



ANTONI FOLKERS Modern Architecture in Africa
*critical reflections on architectural practice in
Burkina Faso, Tanzania and Ethiopia (1984-2009)*

Modern Architecture in Africa
*critical reflections on architectural practice
in Burkina Faso, Tanzania
and Ethiopia (1984-2009)*

Proefschrift

ter verkrijging van de graad van doctor

aan de Technische Universiteit Delft;

op gezag van de Rector Magnificus prof. ir. K.C.A.M. Luyben

voorzitter van het College voor Promoties

in het openbaar te verdedigen

op vrijdag 18 maart 2011 om 10.00 uur

door Antoni Scholtens FOLKERS

ingenieur

geboren te Delft

Dit proefschrift is goedgekeurd door de promotor:
Prof.ir. W.Patijn

Samenstelling promotiecommissie:

Rector Magnificus, voorzitter

Prof.ir. W.Patijn
Technische Universiteit Delft, promotor

Prof.dr.ir. P.H.Meurs
Technische Universiteit Delft

Prof.dr. K.A.Ottenheym
Universiteit Utrecht

Prof.dr. K.A.Bakker
Universiteit van Pretoria

Dr. N.Elleh
Universiteit van Cincinnati

Dr. O.Uduku
Edinburgh College of Arts

J. Osae-Addo
Constructs LLC Accra

Prof.dr. A.D.Graafland
Technische Universiteit Delft

*‘L’Afrique et l’occident ne se fréquente que depuis 100 ans – c’est peu. En 100 ans les uns ont cru qu’ils maîtrisaient tout et les autres ont eu la sagesse de laisser faire. Cent ans plus tard grâce à cette magnifique incompréhension, acte manqué splendide, chacun se retrouve à la case départ, mais sur un champ de ruine les uns culpabilisent, les autres se ressaisissent lentement’*¹

¹ ‘Jean Marc Patras on Bodys Isek Kingelez,’ in: Serageldin, *Home and the World* (1993) p. 87.

Contents

First volume

Modern Architecture in Africa → contents on p. 9 1-368

Second volume

Modern Architecture in Africa: critical reflections on architectural practice in Burkina Faso, Tanzania and Ethiopia (1984-2009) 369-461

Introduction 375

Subject of the thesis 377

Positioning of the thesis 377

Historiography 377

Research queries 379

Intermezzo: on the 20th century encounter of European and African architecture 382

Methodology 387

Structure and contents of the thesis 397

Definitions and Restrictions 398

Findings and Conclusions 400

Propositions / Stellingen 409

Epilogue 410

Curriculum Vitae 412

Summary 413

Nederlandse samenvatting 414

Introduction

This thesis consists of two volumes.

The first volume was published as the book *Modern Architecture in Africa / Moderne Architectuur in Afrika* a year ago by SUN Publishers in Amsterdam. This second volume contains the introduction and framing of the first volume, responding to the criteria of a doctoral thesis as set by the Delft University of Technology. The two volumes are inseparable as thesis.

The first volume also contains the supportive documentation: bibliography, index of names, glossary of African synonyms, and list of abbreviations — pp. 353-366. The frequent referencing in the second volume to passages in the first and second volumes is given as p. (number).

The work that I have devoted to this thesis can be roughly divided into two periods of time. The first period, stretching from the early years of this century to spring 2010 was devoted to writing the first volume, which is the book entitled *Modern Architecture in Africa*. This work summarized my practical and research experience in Africa during the period 1984-2009.

Although Wytze Patijn invited me to rework the draft into a full doctoral thesis as early as summer 2008, I abandoned that idea when he temporarily left this world in the fall of the same year. Wytze Patijn returned however and it was Koen Ottenheym who suggested me to submit the completed book to Wytze as a doctoral thesis in November 2009.

The short history of the coming-to-be of this thesis can hardly be called a conventional process. It is a combination of prolonged hard work, insight, and coincidence that made this path eventually turn into a thesis. A thesis I would never have been able to complete without the trust and drive of Wytze Patijn, the vision of Koen Ottenheym, and the professional and supportive approach of the other members of the doctoral committee; Paul Meurs, Karel Bakker, Ola Uduku, Nnamdi Elleh, Joe Osae-Addo, and Arie Graafland.

