called for. Where there was either no need for representation, or the monies were limited, either a simplified local form, or a clearly functional form were chosen.

Jewish architects were faced with similar problems. There was the necessity of complying with local building restrictions, while seeking to create an architecture that was either evocative of the local past or a reflection of modern consciousness, in either case, to be done in stone. At a moment when the ideas of what would become known as international modernism were emerging, ideas which ultimately trace their origins back to traditional Mediterranean structures, it is intriguing to see how that idea is both embraced and rejected. The local populations, not just Arab, but Armenian, Christian, and others were also now bound by the legal, rather than practical requirement of stone construction.

The brief period of British rule in the Mandate of Palestine provides a clear window into the ways the knowledge of the architectural past can be used with the same desire—to express a historical sense of presence—yet result in three profoundly differing sets of structures.

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

Building Jerusalem: British, Jewish and Arab Architects in a Neo-colonial City

Samuel D. Albert

## Illustrations



Fig.1. Surrender of Jerusalem.  
Library of Congress, G. Eric and Edith Matson Photograph Collection, LC-M31- 1831 [P&P].

Fig.2. Allenby entering Jerusalem. Clock tower in rear.  
Library of Congress, Photograph by Underwood & Underwood. Frank and Frances Carpenter Collection, LOT 11356-31 [P&P];

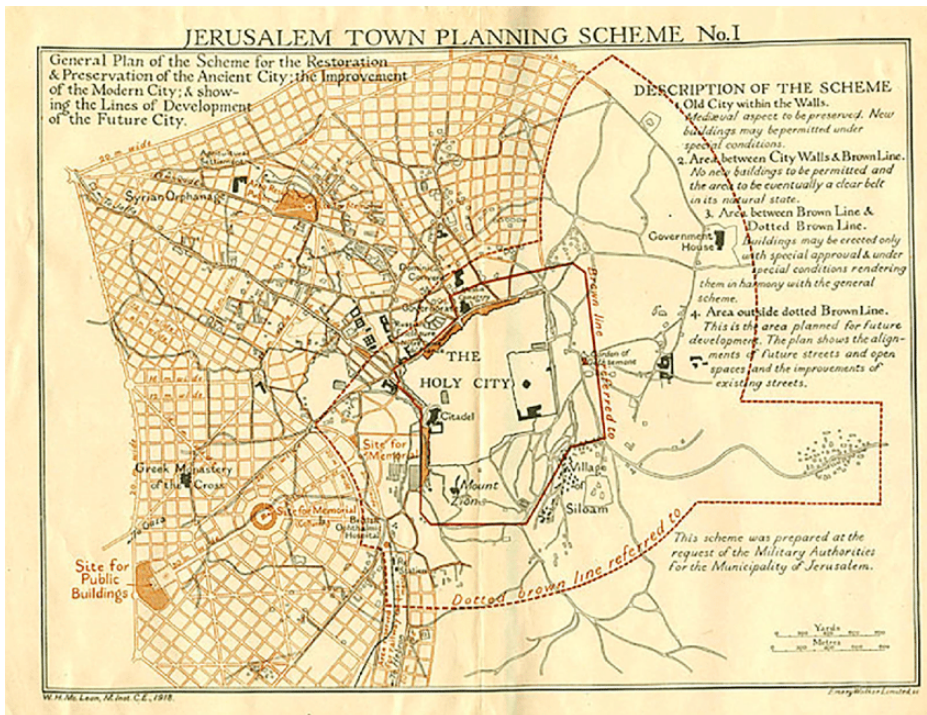


Fig.3. McLean Plan.  
<http://www.kings.cam.ac.uk/archive-centre/archive-month/october-2010.%20html>



# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

Building Jerusalem: British, Jewish and Arab  
Architects in a Neo-colonial City

*Samuel D. Albert*



Fig.4. Ceiling Decoration, Augusta Victoria Hospital.

Library of Congress, G. Eric and Edith Matson Photograph Collection. LC-M32- 7155 [P&P]

Fig.5. Replacement clock, Allenby Square.

[https://commons.wikimedia.org/wiki/File:Allenby\\_Square\\_Clock\\_Tower.\\_D11-017.jpg](https://commons.wikimedia.org/wiki/File:Allenby_Square_Clock_Tower._D11-017.jpg). Public Domain.



Fig.6. The Post Office, Jerusalem.

<https://upload.wikimedia.org/wikipedia/commons/>. Public Domain.

Fig.7. Government Printing Office, Jerusalem.

Library of Congress, G. Eric and Edith Matson Photograph Collection, LC-M32- 51595-x [P&P]



Fig.8. High Commissioner's Residence, Jerusalem, view.

Library of Congress, G. Eric and Edith Matson Photograph Collection, LC-M32- 50769-x [P&P]

Fig.9. High Commissioner's Residence, Jerusalem, Ball room.

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# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

Building Jerusalem: British, Jewish and Arab  
Architects in a Neo-colonial City

*Samuel D. Albert*



Fig.10. Palestine Archaeological Museum, view.

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Fig.11. Palestine Architecture Museum, South Gallery.

Library of Congress, G. Eric and Edith Matson Photograph Collection, LC-M32- 7379-A [P&P]

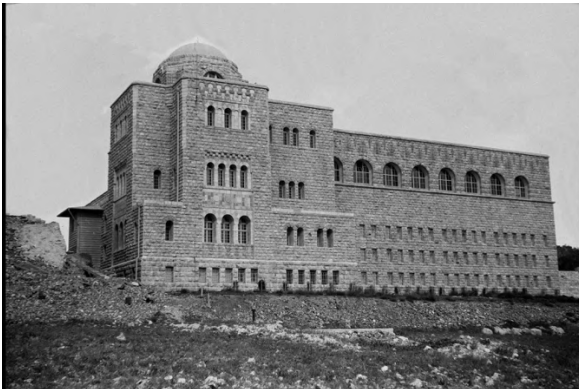


Fig.12. Wolfson Building, Hebrew University, Mount Scopus.

<https://commons.wikimedia.org/>. Public Domain.



Fig.13. Hadassah Hospital, General View.

Library of Congress, G. Eric and Edith Matson Photograph Collection, LC-M32- 9704 [P&P]



Fig.14. Hadassah Hospital, Detail, entryway domes.

Library of Congress, G. Eric and Edith Matson Photograph Collection, LC-M32- 10748 [P&P]



Fig.15. Palace Hotel, view.

[https://upload.wikimedia.org/wikipedia/commons/0/0a/Palace\\_hotel\\_in\\_Jerusalem.jpg](https://upload.wikimedia.org/wikipedia/commons/0/0a/Palace_hotel_in_Jerusalem.jpg). Public Domain.

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## Zambia's Colonial and Postcolonial Railways

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### Abstract

This paper focuses on transport infrastructure as a specific type of materiality, as “matter that enable the movement of other matter” (Larkin, 2013: 328). Rail, pipes and roads are immovable material artifacts which allow the flow of resources, people, and capitals. At the same time infrastructures bridge between the here and the elsewhere locus of modernity; as the places where ‘copies’ of the same technological system exist and define the global modern environment and its aesthetic.

Infrastructure planning is here conceptualized as “technopolitics”; the practice, deployed by the colonial and the postcolonial regimes, of “using technology to enact political goals” (Hecht, 2011: 3). The notion of technopolitics investigates the relationship between specific design features of technological systems, like shape and materiality, and their physical and social consequences beyond, and sometime in contrast with, the wills of their planners (Mitchell, 2002; Hecht, 2011).

In the first part of the paper I will show how the form and materiality of colonial infrastructure affected the human, urban and economic geography of Northern Rhodesia and how it determined her geopolitical dependency. In the second part, I will illustrate the postcolonial struggle of independent Zambia to re-route the export of copper and the import of oil and other goods in order to avoid white controlled territories of Southern Africa. Despite the use of radically different narratives, both the colonial and the postcolonial infrastructure, simultaneously enabled and constrained the material development of Northern Rhodesia, they operated in unexpected ways with often unforeseen consequences.

Through the direct observation of infrastructural artifacts and the study of archival and secondary visual and written sources, the paper will juxtapose official narratives of infrastructure development with their tacit goals and will reveal their alternative modes of functioning and their effects on the ground.

**Keywords:** Railways; Territory; Infrastructure; Zambia.

### **Northern Rhodesia**

Zambia, Northern Rhodesia at time of British domination, is a landlocked country located in Southern Africa. Her historical evolution, since the beginning of the twentieth century, is deeply intertwined with the discovery, extraction, and export of copper and with the need to import fossil fuel. The first colonial power to impose its presence on what would become Northern Rhodesia was the British South Africa Company (BSAC) led by Cecil John Rhodes. In the second half of the nineteenth century, Rhodes and his company's paramilitary forces acquired and ruled over vast African territories reaching from the Cape in the south to the Congo in the north. The Chartered BSAC combined the role of a private enterprise with the legitimization of the Victorian state and, through the construction of railways or "the permanent way" as it was often called, the BSAC extracted and exported metal ores toward South Africa's ports (Lunn, 1992: 244). Rhodes's imperial ambition was to expand the Rhodesia Railway to the north, in order to reach the British colonies on the Mediterranean Sea through the envisioned, legendary "Cape to Cairo Railway" but, after crossing the Zambesi river at the Victoria waterfalls, in 1905, the ambitious mission had to be aborted. Unable to cross German East Africa and the Belgian Congo, the railway was converted into an exporting tool for the copper deposits which were then discovered in the region (Gewald, 2009: 22). The oddly shaped territory of Northern Rhodesia was the result of infrastructural expansionism, geopolitical contingencies and of the discovery of copper deposits (Roberts, 1976: 151).

The trains of the Rhodesia Railway, departing from Port Elizabeth or Durban (South Africa), would stop in Wankie (Southern Rhodesia) to collect coal, and then proceeded to the north. Once they reached the Copperbelt, coal was unloaded and used to activate the mining engines while copper was loaded and shipped southward to South Africa and Mozambique and from there to the whole world. By drawing straight lines of steel, Rhodes company could impose its order on the "unfriendly" African landscape, control times and distances within unknown territories, and define a new geography of lines, nodes, and settlements it could understand and control. Thanks to the efficiency of the railway and the stable growth of the price of copper, the mining industry of the Copperbelt flourished and the railway line became the economic backbone of the colony.

The most fertile and accessible swaths of land – mainly along the railway and around the mines – were designated as "crown land" and could be purchased by white settlers while Africans were forcibly relocated to the "native reserves". Most urban settlements, industries, and



economic activities developed within a narrow area along the rail line while a sparse population lived of subsistence agriculture in the less accessible provinces (Simmanee, 1972). The reserves soon became overcrowded and shortages of land and food pushed the African population to migrate towards the mining and urban areas seeking wage labor (Roberts, 1976: 178).

## **Lusaka**

Lusaka, the capital of Northern Rhodesia from 1931, was established in 1905 as a technical stop on the railway line. Steam engines needed periodically to be refilled with water; therefore, the BSAC built loading and unloading platforms every twenty miles. Named after the chief of nearby Lenje Village, Lusaka offered a flat dolomitic soil and consistent water reservoirs.

In 1906, when the railway construction ended at the border with the Congo, many who were left without work purchased farmlands in its surroundings. The White Fathers mission and the BSAC also settled in its proximity. Thanks to the growing farming activities, a marketing centre grew around the train stop where products were loaded and unloaded (Kay, 1971: 118). By 1913 the new settlement included a post office, a veterinary office, three mills for grinding maize and other grains, two lime kilns, a mission school serving the farmer's community, a government school, several shops, and a small hotel. In the same year, the BSAC developed a simple master plan to control the growth of the township (Kay, 1971: 118). The railway and the dirt track running parallel to it – named 'Cairo Road' in memory of Rhodes's imperialist vision – constituted the main axis of a linear gridded master plan expanding for two miles along the railway. Logistic and storage spaces were located towards the rail line while the main public buildings and services sprang up along Cairo Road. White colonists also settled within the gridded structure while African workers lived in compounds south of the town.

The north-south orientation of Lusaka's urbanization pattern reflected the fundamental role of the railway and the logistic nature of the settlement. At the national scale, the territorial structure mirrored Northern Rhodesia's political and economic dependence on Southern Rhodesia and South Africa.

## **Independent Zambia?**

In the late 1950s, the possibility of maintaining good post-independence economic relations and the presence of various private British companies in the most strategic position of Africa's

economy, convinced the British government to renounce to colonial sovereignty and to negotiate the conditions for independence (Cooper 2002: 198). In 1964, Kenneth Kaunda, leader of the nationalist movement from the early 1950s, became the first president of Zambia. In the year of its independence, Zambia was the third larger copper producer in the world. Copper constituted over 90% of its export and almost 50% of government revenue (Bank, 1976). During the 1960s, thanks to the high price of copper, Zambia was rated one of the most prosperous countries in Sub-Saharan Africa but its little-diversified economy depended heavily on copper price fluctuation and on its ability to negotiate favorable trading agreements with neighboring countries in order to maintain the flow of copper and fuel (Bank, 1976).

Throughout colonial domination and during the first year of Kaunda's government, all of the copper export and ninety-five percent of imports had been shipped via railway through the British controlled territories to the ports of South Africa but in 1965 Southern Rhodesia's white minority self-proclaimed its independence from Britain. The unilateral declaration (UDI), condemned by the United Nations, entailed an embargo to and through the country (Bank, 1976). The effect of the trading ban on the Zambian economy revealed its dependency on Southern Rhodesia's infrastructure and caused a serious oil crisis (DeRoche, 1969: 214-17). The closing of the border, the consequent lack of fuel and the stack of copper waiting to be shipped out of the country required a prompt and durable solution. In the first phase of the crisis, an oil airlift was organized by the British, American and Canadian air forces. Cargo planes flew oil in from Dar es Salaam and Nairobi while trucks imported oil and exported copper via the Great North Road an unpaved track built in 1917 to convey British troops from Northern Rhodesia to the German East African front. This provisory solution proved inefficient; the cost of the air-lift was too high and a big quantity of oil was consumed by the heavily loaded planes. Furthermore, only a few months after the UDI, the unsurfaced and poorly engineered Great North Road became impassable (Gleave, 1992: 249-67).

Together with Tanzania, his most reliable neighbor, the Zambian government envisioned a double long-term answer to Zambia's isolation: an oil pipeline had to supply oil to the mines while the so-called 'freedom railway' would guarantee the flow of copper. Both infrastructures would run parallel to the existing Great North Road and connect Zambia to the Indian Ocean at Dar es Salaam. However, neither Zambia nor Tanzania could count on sufficient capital or knowledge to undertake the construction of such large-scale infrastructure (Roberts, 1976). The

diplomatic effort carried out by the two countries to gather foreign aid and assistance led to an unexpected but paradigmatic African Cold War situation.

### **Postcolonial Rerouting**

In 1966, the Zambian government awarded the Italian National Hydrocarbons Agency ENI (Ente Nazionale Idrocarburi) a contract to construct the pipeline. The railway project, on the other hand, had been dismissed by various western donors as uneconomic and unnecessary. After the refusal of Britain, the USA and the Soviet Union, in 1967 the People's Republic of China unexpectedly offered to build the rail link while the World Bank, adverse to the railway construction, but willing to participate in solving the crisis, granted loans to improve and widen different sections of the Great North Road, renamed Tan-Zam Highway (Bailey, 1976; Monson, 2009).

After two years of negotiations and three years of surveys, the construction of the Tazara (acronym of Tanzanian Zambian Railway Authority) railway began in Dar es Salaam in 1970. The 'mobile construction site' proceeded at the average speed of three kilometres a day and reached the Zambian copper belt five years, three hundred bridges, twenty-one tunnels and ninety-three stations later. Together with the railroad, the project included the construction of peripheral infrastructure and services such as train stations, power plants, electric and water networks, offices, warehouses, workshops and industrial plants (Bailey, 1976: 125-130).

The working team of the People's Republic of China (PRC) deployed a labor-intensive strategy that was considered suitable for developing countries – Zambia, Tanzania, and China – with a shortage of capital and a surplus of underemployed manpower. Between twenty and fifty thousand Chinese workers, engineers, supervisors, and doctors were sent to Africa to build bridges, tunnels, workshops, offices, stations, and housing for the railway authority's employees. The 310,000 tons of steel rails, together with cement and timber to integrate the local production had also to be imported from China (Bailey, 1976: 93-123).

The stations were designed following a modular scheme. The smaller stations, occurring most commonly, were mainly deployed in sparsely inhabited areas. The L-shaped building was divided in two; half of the station served as waiting room, the other half as office space for railway workers. Medium-size villages were assigned medium-size stations, composed of a flexible number of modules articulated around the entrance space. The main stations, however, were specifically designed. Despite the fact that they had to cope with peculiar topographic and

urban conditions, all main stations featured a monumental hall with a high ceiling and a glass façade. Other elements such as perforated panels, platform roofs and standardised graphic signage provided a uniform style to the different buildings.

From the beginning of the Sino-African collaboration, Western newspapers envisioned what they called “yellow peril”, the threat of communist propaganda and the spread of Maoism on the African continent (Mohr, 1970). The Tanzanian and Zambian governments were indeed considered ideologically close to the communist bloc, even more after receiving China's assistance (Bailey, 1976: 71-76). But more than Communism, though, Maoist China needed to import copper, export its products, and establish new political alliances. After the Sino-Soviet split of the early 60s and the US embargo, the People's Republic of China was left politically and commercially isolated. The Chinese government, who lacked foreign currency to pay African workers and suppliers, proposed a commodity trading agreement to the Zambian and Tanzanian governments. The latter committed to selling, through their national wholesale corporations, a list of Chinese products whose revenues were used to pay salaries of African workers and local construction expenses (Bailey, 1976: 82-86). Initially criticised for their poor quality – especially by the official (and pro-Britain) press –, Chinese beers, bicycles, napkins and other goods started filling the shelves of Zambian shops. After an initial resistance, Zambian consumers got used to the new products that were shipped from China to Zambia through Dar es Salaam and on the Tazara wagons (Times of Zambia, 1973). Even though the main goal of the ‘multimodal Dar es Salaam transport corridor’ was the rerouting of copper and oil, other goods and people started circulating along the corridor.

Besides stocks of Chinese goods, Zambian and Tanzanian farmers started using the railway to reach nearby markets. Especially after the liberalisation measures of the 1980s and 1990s, small dealers who couldn't rent and fill entire cargo wagons, started shipping their goods as luggage on the passengers' “ordinary train”. The slow train became a moving market from which, twice a week, farmers and traders could buy and sell homegrown agricultural products or imported goods coming from the port of Dar es Salaam (Monson, 2009: 82-85). The unforeseen use of the railway as a small-scale logistic device radically changed the life of people living along the line and conflicted with the state centered idea of development pursued by the Zambian government.

### **New routes and new meanings**

The “Freedom Railway” was sold by the Zambian and Chinese propaganda as the symbol of Zambia’s territorial decolonization and economic freedom from the rule of the white-controlled south. Interestingly, though, the newly founded Zambian state sought to decolonize its territorial imbalance and escape from colonial dependencies through the same technology previously deployed by the British South African Company to conquer and colonize its territory.

A key aspect in the process of ‘re-signification’ of the railway as a technological artifact was played by the aesthetic and by the materiality of the infrastructure itself. Despite the colonial use of the railway as an extractive tool, the post-independence railway construction was deeply linked with progressive and nationalist images of industrialization, modernity, and progress. North American historian and urbanist Lewis Mumford observed that iron, the first manmade building material, replaced wood’s organic and rural aesthetics and became the structural element of an industrialized and consumer society (Mumford, 2010).

Like architecture theoretician Keller Easterling suggests, we should not only focus on what infrastructure is “saying”, but also on what it is actually “doing” in order to make visible the discrepancies between the official narratives and the real tasks and performances of technological artifacts (Easterling, 2014: 6). The new transport corridor was built to guarantee the flow of copper and other resources out of a landlocked country but, at the same time, the Zambian government expected the railway to transform subsistence agriculture, still very common in the rural areas, into a cash crop economy and redefine national patterns of production and consumption. Furthermore, just like the colonial railway 60 years before, the Tazara was expected to attract the sparse population of the northwest province, making them easier to reach, serve, control, and tax. The nation building process was also supported by the railway that acted as a medium but also as a message. In the most remote and poorly served areas of the country, the new infrastructure became the only tangible presence of the new state. Despite the claim of self-reliance and panafrican cooperation, and the depiction of the railway as a “friendship struggle” (Bailey, 1974: 192), the construction of the railway did actually entail the creation of new territorial economic and political dependencies no longer with colonial empire but with foreign donors, experts and commercial partners.

Nowadays most of Zambian copper is exported on trucks through South Africa, Namibia and Mozambique. The remains of the colonial Rhodesia Railway still constitute the main axis of



the country, but it is an empty backbone. Lusaka itself is divided in two by the presence of the abandoned rail tracks which strongly affect its urban structure, with consequences on mobility and accessibility. A small section of the railway still operates for touristic purposes across the Zambesi River in the proximity of the Victoria Falls. The "Freedom Railway" is working sporadically and mainly on short distances as a transport device for local farmer produces. The rerouting of copper on the highway is affecting the income of the railway authorities and therefore the functioning of the line which relies mainly on foreign aids to maintain the tracks and the rolling stock. The new railway did not succeed in recreating a new linear centrality.

The paper illustrated how the construction of the Rhodesia Railway affected the historical evolution of Norther Rhodesia from its foundation to the postcolonial era and highlighted the power of the colonial infrastructure to influence Zambia's material and social processes, land values, density of population and economic activities, geopolitical dependencies at the regional and continental scale. The closure of the border with southern Rhodesia, on the other side, revealed the weakness of the railway as a linear and closed system. Ironically, the only permanence of the "permanent way" once it stopped working, were its physical, social and economic consequences.

With the postcolonial rerouting, the logic of the infrastructure was reinterpreted and its narratives reconstructed around claims of decolonization, panafricanism, and nation building. The 'freedom railway' attempted to create a new "geometry of power" (Massey, 1993) but reproduced a territorial structure based on resource extraction and control at the local and global scale: control of the Zambian population by the Zambian state, but also control of Zambian territory, resources and market by external neo-colonial competing actors.

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## Reassessing heritage identities: Chinese entrepreneurship and the building of colonial Macao's urban landscape (1856-1875)

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### Abstract

Following a devastating fire in 1856, the Portuguese Government launched itself into a full-fledged plan to expand Macao's urban territory by restructuring its most prominent Chinese district, the Bazaar. With political, financial and logistical support from local Chinese fortunes, the city's riverfront was successively restructured and expanded, culminating in the 1875 inauguration of the New Bazaar area: a unique urban landscape of Southern-Chinese architecture in a planned colonial Portuguese urban mold. The 2005 inclusion of the Historic Centre of Macao in the World Heritage List, however, by leaving the historical Chinese districts entirely outside of the protected areas, ended up perpetuating Macao's old stereotype of the Chinese and Christian cities living back-to-back. By unveiling the history of the Bazaar's mid-19<sup>th</sup> century transformation, this paper aims at better understanding and enhancing the urban landscape's mixed heritage identities, thus contributing to dissolve internal frontiers and restore cohesion to the city.

**Keywords:** colonial Macao, Chinese entrepreneurship, urban renovation

### Introduction

On January 4<sup>th</sup> 1856, a fire broke out in the Bazaar, Macao's most prominent Chinese district, destroying over eight hundred shophouses and affecting thousands of people. Three days later, the Portuguese Governor had already issued instructions for rebuilding, projecting the widening of four main streets and a large reclamation plan. Commanding the district's land and construction policies had been the exclusive prerogatives of Canton authorities up until their eviction from Macao in 1849. Therefore, this would be the first time colonial Government

intervened in the planning and management of the Bazaar, setting the beginning of the end for old Macao's Chinese and Christian cities living back-to-back.

By the 1860's, what had started as a response to a crisis, transformed into a full-fledged Government plan to expand the urban territory by restructuring the Bazaar's riverfront. With the influx of refugee population from the Taiping rebellion and 2<sup>nd</sup> Opium War, the pressure to grow was intense, which agreed with the political agenda of ending the old divided sovereignty system and claim Macao as a Portuguese colony. Meanwhile, the gambling and commodity concessions, had helped develop local Chinese fortunes, which would turn out to be Portuguese ambition's best allies. Under the banner of "one benevolent Government for all", these Guangdong and Fujian entrepreneurs financed and provided the workforce for most renovation projects culminating in the 1875 inauguration of the New Bazaar area: a unique urban landscape of Southern-Chinese architecture in a planned colonial Portuguese urban mold.

The post-handover 2005 inclusion of the Historic Centre of Macao in the World Heritage List promoted its representation as a meeting place of cultures between East and West. In what concerned the city, however, the configuration of the protected areas, leaving the historical Chinese districts out entirely, ended up perpetuating the stereotype of the divided Chinese vs. Christian city. This artificial frontier was exacerbated by concentrating on the monuments while failing to address their urban context, also a legacy of late Portuguese administration's heritagization models. By unveiling the history of the Chinese Bazaar's mid-19<sup>th</sup> century transformation through the comparative study of historical plans, cross-referenced with contemporary written sources, this paper aims at better understanding and enhancing the urban landscape's mixed heritage identities, thus contributing to dissolve internal frontiers and restore cohesion to the city.

### **Taking advantage of disaster**

On January 12<sup>th</sup>, Governor Isidoro Francisco Guimarães wrote to the Minister of Overseas Territories accounting for what he described as the "*great calamity that had befallen Macao*"<sup>1</sup>. As the fire death toll was being determined, the Governor's mind was on its financial impact, estimating the loss at one and a half million patacas: "*Public finances, which we had worked*

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<sup>1</sup> AHU, AHU-ACL-SEMU-DGU-005, Cx.0022, Letter n°355 from Governor Guimarães to the MOT (Minister of Overseas Territories), January 12<sup>th</sup> 1856.

*so hard to stabilize, will be greatly disturbed. The revenue from the Chinese, which is the main revenue, consisting in the taxes and licenses for shops and gambling concessions, lotteries and processed opium, will entirely cease for some time, until Macao may regain the prosperity it had attained.”<sup>2</sup>*

The following days, the Governor laid out his plan to emerge from the crisis. Firstly, he ordered a new cadastral survey of the Bazaar, so as to compel every Chinese landowner to register its property with the Portuguese authorities, therefore being eligible for tax collection. Secondly, urban renovation: *“To take advantage of the January 4<sup>th</sup> disaster, apart from the increase in tax, I have determined to make some improvements in the layout of the Bazaar streets. One project that I intend to see through is to build a 24 feet wide road off the Bazaar shoreline, with a wall and several piers. This is a very important project, for the policing of the Bazaar as for the defense of the City.”<sup>3</sup>*

On January 7<sup>th</sup>, the Governor had issued a local ordinance laying out the guidelines for rebuilding the Bazaar under a *“new form, making it less exposed to the risk of fire spreading throughout the whole district, endangering the part of town inhabited by the Christians”<sup>4</sup>*. In the same text, a committee was nominated to oversee the regeneration process and make sure that *“the Bazaar is rebuilt according to the plan given by this Government”<sup>5</sup>*. This committee would be presided by Major João Miguel Milner (probably the government official in charge of engineering and public works) and including *“some respectable Chinese landowners”<sup>6</sup>* to help with its work.

The rebuilding instructions followed<sup>7</sup>. The first idea was to build a wall to separate Chinese and Christian dwellings. Although there is no evidence that this wall was actually built, its description perfectly illustrates the existence of a conceptual frontier between the two cities, as it would be put a decade later: *“[Twenty years ago, there were] two districts, as if forming to separate cities: the first, most populated, the Bazaar, inhabited only by the Chinese, clinging to their prejudices and traditions, harassed by the rule of the mandarins; an entanglement of*

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<sup>2</sup> Ibid.

<sup>3</sup> AHU, AHU-ACL-SEMU-DGU-005, Cx.0022, Letter n°363 from Governor Guimarães to the MOT, February 12<sup>th</sup> 1856.

<sup>4</sup> BG, n°12, January 12<sup>th</sup> 1856, 72-73, Government of Macao local ordinance (*portaria*) n°2, January 7<sup>th</sup> 1856.

<sup>5</sup> Ibid.

<sup>6</sup> Ibid.

<sup>7</sup> BG, n°12, January 12<sup>th</sup> 1856, 72-73, *“Instructions for rebuilding the Bazaar”* by Governor Guimarães, January 8<sup>th</sup> 1856.



*narrow streets, filthy, unsanitary, and crowded with vile houses; the second, the Christian city, with its old doors, true barriers to progress; and both without police, completely separated, with unequal rights, no reciprocity of interests, bounded, in moral languish, apathetic.*"<sup>8</sup>

The wall was to be built at the back of the houses facing the Bazaar along Rua de Santo António, Rua de São Paulo, Largo do Senado and Rua dos Cules. Fig. 1 shows that this limit corresponded to the city's historical main road from the S. António gate in the north to Largo do Senado, heart of the Portuguese town. It then followed the 16<sup>th</sup> century shoreline towards the south through Rua dos Cules and Rua da Alfândega. Roughly, the 1830s to 1850s had been the result of the occupation of the silted riverfront in the Praia Pequena bay, effectively extending the city westward from the streets that had once formed the 16<sup>th</sup> century inner harbor. A decade later, Macao Chief-Surgeon Lúcio Augusto da Silva would give a description of the Bazaar riverfront as was, while referring to the "important improvements" achieved in later years: "A great part of the peninsula's west bank, to which the backs of the houses were turned, and whose muddy riverbed was left exposed at low-tide, was covered in all manner of filth. Almost all of this surface is now reclaimed, new streets having been established and new houses constructed, with their fronts to a riverside street, which is conveniently done and lined with piers"<sup>9</sup> (Fig. 3). This riverside street was the part of the regeneration project Governor Guimarães held closest to his heart: "On the seaside, every effort shall be applied to continue the praya which Apon is building in Tarrafeiro. This praya, with a public road along the sea, must come up to the Pereira factory [casas do Pereira]."<sup>10</sup> Rua Nova de El-Rei, as it would be named, can be seen in Fig. 2 topping the new Bazaar reclamation.

The January 8<sup>th</sup> instructions also established a street realignment plan concerning four of the Bazaar main streets, among them Rua do Culao, down to the river, and thoroughfare Rua do Bazar. Finally, by the end of the month, new building regulations were published, clearly intended to curb some of the century-old autonomous space appropriation practices in the Chinese Bazaar, imposing instead the primacy of public space, which private initiative was no longer permitted to overlap.<sup>11</sup>

<sup>8</sup> BG, n°38, September 23<sup>rd</sup> 1867, 224-226, "Project for the organisation of a special body for public works" in Macao, September 18<sup>th</sup> 1867.

<sup>9</sup> BG, n°46, November 14<sup>th</sup> 1870, 193-194 "Report on the Macao Public Health Service, relating to the years 1865-1867" by the province's Chief-Surgeon Lúcio Augusto da Silva, April 26<sup>th</sup> 1868.

<sup>10</sup> BG, n°12, January 12<sup>th</sup> 1856, 72-73, "Instructions for rebuilding the Bazaar" by Governor Guimarães, January 8<sup>th</sup> 1856.

<sup>11</sup> BG, n°14, January 26<sup>th</sup> 1856, 53, Government of Macao local ordinance n°6, January 22<sup>nd</sup> 1856.

## Under one favorable and benevolent Government

Although the establishment of a property tax had been insistently pushed by Ministers and Governors for a decade, the province's public finances in the 1850s were heavily dependent on the concession system (*exclusivos*). The idea of giving the monopoly of certain commodities or services to the highest bidder had been introduced in Macao by great reformer Governor Ferreira do Amaral (1846-1849) with the purpose of funding the Portuguese sovereignty regeneration project. Gambling concessions had occasionally been authorized for short periods of time by the Qing administration to serve specific funding purposes. This had apparently been the case between 1863 and 1866, when the Governor of Canton had briefly legalized the Vae-seng lottery to quickly raise funds for the war effort<sup>12</sup> during the Taiping rebellion.

In Macao, it had started with the "Chinese lottery" in January 1847, to which pork, beef and gambling-game Fantan followed in 1849<sup>13</sup>. Hardly ten years later, the Chinese Fantan concession holder was solely bringing one third of public treasury's annual income<sup>14</sup>. Of course, this made for an extremely alluring, even if unsteady, governance. So much so that none of the subsequent Governors would ever dare to change course.

Macao's thriving economic bubble, the Taiping rebellion and the Second Opium War ended up attracting many Guangdong and Fujian entrepreneurs as, under the (relatively) liberal Portuguese administration, they enjoyed a freedom and stability to conduct their businesses and extend their influence that didn't exist in Canton, or anywhere else in China, for that matter.

These "*Chinese business families*"<sup>15</sup> rapidly established their connections with the local Chinese and Macanese networks, thus being put in the path of the government concession auctions and real estate development opportunities. Case in point, Guangdong native Ho Guai's 1869 partner in the bidding for the first Macao Vae-seng lottery was none other than Macao-born Chinese merchant Apon<sup>16</sup>, cited in the 1856 Bazaar rebuilding regulations as contractor for an ongoing reclamation project in the Tarrafeiro area.

As engineer Major Francisco Maria da Cunha would write a few years later, in a rarely explicit reference to the fundamental bond between Portuguese sovereignty and Chinese entrepreneurship in the making of Macao's modern urban landscape, Ferreira do Amaral had

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<sup>12</sup> (Godinho, 2013: 116)

<sup>13</sup> (Silva, 2002: 214)

<sup>14</sup> BG, n°40, July 30<sup>th</sup> 1859, 157-159.

<sup>15</sup> (Lin, 2017 : 339)

<sup>16</sup> (Lin, 2015: 35)

enabled “*the convergence between [the Chinese], the Christian, and the colony authorities, [strengthening] the belief that there is only one single, favorable and benevolent government for both.*”<sup>17</sup> In his wake, subsequent Governors had “*managed to get the Chinese interested in public works, so as to lend [them] great assistance in capital and workforce. Hence, as civilization cannot pass through a country without leaving the mark of the ideas of its time, it can be stated that today the Chinese understand the instruments of civilization, that they know how to use them, and that they are fully aware of the services they receive from this colony's government by carrying out this work*”<sup>18</sup>.

In 1865/1866, under Governor Guimarães' successor, Coelho do Amaral, the riverfront was once again realigned, this time south from Rua Nova de El-Rei. Fig. 4 details the Bazaar area at that time, showing that a new row of blocks had been added to the riverfront, creating a new promenade and pier, appropriately named Rua do Guimarães. The former Pereira tea factory, as well as the old shipyards, had been integrated into a new reclamation featuring a large dock as well as a smaller one in front of the former Portuguese customs.

Continuing the riverside road from the northern border to the south end of the peninsula or, as it was put, “*from Porta do Cerco to Barra*”<sup>19</sup> was to be the following administrations' next great project, formalized by Governor Ponte e Horta in February 1867, for “*the beautification of the city, as well as for the benefit of hygiene and commerce*”<sup>20</sup>.

Working in the province's public works at this time, it is likely that the trio of engineers Major Francisco Maria da Cunha, inspector of public works, Captain Jerónimo Osório de Albuquerque, director of public works and British civil engineer W. A. Read, may have played an important role in the design of this project. They would also form the committee in charge of outlining what would be the 1870-appointed Macao public works department<sup>21</sup>. Together with the urban population survey that followed<sup>22</sup>, governance reform would be taken one step

<sup>17</sup> BG, n°38, September 23<sup>rd</sup> 1867, 224-226, “*Project for the organisation of a special body for public works*” in Macao, September 18<sup>th</sup> 1867.

<sup>18</sup> Ibid.

<sup>19</sup> BG, n°6, February 11<sup>th</sup> 1867, 26, Government of Macao local ordinance n°16, February 8<sup>th</sup> 1867.

<sup>20</sup> Ibid.

<sup>21</sup> The committee in charge of laying out “*a plan to organize a public works special body to oversee this branch of service in the colony*” was appointed by local ordinance n°31, September 14<sup>th</sup> 1867 (BG, n°37, September 16<sup>th</sup> 1867, 213).

<sup>22</sup> The Macao statistics department was created by local ordinance n°19, November 15<sup>th</sup> 1866 (BG, n°47, November 19<sup>th</sup> 1866, 189).

further by benefiting, for the first time, of modern urban planning's whole range of instruments of measurement and control.

The final step in the Bazaar regeneration was introduced during the governorship of Admiral António Sérgio de Sousa (1868-1872), probably around the beginning of 1870. Its first reference came only at its latter stages of construction, on January 1873, when reclamation seemed to be over and the public works department was proceeding with the layout of drainage infrastructure *"in the streets adjacent to the new bazaar and Chinese theater, next to the recently reclaimed Manuel Pereira dock"*<sup>23</sup>. Newly appointed (and first official) public works director Lieutenant-Colonel Francisco Jerónimo Luna, in his report regarding the year 1872, mentioned setting up *"the drainage pipelines in the streets adjacent to the New Bazaar and Chinese Theater, which are newly constructed, mostly over the reclamation of an old dock [caldeira], whose presence was no longer convenient for the city's general sanitation, for it served as shelter for the accumulation of tancás, full of Chinese families, forming something of a floating village, with no consideration for hygiene."*<sup>24</sup>

As shown in Fig. 5, the reclamation of the "Manuel Pereira dock" set the beginning of construction for the New Bazaar district, strategically connecting the old Bazaar towards the south with Ponta e Horta square. According to Wang Wen Da, part of the site where the dock stood had been *"an old Jewish tea company called Pereira"*<sup>25</sup>, which had been bought by the Chinese merchant Vong Lok around 1861. If so, Macao-born Vong Lok, whose family originated from Fujian<sup>26</sup>, might have been responsible for the construction of the former dock following the 1856 Bazaar extension, since Wang describes some activity in the 1860s regarding *"reclamations, property purchase, street layout and building construction"*<sup>27</sup> around that time. At the beginning of 1870, the dock was being managed by Ho Guai who, as mentioned, had just won the first concession for the Vae-seng lottery with his partner Apon. According to Wang, Governor Sérgio de Sousa had asked Vong Lok to undertake the reclamation and urbanization of the area, which he started on October 1870<sup>28</sup>, with Ho Guai as

<sup>23</sup> BG, n°3, January 18<sup>th</sup> 1873, 9, Government of Macao local ordinance n°7, January 17<sup>th</sup> 1873.

<sup>24</sup> BG, n°23, June 7<sup>th</sup> 1873, 92-93.

<sup>25</sup> (Wang, 1999: 224)

<sup>26</sup> (Lin, 2015: 24)

<sup>27</sup> (Wang, 1999: 224)

<sup>28</sup> (Wang, 1999: 225)

partner<sup>29</sup>. By 1875, with the New Bazaar finished, Vong Lok celebrated his 70 birthday with the inauguration of brand new Cheng Peng Theater<sup>30</sup>.

The district's main street, Rua da Felicidade (Fig. 6), quickly became Macao's most popular thoroughfare, known for its opium, gambling and prostitution houses, which military engineer Adolfo Loureiro would visit some years later: "*The so-called Chinese Bazaar is a district partly of modern construction, already with some regularity and hygiene, where there is extraordinary movement and liveliness. The streets are clean and aligned, though narrow. The houses are all built the same and are all alike, with shops decorated with large golden signs, written in Chinese and ornamented with flowers and lanterns.*"<sup>31</sup>

### **The Bazaar shophouse: a regeneration and development unit**

The distinctive feature of the new Bazaar areas, from 1856 through 1875, is the use of the shophouse typology as a real estate development unit. Its widespread construction, with minor variations, ended up creating a rather homogeneous urban landscape, as described by Adolfo Loureiro in 1896. In Fig. 7 these new constructions are easily identifiable on the right side of the street, well aligned and with their regular façades topped by platbands, in contrast with the old Bazaar buildings on the left side, one storied, irregularly aligned and with overhanging roofs.

This shophouse typology is described by Wang and Cheong as "*traditional Chinese street-houses*"<sup>32</sup> in a Guangzhou (Canton) architectural style<sup>33</sup>. Architect Carlos Marreiros uses a similar expression to describe the architecture surrounding the Cheng Peng Theater in the New Bazaar. Marreiros calls this "*traditional Chinese architecture*", following "*rigid principles of construction and design*", which accounted for the homogeneity of the "*Chinese city*"<sup>34</sup>.

Challenging this "traditional Chinese" discourse, I would argue that, even though the Bazaar shophouses were built using Southern China provinces' materials, construction techniques and visual codes, they were anything but traditional. In my view, this commercial and residential unit was, rather, a typological instrument for the maximization of house space density that most

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<sup>29</sup> (Lin, 2015: 36)

<sup>30</sup> (Lin, 2015: 24)

<sup>31</sup> (Loureiro, 1896: 317-318)

<sup>32</sup> (Wang, Cheong, 2010: 27)

<sup>33</sup> (Wang, Cheong, 2010: 18)

<sup>34</sup> (Marreiros, 1987: 91-92)



probably emerged in Macao in the context of the 1850s through 1870s government-sponsored property development. In this sense, it is somewhat Macao's version of the Shanghai *lilong* row house.

Literally meaning "community lane", the *lilong* was, from the second half of the 19<sup>th</sup> century and up to the 1950s, the dominant form of residential district in Shanghai<sup>35</sup>. It had originated in the British section of the International Settlement, established in the 1840s in the wake of the First Opium War, but it soon became the standard real estate development operation in the French and Russian concessions as well. Its row-housing typology, introduced "*to accommodate the surge of migrant inflows and overcrowding*"<sup>36</sup>, is generally associated with British "*traditional row houses: a series of short-width houses joined by common sidewalls*"<sup>37</sup>, the British Victorian poor tenements.

However, as researcher Nora Boyd points out<sup>38</sup>, the history of the *lilong* doesn't fit exclusively in the straightforward diffusionist narrative of the housing typology imported from Europe and disseminated in China through the "*quasi-colonial*"<sup>39</sup> networks of influence. Instead, Boyd argues that these complexes emerged in a context of particularly strong building pressure, where the figure of the local comprador emerged as contractor, "*engaged to solve the problem of housing, [looking to] regional forms and [employing] them to serve the mercantile project of rent collection*"<sup>40</sup>.

In a similar way, Chinese entrepreneurs Apon, Ho Guai and Vong Lok, for example, seem to have been among the first generation compradores/contractors of the new Portuguese sovereign Macao. Meeting government's ambitions with the funds and logistics to materialize them in the regeneration and expansion of the urban landscape, I believe that these were the men at the source of the new shophouse typology. As such, it must have emerged as the adaptation of Southern China regions' housing architectural and construction vocabularies, to the ensemble real estate development plan general scheme which, until then, had been virtually unpracticed (and impracticable, due to local Chinese authorities' building restrictions) in the region. Therefore, I argue that the emergence of Western settlements from the 1840s on, may be seen,

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<sup>35</sup> (Arkaraprasertkul, Williams, 2015: 138)

<sup>36</sup> Ibid.

<sup>37</sup> Ibid.

<sup>38</sup> (Boyd, 2019)

<sup>39</sup> (Arkaraprasertkul, Williams, 2015: 137)

<sup>40</sup> (Boyd, 2019)

not as the vehicle through which Western housing typologies and modern urban forms were introduced in Chinese “traditional” urban landscapes, but rather as the enabler agents whose liberal urban governance model allowed for a new type of ensemble property development to materialize. The combination of modern European urban planning, expressed in the Bazaar urban extension and regeneration plans by Portuguese military engineers in charge of public works, with Chinese entrepreneurs’ willingness to diversify their business portfolio would, in turn, lead to the regularization of the district’s urban fabric through the space optimization effort made possible by the new moderate-cost housing typology.

This idea is confirmed by the morphological analysis of the developed areas. In the same way the urban structure of the extension areas is clearly differentiated from the old urban fabric by a much more regular layout, which we observed in Figs. 1 through 5, Fig. 8 shows that the plot division in the new blocks is also geometrically regular, contrasting firmly with the more additive layout of the old Bazaar blocks and plots.

As had been the case with the Shanghai *lilong* in the 1980s, the accelerated demolition of the Macao harbor Chinese districts, especially from the early 2000s on, created a renovated interest in these “forgotten” urban structures. Raising awareness of their social role, new studies such as Wang and Cheong’s<sup>41</sup> endeavor to establish an inclusive narrative of urban heritage that aims at recognizing “ordinary” residential architecture, specifically one that might convey what can be construed as Macao’s “Chineseness”, alongside the predominantly Portuguese/European classified monuments. For, as the authors point out, “*neither included in the mainstream discourse of Macao’s historical architecture and urban spaces, nor included in the list of heritage buildings for protection, these Chinese urban patterns and historical buildings have been left out from efforts of urban conservation and are gradually being wiped out under the process of rapid urban development*”<sup>42</sup>.

This isn’t entirely true, as some parts of the Chinese Bazaar are indeed protected under local heritage legislation (Fig. 9). They remain, however, as does the whole of the Bazaar, entirely on the outside of the World Heritage main buffer zone. This is due to the choice of outlining the protected area, on its inner harbor side, by following the old 16<sup>th</sup> century shoreline which, as mentioned, established the Chinese vs. Christian unofficial city “border”.

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<sup>41</sup> (Wang, Cheong, 2010: 14)

<sup>42</sup> Ibid.

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

Reassessing heritage identities: Chinese  
entrepreneurship and the building of colonial  
Macao's urban landscape (1856-1875)

Regina Campinho

At the time the first UNESCO applications were filed, prior to the 1999 handover, European heritagization models favored a focus on the safeguard on significant buildings. Their respective urban (or otherwise) surroundings were only taken into account as “protection zones” which, therefore, only acquired heritage value through visual association with the exceptional building. Hence, it is only fair to admit that not only the Chinese district, but all of the Macao residential urban fabric was left out of heritagization considerations regarding the UNESCO application. But of course, being visually associated with the majority of the city's exceptional historical buildings, the Christian city “got in” the buffer zone, thus being, at least in theory, protected against the ravages of real estate development. The Chinese city didn't. And so, through lack of knowledge about the history of this urban landscape and the intricate ties it maintained throughout the centuries with its neighbor, its heritage value was severely undervalued, leading to a deficit of legal safeguard instruments to protect it.

## Conclusion

Disputes over issues of sovereignty, territorial limits and ground administration had been prevalent in Macao since the establishments of the Portuguese concession under a peculiar situation of administrative, as well as judicial, “*divided sovereignty*”<sup>43</sup>. At the time of the 1856 great fire, however, this status had been changing at an increasingly fast pace for the best part of the latter ten years, in the sense of asserting exclusive Portuguese sovereignty over the territory. As we have seen in the immediate handling of the disaster by Governor Guimarães, establishing full sovereignty had a fundamental expression in the control and management of the urban ground. Cadastral surveys, government-registered property titles, property taxes, building regulations, the idea of public prerogatives prevailing over private interest in the reconfiguring of the urban fabric, were all providential instruments to assert administrative legitimacy. Particularly set in the contested grounds of the Chinese Bazaar, this swift action in the wake of the fire had been of ground-breaking significance.

The focus of post-Opium War Portuguese colonial ambition on making its claim through regenerating and expanding Macao's urban landscape, mostly for the purpose of establishing property tax as a major instrument of financial viability, would make city building a proverbial

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<sup>43</sup> (Santos, 1998: 7) Boaventura de Sousa Santos is citing Pereira, Francisco Gonçalves (1991), Towards 1999: the Political Status of Macao in the Nineteenth and Twentieth Centuries, in Cremer, R. D., ed., *Macao. City of Commerce and Culture*, Hong Kong: API Press Ltd., 261-282.

land of opportunity for the local Chinese fortunes, much as it had through the Nanjing treaty ports, such as Hong Kong and Shanghai. The city thus became a fast-changing yet tightly knit entity, determined by the intricate and extremely multifaceted connections between each group's prerogatives and ambitions.

When assessing its value, therefore, I argue that one must strive to consider, not only reflections on identity, where the question "whose heritage is it?" brings with it ideas of otherness and borders, but dare to approach the city and its multilayered history through the inclusive "historic urban landscape"<sup>44</sup> point of view, where the question hopefully becomes "how does this urban and architectural form translate the human complexities in its genesis?". When it comes to landscapes fashioned by the colonial encounter, where this assessment often intertwines with identitarian ownership, this "borderless" approach may better steer scientific objectivity towards the recognition of universal value in the parts, leading to a more inclusive safeguard of the whole.

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<sup>44</sup> (UNESCO, 2011)

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

Reassessing heritage identities: Chinese  
entrepreneurship and the building of colonial  
Macao's urban landscape (1856-1875)

Regina Campinho

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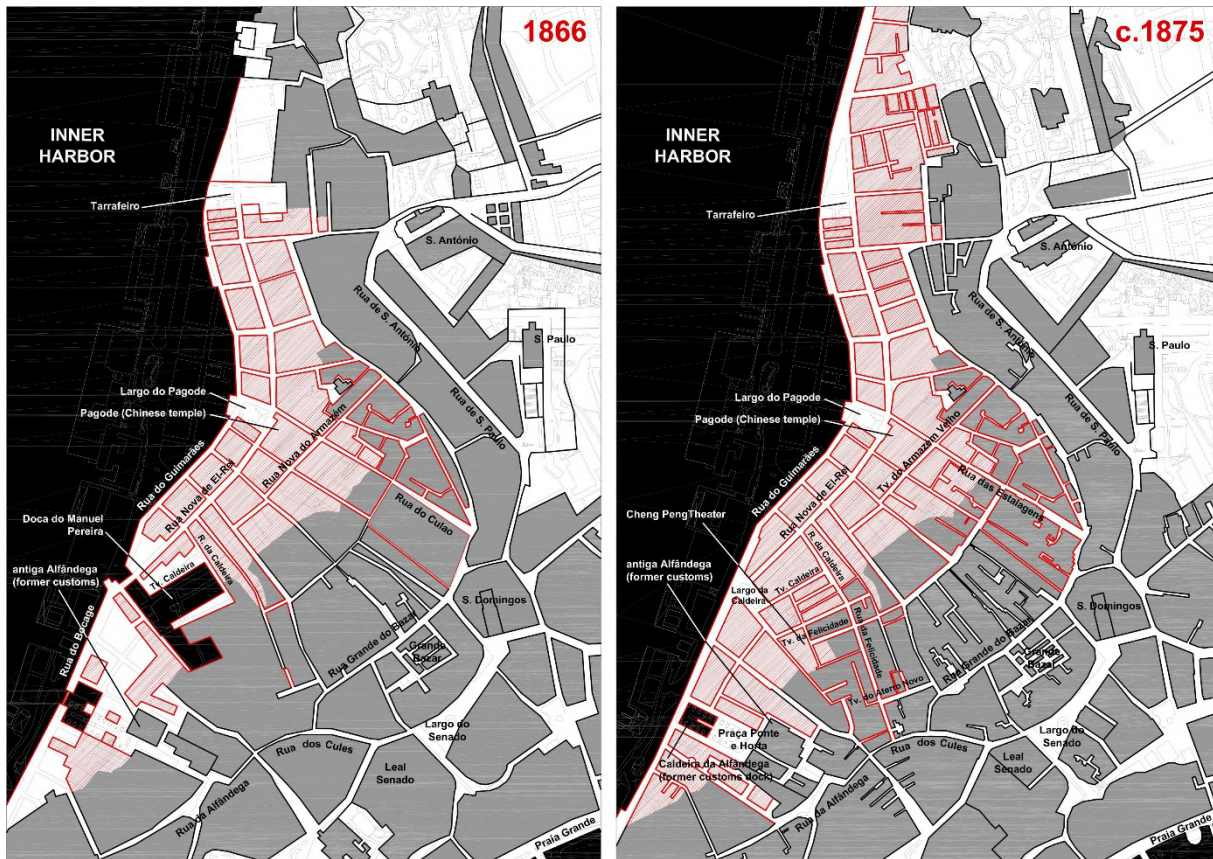


# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

Reassessing heritage identities: Chinese entrepreneurship and the building of colonial Macao's urban landscape (1856-1875)

Regina Campinho



**Fig. 4. Chinese Bazaar in 1866.** Reinterpretation of the 1866 historical map (“*Macao com as Ilhas e Costas Adjacentes feita por Mr. W. A. Read, C.E. 1865-6*”, Bibliothèque Nationale de France, Paris, France) superimposed on Macao’s 2015 cadastral map. **Fig. 5. Chinese Bazaar circa 1875.** Comparative reinterpretation of the 1866 (see Fig. 4) and 1889 (“*Planta da Península de Macau*” by António Heitor, National Library, Lisbon, Portugal) historical maps superimposed on Macao’s 2015 cadastral map.



**Fig. 6. Rua da Felicidade, Macao SAR, PRC.** (macaulifestyle.com)



# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

Reassessing heritage identities: Chinese entrepreneurship and the building of colonial Macao's urban landscape (1856-1875)

Regina Campinho



Fig. 7. "Chinese Bazaar, circa 1900", in Jorge, Cecília and Coelho, Rogério Beltrão (1993), *Album Macau 3: People, Places and Experiences*. Macau: Livros do Oriente.