There are many other people who helped me along the way, and I would like to thank those who worked with me on the book 'Modern Architecture in Africa' once again at this time — pp. 17-18. In addition to them I would like to thank Shaïda Freese who helped me avoid bureaucratic pitfalls, Mia Folkers who provided me with much needed shelter so that I could survive the frantic final phase, Laura Bruce for editing once again and Gijs van Loef and Karel Greven who vigilantly stood my side throughout the whole process.

Utrecht, February, 11, 2011

Subject of the thesis

The subject of this thesis is African architecture, architecture on the African continent.

The focus is on my own architectural practice in Burkina Faso, Tanzania, and Ethiopia (1984-2009) within the framework of the introduction of European modern architecture on the African continent.

The work narrows down to nine case studies of projects in which I was personally involved in the period of 1984-2009. This twenty-five years of experience is set in the broader, main period of the twentieth century, starting with the Kongo-Konferenz of 1884, which marked the beginning of considerable European investment in the African spatial environment.

The projects selected for the case studies are shown in image on the inside of the back cover of this volume.

Positioning of the thesis

The approach taken in the thesis is practical; it is a reflection on personal, practical experience. This makes the thesis a family to the work of other practicing European architects in Africa, who have also summarized their reflections into writing, such as Maxwell Fry & Jane Drew, Georg Lippsmeier, Hassan Fathy, Hannah Schreckenbach, and Jak Vauthrin.² However, this work does not pretend to be a manual for the architect practicing on the African continent, as the above quoted work by Fry & Drew, Lippsmeier, and Schreckenbach aims to be.

Though critically touching on the history of African architecture, this thesis does not intend to be a comprehensive work on modern African architecture, in line with the work of academic authors on this subject, such as Kultermann, Fassassi, Frampton and Elleh.³

Instead, this work sets out to present a broad and unique understanding of the position of modern architecture in a number of African countries, in relation to its historical context from 1984 to 2009. This is sufficient time to analyze the subject so as to propose an agenda with relevant issues for further research, education, and practice of African architecture in a broader sense.⁴

In order to make the work contextually comprehensible, a comparatively extensive description of the history of African architecture has been included, as far as it is thought relevant for the fields and cases that are the subject of this thesis.

Historiography

This chapter provides only a brief and summarized introduction to the general history and historiography of African architecture. From here, reference is given to the locations in the thesis where the respective information can be found. The historiography relevant to the context of each

² Fry & Drew 1956, Fathy 1973, Lippsmeier 1980, Schreckenbach 1981, Vauthrin 1989.

³ Kultermann 1963 and 1969, Elleh 1997, Fassassi 1997, Frampton 2000.

⁴ This is one of the main goals of the ArchiAfrika foundation, co-engine behind this thesis.

case can be found in the introductory chapters to the four parts, and the case-specific historiography in the case studies themselves.

Analysis of and publications regarding African architecture are in general rather scarce. African history was traditionally transmitted orally, and a culture of writing was rare in Africa until the twentieth century. Written African history to date is therefore dominated by European and American recordings — pp. 13–14.

Pre-1950 research and publications regarding architecture in sub-Saharan Africa is sporadic and limits itself to ‘pioneer’ or ‘explorative research’ in the service of conquest and exploitation — pp. 160–161. The history of South African and Maghreb’ architecture is fairly well recorded due to early European and Arab interest and presence.

Interest in African architectural issues sees a steep rise after World War II, possibly due to enhanced investment by the colonial powers into the development of the continent. This interest can be broadly divided into anthropological research on traditional African culture, to which architecture belongs, and the introduction of European modern architecture in service of development. These two ‘worlds’ do seldom meet.

The study by the anthropologists of the traditional or vernacular non-western culture⁵ — pp. 23–24 roused the curiosity of architectural historians and subsequently led to an extensive list of publications recording traditional African architecture in the 1960s and 1970s.⁶ This wave of publications coincided with Rudofsky’s 1964 exhibition, *Architecture without Architects*, in New York. This exhibition and subsequent publication⁷ can be regarded as an important stimulus of interest in vernacular architecture worldwide — pp. 155–157.

During the same period, research on and publications about modern architecture in Africa formed part of a broad program on tropical architecture that was aimed at developing the Third World, as set up by the scientific institutions such as the Building Research Units (BRU) in the British Empire, the ‘Secrétariat des Missions d’Urbanisme et d’Habitat’ (SMUH) in Paris and the ‘Institut für Tropenbau’ (IFT) in Starnberg — pp. 161–163, pp. 172–176. Publications resulting from this program consist of a multitude of reports and journals, as well as some handbooks and lavishly illustrated catalogues displaying the achievements of the European modern project.⁸ Johan Lagae’s recent overview of the historiography of postwar architecture in Africa, points again to the limitations of the writings of Kultermann and the few others.⁹ Notwithstanding these publications, key writings on the general history of modern architecture of the twentieth century¹⁰ barely touched upon the African continent until the end of the twentieth century.

The first attempts to converge traditional African architecture with European modern architecture starts with the work of the first African architect to write: Hassan Fathy.¹¹ His work and philosophy was subsequently picked up as basis for the proponents of Appropriate Technology (AT) movement¹² who presented themselves as antimodern, but, in essence, were still part and parcel of the modern project¹³ — p. 212.

Further reconsideration of these antagonistic positions and attempts to merge African and modern architecture were being undertaken by African authors starting from the late seventies with the work of Fassasi¹⁴ and provisionally ending with the book *African Architecture* by Nnamdi Elleh.¹⁵ These publications illustrate the picture of African architecture of today. They were merely a modest, inevitably incomplete introduction to the true richness of architecture on the African continent. — pp. 14, 32, 35–36, 157–159

Recently, a wide range of specific publications on African architectural subjects, be it on themes, geographical locations or monographs, have seen the light such as Lagae’s monograph on Claude Laurens,¹⁶ Avermaete’s work on the modern project of ATBAT,¹⁷ Cohen’s exhaustive study on Casablanca¹⁸ and Godwin’s work on Demas Nwoko.¹⁹ Notwithstanding this encouraging rise of interest for African architectural subjects, critical and updated comprehensive or comparative studies on modern African architecture have yet to appear.

At the same time, European modern architecture is now being reconsidered, this time opening the floor to voices from the non-western World.²⁰

Research queries

The leading research query is: *How have European-funded (aid) housing, urban planning, and building projects that were executed in Burkina Faso, Tanzania, and Ethiopia from 1984 to 2009 proved themselves in relation to the African context?*

The word ‘aid’ is purposely added in brackets in the above query definition. The reason for this is that the main impetus for me to start work in Africa was mission-driven. As a youth, I believed it was important to devote my knowledge, time, and energy to helping to better the world, to help to alleviate African suffering. In retrospect, the majority of the work that I selected as case studies for this thesis does qualify as ‘aid-funded’ projects, probably meaning that this fact played some role of importance in the evaluation of these projects. This issue will receive further attention in the chapter regarding the selection of case studies.

To provide a framework for the issues that surfaced in the field work, the study and the underlying research query are focused on four fields of architecture as traditionally taught at the Faculty of Architecture of the Delft University of Technology:

- 1 Urbanism and architecture in Africa
- 2 Building technology and architecture in Africa
- 3 Building physics and architecture in Africa and
- 4 Architecture in the African heritage context.