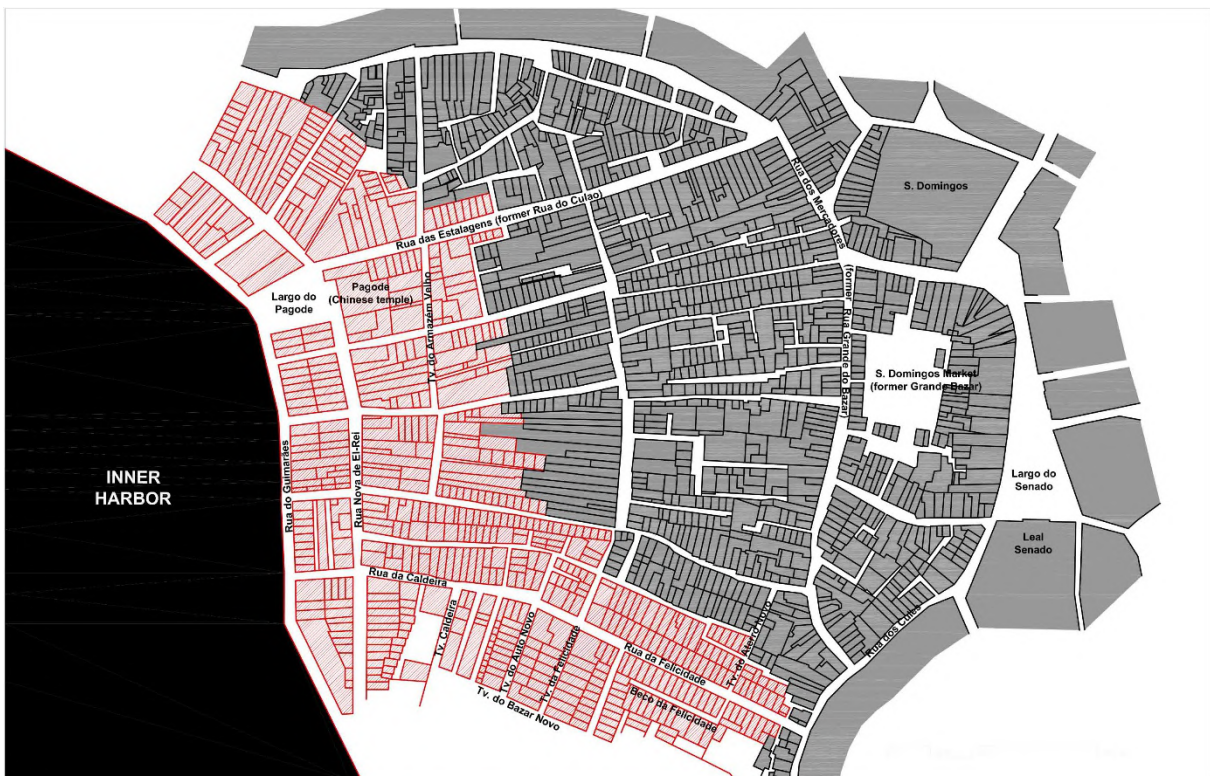


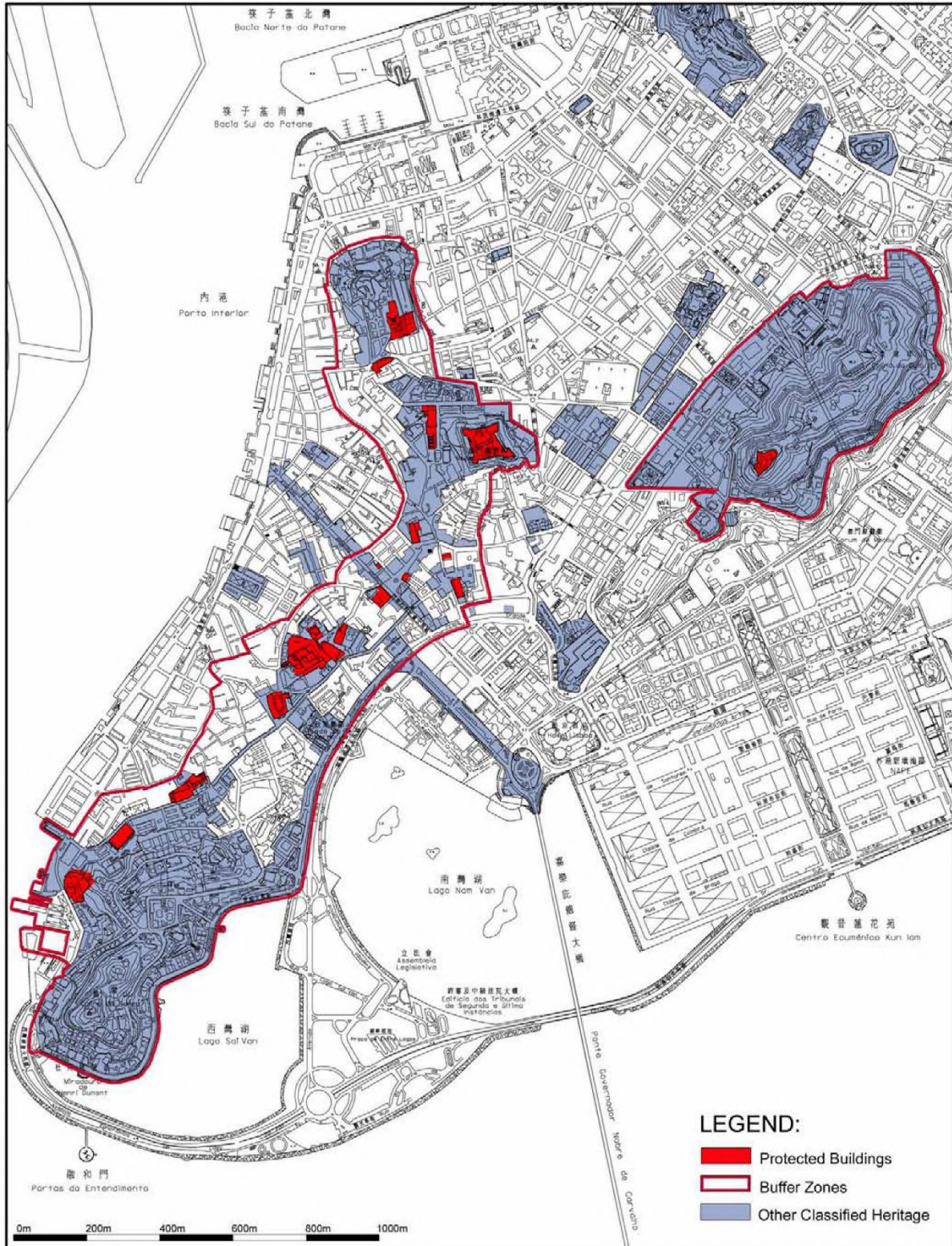
Fig. 8. Chinese Bazaar in 1903. Reinterpretation of the 1903 Bazaar historical map "Projecto de construção d'uma Avenida do largo do Senado ao porto interior e melhoramento de várias ruas do bazar china, Escala 1/500", c. 1903, MO/AM/CART/1/058, Archives of Macao, Macao SAR, PRC.



# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

Reassessing heritage identities: Chinese entrepreneurship and the building of colonial Macao's urban landscape (1856-1875)  
Regina Campinho



**Fig. 9.** “Protected buildings and other classified heritage in Macao” in The State Administration of Cultural Heritage of the People’s Republic of China (2004), *The Historic Monuments of Macao. Nomination for Inscription on the World Heritage List, Supplementary Document.*

## Network: The Global Economy of the Kolar Gold Fields 1883-1960

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### Abstract

This paper traces the materiality of gold production in the Kolar Gold Fields, one of the few, if not the only successful gold extraction industry in British colonial India. The Fields produced over 1.7 million pounds of gold over its lifetime, from the late 1880s till production came to a standstill in the 1960s. In this paper I talk about how gold mining was increasingly entangled within a network of speculative trading on the London Stock Market allowing land claims to be made by a Euro-American conglomerate of shareholders and investors. Consequently, the landscape of the Kolar Gold Fields was moulded through speculation that impacted both the underground and overground.

While the unseen pressures of market forces drove excavation works deep into the earth, agricultural workers were brought into its fold with the promise of employment and modernity. Backed by British and American capital, new infrastructures and technological innovations were constructed around the mines to assure the workers of the good that these projects would bring. I argue that these constructions did foster a new age of modernity, but not without the subtexts of social control and imperial authority.

Straddling the thin line of the earth's crust, the historical inheritance of the Kolar Gold Fields: the global political events, technological innovations and development efforts, economic change and the influx of labour are some of the key characteristics that created its built environment. Here, I assert that the nature of colonial economics behind the industry says much about the role of architecture within a larger network of "gray, obscured genealogies"<sup>1</sup>. These visible residues of Kolar remain embedded across various sites the world over, and continue to persist in contemporary governance driven by global market ideologies.

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<sup>1</sup> Foucault, Michel. 1977. "Nietzsche, Genealogy, History." In *Language, Counter-Memory, Practice: Selected Essays and Interviews*, edited by D.F. Bouchard, 139-164. Cornell University Press.



## Introduction

By the early twentieth century, the Kolar Gold Fields in the southern state of Mysore in colonial India had developed a sizeable industrial labour force to work the mines. The workforce consisted of both, migrant and non-migrant populations, and were categorised as Europeans, Anglo-Indians, natives, or surface and (under)ground workers. The period of docility that had prevailed in previous years however, was coming to a close. In 1930, conditions of labour on the fields had attracted international attention with the eighteen day strike against the institutionalisation of ‘fingerprinting’, a measure introduced by the mining companies to prevent theft and assist in identification.

To assuage any worker unrest on the Kolar Gold Fields, the Mysore government had pursued an aggressive infrastructural development model as a means of countering social instability since the early 1900s. Even as gold production declined in the 1920s, the construction of infrastructure spread out even farther over the lands. These booms cemented the fact that the Fields were certainly not bereft of any national or global implications, nor their financial or political motivations.

For one, the re-organisation of gold-mining along modern scientific methods pre-empted the construction of a strong system of transport infrastructure to support the movement of raw materials in an increasingly globalised imperial economy. Not only were the mines structurally supported by timber that was brought from different parts of the Indian subcontinent, but coal required to work machinery was sourced from parts of Bengal, Australia and England.<sup>1</sup> Secondly, as with many simultaneously occurring gold rushes around the world, international financial markets and speculative trading in gold drove investments for the development of a new urban centre around the mines – the Kolar Gold Fields city.

The KGF city, as it came to be known, was inscribed with multiple labour geographies, marked by the distinct differences in the native workers’ and their British supervisors’ housing, sanitation and recreational facilities. It is this paper’s aim to trace the materiality of gold production by charting these labour geographies. At the crux of this discussion is what the Kolar gold mining industry represented – modernity, development, mastery of nature, and most importantly, industrial-labour relations based on conditions of colonial difference. Secondly, the political problems of the Indian countryside, that is, the difficulty maintaining a steady stream of labour to work the fields, quelling (native) worker superstitions, sickness and diseases were all to be solved with the help of private-public alliances and a steady stream of

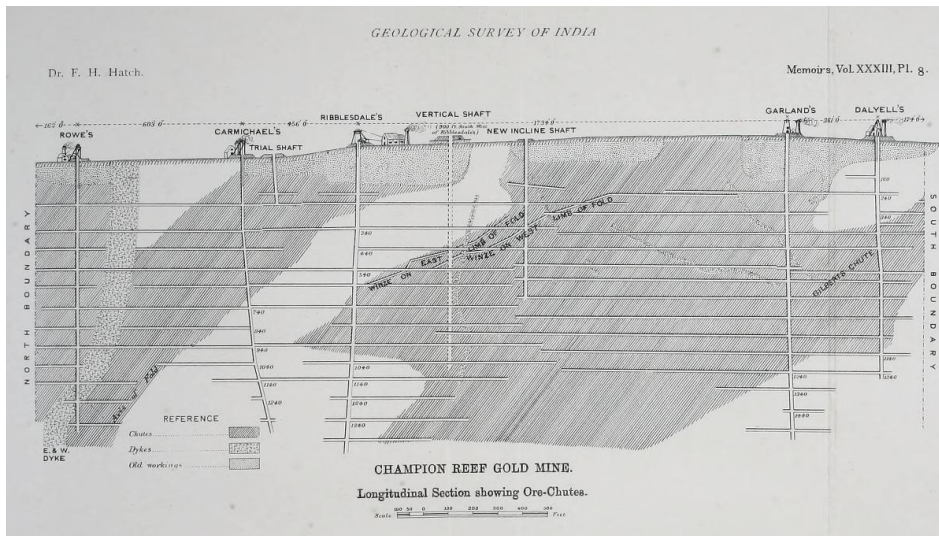
international funding for industrial development and reforms. Ultimately, the global truly became operative as a means of governance on the gold fields.

### **Financing Gold**

The First World War ravaged private investment in India, and continued on a slow decline into the late 1930s. Heavy taxation, a shortage of shipping and transportation and the relative shortage of free trade ideals offered private corporations little incentive to invest in the country. The lack of energy however, while having an enormous effect on various industries (especially textiles) in the depression years, largely circumvented the holdings of mining capital on the Fields.<sup>ii</sup> Instead, the companies' accounts followed a trend set by the global market on the London Stock Exchange.

It is this paper's contention that the prehistory of today's global financial policies can be evidenced in the colonial interests in gold mining on the Kolar Gold Fields. From the period roughly ranging from 1884-1956, production from the Kolar Gold Fields accounted for 97 percent of India's gold mining production. For one, the accelerated development of the Gold Standard in 1871 resulted in the rise of an international demand for gold and an increase in exploration to little-known areas in Asia and North America followed by a systematization of prospecting and mining knowledge.<sup>iii</sup> By the mid-1910s however, the reserves of gold were running out, coupled with diminishing returns from an overworked field.<sup>iv</sup> But global pressures to exploit the fields were unrelenting, even from local newspapers and commentators.

The longitudinal section of Champions Reef Gold Mine [Fig. 1], one of many mines in the Kolar region, and one of the deepest in the world, is crucial to demonstrate the systematization of knowledge. The painstakingly rendered section and the individuation of the mill-houses and headgear above makes the relationship of the over-ground and the underground a carefully curated one, providing more than necessary information to imagine the vast network of subterranean workings. The omission of intermediary developments between the mill-houses and overhead gear is particularly arresting, and it certainly does not document everyday spaces of housing, markets or recreation. The image denies any mention of the labour required to work this incredible network of shafts and tunnels, or of any infrastructural development that this industry spawned. The scale of millheads above ground is striking in comparison to the geometricized grid of underground workings that perhaps allows us to read the section as a metaphor for the vast and invisibilised global scale of the colonial trade.



**Fig.1.** Champion Reef Gold Mine: Longitudinal Section Showing Ore-Chutes. Dr. F. H. Hatch. From *Memoirs of the Geological Survey of India Vol. XXXIII. Pl. 8.* Survey of India Office, Calcutta, December 1900.

A scramble for prospecting licenses and leasehold or tenure rights was strengthened by the high exchange rate of money in the 20s, post war British India. The gold industry in particular afforded the metropole economic protection in an international gold standard system with market fluctuations driven by increased demands for the metal with low or stagnating supplies. The Fields were seen as a dependable source for maintaining the British controlled gold standard, and even during the global economic depression of the thirties, the massive repatriation of British capital was overcome through the exports of gold from India.<sup>v</sup>

Trading in gold however, brought other complications. Unlike other extracted resources, exchange rates fluctuated frequently. Within the international market, gold was a fragile commodity that needed technological innovations to support large scales of production to overcome these fluctuations. Such an interconnected industrial economy often accompanied ideas of territorial improvement that spawned the building of railroads, coal and electricity industries and machinery.<sup>vi</sup> The process of removing gold from the ground involved another kind of growth politics - urban development models and included housing and other infrastructure to support labourers and supervisory staff. Private speculative markets and state improvement visions were therefore a result of a conjoining of industrial and human capital, undertaken by the industrialist under the supervision of the state.<sup>vii</sup> It also meant that businessmen would speak more broadly about newer forms of modernisation, domestic comforts in tropical lands and the industrial aesthetics of this new environment.

## Creating Domesticity

Indeed, the spatial imperative of speculative markets was seen in the cascading number of developments at Kolar as private capital sought to establish a sphere of economic control through urban development.<sup>viii</sup> Speaking of the development surrounding the mines towards the end of the nineteenth century, James Grundy, the Inspector of Mines remarked,

Such a great industry must be a great benefit to the surrounding country, and that is clearly the case. It may be seen in the everyday life of the people: at the railway stations, especially at or near the pay days; at the daily and weekly bazaars; at the monthly *hát* or pay-days; and the springing up, with almost mushroom growth, of very large number of village huts; places for buying food and drink; and really fine and large buildings for a hospital, church, chapels, recreation halls and reading rooms, fine officials' bungalows, *musafir* bungalows and a frequently used *kachahri*.<sup>ix</sup>



Fig 2. Panoramic View of Kolar Goldfields, India. From *Gold, It's Occurrences and Geographical Distribution* (book) by J. Malcolm Maclaren. 1908.

The virtual mechanism of trading on the stock market and the profits they reaped were grounded in very material developments at Kolar. Significantly, speculative trading created an uneven urban development. Amenities were sporadic and unevenly distributed, and public institutions such as schools for native miner's children evaded private financing, instead, set up and run by charitable (missionary) organisations. As can be seen in the second photograph, 'A General View of the Ooregum section of the Kolar Gold Field' [Fig.3] taken more than ten years later,

the industry was certainly profitable despite the shortfalls of the War, and says very little of the falling employment, a decline in sales revenue and a diminishing production with a fixed gold standard.

Most importantly however, the photograph makes clear the growth of the industry was dependent on the circuits of political and social power. Financial transactions on the London Stock Exchange bore specific spatial implications that affected the daily life of both coloniser and colonised, and the new landscape of Kolar was dotted with exclusive bungalows and quarters for the European and Anglo-Indian employees, company houses and administrative buildings. The native workers of course, were far less fortunate.

The photograph, printed in the professional *Engineering and Mining Journal* for a foreign audience, purposefully fails to capture the houses or huts used by the native workers within the area. The carefully curated image bears a narrative of a certain kind of transformation taking place on the mines. The article proceeds,

The general appearance of the country all around is rocky and sterile, but the companies at work here have done much to improve the appearance of the area where the mines are situated. A long broad road has been cut out from one end of the field to the other, and this is always kept in splendid condition. There are smaller roads branching from the main roads to the bungalows and the mines. The bungalows of the officers are well built, and in most cases the inhabitants have spent considerable time in making gardens around them. These are in marked contrast to the surrounding country, and were only made possible by bringing large quantities of soil from a distance... The gardens on these gold fields are indeed a credit to the people, and they do much to give relief to a district the physical attractions of which are not many.<sup>x</sup>





A GENERAL VIEW OF THE OOREGUM SECTION OF THE KOLAR GOLD FIELD, SHOWING THE MODERN EQUIPMENT AND UP-TO-DATE COMPANY HOUSES

**Fig 3.** A General View of the Ooregum Section of the Kolar Gold Field, Showing the Modern Equipment and Up-to-Date Company Houses. From *Romance of Gold Mining in the Mysore State* (journal article) by E.W.T. Slater. 1920.

Why would a professional mining journal concern itself with the domesticity of the house and garden? Indeed, the article evidences the influence of the mining companies, both on the Fields, and in transnational print media to shape the architectural imaginations of the colonial audience. To be sure, the building of imperial power (through private capital) rested on transforming life for the European administration as well as the native workers. These ‘quality of life’ appeals certainly needed to be promoted to the western voyeur. The photograph makes evident a distinction between race, class, and urban development on the fields as the article continues,

“[I]nstead of the roughness usually associated with mining life there is a refinement and even suggestion of luxury that would surprise most visitors to Kolar for the first time. A fine club has been built, and in connection with it arrangement have been made for tennis, golf, and other sports. The hospital is one of the best in South India... no expense has been spared in the care and treatment of either European or Indian workmen. This expenditure has more than justified itself, for it helps to create the necessary confidence between master and men...”

For the coloniser, domestication was both a political and economic issue that was inextricably linked in spatial production.<sup>xi</sup>



**Fig 4.1** Kolar Mission House (top left). From *Ellis Collection: Album Depicting Missionary Life in South India*. India Office Select Materials Photo 304/(128), British Library.

**Fig 4.2** Cooly Hut on the Gold Fields Mission House in Background (bottom right). From *Ellis Collection: Album Depicting Missionary Life in South India*. India Office Select Materials Photo 304/(130), British Library.

The photographic collection of Reverend Robert Ellis, a Wesleyan Methodist minister working with the Christian missionary organisation on the fields and in the city of Bangalore, captures the inconsistencies in the pattern of deployment of this new urban development. The photographs, possibly taken before 1905, is presented as a series of collages, provide an insight to the early years of the newly planned mining town. the photograph of the Kolar Mission House [Fig 4.1] in the top left, a double-storeyed brick building bears stark contrast to the Superintendent's bungalow, let alone the photograph 'Cooly Hut on the Gold Fields Mission House in background' [fig 4.2] in the bottom right corner. The building, fenced crudely with a wood post gate, certainly lacks ornamentation - raised on a plinth, the main congregation space is inset beyond the projecting verandas. The lack of any form of adornment that is generally associated with public buildings built in the colonial style harks to the ways in which the spectacle of public development was a carefully curated practice. Development could never extricate itself from the spatial manipulations of colonial difference.



**Fig 5.** The Superintendent's Bungalow – Mysore Mine – Headquarters of E.T. & H.C.T. Dec 1894-Feb 1895. Photographer Unknown.

But there appears to be another underlying narrative in the provision of domestic comforts for the British official. The companies, with the support of the state, sought to enact paternalistic promises of security in the wild country, a joint vested interest in harnessing a loyal British subject to oversee work on the mines.<sup>xii</sup> The photograph, ‘The Superintendent’s Bungalow’ [Fig. 5] broaches the colonial state’s interest in extracting that sentiment. Captured standing in the garden of an archetypal bungalow, A. Llewellyn, superintendent of the Coromandel Mining Company and R. Hancock, superintendent of the Mysore Mining Company are imbricated in the vocabulary of imperial domesticity and authority that marked the relationship between master and native servant. The photograph foregrounds the entryway to the bungalow, separated from an access road by a garden, bound by manicured hedges. The emphasis on the garden with the sizeable bungalow behind roots the notion of organisation and ‘civilisation’, as well as the creation of security in the form of the ‘home’ - access to a new set of tastes, desires and aspirations as British subjects on Indian soil.

### **Making Spectacular**

By the early 1900s, the Kolar Gold Fields were affected with the imperatives of modernisation demanded by industrial growth that led to the establishment of large infrastructure projects such

as railway networks and electrical transmission lines. Two of the largest infrastructural state works servicing the Kolar Fields were undoubtedly the Kolar Goldfields Railway and the Cauveri Irrigation Project that allowed electric power transmission to the area. These state works however, were not excluded from private investment, and the Government was able to turn to the transnational private investment firms for undertaking its construction. As businessmen began to take a more active role in politics, the State Government increasingly saw their involvement as indispensable, helping consolidate power through the political apparatus of British and American capital. As the American economic advisor, Herbert Feis, noted, “[T]here was, besides, a general faith... in the orderly economic development of lands under British rule and in their freedom from political disturbance... investment in the empire [which] gave the act a faint touch of virtue; the economic strengthening of the rest of the empire through capital of the home country conveyed a promise of greater domestic political security and commercial benefit.”<sup>xiii</sup>



**Fig 6.** Kolar Gold Fields: A General View of the Mines. From *The Reading Collection: Views of Mysore*. India Office Select Materials, Photo 10/29(27), British Library.

Apart from securing British capital, there were other reasons for the rush to construct large infrastructure projects. Inspired by the success of the Aswan Low Dam, the Niagara in Canada, and the Lauffen Falls in Germany, the Cauveri Falls electrical power transmission project was deemed to be the largest undertaking of its kind in the British Empire, designed specifically to

transmit energy for the working of the gold fields. The construction of the river works, channels and transformer stations, undertaken by the Mysore Public Works department was, however, interrupted with the problem of labour acquisition. The solution to the problem certainly displayed imperial resourcefulness, as reported in the following quote in the journal *The Engineer*:

*“It appeared that the natives believed that the god of the Falls was very irate at the idea of any of the river water being diverted from his falls, he therefore informed the people, through a devotee, that anyone assisting in the undertaking would die forthwith. It so happened that malarial fever was very prevalent at the time, and added to this an outbreak of cholera occurred, the result being that the workpeople disappeared in all directions, and it was only with the greatest difficulty that other could be procured on the assurance that the new god, being imported in the shape of the machinery, was much stronger than the old one who guarded the Falls.”<sup>xiv</sup>*

Mechanisation and new infrastructure development in other words, became an instrument for cultivating authority over native workers. Implicit in comments such as the one above, was the power that embodied new machinery, that alluded to both, a masculine productive potential, as well as the ability of the State (in the form of the Public Works Department) to penetrate and appropriate social relations and beliefs.<sup>xv</sup> These development projects defined new social spaces amongst the mining labour. Not only were these projects deemed necessary for the advancement of industry, but were considered essential for the material prosperity and education of the mining population. A New York based magazine concurred, *“The industrial missionary will achieve results of almost incalculable value for the saving and ennobling of India’s common life.”<sup>xvi</sup>*

The rhetorical commitment to the spectacle of infrastructural development was increasingly representative of the power to expand and bolster political authority.<sup>xvii</sup> As with the Cauveri electric transmission project, railway infrastructure to the gold fields were considered to be essential to the organisation and efficiency of the mines as integral to State trade and commerce. For that reason, the construction and maintenance of the broad gauge railway was undertaken by the Madras and Southern Mahratta Railway Company, Ltd, based in London, under the Kolar Goldfields Railway Contract of 1902. The linking together of public infrastructural



development and British economic enterprise sustained an expanding era of engineering and urban development on the Fields.



**Fig 7.** Tailings Dump, Champion Reef Mine, Cauvery Power Electrical Transmission Lines in Foreground. From *Lieut-Colonel John Lloyd Thomas Jones (Indian Medical Service) Collection: Album of miscellaneous views and portraits*. India Office Select Materials, Shelfmark 578/2, British Library.

The exponential increase in native workers and migrants created other incentives for private investors to provide infrastructure, primarily, the protection of British capital by quelling worker displeasure - “[t]he extensive industrialisation... is in no small measure... to create acceptable working conditions for [underground, read: native] gold miners.”<sup>xviii</sup> Certainly, companies attempted to partake in pacifications schemes to inculcate a loyalty to the industry despite forms of discontent that periodically arose amongst the mine workers.

Despite these declarations, workers continued to occupy a liminal position. Take for example, the photograph ‘Ooregaum Camp General View from S.E’ [Fig. 8] that captures a group of mine workers stand in front of their tented, thatched residences along with their families.<sup>xix</sup> The photographer seems to capture the unevenness of the ground, a rocky outcrop amongst which the thatched huts emerge almost as a corollary to the rough character of the migrant workers. With the high perspective looking over the huts, the photographer juxtaposes the rational order of industry arising in the background with the unplanned chaos of inhabitation. Apart from offering an ethnographic insight to the lower classes of native workers, the photograph’s large depth of field suggests a spatial distinction of the main mine works from the camp. Here, the

photograph resonates with the suggestion of the workers' dependency on the industry, while being tangential to its economic and infrastructural development.



Fig 8. Ooregaum Camp General View. From SW 33. Photographer Unknown.

## Conclusion

As Foucault has noted, genealogy is never completely apparent, obscured by multiple scratched documents, copied many times.” This paper highlights one aspect of the genealogy of the Kolar Gold Fields, whose landscape was seen by prospectors, the Geological Survey of India, shareholders and travellers for its financial potential. With the rise of trading on the London Stock Market, claims to this land were increasingly deterritorialized - land was, of course, owned by the State of Mysore, but its profits were reaped by thousands of investors miles away in their English homes.

The spatial consequences of this system of governance are evident, and had far reaching effects in the early 1900s. The industry not only brought migrants to the growing region, but its expansion was funded through a system of international investments in the garb of organisations interested in infrastructure and research in public health. The spectacle of development perpetuated distinct spatial inequalities and exclusions, and this paper contends that the alignment of global and local administration shaped the environment of Kolar. This was not a

simple task. Development initiatives were an immense project of ‘making spectacular’ - by popular media both in India and the West.

Consequently, documentations of the industry drew attention to the exuberance embodied by modern technology driving a cyclical narrative of events: the need for symbolic activity spurred investment in development and infrastructure, furthering a visual projection of imperial might that obscured the material conditions of mining work. This display of authority was partly successful in securing a stable workforce until a national uprising for independence in the 40s. What is central to this paper is the underlying discourse on the flow of capital, its forms of spatial production, and its effects on managing and ordering populations whether in the name of welfare or profit. An analysis of the landscape and spaces of the gold field therefore reveals it to be a site of intense contestation where workers – both British supervisors and native Indians, were produced, and their loyalties to the industry negotiated. In conclusion I’d like to say that a recognition of how these histories have shaped populations is in order to urge us to think of the effects of spatial production and practice.

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

Network:  
The Global Economy of the Kolar Gold Fields  
Shivani Shedde

<sup>i</sup> J. Bernard Mannix, "The World's Great Gold Mines," in *Mines and Their Story*, (London: Sidgwick and Jackson Ltd, 1913), 52-73.

<sup>ii</sup> The gold mining industry was no significant contributor to British revenues, a task left to the cotton and jute industries. In fact, India's significance in British capital flow was because it proved to be a good supplier of cotton (and made up a significant aspect of British imports), as well as a good market for British manufactured cotton goods (British exports). Before 1914 then, India derived most of its foreign investment from the UK, and exports to India allowed Britain to pay off its deficits with continental Europe and the US. However, during the interwar years, these trading links diminished (for the reasons stated) as well as internal domestic restructuring and industrial labour strikes. It is then that the US replaced Britain as the world's major international lender, although Britain remained a significant political force in India and Asia in general. See: Geoffrey Jones, and R.P.T Davenport-Hines, *British Business in Asia Since 1860*, (Cambridge University Press, 1989).

<sup>iii</sup> William A. Berridge, "The World's Gold Supply," *The Review of Economics and Statistics* 2 (1920): 181-201.

<sup>iv</sup> "Notes on Trade and Industry Abroad," *New York Times*, December 16, 1923. According to the article, the gold production on the Kolar Gold Fields had gradually declined from 520,000 ounces in 1917 to 391,000 in 1921.

<sup>v</sup> Amiya Kumar Bagchi, *Private Investment in India 1900-1939*, (Cambridge: Cambridge University Press, 1972).

<sup>vi</sup> As economists Stephen Broadberry and Mark Harrison describe, the concept of the territorial economy (particularly during the first World War) was best measured by taking into account populations and Gross Domestic Products, and natural resources available across the territory, where the GDP was measured by a territory's development level.

<sup>vii</sup> In a slight deviation from this narrative, scholars of the American gold rush have noted that the development of the mining industry grew more out of individual speculation than a provision of a critical commodity for a growing nation. As anthropologist and urban planner Stephanie S. Pincetl observes, the unfolding of development (particularly in California) was a result of a 'negotiation' between capitalist development and market speculation, and the state's vision, planning and coordination of ambitious proposals. See: Stephanie Pincetl, *Transforming California: A Political History of Land Use and Development*, (Baltimore: John Hopkins University Press, 1999).

<sup>viii</sup> As anthropologist Daniel Miller notes, governance is increasingly being driven by transformations in the market and the economy that allows forms of speculative modelling - the ways in which multilateral organisations, funding agencies, states and economists have applied theories of market and global flows of economy with 'unprecedented' power. While his observations are primarily based on the modern state post Thatcherite and Reaganite political economies, his conceptualisation on virtualism points to the ways in which economics and market forces have "the authority to transform the world into its own image" through the "imposed modelling of reality", which resonates with the development of the Fields. See: Daniel Miller, "Conclusion: A Theory of Virtualism," in *Virtualism: A New Political Ecology*, ed. James Carrier and Daniel Miller, (Oxford: Berg, 1998), 187-215.

<sup>ix</sup> James Grundy, *Report of the Inspection of Mines in India for the Year Ending the 30th June 1895*, (Calcutta: Office of the Superintendent of Government Printing, India, 1896).

<sup>x</sup> E.W.T. Slater, "The Romance of Gold Mining in the Mysore State," *Engineering and Mining Journal* (August 14, 1920): 302-305.

<sup>xi</sup> As various scholars have noted, domesticity was a key site for imperial anxiety and was often placed in wider debates surrounding identity, nationality and imperial responsibility. As colonial urbanism was founded on forms of segregation, attempts of averting notions of domestic 'degeneracy' (through intermixing of the two or more races) was often accomplished by locating the domestic within a narratives of exclusive 'Britishness'. See: Alison Blunt, *Domicile and the Diaspora: Anglo-Indian Women and the Spatial Politics of the Home*, (Blackwell Publishing, 2005). The provision of amenities and social comforts has also been seen as the State's foray into sustaining social cohesion necessary for the preservation of colonial power and privileges as colonisers, and as Dane Keith Kennedy states, "Britishness and Europeaness are socially and historically constructed identities", contingent on their circumstances – in this case, the maintenance of cultural difference on colonised soil. See: Dane K. Kennedy, *The Magic Mountains: Hill Stations and the British Raj*, (University of California Press, 1996).

<sup>xii</sup> Historian C.A. Bayly talks about a surge of British support for a wide range of constitutional reforms in India since the early half of the nineteenth century, which included interests in civil liberty for the native subject as well as an interest in free market reforms. See: C.A. Bayly, "Rammohan Roy and the Advent of Constitutional Liberalism in India, 1800-1830." *Modern Intellectual History* 4, no 1(2007): 25-41.

<sup>xiii</sup> Herbert Feis, *Europe, The World's Banker 1870-1914*, (Cambridge University Press, 1961).

<sup>xiv</sup> "The Cauveri Falls Electrical Power Transmissions," in *The Engineer* (June 6, 1902): 553-556.

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

Network:

The Global Economy of the Kolar Gold Fields

Shivani Shedde

<sup>xv</sup> Talking about the interpenetration of forms of productivity and an ethic of work, anthropologist Laura Bear draws on histories of labour on the river Hooghly in Bengal to argue that productive potentials are often realised through a construction of relationships between the material, imminent and transcendental power. She points to the (bureaucratic) power of the State to take on the task of protecting against a volatile market by introducing incentive through forms of personal relationships. She says, "These ethics are visceral and affective... they emerge from acts of labour as senses of workmanship. See: Laura Bear, *Navigating Austerity: Currents of Debt along a South Asian River*, (Stanford University Press, 2015).

<sup>xvi</sup> Arthur Bruce Moss, "Big Business in India," in *World Outlook* 5 no. 1 (1919): 22-23. The project also benefited General Electric, set up not long before in 1892. As the *Wall Street Daily News* stated, "The report of E. W. Rice, third vice-president, states that many new long distance transmission plants have been installed... A notable instance given is that of the transmission of 6000 horse power from the falls of the Cauvery River to the Kolar gold-fields in Mysore, India..." See: "General Electric," *Wall Street Daily News*, April 24, 1903.

<sup>xvii</sup> In a similar vein, historian Manu Goswami notes that, "There is a strong resonance between Lefebvre's emphasis on the appearance of space as abstract and historically specific misrecognition rooted in the phenomenological experience of capitalism and Walter Benjamin's reading of 'empty homogenous time' as the utopian self-presentation of capital and associated teleological images of progress." She thus argues that spatial image-making is reproduced through capitalist ideology that supports Lefebvre's thesis of modern space-time as simultaneously global, fragmented and hierarchical. See: Goswami, *Producing India*.

<sup>xviii</sup> Geoffrey E. Ffrench, "The Role of Occupational Health Services in Economic Development," in *Occupational Health*, by Geoffrey E. Ffrench, (Lancaster: Medical and Technical Publishing Co. Ltd, 1973).

<sup>xix</sup> Camps on the mine, housed day-wage labourers rather than permanent employees, and consisted of large migrant populations from the surrounding states.



## Construction, Maintenance, and Forced Labour: Laterite Roads in Mozambique and Angola

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### Abstract

The term “low cost” in colonial history in Africa usually refers to the low price paid European colonisers paid for the lands they acquired, or to describe the adaption of services and infrastructures to a price that under-developed areas could afford, as well as the use of local materials. Low cost also meant that some of the production costs for road building and maintenance were omitted, like the forced labour carried out by Africans. In this paper I deal with the use of a local material, laterite, to the construction of the so-called “low cost” roads by Portuguese engineers in Angola and Mozambique, in the late colonial period (1950s, 1960s). In this case, use of laterite was related with:

- 1) the beginning of the collaboration of civil engineering laboratories from the metropole and those of Angola and Mozambique. In the 1950s, some Portuguese engineers started a study on the use of laterite in roads, through a collaboration between the Portuguese Civil Engineering Laboratory (in the metropole) and the Angola Engineering and Mozambique Soil Mechanics Laboratories. In the 1960s, following the beginning of the colonial war, the investment in public works in the colonies increased substantially, not only in institutional, through these laboratories and the creation of road administration organisations in Angola and Mozambique, but also in financial terms.
- 2) the use of forced labour, which played an important part in the history of road construction and maintenance in Guinea, Mozambique, and Angola as well as in African mobility history. The use of materials such as laterite (natural local material used for gravel road surfaces), which was difficult to maintain, could well have been justified by the (“low cost”) “abundance” of manual labour available, which was included as a silent variable in the planning and administrating of these roads.

Using a history of technology approach, I will follow the development of these technical collaborations through the reports written by the proceedings of the World Road Congresses (PIARC) that have addressed the use of laterite to understand how the silence regarding the use of forced labour was framed by a technopolitical agenda that supported a less visible part of the war effort aiming at sustaining Portuguese colonial rule over those territories.

**Keywords:** Portuguese Late Colonialism; Laterite; Road Engineers; Forced Labour

## Introduction

Laterite is a term both used to call a rock type and a type of tropical residual soil that is mainly used for road pavements (both as base and as sub-base) but can also be used as a building material (bricks for buildings) and for agronomic purposes (restriction of root development). Laterite is produced by intense weathering - physical disintegration and chemical or biological decomposition of bedrocks - in tropical areas, such as parts of Africa, South America, India, or Australia. Tropical areas' climate characteristics (high temperatures and abundant rain, for instance) increases the intensity of the weathering process, being the climate one of the major factors for laterite formation. It is a natural material with high concentration of hydrated oxides of iron or aluminium, normally with a red colour (but other colours can also be found, such as ochre). It attracted a great interest in the mid-twentieth century, having been studied by several research groups, mainly from the specialization of geotechnical engineering (within civil engineering), but also by agronomists. The term laterite is not consensual and its definition has been controversial, but it is still used nowadays (Stoops et al., 2010).<sup>1</sup> Lateritic materials are also still being used and researched to this date, because its use is considered nowadays to be sustainable, both environmentally and economically in certain tropical areas where it exists (Dutra, 2014, Stoops, 2003, Ricardo et al., 2003).

In this paper I am looking at how laterite, a local material in Angola and Mozambique, have been made a scientific object and a (colonial) natural resource, in the post-World War II period, by Portuguese engineers who wanted to use it for road building. By becoming a scientific object, it fostered the collaboration between engineers and laboratories from the metropole (mainland Portugal) and the then Portuguese colonies of Angola and Mozambique, which produced knowledge on laterite's properties and "behaviour". By becoming a colonial natural resource, its utility became connected with the so called "low cost" roads built in Angola and Mozambique, on the one hand because it was a local inexpensive material and, on the other hand, because it was used in tandem with the use of another local "resource": forced labour.

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<sup>1</sup> For instance, the classification of soils of the United States of America (USA) Department of Agriculture has included laterite in the term "plinthite" (Dutra, 2014: 18). Portuguese pedologists also contributed to the discussion on the definition of laterite and lateritic soils, namely Joaquim Vieira Botelho da Costa, who headed the pedological mission to Angola of the Overseas Research Board (*Junta de Investigações do Ultramar*, JIU) in the 1950s (Ricardo et al., 2006) I thank Cláudia Castelo for having shared with me this reference.

### **The Portuguese intra-imperial research on the use of laterite in road construction in Angola and Mozambique**

The investment on scientific and technical research in the African colonies was a drive of the so-called “second colonial occupation” of the immediate post-world War II period (Low et al., 1993, Castelo, 2018). Research on African soils, and particularly on laterite, was not exception and was carried out in the fields of agronomy, geology and civil engineering (particularly the subfield of geotechnical engineering). Research on laterite as a useful resource became more prominent in the field of civil engineering. Samples were collected from the tropical areas and analysed either locally or at engineering laboratories at the colonial metropolises to test their chemical, physical and mechanical characteristics. Its “improvement” and “stabilisation”, particularly for road pavements was then also researched, namely by using other materials, such as cement or limestone. One of laterite’s more well-known characteristics was its hardness – the term “laterite” was coined in India in early nineteenth century after the Latin word *later* (which means “brick”) because some lateritic materials were so hard that they would enable getting bricks out of them – but the difficulty in predicting and reproducing its mechanical and chemical behaviours, which was called the “problem” of laterite soils (Gidigas, 1976: 303-317), has led to further research and adaptation of essay norms in road construction. Due to the specificities of the laterite, both the internationally used American norms AASHTO and ASTM (American Association of State Highway and Transportation Officials, and American Society for Testing and Materials, respectively) on the preparation of samples and geotechnical essays had to be adapted because they did not include specific norms for laterite soils. Drainage and the quantity of water was an issue in considering the characteristics of the laterite’s “behaviour”. In the case of the laterite being used as part of a sub-base of the pavement of the road, this last layer would normally be waterproofing; but in the case that laterite was the main pavement, not being waterproofed, this revealed to be an undesirable situation, because water would affect soil compaction and the stabilization of the road. Lack of good drainage, corrugation and dust were also negative points associated with laterite earth roads. The research efforts aimed at addressing these problems and fostered both intra-imperial and inter-imperial and regional scientific collaboration.

The research on the African soils by the Portuguese metropolitan institutions was initially developed by metropolitan agronomists in pedological missions, namely in the early 1940s in Angola (Ricardo et al., 2006). The research done by metropolitan civil engineers would start a

little bit later, and would be backed on the experience that civil engineers coming from the metropole and working on Angola and Mozambique already had, particularly in using laterite in road construction (Nascimento et al., 1955: 1, 2). The beginning of the collaboration between the three laboratories from metropolitan Portugal, the National Laboratory for Civil Engineering (*Laboratório Nacional de Engenharia Civil*, LNEC), Angola, the Engineering Laboratory of Angola (*Laboratório de Engenharia de Angola*, LEA) and Mozambique, the Laboratory of Materials Testing and Soil Mechanics (*Laboratório de Ensaios de Materiais e Mecânica do Solo*, LEMMS) for the study of laterites was proposed by engineer Mário Ferreira Mendes in 1953. Ferreira Mendes was then General Inspector for Overseas Development, working for the Portuguese Ministry of Overseas and had worked in Mozambique since the 1920s (Processo individual de Mário José Ferreira Mendes, 1910-66). He became one of the experts on the so called “low cost” roads (in which local materials, such as laterite, were used) and a member of the Permanent International Association of Road Congresses (PIARC) technical subcommittee on low cost roads established in 1953.

The aim of this research was to use laterite, a local material in some regions of Angola and Mozambique in the construction of buildings, roads and airports runways because, as stated by Ferreira Mendes, this “*largely understudied material*” constituted “*a considerable part of our overseas provinces of Guinea, Angola, Mozambique, and India*” and “*a vast field is to be opened (...)*” (quoted in Nascimento et al., 1955: 1). The Minister of Overseas would approve this proposal in 1954 and in 1955 the three laboratories (LNEC, LEA and LEMMS) would agree to cooperate on laterite research, particularly in its application to road construction (Nascimento, 1959).<sup>2</sup> In the following years, LNEC would increase its cooperation with institutions that did research on the “overseas”. In 1957, a collaboration between LNEC and the Overseas Research Board (*Junta de Investigações do Ultramar*, JIU) was started to study geophysical prospection methods applied to civil engineering problems in the so called “overseas” (for roads, ports, dams and buildings construction, prospection of water, etc.) (Nascimento et al., 1965).

Initially, there were few occasions when the engineers from these three laboratories would travel on purpose either to metropolitan Portugal, or to Angola and Mozambique. One LNEC

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<sup>2</sup> LNEC work plan was approved by the Overseas State Sub-Secretary on February 25, 1955 (Nascimento et al., 1957: 1).

engineer travelled from Lisbon to Luanda (Angola) and Lourenço Marques (nowadays, Maputo, in Mozambique) in May and June 1956, to visit the laboratories and road construction works, proposing some adjustments to the research cooperation (Nascimento, 1959: 1, 2, Nascimento et al., 1957 Anexo I (mission to Angola and Mozambique). Anexos II, III (work plan - adjustments)); and LEA and LEMMS engineers travelled to Lisbon to participate in a meeting held at LNEC in 1959 to discuss the results of the first stage of this collaboration (Castro, 1962: 1, 2).

Besides these meetings, they have met on occasion, profiting from travelling to international conferences. One was the Xth PIARC World Road Congress held in Istanbul in 1955. Engineer Ferreira Mendes, other “overseas” engineers such as LEA engineer Ferreira da Silva, and LEMMS engineers Pereira dos Santos, and LNEC engineer Úlpio do Nascimento, met there to prepare information exchange between these laboratories and to decide how to move forward with research (Nascimento et al., 1955: 3, 4). They met again in Luanda in 1957, during the first Road Meeting of Angola and, in 1958, also on the “Specialists’ meeting on road research” organised by the Scientific Council for Africa South of the Sahara (CSA) (and supported by the Commission for Technical Co-operation in Africa South of the Sahara, CCTA).

What circulated were the engineers themselves, and also around 40 samples of laterites, considered to be representative, travelled from Angola (22), Mozambique (11), India (7), and Guinea (2) to Lisbon, mostly between 1956 and 1957, to be analysed chemically and physically at LNEC (Nascimento, 1959: 1).

PIARC World Road Congresses were both a source of inspiration and an arena where these experts expected to present their results, especially in the discussion on the soil mechanics and on the “low cost” roads, which started being treated as a separate “Question” from the Lisbon Congress, held in 1951, on (Sousa, 2016). Having the first big report on Portuguese “overseas” laterites ready in 1959 matched the XIth PIARC World Road Congress, which was held in Rio de Janeiro, where engineers from LNEC, LEA and LEMMS aimed at presenting the results of their collaborative work (Castro, 1959: 1).

The collaboration between LNEC, LEA and LEMMS would proceed in the 1960s, insisting on the importance of laterite materials to the construction of roads, analysing more samples and



proposing adaptations to technical norms (namely those of AASHO).<sup>3</sup> In 1963, the engineer Manuel Pimentel dos Santos would promote regular meetings between LNEC, LEA and LEMMS (Processo individual de Manuel Pimentel Pereira dos Santos, 1944-74). The collaboration of the three laboratories would be eventually be institutionalised in 1965 through the creation of the Superior Council of the Civil Engineering Laboratories (*Conselho Superior dos Laboratórios de Engenharia Civil*, CSLEC) to coordinate their activities (Decreto-lei n° 46370, 1965). The results of this collaboration between the civil engineering laboratories of Portugal, Angola and Mozambique regarding research on the use of laterite for road construction would be synthetized in a paper presented to the International Conference on Soil Mechanics and Foundation Engineering held in Mexico in 1969 under the title “Portuguese studies on engineering properties of lateritic soils” (Laboratório Nacional de Engenharia Civil et al., 1972). The inclusion of studies on Angola and Mozambique under the “Portuguese” label was an important political stance in this time of late colonialism, marked by the colonial wars, which would last until the “Carnation revolution” in Portugal metropole that ended the dictatorship in 1974.

The work “Portuguese studies on engineering properties of lateritic soils” (1969), based on 15 years of collaboration between civil engineering laboratories of Portugal, Angola and Mozambique was cited in other works on laterites (see, for instance, Gidigasú, 1976, Charman, 1988) and is part of a process that contributed to the construction of the Portuguese National Laboratory for Civil Engineering (LNEC)’s expertise as an “authority” in the study of laterites, as described in a 1988 publication by the English Overseas Development Administration (Charman, 1988: 48).

Laterite and particularly its use for road construction were the starting basis for this collaboration.

### **Final remarks: the construction of laterite as a (colonial) natural resource**

Laterite was considered a natural resource for civil engineers who worked on roads in Angola and Mozambique and a valuable object of scientific inquiry (Nascimento et al., 1955). This position was not shared by all disciplines: different positions regarding the use of the term

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<sup>3</sup> Technical norms were adapted, discussed, changed in other to apply it to the roads construction, according to the estimated traffic (Castro, 1962, Nascimento et al., 1963).

laterite seem to be linked to the use each disciplinary field could envisage to it; for instance, in the study carried out by Portuguese agronomists and by civil engineers on laterite and lateritic soils in Angola and Mozambique in the 1940s and 1950s, the use of the term laterite (or its rejection), or the way to carry out the tests to the samples, depended on the point of view of each of these disciplines regarding the utility of laterite (Ferreira, 1963: 37, 38, Nascimento, 1959: 8, 9). Lateritic soils were not good for agriculture, whereas they could be used as a building material by civil engineers.

The lengthy report (based on other previous reports) that concluded the first phase of collaboration between LNEC, LEA and LEMMS in 1959 presented some applications of laterite materials in road construction (studying specific roads stretches in Angola and Mozambique), describing how it had behaved either if it was used as sub-base (with a bituminous pavement on the top, for instance), mixed with other materials (such as limestone), or being used as the top pavement of the road; what kind of weather (dry and wet seasons) it beared and which kind of motorized traffic it had, and how they tried to avoid well-known problems of corrugation and soil disaggregation of use of laterite materials on roads (Nascimento et al., 1959: 48-50).<sup>4</sup> In any of these case studies did this report mention anything concerning the workforce used to build the roads, or to maintain them. This was also the case of other reports in the late 1950s by Portuguese engineers working in Angola and Mozambique on the use of laterite on local roads (Justino, 1957, *Discussão: Aplicação das laterites às estradas de Angola*, 1957, Furtado, 1959). What do these silences mean and how can we interpret them when we know that forced labour played an important part in the history of road construction and maintenance in Guinea, Mozambique, and Angola (Havik, 2006, 2009, Chilundo, 2001, Heintze et al., 2008, Neto, 2008), as well as in African Mobility History (Mavhunga, 2011: 75, 76)? A recent testimony of an agronomist (and not a civil engineer) who worked in pedological missions in Angola also mentioned the use of forced labour (by the Africans who did not pay the “imposto de palhota”) recruited by the local civil administration (*chefes de posto*) to work for the missions and also in the maintenance of roads with lateritic materials (Castelo et al., 2014: 11, 15).<sup>5</sup> Depending on the degree of hardness of the laterite

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<sup>4</sup> In the section on the applications of laterite, it was also included the use of laterite materials to buildings construction in India.

<sup>5</sup> I thank Cláudia Castelo for having shared with me this reference. I also thank Catarina Madruga, Gijs Mom and Pedro Cerdeira for having shared references and/or discussed ideas of this paper.

used, the road paved with laterite would have a greater propensity for disaggregation in the dry season with the traffic loads (Nascimento et al., 1955: 36, 39), which meant that great maintenance works were required to keep the road. This work was carried out by forced labour at least until the 1950s. Although the omission of references to the workforce necessary to construct and maintain laterite roads might be expected in this kind of sources (because they tended focus on “purely” technical and scientific aspects), the intra-imperial scientific collaboration between civil engineering laboratories in Angola, Mozambique and Portuguese helped to build a “Portuguese” knowledge on the subject, in a time when this meant colonial rule. In Angola and Mozambique, the increase in road length construction and use of improved pavements was particularly significant from the 1960s onwards, coinciding with the beginning of the colonial wars (Angola, 1961; Mozambique, 1964). The technical collaboration that started in the 1950s between the three civil engineering laboratories benefited from an increased investment in roads in the following decade, both financially and institutionally, but also contributed to it. Roads were part of the war effort, also because roads were seen as ways to control guerrilla (Brinkman, 2008) and were, therefore, literally, a tool of control (Neto, 2008). Laterite constructed as a colonial natural resource paved this way.

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## **Mapping Patterns of Inhabitation: Visual ethnography as a tool for critical pedagogies of housing design in the Global South**

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### **Abstract**

Over the last two decades, after the neoliberal turn, in Africa and South Asia several governments have adopted housing policies primarily focused on efficiency (i.e. building quickly and cheaply). They have overlooked, however, the importance of preserving structures of sociability, creating opportunities to generate income, catering for the creation of inclusive communities, and promoting healthy living conditions. In other words, most of the current resettlement programmes for the growing cities of the postcolonial global south have failed to include the local communities as stakeholders in the design decision-making process. It is against this background that the chair of Architecture and Dwelling at the TU Delft has initiated in 2014 the graduation studio “Global Housing”, dedicated to explore critical approaches to the design of housing for sustainable development.

The studio’s pedagogical approach aims at stimulating a strong commitment with the place through participatory action research. This approach has been implemented in transnational Live Projects organised in Addis Ababa (2014-2017) and Mumbai (2017-2018). During the site survey, a key component of the project, a group of international students and teachers from the TU Delft team up with local students and educators to develop an in-depth study of the project’s physical and societal context using a method of enquiry based on visual ethnography. The outcome of this research is processed and organised as a collective catalogue of patterns of inhabitation. When the students move from the analytic to the projective mode, the Book of Patterns performs both as a “reality check” and a tool-kit for the student’s design proposals. Eventually, the projects designed by the students show conspicuous references to the patterns of inhabitation researched during the field work and show a clear contrast to the design approach of the official housing programmes.

In this paper, I will present and discuss the importance of visual ethnography as a research method in TU Delft’s “Global Housing” transnational Live Project. I will examine the extent to which this pedagogical approach has successfully stimulated the students to critically address societal issues such as spatial justice, social and gender inequality, and the social reproduction of labour. Next to the positive aspects of this approach, I will also highlight some of its ethical challenges, particularly the risks of a fetishized endorsement of informality (poverty porn) or failure to recognise invisible power structures.

**Keywords:** Housing; Architecture Education; Visual Ethnography; Live Project

## Introduction

In his foreword to Erwin Anton Gutkind's *Community and Environment; a Discourse on Social Ecology*, written in 1953, Martin Buber (quoted in Teyssot 2011, 52) argued that "*the architects must be given the task to build for human contact, to build an environment which invites human meetings and centers which give these meetings meaning and render them productive.*" Buber's text stressed the importance of establishing a strong relationship between the social and the ecological.

A similar claim to plan ecologically-balanced communities had been made by Patrick Geddes's. His search for environmental understanding was famously illustrated in the Valley Section diagram, which would become the key reference for Team 10's Doorn Manifesto. (Welter 2002) As recent scholarship has revealed, both Buber and Geddes played an influential role in the humanistic turn that characterized the discourse of the post-war CIAM. (Teyssot 2013; Welter 2005) Aldo van Eyck, for example, dwelt upon Martin Buber's philosophy of dialogue, to conceptualize the 'in-between' as "*the common ground where conflicting polarities can again become twin phenomena*" (Strauven 1998, 354–60).

Van Eyck and other architects from his generation quoted often the work of anthropologists such as Franz Boaz, Margaret Mead and Ruth Benedict to recalibrate the importance of the cultural production of archaic and primitive cultures to the same level as that of Western civilization. In point of fact, from the 1960s on there was a growing interest in social ecology, in exploring the relationship between subjects and the environment surrounding them. This movement would eventually trigger the ethnographic turn in art and architectural education.

## The Ethnographic Turn

In his *The Return of the Real*, the art critic Hal Foster argued that the artist as ethnographer emerged in the 1980s as a new paradigm to replace Walter Benjamin's old "Author as producer". The committed artist, Foster (1996, 172) argues, shifted his subject of inquiry from one defined in terms of *economic relation* to one defined in terms of *cultural identity*. The problem, Foster continues, is that "*often, this realist assumption is compounded by a primitive fantasy: that the other, usually assumed to be of color, has special access to primary psychic and social processes from which the white subject is somehow blocked*" (Foster 1996, 175).

However, while Foster was critical of the emerging figure of the artist as pseudo-ethnographer, art education scholar Dipti Desai (2002) saw in it an opportunity to introduce new approaches in art education that could be more focused on the social production of art, blurring the boundaries between high and low art forms and promoting a meaningful engagement with the artist's cultural context.

This dialogical pedagogical practice, as the American artist and educator Olivia Gude (2007) called it, creates opportunities for an intensification of the student's sense of place through mapping and local research activities, for example. Furthermore, it expands the student's possibilities to encounter difference and be tuned-in with the culture of their community.

In art education, as well as in architecture education, the use of the ethnographic method encouraged closer relationships between academia and reality. Suddenly, students could become public scholars (Powell 2010).

In architectural education, the ethnographic method would be an important component of a pedagogical tool committed with socially responsible design and civic engagement: The Live Project.

### **The Live Project**

According to James Benedict Brown (2012, 25–31), the emergence of architectural Live Projects in academia can be traced back to the tenure of Douglas Jones as head of the Birmingham School of Architecture in the 1950s. Since then, there were many experiments with live projects in architectural education (Harriss and Widder 2014a). The key characteristic of architecture Live Projects is that students have the opportunity to go beyond the limitations of the conventional design studio and test different approaches to design-decision making in a real-world context.

The learning goals of architecture Live Projects revolve around the development of skills in collaborative ways of working, development of capacities to communicate with several stakeholders, an ability to engage in participatory processes. Achieving these goals are, according to architectural educators Harriet Harriss and Lynnette Widder (2014b, 5), at the crux of the successful Live Project. Thus, as these authors argue, Live Projects are instrumental to establish a connection between pedagogy and practice where the problem of heroic authorship and deep personal identification with one's own work can be circumvented.

### **Designing for the Great Number**

Designing adequate housing for the hundreds of millions of new urbanites that will inhabit the expanding cities of the Global South in the next three decades is one of today's most urgent societal challenges.

Currently, we can see everywhere how technocratic approaches are gaining momentum as the solution to cope with the challenges associated with an unprecedented urban growth. In the competition between two of the most popular terms of these days, "efficiency" is gaining against "resilience". This state of affairs needs to be challenged; a new balance should be pursued, and it involves new approaches to housing governance, management and design (Smets, Bredenoord, and Lindert 2014).

However, while the contribution of architects to solve this problem is more than welcome, heroic authorship is definitely not perceived as the most probable reward. Instead, collaboration, good communication and open-mindedness are likely more useful skills to engage in meaningful actions to promote the development of sustainable communities. Architectural education can play an important role in this process, promoting a deeper understanding of the ecosystem that supports everyday life. However, the research methods used in the past need to be critically reviewed.

### **Patterns of Inhabitation: Decolonizing mapping methods.**

With the rapid urbanization undergoing in the Global South, it is necessary, once again, to discuss in which ways design education can contribute to address the conditions threatening the creative nucleus of many civilizations, as Paul Ricoeur (2007) put it in his seminal "Universal Civilization and National Cultures" of 1961. Writing at the moment France was losing Algeria, the jewel of its colonial crown, Ricoeur argued that cross-cultural encounters could be always mediated through translation. "*There is no reason or probability that a linguistic system is untranslatable*", Ricoeur stated. "*The belief that the translation is feasible up to a certain point is the affirmation that the foreigner is a man, the belief, in short, that communication is possible.*" Based on this universal possibility, Ricoeur (2007, 52) concluded that "*only a living culture (...) is capable of sustaining the encounter of other cultures.*"

The unprecedented scale and speed of the urbanisation process that is currently taking place in the Global South, stresses the importance of re-thinking the design and research methods that a new generation of architects will use to be able to sustain the encounter with other cultures,



as Ricoeur anticipated. This challenge calls for new approaches in design education. Live Projects are a case in point.

Since the academic year 2014-15, the course “Graduation Studio Global Housing”, organized by the Chair of Architecture and Dwelling at the TU Delft, has been developing an educational program, led by Dick van Gameren and the author of this paper, in collaboration with local partners, which is focused on searching alternative solutions for the current housing strategies in contexts undergoing rapid urbanisation.

Since the course was launched in 2014, it has been organised in Addis Ababa (Ethiopia, 2014-2017) and in Mumbai (India, since 2017), in collaboration with the EiABC (Ethiopian Institute of Architecture, Building Construction and City Development) and KRVA (Kamla Raheja Vidyanidhi Institute for Architecture and Environmental Studies), respectively. The course’s cohort includes students from all six continents. The social and cultural diversity of the cohort stresses the importance of using cross-cultural approaches in the course’s methodology.

The course attaches a primal importance to the first encounter of the students with the project’s site, which represents for most of them a foreign reality that needs to be translated and decodified. While the course is not structured as a typical Live Project, it includes a Live Project approach to develop one of the course’s key components: the site survey.

According to Ruth Morrow (2014), Live Projects fill in the gaps in education that normative design studies fail to address. In particular, she points out, there are five aspects where Live Projects go beyond the remit of the conventional design studio: People, Processes, Materials/Construction, Other Skills, and Value Systems.

These aspects define the background against which the students of the Global Housing graduation studio develop the site survey. The fieldwork is based on a micro-ethnographic study of an urban community, which is used to build-up a comprehensive account of the site’s social and spatial practices.

Following the intellectual framework of Christopher Alexander’s *A Pattern Language Building* (Alexander, Ishikawa, and Silverstein 1977) and *The Timeless Way of Building* (Alexander 1979), the students are invited to develop a “Book of Patterns” that synthesizes the site’s patterns of inhabitation, regarding four main themes, that roughly address Morrow’s five

aspects, mentioned above: Income Generation, Borders, Materials and Techniques, and Social Spaces.<sup>1</sup>

These themes stimulate the student's awareness of the social and spatial practices that remain invisible in traditional mapping techniques. The choice of research methods is, however, a vital element in this pedagogical approach. The importance of visual representations of the student's experience became a prominent component of the ethnographic approach to the site survey.

Drawings, pictures and diagrams became privileged media to create synthesis of micro-ethnographic research projects to support the design-decision-making process in architectural design. The use of visual ethnography enables a deeper understanding of the social ecology of the site and enables the students to de-codify the reality beyond the fetichization of the alien or the stranger.

### **Architectural Ethnography**

Visual ethnography has been an important medium used by architects, researchers and design educators to analyse and communicate aspects of everyday life. From the 1940s on, the Japanese architect and planner Nishiyama Uzo (1911-1994) developed innovative visual representations of the daily life of ordinary people to communicate the results of his research on Japanese housing and lifestyle and document the socio-cultural impact of the modernization of Japanese architecture (Nishiyama and Hein 2018).

In the 1960s, Octávio Lixa Filgueiras (1922-1996), a professor at the Porto School of Architecture, developed a pedagogical methodology that used ethnographic surveys as the foundation for the conceptual process (Moniz 2011, 483–88). Using hyper-detailed plans and sections, the students produced a compelling cartography of the everyday life of Porto's urban poor.

The outcome of this visual ethnography created valuable documentation to understand the patterns of inhabitation of a social group whose dwelling practices were virtually unknown to the majority of the architectural students of that time, most of them coming from a bourgeois / middle class background (Filgueiras 1970).

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<sup>1</sup> The use of Alexander's "Pattern Language" has been revived and reviewed over the last decade to produce visual cartographies of vernacular social and spatial practices (Angelil, Hehl, and Something Fantastic 2014, 82–123; Fanelisa et al. 2015)

In the 1980s, the Minimum Cost Housing Group, a research group based at Mc Gill University used visual ethnography to document the social and spatial practices of communities living in informal settlements. With the series “How the other half builds”, this research group produced an insightful documentation of the patterns of inhabitation in the slums of Indore (India) that would become instrumental for the development of the project for the Aranya Township, designed by B.V. Doshi and the Vastu Shilpa Foundation in the mid-1980s (Witold Rybczynski et al. 1984).

More recently, the Japanese Atelier Bow-Wow revived the interest in visual ethnography both as an analytical tool and a projective device. The drawings included in their book *Communalities: Production of Behaviours* (Atelier Bow Wow 2014) demonstrate the potential of architectural drawings to communicate aspects of everyday life. Finally, with their curatorial approach to the Japanese pavilion for the 2018 Venice Biennale, they have consolidated “architectural ethnography” as a research method based on the codes and conventions of architectural drawings (Kaijima, Stalder, and Iseki 2018).

This renovated interest in the cross-pollination between architecture and ethnography testifies to the importance of developing new methods to apply in the transnational Live Project as a strategy to mediate encounters between different cultures. In architectural education, visual ethnography can contribute for the development of a new social ecology, a reconciliation of man with the built environment. The relevance of this approach cannot be underestimated in a world experiencing rapid urbanisation.

### **Patterns of Inhabitation**

After the research phase, the students enrolled in the Global Housing graduation studio elaborate a problem statement and are challenged to critically integrate the patterns of inhabitation observed during the site survey in their design hypothesis.

Since the course was launched, the students produced more than thirty projects for sites in Addis Ababa and Mumbai, located in diverse urban conditions: urban renewal of the city centre, urban expansion, and rural-urban interface. In the following sections, I will explore each of the four themes used in the micro-ethnographic study, to discuss the importance of visual ethnography in the conceptual process of the student’s projects.

### *Income Generation*

Charles Correa famously wrote in his *The New Landscape* that people do not migrate to the cities looking for houses. They move to the city looking for jobs (Correa 2010, 179). Indeed, the generation of income is a major driver of the urban dynamics of growth and change. Considering this, the students were challenged to observe and understand how people generate income and what are the spatial conditions in which these activities take place. In the patterns of income generation surveyed by the students, there was no distinction between formal and informal practices, neither between temporary or permanent activities. (Figure 1)

As the design process evolved, these patterns would be critically reviewed and integrated in the student's project. For example, in his project *Transit City*, Jaap Le explored the vast landscape of labour that characterizes the peri-urban development of Mumbai. (Figure 2)

Jaap's project investigates the relationship between infrastructures of circulation, the social division of labour, and the spatial conditions for income generation in Nalasopara east, an area in the north of Mumbai experiencing rapid growth of informal settlements. His project builds up a hierarchical sequence of spaces that provides the support for the development of different scales of economic activities.

Using the "fractalization" technique, Jaap's project explores a typological mix in the creation of clusters, to articulate different urban conditions in which both formal and informal commercial practices can take place. His project stimulates multi-scalar exchange of income generation opportunities.

### *Borders*

The "in-between" and the "threshold" are arguably Aldo van Eyck's most discussed contributions to architectural discourse. As Francis Strauven (1998) showed, these concepts were deeply rooted in Van Eyck's reading of Martin Buber's philosophy of intersubjectivity, and were based on a plea for architecture to reconcile spatial polarities.

In the patterns of inhabitation, the students have expanded the concept of threshold to include other tangible and intangible edge conditions. The nuances between borders and boundaries were analysed and confronted with narratives of control and alienation. (Figure 3)

The project developed by Arianna Fornasiero and Paolo Turconi to the Menen neighbourhood in Addis Ababa illustrates a case in which the concept of borders became an essential conceptual device. (Figure 4)

These students developed a project for the urban renewal of an historic neighbourhood of Addis Ababa, using a rhizomatic structure that resonates with Aldo van Eyck's aesthetics of number (van Eyck 1993). The design decisions were influenced by a critical translation of a particular pattern, the "cluster of compounds", which had been identified by the students during the site survey. The students investigated the vernacular system of progression from the public realm to the dwelling unity and redefined it.

Using a methodological approach close to the configurative discipline that Aldo van Eyck, Piet Blom and Herman Hetzberger explored in the 1960s, the students designed a system of interlocking clusters that defines soft borders in the transition from the street, to the community core, to the dwelling unit.

### *Materials and Techniques*

In his *The Craftsman*, Richard Sennett (2009, 6) explains Hannah Arendt's concept of *Homo faber* as "man as maker", the "judge of material labour and practice", as opposed to *Animal Labourans*, those who take the work as an end in itself. Sennett rejects this distinction between those who ask "Why?" (*Homo faber*) and those who ask "How?" (*Animal Labourans*). He suggests, instead that "*thinking and feeling are contained within the process of making*" (Sennett 2009, 7).

Following Sennett's proposition, the students have identified processes of making that revealed important aspects of the vernacular tradition, on the one hand, but also contemporary processes and techniques that are re-shaping labour and craftsmanship. (Figure 5)

The project of Max Brobbel for a new mass housing system to be developed in Ethiopia reflects upon the question of mass production and pre-fabrication in the context of a labour-intensive economy. (Figure 6)

His project explores an alternative approach to the building system currently used in the production of affordable housing under the Ethiopian government's Integrated Housing Development Program, the so-called "condominium housing" (UN-Habitat 2010). He shows that the banner of affordability and efficiency does not need to overrule the creation of meaningful spaces.

In his project, Max Brobbel moves beyond the fetichization of vernacular building systems and materials, to advance a solution that accepts the technological transition undergoing in Ethiopia, as well as the re-configuration of the Ethiopian labour force.



## *Social Spaces*

Michel Foucault wrote that urban order implies “mechanisms of social normalization”. These mechanisms, Stavros Stavrides argues, “*includes attempts to establish spatial relations that encourage social relations and forms of behaviour, which are meant to be repeatable, predictable and compatible with the taxonomy of the necessary social roles.*” “Normalisation”, Stavrides goes on, “*shapes human behaviour and may use space (as well as other means) to do so*” (Stavrides 2015, 9).

To survey the patterns of social spaces, the students have identified and went beyond these mechanisms of social normalization. Their research revealed several spatial conditions in which people come together to resist normalisation policies, but also spaces that reproduce structures of social control. (Figure 7)

Roza Derakhshan’s project for the Nalasopara area, in the north of Mumbai’s metropolitan area, shows a critical translation of the vernacular patterns of social spaces. (Figure 8) Her project is based on the idea of in-situ upgrading and highlights the importance of the infrastructure of circulation to build up a network of social spaces in a very dense living environment. With her design approach, Derakhshan reveals the extent to which design decisions can play an instrumental role in shaping convivial spaces in a very dense human *habitat*. The circulation gallery of Mumbai’s chawls is combined with the traditional “otla” to develop a reconceptualization of the “streets-in-the-air” concept. This project presents a system of spaces that deliberately reproduces the local patterns of social organization. It is strongly based on the definition of a sequence of spatial continuities that articulate the realm of the neighbourhood, to the community, to the family.

## **Conclusion**

Drawing on the results of the course Global Housing Graduation Studio, in this paper I have discussed the potential of using a transnational Live Project approach to promote community and social agendas in design decision-making processes related with the production of affordable housing. In have discussed in particular the role of visual ethnography as an empirical research method for architecture students.

These projects show examples of conceptual approaches based on a critical integration of vernacular social and spatial practices, filtered through the documentation of “patterns of

inhabitation”. While these projects are situated in a particular geographical condition, they address aspects of a global ecological crisis propelled by processes of rapid urbanization. Using a transnational Live Project approach, the students explore visual ethnography as a research method to search solutions for a more sustainable urban development, highlighting the importance of strengthening the focus on social ecology as a project for the whole Earth as home, indeed a planetary *oikos*.

In some cases, however, the students’ engagement with reality was such that it hindered their capacity to explore possibilities that challenged the social and spatial practices surveyed during the site survey. In doing so, they failed to take into account other aspects of reality, the “dirty reality” of politics, governance, and management issues. In many cases, the social and the spatial gained such predominance in the student’s design approach, that they undermined the capacity of the student to make sense of the challenges at stake.

Guided by a new set of moral values for the socially conscious designer, many students avoid conflicts and agonistic approaches to pursue, instead, design approaches based on “modesty” and “negotiation”. In these cases, I would argue, the current predicaments of the architecture profession that Harriss and Widder have identified come back again, though in a different outfit. A socially responsible approach is now pursued as a heroic achievement and a reason for deep personal identification with one’s own work.

Notwithstanding this predicament, Live Projects in general, and the development of micro-ethnographic studies by the students of the Global Housing Graduation Studio in particular, activate “*the potential to recalibrate the contesting claims that both academia and profession make on architecture*” (Harriss and Widder 2014b, 1).

Furthermore, they show the extent to which a deeper focus on social ecology in design education is instrumental to help future architects shape our world as a built homecoming, as Aldo van Eyck put it, humanizing the vast plurality that characterizes the urban world in which we live (Ligtelijn and Strauven 2008, 442).

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ARCHITECTURE, CITIES, INFRASTRUCTURES

Mapping Patterns of Inhabitation:  
Visual ethnography as a tool for critical  
pedagogies of housing design in the Global South

Nelson Mota

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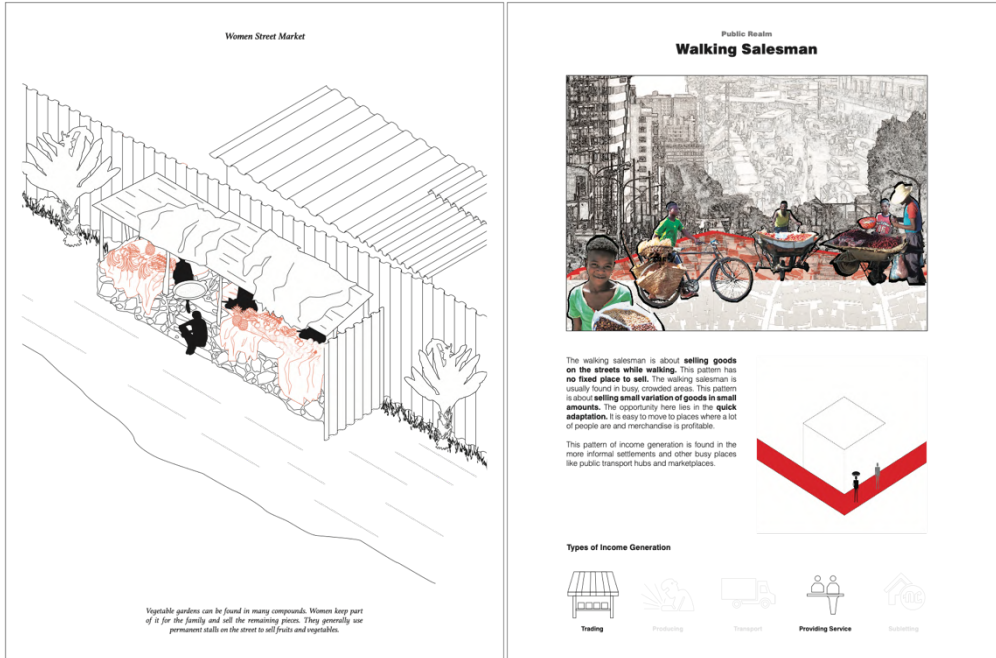
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Mapping Patterns of Inhabitation:  
Visual ethnography as a tool for critical pedagogies of housing design in the Global South

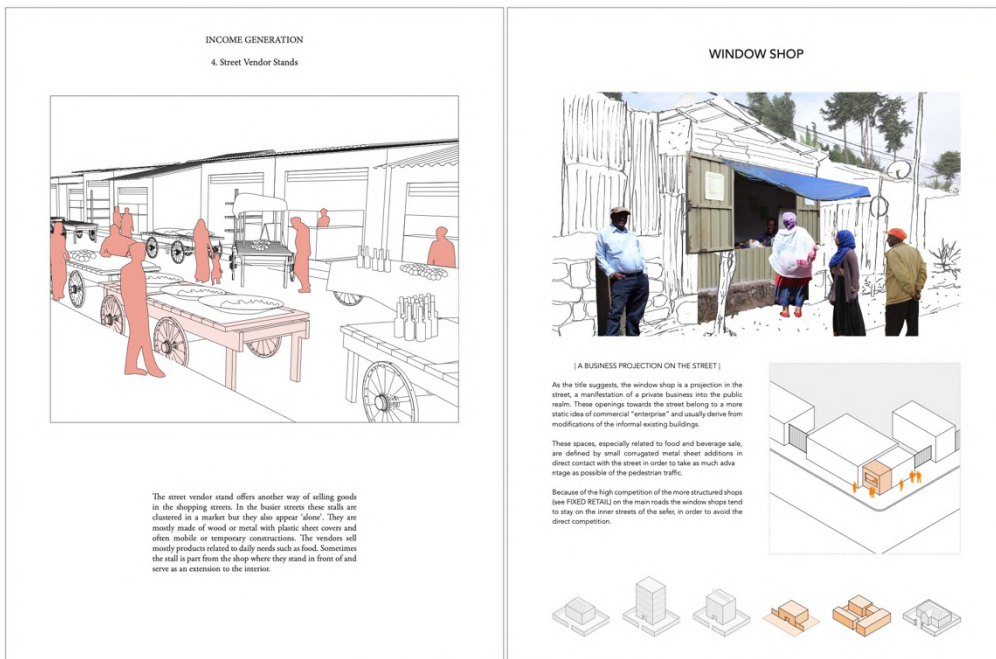
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## Appendix: Figures



Patterns of Inhabitation: Income Generation  
Source: Global Housing Graduation Studio; Student Work

28



Patterns of Inhabitation: Income Generation  
Source: Global Housing Graduation Studio; Student Work

29

Fig.1. Patterns of Income Generation. Global Housing Graduation Studio, TU Delft, 2014-18.

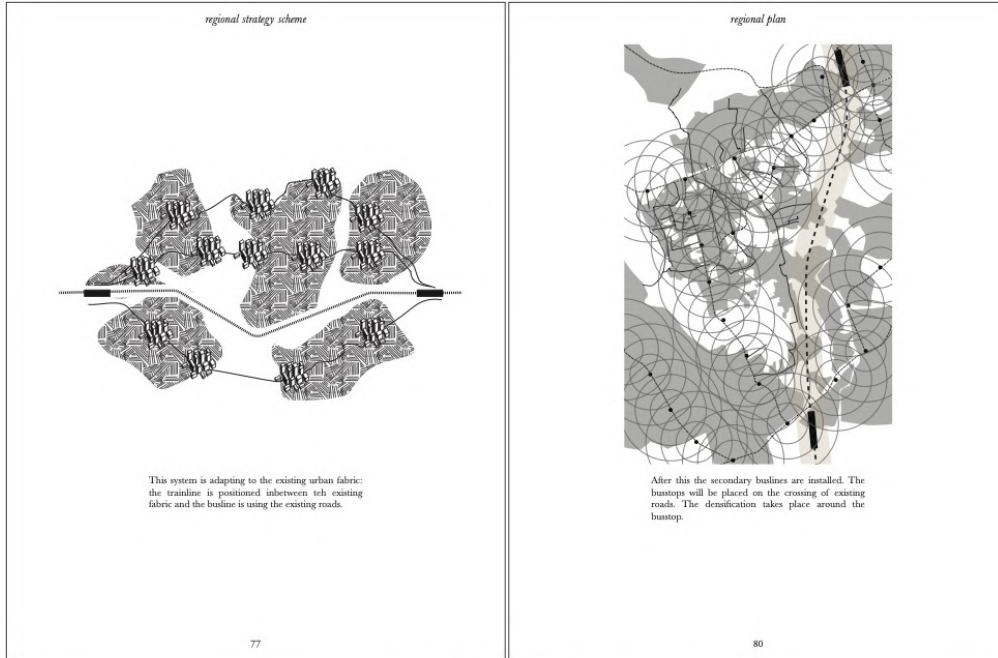


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Mapping Patterns of Inhabitation:  
Visual ethnography as a tool for critical  
pedagogies of housing design in the Global South

Nelson Mota



Jaap Le, Transit City (2018)

32



Jaap Le, Transit City (2018)

34

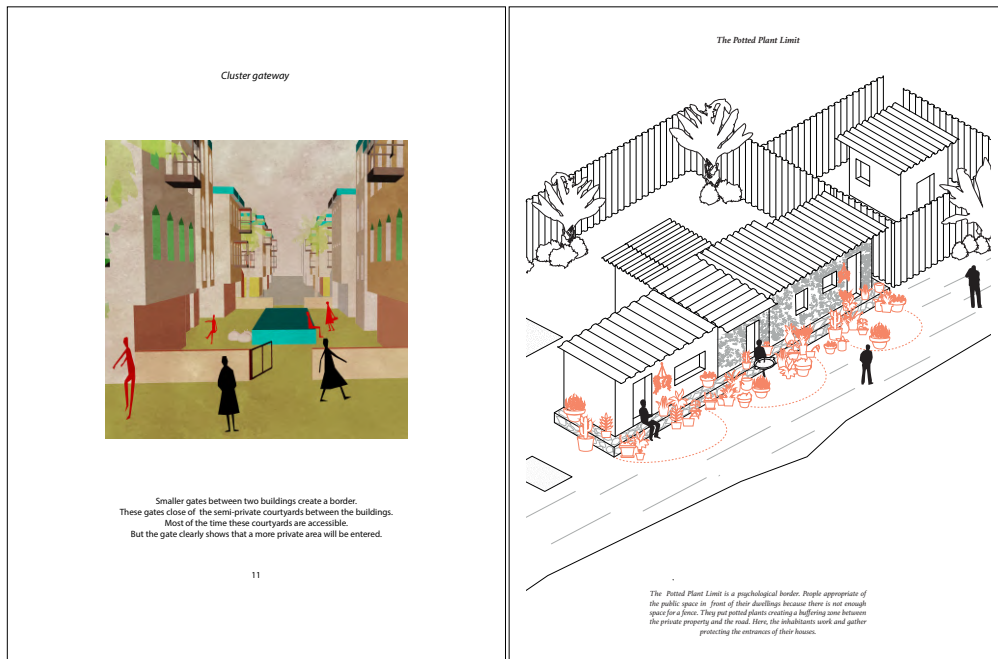
Fig.2. Jaap Le, *Transit City*. Global Housing Graduation Studio, TU Delft, 2018.

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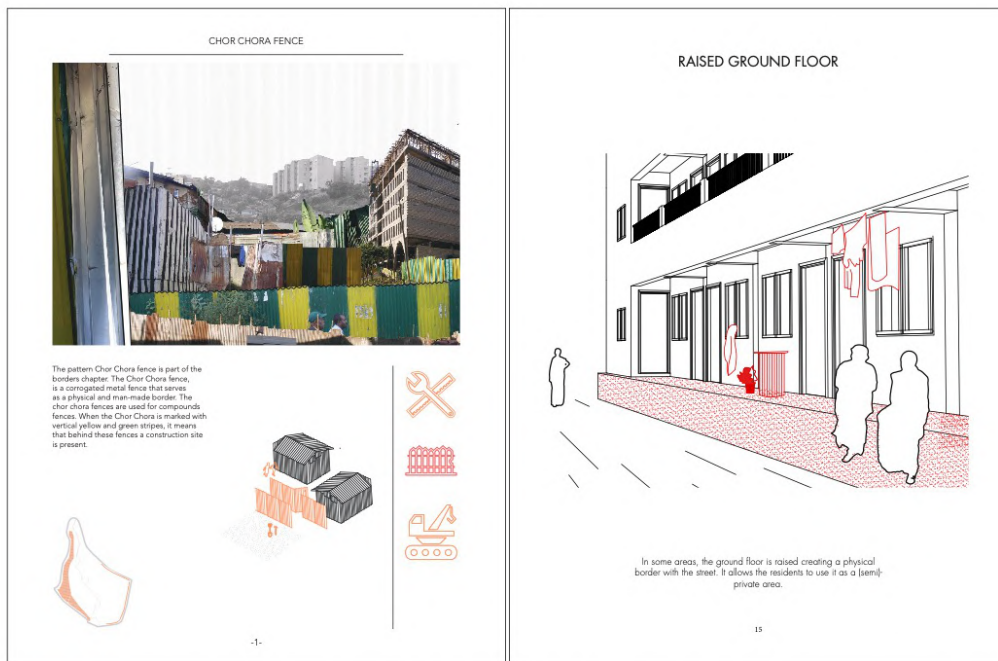
Mapping Patterns of Inhabitation:  
Visual ethnography as a tool for critical pedagogies of housing design in the Global South

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Patterns of Inhabitation: Borders  
Source: Global Housing Graduation Studio; Student Work

36



Patterns of Inhabitation: Borders  
Source: Global Housing Graduation Studio; Student Work

37

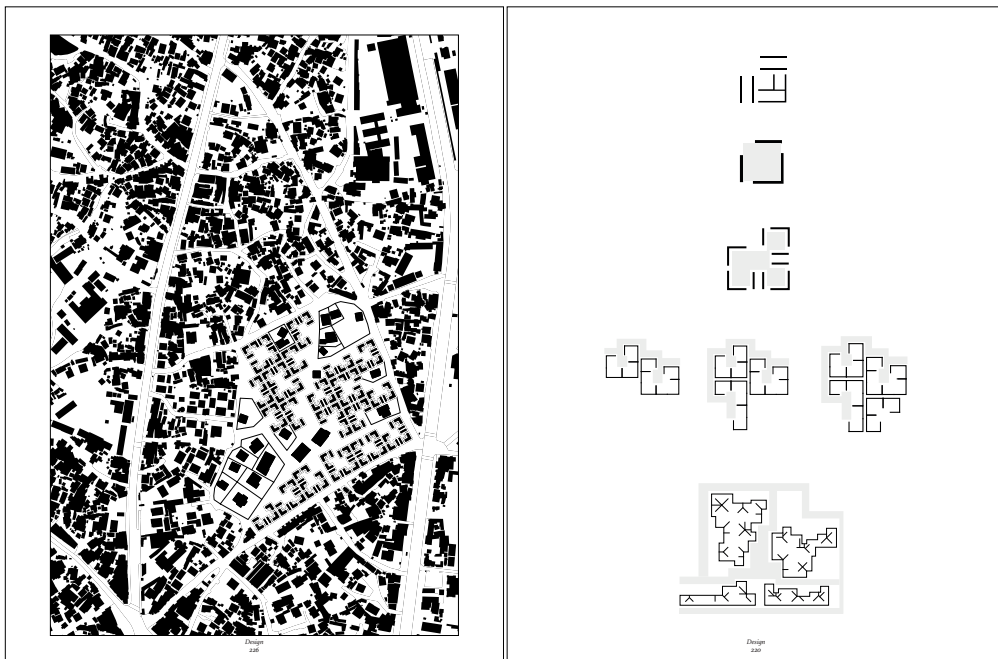
Fig.3. Patterns of Borders. Global Housing Graduation Studio, TU Delft, 2014-18.

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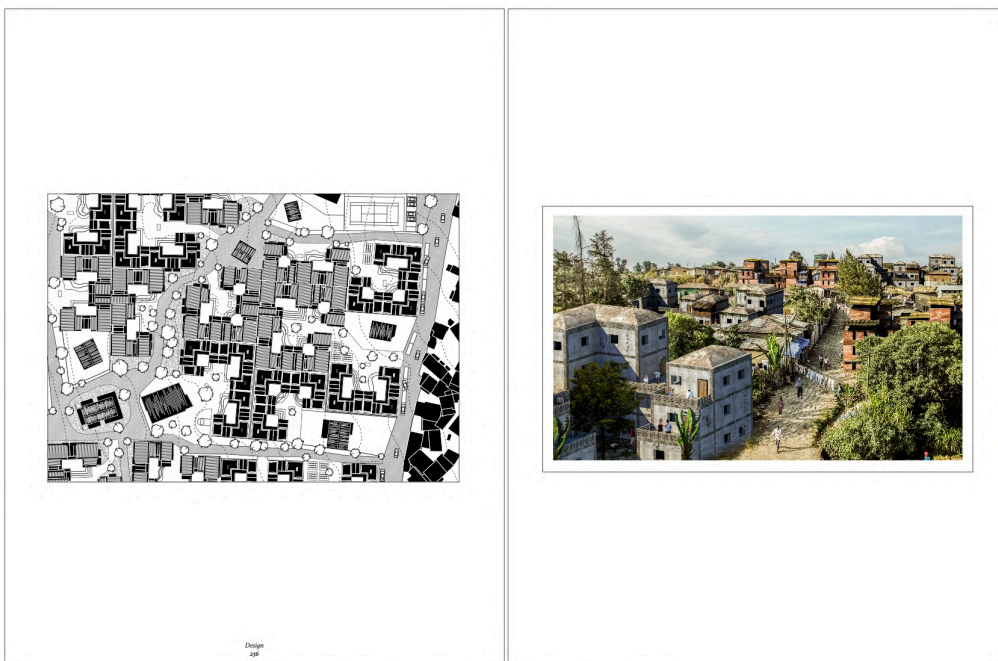
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Visual ethnography as a tool for critical  
pedagogies of housing design in the Global South

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Arianna Fornasiero & Paolo Turconi, *Rhizome* (2017)

39



Arianna Fornasiero & Paolo Turconi, *Rhizome* (2017)

40

Fig.4. Arianna Fornasiero and Paolo Turconi, *Rhizome*. Global Housing Graduation Studio, TU Delft, 2017.



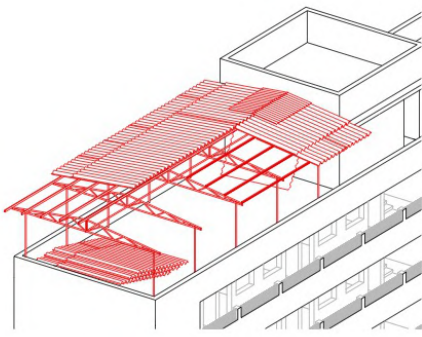
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Visual ethnography as a tool for critical pedagogies of housing design in the Global South

Nelson Mota

### ROOF EXTENSION

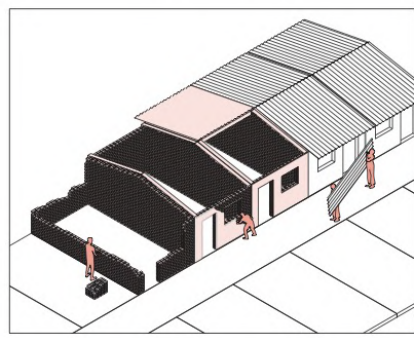


As a solution to make the building water proof, corrugated steel roof extensions are added. This also provides the possibility to use the roof as an extra space.

31

### BUILDING TECHNIQUES

1. Bathi chawl construction process



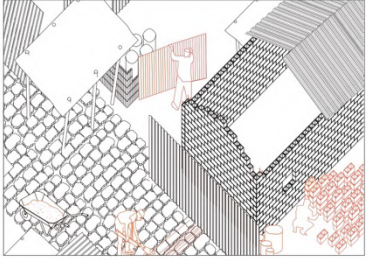
The units of the bathi chawls are constructed by the same contractor or developer and grouped in clusters of approximately twenty pairs. The walls are made of brick after which the exposed sides are covered with a layer of cement to prevent the bricks from rainwater. After this small steel beams are laid upon the wall to support the roof made of corrugated metal.

Patterns of Inhabitation: Materials and Techniques  
Source: Global Housing Graduation Studio; Student Work

44

### Building techniques


#### 6. Low-rise house with concrete block structure




**Type of housing:** private houses  
**Material:** cement, sand, gravel, reinforced bars  
**Advantages:** durability, easy installation, speed in construction, low price, large availability of the material  
**Disadvantages:** use of modular elements that can lead to seriality and repetitiveness, need of workes and qualified contractors and sub-contractors

The hollow concrete blocks are used to realise cost efficient houses as, using modules, the wastage material is reduced. The modules start from the smaller parts like the masonry blocks and repeats themselves of longer scale of the whole housing unit. Therefore all the house measurements, including the opening, have to be planned according the block dimension (32 cm x 16 cm x 19 cm).

During the wall construction the hollow block is placed up with the closed bottom facing upwards to increase the bond between the blocks. Specific blocks are used as a frame work for columns, these are reinforced with steel, and their position has to be calculated preventively. When the blocks are placed they are filled with concrete. In most of the cases, the roof of this kind of house is made of wood structure with corrugated sheets nailed on top of it.



### CHIKA TECHNIQUE

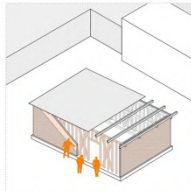
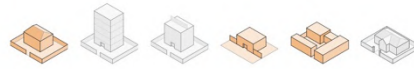


[ THE TRADITIONAL METHODOLOGY ]

In Addis Ababa almost 90% of the informal houses are built using the traditional technique of "chika" construction, inherited from the first nomadic settlements in the country.

The foundations of the house are dug in the ground and afterward filled with stones, creating a solid as well as isolated basement. The structure of the façade is built in four main steps with the usage of generally two different materials: wooden scaffolding sticks and mixture of mud and tall straw as isolating and finishing outer layer.

In order to give more stability to the structure, diagonal poles are sometimes fixed to the vertical ones, working as modern diagonal bracing. In some cases, inhabitants add an additional outer layer made with concrete (2/3 centimetres) as plaster. In this specific case is possible to observe in the façade some handmade holes working as support for the outer finishing.

Patterns of Inhabitation: Materials and Techniques  
Source: Global Housing Graduation Studio; Student Work

45

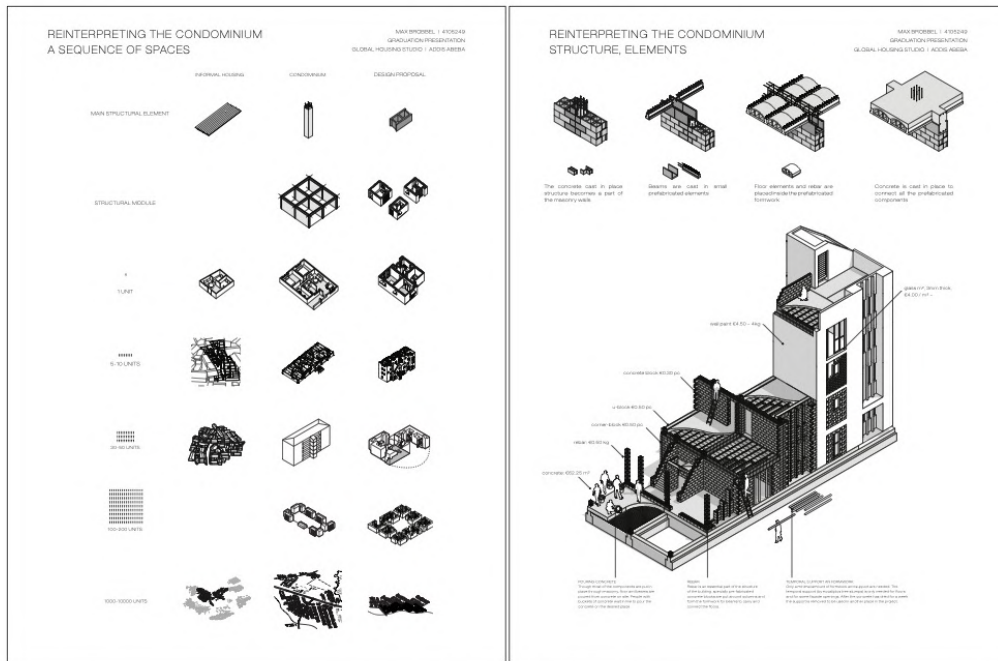
Fig.5. Patterns of Materials and Techniques. Global Housing Graduation Studio, TU Delft, 2014-18.

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

Mapping Patterns of Inhabitation:  
Visual ethnography as a tool for critical pedagogies of housing design in the Global South

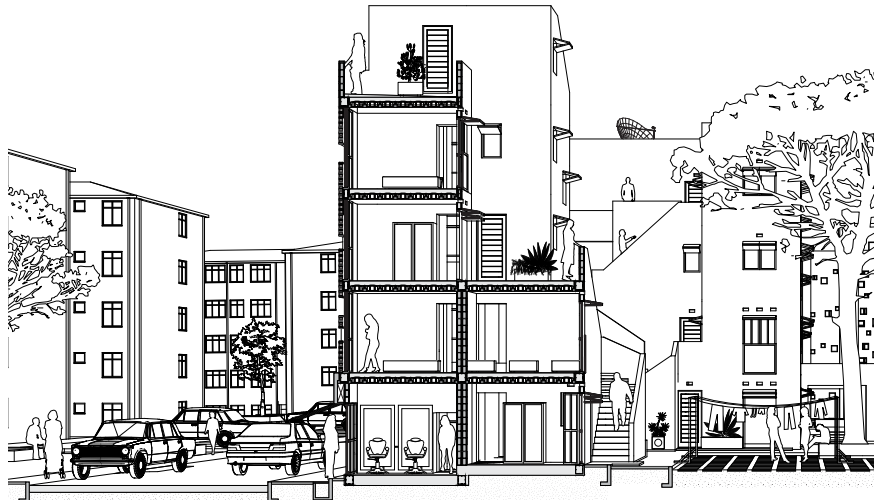
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Max Brobbel - Reinterpreting the Condominium (2015)

49

SUBTLE HEIGHT DIFFERENCES CONNECT THE BUILDING TO THE PUBLIC SPACE



65

Max Brobbel - Reinterpreting the Condominium (2015)

50

Fig.6. Max Brobel, *Reinterpreting the Condominium*. Global Housing Graduation Studio, TU Delft, 2015.




# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

## Mapping Patterns of Inhabitation: Visual ethnography as a tool for critical pedagogies of housing design in the Global South

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### CIRCULATION GALLERY



The galleries work as extensions of the homes, a meeting place where women chat while hanging the laundry to dry and where kids run around and play.

20

### COMPOUND COURTYARD

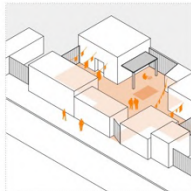
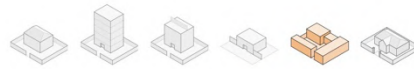


[A COMMUNITY WITHIN THE COMMUNITY]

The residential compound layout derives from an organization of a group of informal houses around the same common space. Such community spaces are accessible from gates generally roughly built with corrugated metal sheets.

The courtyard is shared by an average of 15 households; it is the place where both the everyday life activities (as drying spaces, washing clothes, drinking coffee and cooking meals) as well as the social interaction among the members of the different families take place, strengthening their sense of community belonging.


In the case of Dajach Waba safer, the peculiarity is that inhabitants tend to remain closer to their specific compound, creating a community within the bigger community of the safer, rather than share the same interests with closer ones.

Patterns of Inhabitation: Social Spaces  
Source: Global Housing Graduation Studio; Student Work

53

### Social Spaces Inner Streets



The inner streets of the Gajja safer are full of action, primarily in the grid like structure east of the river. Here, most of the daily exchanges of the community occur and many of the activities present in the courtyards exist here as well, along with income generating activities of different scales. Similar to the courtyards, activities spill out from the homes and in this case also the shops, onto the busy street. These streets are mainly for foot traffic but they are car accessible, especially around areas of service garages. The width of these streets is around five meters in the gridded area but ranges from one to ten meters where the streets flow more organically.


**Time of Use:** most of the activities in the inner streets take place in the day and before it gets dark, between 7am to 6pm.

**Demographics:** everyone takes part in the activities in the streets.


**Activities:** most of the activities present in the compound courtyard also take place in the inner streets. Other than that it is also a space full of shops and income and different income generating activities.

**Public / Private:** The street can be easily accessed by the public.


Time of Use



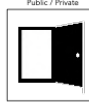
Demographics



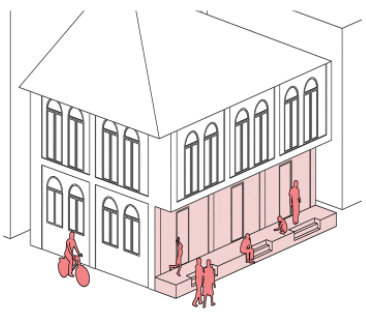
Activities



Public / Private



### THE OTLA



Usually a heightened area in front of the entrance, the otla represents the intermediate space between the street and the house. A place more private than the street but more public than the house. It is in this space where visitors will take of their shoes before they advance into the house, where evenings will celebrate festivities with each other and where children meet and play.

4

Patterns of Inhabitation: Social Spaces  
Source: Global Housing Graduation Studio; Student Work

54

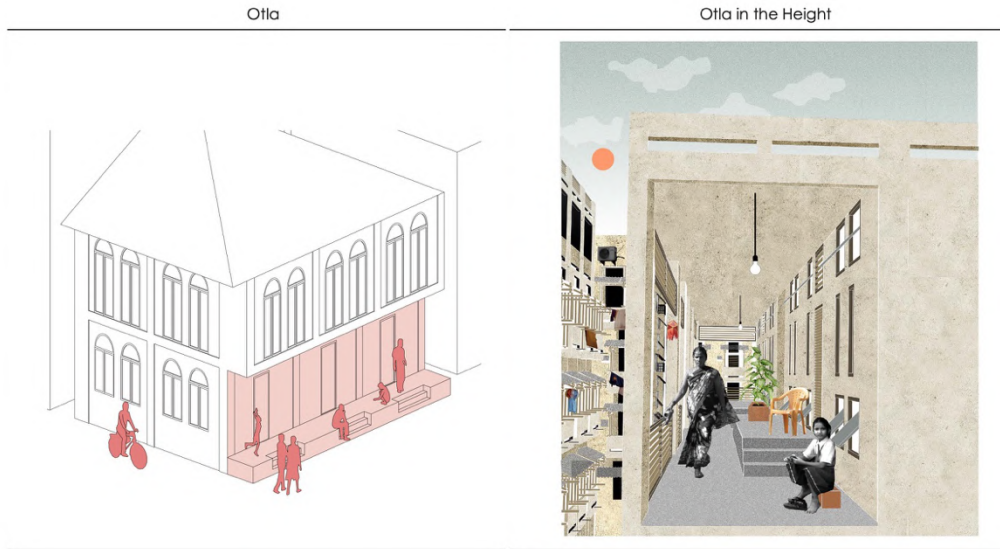
Fig.7. Patterns of Social Spaces. Global Housing Graduation Studio, TU Delft, 2014-18.

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

Mapping Patterns of Inhabitation:  
Visual ethnography as a tool for critical  
pedagogies of housing design in the Global South

Nelson Mota



67

68

Roza Derakhshan - Towards an Inclusive Urban Space (2018)

59



In Between the Blocks'

Proposal | Experience

Roza Derakhshan - Towards an Inclusive Urban Space (2018)

60

Fig.8. Roza Derakhshan, *Toward an Inclusive Urban Space*. Global Housing Graduation Studio, TU Delft, 2018.

## The North African Horizon of French Solar Architecture, 1945-1973

Paul Bouet

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### Abstract

In the years following WWII, the exploitation of natural resources in the Sahara became a major geopolitical and economical issue. The newly founded Unesco launched the Arid Zone Program, promoting international scientific cooperation for the “development” of the dry lands throughout the world, particularly in North Africa. Parallel to this program, France intensified its control over the Saharan regions under its colonial rule to prospect, exploit and secure their underground natural resources. Within both Unesco and France programs, solar energy was thought to play a key role for achieving two goals considered as complementary: the adaptation to the climatic conditions of the desert in order to exploit its resources, and the supply of “technical assistance” to local populations, judged as “underdeveloped”. Architects, scientists and engineers trained in France collaborated in this project. How were they involved in it, and what role did the Saharan territories play in their perspective?

The paper discusses two different cases. Firstly, it analyzes the research of scientist Félix Trombe, arguing that in his technoscientific view, Sahara represented a “laboratory” to initiate the development of solar energy, meant to be deployed worldwide thereafter. With his Laboratoire de l'énergie solaire, funded by the army and colonial authorities, Trombe developed solar furnaces in order to melt ores, that led to the construction of experimental buildings. Trombe also designed prefabricated houses that used solar energy to cool and warm indoor air, to adapt the climatic conditions of arid lands. Secondly, the paper analyzes the trajectory of architects Georges and Jeanne-Marie Alexandroff. Concerned with the emergence of the “Third World”, they tried to implement solar pumping technologies to provide water, at both architectural scale within community buildings and urban scale within “solar oasis”. In the Alexandroff's perspective, Sahara and Sahel represented a ground to criticize modern western architecture and to imagine its renewal based on the combination of technology and vernacular practices. Although in both cases the realizations were finally limited to local experiments (notably in Algeria and Mauritania), North Africa and its colonial condition represented a decisive horizon for the conceptualization of solar architecture, whose focus then shifted towards France and the West after both decolonization and the emergence of environmentalism.

**Keywords:** solar architecture; solar energy; arid lands; Sahara.

### **Solar Energy in Sahara**

In the years following the Second World War, arid lands of the world were given a particular attention. What had long been seen as remote and unproductive territories, hostile to human occupation and to life in general, came to be seen in the light of economic development (Davis, 2007, 2016). Totalizing almost one third of the continents, arid lands were designated to play a bigger role in the exploitation of natural resources in order to face population growth and to fuel postwar modernization. Both international organizations and colonial powers then acted for what they called the “development” of arid lands.

The United Nations Educational, Scientific and Cultural Organization (UNESCO) played a prominent role in this process. Willing to establish transnational scientific research projects, the UNESCO launched the Arid Zone Program at a symposium held in Algiers in 1951 (Batisse, 2005). As defined by experts of this program, the arid zone was composed of regions that shared climatic analogies: few annual precipitations and episodes of extreme temperatures (Fig.1). It comprised regions of Central Asia, Australia, West America, the Middle East, Southern Africa, and, notably, the whole northern part of the African continent, with, at its core, Sahara (UNESCO, 1952). Life faces serious difficulties to develop in such territories, and modern science, together with a rational use of technology, was seen as a major lever to improve possibilities of inhabiting, cultivating, and exploiting natural resources in the deserts. In the course of the 1950s, the UNESCO thus organized a series of annual symposiums and financed programs in order to stimulate scientific research and international cooperation on all aspects concerning the arid zone.



Fig.1. Arid Zone Program logo (UNESCO, 1956).

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

The North African Horizon  
of French Solar Architecture, 1945-1973  
Paul Bouet

In the meantime, Sahara became a key territory for France's imperial policy. A rationale emerged within colonial discourses that called for the "mise en valeur" of Sahara. As defined by Albert Sarrault in his eponym book of 1923, "mise en valeur" combined the "*development of material wealth*" and the "*civilizing mission*" of France in its colonies (Sarrault, 1923: 20). In this scheme, the industrialization of colonized territories to exploit their resources and workforce was considered a means to produce economic wealth as well as to raise the standards of living of local populations, by getting them closer to the western way of life. By combining "economic development" and "human development", "mise en valeur" was then to benefit to the colonizer as to the colonized—even though the exchange was fundamentally unequal—; it was supposed to make economic exploitation "profitable" for both (Unger, 2018: 36). This "mise en valeur" logic was massively applied to Sahara from the 1950s onward: missions were launched to prospect mineral ores, gas and oil, leading to the discovery of important reserves in underground Sahara (Frémeaux, 2010: 229-233; Cantoni, 2017). Projects were undertaken to create industrial complexes and infrastructures in the desert. And this endeavour was not stopped by the beginning of the Algerian war of independence in 1954: the war only accelerated it, reinforcing military control over this region in an attempt to secure France's access to those strategic resources.

In both UNESCO's development program and France's colonial project of "mise en valeur", solar energy was meant to play a key role (UNESCO, 1956; Le Bras, 1961). Sun radiation was not only considered a problem—the cause of aridity—, but also a solution—a potential resource. Indeed, adaptation to the extreme climate was a necessity for human occupation in arid lands, while access to energy was a key goal in those territories distant from conventional infrastructures. Abundant and immediately accessible, the sun rays could be used directly and provide energy for both industrial processes and human needs. The use of solar energy was thus seen as a perfect means to combine economic development and so-called human development, under the patronage of modern science.

Scientists, architects and engineers were involved in this project of using solar energy in the Sahara, most prominently in buildings. What was exactly their role in this project? And what represented Sahara and its Sahelian outskirts in their view? In what follows, I focus on two different cases: the experiments of scientist Félix Trombe and the projects of architects Georges and Jeanne-Marie Alexandroff. I argue that for the former, Sahara represented a technoscientific laboratory to initiate the spreading of solar technology, while for the latter, it



was notably envisioned as a ground to criticize modern western architecture and to imagine its renewal. Finally, I draw continuities with the following period by discussing how the colonial and postcolonial condition of these experiments represented a key stage for the conceptualization of solar architecture, before its deployment in the context of the environmental movements and the oil crisis of the 1970s.

## A Technoscientific Laboratory

In postwar France, Félix Trombe became one of the most active advocates of the use of solar energy in the arid zone. Trained as a physician and a chemist, Trombe had specialized in the study of refractory metals, which are materials extremely resistant to shocks and temperature. These materials were of special interest for military authorities, as some of them were components of advanced weapons. In 1946, at a time when shortages caused by the war were still in effect, Trombe and his laboratory had the idea to transform anti-aircraft projectors, taken to the German army, into solar furnaces: the sun rays were concentrated in one point in order to melt the metals they studied (Trombe et al., 1946).

With his work on solar energy and refractory metals, Trombe gained much popularity within the scientific community, and his laboratory constantly grew in size in the course of the 1950s and 1960s. The scope of his research also expanded, both geographically and in terms of applications. Indeed, following UNESCO's call to scientists, and with the support of the army and colonial authorities, Trombe focussed his research on the use of solar energy in the arid zone, and particularly Sahara (Trombe, 1953). Visiting Morocco in 1951, still under French rule at the time, Trombe advocated for the construction of industrial solar furnaces on the slopes of the Atlas Mountains<sup>1</sup>. Facing the desert at south, they would serve to transform ores extracted in the mines of manganese and other metals. In a report of 1949, he proclaimed that "*surely, North Africa will be the elected land for the development of great solar machines*"<sup>2</sup>. But what was exactly the role North Africa and Sahara should play for the development of solar energy in Trombe's view?

<sup>1</sup> Archives nationales de France (AN), 19800284/213, Félix Trombe (ca. 1951), *Compte rendu de mission au Maroc*.

<sup>2</sup> AN, 19800284/213, Félix Trombe (ca. 1949), *Le laboratoire de recherches solaires de Montlouis (Pyrénées Orientales): Organisations et recherches en 1949. Projets en 1950*.

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

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As other scientists of his time, Trombe thought that fossil energy sources (coal and oil) were subject to an accelerated depletion as they fuelled postwar modernization. In the end, when fossil sources would be over, this would inevitably lead to the use of renewable energy sources (Trombe, 1953). And among them, solar energy was presented as the most universal and promising one. It was to become the “*houille d’or de l’avenir*” (the golden coal of the future), after an expression forged by Trombe (Trombe, 1950). Although this transition was not to happen immediately, it was to be prepared without further delay. But according to Trombe, western industrialized countries were so addicted to fossil energies that they would not be ready to adopt solar energy. On the contrary, less industrialized regions of the arid zone—and particularly Sahara under French rule—, with fewer access to conventional energy sources, would be appropriate places to initiate the use of solar energy, contributing to their overall development. In this global project, that could be qualified as technoscientific, Sahara thus represented a “laboratory”, a land where to experiment the use of solar energy before its worldwide deployment.

Trombe acted intensively to fulfil this goal, getting financial support from French colonial, military and scientific authorities. In 1950, his research laboratory was transferred from Meudon, near Paris, to the citadel of Mont-Louis, in the Pyrenees Mountains—a much sunnier place. There, his Laboratoire de l’énergie solaire developed two types of applications of solar energy (Trombe, 1953) with the intention of transferring them to Sahara. On the one hand, the team of scientists continued researching on industrial solar furnaces. They built the biggest solar furnace in the world within Mont-Louis citadel between 1950 and 1952. It was supposed to melt greater quantities of metals, so as to achieve economic viability. On the other hand, Trombe and his team began researching on the use of solar energy for domestic applications. Within the citadel, they experimented various devices: greenhouses to purify water and cultivate plants; blackened pipes on roofs to produce warm water; sun-powered refrigerators to provide ice; glazed boxes on facades to warm indoor air; and small containers that used terrestrial radiation to produce cold air. All these devices had one goal: to adapt the extreme climatic conditions of the desert, which shares some characteristics with the sunny Pyrenees Mountains (Bouet, 2017: 33-37).