5 Bascom 1958, Claude Lévy-Strauss, *Tristes tropiques*, 1955, re-edition, coll. Terre humaine, 2001.
6 Amongst others: Denyer 1978, Blier 1994, Oliver 2003, Dmochowsky 1990, Bourdier 2005.
7 Rudofsky 1964
8 Fry & Drew 1956, Kultermann 1963 and 1969, Schreckenbach 1981, Lippsmeier 1980.
9 Johan Lagae, ‘Kultermann and After. On the Historiography of 1950s and 1960s Architecture in Africa,’ in: *Oase #82 L’Afrique c’est chic. Architecture and planning in Africa 1950–1970* pp.5–23.
10 Such as Giedion 1982, Frampton 1980, and others.
11 Fathy 1973.
12 Vauthrin 1989, Houben 1990.
13 Interview with Bruno De Meulder, Leuven, 2007.
14 Fassasi 1997.
15 Elleh 1996.
16 Lagae 2001.
17 Avermaete 2005.
18 Cohen 2002.
19 John Godwin & Gilian Hopwood *The Architecture of Demas Nwoko* Lagos (Farafina) 2007.
20 Amongst many others: Tzonis 2001, Ozkan 1992, Henket & Heijnen.

The mean research query is thus subdivided into four sub-queries.

1 The sub-query on urbanism and architecture in Africa:

What can be learned from the results of different European urban planning and design methodologies that were applied to the African cities; in particular from experiences in Zanzibar and Ouagadougou?

2 The sub-query on building technology and architecture in Africa:

How has European modern building technology proved itself in Africa; in particular, how can the results of late modernist building technology of the 1970s and the appropriate technology of the 1980s, as encountered in Dar es Salaam and Ouagadougou, be compared?

3 The sub-query on building physics and architecture in Africa:

How did European modern architecture respond to the African physical context; in particular, have late twentieth-century innovative adaptations to modernist principles, as applied in building projects in Tanzania, proved to be an improvement in relation to the traditional African architectural response to climate?

4 The sub-query on architecture in the African heritage context:

What has been the impact and role of European-aided and driven monument protection in Africa, as experienced in church restorations in Tanzania and Ethiopia?

The initial critical reflection will be focused on personal, practical experience over a twenty-five year period, and should thus be understood from the perspective of a practicing Dutch architect, trained at the Faculty of Architecture of Delft University of Technology – one of the bulwarks of European modernist architecture. More broadly speaking, the leading research query can thus be formulated as: *What findings can be distilled from the encounter of late twentieth-century European architectural thought and African architectural culture?*

The answer to this broader question is that this encounter provided new insights. I believe it is worthwhile to develop these insights into larger issues, in order to form the basis of an agenda for further research, education, and practice within the context of the early 21st century situation and its enormous challenges on the sustainability of our future world. This agenda is outlined in the concluding chapters of the thesis. This is also the true reason why I began writing this essay. Once a missionary, always a missionary.

Insight cannot be provided into the encounter between European modern architecture and African architecture by means of existing literature, simply because there is no critical and comprehensive documentation of this topic, as mentioned above in the preceding chapter.

This situation has created a general lack of knowledge on the subject, which, in turn, has led to abnegation and prejudices. For instance, it is largely unknown that parts of Africa were considerably urbanized, before 1884, and many still believe that the *mud hut* is the African standard dwelling structure.

Therefore, a broad stocktaking is required, which anticipates the above-specified sub-queries. Such a stocktaking requires a broad investigation, due to

the enormous expanse of the African continent and its vast, internal cultural and physical diversity. This stocktaking should thus respond to a further sub-query: *When and how did the introduction of European modern architecture take place and what were the consequences of the ensuing encounter with African architecture?*

Although various chapters of the thesis deal with this subject, I have thought it useful to summarize a comprehensive answer to this query in the below intermezzo.

Intermezzo: on the 20th century encounter of European and African architecture

♦ INTRODUCTION OF EUROPEAN MODERN ARCHITECTURE IN AFRICA

The serious introduction of European modern architecture began after the 'Kongokonferenz' of 1884 — p. 40. Pre-1884 European investment in building and infrastructure in sub-Saharan Africa was limited to Gorée Island, Elmina Castle, the Cape Colony, Ilha de Moçambique, Mombasa and a number of lesser forts and trading settlements strewn along the coasts. It can therefore be stated that the impact of European modern architecture on sub-Saharan Africa was insignificant previous to 1884.