Developed in Mont-Louis, these devices were then tested in southern Algeria. In 1958, a miniature house was manufactured in France and transported to Colomb-Béchar, an Algerian city of northern Sahara. There, it was assembled within the Centre d’Essais d’Engins

Interarmés, a military base where missiles were tested. Despite technical complications, the results of this experiment proved good, as the device allowed for a reduction of indoor temperature up to 12° C compared to outside temperature (CNRS, 1961: 653-680). On this basis, other experiments were envisioned in Algerian Sahara under French rule. At this time, Trombe's laboratory gained support from the Organisation Commune des Régions Sahariennes (OCRS), a political and military institution created by France in 1957 so as to secure its access to resources in Sahara, while insurgency for independence was getting more intense in northern Algeria. In this context, building housing and facilities to serve in the industrialization of Sahara became a major goal for the OCRS. In 1960, Trombe and his team projected to build a large greenhouse to purify water and cultivate plants, based on their previous experiments. They also conceived two houses to test devices meant to alternatively cool and warm air<sup>3</sup>. Cooling was much needed during very hot days in the desert, while warming was needed during cold nights, when temperature could get very low. The Laboratoire de l'énergie solaire even planned to build a monumental solar furnace in Algerian Sahara, more than ten times bigger than the one in Mont-Louis, so as to operate in industrial processes (Trombe, 1964).

All these ongoing and planned experiments were brutally stopped by the end of the Algerian war of independence in 1962. Even though France negotiated a special access to Saharan Algeria during the years after the war, especially to continue its nuclear activities and the exploitation of oil, solar experiments were stopped. From that moment on, the Laboratoire de l'énergie solaire carried on its research in France. The monumental solar furnace was built not on the slopes of the Atlas Mountains, but in Odeillo, near Mont-Louis. It was designed by the national architectural and engineering office of Aéroport de Paris, and conceived as a scientific and architectural symbol of postwar modernization in France (Bouet, 2017: 44-57). While research on cool houses were progressively reduced, research on warm houses gained much importance. In the course of the 1960s, a series of experimental houses warmed by the sun were built, also in Odeillo (Fig.2). Trombe then collaborated with architect Jacques Michel, a disciple of Le Corbusier, to adapt his technology to various housing projects and promote it through spectacular designs. Despite the withdrawal of France colonial power from North Africa,

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<sup>3</sup> Félix Trombe papers, private collection of Michèle Lhermitte, Félix Trombe (ca. 1960), *Rapport sur la climatisation des maisons dans les pays à ciel clair*.

Trombe's technoscientific project to use Sahara as a laboratory to initiate the deployment of solar energy had begun to realize.



Fig.2. Experimental solar house, Odeillo, France, 1961-62 (Félix Trombe papers, private collection of Michèle Lhermitte).

### A Ground to Criticize Modern Western Architecture

The Algerian war of independence and the overall process of decolonization also played a key role in the second case analyzed in this paper, although not in the same perspective. The interest of Georges and Jeanne-Marie Alexandroff for solar energy and Africa grew during their studies in the Section d'architecture of the *École des Beaux-Arts de Paris*. In 1958, at the age of 27, Georges Alexandroff, then a remarkable student, had to stop the course of his studies to serve in the army<sup>4</sup>. At that time, military service had been extended to almost three years because of the intensification of the war in Algeria. Georges Alexandroff was integrated in a section of the engineering corps; but we ignore whether or not he was effectively sent in Algeria, as most of the conscripts were, or if he served in other countries where the French army was present. In any case, as historian Ludivine Bantigny has argued, the Algerian war of independence profoundly marked a whole generation of young men and women, appalled by France's action in Algeria and

<sup>4</sup> AN, AJ52/1353, Capitaine Romary (January 23, 1958), *Certificat de présence au corps de Georges Alexandroff*, Auneau.

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

The North African Horizon  
of French Solar Architecture, 1945-1973  
Paul Bouet

terrorised by the attacks perpetrated by the Organisation de l'Armée Secrète in metropolitan France (Bantigny, 2007).

At his return to the École des Beaux-Arts de Paris in 1961, Georges Alexandroff together with his wife Jeanne-Marie got interested in the issue of third world development and the role architecture could play in it. In the French context of the 1960s, issues of development were particularly discussed by agronomist René Dumont. In his book of 1962, provocatively—and quite ambiguously—entitled *L'Afrique noire est mal partie*, Dumont argued that colonization had left African countries profoundly disorganized, particularly in the agricultural sector (Dumont, 1962). To avoid starvations and conflicts, Dumont pleaded for an intense agricultural modernization based on western knowledge but adapted to local conditions. He notably called for the creation of experimental villages in the Sahelian zone, where villagers would be taught modern agricultural practices, including the massive use of irrigation. And at that time, as we have said, solar energy was commonly presented as a mean to “develop” the arid zone, including Sahara and Sahel, by UNESCO and various scientists (Perrot, 1963).

With these considerations in mind, Georges Alexandroff chose to dedicate his diploma project to a “solar village”. Presented at the École des beaux-arts in 1965, it was awarded the Guadet prize for the best diploma project of the year (École nationale supérieure des beaux-arts, 1965). Drawn in the spectacular manner of the Beaux-Arts tradition, the project was set in a fictitious site, although located somewhere in the Sahelian zone, between Senegal and Chad. It was composed of four different programs: housing for thirty families, community services, a training centre and agricultural facilities. All these programs were organised under a repetitive roof profile composed of solar panels. Solar energy was used to pump underground water and irrigate fields around the village in this semi-arid zone.

Elaborating on this project, the Alexandroff conceptualized what they named “solar architecture”, and doing so, they clarified the role given to Sahara and Sahel in their perspective. For them, solar architecture consisted in integrating solar technologies in projects to be built in third world countries (Alexandroff, 1968). It was a means to provide technical assistance based on western technologies to populations in rural regions considered as underdeveloped. For the Alexandroff, solar architecture was thus “*a tool of development . . . that should be generalized in the third world*”. Implementing it in Sahara and Sahel had also a particular political and historical significance for them: it was an attempt—and possibly a naïve one—to reverse the relationship between France and its former African colonies in the postcolonial period.



# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

The North African Horizon  
of French Solar Architecture, 1945-1973  
Paul Bouet

Besides this development goal, Sahara and Sahel had also a critical function in the Alexandroff's perspective. Solar architecture, as they stated, relied on western technologies but had to integrate and celebrate characteristics of local architecture. "Vernacular" architecture, as it was qualified, represented a model of vitality and inventiveness that they opposed to the monotony and abstraction of modern architecture that triumphed in the West at that time, particularly in the French *grands ensembles* as they pointed (Alexandroff, 1968: 7). This function of critical model is particularly emphasized by a spectacular photograph reproduced on one of Georges Alexandroff's diploma panel. Initially taken by French ethnologist Marcel Griaule, it represents a Dogon village built on the cliffs of Bandiagara, in today's Mali, with its profusion of constructions and raw materials set in apparent disorder. It is worth noting that at the very same moment, Bernard Rudofsky showed the same photograph in his most famous exhibition and book *Architecture Without Architects* (Rudofsky, 1964: 40). For the Alexandroff as for Rudofsky, the intention was similar: to make vernacular architecture a critical model opposed to modern western architecture. And for this critique, Sahara and Sahel represented a particular ground.

In the years that followed their diploma project and first articles, the Alexandroff had the opportunity to give shape to their ideals. They became members of the *Coopération Méditerranéenne de l'Énergie Solaire*, a group founded by scientists aiming at promoting research on the use of solar energy around the Mediterranean Sea, beyond historical and political conflicts. At the COMPLES meetings, they met Jean-Pierre Girardier, an engineer and business owner who had studied solar pumping technologies in Dakar University. The Alexandroff and Girardier associated to develop a project in Chinguetti, Mauritania (Fig. 3). In this city located in West Sahara, with no access to conventional energy sources, they implemented a solar pump within a community building (Brabyn, 1974). Again, this project was typical of the development policies of that time, as well as of the Alexandroff's conception of solar architecture. Solar panels formed the roof under which children, who had not to pass their day getting water anymore, could be educated in classrooms. The pump itself was set in the tower, the design of which was inspired by the nearby mosque. Solar components came from France, while the rest of the building was made of local materials and building techniques. Completed in 1973, this project was followed by other designs based on the same principles to build "solar oases" in the Saharan regions, including Algeria, Niger and Tunisia.

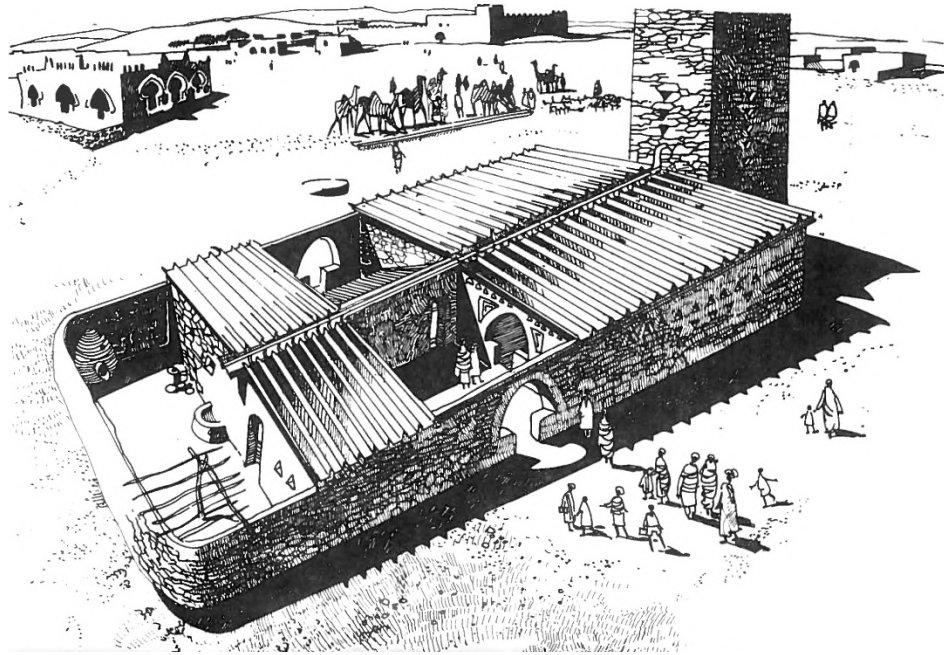


Fig.3. Georges and Jeanne-Marie Alexandroff, solar community building, Chinguetti, Mauritania, 1973 (Brabyn, 1974).

## Conclusion

Although different in perspective, Trombe's and the Alexandroff's conceptions of Sahara and Sahel shared a fundamental characteristic: they were in very large part imaginary, idealized visions of a land seen from the West, and that they knew only little in reality, as pointed in the classical saïdian theory. Indeed, this gap between local realities and ideal conceptions was in large part responsible for that most of the experiments that were conducted in those territories ended up failing. Nevertheless, research undertaken in Sahara and Sahel were then continued in France and other western countries in the context of the rise of environmentalism and the oil crisis of the 1970s. They served as a basis to develop the use of solar energy within buildings and to theorize the adaptation of architecture to climate. Technologies such as the Trombe wall, first imagined for Sahara, became very popular among counter-cultural builders on both sides of the Atlantic. Actors such as the Alexandroff became central figures of the debate on the use of renewable energies in architecture. But, in that second period, the North African horizon of early French solar architecture remained largely ignored.

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**COLONIAL  
AND POSTCOLONIAL  
LANDSCAPES**

ARCHITECTURE, CITIES, INFRASTRUCTURES

The North African Horizon  
of French Solar Architecture, 1945-1973  
Paul Bouet

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## **The cities of Western Sahara: their defining characteristics and evolution**

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### **Abstract**

During the period (1884-1976) when the western Sahara was a Spanish protectorate, then a colony, and finally a province, the territory featured no pre-existing cities or anything else that might be considered an urban settlement. Only at the end of the 19th century did local chief Ma al-'Aynayn build at Smara his mosque-fortress from which to combat European invasions of the region.

Today's consolidated urban centres at El Aaiún (Laayoune), Villa Cisneros (Dajla/Dakhla), Cap Boujdour (Cabo Bojador), Smara, Tifariti, Sidi Ifni, and Cabo Juby were largely created from scratch by Spanish planners, as European enclaves in the Sahara desert. These settlements are unlike other cities of the Saharan region, where the influences of various cultures (Berber, Arab, European, and subsequent postcolonial rearrangements) are superimposed.

This paper aims to examine these distinct urbanization plans and to identify signs of the diverse architectures of the colonial period, defining certain characteristics of their evolution. Attention will be paid to the settlement styles of nomadic populations, and to changes made in the midst of ongoing de-colonization. Urban processes undertaken by architects such as Ramón Estalella and Diego Méndez.

**Keywords:** Western Sahara; Urban Plan; Diego Méndez; Ramón Estalella

### **Introduction**

When Spain arrived on the Atlantic coasts of the Sahara in 1884, for geo-strategic reasons and with every intention to stay, no stable core of settlement could be found, not even among the 'imraguen' fishermen who practiced coastal nomadism (Boulay, 2013). Spanish intellectual and activist Joaquín Costa, then-director of expeditions of the Colonial and Mercantile Geographical Society, pointed out in those early incursions that "three nuclei on the coast" (Rodríguez, 2011) would be necessary to bring value to the area that Spain had declared (before the Cortes and the European powers) to be within its interests to protect. Joaquín Costa's



# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

The cities of Western Sahara:  
their defining characteristics and evolution  
*José Antonio Rodríguez-Esteban, Diego Barrado-Timón*

premonition, and Spain's claims in the region, would take many years to be realized; indeed, one of the zones indicated by Costa (site of the current capital of El Aaiún) would not be constructed until the 1930s. Thus, the cities of the region were created *ex nihilo* in less than 100 years, giving them a certain originality.

That is to say, the consolidated urban centers of El Aaiún, Villa Cisneros, Smara, Tifariti and Cabo Bojador, Sidi Ifni and Cabo Juby were essentially created from nothing, emerging as Spanish/European enclaves in the Sahara desert. Only at the end of the 19th century did local chief Ma al-'Aynayn build his mosque-fortress project in Smara, from which he intended to fight European invasion of the region. These cities are, in effect, urban nuclei uncharacteristic of other cities in the Saharan region, where the influences of distinct dominant cultures have been superimposed over time: Berber, Arab, and in many cases European, each with its own subsequent post-colonial rearrangement.

A modern approach to the structures and evolution of the socio-spatial and cultural traits of these places requires an examination of the colonial archives (to identify the intentions of their creators between 1884 and 1976) as well as a knowledge of the tribal patterns that have characterized nomadic life, including through its 20th-century readjustments. The conflicts and games of interest that have molded the region are blended and enriched by the reading of its urban forms, if observed attentively and with a multidisciplinary outlook. As Freund (2007) has pointed out for African cities in general, the challenge here is to find a way to relate new and distinctive stories with older analytical categories, and to bring them into tension in order to update and deepen our understanding.

Our proposal is based on the need to better understand the urban structures that characterize a large area that we will call the western Sahara region, including southern Morocco, the nation of Western Sahara, a good deal of Mauritania, and southwestern Algeria, taking into account the permeability of current borders (Caratini, 2009; Marfaing et al, 2004; Mcdougall et al, 2012) and the 'porous geography' indicated by Freire (2016). Only by considering social relations, material and immaterial flows of ideas (political and religious), and the commercial and imagined needs that run through these spaces it is possible to logically assemble the puzzle that has proven so elusive to classic categories of the social and political sciences, whose interpretations tend to be based on stereotype and prejudice. The study of urban forms and characters within their historical contexts, and of their ability to wield wider influence, can be addressed only in cognizance of the inheritances that helped to inform their consolidation. Thus

the objective of a multidisciplinary approach, as posited here, is to achieve synthetic knowledge of the main tributaries that explain these settlements as places that have always concentrated the interests and desires of all actors who have converged on this wide territory.

As indicated, a lack of models and adequate conceptual tools have so far led to an array of incomplete and often unsatisfactory approaches to the cities of the western Sahara region (Ifni-Gulimín, Tan Tan, Tarfaya, among others), and especially those of Western Sahara (Dalda et al, 1977; Bekkar, 1994; Meana, 2006 and 2016; Ben Attou, 2007 and 2010; Cherkaoui, 2008; Veguilla, 2013; Diaz et al, 2014; Rabasco, 2015; Rodríguez et al, 2015).

### **Beginnings and progressive stages of urbanization in the western Sahara**

In 1884, Spain occupied a point on the Saharan coast which was dubbed Villa Cisneros, and it declared a protectorate over 500 km of coastline proximate to the Canary Islands. This initial presence was meant to extend inland, in the direction of Timbuktu, but that plan was frustrated by French designs to unite their Senegalese and Algerian possessions, thus preventing Spanish colonization of interior territories. Later attempts to extend beyond the initial coastal settlement of Villa Cisneros came during the early 20th century, this time with the help and in the shared interest of France, which wanted to prevent native groups harassing French troops from taking refuge in territories which, though claimed by Spain, remained without effective control.

Finally, the exploitation of diverse mining resources fostered the development of population centers in the region, as well as the need for Spain and France to coordinate their colonial policies, now reflected in nascent urban environments as a consequence of the search for a common settlement policy.

Actions undertaken by Spain following its declaration of a protectorate on the African coast between Cabo Bojador and Cabo Blanco at the end of 1884 can thus be explained through a set of factors (political, military, economic) that have proved more or less determinative in each period. The first of these was defense of the Canary Islands and the protection of fishing practices along the southern Sahara coast, along with concern over the presence of other powers in the area. Of similar importance were relations with France, in terms of competition and confrontation, as well as necessary collaboration; possibilities around exploitation of natural resources; and ultimately, in the years after 1960, control of the territory despite pressures for independence both within and beyond its borders.

Considering the importance of each of these factors, it is possible to distinguish three overall periods of territorial action by Spain: 1884-1940, 1940-1964, and 1964-1975 (Rodríguez et al, 2015). The latter two periods are indicated below via population statistics of the two main cities: El Aaiún and Villa Cisneros.

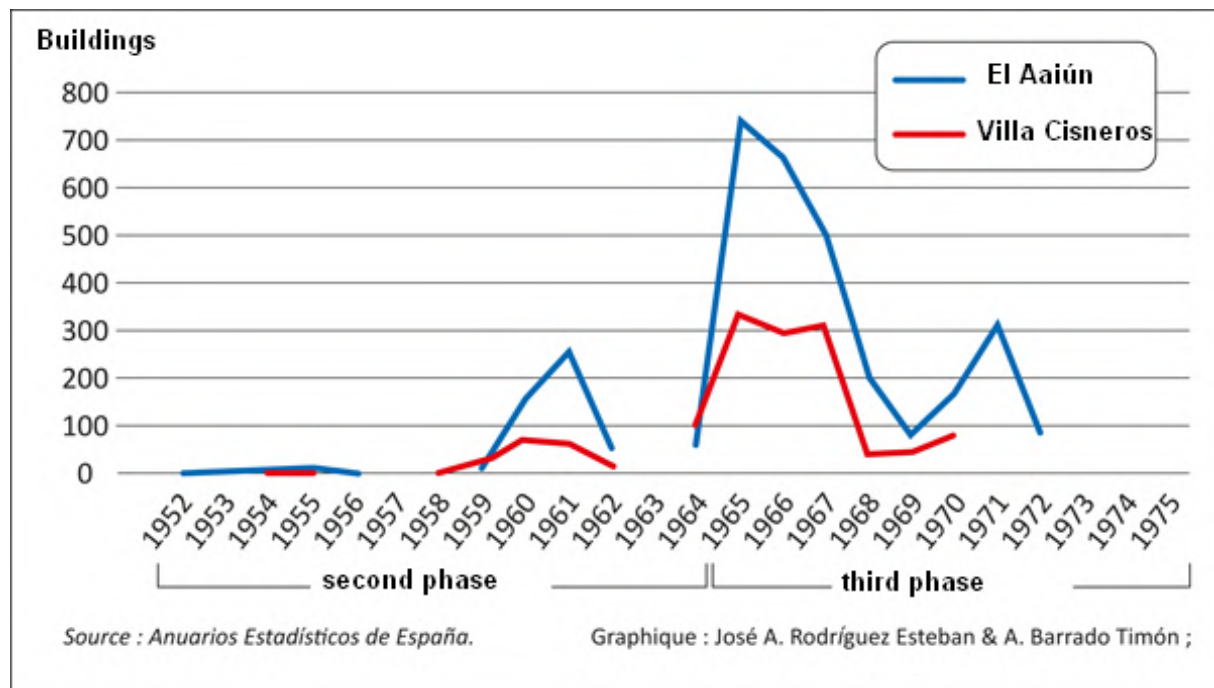


Fig.1. Population statistics of the two main cities: El Aaiún and Villa Cisneros

It is in these latter two phases that urban processes were accelerated, and architectural projects became more relevant. It should be recalled that, in 1939, a Civil War brought General Francisco Franco to power in Spain and, consequently, the Saharan territories came to represent imperial aspirations for Spanish politicians, financiers, and military operators alike. This coincided with the temporary defeat of France during World War II, and the consequent possibility that Spain might administer (given its ties to Germany) France's possessions in West Africa; toward which end Hitler's forces would necessarily occupy one of the Canary Islands. These developments brought greater attention to the western Sahara, and to the allocation of economic resources destined for diverse projects, culminating in the eventual plan to organize El Aaiún, launched in 1950. A similar situation unfolded at Villa Cisneros, the first Spanish settlement in the region, where 125 buildings in existence in the early 1950s became the object of an Urbanization Project in 1953. (Notably, Spanish urban planning had not yet been

definitively institutionalized in the 1940s, either in administrative or in legal terms; even in Spain itself, very few capitals were being planned).

This policy of national affirmation in the Sahara saw rapid territorial reflection with the construction of El Aaiún; the city took on an administrative and symbolic role as the capital of a province created in 1958, to disguise before the United Nations the colonial character of western Sahara following the first wave of African independence. Roads were asphalted, water tanks installed, warehouses opened and ports enlarged, enhancing provincial symbolism while strengthening political, military, and cultural control, with buildings erected for governmental delegates and churches constructed to advance the official religion. These tasks were entrusted by Franco to one of Spain's star architects of that moment: Diego Méndez.

### **Diego Méndez and symbolic 'round-trip' architecture**

Appointed in May 1940 as an advisor to the National Heritage Administration, Diego Méndez was assigned a year later to intercede in the National Directorate of Architecture, reaching the executive rank in 1950<sup>1</sup>. In 1951 Méndez became the chief of the architecture section of the General Directorate for Morocco and Colonies.

Before this appointment, he had been sent by Franco to Marrakech to study Moroccan urbanism in order to build a barracks/residence for the Mora Guard (Franco's personal escort) outside Madrid. Although the project was never realized (the original unpublished plans reside in the private Diego Méndez Archive, 1942, ref. Cantero et al, 2014: 197), the visit inspired in Méndez a "new and delicate ornamental language, order, and reading quite different from that seen in Royal Sites and heritage buildings" (Cantero et al, 2014: 193). Such forms would later be employed in the most symbolic buildings built throughout the following decade in Villa Cisneros, by way of the General Directorate of Morocco and Colonies. In this way, Arab architectural models were carried further south, to a comparatively Berber area, in a sort of 'round trip'. During this trip, the models were hybridized and blended with other influences, as of Méndez's the renowned and providential master, the architect Pedro Muguruza Otaño, who had designed the layout for Tetuán, the first Spanish plan in Africa (Muguruza, 1944).

Thus Méndez endowed the main cities of what was then called Spanish Sahara with buildings such as the Sanitary Center at Sidi Ifni, the churches of Laayoune and Villa Cisneros (Fig. 2)

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<sup>1</sup> Archivo general, Ministerio de Fomento, Government of Spain.

(whose M-shaped arches recall the architect's initials), along with diverse infirmaries, dispensaries, hospitals, leprosaria, military installations, school facilities, slaughterhouses, mosques, town halls, and so on, in cities such as Villa Cisneros, El Aaiún, Smara, La Guera, Sidi Ifni, Barta, and Auserd.



Fig.2. Iglesia de Villa Cisneros, by Diego Méndez. (Draft, 1951, in Cantero et al, 2014: 195, and oblique aerial photography 1958).

### **Urbanism and architecture's next stage: the residential projects of Ramón Estalella**

In 1956, Morocco acquired its independence after the long protectorate period begun in 1912, during which both France and Spain shared control of the territory. Beginning with independence, Morocco launched a process of continuous harassment of southerly territories reaching into what is now Mauritania; in 1958, following a military confrontation, the territories of Sidi Ifni and Tarfaya (then under Spanish control) were annexed. In 1960 a meeting took place in Madrid between General Díaz de Villegas, Spain's General Director of African Sites and Provinces, and Colonel Villiers, attached to the Chief of the Military Cabinet of the President of the French Republic; the purpose of the summit was to preview for Spanish authorities the independence process of Mauritania and its possible consequences for the Sahara, especially as it related to the large and nomadic Erguibat tribe, estimated at 30,000 people. Colonel Villiers raised the necessity for various measures, including to contain this tribe in Mauritania and Spanish Sahara by way of economic incentives that would allow them to live without their traditional mobility; this would curtail their traditional movements to southern Morocco, where it was feared they might engage in activities of a political nature. Thus new territorial actions were required, especially in El Aaiún, which would undertake significant



# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

The cities of Western Sahara:  
their defining characteristics and evolution  
*José Antonio Rodríguez-Esteban, Diego Barrado-Timón*

urban projects with the assistance of Spain's National Housing Institute, founded in 1939 and promoted in 1957 following the creation of a Ministry of Housing.

In 1961, these settlement plans for the nomadic population led the Spanish Government to take its low-income housing regime to the Sahara. A plan was created, decreeing that the National Housing Institute establish a construction program to calculate the numbers, social classes, and economic means of the people for whom the housing was intended. This plan established a series of recommendations for new buildings, also taking into account the psychological frames of future tenants and the particular characteristics of the coastal desert (high condensation, rapid oxidation of metals, and damages caused by sudden changes in temperature), with the goal of reaching an "agreement between man, soil, climate, and housing" (Estalella, 1966: 3). This urbanization work and its complementary buildings were covered by the National Housing Institute (*Institute Nacional de la Vivienda*) from budgets directed by the State.

Ramón Estalella, who had entered Madrid's School of Architecture in 1953, and among the youngest in his class, won in a 1962 competition the post of National Housing Institute, awarded by the Provincial Delegation of Santander. At the request of the General Director, and thanks to his prior experience with African architecture, Estalella assumed direction in April 1962 of the Housing Construction Plan at Ifni (Fig. 3), Sahara, and Guinea (Rabasco, 2015). He was given to oversee two teams and the Institute's central offices, and charged with implementation of the plan, controlling relations with promoters, land adjudications, correspondences, etc.

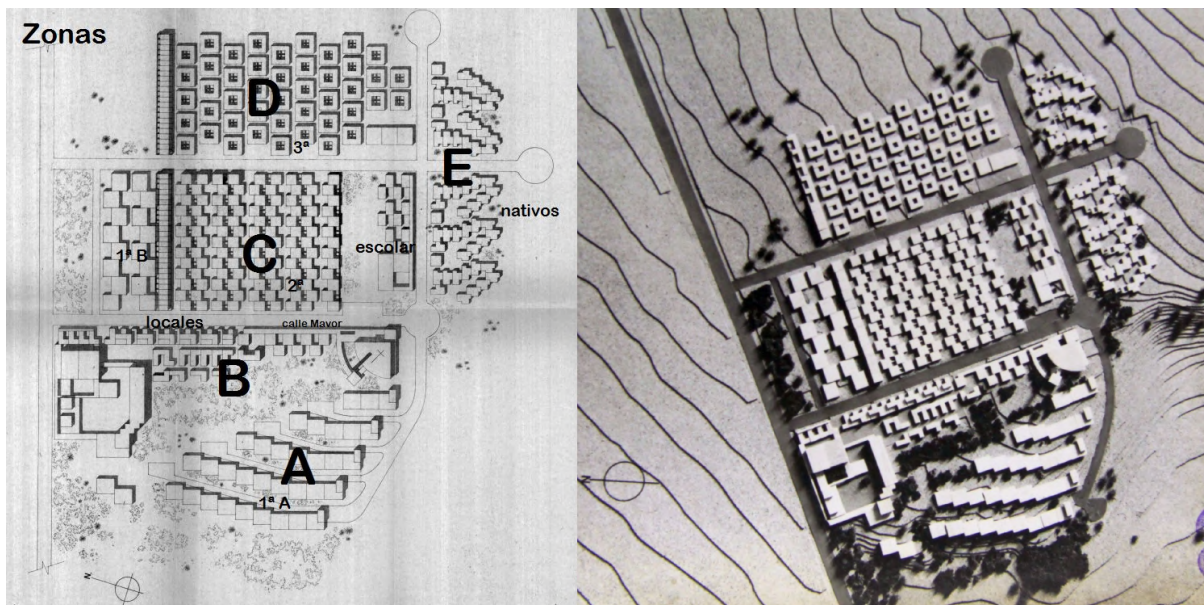


Fig.3. Barrio de Agulla, (Sidi Ifni) by Ramón Estalella. Various building categories (for the military, for workers, etc.) are visible. Area E is housing for native populations.

Such National Housing Institute plans extended to Villa Cisneros, where buildings were constructed within the city limits, but in El Aaiún the houses were grouped into independent settlements in the vicinity of a central core. These were aligned east-west with individualization attained from a small number of types (to facilitate prefabrication), and monotony was avoided through combinations. Dwellings for the natives (understood as transitional, between the jaima and European-type housing) feature a peculiar hexagonal foundation (El Aaiún and Villa Cisneros). In each block, twelve houses were grouped around a central courtyard where animals could be kept, allowing natives proximity to their livestock (Fig. 3).

When Spain withdrew from Western Sahara, in the early days of 1976, several of these population centers had fully consolidated (El Aaiún, Villa Cisneros, Smara, Sidi Ifni, Bojador, and Tarfaya): together with European populations, they had attracted and permanently situated a good number of nomadic groups, for economic or political reasons.



Fig.4. Barrio de la Paz (El Aaiún), by Ramón Estalella, housing for natives

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## **Crown Land Rule as a means of Governance in Colonial Hong Kong**

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### **Abstract**

In the current historiography of Hong Kong, the Crown Land Rule has been seen as a key foundation for the former British colony's impressive economic development in the second half of the 20th century — the colonial government's ability to collect land rent enabled low tax rate and laissez-faire attitude to trade and commerce. Meanwhile, as the allodial landowner of almost all the land in Hong Kong, the government had significant autonomy in determining the provision of social housing, hence ensured an ample supply of low-wage workforces. What has been missing from the discussion is the Crown Land Rule's function as a means of governance. This paper draws attention to frictions that have long been sidelined in the discussion of Hong Kong's land policy, in particular, the issue of racial and ethnics divisions. Although the majority of Hong Kong's population are racial Chinese, this paper argues that the Crown Land Rule has widened the socio-economic and socio-political divide between migrants who came from different Chinese provinces and arrived in Hong Kong in different decades of the late 20th century. In this effort, this paper looks into three types of "villages" in Hong Kong's urban planning policy: indigenous villages that are founded since the 19th century, squatter villages that are recognized and tolerated by the colonial government through a series of Survey in the 1980s, and illegal settlements. Paying particular attention to the policy on squatting, this paper highlights the tangible and intangible boundaries that were created and fortified as a result of Crown Land Rule. This research adds to the current discourse on land reform and urban development in the Global South through a critical re-appraisal of Hong Kong's late-colonial and post-colonial spatial governance.

**Keywords:** Hong Kong, Crown Land, Pokfulam Village, Squatter

## Introduction: Spatial Governance

This paper discusses land lease and squatter policy in Hong Kong as a form of spatial governance in the late and post-colonial period. Although it uses Hong Kong as its main case study, this paper is hoping to contribute to the discussion of the legacy of British colonial land rule. Here I use the framework of spatial governance offer by planning theorist P. Allmendinger's as a means to consider Hong Kong's land management mechanism and its resulting socio-urban conditions. According to Allmendinger, spatial governance is

*“situated at the juncture of the integration of official state policy making and a requirement for joined-up government, with a determination to embed strategy making within specific distinctive territories that can be sponsored or owned by either government or governance actors.”* (Allmendinger & Tewdwr-Jones, 2006: xv)

The framework of spatial governance has at least two significance to the study of Hong Kong. Firstly, when the Hong Kong Island was first ceded as a British colony in 1848, all land, except a church plot, were turned into “Crown Land” – they became the property of the British Crown managed by the colonial government. The implication of this Crown Land Rule is that not only the Hong Kong government would effectively function as a private landlord in all decisions regarding land leasing, but also that any issue regarding land and planning would simultaneously become an issue of governance.

Secondly, spatial governance also offers an alternative answer to a fraught question regarding Hong Kong's planning history. In the existing literature, Hong Kong's colonial governance is often being described as a *laissez-faire* approach. This claim is undeniably justifiable considering Hong Kong's low tax rate and adaptable trade and commerce laws. In terms of planning and urban development, Hong Kong has virtually no zoning and height control planning – except areas near the airport, and treatment plants. However, one can also argue that the impressive economic growth occurred in Hong Kong in the 20<sup>th</sup> century was also a result of strategies put in place, by the colonial government, to ensure the colony's stability and competitiveness. I argue that what was instilled in Hong Kong is closer to what Allmendinger and Haughton et al. observed as “neoliberal spatial governance”, which is

*“a fusion of a market-based, growth focused planning, and a planning that was implemented with sufficient public interest legitimacy to be seen to be acting in the wider needs of society.”* It was not “emerged through a conscious strategy of a



*'guiding hand' but through a series of experiments and trials, some of which have succeeded and some not.*" (Allmendinger, 2016: 88)

Although the policies I will be discussing pre-dated the commonly designated neo-liberal era of the 1980s, the framework of neoliberal spatial governance provides an apt description of the unusual condition of Hong Kong's planning mechanism. It also signposted the entangled relationship between land management, economic policy, as well as internal affairs in Hong Kong.

To understand how land management functions as spatial governance in Hong Kong, this paper considers three types of villages that are still exist within the metropolis: indigenous villages, "new" villages, and extra-legal "squatter" villages. I will use one area, the Pokfulam Village, where all the three types of villages co-exists, to examine the fraught legacies of Hong Kong's neoliberal spatial governance. The current debates in Pokfulam Village will be used to unravel questions about citizenship, identity and rights to the city in Hong Kong today.

### **Hong Kong's Crown Land and Land Lease System**

Before looking closely at the Pokfulam Village, it is necessary to introduce the two land management mechanisms that enable Hong Kong's spatial governance: the Crown Land Rule and Lease Modification System. Since all lands in the colony belong to the British Crown (now the Hong Kong Special Administrative Zone government), they are leased out, through auctions, to land users with varying durations. Noteworthy is that the lease system is also a way for the colonial government, in the absence of a zoning plan, to control the use, height and volume, as well as the quality of the buildings through the planning permission procedures. In other words, developers can apply for changing the land use of the plot through planning permission applications and by paying a premium. In fact, the land lease premium has been a vital source of income for the Hong Kong government since leasing, lease modification and lease renewal are perpetually recurring events. They also allow the colonial government to directly intervene with Hong Kong's housing and commercial real estate provisions. (Nissim, 2012) The standard lease durations are 75 and 99 years in the early period of Hong Kong colonial history. The standard maximum lease term of 99 years is a legacy of Hong Kong's colonialization: the Hong Kong Island was ceded to the British in 1848, but the New Territories was "leased" to the British Crown, in 1898, for 99 years. (Hayes, 2006) After Hong Kong's hand-over the China in 1997, new leases are issued with a term no more than 50 years since the

year 2047 is supposed to be the time when the “One Country, Two Systems” rule for the Hong Kong SAR expire. In other words, a direct tie between governance and land management persists till this day.

The lease duration of 99 years is, one can argue, one of the earliest spatial governance strategies put in place by the colonial government. Unlike the Hong Kong Island, the Kowloon Peninsular and the New Territories had already been populated by farmers villages when the British arrived in the 19th century. The families and clans in these villages waged noticeable resistance to the British colonialization. In order to consolidate their ruling, the colonial government conducted a between 1899 and 1903 to record the land claims of indigenous villagers in the New Territories. (Hayes, 2006: 35) Crown Lease of 99 years were granted to these villagers and hence guaranteeing their private properties and interests would be preserved during the British colonial rule. The name New Territories can still be regarded as an embodiment of the different land management, and hence political form/vessel that was put in place.

In the aftermath of the Second World War, Hong Kong witnessed a rapid population boom due to the influx of refugees fleeing the Communist regime in China. The Hong Kong government began to construct satellite new towns in the Kowloon Peninsular and the New Territories to create more urbanized land for industrial and residential uses. Many of these new towns were constructed on the village farm land, hence the government had to provide another plot of land for exchange. At stake was that during this process, stipulated by the “Village Resitting Policy,” many villagers would sell their land directly to a developer. These supposed farmlands are often turned into industrial and commercial use through the lease modification system or used as a means of land-banking at a time of rapid economic boom. (Hayes, 2006 and Poon, 2011) The adverse effect of this processes and the resulting land monopoly in Hong Kong has been eloquently pointed out by Alice Poon in her *Land and the Ruling Class in Hong Kong*. (2011) Poon suggests, in the book, that the Hong Kong government is also a beneficiary of this lease modification procedure when the land value of the colony soars, and their income from premiums raises. Poon also observes that the speculative developers, due to the large quantity of land they have amassed, transition into enterprises that manage Hong Kong’s infrastructure and utilities. These tycoons are, according to Poon, *de-facto* executives of Hong Kong’s urban and economic development. In sum, the spatial governance strategy used to

establish colonialization was turned into a form of neoliberal spatial governance that merged public infrastructure provision, capitalistic speculation as well as growth-driven policies.

Although the loophole in the “Village Re-sitting Policy” has now been amended, the claim to ancestral land by the indigenous villagers continued to be a contentious issue in Hong Kong. Although the land held by these ingenious villagers still subjected to the lease duration, there is another policy that effectively guarantees their continuous access to land. Since 1972, each of the male descendants of the New Territories indigenous villagers is granted a “Small House” – a plot of residential land for constructing house that is no more than 21m in height and 70 square meter in footprint. Not unlike their precedents, this policy is created as a means of peace-offering to the powerful indigenous families after months-long civil unrest waged by pro-China Hong Kong residents in 1967. (Hayes,2006,147) As a result of this Small House Policy, the Hong Kong government has to maintain a large amount of land reserve in anticipation for the land claim by the decedents. This strategy emerged at a time when Hong Kong was transiting from a manufacturing economy to an economy driven by service industry, with a growing middle-class population. By justifying their needs to maintain a large land reserve, the government can ask for higher and higher land rent. The artificial shortage of land and high land price fostered the growth and accumulation of wealth in Hong Kong in the last decades of the 20<sup>th</sup> century. The Small House Policy, therefore, benefit both the indigenous villagers and the colonial government, but also widen the gulf between the socio-economic status of the indigenous villagers and the other residents of Hong Kong.

### **Case Study: Pokfulam Village**

To look into not only the economic but also the social significance of the Crown Land Rule, this paper turns to Pokfulam Village, in the south part of the Hong Kong Island as case study. Today, it is surrounded by middle-upper class apartment blocks as well as prestige institutions including two universities and a riding school. In many pictures, Pokfulam Village resembled the images, that have populated the internet, representing the overwhelming income inequality in cities. However, as the following part of this paper reveals, the situation in Pokfulam is murkier. In 2013, the Pokfulam Village was listed in the Watch List of the World Monument Fund and hence shielded it from demolition. (Lee & Ngo, 2013) The particularity of Pokfulam Village can be best illustrated from an aerial picture. In pictures, one can see three types of the roof: gable tiled roof, concrete roof and corrugated metal roof. (FIG.1) Although

they are all seen as ordinary construction materials for houses in South-east Asia, the material of the roof, in fact, identify the socio-political status of its residences (or owner) and their different roles in Hong Kong's land policy.



Fig.1 Aerial View of Pokfulam Village, Pokfulam Village Community Archive, 2015

The few tile roof structures are the remaining structures dated back to the 18<sup>th</sup> and 19<sup>th</sup> century. The owner of these structures, although did not enjoy the land inheritance rights, through the Small House Policy, as their counter-part in the New Territories their private properties are protected. It is worthy to note that the protection is not necessarily tied to heritage preservation – as long as the residents can provide evidence of land deeds written before the colonization of Hong Kong their ownership is guaranteed. In other words, should the Pokfulam Village to be redeveloped, the government would have to purchase the property from them or compensate with valuable land in the Hong Kong island. Due to the prestigious location of the village and the lack of precedents, the potential compensation has deterred the government and developers' redevelopment interest. One can even assume the owners of these ancient land and houses hold more wealth and power than the nearby middle-upper class apartment residents who do not hold the land lease.

The other type of houses found in Pokfulam are of concrete roofs – they are houses that are reconstructed on plots that are associated with historic land deeds, many previously used as farmlands. These are houses that recognized as part of the natural expansion of the historical villages. In other words, the private property of the residents of the “New Village” are also protected. The majority of the houses in Pokfulam Village, however, are built with corrugated metal roofs. These are houses that are designated as “squatters” or temporary structures. Today, these squatter houses in Pokfulam Village are not strictly illegal. Their existence is being “tolerated” under the 1982 Surveyed Squatter Structure Policy. (HKLegco, 2000) Any squatter structures that are recorded in the survey are not subjected to immediate demolition, and they are allowed to have minor repair and improvement should it be proven by the government. In reality, most of the squatter structures in the Pokfulam Village are constructed with concrete or brick, but corrugated metal roofs are added to accentuate the “temporary” “squatter” status of these buildings. However, the residents of these squatters have no claim to the land and have no bargaining right when face redevelopment.

The term “squatter” is worthy of more consideration here. In Hong Kong, illegal settlements have been an on-going phenomenon since the 19th century, but squatting has been mostly recognized only as a public health issue. (Chu, 2013) In the aftermath of the Second World War, however, the tense geopolitical situation prompted the Hong Kong government to use the term squatter in a multitude of ways. In 1949, the Chinese Communist Party overtook the control of the country from the Chinese Nationalist Party (or usually called Kuomintang KMT) and KMT regime fled to Taiwan. Some of the army and government officials, as well as KMT sympathizers who did not leave in time went to Hong Kong for safety and to wait for passage to Taiwan. At first, the British colonial government hosted them as asylum seekers in former military camps and government sites. But as it became increasingly apparent that the KMT regime in Taiwan had little interest in accepting many of these refugees, the colonial government moved them to a remote site in the Kowloon Peninsular and left the KMT refugees to fend for themselves. Crucially, the colonial government designated these refugees as “squatters” – they have no rights to the land they lived on, as well as access to public infrastructure and amenities. This awkward definition of squatter meant the KMT refugees would be left alone without the threat of being repatriating back to China. The squatters were also not recognized as citizens of Hong Kong. For the colonial government, the term “squatter” created a grey zone in which they could host but also sideline these KMT refugees, and thus



maintained a cordial relationship with both the KMT regime supported by the U.S., and Communist Republic of China. (Roberts, 2016)

The designation of squatters enabled the Hong Kong government to negotiate the complicated geopolitical conditions as well as the complex issue about citizenship at a time of great insatiability. It also became a convenient alibi for colonial government to provide no public amenity and infrastructure to the massive influx of refugees into the city. Only in 1956 that the Hong Kong colonial government initiated the first public housing scheme after a great fire, in 1953, destroyed a densely populated squatter village. In the following decades, the colonial government began to instill tighter control over squatter villagers, stipulating building material, distance, and basic fire and building safety requirement. In other words, the Hong Kong government granted an extra-legal status to these villages. Although more and more Hong Kong people, since the 1970s, have the means to move into private purposed built apartment blocks, they often lived in overcrowded conditions. It is not unusual to see a family of 4 living in an apartment smaller than 30 square meters. As a result, many of the private apartment blocks in Hong Kong were populated by illegal extension, a kind of squatter in the sky. For the colonial government, it meant the wage of workers could be maintained at a low and internationally competitive level. Hence, the 1982 Squatter Structure Survey can be seen as a compromising strategy to simultaneously allow high land prices as well as low living cost.

## **Conclusion**

For the most of the second half of the 20th century, the Crown Land Rule and the squatter policy functioned as an effective means of spatial governance by the Hong Kong government. They enabled private-enterprise driven urbanization whilst allowing the Hong Kong government to profit from the incomes from land leasing and modification. Meanwhile, the Small Houses Policy and the village re-sitting mechanism appeased the powerful indigenous families. Secondly, the squatter survey allowed the existence of sub-ordinated housing for the low-wage workers of the city, while creating an illusion that they have also benefited from the system by gaining additional floor areas. At stake is that the 1898 land survey, the 1972 Small House Policy as well as the 1982 Surveyed Squatter Structure both use the date of construction, rather than the condition, location, or usage of buildings as criteria. They effectively created a mentality that one's rights to private property, access to infrastructure, and recognition are solely determined by when they or their family arrived in the colony. Under such mechanism,

the interests of new immigrants would be consistently neglected. This stratification also has a racial implication, too. The indigenous villagers and the historical villagers are usually Cantonese and Hakka people who originated from the Southern coast of China. (Hayes, 2006,6). They are recognized as the rightful, and even valued, citizens of the colony through their access to land. The owners of the 1982 Surveyed Squatter Structures are usually Chinese migrants from both Canton and another part of Chinese in the aftermath of the Second World War. Through the urban and economic changes in Hong Kong, their statuses are no longer peculiar; and their interests are now somewhat protected. However, due to the fact that Pokfulam is still a “squatter” village, most structures cannot be legally rent or sold on the market. In the recent year, Pokfulam Village became a new refuge for new migrants whose status in Hong Kong is peculiar: domestic helpers from South-east Asia, migrant workers from South Asia, as well as none-Chinese asylum seekers. The squatter policy continued to enable the Hong Kong government to turn a blind eye on an exploited class in Hong Kong. One can even argue that it can be seen as part of underlying causes of Hong Kong people’s persistent discrimination against the new-comers.

Hong Kong’s colonial government used the Crown Land Rule, Lease Modification, and Squatter Policies as means to negotiate the political, economic, and demographic changes in Hong Kong in the second half of the 20th century. They played a part and parcel role in fostering Hong Kong’s social stability and economic development. However, since these strategies of spatial governance are established out of contingencies and put in place through trails and experimentations, they also give rise to a multitude of unexpected side-effects. In the case of Pokfulam Village, the protection granted to the holders of ancient land deeds renders a wholesale demolition of the village almost impossible. The village also blocks access to a disused dairy farm that occupies some of the most scenic parts of Hong Kong. The recent World Monument Fund Watch List status forms a further obstacle to any redevelopment efforts since it protects the fabric of the village as a whole, including the squatter structures. In light of the overwhelmingly high property prices, the Hong Kong government has no means to recollect these valuable lands to increase affordable housing provisions. And it is worthy to emphasize the Pokfulam Village is only a microcosm of the dilemma created by ancestral land titles in Hong Kong today. Meanwhile, although most of the residents of Pokfulam Village have a keen appreciation of their village and their community bonding, they are also frustrated by the problematic physical condition in the village. Due to its status as a squatter, it means it does not

have access to necessary public infrastructure: there is still no sewage system in the village till today. The more than a hundred households still rely on a stream as a fresh sewer. The inability to carry out large-scale improvements to the houses and the village also meant the village's ageing population is living in increasingly dire states. These conditions, one can argue, are the result of decades-long spatial governance by a government that only considers the interests, but not the rights, of its dwellers. When citizens are demarcated as either land-holders or squatters, when identity is formulated through arbitrarily dates in land policy documents, the Crown Land Rule continues to perpetuate a means of spatial governance that can only keep negotiating with the past and cannot project into the future.

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## **The Resistance of Docile Bodies: The Indonesian Plantation System ca. 1900-1950**

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### **Abstract**

Through the notion of Lefebvre's space production, this paper explores how plantations in the Netherlands East Indies were strung together to form what I refer to here as a 'plantation system' between 1900 and 1950. Within this system, Indonesians and their communities were violently transformed—through time-tables, strict rules on hygiene and housing and outright punitive measures—into docile bodies. These bodies were then wedded to an extractive colonial economy that, contrary to 'modern' colonial narratives from the 1900s, was definitely not geared towards ameliorating Indonesian society.

The paper's departure point is, as said, 1901, when the Dutch government designed and implemented the 'Ethical Policy', i.e. the Dutch variation of the *mission civilisatrice*. After having established how this Ethical Policy gave Dutch (and other) planters a strong mandate to coercively reorganize indigenous society, the paper will trace how the plantations in the Netherlands East Indies became the sites of social engineering as alluded to above and what practical methods ensued from this large-scale engineering program. The analysis will then zoom in on the role the Japanese Occupation played in contesting the Dutch plantation system and how it empowered the nationalist and anti-colonial layers within Indonesian society. The third segment of the paper, roughly covering 1945-1920, traces how the plantation system was destroyed.

The overall argument of the paper is that due to its function as sites for social engineering, the plantation system became the focal point for both the Dutch authorities' 'modernizing mission' and the (nascent) nationalist movement in Indonesia. It was the Japanese occupation of (later) Indonesia, however, that fatally undermined the plantation system and gave the Indonesian nationalists and freedom fighter—after 1945 broadly speaking gathered under the banner of the Republic of Indonesia—the upper hand to finally contest the closed colonial space that was the plantation system. In relating how and why anti-colonial forces entrenched against the Dutch re-occupation of Indonesia targeted and destroyed a great number of plantations the paper, furthermore, will put into relief conflicts hidden within the current historiography of the Indonesian revolution, as well.

**Keywords:** plantation system, docile bodies, space-production

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

The Resistance of Docile Bodies: The  
Indonesian Plantation System ca. 1900-1950  
Roel Frakking

When the payment of the individual labourers is done, a roll call is held for the men and women, who have spent the day in the gardens weeding and cutting, the full-time workers, who are paid once a week. Ten by ten squatted in perfect order, with in front the *mandoers* [indigenous foremen], the European employee calls their names and notes them in his ledger...Such, then, is the contact between employer and employee present...to at least prevent muddling and intrigue. Because behind the ostensibly unmoved faces[,] behind all that calm activity, hides the full life of the *dessa* [village], where sexuality, as much as in our [Dutch] big cities, plays such an important role.<sup>1</sup>

This quote, from a serialized 1930s exposé on life on ‘allotment Soekamadé’, a relatively new plantation some four and a half kilometres from Java’s south coast, described a process that was, this paper argues, emblematic for plantations across what was the Netherlands East Indies.<sup>2</sup> In fact, this tableau captured colonial Indonesia at large. The indigenous manager, or *mandoer*, acted as the European managers’ eyes and ears; with this the seemingly unassailable hierarchy in place, they ruled over the workers living in the plantations’ kampongs and surrounding *dessas*, or villages. The ‘ten by ten’ squatting reflected the way—what I call—the plantation system had promoted the colonial infiltration of indigenous spaces: it engendered order and control. Obviously, the colonial state and its planter representatives feared what lay beyond those controlled spaces, as exemplified by the apprehension kindled by assumed unbridled indigenous ‘sexuality’. As the latter—an uncontrolled substance—threatened to seep unto the plantations itself, colonial power had to radiate into those areas as well, straight from the plantations.

If the plantation’s ‘shadow was cast everywhere you turned’, the ignominious 1942 defeat of the Dutch at the hands of Japan dispelled all such shadows.<sup>3</sup> With Japanese troops withdrawing to their barracks prior to evacuation and no oppressive colonial administration in situ to hold them back, politicized Indonesian youths took to the streets. Ir. Sukarno and Dr Hatta, as president and vice president respectively, meanwhile, proclaimed the Republik Indonesia on 17 August 1945. Albeit gradually at first, Indonesia’s anti-colonial revolution

<sup>1</sup> ‘Plantersleven, Zorgen en Doening. II.’, Soerabaiasch Handelsblad, 6 February 1930.

<sup>2</sup> ‘Plantersleven, Zorgen en Doening. II.’, Soerabaiasch Handelsblad, 1 July 1930.

<sup>3</sup> The quote is from Ann Laura Stoler; Interview by E. Valentine Daniel, *Public Culture. An Interdisciplinary Journal of Transnational Cultural Studies* (2012), 24, 3.



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*Roel Frakking*

largely coalesced around the Republic. This was the starting point of a bloody yet relatively short four-year (guerrilla) war as the Dutch authorities had a hard time relinquishing their overseas empire in the East. The Dutch needed no less than four rounds of negotiations and agreements – at the Hoge Veluwe (1946), Linggadjati (1947), Renville (1948) and Rooijen-Van Rum (1949) – and two military actions (1947 and 1948–9) to finally give up Indonesia through a fifth agreement, the Round Table Conference of 1949. During these years, the Republican Army, supported by a massive number of irregulars, was able to fight the Dutch army to a standstill.

Before such time, the returning Dutch civil and military authorities and large privately owned land-owning corporations needed the plantations, regardless of whether Indonesians hailed them as liberators – as many Dutch expected – or as enemies to be driven off. Yet, the central role of the plantation system and the continued focus of military and civil authorities it garnered throughout Indonesia's war of independence have been overlooked historically. Recent research instead focuses on the violence of decolonization, the nature of the Dutch approach to it and the ultimate failure of Dutch counter-insurgency in Indonesia.<sup>6</sup> The plantations are scarcely mentioned as distinct sites of conflict.

It is this chapter's contention that the plantations were critically important both to the Dutch and to the anti-colonial resistance. It argues that the plantations in the Netherlands East Indies represented a primary nexus where colonial and anti-colonial discourses and practices met. This had been the case before 1942 and would again be so at the end of the Japanese interlude. After 1945, the Dutch introduced practices to the plantations, which, taken together, were deemed instrumental to winning an increasingly violent guerrilla war. First, the plantations constituted the physical expression of a renewed colonial project the Dutch sought to pursue after 1945. Making plantations operable once more would prove to local communities that the Dutch were back in power. Re-establishing large-scale production, furthermore, would spark the failing Dutch and indigenous economies back to life, confirming the benefits of lasting Dutch rule. Lastly, the plantations would be, in the course of the war, transformed into garrisoned centres from which colonial security forces would make their presence known. In other words, plantations were used as counter-insurgency tools. Controlling plantations and the areas around and between them would allow authorities the opportunity to separate communities from the Indonesian freedom fighters. For the latter, the opposite held true.

Combating the Dutch presence on the plantations and resisting their pernicious attempts to cut them off from the population were central to insurgent action.

Ignoring the plantations leaves key aspects of this violent episode in Southeast Asian decolonization hidden. For one thing, much research continues to zoom in on the transfer of sovereignty, including the various negotiation rounds, the role of the United Nations and the two ‘Police Actions’ in 1947 and 1948 (euphemisms for two large-scale military operations) that preceded the final colonial dénouement of December 1949. Dutch measures seeking to reshape colonial spaces and to determine ‘loyal’ versus disruptive behaviour remain unexplained. Researchers often proclaim that the Dutch held narrow, military perspectives and little was done to garner local support. This paper challenges this latter notion, highlighting that, alongside violent recolonization, less aggressive means were deployed, albeit rather minimally. What is more, local troops were heavily utilized in the defence of plantations. Their presence, as well as the concentration of thousands of Indonesians in one place, combined with Commander-in-Chief, General Simon Spoor’s insistence that the estates figured centrally in his 1949 anti-guerrilla plans, provoked specific kinds of subversion – which remain concealed when counter-insurgency in Indonesia is studied from a Dutch command-and-control perspective that devotes less attention to grass-roots violence. If the Dutch lost the initiative to the guerrillas, a likely place this happened was on the plantations.