In the earliest, pioneering stage of the introduction of European architecture in sub-Saharan Africa after 1884, which lasted long after World War I, European building can be characterized by a pragmatic and contextual approach, and was dominated by engineers — pp. 241-247]. During this period, it was common to use African building materials and typologies for European-based settlements, due, on one hand, to the above-mentioned pragmatic approach. Other reasons include the absence of academically trained architects and scarcity of imported building materials. The development of European modern architecture in Africa in later stages, however, displays a gradual increased distancing from the traditional African building culture.

After World War II, there was a steep increase in investment in Africa by the colonial powers. Emphasis was placed on the development of infrastructure in service of the realization the 'colonial welfare state,' as coined by Bruno De Meulder — p. 51. European modern architecture, in the formal language of the *International Style*, was the standard. It ignored and discarded (traditional) African architecture as inappropriate for the housing of European settlers, as well as the 'making of the modern African citizen.' The massive building boom of the late colonial period is regarded by others more negatively than intended, in order to contain the growing influence of the African population.²¹ The zoning inherent to urban planning and design in European modern architecture may even have created an exclusion of Africans, while being well fitted to Apartheid politics, which were not only popular in South Africa, as some scholars suggest.²² Manthia Diawara goes as far as stating that there was such a thing as an '[...] ideological complicity between French colonial administrators and modernist architects who created housing projects intended to control the movement of populations from rural areas to the cities. The exhibition²³ also showed many militaristic designs, which had the effect of segregating people according to race, class and origin.'²⁴ This debate does not form the subject of this thesis, but I think the creation of the African welfare state and the intended government control by means of architecture do not necessarily exclude each other.

Independence of the majority of African nations around 1957-1964 changed little regarding the building boom and the domination of European modern architecture — pp. 51-52. Modern architecture was seen by the new ruling class as the expression of a young nation — a modern 'African welfare state' that turned its back on all that is primitive and backward. Moreover, modern architecture, which until now had been alien to traditional African architecture, was free of tribal associations and was thus considered a powerful instrument in the forging of a new nation. The development of a large tourist hotel in Lagos by ACP architects in 1955 formed the polemics around a rare exception to the independent African nation's smooth acceptance of modernist architecture. The delay caused by these polemics and subsequent independence stopped the hotel from ever being built.²⁵

Scientific research on technology and climate stood at the basis of the development of the building boom in Africa — pp. 161-163. In the late British colonial empire this research took place at the BRU's and AA School of Architecture (English School). After independence the initiative in scientific research was taken over by others, such as the IFT and the GTZ/GATE in Germany, CRATERRE and SMUH in France, and the Athens Centre of Ekistics established by Costantinos A. Doxiadis in Greece.

Building in Africa during the period of 1950-1975 was thus dominated by European modern architecture and its formal expression of period of the times: the late International Style. The architects were almost exclusively European, or of European origin,²⁶ who encountered a situation in Africa that was quite different from Europe: namely, the cultural and historical context could be fully ignored and did not thwart the creation or development of a new world. Africa was a genuine laboratory, a playground of modern architecture creating results — pp. 162-163 that merited the current academic attention.²⁷

There was some ambiguity between the scientific findings and guidelines of the tropical building schools, and the formal expression of European modern architecture, which rooted in Mediterranean architecture that was not adapted to the warm and humid regions of Africa — pp. 244-251.

The oil-crisis in 1973 and its aftermath appeared to mark the end of the domination of European modern architecture. The Appropriate Technology (AT) movement promoted, instead, the use of local materials and building technology in architecture — pp. 191-195, which indeed brought an end to the predominance of International Style architecture, in Africa as in the rest of the world. However, AT was also a product of European modernity, in that it was founded on predominantly European scientific research that promoted and implemented generic solutions, and largely ignored localized African building culture while basing itself on an assumed, romanticized and anachronistic image of African architecture.

21 Myers 1993-1995-2003, Manthia Diawara, *African Film – New forms of aesthetics and politics*, Prestel, Berlin 2010, p. 93.

22 Demissie, Fassil, 'Controlling and 'Civilising Natives' through Architecture and Town Planning in South Africa,' in: Folkers ea. 2005 pp. 173-186.

23 He is referring to the exhibition in Berlin in 2008 on modernist architecture in North Africa *In the Desert of Modernity*, curated by Tom Avermaete, Marion von Osten and others.

24 Diawara 2010 p. 93.

25 Rhodri Windsor-Liscombe, 'The Lagos hotel affair: negotiating modernism', in: Casciato 2005.

26 The few exceptions include Anthony Almeida in Tanzania and Demas Nwoko in Nigeria.

27 Amongst others, Lagae 2001, Avermaete 2005.

As an example, the Egyptian architect Hassan Fathy's rediscovery of traditional masonry technology in Sudan, via French laboratories, to Senegal, Mauritania, and finally Burkina Faso, West Africa.

♦ AFRICAN REACTIONS ON THE INTRODUCTION OF EUROPEAN MODERN ARCHITECTURE

From the early period, from 1884 to well after World War I, little is known about the reception of and reactions to the introduction of European modern architecture.

However, African popular or vernacular architecture adopted elements from the European modern early on. The typology of the low-cost dwelling (labor lines), technology (standardized family unit), and building materials (cement, processed timber, g.i. sheet) used in 'informal' building were directly influenced, leading eventually to a new, or modern vernacular that is astonishingly homogeneous over the continent → pp. 216-223. However, this process was scarcely documented, because the interest of anthropologists was restricted to the 'non-contaminated' vernacular, and the empire builders ignored or disregarded informal African architecture as irrelevant to the development of the African continent.²⁸

By the 1980s, this 'modern vernacular' developed into an expressionist architecture for the middle and upper class → p. 222 that is a lavishly decorated architecture that often develops organically from the informal settlements.²⁹ More often than not, this architecture is constructed without the intervention of an academically schooled designer. The decoration of these residences consists of the application of components that find, for an important part, their source in European architecture, with a preference for classicist elements such as Italianate banisters, ionic capitals, carved fascia boards, wrought iron gates, panel doors, and so on, which are produced in small workshops along the roadside. Again, I have seen this architecture and the organization of the production process spread throughout the continent.

From the 'formal' or academic perspective, African reactions to European modern architecture are rare in the twentieth century. This may be explained by the fact that the academic training of African architects began only after World War II, and for a long while this education exclusively took place exclusively in Europe, or was taught by expatriate professors in the newly formed schools in Africa. In sub-Saharan Africa, KNUST in Kumasi and Makerere University in Kampala played and continue to play an important role. It can be stated that African architectural training is still dominated by European academia.

Another reason for the scarcity of academically trained African architects is the comparatively low status of the profession.

There are a few exceptions to this. Hassan Fathy³⁰ formulated a reaction to European modern architecture that was rooted in Africa culture → pp. 192-194. His work in Egypt, however, was adopted more by European scholars and architects than by African academics. Anthony Almeida³¹ and Demas Nwoko³² are African architects who did not reject European modern architecture, but

instead developed a localized and personalized form of modern design → pp. 249-250 on Almeida. There are very likely more African architects, who were active in sub-Saharan Africa during the 1950s to 1980s, but their work has not yet been published to the broader public.

An important reaction to European modern architecture can be found in the work of a number of individual architects with European or South African backgrounds, who were active in Africa during the period between 1950 and 1990. First and foremost amongst these figures is Pancho Guedes in Mozambique, but others include Richard Hughes in Kenya, Julian Eliott in Zambia, J. Dahinden in Uganda, Norman Eaton, Helmut Stauch and Gawi Fagan in South Africa, and J. Zevaco in Morocco → p. 168. Although most of these architects were trained in Europe and adhered to principles of European modern architecture, they made considerable efforts to understand African architecture and translated this inspiration into their buildings. As such they can be seen as 'abstract regionalists'³³ or 'critical regionalists' *avant-la-lettre*.³⁴

Not until the 1990s did African architects begin to emerge and make an imprint of their views on architecture in their work. An important direction that can be discerned in the work of this generation of African architects is a monumental and expressive mix of modernist architecture with African symbolism and references to historic architecture, which has been popularly baptized 'hyper-modern' or 'ultra-modern' African architecture. The Congolese artist Bodys-Isek Kingelez and Senegalese architect Pierre Goudiaby Atepa are two stars of the ultra-modern architecture of the turn of the century → pp. 213-216.