Equally important is the fact that once plantations and estates come into view, we see that aspects from the Indonesian war of independence hitherto hidden from sight come to the fore. The people targeted – either by Dutch or Indonesian forces – were not supportive of either side; they tried to remain neutral as much as possible. The quest for neutrality in the face of danger may seem a moot point to make as it is common to most conflicts, but in the case of Indonesia, this obvious point has hardly been made.<sup>9</sup> Still, with a Dutch ‘Department of Intelligence & Loyalty Inquiries’ in operation during at least part of the war, perceived loyalties were no trifle matter. The battle for the plantations was also a struggle for labour. Some thirty years ago, two researchers commented on the absence of the planters as historical nodes of analysis; they averred that they almost passively suffered their violent fates. And yet, as this chapter will show, planters were pivotal to harsher, more punitive measures, playing a much larger role in counter-insurgency than is generally acknowledged. Broadly speaking, with the plantations as a departure point for analysis, this chapter seeks to deepen understanding of the Indonesian war for independence.

### **The Indonesian plantation system as colonial space**

To understand why the plantations loomed large in Dutch operational and colonial planning, it is instructive to consider their significance in the Netherlands East Indies from a broader perspective, especially as the Indonesian war against Dutch re-occupation post 1945 is under-represented in English-language discourses on decolonization. Unsurprisingly, what follows applies to most plantation economies, colonial or otherwise. Not a few studies on colonial plantation economies, however, seemed disposed to merely debate the conceptual nature of such economies and determine whether they are feudal, (proto) capitalist or an admixture of both systems. Worse still, a minority of commentators outright dismissed the asymmetrical, coercive relations that flow from 'unfree labour', claiming labourers entered into contracts cognizant of the consequences. More insightful analyses – the majority – did not gloss over the plantation economy's coercive nature, its 'eliminating [of] the ability of owners of the commodity labour-power to exchange it as they choose' and its inherent class and 'race-making'.

This paper falls in the latter category, yet it seeks to bring out the practical consequences of what others have more euphemistically called 'coercion'. However, contrary to Breman but similar to Stoler (both focussed on the plantation system's inherent violent bias), the current analysis seeks to add another layer to the coercive characteristics of the specifically Indonesian plantation system: its use as a counter-insurgency tool during unrestricted guerrilla warfare. In doing so, the analysis will veer away from ground covered by more traditional plantation economy narratives.

As the opening quote suggested, plantations across Indonesia served another function aside from fuelling an extractive economy: plantations became the site where visions of colonial modernity were wedded to far-reaching social control. This had been an outgrowth of a shift in thinking in the closing decades of the nineteenth century. New ideas culminated in an 'Ethical Policy' inaugurated in 1901. Its proponents claimed that administrators would improve the lives of the indigenous population, thereby making amends for the exploitative economy the Ethical Policy replaced. It was not to be. Instead, the new policy provided unprecedented opportunities to make deeper inroads into everyday Indonesian life. The positions of the Europeans, within both the plantation economy and colonial governmental structures, were strengthened. The plantation system, which expanded massively from 1870 onwards, became the stage upon which the colonial government and the planter community performed the Ethical Policy. They

reshaped Indonesians into supposedly controllable, docile subjects and subjected communities to the trappings of the colonial police state.

The creation of colonially defined spaces on Netherlands East Indies plantations asserted control through delineations of the permissible. Colonial space-production sought to alter indigenous behavioural repertoires, the plantation system imposing a 'homogeneous, clearly demarcated space complete with horizon and a vanishing point'; or at least, that was the object. The colonial enclosure had simultaneously to capture and deconstruct social relationships in order to reassemble them into the behavioural patterns demanded. The Dutch colonial state thus established particular boundaries ranging from the geographical and material to the mental and discursive. The plantation system was politicized and imbued with highly symbolic content. Everything, including the use of various languages that established social hierarchies, reinforced colonial power. Timetables determined when a person should be where; when sick, it was the planter who decided whether a labourer would visit the plantation's infirmary. Power was projected onto the body. Indigenous intermediaries and racial segregation, violently enforced, were to insulate the European planters from supposedly debasing themselves. Planters bore responsibility for 'hygienic circumstances'; they accrued 'police rights' to apprehend deserting workers. So-called 'lazy' Indonesians, in short, were subjected to a regime that combined surveillance and the threat of force with education in agricultural techniques and personal hygiene.

Other forms of spatial domination were more tangible and physical – but equally symbolic, making Lefebvre's 'logic of visualization [of power]' strongly applicable. The plantation's central emplacement was the site where all roads and rail roads leading into the gardens and factories converged. More often than not, the workers' day began and ended there, receiving instructions and payment. The elevated nature of many plantations reflected how power trickled down: 'Great height [has] ever been the spatial expression of potentiality violent power.' The overseeing European manager lived in a sprawling villa at the top of the plantation, surveying his properties. In a semicircle below lay the villas of the lesser European administrative personnel. Lower, on the various smaller emplacements, lived the European planters. Still further down, in the gardens, but close to the indigenous overseers, lived the workforce. Indigenous villages were rebuilt. Identical houses stood in neat rows complete with small gardens. Plantation interest groups disseminated instructions on constructing the gardens, stipulating how and where workers' dwellings were to be erected, down to the dimensions of

**COLONIAL  
AND POSTCOLONIAL  
LANDSCAPES**

ARCHITECTURE, CITIES, INFRASTRUCTURES

The Resistance of Docile Bodies: The  
Indonesian Plantation System ca. 1900-1950  
*Roel Frakking*

every house. After all, warned the Commission for Village Amelioration in 1939, 'In a population, that has to live in messy and dirty [villages], the tendency for social dissatisfaction and unruliness is enhanced.'



## The Algerian Sphinx. Le Corbusier and the North African riddle.

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### Abstract

Le Corbusier never built in the desert. He did, though, make resolution of becoming desert-architect. “I will limit all my work to that which causes me to pass from barrenness (the desert, the limitless land of hunger and thirst) to splendour; (...) from desert to the oasis.” It was the end of the summer of 1931, and he had just arrived in Paris from Algeria. Back in the metropolis, the experience of the desert posed an enigmatic question, a riddle that interpreted as an Algerian Sphinx, or *la femme à le licorne*. Though never building his foundations on sand, the North African country played an important role of transfixing landscape.

The paper proposes revisiting the two journeys Le Corbusier did in 1931 and 1933 to the M’zab, in the third desert to the south of Algeria. Proposed by the architect as a “learning from” experience, the travels put forward an intercultural form of practicing architecture. In the oasis of M’zab, Le Corbusier envisioned the possibility of understanding urban form beyond the modern metropolis. The five cities that compose the valley of the M’zab were to be looked as a project. Internalising this lesson of the desert cities, Le Corbusier applied it cross-bred with the modern technology of the airplane that took him there; enabling a scaling out the logic of the *pentapole* city into his project for a *Meridien Paris-El Golea-Gao*, a project that follows the Parisian meridian interconnecting sequential urban interventions. Though Le Corbusier’s project can hardly be argued as post-colonial—in fact, it was very much colonial in its mindset—, on discussing it through revisiting the context of its production, the paper intends unfolding the limits and perils contemporary post-colonial critique towards Le Corbusier in Algeria. To a certain degree, Le Corbusier’s fascination with the country bears some traces of contemporary interest in hybrid cultural encounters.

**Keywords:** Le Corbusier; Algeria; Post-colonialism; Colonialism.

Much to his regret, Le Corbusier never built in the desert. He did, though, make resolution of becoming desert-architect. “*I will limit all my work to that which causes me to pass from barrenness (the desert, the limitless land of hunger and thirst) to splendour; from suffering and*

*anxiety to well-being; from terror to calm; from the empty to the full; from desert to the oasis.”* (Le Corbusier, 1931: 104; author’s translation) It was the end of the summer of 1931, and he had just arrived in Paris from Algeria, the sand still in his boots and the burning sun impressed in his retina. Back in the metropolis, the experience of the desert posed an enigmatic question, a riddle uttered by an Algerian Sphinx, or *la femme à le licorne*. Though never building his foundations on sand, the North African country played an important role in his biography.

Le Corbusier has an extended and complex relationship with Algeria. From his first step in Africa in 1931—when he visited the country for delivering two conferences during the centenary of the French Colony—, it was at least four occasions that he journeyed in the country until 1942 when his famous Obus Plan for Algiers was unanimously rejected by the Municipal Council of the capital. In between, an outcome of revelatory experiences narrated in articles, books and, overall, drawings.

Two main lines of thinking have reviewed the journeys. Two poles of what we could call the Algerian debate on Le Corbusier. First, the post-colonial critique, epitomised by the writings of professor Zeynep Çelik who in her *Urban Forms and Colonial Confrontations* (1997) blames Le Corbusier for attempting a colonial realignment of Algeria with France in the plans for the capital. In Le Corbusier’s drawings, she sees “*the idea of la plus grande France, which represents not only an imperial French doctrine, but also a colonial consciousness.*” (Çelik, 1997: 76) Not remaining on criticising his plan as colonial, she also argues the perpetuation of the Orientalist tendency in Le Corbusier’s observations. It is precisely that ‘colonial mindset’ with which she sees the architect moving around Algeria. The text and drawings that describe his visits—in Çelik’s view—are full of platitudes and preconceived ideas from other travellers like Théophile Gautier or Pierre Loti, that prioritised the cliché to the actual description of the condition of the country at their times. It is as if his cultural glasses prevented Le Corbusier from seeing the actual Algeria. To that post-colonial critique, a second one is opposed. Though it is hard to picture Le Corbusier’s iconic profile without glasses, professor Alex Gerber argued that certain orientalist hue didn’t obstruct the architect from illuminating experiences in his journey. What Le Corbusier saw in the country changed his way of seeing and producing architecture. Gerber’s defence of the architect in his PhD focuses on the two journeys of 1931, claiming that a certain “learning-from” attitude of Le Corbusier in Algeria was crucial for the

development of his posterior practice. (Gerber, 1993)

What this paper argues is that neither focusing on the Obus Plan—a failed project from the part of the colonial government—, nor limiting the revelatory moments to the 1931 journey is the way for understanding the influence of Algeria over Le Corbusier. The key for grasping Le Corbusier’s mindset in Algeria (colonial or otherwise) is in the desert aerial trip in the winter of 1933, a truly magic carpet ride—with all its connotations of cliché, allure and, more than them, orthographic vision.

For that revelatory flight in 1933, his first incursion into the Algerian desert forms a clear background. This took place two years before, in the summer of 1931. It was then that he related his ‘vocational’ experience as builder of oasis. Departing from Paris southbound “à la recherche du soleil”, his itinerary took him through the Spanish peninsula, crossing the strait between Europe and Africa, into Morocco and Algiers. There in the desert regions ‘he saw a call’, or rather an answer to a question: “*L’oasis répond*”—as he titled the entry in his travel diary that he published in *Plans* magazine— was the encounter with Ghardaïa (Le Corbusier, 1931: 104). The question was an educational one. The journey through North Africa, as has been argued by Francesco Tentori, constituted a “*Second Oriental sojourn*”, a continuation of the journey for discovering the East whose first part took place in 1911 (Gerber, 1994: 366). In that sense, Le Corbusier was moving in the context of the Grand Tour, a traditional form of education in which the journey operated as a way of displacing the architect far from the studio and the school into the visible lessons of the ruins of past civilisations. Ghardaïa, though, never formed part of any well constituted route. Perhaps because of that, the sense of displacement away from Paris was intensified, and the allure of the discovery was overdramatised in the text. In fact, reading his article in *Plans* the reader wonders what it is that Le Corbusier ‘saw’, while text and his own sketchy illustration do not legibly point to the same findings.

On the one hand, the text describes the fascination with a civilisation, the Ghardaïan, that had developed at the margins of Modern society, avoiding “*industry, work, Taylorism, commerce...*” with their downfalls of “*vanity, pride, jealousy, envy, imitation, and the suspension of interior life*” precipitated by “*the money, as a goal.*” (Le Corbusier, 1931: 105) A form of living still in contact with Nature,—precisely by the struggle against the desolation

of the desert—, and the enrichment of the spirit. The desert city of Ghardaïa, as Le Corbusier ascertains, finds a logic in which the vanishing point is not anymore consumption: “*Et ici, dans l'oasis, pas de consommation. Voilà le grand fait.* [Here, in the oasis, no consumption. Here is the great achievement.]” (Le Corbusier, 1931: 103) However, paradoxically the strangeness, the otherness of the oasis points the direction to Europe. It does speak to the Modern Man about “a new vision for living, an ethics directed through a different course.” As a reverse mirror of Paris, Ghardaïa operates as self-reflection of Modernity. A source from where to draw a lesson:

*“Le monde moderne ayant perdu contact avec ses conditions premières et n’ayant plus souvenir des conditions profondes de la conscience humaine, accueillerait la prédication d’un Jésus nouveau, aussi énergique, aussi simple, aussi fort, aussi sublimement humain.* [The Modern world, having lost the contact with its original conditions and no longer remembering the profound state of human consciousness, would welcome the preaching of a new Jesus, as energetic, as simple, as strong, as sublimely human.]” (Le Corbusier, 1931: 106)

However, this vocational call as desert architect or Modern-world Jesus is not that easily found in the illustrations that accompany the text. Preceded by beautiful clichéd sceneries of camels and palm-trees, the two illustrations of Ghardaïa are indeed more centred on the architecture of the oasis city. Particularly they focus the attention in the courtyard—one of a mosque and one of a house. Sitting behind the 1.80m walls that face the narrow streets, the courtyards host life at “a human scale.” The sketch of the mosque in Ghardaïa doesn’t depict the characteristic profile of its minaret, but rather, standing next to it, it looks at its courtyard (Figure 1). The second drawing mirrors the one of the mosque, but transferring it into the domestic realm (Figure 2).. It is the courtyard of “*une maison de l’oasis*”, a generic type omnipresent in the oasis. It is the courtyard of the mosque that acts as centre and cell that gives order to the rest of the city, an element generator of order. An interesting architectural finding if it was not because he had already read it in *La Civilisation Urbaine au Mzab* by Marcel Mercier. An ethnographic study, Mercier centres his investigation in the cities of the M’zab, to which Ghardaïa belongs— isolated from foreign invasions, an object “conserved as a fragment of Antiquity.” Paradoxically, a ‘frozen island’ in the middle of the desert. Interested in the study of social formations, for Mercier the city constitutes “*a sociological subject par-excellence.*” (Mercier,

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

The Algerian Sphinx. Le Corbusier  
and the North African riddle  
Álvaro Velasco

1922: 6) And on trying to encompass the whole city, his approach is organised in two main scales: “*la ville et la maison*”—moving “*ab exterioribus ad interiora*[outside in]” (Mercier, 1922: 7). This zooming-in process culminates claiming the mosque as the “*élément generateur de la cité.*” (Mercier, 1922: 45). Indeed, the concept of ‘generating element’ very much resounded with the Corbusian tropes at the time of his journey.

On planning his desert ‘treasure hunting’, Le Corbusier already knew where to look at; somehow, more of a retroactive discovery than actual unexpected encounter. In fact, as opposed to the account he published in *Plans*, looking at non-published impressions Le Corbusier was left rather cold by the desert. More arduous than what he depicted in the article, the view from his Voisin 14cv of 1931 was described as land of lack, of desolation. On the 24th of August, a day before arriving to Ghardaïa he wrote to Yvonne complaining about the poisoned food he had on the road. Before leaving for the desert, his mind was already back home:

*“We will leave for the desert and then it will be a sudden return on the north on a vertical line Biskra-Algiers-Marseille-Paris. My head is fully rested. I did not think for a minute about painting, architecture or books.”* (Le Corbusier, 2013: 355; author’s translation)

And to the hunger of foodborne illness, the desert imposed thirst. A day before departing from it he wrote:

*“Ici, Vonvon, on pense à toi, car on meurt.*

*De soif, mais on ne sait plus que faire ni où se mettre. De l'eau de l'eau.*

*Jamais on n'aurait imaginé ça.*

(...)

*Baisers dd.*

*Depuis cette nuit nous remontons au nord.*

[Here, Vonvon, we think of you because we are dying.

Dying of thirst, and we neither know what to do nor where to go. Some water, some water.

We would never have imagined this.

(...)

Kisses dd.

After tonight we are going back to the north.]” (Le Corbusier, 2013: 355)



# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

The Algerian Sphinx. Le Corbusier  
and the North African riddle  
*Álvaro Velasco*

Slightly banal truism for desert travellers, thirst played a key role in his first journey. The impression in his letters, mixed with the nostalgia of turning homeward, paradoxically linked Ghardaïa and Paris. In fact, the text in *Plans* traces the itinerary between the two cities, precisely through the idea of thirst. As in the classic scene of *Ice Cold in Alex* (1958), Le Corbusier describes himself emerging from the desert one sun-drenched day, into the Hotel du Sud, sitting down and ordering a bottle of Champigneulle beer from Nancy. That moment that in *Ice Cold Alex* was ‘worth waiting for’, for Le Corbusier supposed the turning point from thirst to satiety, contemplating the “*miracle of my ice-cold beer from Nancy.*” (Le Corbusier, 1931: 107) Obviously, the miracle was not the eerie presence of both ice and beverage in the ‘land of Thirst’, but the systems that enabled it. The miracle was Modernity and quite patently he could contemplate it there.

“(…)boire les apéritifs(…) à Ghardaïa représente simplement tout le phénomène moderne de la production, l’industrie des transports: chemins de fer, paquebots, camions, l’armature même de la vie machiniste. [Drinking aperitif(…) in Ghardaia represents simply the whole modern phenomenon of production, the transport industry: railways, liners, trucks, the very frame of machinist life.]” (Le Corbusier, 1931: 107)

The ice-cold beer satisfied his two longings: that of a gulp and that of Paris. In the postcard he sent to his mother from the desert, he graphically depicted them (Figure 3). A straight arrow connecting Ghardaïa to Paris, traversed by “dying of thirst” and a Corbusian skull. Though paradoxically he died in the Mediterranean, not of thirst but drowned, this line was simply a line of longing in this journey. For the following one it became literally a ‘line of flight’. Finally directed homebound by car and boat along the line—attached to the ground and water—, with a ‘claimed discovery’ about which he knew before stepping there, the desert sojourn in the summer of ’31 was still a too down-to-earth way of thinking of the desert.

It was in the winter on ’33 that gave Le Corbusier a different perspective of it, lifting up his thoughts. As he described in his book *Aircraft*, “(w)ith my friend Durafour, I left Algiers one sun-drenched afternoon in winter and we flew above the Atlas towards the towns of the M’Zab(…)” Though familiar with the territory, the airplane put him on different airs, thinking of the desert cities differently, immersed in a new moment of revelation.

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

The Algerian Sphinx. Le Corbusier  
and the North African riddle  
Álvaro Velasco

*“Durafour, steering his little plane, pointed out two specks on the horizon, “There are the cities! You will see!” Then, like a falcon, he stooped several times upon one of the towns, coming round in a spiral, dived, just clearing the roofs, and went off in a spiral in the other direction (...) Thus I was able to discover the principle of the towns of the M’Zab. The airplane had revealed everything to us.” (Le Corbusier, 1935: 12)*

Written as part of the preface—modestly titled ‘A Frontispiece to Pictures of the Epic of the Air’—for a book dedicated to the great achievements of aerial technology, the account of the journey does not lack overdramatised impressions. Nevertheless, as he points in the text, the flight did show Le Corbusier a lesson. *“The lesson is this: every house in the M’Zab, yes, every house without exception, is a place of happiness, of joy, of a serene existence regulated like an inescapable truth, in the service of man and for each.(...) In the M’Zab it is not admitted that any family should be without arcade and garden.”(ibid. 13)*

Unfortunately, that text again points out to a well learned lesson. Nevertheless, the technology of vision of the airplane enabled Le Corbusier a reversal of the process of analysis he had learnt from Mercier. If Mercier proceeded *ab interioribus*, beginning with the city as a whole zooming into the courtyard; from the panoramic window of Durafour’s biplane, Le Corbusier reversed the procedure moving in a continuous scaling-in-scaling-out analysis. This is very clear in the series of sketches that are kept in the Foundation. Most likely drawn meters above ground, the cities of the M’Zab show evidence of their generative principle in the aerial perspective which put the architect closer and closer towards his paradigmatic standpoint: the plan. Even the interior perspectives of courtyards, in this flight now they appeared accompanied by attempts of surveying plans. The plan really was “the generator” as he stated in *Vers une Architecture*. Furthermore, this process of zooming out was taken beyond Ghardaïa, understanding that the logic of the oasis is the one of an archipelago, rather than isolated island in a sea of sand. Known as the *pentapole* following the five foundational cities that date back to the 11th-century, the valley of the M’Zab composes a system of interconnected oasis. Having visited Ghardaïa in the summer of ’31, the winter of ’33 taught Le Corbusier about the system of cooperation between summer and winter oasis. A system that operated between satiety and thirst. In *The Radiant City* he titled it “the voice of the desert” and “the melody of the oasis”,

*“In the spring, the Arab leaves the winter city, and 3 or 6 kilometres away he enters his summer house, in the palm grove, bringing with him only rugs and kitchen utensils. A masterpiece! The house is entirely equipped. In winter, it is abandoned. All of the doors remain open. I go*

*in, I sketch. I go from there into another house: the same law prevails.*" (Le Corbusier, 1967: 232)

From courtyard, to oasis, to archipelago; taking off and lifting up, the airplane scaled out the discoveries into the pentapole as urban form.

However, more importantly, as Adnan Morshed has argued, the aerial view in Le Corbusier is strongly attached to the notion of urban planning, whose scales do not remain in the architectural object but in the territorial realm. As Morshed's argument continues, Le Corbusier's understands "*the experience of planning(...) as a universal act of rectifying both spatial and social pathologies*" (Morshed, 2002: 207), something that is evidenced in the drawings Le Corbusier produced flying over Rio. Nevertheless, in the case of the M'Zab, Le Corbusier did not intend to cure any pathology of the oasis. It rather operated in reverse; the aerial view revealing a panacea. It is the cities of the desert that work as a mirror of the XIX-century metropolis, indicting plainly the pathologies of the European city.

*"Such is the gulf which separates the natural creations of the desert people from the cruel and inhuman creations of white civilisation; this civilisation which a thirst for money has brought to twilight, this civilisation which a new civilisation will soon replace."* (Le Corbusier, 1935: 13)

Having understood one pole—Ghardaïa— and its opposite—Paris, it was only a question of continuing the lifting up movement of the plane, scaling out the logic of the *pentapole* city into what is probably the drawing that better synthesises Le Corbusier's discoveries in Algiers (Figure 4). Cutting through the line profile of Europe and Africa, populated with what seems *unités*, the line of longing that he sent to his mother in 1931 has now become the organising element of a *pentapole* in transcontinental dimension. It was the lesson learnt in the desert, now applied to the "meridian Paris-Golea-Gao". A realm that moves well beyond the scale of the super infrastructures he envisioned for Brazil. The airplane over the desert operated the intercultural mindset. As he pondered,

*"Les échanges au long d'un parallèle terrestre ne sont que concurrence, lutte, struggle for life: industrialisme, mécanisme, perfectionnement haletant, etc... = sueur et douleur.  
Les échanges au long d'un méridien terrestre sont: diversité, complémentaire, évolution*

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

The Algerian Sphinx. Le Corbusier  
and the North African riddle  
Álvaro Velasco

*harmonique. Il s'agit de produits déterminés par l'incidence des rayons solaires = à chaque fois harmonie entière, symphonique: cause—effet. = Alimentation de la curiosité, richesse spirituelle, unité mathématique = sensualité et philosophie.*

[The exchanges along an terrestrial parallel are only competition, struggle, struggle for life: industrialism, mechanism, breathless perfection, etc ... = sweat and pain.

The exchanges along a terrestrial meridian are: diversity, complementarity, harmonic evolution. They are products determined by the incidence of solar rays = always entire harmony, symphonic: cause—effect. = Food of curiosity, spiritual wealth, mathematical unity = sensuality and philosophy.]” (Le Corbusier, 1931: 102)

A meridian encounter that is to bring harmony to the technologies of Modernity and the non-consumption of M'Zab; a combination of pentapole and metropolis. The “*new civilisation that will soon replace*” the 19th-century metropolis to abridge the poles, finding the locus for the exchanges meridian-wise. A year before his magic carpet ride, Le Corbusier inaugurated his carnet, drawing in the back of the front cover a quick outline. A sketchy line that months later becomes clearly delimited as locus of encounter between Europe and Africa (Figure 5). There, two further black dots thicken the two-dimensional line of the meridian becoming a bounded site of intervention. Barcelona and Rome were to provide the parallel, to which Paris and Algiers were the poles. A quadrilateral scheme that closed the rear dust jacket of *Poésie Sur Alger*.

However, if the closing page was clear, the opening cover was engraved with the riddle. It is the sphinx that precedes the country, a puzzling question that Le Corbusier tried to come to terms with through his travels. *La femme à le licorne*, a feminised depiction of the country; as such, a classical representation of the colonial body to be conquered, however, also an enigmatic and inscrutable monster. In the first projects for the cover of the *Poem*, Le Corbusier represented the country as a female body lying on top of his proposal for the Obus Plan (cf. de Smet, 2012:194-195). The contour of the body mirrors the complex topography of Alger, a siren that enunciates her *poesie* or mysterious chants. In further attempts, the siren takes the shape of the Greek mythological version, shown winged in the sky. The lessons of the desert flight appear over the gulf between the continents. More clearly in the published engraving of *Le Poème de l'angle droit, la femme à la licorne* is the hybrid creature that bridges north and

south floating in the meridian. It is both the lessons of Algiers and the aerial view of Modernity (cf. *ibid*). Neither only one nor the other, the influence of Algeria in Le Corbusier cannot be measured neither by the colonial critique, nor by the allure the country seemed to play in his journeys. It is rather the hybrid, the sphinx that explains the influence of the country in the architect. A form of cultural encounter that did not delve in colonial power-struggle, but in a subtler form of appropriation which consisted in the internalisation of the other. *La femme à la licorne* is Algeria, but overall Le Corbusier himself, that has finally internalised the country by portraying himself as hybrid winged-eye.

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# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

The Algerian Sphinx. Le Corbusier and the North African riddle  
 Álvaro Velasco

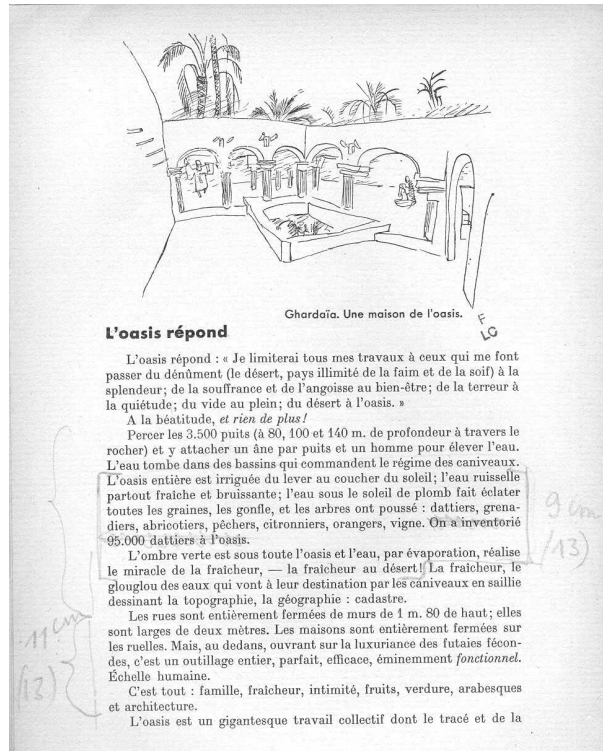
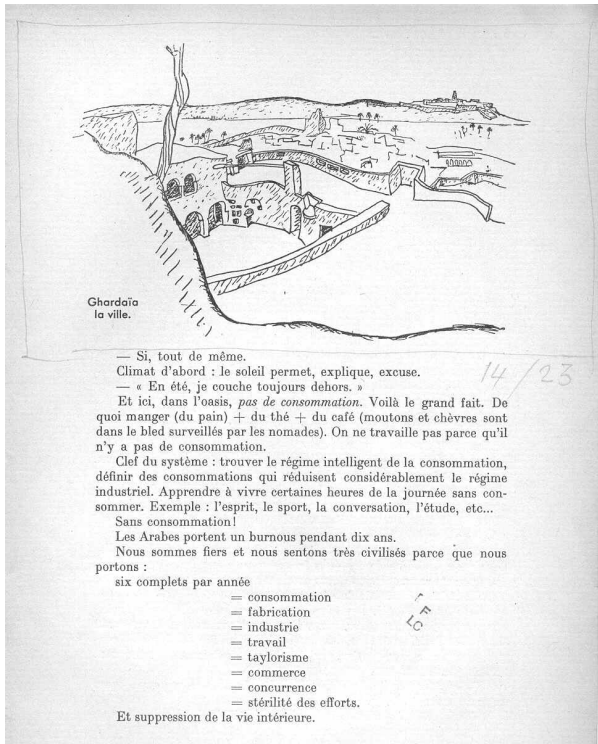


Figure 1. Le Corbusier (1931) *Coupe en Travers. Retours...ou L'Enseignement du Voyage, Plans, Vol. 8. Paris. p. 103.*

Figure 2. Le Corbusier (1931) *Coupe en Travers. Retours...ou L'Enseignement du Voyage, Plans, Vol. 8. Paris. p. 104.*



Figure 3. Le Corbusier, 30 August 1931, CÉJ and Pierre to his mother. R2-1-128-001. © Fondation Le Corbusier.

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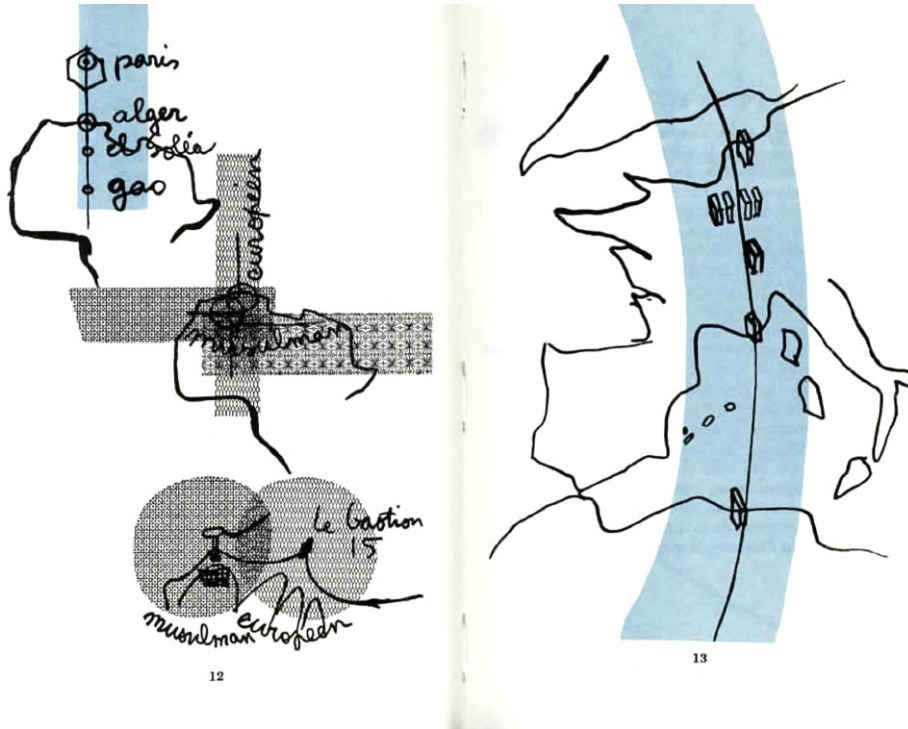


Figure 4. Le Corbusier (1950) *Poésie sur Alger*. Paris: Falaize. fig.13.

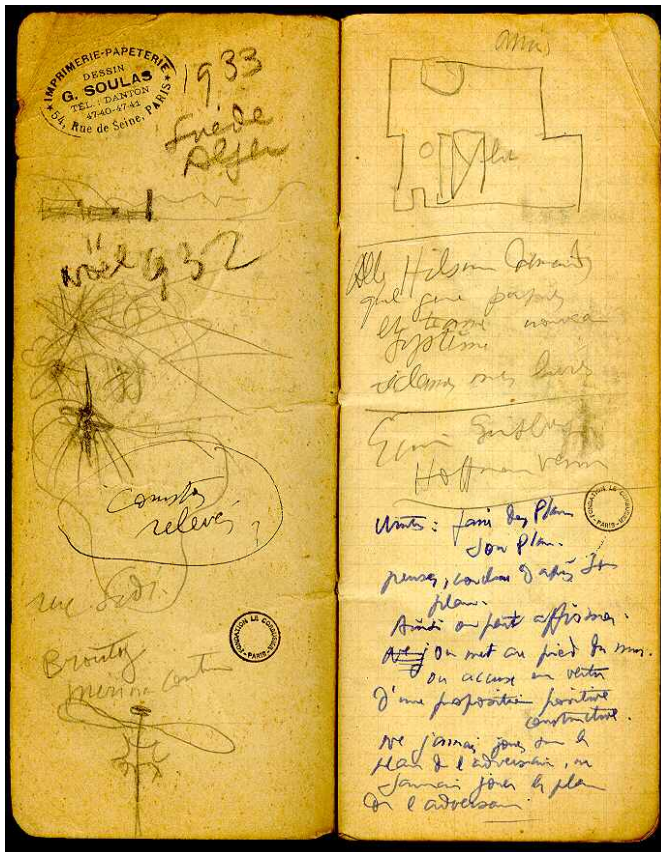


Figure 5. Le Corbusier, Sketchbook 1932-33. F3-5-5-002. © Fondation Le Corbusier.

## **The Cathedral of Our Lady of the Conception in Lourenço Marques: a national-imperialist affirmation of Estado Novo in the colony of Mozambique**

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### **Abstract**

In the year 1933 the engineer Marcial de Freitas e Costa began the sketch of what would become the Lourenço Marques Cathedral. In that same year, the Constitution is published, the Colonial Act is annexed to it and it is consolidated what has been designated as Estado Novo. The preliminary draft is delivered in 1936 to the Lourenço Marques Chamber and approved commencing work. When in the metropolis (Lisbon) the Commemorations of the Double Centenary of the Nation are planned, from 1938, the consecration of the Cathedral is included revealing its importance in the political-religious context of the Estado Novo: a nation with secular, historical, to evangelize and civilize parts of the Globe. With the outbreak of World War II, the consecration of the Cathedral was successively postponed. In August 1944 a huge propaganda machine accompanies Cardinal Cerejeira, who follows the legacy *a latere*, to record the whole historical moment, which the Estado Novo wants to amplify as much as possible: the colonies belong to him, Mozambique is his and the Cathedral is a Pattern (Padrão) that proves it against the rest of the World.

**Keywords:** New state; Lourenço Marques; Cathedral, Pattern.

Lourenço Marques was served until 1944 by a church that had been built in the eighties of the nineteenth century. In 1912 it is already admitted publicly that it was small for the affluence of the faithful. Two projects emerge that are described by the author Francisco dos Santos (1944): the first by Tito Fernandes<sup>1</sup> in 1920 as a Gothic style and the second by António

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<sup>1</sup> Unknown architect. There are no images of this project, and the only reference that exists is the author Francisco dos Santos, where he briefly describes the project and characterizes it as a Gothic style.

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

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a national-imperialist affirmation of Estado Novo in the colony of  
Mozambique.

Ana Furtado

do Couto<sup>2</sup> with the date of 1922 and which is described as being of Romanesque style. Due to the respected name of this architect in Lisbon this revivalist project which is planned to be built for the capital of Mozambique. It turns out that the Chamber of Lourenço Marques raised endless obstacles, thus guarding the real reason for not building the church: the aesthetic of it was seen as a cripple.

Lourenço Marques was already a cosmopolitan, modern city that suffered influences of its neighboring countries, particularly the Union of South Africa (South Africa) where a pioneering move directly influenced by Le Corbusier - described by the author Kenneth Frampton (2003) as the Transvaal Group - now starts to manifest architectonic. In this way, the leaders were not willing to change the image of a city that was seen and wanted like modern authorizing the construction of a revivalist church.

It is in this impasse, that took years, that Marcial de Freitas and Costa<sup>3</sup> offers his help to get the project out of the role: he had the knowledge, he could help in that sense.

D. Rafael da Assunção<sup>4</sup> then Bishop of Augusta, does not miss the opportunity and consult the engineer to know what were the problems that did not allow the advance of construction. Martial begins by mentioning the most patent: the use of stonework. Lourenço Marques had neither the raw material nor the manpower that he knew how to execute. Everything would have to be imported from Lisbon, which would entail enormous costs. In this way, Freitas and Costa finally advise D. Rafael da Assunção to opt for a raw material existing in the colony: cement<sup>5</sup>.

The Bishop of Augusta accepts the counsel and ends up asking Freitas and Costa to design the project for the patriarchal church of Lourenço Marques in modern lines. We believe that the request was made taking into account the fact that Freitas and Costa is an engineer and with high skills already demonstrated by his work. Martial does not accept being the architect of

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<sup>2</sup> António do Couto Abreu (1874-1946). Classical architect, holder of a long and meritorious career. Its name was connected to the Cathedral of Lisbon when it replaced the Architect Augusto Fuschini in the continuation of the restoration to that monument. For a better understanding of the topic check Maria João Baptista Neto (2001).

<sup>3</sup> Marcial de Freitas and Costa (1891-1944). A military engineer, he arrived in Lourenço Marques in 1922 to perform duties in the Directorate of Oporto and Railways of Lourenço Marques (CFLM) as Head of Via and Works. Born in Lisbon, he died on December 14, 1944 in Lourenço Marques.

<sup>4</sup> Franciscan missionary who arrived in Mozambique in the year 1896. D. Rafael will be the promoter of the construction of three other churches on Mozambican soil: the Church of the Franciscan Mission of Beira, Homoine and St. Joseph of Lhanguene.

<sup>5</sup> The entire development of events surrounding the abandonment of the project António Couto and the emergence of a new project of modern nature for the church of Lourenço Marques is reported in an interview given by Freitas Costa and the newspaper *Diário da Manhã* the 3 of October of 1944.



# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

The Cathedral of Our Lady of the Conception in Lourenço Marques:  
a national-imperialist affirmation of Estado Novo in the colony of  
Mozambique.

Ana Furtado

such work. But at the insistence of Don Rafael, ends up giving in to the request and the huge responsibility that was required and it makes two drafts still in 1933 (Figs. 1 and 2) which are an attempt to find a coherent architectural solution for the future church (which D. Rafael asked). This sketch shows the admiration and knowledge that this engineer had the vast work by the architect Auguste Perret.

Marcial de Freitas e Costa was born in Lisbon in the year 1891, at the age of nineteen he swore allegiance and entered as a volunteer for the regiment of cavalry nº 2, Lanceiros Del-Rei and it is with this statute that he will make the preparatory ones to be able to enter the Escola do Exército. This will go between years from 1910 to 1915: the Escola Politécnica (now Faculty of Science, University of Lisbon) and the Instituto Superior Técnico. We can say that this period was crucial for the assimilation of the concept of modernity. In the year 1915 he enters, then, to the Escola de Guerra<sup>6</sup> where he specializes in Military Engineering that finished with 15 values in the year 1917.

In the same year, he is placed in the Corpo Expedicionário Português and sent to France. He will return to Portugal in 1919, in the middle remain the Battle of La Lys and a replacement with the British Expeditionary Force until the end of the conflict and where his performance will be praised. In Paris where he will enjoy his days of the campaign left. By this time, the architect Auguste Perret has already built work in Paris, such as the apartments building Franklin Street, will Marcial had contact at this time, with the work of Perret?

In the year of 1922 is named assistant professor in Escola Militar<sup>7</sup> and in that same year, he will leave for Lourenço Marques as requisitioned attaché to carry out a commission of dependent service of the Ministry of the Colonies in the Direction of the Railroads like Head of Way and Works. An educated man and traveled ( due to his profession ) in full harmony with his time, the twentieth century in constant acceleration and becoming, will live in Lourenço Marques until the year of his death.

After several attempts, the draft with the solution that we know today is delivered and approved in the year 1933, but there is no record in the estate of Freitas and Costa. The engineer will take two years between calculations and drawings and will deliver the fruit of his work ( Fig. 3 ) in

<sup>6</sup> The Escola do Exército changed the name to Escola de Guerra in the year of 1911.

<sup>7</sup> The subjects he taught were: Resistance of Materials, Stability of construction, Construction materials, Architecture, General Construction Processes, Works of Art, Maritime and Underground Works.



# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

The Cathedral of Our Lady of the Conception in Lourenço Marques:  
a national-imperialist affirmation of Estado Novo in the colony of  
Mozambique.

Ana Furtado

the year 1936 to the Chamber of Lourenço Marques that will give the authorization for the construction of the church. The architectural solution he found was the union of his modern spirit, which understood perfectly the work of Auguste Perret and the clear notion that the taste of the catholic society of Lourenço Marques would certainly not accompany it. Not wanting to jeopardize the construction of a new church (which was really necessary) with a project too modern, since what was in the process of being built was of revivalist taste, he chooses to unite a little of the two worlds: it conceived a church in latin cross, and inside it gave visibility to elements that did not need to be seen, as is the case of the pillars and elliptical domes, which gave the building a non modern language (Fig.4), however he didn't not abdicate aesthetics of the concrete (the blocks are visible both inside and outside the building). We also recall that in this period the Estado Novo had no architectural models to impose. This only came to pass in the 1940s has recall the author Ana Tostões (1997).

The first stone will be blessed by the hand of D. Rafael da Assunção<sup>8</sup> still in the year 1936.

This cathedral, for the duration, that it took to be projected, constructed, and sacred accompanied the materialization of the Estado Novo and all the national-imperialist mystique that it created. The importance that it is gaining is increasing throughout this time span that goes from 1933 to 1944.

In the year of 1928 Oliveira Salazar enters to the Government and in the year of 1930 leaves by his hand the Colonial Act that is nothing more than the diploma that will centralize economically and financially everything that is related with the colonies. This diploma reflects the vision that Oliveira Salazar had for the future of the nation overseas: organization against the disorganization (political, administrative and economic) that raged and compromised results. The diploma that justifies the historical function of Portugal in possessing and colonizing domains with a right, also to exercise moral influence that is attached to it by the Padroado do Oriente, that is, the right of the Church to civilize by evangelizing. It is this document that also brings a greater racial segregation because it adds new statutes to the

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<sup>8</sup> D. Rafael da Assunção will not accompany the rest of the church building, which is rapidly elevated to the cathedral, as he will be appointed Bishop of Limira and will go to Cape Verde. Its place is occupied by D. Teodósio de Gouveia who will follow the process until the end.

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

The Cathedral of Our Lady of the Conception in Lourenço Marques:  
a national-imperialist affirmation of Estado Novo in the colony of  
Mozambique.

Ana Furtado

colonized peoples as is the case of the assimilated<sup>9</sup> (or civilized), however all this legislative language is intended, as stated Isabel Castro Henriques (2004) “*that 'the reality of African exploration is not as starkly visible'*”. In the year 1929, Father Gonçalves Cerejeira<sup>10</sup> is appointed Cardinal-Patriarch of Lisbon and takes office in January 1930. Three years later we have the approval of a plebiscite of the Constitution that begins what has been designated as Estado Novo. The Constitution incorporates the Colonial Act and definitively establishes diplomatic relations between the Portuguese state and the Holy See, recognizing it as a sovereign state, since relations with the First Republic had been practically cut off.

From this moment we can see the importance that the Estado Novo will devote to the cult of nationality: 1) with the restoration activity of national monuments ( often reduced to a unit of style in order to show the time to which they were associated<sup>11</sup>) in order to extol the history of the foundation of nationality and its expansion; 2) the preparation for the Commemorations of the Double Centenary of the Nation to take place in 1940 (for which begins to work as early as 1938) which will include a sample of the colonial empire and, finally, to the colonies trying, within what was financially possible, to support the Catholic missions that called for new buildings as they settled on African territory.

It is in this context that the consecration of the cathedral of Lourenço Marques, or cathedral of Our Lady of Conception, is included in the Commemorations of the Double Centenary of the Nation for the year 1940. The cathedral receives a subsidy for the calendar year of 1939 approved by Oliveira Salazar (Francisco dos Santos: 1944). With the money received, so that the cathedral was ready and part of the Commemorations, its decorative program undergoes some alterations to the initial project drawn by Marcial de Freitas e Costa: it is thought a Sacred Way of bronze (sculpture of Leopoldo Almeida and the goldsmith Antonio Maria Ribeiro) to put on the temple walls, the pattern of gates changes becoming by António Lino, the baptismal font (the sculptor Leopoldo de Almeida and the goldsmith Antonio Maria Ribeiro) will take the

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<sup>9</sup> Assimilado: to have more than 18 years, to have profession / art / craft, to speak Portuguese correctly, to be good behavior, not to be a deserter to the military service; and with all the described requirements can be possessed of the citizenship charter.

<sup>10</sup> Gonçalves Cerejeira was a colleague of Oliveira Salazar during his student days in Coimbra. They shared the same house (Grilos manor-house), were members of the Academic Center for Christian Democracy and founded the newspaper *Imparcial*. They had a strong friendship and shared common ideals. Their friendship lasted until the death of Oliveira Salazar and had, according to some authors, strong interferences for the history of the Portugal.

<sup>11</sup> For a better understanding of the theme check the author Maria João Baptista Neto (2001).

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

The Cathedral of Our Lady of the Conception in Lourenço Marques:  
a national-imperialist affirmation of Estado Novo in the colony of  
Mozambique.

Ana Furtado

place of the baptismal font in concrete armed who Freitas e Costa had thought of in their project, all this will come from Lisbon and from the hand of well-known artists (already within the language accepted by the regime). We see a *nationalization* of the Lourenço Marques cathedral where iconographic discourse gains another importance. All that was left was the placement of the stained glass windows that had been ordered from a Dutch factory, but these were stuck in 1939, ready for shipment, due to Hitler's invasion of Holland.

In Portugal, the expectation is great to be able to recover the stained-glass windows and be able to complete the cathedral in time for the commemorations, but the Portuguese diplomatic effort that was seen in a very delicate position due to its neutrality, and the effort not to lose , can only get the stained glass windows to Lourenço Marques in the year 1943, thus losing the cathedral the opportunity to be sacred in a year that proved to be of great importance for Portugal: the Holy See would sign the Concordat and the Missionary Agreement this year, the latter being of great importance because it will recognize the Church's privileges in the Portuguese overseas territories, as well as attempts at foreign occupation due to the climate of instability experienced by World War II and to a large extent to the failure of mission that the First Republic had caused. With the signing of the Concordat and the Missionary Agreement, a compromise between State and Church, the New State that had emerged in the year 1933: God, Motherland and Family.

When the Cathedral of Our Lady of the Conception has completed the expectation for the date of its consecration is great because the international conjuncture was complex. Europe was in a state of war. Pope Pius XII saw the Vatican being surrounded in 1944 by Hitler putting the Catholic world in suspense. Portugal kept the date of 14 August (for the consecration) in absolute secrecy and it was only revealed when the international conjuncture allowed it, but in the shadow decisions were made as to the program to be followed, the diplomatic representatives to be invited, what could or could not be done on the trip so as not to create international misunderstandings, costs of procedures, journalists and other professionals who should accompany the entourage, and the like, by the time the time came, everything was prepared. It was already official that it would be Cardinal Cerejeira to consecrate the cathedral by going as an envoy of Pope Pius XII with a statute of legacy to *a latere* since the Pope could not be absent from the Vatican at all.

The international situation and the need for Portugal to affirm the ideological path of a Nation established in the Constitution of 1933, the Concordat and the Missionary Agreement of 1940

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

The Cathedral of Our Lady of the Conception in Lourenço Marques:  
a national-imperialist affirmation of Estado Novo in the colony of  
Mozambique.

Ana Furtado

galvanized this first, and only, trip in which one Portuguese cardinal was going to land in Africa doing it as legacy to a *latere*. The importance attached was enormous: Portugal, a neutral country in World War II, was going to assert its nationality, its missionary Christianity, its right to colonies for historical justification and, ultimately, to safeguard the image of the Pope as an untouchable figure of the Church and that so put in question outside the ideologies and mergers.

At the moment when the date is officially confirmed the "machine" of propaganda, the Secretariat of National Propaganda starts moving: this way, they will send the journalist Dutra Faria, the engineer Vítor Veres da Emissora Nacional (sound), two film operators (so designated at the time) and a photographer that although they were not part of the entourage of Cardinal Cerejeira they had orders to accompany him to all the places he visited. The purpose was to maximize the impact of the visit - to collect the necessary images for the editing of the film / documentary to be made later - both inside and outside of Portugal, with the radio, reports coming first hand (by the newspaper Dutra Faria) and telegraphs, to be distributed by the national press and information agencies. Cardinal Cerejeira left Lisbon at 6:00 pm on July 15, and his itinerary covered several places in the following order: Funchal, S.Tomé, Luanda, Lobito, Lourenço Marques (the reason for the whole trip), Beira, Mossâmedes<sup>12</sup> and Praia<sup>13</sup>. At each stop, Cardinal Cerejeira had camp masses to celebrate (Luanda where the King of Congo was present) or buildings to inaugurate<sup>14</sup>(Beira and Quelimane) in addition to the entire program of visits and diplomatic protocols to follow.

On August 12 Cardinal Cerejeira arrives at Lourenço Marques aboard the Serpa Pinto, and despite a festive climate, a program planned in Lisbon was started in Lisbon so that nothing would fail.

On the 14th, the ceremony of consecration of the cathedral begins, which will be divided between 14 (day of the Battle of Aljubarrota) and 15 (day of the Assumption of Our Lady Madonna), since the Vatican allowed its division because it was a celebration that involved seven hours of liturgical rituals. Present were several vicars and apostolic mayors:

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<sup>12</sup> Or Moçâmedes, present Namibe.

<sup>13</sup>This will be visited on the return trip between Luanda and Funchal. It is a demarcation of territory since Cape Verde Islands, Portuguese colony, had a great geostrategic importance during World War II where Portugal was a neutral country.

<sup>14</sup> In Beira will be the blessing of the first stone of a new church that will be built, and in Quelimane will be the inauguration of the Cardinal Cerejeira Bridge.

Beira, Johannesburg, Transvaal, Durban, Nampula, Cape Town, and Swaziland, among others. From public function and services, all bodies were represented by high figures. The repercussions of the consecration are reflected in Portuguese newspapers (as one would expect), as well as in the English-language newspapers present in Mozambique and circulating in the South African Union. The journalist Dutra Faria will describe this trip in his book *Navegação de Paz e Glória* (the

first words of the speech by Cerejeira cardinal in Lourenço Marques) which describes in detail all visited sites, as the incoming train, interweaves also in the historical facts of each place with the history of Portugal, reinforcing once again the Portuguese presence, catholic and missionary.

For all this, the chapel of Our Lady of the Conception is a Pattern (Padrão) that confirms the fact that Mozambique belongs to Portugal, as Francisco dos Santos (1944) affirmed.

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This article was based on our master's degree defended in Faculdade de Letras de Lisboa, titled: *A Catedral de Nossa Senhora da Conceição de Lourenço Marques: cópia ou inovação do seu arquitecto?*

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## Traditional colours and coatings in the colonial cities of Minas Gerais

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### Abstract

The thematic of heritage conservation in Brazil became relevant at the beginning of the 20th century, and in that context, the "rediscovery" of the old colonial villages of Minas Gerais was especially important. These villages were founded in the early 18th century, a period of both Brazil's and Portugal's history known as the "gold cycle". Before the first half of the 20th century, following decades of patrimonial policies where colonial art was protagonist, five colonial cities of Minas Gerais had already been classified as heritage. However, since then, the conservation of built heritage in Brazil has faced technical, economic and political problems, which generate constant risks of de-characterization and losses in the colonial landscape. It is well known that materials, coating techniques and colours - the visual appearance - are among the most important factors of a site's architectural identity, as well as its urban coherence and landscape set. These are also the most perishable and ephemeral elements of constructions because they directly face the erosion and wear caused by weather. This work presents a brief literature review on the traditional building techniques of Minas Gerais' historical XVIII century towns, with emphasis on the study of colour and coating materials. The pertinence of this proposal also relates to the lack of systematized information on the construction techniques in colonial Brazil and the scarcity of information about colours and coating materials in Minas Gerais. The outcome of this work could be the establishment of invariables in traditional colours and coatings that could help ruling the renovation and preservation of the historical centres, nowadays in danger due to the dramatic changes caused by touristic flow.

**Keywords:** Colours and coatings; Colonial architecture; Minas Gerais heritage.

### Introduction

As a consequence of the interests and strategies of the Portuguese Crown, in the first two centuries of colonization, the occupation of Brazil was limited to the region of its coast. The process of expansion of the occupied territory towards the interior of the country occurred only from the expeditions to discover gold and precious metals during the early eighteenth century (Cagriota, 2012).

In this process, it was important the discovery of gold in the region of the mines, currently known as Minas Gerais. The peculiar situation in which the colonial society was developed in this period, known as the “gold cycle”, provided an important singularity to the environment of the villages built during the eighteenth century. If the landscape demonstrates a clear reference to the aesthetics of the Portuguese constructive way, factors such as the isolation of the populated coastline, the adaptation to the new environmental context and the precarious technological level, based on the slave labour, conceived a unique model of human occupation, with vernacular characteristics and influence of different constructive cultures, such as the Portuguese, the African, and the indigenous.

After the decline of the metal extraction activities at the end of the eighteenth century and a period of economic stagnation of more than a century, the villages of Minas Gerais were "rediscovered" and considered by the Brazilian modernists as a symbol of traditional culture, because they had remained isolated, without major interventions.

Currently, a large part of this heritage is classified by the National Historical and Artistic Heritage Institute (IPHAN-Brazil), such as the cities São João Del-Rei, Mariana, Serro, Tiradentes, Paracatu and Sabará, as well as Ouro Preto, Congonhas and Diamantina, which also have classified heritage by the United Nations Educational, Scientific and Cultural Organization (UNESCO).

Despite the importance of the aesthetic aspect to the heritage value of the villages of Minas Gerais, it is possible to affirm that the visual identity of these cities faces constant risks of de-characterization, among others, arising from intense tourist exploitation. Therefore, this work presents a literature review on the traditional building techniques of Minas Gerais' historical XVIII century towns, with emphasis on the study of colours and coating materials.

It is intended to contribute to the knowledge of the state of the art in the subject and to provide data for, in the future, to establish invariables in traditional colours and coatings that could help ruling the renovation and preservation of the historical centres of Minas Gerais.

### **Materials and methods**

The materials of building coatings have, in addition to the protective function, a decorative purpose of an artistic or architectural nature, which is of great importance for the aesthetic representation of the building and the urban image where it is inserted (Tavares, 2009). In this composition, the colours are elements of primary importance, since the human perception of

space depends significantly on the visualization of the colours. Among the senses, vision is the most significant means of receiving information about the environment, since human beings receive 80% of their information from it (Silva, 1999).

Depending on the light and the observer, the materials and the coating techniques, through the pigments and textures, provide the human perception of the characteristic colours of a site. As Pernão (2012) states, the materiality of the space, which is transmitted to us by colour in its visual aspect, is due to the information of the characteristics of the surfaces, whether painted or intrinsic to the materials themselves.

According to Aguiar (2011), until the industrial revolution, the materials and coating techniques depended and expressed the culture of construction in its geographic and geological context. In this subject are important references the colour studies developed by Jean-Philippe Lenclos and Dominique Lenclos. To identify the local colour palette of a site, the authors use the concepts of "general palette" and "selective palette": The first refers to most of the visible urban space (roofs, walls and coloration of the floor) and the second refers to the details that complement and influence the general palette (doors, frames, windows, etc.).

Based on this logic, the literature review performed in the present study investigated information on the materials and constructive techniques used in the colonial period and was subdivided into 4 themes: (i) roofs, (ii) floors, (iii) walls and (iv) details.

## **Roofs**

According to Lenclos (2004), the roofs have a high visual importance, related to their shapes and colours, which provide a preponderant effect on the landscape, especially when observed from above. Vasconcellos (1979:172) identified this importance from the example of Ouro Preto's architecture, which the author considered "*so spontaneous and natural, and so much merges with the landscape that, it may be said, is part of the earth, like the trees of the forest or the bush of the ground. In fact, their constructions are perfectly matched to the local topography, accentuating the contours, colours and shapes of the roofs confounding with the soil itself.*"

As well as the other constructive systems, the roofing system was designed in order to use local materials, for the reasons mentioned above. In the first centuries of colonization, it was widely used the materials of natural fibres such as straw, a tradition from Brazilian indigenous people. In the colonial villages of Minas Gerais, it is clear the predominance of the use of roof tiles

made of clay. With the effective beginning of the colonization and the growing need for more durable constructions, the ceramic factories were soon implanted, which prioritized the production of roof tiles known in Brazil as *capa-e-bica*, *capa-e-canal* or colonial tiles (Mendes et al, 2007).

According to the Brazilian Agricultural Research Company (Empresa Brasileira de Pesquisa Agropecuária – EMBRAPA, 2018), the predominant types of soils in Minas Gerais are the oxisols, consisting of mineral material, in which colours range from very dark red to yellow. These are the tones that compose the aesthetics of colonial roofs, which acquire a darker coloration due to the degradation processes.

The roof tiles were arranged on timber structures, predominantly in two surfaces, with a trim over the street and the backyard (Reis Filho, 1970). The high rainfall index determined the need for protection of the walls, mostly composed of clay, perishable material if exposed directly to tropical rains (Mendes et al, 2007).

The eaves were executed of wood, stone or mortar (more recently), and present some differentiated forms. They are known in Brazil as *cachorros* (the visible support structure), *cimalhas* or *sancas* (similar to entablaments), executed with less or greater formal perfection, according to the importance of building and the labour force available (Mendes et al, 2007).



Fig.1. Ouro Preto's landscape and eaves details (IPHAN, 2018).

## Floors

Like the roofs, the coatings for the floors evolved as the workforce qualified. The first systems used materials in their raw state, such as clay or the stone without any rigging (Mendes et al,

2007). For the construction of the sidewalks and streets, the stones were clearly the most used materials in Minas Gerais during the eighteenth century.

According to Castriota (2012), three phases are remarkable in the use of stone in regional constructions: in the initial phase, blocks of iron ore (stones known as *Canga*), then the quartzites, and finally, the steatite, known as *pedra-sabão* (soapstone). From the rocks mentioned, the quartzites were those mentioned by Vasconcellos (1977) in the construction of roads and slabs.

In the Brazilian literature, the most popular type of public paving is *pé-de-moleque*, mentioned by several authors such as Omnega (1961), Vasconcellos (1979) and Mendes et al (2007). It is a simple system, in which local fragments of rocks of different sizes were collected and applied directly on the soil, mortared with clay. It was common to use smaller rocks, such as river stones, for interior paving, while in the exterior pathways were applied larger blocks (Mendes et al, 2007). In summary, smaller and more delicate stones were applied in noblest places, expanding the diameters as the areas to be filled are increased (Vasconcellos, 1979).



Fig.2. *Pé-de-moleque* in Serro (IPHAN, 2018).

With the improvement of the labour force and the stone constructive techniques (knowledge from Portuguese masters), the stone rigging was used, especially in places of greater prestige, such as churches (Mendes et al, 2007).

## Walls

In the Brazilian colonial tradition, "*The walls are, in general, lined with clay mortar, supplemented or not with plaster of lime and sand*" (Vasconcellos, 1979:62). Clay mortar with corral material (manure) was also used to provide greater consistency and bonding "*between the clay mass and the lime and sand coating*".



According to Vasconcellos (1979) and Castriota (2012), the lime used in Brazil was first imported. It is possible to assume its origin, as it was common in Portugal, from the *Lioz* stone, widely used on the Brazilian coast, as stated by Lucio Costa (2006: 45): “*Lioz stone doorways and sidewalks are common all over the coastline*”.

As a consensus of several authors such as Kanan (2008), Santiago (2007), Vasconcellos (1979), Castriota (2012), Mendes et al (2007), Lemos (1989) and Breitenbach (2013), it is known that in the early times of colonization, it was widely used the lime obtained from the burning of shells and shellfishes. The lime of marine origin was abundant, what justifies its use on a large scale.

According to Santiago (2007), in documents written in the early years of the founding of the city of Salvador, in Bahia, it can be noted that the Portuguese had the knowledge of the production of lime with oyster shells. It was also verified that whitewash masters were sent to Brazil, at the expense of the Crown, in order to assist in the construction of the city.

One of the first known descriptions, authored by the Portuguese Gabriel Soares de Sousa (1540-1592), refers to the existing oysters in Bahia, whose shells could be used in the manufacture of lime for the construction sector (Santiago, 2007).

Later, lime from limestones or dolomites was also produced in a traditional way, and hydraulic binders were imported. After the advent of the lime and the cement industry, in the mid-1950, the old shell lime factories traditionally known as *caieiras* (Breitenbach, 2013) disappeared. Lemos (1989) complements with the information that only in the nineteenth century calcium carbonate rocks began to be explored to produce lime.

Vasconcellos (1977) also mentions the use of black lime for the waterproofing of buildings, roofs and tanks. This lime, however, was not used for painting, but as the basis for the final painting, always white.

As an alternative to the use of lime, the wide application of the material known as *Tabatinga* for the coating of buildings is mentioned by several authors. There are reports that the *Tabatinga* was used in Minas Gerais, as Vasconcellos (1979:177) describes: In the city of Mariana “*There is an excellent yellow and white clay, and they call it Tabatinga, which, after being prepared and cleaned, supplies the faults of the Alvaiade, and is used in various paintings*”.

Castriota (2012:81) mentions in a book about master craftsmen in Minas Gerais that the material was “*easier to find than lime*” and its use “*for wall cladding became generalized*”. The

author Duarte (2009), in her PhD thesis, cites a testimony of the Italian physician Domingos Vandelli, creator of the study travels to the Portuguese colonies in the eighteenth century (known as "Portuguese scientific travels" or "Philosophical journeys"), which confirms the existence of *Tabatinga* in several parts of Brazil.



Fig.3. Bricks and *tabatinga* in Minas Gerais (Catriota, 2012:112/81).

Despite the existence of coloured clay and the presence of pigments of vegetal and animal origin, it is common sense that in traditional Brazilian architecture, in general, the predominant colour is white.

This idea was reflected in the actions of IPHAN in relation to the colonial cities of Minas Gerais. According to Motta (1987:115), the institution's guidelines regarding the treatment of colours in the interventions in the classified heritage was limited to the requirement of light colours on the walls, in the decade of 1940, and subsequently, it was requested "*White colour paint on the walls and dark colour in the woods*".

The positioning of IPHAN induces the assumption of the prioritization of aesthetic and stylistic values for decisions, and the neglect of the authenticity of the buildings, especially in the treatment of coatings and colours. Contradictorily to this fact, there is photographic evidence of the existence of wall paintings with different colours in Tiradentes, as presented in the image below.



Fig.4. Tiradentes, Minas Gerais, in 2007 and 1979 (Neves, 2012:112).

Additionally, it is also important to question the common sense of the white colour of the Brazilian colonial landscape. Although the light shades are predominant, it is certain that they present variations and exceptions. As stated by Pernão (2012), human perception is not effective for the categorization (naming) of colours, which are distorted by our cognition, that tends to arbitrate a general colour.

It is known that the shades of lime coatings are variable according to elements such as the origin of the raw material and the techniques used (Duarte, 2009), and it's also significant the "yellowish" colour of the *Tabatinga* mentioned by Castriota (2012) and Vasconcellos (1979), which was found in Minas Gerais, and the large amount of colours obtained from natural dyes since the beginning of colonization. As Vasconcellos says (1979:178), "*It is verified, by the existence of dyes, that the white of the walls was not due to their lack, but that perhaps they did not work with water-based paints, while in oil-based paints their concentration could be greater*".

The colours, after all, were widely used in the interior paintings of churches and in the details of the facades, where their application was varied. "*Not only the blue, known today as colonial blue, but all the colours, especially in strong tones and preferably by the primitive colours*" (Vasconcellos, 1979:178).

## Details

In the tradition of the civil architecture of Minas Gerais in the eighteenth century, the facades were considered autonomous elements of construction. According to Vasconcellos (1977:41) "*The owners were always striving for a better treatment of the facades of buildings and the reception rooms, disregarding the interior of the residences*". However, the aesthetic quality of

the colonial facades derives not from the richness of its materials and details, but from aspects such as its constructive frankness, the established proportions and the good distribution of its various elements (Vasconcellos, 1977). Special coatings such as ceramic tiles and artistic paintings were not common. The use of glass was very rare in Minas Gerais, and the counters and balconies were more commonly used in the constructions of the Brazilian coastline.

The characteristic details of the facades are simple and fundamental, determined mainly by the contrast of materials and colours. In contrast to the light-coloured walls, the colourful elements of the details, commonly the doors, windows and frames, express intensely the identity of Brazilian colonial architecture, including the villages of Minas Gerais.

The materials that compose these details are the wood, the stone and the mortar (more recently) (Menezes, 1964). The wood, due to material, technological and labour limitations, was the most used for these details. As stated by Castriota (2012), in Minas Gerais, wood was one of the most used materials in the constructive techniques and ornamentation works of the colonial period. The same author states that the most applied types of woods for the frames, windows and doors were: *cedro, pinho, pinho de riga, canela preta e parda, jacarandá e sucupira*.

However, the woods applied in the details of the facades were always painted, sometimes combining two colours. Mendes et al (2001) mentioned as the most common the colours blue, red and yellow, and Vasconcellos (1977) also mentions the green colour, preferred of the noble houses.

In some cases, the woods were treated with lime coating, but they were usually painted with glue, tempering or oil from whale, linseed (Vasconcellos, 1979) or castor bean (Mendes et al, 2007). For the glue painting, it was used as raw material the fish, the leather, and possibly the manioc starch and the corn starch; and for tempering it was probably used the egg as varnish (Vasconcellos, 1979). For the colourings, several dyes were used, mostly of vegetal origin: from *Anil*, the colour blue; from the *Cochonilha* or the *Urucum*, red; from *Açafrão*, yellow and from *Pau-Braúna*, black; among others.

The details executed in stone, also applied in contrast of colours with the walls, demonstrate a better finish and were used in noble buildings. Among the main materials are the quartzite and the soapstone (*pedra-sabão*). The first one has blue, pink, yellow or green colorations and was intensely used in the masonry or the stonework of the buildings, composing its bases, corners, sills, frames, lintels, entablaments, etc. (Vasconcellos, 1977).



The soapstone has a variety of colours such as grey, blue and green, and they have even better finishing effects, because they are "soft" and easy to work stones (Menezes, 1964). Finally, with the impossibility of using the stones, it was applied a painting technique known as *faiscado* in Brazil, to imitate the appearance of the stones. This technique is mentioned by several authors, such as Vasconcellos (1977 and 1979), Rodrigues (1979), Oliveira (2003) and Menezes (1964). This is a technique equivalent to that known in Europe as *Scagliola*. As Bury confirms (2006), the use of substitute materials was frequent by the baroque architects and sculptors.



Fig.5. Coloured wood in Tiradentes (left), soapstone in Congonhas (middle) and quartzite in Ouro Preto (right) (IPHAN, 2018).

## Conclusions

From the accomplishment of the present work, it was possible to expose the main authors and bibliographical references in the subject of the colonial constructive techniques of Minas Gerais. The presented literature review organized the available information about the colours and coatings that had not yet been compiled or systematized, providing the understanding of the importance of materials, colours and coatings in the aesthetic composition of colonial architecture. Among the conclusions, it is stated that, in fact, these are the main elements of the visual identity of the cultural heritage of Minas Gerais. However, it is emphasized that this identity results not from the isolated building, but from the architectural set coherence and the final composition of constructions in the landscape.

It is also concluded that there is clearly in the literature the common sense that in traditional Brazilian colonial architecture, in general, the coated walls are whitewashed, influencing the neglect of important facts, such as the use of *Tabatinga* as a constructive technique (and its "yellowish" colour); the existence of distinct "chromatic moments" in colonial architecture (as



demonstrated through the pictures of Tiradentes); and the actions of IPHAN in the treatment of coatings and colours, which induce the assumption of the prioritization of aesthetic and stylistic values.

Finally, it is emphasized the importance of investigating the issues mentioned in the present work, through the continuity with field research, case studies and data collection that complement the literature information, in order to establish invariables in traditional colours and coatings that could help ruling the renovation and preservation of the historical centres of Minas Gerais.

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## **The Modern Collective Housing in Luanda and the role of private enterprise – 1950 to 1975**

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### **Introduction**

Luanda is the capital of Angola. Located on the North coast, it is considered the most developed city in the country. Portuguese occupation and colonization occurred from the 16th to the 20th centuries. Only at the beginning of the 20th century there are records of its growth, however, its greatest progress occurred between the years 1950 to 1975, this because in this period came a new model of urbanism that from the municipalities were promoted on the one hand the public partnerships and cooperative initiatives.

In the context of these changes were the new intentions of Portugal directed to Angola, which included the abolition of the exile and the coming of a free Portuguese population and with desire to make their new land the best to live, adapting this, in what is did better in Europe and America with new buildings and new habits with housing, work and leisure together.

This was to the detriment of an African population that had already imposed its living standards and jobs in public services until the early 1950s, in which Professor Fernando Mourão considered the end of the Angolan era and the beginning of Portugal hood (Mourão, 2006).

In the scenario of the time, the achievements promoted by the Colonial Urbanization Office (GUC) and the architects of the Câmara Municipal de Luanda (CML) stand out. Some of these professionals were precursors of an urbanism and an architecture adapted to the tropics in Angola.

To the Portuguese this interest came after the results achieved in South Africa, which led them to an awareness that to project on the African continent would be necessary to know the territory and live in it, because only knowing the problems would be possible to solve and develop.

From this perspective came the Portuguese professionals trained in French institutions with specializations in English institutions for the production of tropical housing, proposing to introduce a modern architecture, thus contradicting the regime of António Oliveira Salazar that

proposed an architecture with modern constructive elements and decorative elements collected from the buildings of the 17th and 18th centuries plus the traditional Portuguese architecture, encouraged by the studies carried out by Raul Lino in order to maintain the Portuguese tradition, Fernandes (2017)<sup>1</sup>.

According to Correia (2018, p.139)

*According to an article in the newspaper The Province of Angola on September 12, 1946, in addition to the use of the architectural elements already used in Portugal, one can note the use of concrete and an architecture made by specialized technicians, however, did not neglect the constructions carried out by them, which, although performed with rudimentary methods, had quality and beauty. One of Duarte Pacheco's main objectives was to train new professionals outside Portugal, with the most frequent place being France (FONTE, 2012). However, there are also reports of professionals going to England and Germany (MENDES 2012).*

As the regime has always been able to impose itself, there have been differences in the architecture produced for public buildings and the type of housing that would serve blacks and whites, as well as the imposition of rules on professionals who have not always been able to comply with the Charter of Athens.

In 1942, in the preparation of the first Master Plan for the city of Luanda, initial concerns arose with the housing of the neediest population and the location of industries. In this context, Luanda turned to a garden-like system. However, the assumptions of the Athens Charter were only put into practice in the 1950s, with the reinforcement of the urban building law published in 1951.

Therefore, as pioneers in this endeavour the architects João Guilherme Faria da Costa and Vasco Vieira da Costa, between the 1942 plan and the regulatory plan from 1956 to 1958 were highlighted. In this direction, architect Fernão Lopes Simões de Carvalho continued the actions in the plan of 1961-1966, in collaboration with the architect João Guilherme Faria da Costa.

In an official document, the architect Vasco Vieira da Costa reported that it was based on the Athens Charter to achieve progress in the management of city planning, claiming it as justification for the new rules imposed on Luanda (CAMARA MUNICIPAL DE LUANDA, 03/25/1958). This confirms that the urban action on the city carried out by CML between 1950 and 1975 was based on the criteria expressed in the Athens Charter.

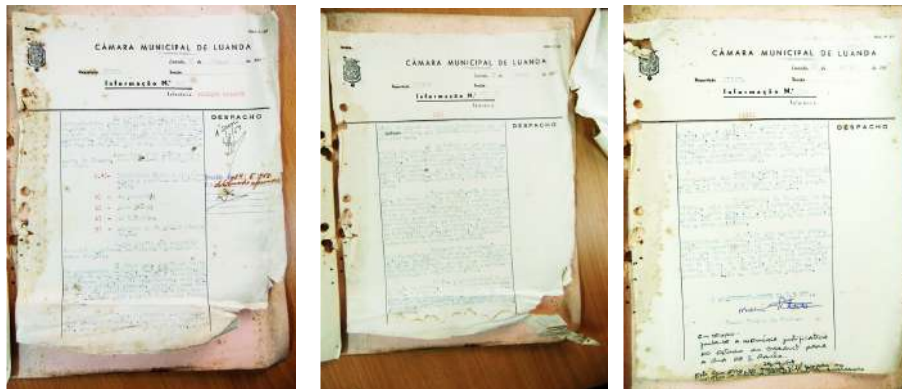
Let's look at Correia (2018, p.175)

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<sup>1</sup> In an interview in 2017.

*In obedience to the principles established by the urbanistic technique, this Bureau has not forgotten that the transversal profiles of the streets that structure a cluster must be defined in accordance with the functions they have to perform. For this and according to the Charter of Athens, 5 categories of routes are considered: 1 destined solely and simply to serve the dwellings; 2 of walking; 3 for pedestrians; 4 of transit; 5 master or large circulation. Whose profiles are studied in order to fully satisfy these functions (Idem).*

**Figure 1 – CML Information n° 144 25<sup>th</sup> March of 1958.**



Source: IPGUL Archive<sup>2</sup>, 2014.

The CML carried out the detailed plans, sometimes building projects and inspection, in a public-private partnership on the margins of the Athens Charter. These were carried out on the land of CML or on private land.

However, it did not fail to establish a relationship between the State, the professionals and the public, since real estate development benefited from State aid for the acquisition of land in the form of sale or transfer of these and loans from the housing development fund. It was established to promote zoning in the city, but urban regulatory norms were never approved in order to facilitate a minority class composed of Portuguese settlers who by their financial power obtained privileged of the government.

On the other hand, it was observed that from Lisbon, the GUC, linked to the Ministry of Colonies, and Estado Novo, promoted an architecture that represented political power and in this stand out public works and a few private ones. But the largest volume of production was private and followed the rules dictated by CML.

The construction of the coffee district in the 1950s is considered one of the first mass constructions of private enterprise at a low altitude. In previous years, downtown Luanda, with

<sup>2</sup> Archive inherited from the Câmara Municipal de Luanda.



# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

The Modern Collective Housing in Luanda  
and the role of private enterprise - 1950 to 1975  
*Maria Alice Vaz de Almeida Mendes Correia*

profits from the slave trade, also promoted private buildings in the Coqueiros and Bungo neighbourhoods.

It was the public-private partnerships and the cooperatives that gave a greater advance in the construction of housing, a legacy that Luanda still presents today, and which greatly dignifies it, as well as in other parts of Angola. In Luanda, housing was produced in Angola, Mozambique, Portugal and even in Brazil. Angolan cooperatives even produced housing in Mozambique and Portugal.

Figure 2 – Sale newspaper announcement in the city of Luanda<sup>3</sup>

**VENDEM-SE POR 350.000\$00, CADA  
OU TROCAM-SE POR TERRENOS EM LUANDA**

**OPORTUNIDADE ÚNICA**

**EMPRESA PREDIAL NORTENHA**

das 15 às 17 horas  
Avenida Marginal, 92 (Edifício de «A Mundial») — Telefone 70169

**Nos arredores da capital do futuro -  
BRASILIA**  
- no coração do Brasil!  
**TODOS QUEREM  
UM NEGÓCIO ASSIM:  
100% GARANTIDO!**

- Segurança absoluta dos títulos de propriedade.
- Quilómetros de 10.000 m<sup>2</sup> a 30.000 m<sup>2</sup> próximo ao novo D. Federal, que no futuro poderá urbanizar.
- Pagamentos desde 20%, de entrada e 40 prestações mensais.
- A primeira prestação lhe dará posse imediata de sua quinta.

**ESCRITURA COM GARANTIA BANCÁRIA**

**UNICOS TERRENOS QUE SE VENDEM EM PORTUGAL A 25 KM DO CENTRO DA CIDADE**

**PROGRIDE COM O BRASIL COMPRANDO EM BRASILIA**

Source: The newspaper “A Província de Angola” on 06<sup>th</sup> August of 1964 and 18<sup>th</sup> January of 1961.

Cooperatives in the absence of bank loans were another means found by private action to get their own home. There were groups of individuals who pledged to contribute a monthly fee. Initially, the houses were built by lot and in a later period by the oldest partner.

This explains why the real estate developers have gone on their good action in promoting development and how it was possible to build many of the cities of Angola and, in this particular case, Luanda.

<sup>3</sup> For the sale of buildings Portugal and Brazil

**Keywords:** Collective housing, cooperatives, Luanda and the modern movement.

### **Private colonial investment for housing in Luanda from 1950 to 1975.**

In a first phase the real estate development in Luanda started with the colonists, owners of the large plantations in the interior of Angola (particularly the coffee growers), with great preoccupation in the purchase of many lands, which, according to newspapers of the time, came to intensify later of 1948, mainly with the prediction of the arrival of more Portuguese who would earn higher salaries than those registered in Portugal. As a result, the economic growth of these owners and the cities of Angola occurred.

The preparation of the arrival of the Portuguese in bulk to Angola began at the end of the eighteenth century. However, it was in 1942 that the official announcement was made, but only the coming of the first colony in 1948 materialized. The great effects occur after the 1950s and go until 1975.

Landowners contributed to the formation of an upper middle class which required architectural projects similar to those in the major cities of the countries (for having been in Europe the training of a large number of technicians), and American (for the news coming through the magazines), where the architecture of the modern movement was most evidenced and promoted by CML and most of the private ones.

Banks and private cooperatives have benefited from real estate development. The landowners acquired them by purchase or exchange with CML. These often hired a construction company to carry out the project and the execution of the work. The great extensions of land were divided and sold or constructed and sold by autonomous fractions in horizontal property. Of the investors, in the first phase, the best known were the names Cunha & Irmão, Mário Cunha, Gomes e Irmão, Martins e Almeida, Cardoso de Matos, Voto Neves, Burity, Josefa Marçal. Then come the big real estate developers dominated basically by Portuguese.

The Caixa Geral de Depósitos de Angola in the 1950s granted loans to those who wanted housing loans. In an interview, Luís Carlos Dias<sup>4</sup> (2017) said that the private companies built or had them built and the CML approved the projects and supervised the works, based on the rules dictated by the council that approved the projects composed by technicians of Public

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<sup>4</sup> Former designer of the municipal chamber of Luanda (CML)

Works, CML, Health Inspector and the representative of the National Monuments Commission<sup>5</sup>.

The newspapers published in Angola and the radio were the means of spreading the projects of sale in horizontal property. In them, not only the enterprises in Angola, but also those in Portugal and those in Brazil were advertised.

The horizontal property regime was created by Decree-Law n°. 40.333, dated 14<sup>th</sup>, October of 1955, in Portugal. For Angola, Portaria n° 15.984, 6<sup>th</sup> October of 1956, applied the regime in the colonies with some minor alterations. From 1958 onwards, the sale of buildings on a horizontal property, where the residents were the target of real estate exploitation, took years to pay their houses, but it was still the means to obtain the house.

Funding was provided by the Development Fund, which also provided for local improvements covering housing and services. This activity intensified after 1965 with the emergence of new banks and lasted until 1975.

The survey in the newspaper *The Province of Angola* from 1940 to 1975, which advertised the sale of apartments under a regime of horizontal property, allowed the knowledge about the sale real estate in Luanda that began in the year 1958 and ended in 1975. The first announcement was the one of the companies Cofinca and Construções Modernas on 3<sup>rd</sup> of 1958 October and for that reason they consider themselves pioneers in the promotion of horizontal property in Angola.

The greatest achievement was the Prenda neighborhood where Precol was the builder. Designated as Neighborhood Unit 1, the Prenda neighborhood had a public utility, with a private partnership, created by the Minister of the Overseas, on 5<sup>th</sup> November of 1963, and this, in turn, was assigned to Precol under of Law 2.007. The company was headquartered in Salvador Correia Street, 176, 2nd floor, in Luanda, and in this public-private partnership, buyers were exempt from payment of surrenders under the law.

In 19<sup>th</sup> April of 1964 Precol once again announced in the newspaper *The Province of Angola*, published, the sale of duplex apartments where the smallest would be with 50m<sup>2</sup> commercialized in the amount of 85,000.00 Escudos, with a monthly income of 612.00 Escudos, payable in 139 months, equivalent to less than 12 years for debt settlement. The remaining apartments had 83m<sup>2</sup>, 119m<sup>2</sup>, 157m<sup>2</sup> and 182m<sup>2</sup> where the maximum monthly

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<sup>5</sup> Architect Fernando Batalha since 1939 to 1980s.

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

The Modern Collective Housing in Luanda  
and the role of private enterprise - 1950 to 1975  
*Maria Alice Vaz de Almeida Mendes Correia*

payment did not exceed 2,225.00 Escudos. The maximum cost of the apartment was 309,400.00 Escudos and the number of instalments for the settlement of the debt was the same for all.

It should be noted that these monthly amounts could only be paid by a high middle class that sometimes resorted to the bank loans that basically served the settlers, since most of the Angolans had the capacity to produce low-income social housing with very small divisions and preferably far from the settlers' homes.

Buildings such as the High Building of the Maianga (The newspaper "A Província de Angola" on 6<sup>th</sup> January of 1969) and Building Angola (The newspaper "A Provincia de Angola" on 1<sup>st</sup> June of 1968) in the district Alvalade; the Combatentes Building containing areas between 54 m<sup>2</sup> and 105 m<sup>2</sup> per apartment, its standard plan contemplated the 12 apartments on a single floor and the advertisement said that it would be built on the Senado da Câmara Avenue (The newspaper "A Província de Angola" 1<sup>st</sup> December of 1973 ), but it was built on António Enes Street.

Also the Building Kinaxixi (The Province of Angola 6<sup>th</sup> January of 1969) in the Street Mousinho de Albuquerque constructed by the Predial Trust; the Caravela Building built by Conol<sup>6</sup> for the Cooperativa "O Lar do Namibe" between Duarte Lopes and Avelino Dias Street (The Province of Angola on 25<sup>th</sup> April of 1971); the São Paulo de Tarso Building (The Province of Angola 5<sup>th</sup> April of 1971), built in the D. João II Street by the company Imóveis de Angola Ltda .; the Alameda Building located on the Almirante Américo Tomaz avenue next to the Church of Nazareth (The Province of Angola 3<sup>rd</sup> October of 1971).

The Luanda Building (21<sup>th</sup> April of 1972) between António Barroso and Garcia de Resende Street, presented the company Construções Unidas and announced more construction of buildings in the neighborhood of Maianga on António Barroso Street and in the neighborhood of Coqueiros in Duarte Lopes Street by the company Construções Jonar Ltda and Brasil Building (The newspaper "A Província de Angola" 7<sup>th</sup> July of 1967) between the Brazil Avenue and António Nobre Street, built by the Horizontal Limited-Protal Property, located at Luís de Camões Street 47 1<sup>st</sup> floor, room 12.

It was also announced the Cristo Rei Building second block by Cofinca on 24<sup>th</sup> April of 1964 in the Sá da Bandeira and Combatentes avenues; the Infante D. Henrique Building<sup>7</sup>, built on

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<sup>6</sup> Nogueira Constructions

<sup>7</sup> Now known as Treme-Treme, its structure shakes at every moment, according to residents and visitors. At this moment the population that lived there was already displaced.

the corner of the Restauradores de Angola Avenue and the Infante D. Henrique Square, better known for its wide span by Sical, with offices, offices and apartments with payment conditions in 18, 30, 42 and 54 months, with prices starting at 130,000.00 Escudos (The “A Província de Angola on 16<sup>th</sup> July of 1968). Another was also the Pátria Building with ample partitions in the Marginal Avenue of Luanda (The Province of Angola 11<sup>th</sup> March of 1968) and many others such as the Alvorada Building, the Benguela Atlântico Building.

The ads included the costs and the conditions that the buildings would have. The apartments were worth between 130,000.00 and 660,000.00 Escudos with a maximum of 60 monthly instalments, the most frequent being between 36 and 48 monthly instalments and the cost of adjudication, considered as the first instalment of 10% to 15% of the value of the work. In the conditions included air conditioning, hot water, electric washing machine, water filter (pressure), phone jack and intercom phones between the concierge and the residences and others.

It is often observed that the ground floor was intended for commerce with shops and overlays, on the following floors the apartments composed of rooms, bedrooms, toilets, kitchens, laundry, balconies, bedroom and toilet for maid, private parking, hallway, elevators, social hall, with built-in wall cabinets, balconies, terraces with tanks and toilets for indigenous people. Often, in Luanda, buildings with a terrace, which during the week, were used as laundry or storage, were transformed into places of leisure.

The construction companies that worked in Luanda were: Construções Tobar, Construções Unidas, Construções Polar, Construções Civil, Construções Pro-Horizontal Ltda., Proficient Ltda., Ribeiros Limitada, Sical, Gadec, Conol, Pastorinha, Precol, Constructions Cofinca, J. Pimenta, Unipredio, Angolan Society of Residential Buildings-Ancor, Horizontal-Protal Property, TecnAtomium, Angola Real Estate, Sociedade Colonial de Construções Ltda., Aralte, Winter Sun, AIA, Tudangol among others.



# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

The Modern Collective Housing in Luanda  
and the role of private enterprise - 1950 to 1975

*Maria Alice Vaz de Almeida Mendes Correia*

Figure 3 – Sale announcement for sale of apartments in Luanda Cofinca and Modern Construction.



Source: The newspaper “A Província de Angola”, 17<sup>th</sup> June of 1959 and 3<sup>rd</sup> October of 1958.

It is possible to contemplate buildings erected by: Conol - in the Paiva Couceiro and Norton de Matos Streets, Sagrada Família Square, D. João II and António Barroso Street; Precol - in the Neighborhood Unit Prenda and Precol; Gadec with participation in the Building of Medical Post Maianga and Flamingo Building in António Barroso Street, the building at the beginning of Brito Godins Avenue near the Maianga Square, the book building on Guilherme Capelo Street and the Pátria Building in Marginal Avenue, according to the Engineer Fernando Leal Machado (2017)<sup>8</sup> who claimed to have been co-owner of the said company with the Architect Pinto dos Reis; Cofinca Buildings - on the Street of the Combatants of the Great War; Siccal - on the Restauradores de Angola Avenue and many more.

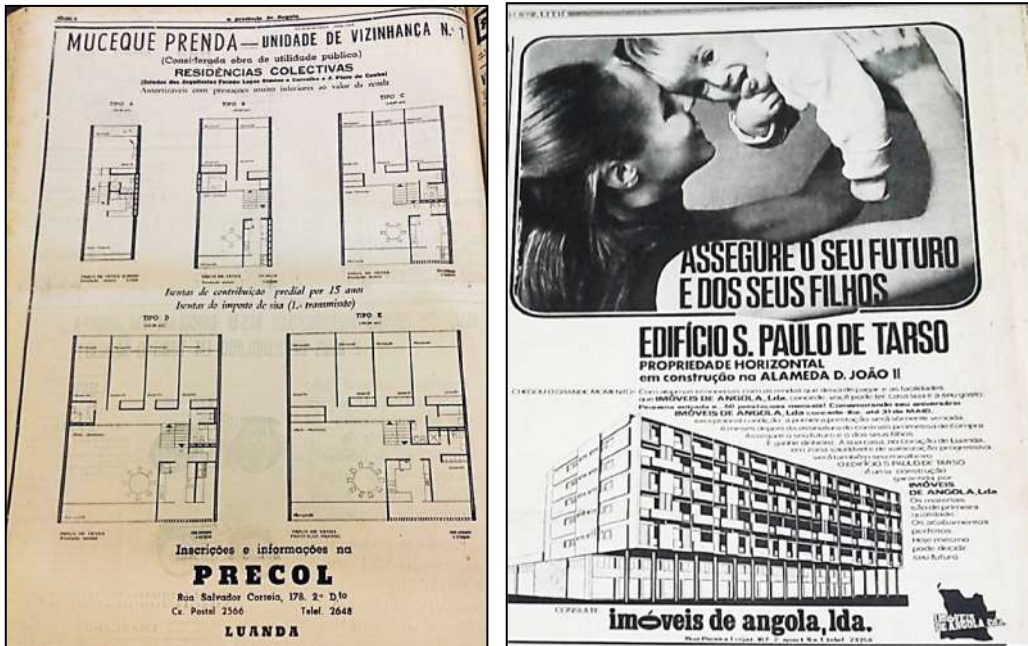
<sup>8</sup> In an interview in 2017 (Correia, 2018).

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

The Modern Collective Housing in Luanda and the role of private enterprise - 1950 to 1975  
 Maria Alice Vaz de Almeida Mendes Correia

Figure 4 - Newspaper Announcement at Prenda<sup>9</sup> and São Paulo de Tarso Building<sup>10</sup>.



Source: Newspaper “A Província de Angola” on 29<sup>th</sup> Abril of 1971 and on 16<sup>th</sup> April of 1971.

Figure 5 - Newspaper Announcement for Combatentes Building and Cofinca Construction.



Source: Newspaper “A Província de Angola” on 1<sup>st</sup> December of 1971 and “A Província de Angola” on 29<sup>th</sup> November of 1965.

The projects were very varied and generally functional. There was great concern about the separation of areas (wet and dry) and the safeguarding of the private area of the dwelling. Also,

<sup>9</sup> Neighborhood Unit N.º. 1. Project Architects Fernao Simões de Carvalho and José Pinto da Cunha in Luanda.  
<sup>10</sup> D. João II Avenue in Luanda.



the use of balconies, the orientation for a better ventilation and less insolation and an excessive care so that the reflection of the sun between buildings does not occur.

**Figure 6 - Kinaxixi Building at Mousinho de Albuquerque Street in Luanda.**



Source: Maria Alice Mendes Correia, 2017.

### **3 - Cooperatives in the promotion of housing in Luanda 1950 to 1975.**

The newspaper *The Province of Angola*, dated 10<sup>th</sup> May of 1967, reported that to solve the problem of homelessness, urban construction cooperatives were created, but they already lamented the high cost of land and construction. The cooperative assigned each member a number to allow the raffles. Before the start of the construction of the house, the interested parties presented the land, the project and the contractor to the cooperative in the case of reimbursement. If they were carried out on behalf of the applicants, the newly built houses mortgaged cooperatives. In the event that the land was ceded by CML or by the State under concession, the process was already in the name of the cooperative and construction was also carried out on behalf of the cooperative. Cooperatives began in 1951 and lasted until 1975 (Leite, 2013).

The Cooperative "A Nossa Casa" was an anonymous company and considered one of the first (if not the first cooperative) of Angola, based in Nova Lisboa, founded in the early 1940s. On 10<sup>th</sup> May of 1967), the cooperative had already built about 500 houses in several places in

Angola, such as Nova Lisbon, where they had already built 287 houses, in Luanda 44, Lobito 29, Benguela 12, Sá da Bandeira 5, in Silva Porto 10, Malange 6, Luso 4, Moçamedes 2 and 1 in Robert Williams, Santa Comba, Salvador do Congo, Cubal, Salazar, Catumbela, Monte Belo, Vila Flôr and Catofe<sup>11</sup>.

Its headquarters cost more than 1,500,000.00 Escudos. The shares of the houses varied from 50.00 to 90.00 Escudos per month. There was the value of the action and that of a jewel. The form of acquisition of the same was by lot, by the order number of the registration or by co-participation of capital by cooperation. The maximum benefits accepted for the purchase of housing at the time of the announcement would be the 24 instalments. On 23<sup>rd</sup> September of 1969, the Cooperative "A Nossa Casa" created the Angolan Centre for Cooperative Studies.

The Cooperative "O Lar do Namibe" was founded on 16<sup>th</sup> February of 1950, but there is news that its activity began in 1954. In an interview Ruy Morais e Castro (2017)<sup>12</sup> claimed that in 1957 he was aware of the existence of the cooperative and was related to its founder and his daughter's godfather of baptism Mariano Pereira Craveiro. The latter founded the cooperative and was also its president with headquarters in Moçamedes.

The Cooperative first expanded to Porto Alexandre, Serpa Pinto and then all over Angola. Also, in the other overseas provinces and in Portugal (Leite, 2013). In the newspaper The Province of Angola, on 1<sup>st</sup> September of 1968, it announced its new statute and internal regulations, in which some of the modalities were: numerical order, lottery, capital contribution, capital contribution with time limit, by percentage, active co-operator, anticipation, lottery for proposing members, regional sweepstakes, death of the associate, wait limit and conditional construction with interest.

For the construction, there were 2, 4, 6, 8, 10, 12, 14, 16 and 20 years, according to the quota to pay and with the right to the construction in horizontal property. The construction by capital contribution obeyed, the time limits by the greater offer and still by fixed percentage for any associate - the one of greater supply had 3 distinct groups.

The construction was facilitated to all the exchanges, according to the desire of waiting and the will of the client. The building constructed by Conol at the corner of Norton de Matos avenue and Oliveira Martins and Luís Vasconcelos Streets, is considered the first building of the

<sup>11</sup> Quibala in South of Cuanza River.

<sup>12</sup> Interviewed in 2017.

Cooperative "Lar do Namibe" in horizontal property built in Luanda, after its conclusion on 14<sup>th</sup> October of 1971, the newspaper The Province of Angola published and informed the society.

In an interview Ruy Morais e Castro (2017), of Portuguese nationality and now living in the State of São Paulo in Brazil, says he worked for the Cooperatives "O Lar do Namibe" and for "Alegria Pelo Trabalho" from 1957 to 1972. He stated that in 1965 he was an employee of the Cooperative "O Lar do Namibe" and was authorized to contact the members and new members. He narrated that in 1957, the cooperative "Lar do Namibe" had 1300 members.

Ruy Morais e Castro also said that in a conversation with the Cooperative's founder, Mariano Pereira Craveiro, he learned that the Cooperative "Lar do Namibe" faced many problems because the members did not pay the quotas. When Mariano Pereira Craveiro clarified how the cooperative functioned, Ruy Morais e Castro (2017) concluded that the communiqués in the newspapers would never have an effect and that the ideal would be for someone to talk to each of the members, making them understand the importance of the payment of the quota.

The president of the Cooperative informed him that they could not afford transportation and lodging expenses, but when he learned how much he would earn from the work, Ruy Morais e Castro (2017) accepted to travel all over Angola, where he got the quotas paid and still gathered more associates.

The latter placed as a condition to receive a percentage according to the payments made. So, to continue to succeed in his activity, he decided to live in Luanda, the capital of the country, where development began in a massive way.

Ruy Morais e Castro in Pereira Forjaz Street, very close to Mutamba, in the center of the city of Luanda, opened the Consulted Technical Co-operative Urban Predial (TECNICOOPE) and also rented 30 minutes at the Catholic Broadcaster of Angola in Santo António Street, where once a week the program was broadcast at 12 o'clock and was called Sintonia. This program was used to answer the questions and doubts of members and the public in general, since the Cooperative "O Lar do Namibe" did not have the human resources to attend the high number of partners spread throughout Angola.

The radio program allowed those who did not want to buy the house to ask for the sale of their positions, which also allowed more gains. This same program served Ruy Morais e Castro (2017) to respond to the doubts of individuals who had acquired houses in other cooperatives and that is how he also worked for the "Joy for Work" cooperative in which it was possible to



sell the Book, in the Guilherme Capelo Street to 12 members. In an interview with Ruy Morais e Castro (2017), he commented that when he stopped providing services to these cooperatives in 1972, the Cooperative "O Lar do Namibe" had 23,000 members.

In continuing his report, Ruy Morais e Castro (2017) mentioned that profits were great, they were used to pay for travel expenses, to support themselves and to buy positions in the cooperative in his name, because he dreamed of building buildings one day, but, unfortunately, it was not possible because he had to leave Angola and live in Brazil, fleeing the war in Angola. And he concluded that wherever he went he gave lectures in the municipal councils, in the commercial associations and in the police commands, showing the advantages in the acquisition of houses or apartments as well as photos of the beautiful landscapes of Angola. He went through many difficulties because in the interior of Angola and after the beginning of the armed struggle in 1962, the Portuguese suffered attacks from the so-called terrorists<sup>13</sup>.

Another Cooperative was the "Alegria pelo Trabalho", based in Luanda, in Sousa Coutinho Street, 87 2<sup>nd</sup> floor, room 7. There are reports that in 1968 it had already reached the 5000 members (Leite, 2013). In the newspaper The Province of Angola on 20<sup>th</sup> May of 1967, after the registration of the members and liquidated the first four instalments entered for the lottery. In 1967, the Cooperative was building 20 apartments in a building with 5 floors horizontally and 26 houses that same year. On 06<sup>th</sup>, June of 1967, the newspaper The Province of Angola published everything about the cooperative and the registration forms to facilitate those who wanted to register. On 1<sup>st</sup> July of 1968, in the same newspaper, it is read that the Cooperative acquired that year 900 members.

As alternatives to the acquisition of housing, they announced the construction in the 10th year, after registration, construction by seniority, from the 3rd year, construction in the 1st, 2nd, 3rd, 4th or 5th year of registration, after the enrolment or retirement at the end of the 10th year. Then it was also located at Pereira Forjaz Street, 79, 3rd floor, room 5, near Mutamba. In another publication, on August 13, 1968, there is news of a building with 8 floors and 50 apartments, in António Barroso Street, in Luanda, whose contractor was Construtora-Ltda. In this announcement was placed that the total cost of the work would be 12,600,000.00 Escudos and would be built within 18 months. The announcement of May 29<sup>th</sup> of 1974 brought that the

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<sup>13</sup> Appointment of the troops of the armed parties that were facing the Portuguese Government.

Barroso Building 4, with 56 apartments, in which the delivery of the keys would occur on 1<sup>st</sup> June of 1974, in said building as an inaugural act.

Looking closely at the city of Luanda through numerous visits to its Streets in the early hours of the morning and on weekends, it was possible to verify that the buildings of “Alegria pelo Trabalho” cooperative are located on António Barroso, Guilherme Capelo and Álvaro Ferreira Avenues. As for the Cooperative “O Lar do Namibe”, we find its buildings on the Streets António Barroso, D. João II, António Enes, Quicombo (building situated in the neighborhood of São Paulo) and Norton de Matos avenue.

The buildings of the Cooperative “Alegria pelo Trabalho” are the ones that present themselves with greater importance, that is, they are of the highest and therefore, they have a larger number of families, as well as services on the ground floor. One of the largest buildings is the Book Building on Guilherme Capelo Street. Another imposing building is the Book Building of the São Paulo neighborhood of the Cooperative "O Lar do Namibe".

The Cooperative “Alegria pelo Trabalho” has built the first building in horizontal property in Angola, it is the building located between the Streets Norton de Matos and Garcia de Resende in the neighbourhood of Alvalade. Its inauguration was announced in the newspaper The Province of Angola, on 29<sup>th</sup> April of 1968.

**Figure 7 - Book Building, in Guilherme Capelo Street in Luanda<sup>14</sup>.**



Source: Maria Alice Mendes Correia, 2017.

<sup>14</sup> Project of Architect Pinto dos Reis, 1974.

The Cooperative "Previdente Angola" became known through an advertisement in the newspaper *The Province of Angola*, on 24<sup>th</sup> November of 1971, in which it informed the partners and future partners and, above all, the banks that Mr. António José de Melo was no longer the collector. He could only fill out applications for registration and receive from each member the value of 150.00 Escudos. Said notice was dated 19<sup>th</sup> November of the same year of publication and was signed by the Chairman of the Board of Directors, Adriano dos Santos Oliveira.

In the Cooperative "O Nosso Abrigo", based in the city of Melange, on 15<sup>th</sup> August of 1967, it announced a summary of its activity, claiming a 15-year existence (from 1952 to 1967) and having built 245 houses in that period. The value of Escudo 57,178,000.00, most of its buildings in Luanda. This Cooperative was founded in the year 1952 with a social patrimony of Escudos 7,832,000.00 and already had more than 4000 members. This summary that the newspaper *The Province of Angola* presented related to its activity from 1952 to 1966.

Cooperatives, in the absence of bank loans, were also another means of finding private homes. There were groups of individuals who pledged to contribute a monthly fee. Initially, the houses were built by lot and in a later period by the oldest partner. This explained why the real estate promoters had gone on their good action in promoting development and how it was possible to build many of the cities of Angola and, in this particular case, Luanda.

While banks were not ready for loans, cooperatives with private capital wisely knew how to assist citizens who wanted to buy housing, which leads them to consider them as pioneers in the contribution of conquering the home for many. In a brief analysis of the banking service in Angola, we can see that Banco de Angola was founded in 1926, following the Bank Banco Nacional Ultramarino, founded in 1863 and, on the other hand, Banco Comercial de Angola, founded in 1957, gave greater attention to large monopolies.

It was only in the 1960s that new banks emerged, such as the Banco de Crédito Comercial e Industrial in 1965, Banco Totta Standard Angola in 1966, Banco Pinto e Sotto Mayor in 1967, and Banco Interunido in 1973. Also, in 1929, Caixa Económica Postal, Montepio Geral de Angola in 1933, the Delegation of the Banco de Fomento Nacional in 1960 and in 1961 the Caixa de Crédito Agropecuário emerged. These institutions, in the first instance, provided credit to State officials and only later in 1965 did they pass on credit to any individual who had a guarantor and to prove that they were liquidating the portions of the loan.

As a facilitating means in the purchase of housing the cooperatives allowed a payment ranging from 2 to 20 years and therefore it is possible to pay benefits at a much lower cost, with a minimum value of 90.00 Escudos. If on the one hand the investors resorted to the bank loan, the cooperatives constructed according to the amount collected that happened due to the financial availability of the associates.

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## **Daguerian excursions in Jamaica: public space and emancipation in the work of Adolphe Duperly**

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### **Abstract**

Through the use of mechanical reproduced images in nineteenth century Jamaica, Adolphe Duperly introduced an interest for the present and an imaginary of the commons. His edition *Daguerian excursions of Jamaica* from c.1840s presents a utopian vision of the island after emancipation. The images are a hybrid between British, Jamaican and French imaginaries of colonial life in the island. Due to the material qualities of early photography and the development of photomechanical processes, the daguerreotypes captured by the French-Jamaican photographer had to be transformed into the printing medium in France, at the famous editing house Thierry Frères. In an overlaying of medium specificities, aesthetic languages and national identities, the album presents public space in the island as the center stage in which a new public sphere could come together. This research analyzes how this is achieved and the entanglement of influences at work in Duperly's images.

**Keywords:** Photography, daguerian view, Jamaica, public space.



“What determines vision at any given historical moment is the functioning of a collective assemblage of disparate parts on a single social surface. It may even be necessary to consider the observer as a distribution of events located in many different places.” Crary, Jonathan. *Techniques of the observer*. Boston: MIT Press, 2000. p. 6

The present research develops around the *Daguerrian excursions in Jamaica*, an album of views of the island made by Adolphe Duperly in the early 1840s. Adolphe Duperly was a French-jamaican lithographer and photographer who worked in Kingston, witnessing and documenting the shifts in Jamaican society during and after emancipation. This album of views of Jamaica is one of the earliest and most provocative attempts to depict public space in the island. However, it presents a fictional image of the Jamaican public sphere, in which multiple imaginaries are at play. To fully grasp the implications of Duperly’s Daguerrian excursions in Jamaica one must look at events distributed in many different places.

## 1. Multiple Jamaicas: images for a grammar of freedom

Jamaica is characterized by an unorthodox articulation of influences: The island, claimed by Christopher Columbus for the Spanish crown in 1494, was taken by Britain in the second half of the XVIth century. As the largest British enclave in the Caribbean, Jamaica became the principal sugar producer in the West Indies and center of the economic bonanza known as the ‘Sugar revolutions’. Its economy in the late eighteenth century depended almost entirely on the exploitation of slaves, leading to a rapid increase in black population in the island, which soon surpassed the indigenous and the european population (Meditz, Sandra W. and Hanratty, Dennis, 1987).<sup>1</sup> For centuries Jamaica had also been a refuge for an ancient Jewish community and center for pirate operations in the Caribbean. As such, the island bore a paradoxical status between being a passive, absentee-owned paradise for landowners and a Caribbean epicenter of revolution.

In the 1800s, the island turned into a place of exile for Haitian *émigrés* and of reunion for the leaders of independence coming from the Spanish colonies in America. Under such

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<sup>1</sup> “Between 1811 and 1870, about 32,000 slaves per year were imported...The eighteenth century represented the apogee of the system, and before the century had ended, the signs of its demise were clear. About 60 percent of all the Africans who arrived as slaves in the New World came between 1700 and 1810, the time period during which Jamaica, Barbados, and the Leeward Islands peaked as sugar producers.” Meditz, Sandra W. and Hanratty, Dennis, editors. *Caribbean Islands: A Country Study*. Washington: GPO for the Library of Congress, 1987.

# COLONIAL AND POSTCOLONIAL LANDSCAPES

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and emancipation in the work of Adolphe Duperly  
*Maria Fernanda Dominguez Londoño*

circumstances, Jamaica became the object of increasing debates over class, race and freedom. In 1807, international abolition of slave trade was ruled, but despite pressing demands of reform, abolition of slavery in the British Empire took place only in 1834 and emancipation in 1838, after the collapse of the apprenticeship system (Hall, 2000: 20)<sup>2</sup>. As Catherine Hall proposes, during the 1830s new grammars of difference began operating, reconsidering the meaning of freedom and thus, the conformation of a public sphere<sup>3</sup>. The social changes brought by abolition of slavery and emancipation in Jamaica fostered a space of appearance for new subjects and a shift in the representation of space itself. As we shall see, technical images, whether intentionally or not, contributed to the reconfiguration of a language of emancipation, adapting to the new social and market demands.



Fig.1. James Hakewill. *Montpelier Estate St. James* in *A Picturesque Tour of the Island of Jamaica* c.1820. p.95. Boston Public Library.

<sup>2</sup> 1828-33 saw the emergence of a new historical consciousness, associated with reform. It marked a different conjuncture when those who argued for change and a more inclusive definition of political citizenship, nation, and empire were able to secure significant legislative shifts. Catholic Emancipation in 1829, The Reform Act of 1832 and the abolition of slavery in 1833 together constituted a powerful indicator of new ways of thinking about the peoples of the British empire and the differentiated forms of government appropriate to them. A new “grammar of difference” -the organization of power relations across lines of class, race, gender and ethnicity- was being articulated, and this opened up opportunities for men such as Belisario. Hall, 2007: 20.

<sup>3</sup> The late 1820s and 1830s saw a multitude of struggles for freedom across the British Empire. Dissenters, Catholics, and Jews, people of color and enslaved Africans, white middle-class and working-class reformers, antislavery enthusiasts both men and women-all used the language of freedom. Yet freedom was embedded in class, gender, race, and ethnicity. New grammars of difference across nation and empire regulated what freedom might be and mean on different sites. Hall, Catherine, 2007: p. 24

## 2. Views of the present

Catherine Hall proposes that a *Jamaican picturesque* flourished in the midst of the debate on slavery, and parallel to the English picturesque, as a genre in which the island was depicted as an idealized paradise. Landscapes of privately owned Estates were painted and printed in exclusivity for a certain class, economically involved in the slave trade, serving as propaganda for a specific social agenda. However, lithography and photography also fostered a modest circulation of *other* images, including caricature, pamphlets and news, consumed by a growing bourgeois public. (Hall, 2007: 19).

It is not gratuitous that Duperly's image production coincides with the changing political landscape in Jamaica. Duperly was instrumental in the appearance of a local production of mechanically reproduced images and a local audience that consumed and traded images in the Caribbean. Throughout the nineteenth century Adolphe Duperly and his sons produced many images of Jamaica, some of which became standard representations of the island. Most images from the first half of the nineteenth century in Jamaica were commissioned to foreign artists and, in many cases, to be exhibited outside of the Caribbean; in this context, Duperly's work was the exception, at the same time documenting the everyday and transforming it. After his death in 1865, his sons took over the business, advertising as Duperly Brothers, "the only native photographers, unlike the other true birds of passage" (Boxer, 2001: 11). This appeal to the native is telling of a growing demand for locally produce images.

Adolphe Duperly had emigrated from France to Haiti in 1820 offering his services as a lithographer and engraver. After visiting Cuba, he settled in Jamaica in 1824 where he opened a printing shop and eventually became Jamaica's first and foremost photographer. While there is also evidence that his sons, who were born in Jamaica, supported the abolitionist cause in the Caribbean through several printing activities, David Boxer suggests that, initially, Duperly was critical of emancipation, however, his production responded to market demands and, with time, his images became increasingly idiosyncratically, aimed at the new publics of post-emancipation Jamaica.

In the 1830s, Adolphe Duperly had begun his own series of lithographed views of Jamaica, following the enterprises of well-known English painters. He became familiar with earlier and contemporary prints of Jamaica which he often copied and modified, such as James Hakewill's

*Picturesque Tour of the island of Jamaica* from 1825, which had a significant impact on Duperly's early *views*. In a similar manner, other artists like Theodor Henry Fielding and J. Cartwright made copies 'after Hakewill', as referred by Tim Barringer. This *modus operandi* was a common and accepted among lithographers and draughtsmen, however, Duperly began appropriating Hakewill's views to illustrate the events surrounding emancipation in the 1830s, with lithographs such as *The attack of the Rebels on Monpelier old works*. Such prints evidence an interest in current affairs that is almost proto-photographic. In this appropriation, Duperly's brought Hakewill's pastoral views, located outside of time, into the present, radically changing the discursive spaces in which the *views* operated and were consumed.

Between 1837 and 1844 Duperly produced many images related to the project of Jamaican views, including the daguerrotypes of the Daguerian excursions. However, compared to his predecessors, Duperly's choice of subjects for the *views* was increasingly focused on public space and on common places or symbols such as the Ceiba tree, the Spanish ruins, the waterfall. This series of lithographs served as a preamble to the album of daguerian views, appealing, as David Boxer mentions, to his customers' patriotic considerations and aimed at building a sense of place. Duperly's interest in the representation of current events is also manifest in his many early works: see for example *La morte de Christophe*, made in Haiti in 1820 or the portraits of Napoleon, Bolivar, Pétion, and exiled republicans residing in Jamaica (Jaramillo, 2013).

However, Duperly became involved in Isaac Mendes Belisario's *Sketches of Character* printed in 1838, which delayed the project of his own *views*. On the year of publication of Belisario's *Sketches*, the scotsman Bartholomew Kidd, realized a similar project of Jamaican views, printing mainly watercolors of Jamaican private estates (Barringer, 2007). This delay gave Duperly the chance to become acquainted with the new photographic and photomechanical developments that took place after 1839, altering the nature of his *views* of the island. In the early 1840s Adolphe Duperly resumed his project of an album of Jamaican views, advertising a series of 48 lithographs taken from daguerreotypes, of which 24 were actually produced. Subscribers would receive two prints each month during a two-year period for a fixed price or single prints could be bought at the Duperly & Son studio. Around 1844, Duperly finally published the Daguerian excursions of Jamaica, presenting a new vision of a Jamaica that begs to be analyzed.

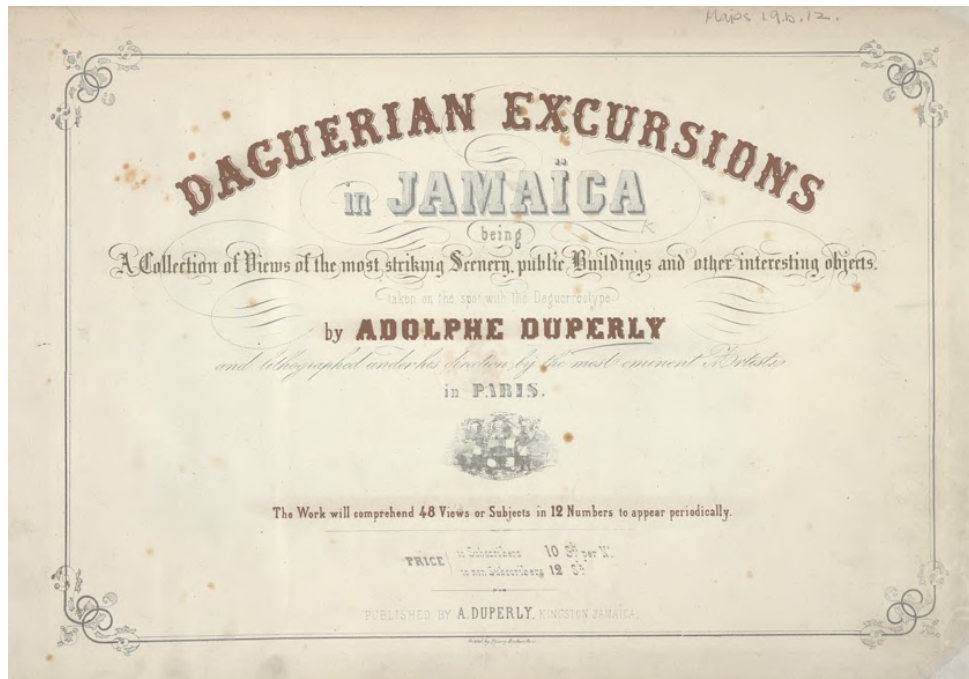


Fig.2. Front page of the album *Daguerian Excursions in Jamaica*. Adolphe Duperly. British Library.

### 3. The Daguerian Excursions in Jamaica

The views of the *Daguerian excursions* come from daguerreotypes taken by Adolphe Duperly around 1840. The daguerreotype was one of the earliest forms of photography, officially invented in France in 1839 by Louis-Jacques-Mandé Daguerre. This technique was expensive and required long exposures, after which a unique, mysterious photograph appeared on a mirror-like surface. The image was captured on a metal sheet covered with light-sensitive substances and it had to be kept in a special case, very much like a precious jewel. Careful manipulation was required to reveal the image on the reflective surface. Consequently, the daguerreotype presented many challenges for mass production. In fact, initially, the only way to make multiple copies of it was to make a drawn version of it. However, since the invention of the daguerreotype, many had become interested in reproducing it. In the early 1840s the French physicist Hyppolite Fizeau, patented a method by which the daguerreotype plate could become a printing plate. In this process of transmediation, the original daguerrotype was lost but multiple copies could be printed on paper.

It is possible that for these reasons, Duperly sent his daguerreotypes to the publishing house Thierry Frères in Paris to have them reproduced, instead of lithographing them himself. Indeed,



# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

Daguerian excursions in Jamaica: public space  
and emancipation in the work of Adolphe Duperly  
*Maria Fernanda Dominguez Londoño*

the size of the images corresponds to that of a full-plate daguerreotype, suggesting direct printing from the photographic onto the graphic. A direct print was possible thanks to the method invented by Fizeau. However, the prints in Duperly's album are even more complicated, remaining half-way between a photograph and a drawn copy, because of the hand-drawn details that were added *a posteriori* to the image.

The long exposure required in early photography prevented moving bodies from appearing clearly in the image. Although the original daguerreotypes taken by Duperly were lost during this process, it is certain that at some point, human figures had to be added to the images in the printing workshop. However, the frontispiece of the album is especially emphatic on the truth-content of these images. The title explains:

*“Daguerian Excursions in Jamaica being a collection of views of the most striking scenery, public buildings and other interesting objects taken on the spot with the Daguerreotype by Adolphe Duperly and lithographed under his direction by the most eminent artists in Paris. The work will comprehend 48 Views or Subjects in 12 Numbers to appear periodically. Published by A. Duperly Kingston Jamaica. Edited by Thierry Brothers, Paris.”*

The epigraph contains the paradox intrinsic to photography, illustrating the struggle between reality and fiction, truth and mediation. In it, Duperly deployed the rhetoric of objectivity, pervasive throughout the nineteenth century, especially in the debates sparked by the invention of photography. For those concerned with the fidelity and truth of the photographic image, the frontispiece of the album insisted on the fact that the views were captured *on the spot*. In doing so, the author asserted that they contain precisely what the photographer saw. Rather than representing, the *daguerian views* aimed to present the real, inviting the observers to overlay their gaze onto that of the photographer and reenact the excursion throughout the island.

The frontispiece also explains that the views were *lithographed under his direction by the most eminent artists in Paris*. The acknowledgement of an artful intervention was possibly aimed at those who saw photography as an artless copy of the real. At the same time, by affirming that he personally supervised the lithographers, he was also foreseeing the objections of a public expecting objective images, a public who may have protested either the hand-drawn intervention or the lack of human presence in the views, as a trump on reality. While many earlier views attempted to faithfully reproduce reality through drawing, Duperly's album

introduced photography as the ultimate evidence of presence. Overall, the photograph is presented as a guarantee, an existential trace of the instant in which the photograph was taken. The album of Daguerian excursions in Jamaica belongs to a long tradition of representing space through the genre of the *view*. The name of this genre points at both, an action and an object; its language is defined by a visual panoramic advantage, usually horizontal, over a territory. The view, in its delimiting and aesthetizing operation, transforms nature into landscape and the act of viewing into an act of possessing. The daguerian views of the album are formally different from earlier views made by Duperly in the 1830s.

They are usually taken from the viewpoint of the photographer, lower than the regular view. This favors the projection of one's own gaze into that of the photographer.



Fig.3. Market Street-Falmouth". *Daguerian Excursions in Jamaica*. Adolphe Duperly.  
British Library.

Furthermore, the views in the album are mostly urban, establishing a hierarchy of looking in and at the city with the rhetorical aid of perspective. Perspective draws the eye of the beholder into the street. The diagonal line of the street is a recurrent element in the composition of the *views*, guiding the gaze and creating the illusion of a journey. In this genre, the photographic language introduces human scale into the framing of vision to stress the proximity between viewer and scene.

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

Daguerian excursions in Jamaica: public space  
and emancipation in the work of Adolphe Duperly  
Maria Fernanda Dominguez Londoño

In such a way, Duperly's daguerian *views* present urban scenes in which the observer is actually participating through the act of vision. The observer/consumer of this views seems to be closer to the *flâneur*, who owns the city as he wanders through it, or to the tourist, who conquers through the gaze, than to the landowner who had owned the right to look for centuries. In this sense, the daguerian view could be considered as a frozen frame of a flâneur's visual experience of the city. Each frame is a fragment of his excursions, the path pursued by the flâneur/photographer. Through this transformation of the *view*, the concept of ownership is also transformed: the images of a certain space are no longer exclusive to the owner of the land represented, instead they are available to anyone willing to discover it with the gaze.



Fig.4. A view of the Kingston theatre. Adolphe Duperly.  
British Library.



Fig.5. A view of the court house. Adolphe Duperly.  
British Library.

## Daguerian views: From the monumental to the everyday

The Daguerian excursions of Jamaica were one of the earliest editions of its kind in the world, in terms of both, its material production and its content.<sup>4</sup> Around the same years, a similar project was made in France by Noel Lerebours. The edition of *Excursions daguerriennes: vues et monuments les plus remarquables du globe* was produced between 1840 and 1843 as a series of prints, prepaid by a list of subscribers. Although this project shares the language of the *daguerian view*, there are substantial differences with Duperly's edition. All of the images from

<sup>4</sup> A copy of the album was sent to the Biblioteque National de France in 1846. Some sources date the album 1840, 1841 or 1842.

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

Daguerian excursions in Jamaica: public space  
and emancipation in the work of Adolphe Duperly  
*Maria Fernanda Dominguez Londoño*

Lerebours' albums came from daguerreotypes, but the method for transcribing them varied. In fact, the french series of *Excursions Daguerriennes* embodies the technical and visual challenges posed by the reproduction of a *daguerian view*. As the series progressed, new printing methods were tried out by the editor including engraving, etching, lithography, until the Fizeau method became available (Lerebours, 1840-1843: 110).

A brief look at these two contemporary projects, starting with the title page, evidences a slight difference in scope too. While the primary focus of Lerebours' views was documenting monuments, Duperly's ambitions yielded towards an accurate depiction of everyday life in the main cities of Jamaica. The subjects in the Jamaican excursions include views of churches, government and military buildings, a theater, a hotel, the market and main streets, but also the suburbs, rich and poor, where the imagined population mingled. Besides a view of the famous *Cascade of White River Near Ocho Rios In St Anns*. Duperly's views are concerned with the urban life and the legitimacy given by its modern infrastructure.



Fig. 7. Falmouth-Taken from the Church  
*Daguerian Excursions in Jamaica*. Adolphe  
Duperly. British Library. Tower”



Fig. 8. Cornwall Street-Falmouth  
*Daguerian Excursions in Jamaica*.  
Adolphe Duperly. British Library.

The choice of subjects photographed by Duperly responded to the demands of a merchant and increasingly bourgeois society. As Hall explains, Kingston, “the most broiling place in the universe, has a population close to thirty thousand by the early nineteenth century, with numerous shopkeepers and traders. It was a trading city, dominated by its port, with crowded wharves and vessels, men and women plying their wares, and sailors and merchants congregating down at the docks. For some it was a place of great trade and opulence, with fine brick houses. It boasted a mayor and aldermen, a town guard and police force, a public hospital,



a library, some schools and charitable institutions, and a good sprinkling of well-attended churches and chapels.” (Hall, 2007: 19) These are the spaces which Duperly photographed in his *Daguerian excursions*, the commons grounds in which a public sphere could fully become (Reinhold, 2016).



Fig.6. Montego Bay-taken from the residence of M Melhado  
*Daguerian Excursions in Jamaica*. Adolphe Duperly. British Library.

The emphasis placed by Duperly on urban space is accompanied by an interest in everyday life in the city, taking the street as its main stage. In these images, the street appears as a dynamic platform, rather than a single apprehensible body. Within this language, the street, a space of negativity, becomes also a subject, a place to look at. This is evident in the more traditional view of Montego Bay “from the Residence of M. Melhado”. The interest is no longer placed on the view *of* the residence but rather on the view *from* it, stressing the power behind exercising the gaze over other subjects. In this image, the four characters in the foreground stand at the edge of the hill, a privileged place for a panoramic view over the city. This is one of the few views taken from a higher point, imbricating the language of romantic landscape painting with the rationality of photography. The street below mimics the movement of the gaze from the foreground, throughout the suburb, and into the fading mountain range in the background, the Blue mountains.



The suburb is another element that gains visibility in Duperly's Daguerian Excursions: the homes of the middle and lower classes are depicted within the rationality of an urban grid. By rendering them visible in such an orderly manner, they are presented within the western ideal of progress and beauty in the nineteenth century. The peaceful and convivial images of suburban life present a common aspiration of post-emancipation Jamaica rather than a reality. In the 1840s, social reform in Jamaica was still to take place, nonetheless, the representation of these new subjects and spaces is an initial act of public recognition. In doing so, the city is recognized as a new space of appearance filled with potentiality.



Fig.9. Market Falmouth. *Daguerian Excursions in Jamaica*. Adolphe Duperly. British Library.

## The city and its fictional dwellers

The Daguerian excursions present an entangled fiction of the Jamaican society at the time of their production. This entanglement manifests in different elements through which a vision of the public is presented<sup>5</sup>. The first element involved is architecture, containing both the truth

<sup>5</sup> Vision and its effects are always inseparable from the possibilities of an observing subject who is both the historical product *and* the site of certain practices, techniques, institutions, and procedures of subjectification. Though obviously one who sees, an observer is more importantly one who sees within a prescribed set of possibilities, one who is embedded in a system of conventions and limitations. Crary, Jonathan. *Techniques of the observer*. Boston: MIT Press, 2000:5.

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

Daguerian excursions in Jamaica: public space  
and emancipation in the work of Adolphe Duperly  
*Maria Fernanda Dominguez Londoño*

value of the photographic image and the identity of the British presence in the Caribbean. Sober buildings of state power serve as background to the scenes of urban life that take place in the square and the market. Then there is the city, the ultimate symbol of civilization and a leitmotif of the July Monarchy of Louis Philippe d'Orleans in France (1830-1848), best exemplified in the transformation of Paris. Indeed, the images in the album depict an ideal city, be it Kingston, Falmouth or Montego Bay. The city, with its rational streets and squares, offers a stage for the fictional inhabitants of the views.

Another element is local nature. In the Daguerian Excursions of Jamaica there is a passage from the picturesque landscape, where nature is at center stage, into the urbanscape, with nature becoming an ornament, a symbol of human domination. American nature, which was often feared by European dwellers, appears only on the sides, contained and orderly. Something similar happens to the inhabitants of these scenes, as if they were part of this tamed nature. We are often presented with their backs and not their faces. These individuals, sometimes only part of a crowd, resist identification. Nonetheless they are at the center stage of these images. They are not secondary like the tourists in Lerebours excursions. Actually, the inhabitants of these views constitute the vital element of the view, a vitality that the daguerreotype could not fully convey but was necessary for the image to be "truthful".

The fictional population of the views is heterogenous, although some class and racial tensions resurface subtly in the prints. Black figures are usually depicted with simple clothing, performing domestic roles as maids and drivers, or selling animals and other goods, although some of these tasks are also performed by white men too. Fashion associated with certain classes and dwellings, are recognizable. Yet the race and identity of the majority of city dwellers is inaccessible to us and hardly classifiable as stereotypes. The inhabitants are as humane as they are anonymous.

The human figures drawn in the lithographic studio in France, with the supervision of Duperly, could have been taken from images of customs of the Caribbean, a genre that became popular between the 1830s and 40s. Nonetheless, renown examples of such genre like the *Images of the Caribbean Slavery* by Richard Bridgens or Isaac Mendes Belisario's *Sketches of character* from this same period are rather exoticizing when compared to the inhabitants of Duperly's views. Instead, the scenes presented by Duperly offer a soothing promise of civilization, in which different races and classes peacefully coexist.

Among the heterogeneous crowd of the prints there are some ambiguous characters, figures whose race and social status are unclear. These bodies are like casts, subjects to-be-defined and made fully visible in a near future. One of these characters is particularly interesting in *A view of Coke Chapel (Taken from the Parade)*, turning his back on the beholder like Friederich's famous *Wanderer above the Sea of Fog*. However, the man does not look into the unknown and immense space of sublime landscape, instead he strolls through the city, admiring its greatness.



Fig.10. “A view of Coke Chapel (Taken from the Parade)” with detail. *Daguerian Excursions in Jamaica*. Adolphe Duperly. British Library.



His attire makes him stand out from the rest: a top hat, a cane, an English pointer and a *redingote* or cut-away coat, a hybrid fashion of French and British costumes that became popular in Europe around the 1840s, is especially suiting. A light is shed over him, singling him out, hoping that a doubling occurs. This character is the possible consumer of such images, depicted in such a manner that the beholder can identify with him. The beholder *becomes* the man observing the church, participating of the spectacle of public space. This figure contains the “here and now”, enunciating “I was there, I saw”. This ambiguous figure can be filled with any future (male) subject that experienced and appreciated the space of the city. Within the political circumstance of post-emancipation Jamaican, the ambiguity of such a figure could be embodied by those *other* subjects that appeared after emancipation, on the condition that they appropriate the costume of this politeness and enthusiasm for civilization.

Duperly’s images seem to praise civilization through its legitimate symbols of progress and order. His daguerian views act as a manifesto, presenting an act of viewing public space not as it is, but rather as a desire of what emancipated Jamaica could have looked like. This hybrid between an idealized British and French colonial society shows a utopian society contrived by the expectations of the colonizers. However, at the crossroads of the many visual layers, the images offer certain spaces of ambiguity in which the stereotypes become a mask, and thus a weapon, that allows locals to reappropriate the gaze and claim through it a space of appearance. Furthermore, by choosing to represent the places of local encounter, Duperly begins a tradition of making visible the spaces and dynamics that supported the formation of a public sphere in the island.

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## Image credits

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## Beyond a “colonial apartheid”, French urbanism in Morocco: From social separation to spatial segregation

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### Abstract

The French protectorate undertook extensive operations of creation of new cities in Morocco. Willing to avoid previous mistakes in Algeria and to protect local culture from a “civilizational shock” general resident of colonial administration Hubert Lyautey opted for a separation between local population and European one and different approaches were adopted. Starting by isolating the traditional urban fabric medinas and creating new urban fabrics for local community called “indigenous neighborhood” by the urbanist Henri Prost and later Michel Ecochard, head of the town planning of the French Protectorate launched a large-scale housing projects for low income population.

After independence, inhabitant’s appropriation evolved into a new order of spatial and socio-economic segregation that is different from traditional urban mixity in the medina. On the one hand, low income populations as well as indigenous occupying the medina and mass housing neighborhood and on the other hand the middle and upper class population investing the new cities that became later cores of extended metropolises. This context shaped many dynamic spatialisation revealed by duality between the new city versus indigenous neighborhood and medina that are recognized as a bipolarized cities.

This article aims, through the case of the city of Casablanca, to examine the experience of colonial urban segregation policies and how it continues to shape the current urban context of Moroccan cities: landscapes, habitat typology, and urban policies.

**Keywords:** Spatial segregation, French colonial urbanism, indigenous neighborhood, Morocco.

## **Introduction:**

Across the colonial world of the beginning of the 20th century, urban policies undertaken under the colonial regimes had generated new strategies of urban planning and management, which transformed not only the urban landscapes of cities and territories of these countries, but also went along with a structure social mutation within the city.

Among these interventions, ranging from a civilizing mission towards local society in the case of the French protectorate in Morocco, to the figure of the Apartheid in south African cities as a spatial expression of racial separation, there was manifestly a shared paradigm of a gap between colonized society and colonizing one (Jelidi Charlotte, 2012 : 97), that shaped these policies, and the relationships within urban societies.

The creation of new cities in the Moroccan context carried, as in other colonized countries, this bipolarized vision of the urban society, with a particular interest for French colonialism for a necessity of modernization and civilizing mission of the society via the urban space. Nevertheless, the current socio-spatial structure of urban society cannot be only related to the colonial policies, but also to the numerous factors in link with to social mutations.

By assessing the particularities of French colonial experience in the Moroccan context, this paper intend to look beyond the concept of apartheid, by examining how the colonial policies interacted with the whole socio-economic mutations occurred in the context of protectorate, in order to understand how this lasting urban legacy of colonialism has affected the current urban landscapes of Moroccan cities.

## **Protectorate versus apartheid , and the segregation as a process :**

As stated by J.L Cohen and M.Eleb, researches related to modern Casablanca, while profuse, are characterized by a gap between the historical, anthropological, and social studies, and tend to fall either in glorifying the colonial experience or negatively analyzing it by opposing political and administrative actions to spontaneous organizations of local population. stresses that urban history is less made by firm decisions than by a permanent tension between public policies and private land speculators. (J.L Cohen and M.Eleb,1998:13)

Hence, The reality of the “separation” or “segregation” within cities, as stated by many historiographers, is more complex to be a mere confrontation between the colonial power and the local society as it is not only an expression of public policies, but is linked to the social structure

of the colonized society, as well as to private dynamics<sup>1</sup>. (J.L Cohen and M.Eleb,1998 ; Rabinow Paul, 1995; Jelidi Charlotte, 2012). thus the social effects of these policies, while drawing decisive political vision and “the future pattern of Moroccan towns and cities” (Arcuri, Gaetano and Anna Pasquali, 1985), were the result of a combination of objective constraints of a capitalist mode of production and the formulation of a social project (Rachik, Abderrahmane, 1995).

In his essay “Rabat: Urban Apartheid in Morocco” Janet Abou-Loughod, states a controversial assumption of an orchestrated class separation, projecting to the Moroccan context the concept of Apartheid initially used to qualify the ideological position of colonialism in south African context, which explicitly built an urban separation based on races. While we can link both the south-african apartheid and the protectorate in Morocco to the same colonial paradigm, fundamental differences exist regarding urban configurations and management as that of the social representation of local society by settlers<sup>2</sup>, which was in the French colonial policies in Morocco based on an ideology of “protectorate”, seeking to protect local culture as a mean to sustain the colonial presence (J.L Cohen and M.Eleb,1998), not to mention that there was no explicit restrictions on access and installation of Moroccans in the European city have been established<sup>3</sup>.

### **The spatial project and the Social project:**

Morocco benefited as one the last French colony, from the feedback of previous colonial experience in the other colonies, and the local culture, was a subject of and study for politicians and urbanists and architects of protectorate, whom expressed their sensibility regarding

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<sup>1</sup> *il est tout à fait fondamental par ailleurs d'échapper à ce que j'appellerais l'illusion du tout-état . Les colonies ne sont jamais le lieu d'une confrontation unique entre l'Etat colonisateur et les sujets locaux. L'espace politique, technique, réglementaire est bien plus complexe » .*

Cohen « Parcours d'historiens. Jean-Louis Cohen », in Jean-Baptiste Minnaert (dir.), *Histoires d'architectures en Méditerranée, XIX<sup>e</sup>-XX<sup>e</sup> siècles*, 325.

<sup>2</sup> Abu-Lughod Janet L., *Rabat: Urban Apartheid in Morocco* (Princeton: Princeton University Press, 1980). Pp. xxii + 374. Illustrations, index, and bibliography. - Volume 15 Issue 3 - Dale F. Eickelman (PDF) *Janet L. Abu-Lughod, Rabat: Urban Apartheid in Morocco* (Princeton: Princeton University Press, 1980). Pp. xxii + 374. Illustrations, index, and bibliography.. Available from: [https://www.researchgate.net/publication/269501934-Janet\\_L\\_AbuLughod\\_Rabat\\_Urban\\_Apartheid\\_in\\_Morocco\\_Princeton\\_University\\_Press\\_1980\\_Pp\\_x\\_ii\\_374\\_Illustrations\\_index\\_and\\_bibliography](https://www.researchgate.net/publication/269501934-Janet_L_AbuLughod_Rabat_Urban_Apartheid_in_Morocco_Princeton_University_Press_1980_Pp_x_ii_374_Illustrations_index_and_bibliography) [accessed Nov 30 2018].

<sup>3</sup> Moroccan elite has even been encouraged to invest in new cities “*excepté une période de deux ans durant laquelle un dahir a été établi en 1941, régulant les opérations de vente des terrains en ville nouvelle aux non français. ce dahir a été abrogé par la suite... L'élite est accueillie à bras ouverts, alors qu'une grande frange de la population est laissée en marge parce qu'elle n'a pas les moyens financiers d'accéder à la ville nouvelle.*” Jelidi, Charlotte, (2012).

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

Beyond a “colonial apartheid”, French urbanism in Morocco:  
From social separation to spatial segregation  
*Najoua Beqqal, Fatima Zohra Saaid, Omrane Mohammed Chaoui*

Moroccan urbanism and architecture, by understanding the local context through the anthropological researches on local vernacular architecture in order to adapt the colonial interventions.

This posture was an important component in settling the French colonial “Musée social”, which guided colonial policies by 1912, when the General Resident Hubert Lyautey, explicitly expressed his conviction to protect the Moroccan culture from a “civilizational shock”, and willing to establish a pacific protectorate. The colonial project, which was for Lyautey both a spatial and social project<sup>4</sup>, had to establish, as Paul Rabinow stated, a new social order, respecting the local culture, yet deeply motivated by a need to control populations through spatial grouping, following security and hygienist considerations.

This was transcribed spatially and socially by an ambiguous relation-separation between the indigenous medina and the colonial city.

Accordingly, the terminology describing the city as a binary space in official colonial discourses could not reflect the reality of an heterogeneous society, and fed the racial and secular perception of colonial cities by many scholars, veiling the fact that the society components were more heterogeneous even inside European and Moroccan groups, with plural cultures and socioeconomic differences. (Florin, Bénédicte, 2010; Jelidi, Charlotte, 2012; Abdelmajid Arrif : 1993) Moreover, the perception of urban society by the protectorate does not support a static vision as this terminology used has itself evolved through the colonial presence. (Florin, Bénédicte, 2010).

The duality “European city” et “Indigenous city” in official terminology between 1920 et 1925, stated the separation between the two spatial entities, that went along with a museification of the traditional medina and dominated the early colonial urban philosophy (Rachik, Abderrahmane, 1995:26). Nevertheless, this "European / indigenous" terminological duality will be replaced after 1925 by a duality between "new city" - "old city", <sup>5</sup>.

On the other hand, the Moroccan social structure was another factor as Moroccan elite played a consistent role in establishing an alliance with colonial administration that associated it to the

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<sup>4</sup> “ j’ose dire que dans toute ma carrière coloniale , la conception qui a toujours commandé mes actions a été la conception sociale “, cité par Esperandieu « lyautey et le protectorat » Rachik, Abderrahmane, (1995).

<sup>5</sup> Especially after the colonial urban planning was criticised during the international congress of in 1931, (see Jelidi, Charlotte, 2012)

protectorate, allowing a complex relationship between French colonization to Moroccan society (Rabinow, Paul, 1995)

As soon as colonial policies were established, socio-economic factors were shaping the settlement of the population over the ethnical ones. This shift occurred earlier in the city of Casablanca, which evolution illustrates clearly the layered and complex nature of segregation shaping the current post-colonial landscape cities.

### **Casablanca: from social separation to spatial segregation:**

Casablanca carries a special place among the others cities developed during the colonial period. known as a small coastal commercial crossing point, and a 18th century resuscitated small medina, the city became the economic capital of the colonial Morocco, draining most of the commercial traffic of the country, which brought rapidly a massive rural migration entitling Casablanca as the first Moroccan city to know the “bidonville” or shantytowns, and witnessing a spectacular urban growth challenging colonial urban planning , as well as social tensions leading to the first riots against the settlers for independence.

### **A neo-medina invested by Moroccan elite : The “ habous city”:**

by 1912, the medina of Casablanca was home to a socio-economically mixed Moroccan population composed by muslims and jews settling in the Mellah quarter at the south-west of the medina until the 1947-48. Problems of Moroccan dwelling became urgent facing the migration of rural population. (fig.1)

Prost, mandated by Lyautey, launched in 1914 the first housing operation for the indigenous population: the city Habous, calling on the architect Albert Laprade, to build a "new medina" south of the medina of Casablanca, that setteled over 10 hectares (24,7 acres) on land donated by the Habous outside the perimeter of the development plan. it consisted of 700 homes inspired by traditional Moroccan architecture, and hosted a palace for the Sultan, and as an extension, Derb sultan for the servants, which was completed by Edmond Brion and Cadet. (fig.2 , fig.3 and fig.4)

Laprade, educated in the “romantic” vision of the Beaux arts (Arcuri, Gaetano and Anna Pasquali, 1985), undertook a detailed work of inventorying historical and artistic characteristics of the medinas and the vernacular architecture, in order to understand and to reframe the essence of the local way of life, he organized the urban and spatial structure “*responding to the social*



*system and the life of the native population”, “linking architecture to landscape, interiors to exteriors, as well as aesthetics”* (Arcuri, Gaetano and Anna Pasquali, 1985), with special attention given to traditional materials and technics evolving local constructors, that shows a cultural approach seeking to grasp and recreate the essence of social characteristics as well as the local architecture while linking it to the modern comfort, by featuring roadways et sanitarian facilities in the hygienist vision.

Conceived at the beginning for middle class Moroccans, “*Derb el habous*” was soon inhabited by Moroccan elites who left the ancient medina, that began to densify.

### **Creating the modern colonial new city: 1920-1946 the bipolarized city and the beginning of segregation**

in 1919, the urbanist and architect Henri Prost, drew the first masterplan for a growing city, implementing a regulatory measures for land use rather than an urban model (Dahir du 16 avril 1914) (J.L Cohen and M.Eleb, 1998 : 75). (fig.5)

Casablanca’s Masterplan structure intended three levels : firstly : regulating and readdressing the current urban situation by implementing a new road system, secondly, by defining new land use rules, and thirdly, by defining four zones structuring : the city center, displaying large avenues and city equipments, which intended to reflect the modern colonial city, composed by courtyard plots, the indigenous city, the industrial zones, and the residential area hosting European upper class villas at the south-west, next to the recreational and marina area.

the European city center located close to the medina condemned the possibility of its extension outside the its walls, and the “*Place de France*” became the friction point between the two entities, in the context of an extension project of the new city over a portion of the Mellah quarter, as Prost hoped that the neo medina of Habous will soon replace the original medina. (fig.6)

By 1929, while the city center is being built progressively, numerous low cost housing in plotting and industrial cities were realized around. But by the end of 40ies, Prost masterplan became quickly obsolete, mostly because the speculation freezing large plots around the city, despite the efforts made further by masterplan planned by Alexandre Courtois for the extension of the city to address this situation.

By the end of 20th, Casablanca, was qualified as a mushroom city, as it seemed to escape planned colonial urbanism, being rather ruled by private interests. More shantytowns, for which

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

Beyond a “colonial apartheid”, French urbanism in Morocco:  
From social separation to spatial segregation  
*Najoua Beqqal, Fatima Zohra Saaid, Omrane Mohammed Chaoui*

the social composition was described as heterogeneous<sup>6</sup>, emerged despite controlling efforts forbidding their settlement inside the planned areas, first by the *Dahir* of 1931 and then by improving shantytowns, as “*Ben M'sik*” first in 1932. These operations were later followed by others led by the “*Office Chérifien de l'Habitat indigène*” created in 1940, that realized the “*industrial quarter Cosuma*” as a model workers’s city located in the extension of the neo-medina, and the operation of “*cit  Ain Chok*” located far in the south of the city (J.L Cohen and M.Eleb, 1998, 228). In 1946, in parallel, the administration, realized the “*cit  jardin*” at the quartier “*Bourgogne*”, as the most large operation for European settlers. (fig.7)

Soon, emerged a city articulated not by a duality “european” versus “indigenous”, but rather an organization dividing it into three entities that became quickly spatially distinct : the new city welcoming the european population, the Habous neo medina, that was inhabited progressively by moroccan elites, and a area at the outskirts south to this neo-medina, for housing the poor indigenous mass. In terms of population origins, upper-class French settlers occupied the city center or the villas of “*Mers Sultan*” and “*Anfa*”, as the modest europeans settled at the *Roches Noires* quarter, while the *Maarif* quarter was inhabited by poor Spanish and Italians, and the Moroccan jewish bourgeoisie occupied the “*Anfa*” quarter next to European upper class, as the poor jewish population remained in the “*Mellah*”(J.L Cohen and M.Eleb,1998).At this point, the separation is already a complex combination between a separation indigenous / europeans, and the beginning of a marked segregation socio-economic articulating Plural culture to socio economic differences.

## **Ecochard and the shifting to a functional modern city:**

After the departure of Lyautey and Prost by 1920 and until the venue of Ecochard in 1946, Casablanca was being caught up by growth and speculation, reaching 500,000 inhabitants By 1944, witnessing the proliferation of plotting in parallel to shantytowns developing in the city’s outskirts.

The sociospatial landscape of the city shows therefore the matrix of spontaneous socio-economic segregation between different neighborhoods. Called out by general resident Eirik Labonne, from 1946 until 1953 , Michel Ecochard as leader of the department of urbanism, to

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<sup>6</sup> Description of Doctor Georges B ros, distingue composed of three groups muslims, jewish and european, each with rich and poor, which their “non hygienic” conditions were the same disregarding the categories. (Cohen,1998,p.222)

whom Casablanca needed to become a rational industrial city in prevision of a more spectacular growth, settled the Athena’s charter principles to reach the objectives of functional city, and brought up the modern vision of a city based on the functionality, urging necessity of controlling a disorder aggravated by the speculation, that led to a city made out of “*private added parcelling*”. (Fig.8 et fig.9)

Ecochard will target for the first time poor population, by conceiving an urban and architectural solution for Mass housing, through massive projects « *Habitat pour le plus grand nombre* », developing the 8x8 grid as an adapted architectural typology within a rationalized urban design, through the concept of neighborhood unit conceived as self sufficient and self contained urban entity with facilities (Chaouni, Aziza, (2011: 62) . (fig.10)

Ecochard methodology was based on studying closely the social and physical characteristics of the local context, along with cartographical and statistical analysis considering also the evolution of population. Ecochard considered then the shantytowns as a study model to think an adapted dwelling, and also as an intermediate phase for migrant population thought in an evolutive perspective: what was supposed to adapt to the population was also designed as to adapt and bring this population progressively to what was considered to be a more urban lifestyle, individual plots were to be progressively transformed into vertical and collective housing. (fig.9)

Ecochard’s approach to urbanism, by “*departing from the pre-war colonial era*”, was the groundbase to a more depoliticized urban design (Chaouni Aziza, 2011:62), the technocrate’s concerns prevailed the original colonial considerations (Rabinow Paul, 1995), concentrating therefore to raising a secure and functional city rather than serving a political agenda, which was transcribed in the work of the architects and urbanists operating in Morocco within the GAMMA group<sup>7</sup>.

En 1952, The AtBAT team designs the collective housing at “*Carrières Centrales*” operation, by designing two types of buildings according to the degree of urbanization of the Moroccan migrants, their religion, and their previous lifestyle , which Ecochard called “*secular*” habits , incorporating also evolutive typologies as to bring them gradually to an urban lifestyle. but later

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<sup>7</sup> GAMMA GROUP, “group of Moroccan modern architects “ lead by Ecochard at the time, was an official branch of CIAM in Morocco, and took part to most of the CIAM congress, particularly the X to the in which the Moroccan Mass housing experience was presented as an innovative approach to an adapted housing . for further information, see Chaouni, Aziza, (2011).

Moroccan representatives considered these adapted typologies as a new colonialism claiming their right to vertical modern building “HLM” “as the rest of the population”. (fig.11 et fig.12) Standing in face to the pressure of the speculation brought by the migration phenomenon and the city growth, Ecochard faced a hostile opposition to his masterplan leading to his departure as well as Eirik Labonne in 1953. Meanwhile, many changes regarding the location of residential neighborhoods intended for the poor took place, and most of the massive dwelling operations were pushed to the outskirts of the city because of land speculators pressures, reinforcing the effects of the zoning.

### **The post-colonial Casablanca:**

After independence, Moroccan middle and upper class invested the city center and the neighborhood left by European population, while the Moroccan administration continued to produce large operations of low cost housing, by relocating and rehousing shantytowns à *Derb Jdid*, *Hay Hassani*, par *Azagury*, based on an amended version of Ecochard’s grid 8x8 “*Trame Sanitaire Améliorée*”, these operation were inhabited by mixed population, (J.L Cohen and M.Eleb, 1998, 354), and extended to many operations inside Casablanca as well as seven other moroccan cities (Chaouni, Aziza, (2011), with a total of 9000 houses, and a first operation at *Derb Jdid* in Casablanca by *Elie Azagury*.

Although these urban projects designed to house social categories have improved their living conditions, they have reinforced the spatialization of social segregation within the city. The Ecochard zoning plans, approved in 1952, will remain in effect in Casablanca until 1984.

Nowadays, as the colonial legacy in the city of Casablanca is seen as a shared legacy, mobilizing both associations and administration toward conservative projects.

### **Conclusion: the urban segregation as a sociospatial process:**

The specific case of city of Casablanca under the colonial period assesses the complexity and the multiplicity of the factors involved in the establishing of a socio-economic segregation in the city in the colonial period and further. Shifting to an industrial and trade city, Casablanca faced new challenges leading to a change in the composition of society, in parallel with changing positions towards Moroccan society from Prost to Ecochard and evolved throughout the time, leading to a socio-spatial construction that replaced the traditional mixity by another ruled by production administrative and systems. Thus the creation of the new city generated

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

Beyond a “colonial apartheid”, French urbanism in Morocco:  
From social separation to spatial segregation  
*Najoua Beqqal, Fatima Zohra Saaid, Omrane Mohammed Chaoui*

social dynamics that led to a new spacialization, along with new trajectories taking place inside the social groups; the belonging to a religion, a race, or a nation, that existed before the protectorate but not sharply expressed spatially nor separated hermetically, became therefore intertwined by another cleavage: that of the differentiation between poor and rich. ( fig.13)

the current effects of these interventions cannot be attributed solely to policies carried out nor isolated from its context, as they are also linked to multiple factors, in particular the ideology of the French protectorate, the pre-existing structure of society, which played an important role in the Moroccan context. Thus, the new urban landscape became as well a product of this change as well as a factor of his fixation (Escallier Robert, 1981:151).

while seeking both a control and a modernization of the society, colonial policies have drifted from a spatial separation -motivated by an aspiration to a peaceful protectorate by respecting local cultures-, to a spatial socio-economic segregation based on the economic level of all categories of the population, that continued to be a pattern for urban management.

Hence, reductive reading of segregation as a rapport colonising/colonised veils the complexity of the process of segregation in colonized countries and its process from a separation between nationalities to a segregation of the urban society based on socioeconomic spatiality (Chouiki Mustapha, 1997: 86) . Seen from this perspective, the concept of Apartheid as a shade of colonialism ruling, seems inaccurate in the case of French protectorate in Morocco, as urban policies of the protectorate, did not carry a static vision.

while we can state that the colonial policies indeed generated / initiated a socio-spatial segregation that continues to characterize most of Moroccan cities after independence. the complex result of the effects of the colonial policies in Morocco in the current cities' landscape should be considered as a dynamic process evolving both the spatial and the social structure, considering the multiple factors related to the very specificity of the local society. In order to avoid the determinism of a static vision of these policies.

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# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

Beyond a “colonial apartheid”, French urbanism in Morocco:  
From social separation to spatial segregation  
Najoua Beqqal, Fatima Zohra Saaid, Omrane Mohammed Chaoui

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# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

Beyond a “colonial apartheid”, French urbanism in Morocco:  
From social separation to spatial segregation  
*Najoua Beqqal, Fatima Zohra Saaid, Omrane Mohammed Chaoui*

## Illustrations

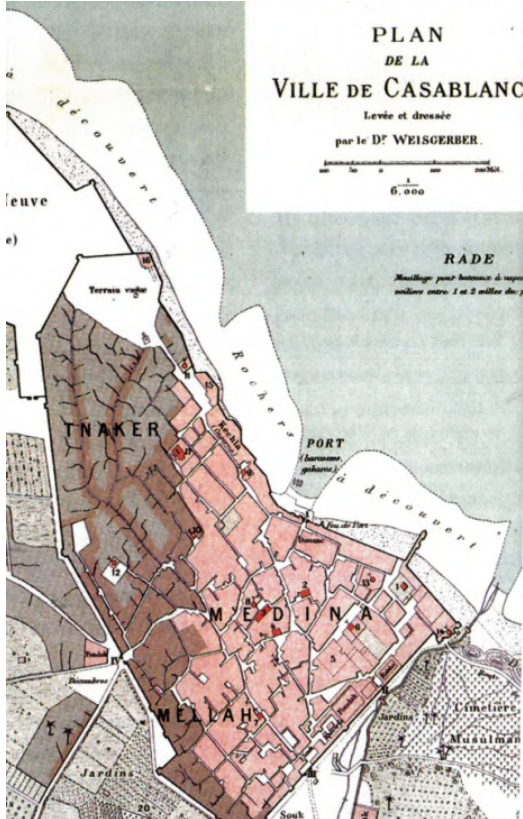


Fig.1. The Medina of Casablanca, (Cohen Jean-Louis & Monique ELEB, (1998)

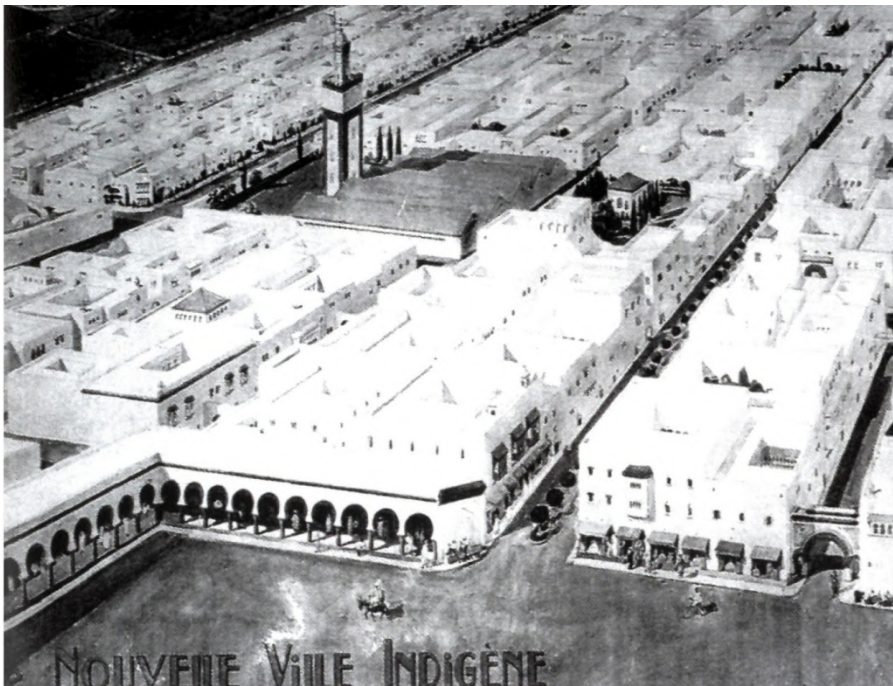


Fig.2. Perspective of the new medina (new indigenous City) (Cohen, Jean-Louis & Monique ELEB, (1998)



# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

Beyond a “colonial apartheid”, French urbanism in Morocco:  
From social separation to spatial segregation  
*Najoua Beqqal, Fatima Zohra Saaid, Omrane Mohammed Chaoui*

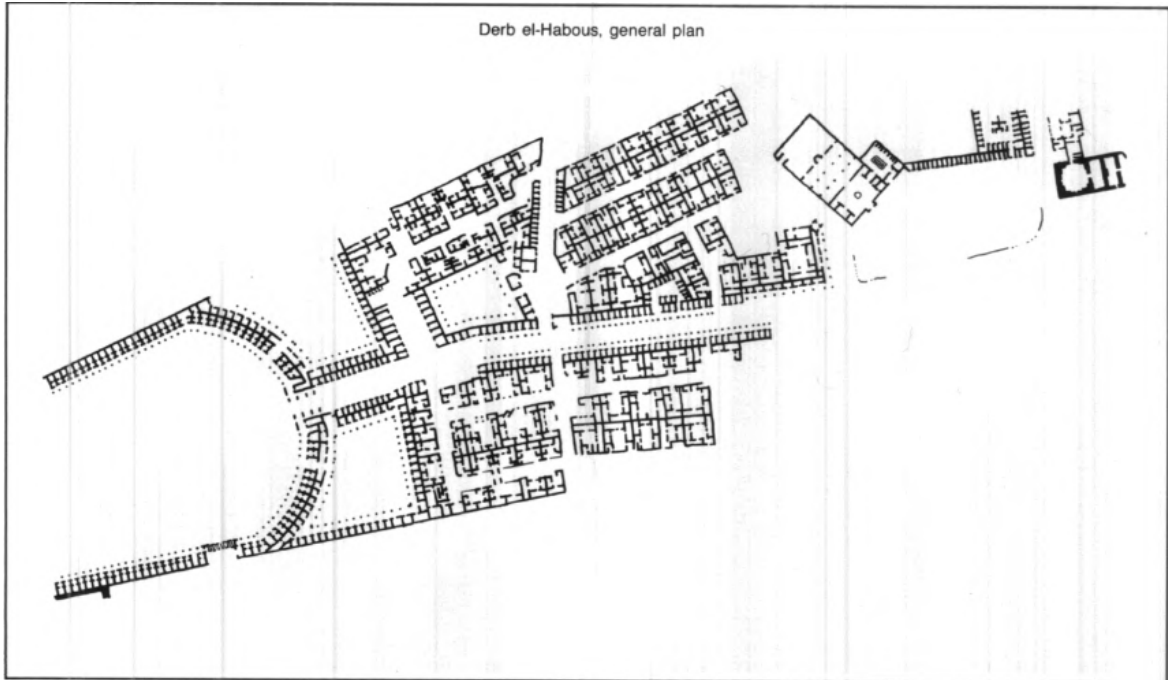


Fig.3. masterplan of the new medina (new indigenous City) (Arcuri, Gaetano and Anna Pasquali, 1985)

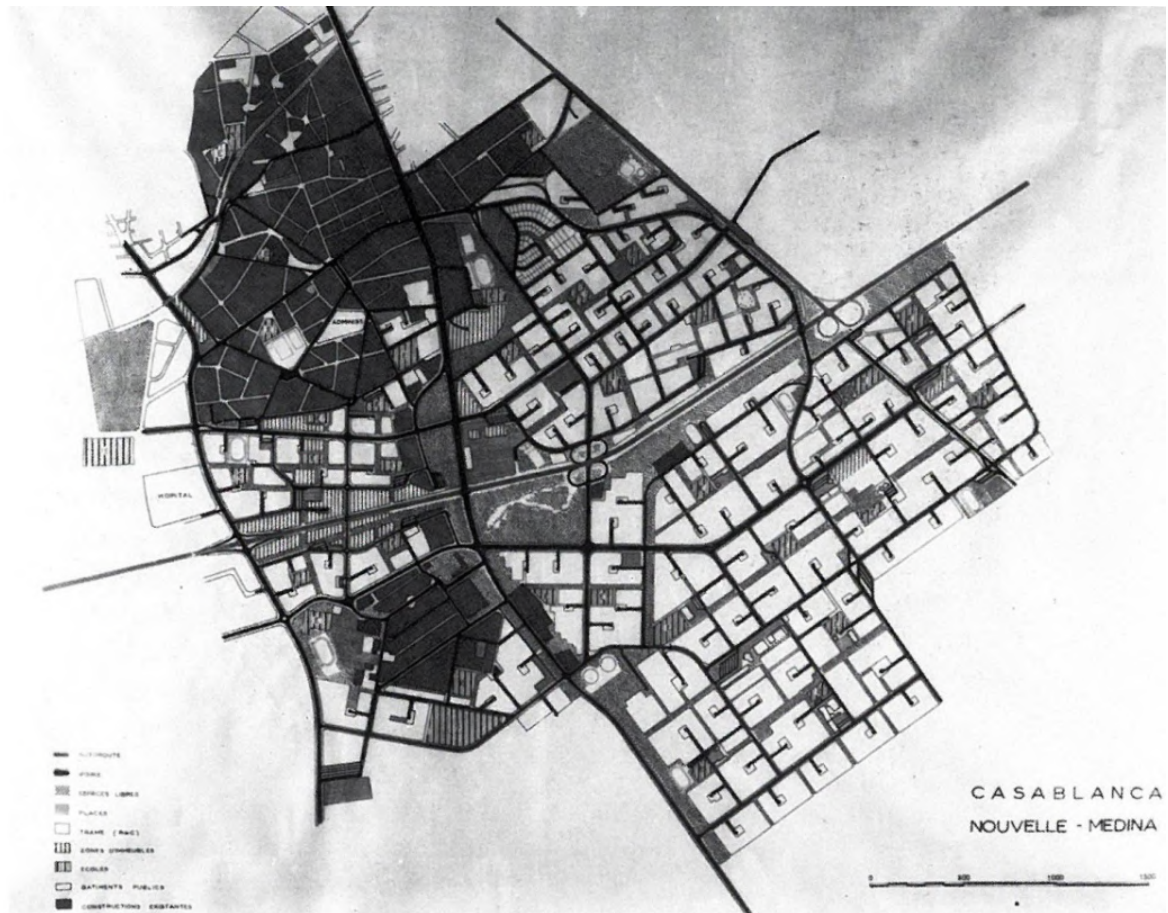


Fig.4. Extension of the new medina, 1954 (Cohen, Jean-Louis & Monique ELEB, (1998)



# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

Beyond a “colonial apartheid”, French urbanism in Morocco:  
From social separation to spatial segregation  
*Najoua Beqqal, Fatima Zohra Saaid, Omrane Mohammed Chaoui*

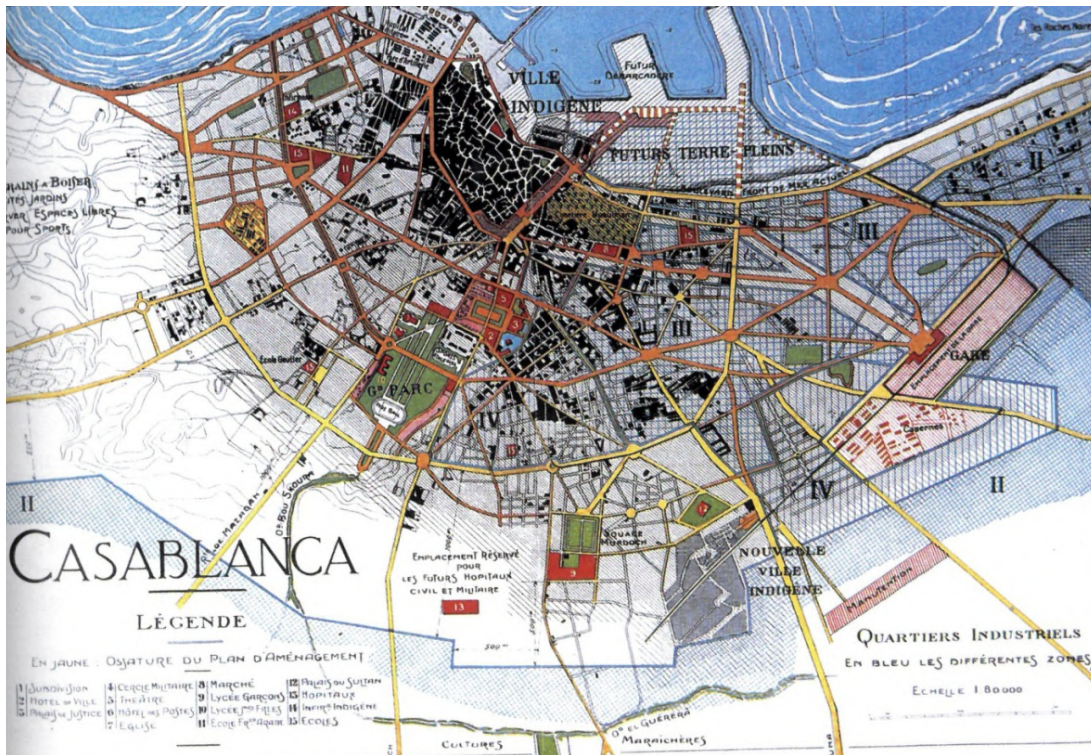


Fig.5. Henri Prost's Masterplan for Casablanca , 1917 (J.L Cohen and M.Eleb,1998)



Fig.6.The Place de France and the Mellah, after destruction of the medina's Wall  
Cohen, Jean-Louis & Monique ELEB, (1998)



# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

Beyond a “colonial apartheid”, French urbanism in Morocco:

From social separation to spatial segregation

*Najoua Beqqal, Fatima Zohra Saaid, Omrane Mohammed Chaoui*

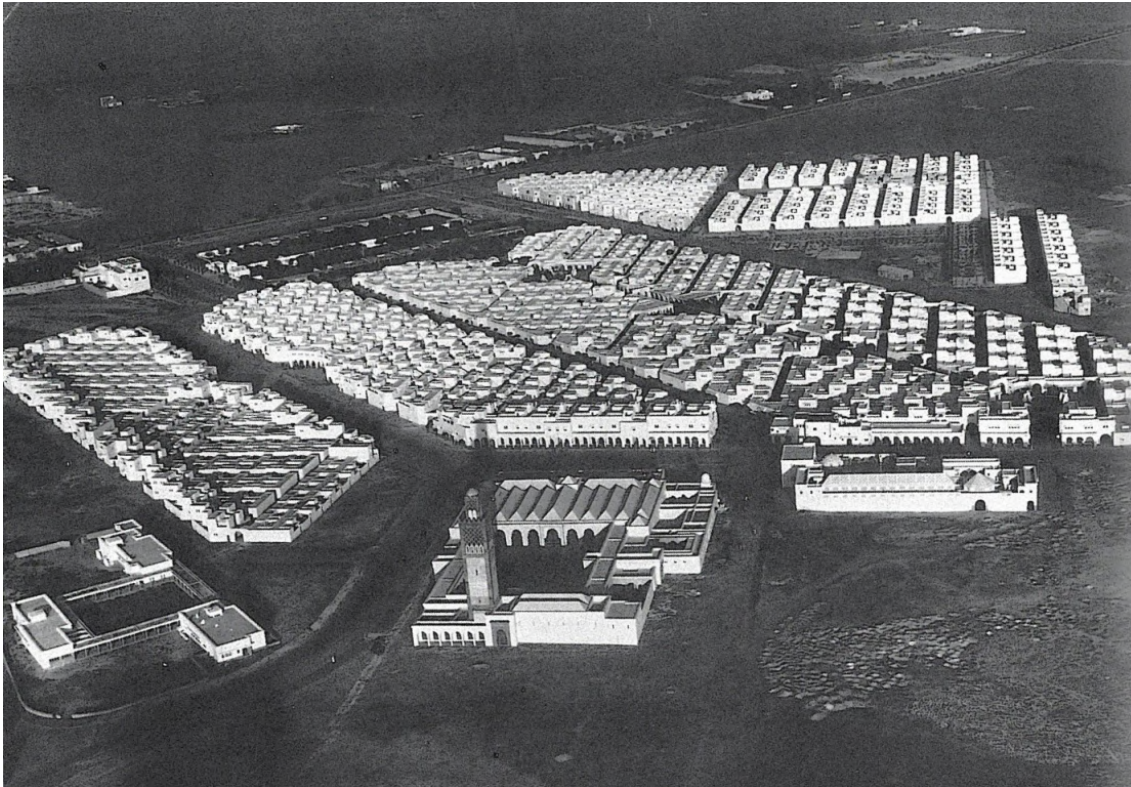


Fig.7. Ain Chok city , 1952 (J.L Cohen and M.Eleb,1998)

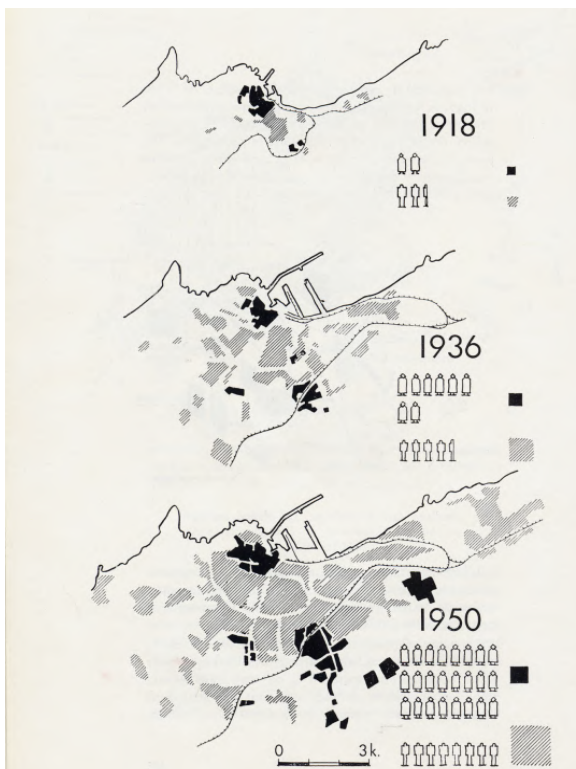


Fig.8. Michel Ecochard, Evolution of population of Casablanca (Moroccan in black, European in hatched), (Ecochard,1955)



# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

Beyond a “colonial apartheid”, French urbanism in Morocco:

From social separation to spatial segregation

*Najoua Beqqal, Fatima Zohra Saaid, Omrane Mohammed Chaoui*

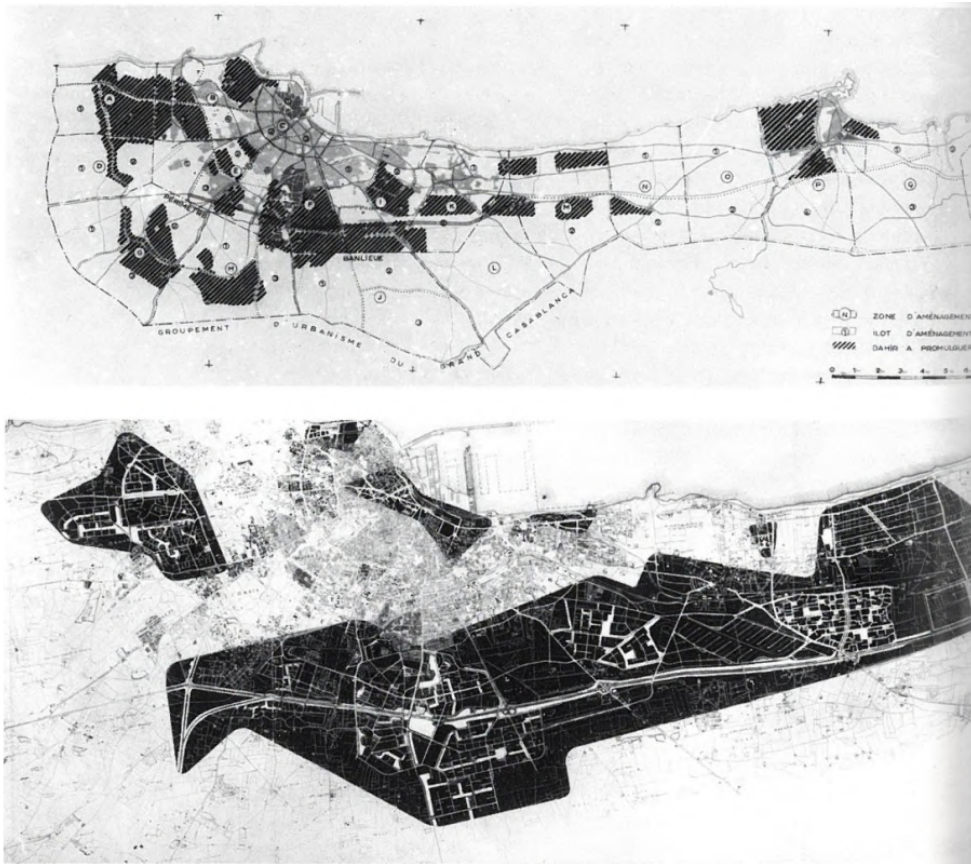


Fig.9. Michel Ecochard’s Masterplan for Casablanca , showing the zoning (up) and the extensions (down) (Ecochard,1955)

Michel Écochard, principe d’organisation d’un quartier marocain, 1949, « Urbanisme et construction pour le plus grand nombre », 1950.

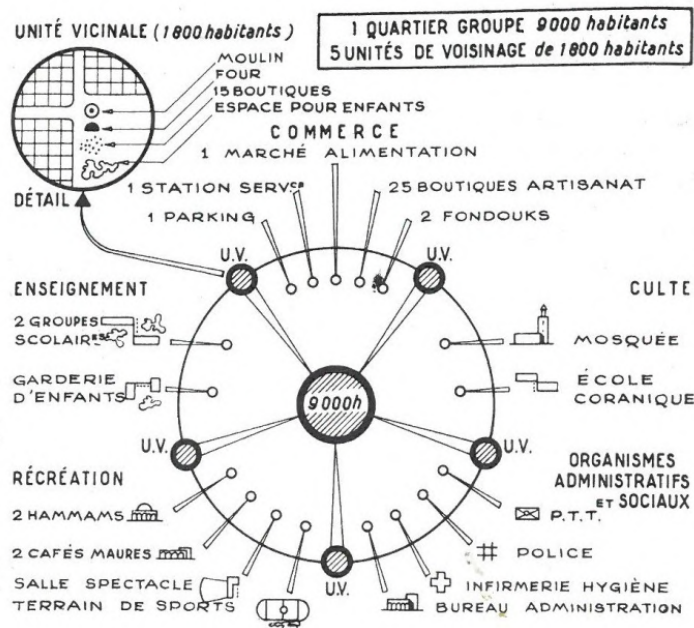


Fig.10. Michel, Ecochard, principles of organization of a Moroccan neighborhood unit, 1950 (J.L. Cohen and M.Eleb,1998)

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

Beyond a “colonial apartheid”, French urbanism in Morocco:

From social separation to spatial segregation

*Najoua Beqqal, Fatima Zohra Saaid, Omrane Mohammed Chaoui*

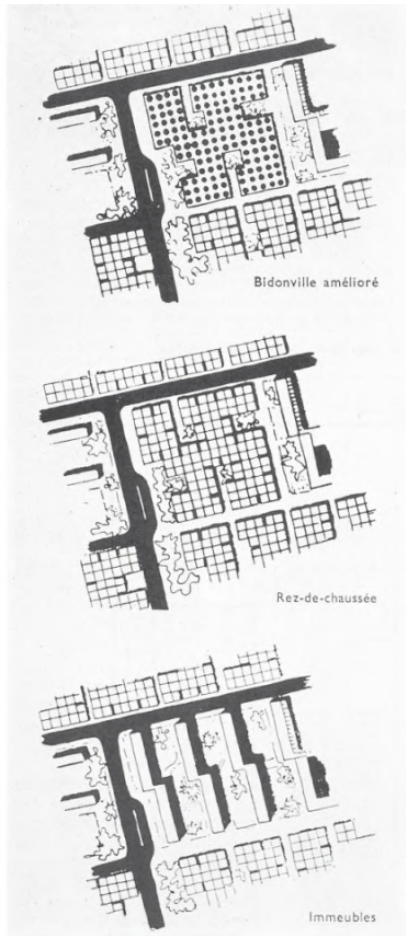


Fig.11. Michel Ecochard, expected evolution of Moroccan Housing, 1950 (J.L Cohen and M.Eleb,1998)

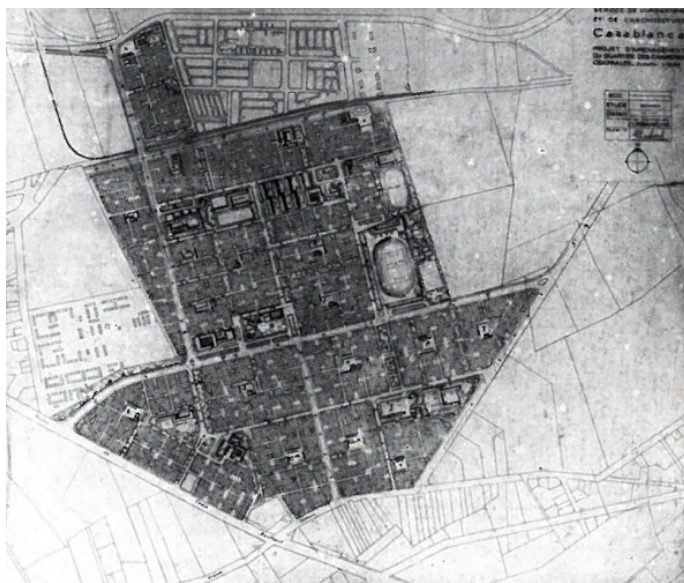


Fig.12. Carrières Centrales neighborhood, 1951-1955, (J.L Cohen and M.Eleb,1998)



# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

Beyond a “colonial apartheid”, French urbanism in Morocco:

From social separation to spatial segregation

*Najoua Beqqal, Fatima Zohra Saaid, Omrane Mohammed Chaoui*

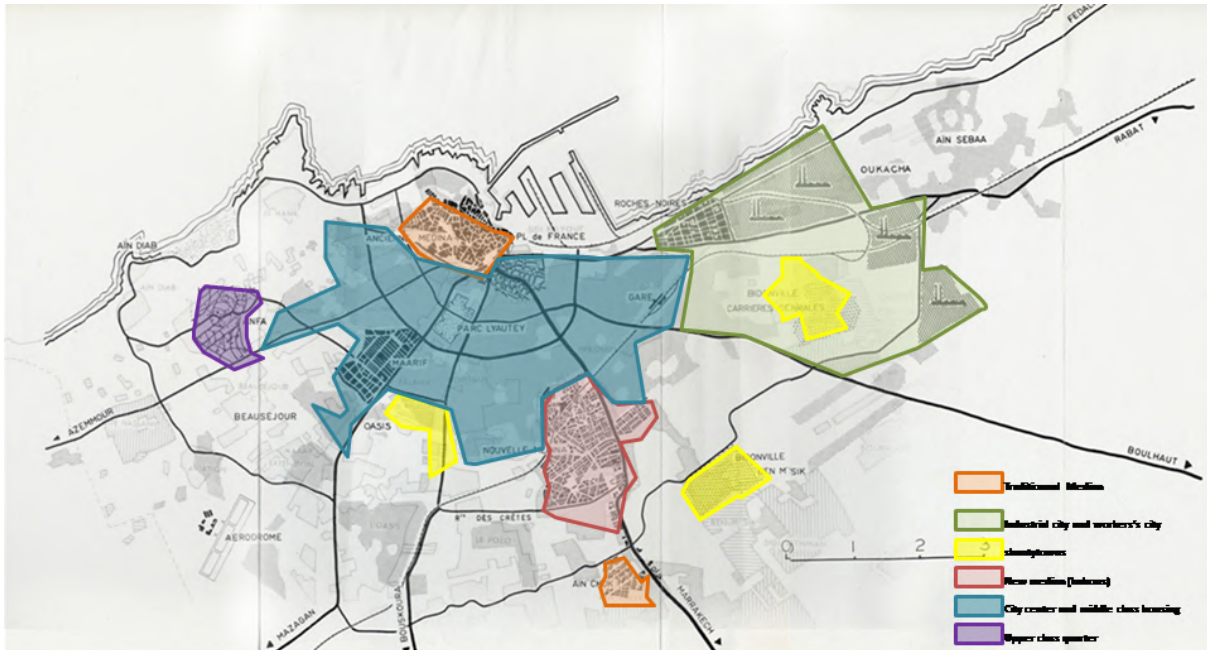


Fig.13. Sociospatial evolution of Casablanca based on Ecochard's Masterplan. the Authors.

## **Atlas “the world from the End”: how to map the “sertão”?**

Natália de Sousa Moura <sup>1</sup>

### **Abstract**

The world as we know it is based on geopolitical violence that produces the Other by classifying, marking and exercising control over their bodies, colonizing their ways of knowing, feeling, thinking and being. This work intends to put in dispute the field of projective and cartographic making through a redirection of looks and narratives, as a way to think of other ways of inhabiting and constructing city, many of these already existent, however invisibles and historically disregarded in maps, plans and projects. The ends of the world, a term that permeates the imaginary of some regions of Brazil, refers to places far away, unknown, wild, backward, such as the "sertões", as well as all places of some marginalized, are populated with stereotypes but never with watchful eyes. It is in pursuit of this attention and establishing a relationship with this dwelling between the interstices, I approach the border idea developed by the chicana writer Glória Anzaldúa as a way of decolonizing theories and practices. Navigating the boundary space between worlds, identities and forms of knowledge, create a close look and listening to a fictional trajectory from Lisieux, district of Santa Quitéria, in the northwestern sertão of Ceará, Brazil. Space between deserts, roads and villages, simultaneously rural and urban. To think of these other places is to disturb the order of the silences. The writer Conceição Evaristo, for example, narrates from her experiences as a black woman, born in the periphery, calling them to write(experiences), tensing and breaking with this predetermined place of an invisible and veiled presence of certain bodies racialized, dissidents, blacks, sertanejos, immigrants in the city. Literary fiction appears as a way to combat and confront fictions and official discourses, such as those of the state and large corporations. So how to map and narrate the End? How do you inhabit your understanding as a place in the world without reproducing pre-established Occidental patterns and without trying to fit into what is already known as classification systems? It is in the attempt to find and open paths that I give birth to the development of work as Atlas, based on the nonlinear method of whirl, where the incompleteness occurred by the action of what arrives and disorders things of place, opens to new meanings and possibilities of narratives and performances, reworking the memories of our colonial archives, as opposed to the official documents and writings.

**Keywords:** memories; assembly; sertão; embodied practice;

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# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

Atlas "the world from the End":  
how to map the "sertão"?  
Natália de Sousa Moura

## End!

*Who am I, a poor chicanita from the end of the world, to think I could write?*, asks Gloria Anzaldúa (2000: 230). It is from there that I introduce them to the location from which this work departs. It is worth to say that here I develop a writing in rips, that is, fragmented, spaced, delayed, without distinction between sky and ground, as in the *sertão*. Some words will come in Portuguese for lack of a translation that contemplates them, but I think it somehow also finds us and reminds us that "we" do not understand each other in a simple or non-problematic way (Taylor, 2013: 44).

The main questions that permeated the desire to think this work revolves around the search for an understanding of knowledge incorporated as an epistemological practice, defended by Diana Taylor (2013), that will serve us for excavation and rewriting of a past, updated at all times in the present, with a view to fable and to imagine other possible futures. Its space of projection occurs here from the memories and experiences of bodies - and its impossible dissociation of the territories and places that inhabit the dominant imaginary: world ends -, historically, neglected in the production of knowledge, knowledge and spaces that presupposes the endorsement of institutions holding the power of say and possession.

World ends are places known in the imagination because they are wild, distant - that is, peripheral, not central - behind, out of the law, fearful but also, therefore, I consider them brave. Its inhabitants are often assigned the same characteristics. How, then, to rework other ways of perceiving and seeing the world, considering the memories of bodies, historically neglected in scripts, archives, and official documents? I speak, therefore, of the ends of the world. I believe that for this it is necessary to write from a localized voice, in an attempt to deny the recurrent trait of the Western, universal and neutral being of the academy. We have to locate ourselves, know where we came from - *if we know where we came from, we know where we are going*



# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

Atlas “the world from the End”:  
how to map the “sertão”?  
Natália de Sousa Moura

(Pedrina, 2018)<sup>2</sup>, where we live, what we eat and wear, who makes our clothes and food, who builds our buildings, who gets up at 4am to work and move the country. It is therefore a question of understanding the relations of power and privilege in our territories. And here I want to exercise speech and listen from the end, understanding the end also as the need to destroy the world as we know it.

## *Borderlands!*

It is in pursuit of this attention and establishing a relationship with a dwelling in interstices, I approach the border idea developed by the chicana writer Glória Anzaldúa (2016), as a way of decolonizing theories and practices. Navigating the boundary space between worlds, identities and forms of knowledge, create a close look and listening to a fictional trajectory from Lisieux, district of Santa Quitéria, in the northwestern sertao of Ceará, Brazil (368005.50 E, 9557494.04 S). Space between deserts, roads and villages, simultaneously rural and urban. There are no architects there, although there are gestures and architectural acts.

The border here is, then, a position in front of what is at stake within the disputes that constitute a territory. Reflect on the silences in the speeches that are materialized in the spaces. I think of the place-*sertão* as an example of this inter-place and, therefore, I also question what is in motion today, trying to break with the dichotomies present as: urban / rural, natural / edified, archive / repertoire. This is a study that is located in and from the border (including my implication in it), denying the existence of a unique history, voice and doing. It is dedicated to bodies exposed to margins, in a continuous and collective desire to broaden them. An impulse

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<sup>2</sup> Pedrina de Lourdes Santos (Captain Pedrina) is a researcher with great knowledge in singing and orality in Afro-Brazilian African languages, in Afro-Brazilian history and culture, especially with regard to the ritual arts of the *Reinado de Nossa Senhora do Rosário*, and as a black thinker on ethnic-racial relations. Captain of the Mozambique Guard of *Nossa Senhora das Mercês de Oliveira* and member of the *Casa de Nação Angola*. She was a curator of the UFMG Winter Festival in 2013 and teacher in the course Transversal Training in Traditional Knowledge at this University.

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

Atlas "the world from the End":  
how to map the "sertão"?  
Natália de Sousa Moura

of placement, of a political doing inherent to any action that implies to propose something. It is also an exercise in lowering the guard to a knowledge and a listening that were not always present in the speeches and, mainly, to allow itself to inhabit a new field of the project making within the architecture and the urbanism, from a critical look on this one.

## *Rips!*

To think from these other places, means to disturb the order of silences, to intervene in bodies and in times. Open rips within a margin existence, and, therefore, extend them. The Brazilian writer Conceição Evaristo, for example, recounts from her experiences as a black woman, born in the periphery, calling them to write(experiences), tensioning and breaking with this predetermined place of an invisible and veiled presence of certain bodies - racialized, dissident, black, *sertanejos*<sup>3</sup>, immigrants bodies - in public spaces. Embedded verbal and nonverbal practices appear as a way to combat and confront official fictions and discourses, such as those of the state, church, and large corporations. Transgress and shave the landscape of the world in its hegemonic sense.

I develop a writing in rips, where I refer to the performative act of a popular saying in Ceará, "rips!", used, that is, when one wants to say something that should not, which is inappropriate, so that it was not authorized - for ignorance or "not fit", serves, in any case, the maintenance of the hierarchical logic - to be put in the official documents. The performative action is: to rip (metaphorically) the role of the "official history" and to tell, narrate orally, what actually happened. The "really" is here put as an exaggeration of the action of the encounter between two or more persons, generally, where there is an identification and relation already established between them and, should not be read like the imposition of an absolute truth, but as a way of

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<sup>3</sup> *Sertanejo* is who lives in the *sertões*.

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

Atlas "the world from the End":  
how to map the "sertão"?  
Natália de Sousa Moura

understanding the performance act itself also as a possibility of transmission and transference of a knowledge or memory.

At this, I present you Lisieux, the *sertão* of Ceará, land of the endless, middle of nowhere. Backland.

## Lisieux

Situate them: place of origin of my family, frequented since I was born, grant me - I ask here leave those before and those who live there today above or below ground - knowledge about not only in the possibility of research and reading, but also of body, to be from there, roots, reverberating also in the here, to inhabit the city.

Lisieux, for those who do not know, is also the name of a city in the north of France, there for the bands of the other sea. City where Saint Thérèse lived and died, as well as being the patroness of the Church of Lisieux, Ceará - inaugurated in December 1960, from land donated by a farmer. In fact, that's where his name comes from, revealing the power of the Church in the determination of buildings and settlements, remnants of the ways of colonization of the interior and their appearance in official histories. Therefore, in order to understand how the formation of these small localities takes place, it is essential to locate the Church in its place of power, as well as the great landowners.

It is known that the process of occupation and colonization of land in Brazil occurred along with the strong whitening of its population, manifested not only in the colors of the skins, but from the "erasure" of ways of living, customs and existences. The myth of racial democracy and miscegenation permeates our minds and territories, presenting itself as an anti-black and anti-indigenous institution. In Ceará this process was no different and it is brutal to this day.

Lisieux has a mostly brown population, with traces of black, white and indigenous mixture – and here we have the presence, besides the true owners of the lands, both of those who came directly from Africa to the Americas, and those who presented Moorish-Iberians, remnants of

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

Atlas “the world from the End”:  
how to map the “sertão”?  
Natália de Sousa Moura

a previous domination of the region of the Iberian Peninsula, Portugal and Spain, by Muslim Arabs –, showing the marks of this project.

The place of ambiguity which I locate Lisieux, where its surfaces have layers that carry multiplicities of sides, dust of here and here, being of the *sertão* at the same time as being of the city, consequently implies in inhabiting the contradiction, locating the speech from a limiting place: ruins, in a search to collapse standards and norms established by the current order. To have in its spatial configurations urban and rural influences, to be in an interstitial state, where one is not a thing or another, but if it is at the same time everything, complicating the fields of intervention in it, or as Riobaldo<sup>4</sup> would say, “everything is and is not is”. Analogously, temporalities blend and confuse each other, intensified by globalization that reaches these environments, often in a brutal way, causing imbalances to their daily lives, almost always, unaware of their arrival, reverberating, however, in the emergence of new ways of dwelling, existing and doing. Or as the writer Gloria Anzaldúa presents us in her poem A Struggle of Borders, about this ambiguous state:

*“Because I, a mestiza,  
continually walk out of one culture  
and into another,  
because I am in all cultures at the same time,  
alma entre dos mundos, tres, cuatro,  
me zumba la cabeza con lo contradictorio.  
Estoy norteada por todas las voces que me hablan simultaneamente.”*  
(Anzaldúa, 2016: 134)

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<sup>4</sup> Riobaldo is a former *jagunço*, a character in the novel *Grande Sertão: veredas*, of the Brazilian writer Guimarães Rosa, known in English version as *The Devil to pay in the backlands*.



# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

Atlas “the world from the End”:  
how to map the “sertão”?  
Natália de Sousa Moura



Fig.1. Church Saint Thésère of Lisieux, Ceará in 1960. Source: collection of the Lisieux Cultural Center.



Fig.2. The Araújo Family, portraying the presence of political, economic, religious and military power in the backland. Source: collection of the Lisieux Cultural Center.

## *The postcolonial does not exist!*

Modernity, from the globalization and development of information and communication technologies, to act in such territories other, whether border or not, establish an apparent shortening of distance - and when they say it reads something like "show them world, to bring civilization where it does not have", as well as when they arrived here, in the Americas, in the sixteenth century, beginning the colonial project, which to some extent continues until today - provoking a contact based on appropriations and impositions of cultures and modes of existence. Therefore, it is important to point out which mechanisms have contributed and contribute to the continuity of this process.

This movement becomes more complex as the migration factor is added: the new arrives in Lisieux also through who has left and, although it brings news of the world there, it is necessary to question: who is the world there? Who does it belong to? What places do their bodies occupy there? And when one stays in that same habitat, making a home among paths, but moves over it, in transit over a *world end*, where one can hardly distinguish the sky from the ground, which is continually taken and transformed?

How, then, to speak of who is left? How to talk about what's there? What repercussions of this in the new configurations of rurality that are created? Is it backwoods yet? How to call? Is it



rural or urban? According to Grossi and Silva (2002), the new rural is marked by the presence of a set of non-agricultural activities, related to housing, leisure, industrial activities and service rendering, avoiding the idea of a field previously associated only with agriculture and livestock. The construction of this new imaginary, the introduction of elements derived from global flows, the consumption of symbolic and material goods and typically urban cultural practices, sometimes leading to processes of restructuring of elements of local cultures based on the incorporation of new values, habits and techniques. And from this assimilation, perceptions of identity are reverberated and how we relate to it. As an example, I point here the facebook page "Lisieux mil grau", administered by young local people, where they take over the languages used by the internet to talk about what identifies them, having as their "ghetto" scenario, how they mentioned in one of the posts.



Fig.3. Facebook page “Lisieux mil grau”, administered by young local people.

## Another way to be in the world

As we have seen with Taylor (2013), the control and transmission of information and knowledge also starts from the language, which dominates the language of justice, bureaucracy, science, money, rhetoric, colonial discourse silent ones - and their knowledge - not to hold. Therefore, to think the language as conformation and delimitation of spaces, also means to consider who inhabits them. It may be a barrier, as in the previous example, but also identification, memory, rite of passage, resistances.

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

Atlas “the world from the End”:  
how to map the “sertão”?  
Natália de Sousa Moura

For example, the way of speaking – and there are several modes, depending on which *sertão* is spoken – of the people there: there is a Portuguese with characteristics of his own, both his intonation and speech time, as well as his way of saying and writing – who writes, writes as one understands. When I refer to these places, some words come to me as a characteristic of these – *engripada*, *alfilhada*, *ridimuim*, *arrudiar*, *barrer* – and intend to look at possible marks of a pre-colonial and colonial past (there is no post!), in a constant attempt to understand the history of these territories and what they came from.

There too, from a very young age one learns to be silent, restrained, in his. It is taught as a way of being. The word has weight, is money, who holds it has "value" - great farmers, politicians, intellectuals, the Church. In other words, from the spoken and written language we can also identify ways of living in the backland, and observing micro-violence often posed and accepted as natural, as a custom or tradition.

However, while writing = memory / knowledge is central to Western epistemology (TAYLOR, 2013), the tradition of spoken language, orality, is one of the main means by which unofficial knowledge is passed in the backlands. It is the basis of its epistemology, secular inheritance – I emphasize that I consider it an inheritance, fundamentally, indigenous and black, with touches of the medieval Moorish-Arab culture. That is, it is an act of transference, a transmission of knowledge in territories historically displaced from the hegemonic centers of production – and it should not be forgotten that I speak here of Ceará / Northeast, often treated as a backyard, exporter of food for the regions with strong presence of products for export in the colonial period. Faced with this, I try to trace how orality in this region manifests itself in bodies and spaces and places itself in a place of transposition - of barriers, of orders and of what is expected.

## Swirl

How, then, to map and narrate the End? How can we inhabit its understanding as a place in the world without, however, reproducing pre-established Western and distant patterns and without attempting to fit into what is already known as classification systems? It is in an attempt to find





# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

Atlas “the world from the End”:  
how to map the “sertão”?  
Natália de Sousa Moura

## Cosmology of the sertão

The elaboration of this cartography was also based on other tapping, during the visitation process, by the speech of some local residents where other knowledge is evidenced, as was the case of Dona Raimunda Madeira, black woman, hatmaker and one of the the best-known community prayers. Or the rural worker Deca, storyteller of oral tradition. He is said to have learned to tell by listening to his father and other gentlemen telling stories on the bean threshing wheels. His knowledge of planting and collecting corn takes place from the phases of the moon, reworking and disputing the official scientific repertoire through another science, a *sertaneja* world-view.



Fig.6. Atlas "cosmovision" prepared by the author. Source: personal archive.

It was observed that this custom of storytelling and, consequently, the action of building a collective memory, also came from living in the flour houses of the region, where it was common to turn the night and many stories were being told around the cassava, peeling it, similar to what happens in the threshes cited by Deca. Therefore, this was one of the main practices that encouraged the transmission of knowledge, memories and constructions of narratives and places.

## Remapping



# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

Atlas “the world from the End”:  
how to map the “sertão”?  
Natália de Sousa Moura

Considering that in territories with vast empty expanses, such as the *sertão* and the desert, the sectors of orientation are presented as physical geographic features, such as river beds, sand dunes, mountain ranges, isolated trees in the landscape, rivers flow etc. In the case of Lisieux, one has the *Serra do Pajé* as orienting element of the landscape and directions. I organize a cartography and other epistemology to present it, understanding it from its relation with the nature that surrounds it, next to the elements that are signs of its colonization, as the Churches and the farms.

What is in the middle, the paths in between places also of interest. The streams beneath the *oiticicas*<sup>5</sup>, the football fields and road cemeteries, the abandoned houses and schools, the crossroads, reflect the reality of the necessary transits and displacements. To imagine that all this exists on a map that represents it as nothing and emptiness is a bit bleak, but that tells of our feelings and inability to see. To be there in those spaces was to understand that all maps are random and all scales are wrong and that one does not measure existences from a frame of reference imposed to be neutral and universal.

It was intended to put side-by-side the issues addressed here, with the goal of updating other repertoires, that this work is born as an inventory. It is itself an atlas, a desire to reconstruct the idea of archive, aiming to remap the stories and memories - which are also in the bodies, from the compilation of contents attributed to interstitial spaces characterized in the new urban sertões, a set of images that show their structures and show the relationships between them, reestablishing new relations in the very process of formation of the (s) knowledge (s) defended here. Be it from the map cartography made or by what reverberates of oral tradition and experience of / in the bodies. The archive and the repertoire talking.

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<sup>5</sup> *Licania rigida*, the oiticica, is a species of plant in the *Chrysobalanaceae* family. It is endemic to Brazil and Puerto Rico. The Oiticica grows deep in floods of rivers and streams, forming long, narrow avenues to the edge of ravines or floodplains staining the dark-green color of its large and dense foliage.



# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

Atlas “the world from the End”:  
how to map the “sertão”?  
Natália de Sousa Moura

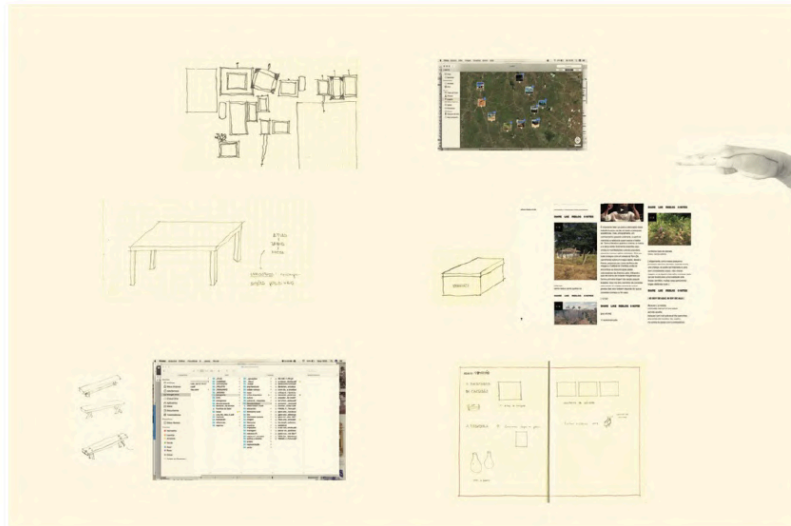


Fig. 6 e 7. Assemblies made by the author. Source: personal archive.

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## Rifts in Borders: From Postimperial to Postcolonial imaginaries

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### Abstract

Border studies have paid much attention to borders and mobility, conceptualizing borderlines and the power politics that manipulates bordering and border crossing. The work of David Newman, Gloria Anzaldúa, and Henk van Houtum has sketched useful ways to conceptualize borders and analyze the processes of border making. This paper investigates borders and mobility in Raja Shehadeh's *A Rift in Time: Travels with my Ottoman Uncle* (2010) and Mohsin Hamid's more recent novel, *Exit West* (2017). Shehadeh's localized representation of a postimperial Mediterranean geopolitics is countered by Hamid's more globalized context of postcolonial worlds. With a nostalgic political impulse, Shehadeh, a Palestinian writer, recounts the travels of his Ottoman uncle through the Great Rift Valley, along the Lebanese mountains and the Palestinian Galilee, highlighting the openness of borders under the Ottoman Empire and the greater mobility they seemed to have enjoyed. That mobility is now challenged by the highly bordered space of colonial Palestine, marked by checkpoints and barbed wires. The borderless imperial paradigm of the Ottomans as reimagined by Shehadeh is analyzed in relation to Hamid's representation of the border legacy of Western colonialism. The Pakistani novelist offers an exploration of the migration experience from an unidentified city, moving west to metropolitan centers in Greece, London and California. Mixing real and surreal elements to reconfigure the experience of border-crossing, the novel sheds light on the limits imposed on mobility, featuring borders as sites of opportunities, but more often than not of separation and global displacement.

**Keywords:** Borders, postcolonial, Raja Shehadeh, Mohsin Hamid.

In a world that vehemently promotes globalization and deterritorialisation through modern technologies and cyberspace, endorsing electronic trade, virtual classrooms and interdisciplinary research beyond the confines of the one class, one nation state or one discipline, individuals continue to face more limits on their freedom to move beyond borders. Recently, a growing flow of borders studies has paid attention to borders and mobility,

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

Rifts in Borders: From Postimperial to  
Postcolonial imaginaries  
Samar H. AlJahdali

conceptualizing borderlines and the power politics that determines bordering and border crossing. This paper brings together two different yet timely reflections on borders and mobility: namely Raja Shehadeh's *A Rift in Time: Travels with my Ottoman Uncle* (2010) and Mohsin Hamid's *Exit West* (2017). The two writers share a background of colonial and postcolonial locales, and educational qualifications from Law schools. In their representations of borders, Shehadeh offers a nostalgic return to Ottoman imperial system, whilst Hamid envisions a future of massive migration and universal mobility. The paper argues that both paradigms disrupt western enlightenment debates of universal hospitality and the right to move, highlighting the complexity and universality of bordering.

Theorizing a framework for border studies, David Newman urges scholars to develop reinventions of traditional concepts of borders in the light of contemporary temporal and geopolitical forms, emphasizing the interdisciplinary nature of this venture and the need for multidisciplinary research (Newman, 2003:13). This concern is shared by Emmanuel Brunet-Jailly who has sketched a history of ideas on borders and contributed to the development of a model of border studies, bringing together tools and 'variables' from different disciplines, including geography, history, economy, anthropology, political science, psychology among other social sciences (Brunet-Jailly, 2005: 633). Contributing to a renaissance of border studies, Newman investigates the complex nature of borders as both lines of separation and opportunities of connection (Newman, 2006: 150). He argues that the function of the border is to perpetuate difference and maintain order between 'our' compartment and that of the 'other' (Newman, 2003:15). Highlighting the 'protection function' of the process of bordering, Newman defines borders as 'institutions,' as opposed to simply lines of demarcation, with their internal rules that govern mobility among other forms of border behavior (Newman, 2003: 14). With more focus on the hierarchical division embedded in bordering, Gloria Anzaldua defines the border, its function and who is entitled to make the border. A border, according to Anzaldua, is 'a dividing line, a narrow strip, a long a steep edge,' made 'to define the places that are safe and unsafe, to distinguish us from them' (Anzaldua, 1987: 3). She emphasizes the artificiality of the border, and the power politics underling its production. For her, 'a borderland is a vague and undermined place created by the emotional residue of an unnatural boundary' (Anzaldua, 1987: 3). Ambivalence, unrest, and tension characterize the borderland, while death is always an unwelcome but familiar resident.

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

Rifts in Borders: From Postimperial to  
Postcolonial imaginaries  
Samar H. AlJahdali

In a later study, Newman has revisited '*the lines that continue to separate us,*' shifting focus to border crossing as forms of resistance (Newman, 2006: 3). The very lines designed to maintain the self/other binarism are susceptible to the need for cultural interaction in that liminal space. With particular focus on her experience in the US/Mexico borderland, Gloria Anzaldua has examined the processes of interaction between cultures across the divide. For her, the processes that the border personality usually undergoes contribute to '*the decolonization of the self.*' According to Anzaldua, the hybridity of the mestizo liberates him from the limiting monologism of nationalist affiliations.

While writing her own experience, Anzaldua showcases the relation between border and narrative. Being a poet and fiction writer, Anzaldua powerfully and usefully implements poetry in her book, *Borderlands/ La Frontera: The New Mestiza* (2004), in which Spanish and English verses intervene and interact telling of walks along the barbed wire and describing ocean waves '*gashing a hole under the border fence,*' while another scene features Mexican boys running after a soccer ball, '*entering the US,*' signaling the vulnerability of the border to human and non-human penetration (Anzaldua, 2004: 2). In her poetry, the Mexico/US border is a '*1,950 mile-long open wound,*' '*running down the length of [her] body, staking fence rods in [her] flesh*' (Anzaldua, 2004: 2). Literary writing and story telling have been instrumental as medium of voicing the border and borderland experience. For Newman, they are useful materials to better understand the diverse and intricate perceptions of borders:

'One way to have a deeper understanding of boundary perceptions is to focus on border narratives and the way in which borders are represented through a variety of images, ranging from the real life landscapes and practices, to literature, media, art, maps, stamps, lyrics etc. The notion of difference, of the walls that separate, figure prominently in all of these popular representations' (Newman, 2003: 20).

Sharing this concern for border narratives, Sharon Navarro has explored the interaction of narrative and the identity formation of the border community, arguing that their story telling, testimonies, and life stories are replete with power politics and counter hegemonic discourses (Navarro, 2003: 129-130).

Beyond the physicality of the border, Henk van Houtum investigates its philosophical possibilities. Negotiating meanings of border, Houtum contends that due to their action related conception, borders are verbs that continue to make and/or are made, thus suggesting the verb



'bordering' as a more useful lexicon (Houtum, 2011: 51). In other words, they are constructs, limiting and more often constraining mobility. However, the conception of border has developed interpretations inclusive of connectivity and inclusion beyond what Houtum describes as '*a narcissian centripetal orientation*' of the border (Houtum, 2011: 50). He cites the example of the door as becoming both a border and a passage, promising further connectivity. Houtum further develops his conception of the border as a '*fabricated truth*' or a construction of knowledge, serving the power politics of the territory; whereby '*the practice of border making, of bordering, confirms and maintains a space, a locus, and focus of control*' (Houtum, 2011: 51). Critical of the practice of bordering, Houtum emphasizes the resulting dehumanization of the landscape.

According to Houtum, '*a socially constructed border is a form and manifestation of self-repression. It suppresses the total potential of personal mobility and freedom by constructing a sphere of trust inside and a fear for what is out there, beyond the self-defined border*' (Houtum, 2011: 59). Hence, borders are both protection walls and thresholds; highly connected to the geopolitics of place. Self/other relation helps understand what Houtum refers to as the '*Janus face of the border,*' with one side facing the inside whilst the other watching the unfamiliarity of what lies beyond the border (Houtum, 2011: 58). The unfamiliarity linked to the border experience, with its associated fear, limits, and more often than not, constrains mobility.

While being informed by the theoretical framework of border studies, this paper draws on Donna Landry's argument on the need for postcolonial studies to address the question of comparative imperialisms (Landry, 2015: 127). Emphasizing the assumption that '*not all empires were the same; nor their legacies,*' Landry invites postcolonial researchers to investigate alternative imperial formations to the European colonial model, with particular focus on the issue of bordering (Landry, 2015: 127). The work of the Ottoman traveller, Evliya Celebi (1611-1685), according to Landry, offers a representation of the Ottoman imperial formation, with its *millet* system, as exemplary of a model based on religious tolerance and a powerful symbiosis of multi-ethnic groups, with a high measure of free movement across a vast Ottoman landscape. By bringing together Shehadeh and Hamid, I will use Landry's postimperial paradigm to negotiate border within the contexts of Ottoman imperialism and European colonialism.

# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

Rifts in Borders: From Postimperial to  
Postcolonial imaginaries  
Samar H. AlJahdali

In *A Rift in Time: Travels with my Ottoman Uncle* (2010), Raja Shehadeh inscribes his reenactment of the travels of his great-great Ottoman uncle, Najib Nassar, bringing about the radical change, particularly the limits on mobility imposed by the Israeli settler colonization of Palestine. Najib, a lawyer by education, was the founder of *Al-Karmil*, a weekly newspaper, which voiced out his warnings of European colonial interests in the land; a position that made him travel from 1915 to 1917 to escape arrest by the Ottoman government. Shehadeh follows in the footsteps of his uncle's journey along the Rift Valley, as documented in the latter's memoir. Shehadeh's *A Rift in Time* includes a clear and direct note of the author's purpose: an imaginative restitution of what was once an undivided land. 'My hope is that I'll succeed in imaginatively recreating the region as it existed at the time of the Ottoman Empire, when the land was undivided' (Shehadeh, 2010: 49). Shehadeh's account can be read as a political nostalgic return to the time of Ottoman imperial expansion over a huge area of land. While travelling in the footsteps of his Ottoman uncle through what was known as Greater Syria along the Great Rift Valley, the writer's concern is to reproduce, albeit discursively, the joy of a borderless geography.

For Shehadeh, the reimagining of his great uncle's travels links borderlessness with forms of resistance. This reflective nostalgia of a time when 'the land was undivided' by borders, roadblocks, checkpoints, and barbed wires articulates resistance of the invisibility effected by bordering (Shehadeh, 2010: 49). Borders make other groups and landscapes invisible to viewers across the divide. 'Unlike Najib,' observes Shehadeh, 'I cannot look from this high cliff and see myself beyond the present borders. My field of vision stops at the Golan Heights, at the border between Israel and Syria' (Shehadeh, 2010: 35). Defying what Gary Fields defines as 'enclosure landscapes,' often effected by means of 'cartographical,' 'legal,' and architectural' instruments, Shehadeh, despite a rift in time, re-inscribes a borderless geography in danger of forgetfulness (Fields, 2011: 183). Through this reenactment of Najib's route along the Rift Valley, Shehadeh resists confinement and invisibility by exploring the Rift Valley from geographically dispersed vantage points including Mount Arbel, the Belvoir fortress, the Jordan Valley, and the Biqa' in Lebanon. What remains for Shehadeh from his great uncle's extended walks is the view from Mount Arbel, one of the highest points in the plateau of Galilee, which offers both a way of looking and a position of enunciation into the bordered and inaccessible.

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ARCHITECTURE, CITIES, INFRASTRUCTURES

Rifts in Borders: From Postimperial to  
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Shehadeh's project has not been without failures. There are occasions when his uncle's route became inaccessible and impossible to walk through, requiring constant rerouting. Imagining the route to visit A'yn Anoub, Najib's villiage in the Lebanese mountains, Shehadeh laments: 'I'll first have to travel east to Jordan in order to go north-west to Lebanon. They didn't have to cross any border, while I have to cross three. Before the First World War, when Najib lived in the area, the whole region was under Ottoman rule. The entire stretch of the Rift Valley, from the Taurus Mountains in the north all the way down to the tip of the Hijaz, modern-day Saudi Arabia, was under one regime. Najib might have had other problems to contend with, but they did not include the fragmentation of the land and the tormenting restrictions on movement that plague my life and the lives of most Palestinians, many Arabs, and to a lesser extent Israeli Jews in the Middle East.' (Shehadeh, 2010: 35)

These moments offer both a political commentary on the present confined space and a nostalgic recollection of that borderless land. In contrast to a borderless Ottoman Empire, border making is the legacy of both a European imperial expansion in the region, and the Israeli settler colonialism.

Border making has taken many forms including redefining natural waterways as borders. The River Jordan is a significant point in case. The river has been manipulated by the settlers to function as a border, separating settlers' dominions from native locales. In June 1967, the River Jordan became a political border, further pushing the 1948 lines, and redefining Israel from what later became the occupied territories of the West Bank and Gaza Strip. Standing on which side of the river can now define your identity and political affiliation.

But this was not the case under Ottoman imperialism. 'For the first sixteen years of my life,' laments Shehadeh, 'the River Jordan was not a border' (Shehadeh, 2010: 56). Rather, it was a site of reconnection and celebration:

'It took a number of years to internalize the new geography. The river where we used to celebrate the feast of the Epiphany and had had our picnics had become a lonely border river made inaccessible on either side by mines and barbed wire, a river that could only be glimpsed when there was a bend in the road as we drove along the heavily guarded border that it now marked.' ( Shehadeh, 2010: 61)

What has long been shimmering with the lights of celebration, the smell of food, and the music of dancing crowds has now sank into deep silence and unfamiliar absence. After being

announced a military border, the once lively River Jordan has diminished into a 'lonely' military border. Throughout the book, Shehadeh's description emphasizes the loneliness of the river, which has now been deserted by both settlers and natives.

The River Jordan, however, resists being relegated to a 'lonely' border, and continues to serve as a palimpsest of Palestinian national history. Now an ethnic divide, the River Jordan, marked by its shifting courses, resists a static and fixed route. While inscribing the history of a settler colony, 'the river of the desert,' to use Shehadeh's description, articulates a form of resistance (Shehadeh, 2010: 56). Being both an ethnic border and a form of resistance reveals only one side of a site loaded with contrasts and ambivalence. At this site, notes Shehadeh, incongruent opposites such as fresh and salt water, life and death, come to a striking proximity (Shehadeh, 2010: 56). Unlike the Nile or Euphrates, the River Jordan has resisted being limited to one civilization, indicating its openness to humanity. The ambivalent representation of the River Jordan in the book further complicates the settlers' act of border making as borders often deconstruct the function for which they are constructed.

Shehadeh represents the Rift Valley as a signifier in danger of losing its signified. During the Ottoman Empire, the Rift Valley has long been known for its connectivity of what was known as Greater Syria. However, the dividing legacy of the British Empire and the settler colonial geopolitics has put these meanings to risk. The Valley comes to bear witness to man-made bordering whilst naturally maintaining its connectivity as it 'starts north in Syrian plains, through Lake Qaraoun in Lebanon and down to the Dead Sea and Lake Tiberias' (Shehadeh, 2010: 53). With little hope, Shehadeh expresses hope to 'travel through this valley, imagining it as it had once been, all one unit, undivided by present-day borders' (Shehadeh, 2010: 54). The decline of the Ottoman Empire and the colonization of the land by Britain and then by Israeli settler project have created rifts in time, geography, memory and literary representations between Najib's and Shehadeh's chronotopes.

Not only the Rift Valley, but also the Allenby Bridge has lost its signified meaning. The bridge, built across the River Jordan to connect the lands of Palestine and Jordan, now becomes a highly secured border. While his great-great Ottoman uncle was able to cross the river on horseback without need for permits, Shehadeh expresses his fear at the sight of a long line of vehicles halted along the road.

'During that historic June week the pressures of vehicles and people crossing to the east bank using the already bombed out Allenby Bridge was so heavy that the bridge collapsed and fell

in to the river. Those fleeing had to walk across the crumbling remains that were half buried in the fast-running water. The crushed bridge symbolized the severing of ties between the two banks of the rouge river.’ (Shehadeh, 2010: 60)

Caved in bridges break all possibilities for connectivity and mobility. A river and a bridge, one natural, one man-made, put further limits on Palestinian movement.

Settler colonialism features a mode of bordering uncommon to imperial and colonial paradigms. Under the guise of Western discourses of ecology and nature conservation, some areas in the colony are designated as nature reserves with limited accessibility. Through the historicisation of conservation thoughts and practices in the African context, Jaidev Singh and Henk van Houtum challenges the visionary rhetoric of conservation and reveals the politics that manipulate the enclosure and control of resource rich regions (Singh and Houtum, 2002: 255-257). While exploring the boundary making aspects of conservation in a settler colonial context, Shehadeh’s representation/ reenactment reveals the othering and bordering processes inherent in the emergent geopolitics of conservation. Shehadeh’s plan to walk through Wadi al Bira, following in Najib’s steps has been thwarted by the conversion of the village to a nature reserve with marked walking trails. This representation of Wadi al Bira contributes to our understanding of the environmental geopolitics that relates to border making. In this Palestinian context, the two frameworks of political ecology and settler colonialism have mediated the designation of nature reserves and (b)ordering of Arab localities.

Shehadeh is voluntarily oblivious to what he describes as man-made borders, as his walks sketch ways to reconstitute a lost freedom whilst simultaneously effecting a political commentary on comparative imperialisms. Fanon emphasized the compartmentalizing scheme of colonial worlds and the increasing immobility imposed by these internal borders:

‘A world divided into compartments, a motionless, Manichaeistic world [...] this is the colonial world. The native is being hemmed in; apartheid is simply one form of the division into compartments, of the colonial world. The first thing the native learns is to stay in his place, and not to go beyond certain limits.’ (Fanon, 1967: 40)

Compared to the exclusionist model of European colonialism, according to Najib’s pronounced position, the Ottoman imperial formation presents ‘a multi-ethnic system that never attempted to colonise the land’ (Shehadeh, 2010: 21).



# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

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Mohsin Hamid's *Exit West* (2017) offers an exploration of border making in a postcolonial world from a postmodern perspective, signaling the global aspect of displacement and migration. The Narrative tells the story of Saeed and Nadia who fall in love in unidentified city in the middle of a civil war. To escape the chaos and threatening conditions of the city, the couple travelled westward to Greece, England and the US. The novel suggests a timely response to massive migrations to Western shores by groups from postcolonial peripheries, unsettled by internal and external threats. Despite the fact that the template for the unidentified city is the author's native city of Lahore, there seem to be more associations to the cities of Aleppo and Mosul, shattered by extremists, violence and civil wars. While featuring global migration and displacement, the narrative simultaneously interrogates the authority to build borders, the right to move, and the direction of border crossing.

*Exit West* redefines borders across a diverse set of divides, including racial, Marxist and colonial power politics. The passage to the Euro-American hemisphere is entangled with jeopardizing rites. Escaping the poverty, death, and loss that ravished havoc in their native city, Saeed and Nadia decides to cross one of the rectangular black doors that appear suddenly in the vicinity. To exit west does not always guarantee a boarding pass to a peaceful and successful future. More often that not, it is the gateway to apocalypse, burning all ties and disconnecting the migrants from their past, family, and culture. The narrative tells of the enormous crushing pain of leaving one's homeland, bringing sorrow and mourning to the fore of the migrant story. The construction of these imaginary doors echoes the surrealism of chaos that led to massive migrations and universal mobility. When the characters step through one of these, they emerge in a different locale. For example, Nadia and Saeed step through a door in their unidentified city and emerge first in a Greek island, then in London and later in California. The door becomes a powerful symbol connecting the local to the global. More importantly, they function as a useful technique to compress the journey and allow the narrative to focus on the experience of migration and the limits imposed on movement rather than the moment of border crossing. Nadia and Saeed, upon emerging in Mykonos, were relegated to a limited space in the periphery. Each of the two migrants has taken a different path in dealing with the unfamiliarity of the host environment. Saeed retreats to groups that share some commonalities in terms of skin color and economic deprivation. While Saeed, a conformist, articulates solidarity with the less privileged, Nadia, a non-conformist, however, seems to find more security in aggregating

herself with the dominant group. For Nadia, denouncing Muslim and Eastern codes facilitates her mobility across ethnic and racial divides.

While Shehadeh's concern was on the physicality and harsh concreteness of borders both inside the settler colony and along its geographical borders with the outside world, Hamid shifts focus to the doors of modernity unveiling their reconfiguration as sites of closure and control. The doors in *Exit West* are highly symbolic, signifying a convergence of politics and economy. Saeed notes that 'the doors to richer destinations, were heavily guarded, but the doors in, the doors from poorer places, were mostly left unsecured, perhaps in the hope that people would go back to where they came from' (Hamid, 2017: 101). Mobility across border from poor to rich locales is restricted and more often prevented, whilst movement in the opposite direction is facilitated. The 'rich countries' respond to this 'unprecedented flow of migrants' with more 'walls' and 'fences' built to strengthen their borders (Hamid, 2017: 71).

Concomitant to the discourse of border security, *Exit West* redefines signs, commonly known to signify openness and accessibility. Windows are reconfigured in relation to the instability caused by the civil war. Instead of opening opportunities to connect with the outer world, a window came to be realized as 'the border through which death was possibly most likely to come' (Hamid, 2017: 68). Amidst turmoil, these windows open room for death and destruction, urging people to seal them with bookshelves.

In the face of global concern for bordering, Hamid negotiates the universality and inevitability of migration and mobility. The Old Lady from Aalo Alto is a good case in point. Although she has never moved from her house, she has been subject to migration. Her neighborhood has changed beyond recognition to an extent that her vicinity has become as unfamiliar to her as a new place. When she opened her door and went out, 'it seemed to her that she too had migrated, that everyone migrates, even if we stay in the same houses our whole lives [...] We are all migrants through time' (Hamid, 2017: 209).

The narrative features an unsettling image of the city of London as an extended refugee camp, with a million migrants pouring into the city, occupying its uninhabited mansions. Furthermore, 'the great expanses of Hyde Park and Kensington Gardens' were soon 'filling up' with the migrants' 'tents and rough shelters' (Hamid, 2017: 126). No European quarter seems to be immune to the ramifications of this global migration. The 'voyage in' that Edward Said has introduced in *Culture and Imperialism* has taken a sweeping, massive form (Said, 1994: 295). Those migrants are changing the demography of metropolitan city, 'forming their own

legions' (Hamid, 2017: 132), and dividing London into dark and light spaces. With accelerating racism, native Londoners respond with nationalist calls, inviting decision makers 'to reclaim Britain for Britain' (Hamid, 2017: 132). This means more borders and more security measures. A very clear translation of this call is the Brexit project. Britain seeks security and prosperity by retreat to nativist closures, fortifying its interior circles to protect the homogeneity of the population.

While Shehadeh focuses on the Middle East, more specifically on Palestine under Israeli settler colonialism as compared to Ottoman imperialism, Hamid has taken a more global position. In *Exit West*, the unidentified city along with recurrent references to 'the global south' and 'global displacement' (Hamid, 2017: 167) indicates the globalizing tendency of the narrative. The locations to which migrants move are geographically dispersed throughout the globe as to include Lahore, Mykonos, London, and California. Moreover, frequent references to the media reports and the emergent topic of migrants further add a globalizing effect, as more cities come to scope.

The paper negotiates bordering at the intersection of postcolonial forms and comparative imperialisms, revealing possibilities for rifts. These rifts are vital for opening up and maintaining a critical position in relation to hegemonic modes and practices. Raja Shehadeh and Mohsin Hamid provide two different models for conceptualizing borders and the pressures that might rift these dividing formations. Shehadeh offers a nostalgic historical return to the borderless landscape of Ottoman imperialism, suggesting a useful paradigm for a tolerant and multi-ethnic system. Hamid, however, sketches an imaginary travel to the future to anticipate fissures in borders and a migration apocalypse. While Shehadeh has localized and firmly framed his narrative, Hamid searches for common grounds for humanity, shared experiences, and global concerns. Yet, both contribute to a fuller understanding and committed endorsement of the enlightenment code of universal hospitality and a revival of Kant's global citizen.

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# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES

Rifts in Borders: From Postimperial to  
Postcolonial imaginaries  
Samar H. AlJahdali

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# COLONIAL AND POSTCOLONIAL LANDSCAPES

ARCHITECTURE, CITIES, INFRASTRUCTURES