Another direction taken by African architects is a more modest form of contextual architecture, though still rooted in European modern architecture. These architects include Francis Kéré in Burkina Faso, José Forjaz in Mozambique, Joe Osae-Addo in Ghana, and Aziz Lazrack in Morocco. Their work can be regarded as a continuation of the work of the early 'critical regionalists' → pp. 226-233. Contemporary 'critical regionalist' South African architects, such as Heinrich Wolff, Mpheti Morojele, Joe Noero, Martin Kruger, Peter Rich, and 'Ora Joubert should also be mentioned here, as South African architecture will play an increasingly important role in Africa as a whole, in the wake of South Africa's commercial expansion across continent.

♦ AFRICAN INFLUENCE ON EUROPEAN MODERN ARCHITECTURE

The European colonizers of the twentieth century disregarded African culture and rejected African architecture as inappropriate for the development of their African colonies → pp. 162-163. This attitude was by and large adapted by the new ruling class, after the main African wave of independence (1957-1964). European modern architecture was considered a vital tool for the creation of a modern nation and the development of the continent, while traditional African architecture was regarded as

28 Research has only recently been undertaken on a systematic scale. For example: Julio Carrilho et.al., *Traditional informal settlements in Mozambique: from Lichinga to Maputo*. FAPF, Maputo 2004 and Livin Moshia, *Architecture and Policies – The transformation of Rural Dwelling Compounds and the Impact of Ujamaa Villagisation and the Nyumba Bora-Housing Campaign in Missungwi – Tanzania* (PhD Thesis) KU Leuven, 2005.

29 The mega-city Soweto shows all stages in this transformation process. The poorest and most affluent live here side by side.

30 Egypt, 1900-1989, active from the 1930s.

31 Tanzania, b.1921, active from 1948 to date.

32 Nigeria, b.1935, active from the early 1960s to date.

33 Ozkan 1992.

34 Frampton 2006.

purely an exotic subject for anthropologists. Notwithstanding this, African architectural culture has nonetheless influenced the development of European modern architecture from early on.

First of all, it was the exotic formal expression of various African architectures, coined 'concrete regionalism' by Suha Ozkan, that inspired European architects — pp. 166–168. The 'Style Empire,' which was brought to Europe via the Napoleonic expedition to Egypt (1800) was the earliest example; followed by the 'Arabesque' style from the Maghreb; the 'Zanzibar style,' the finest example of which is certainly the Ocean Road Hospital in Dar es Salaam, which was built by the Germans in the early 20th century — p. 162; the 'Style Neo-Sudanais' with the striking examples of the Missiri mosque, built by Senegalese army captain Abdelkader Mademba after World War I in Fréjus — p. 203; the Cité Administratif in Ségou and the pavilions at the Colonial Exhibition in Paris of 1931 — p. 49; and the 'Style Obus,' with, for instance, the St Jeanne-d'Arc church in Nice by Droz — p. 349. It can be generally stated that the 'Art Deco' period of the 1920s to 1940s was clearly influenced from the African continent.

Le Corbusier was formally influenced by Maghreb architecture too — p. 67.³⁵ The sobriety of the architecture, the play of light and shade, and the cubist composition of the mountain villages clearly left their mark on Le Corbusier and his modernist followers.

Traditional and contemporary Moroccan architecture left its mark on the CIAM and Team X — p. 45. This time, whoever, it was the innovative manner in which housing units were organized and designed in order to allow future extensions to a modular system, while taking into account anticipated transformation of local culture.³⁶ But again, it was the gracefulness and play with white and primary colors set against the bright blue Mediterranean sky, which may have been the factors that initially seduced the modern architects.

The work of Candilis and others in the Maghreb influenced research by Dutch Structuralists of the 1960s and 70s into innovation on the design of humane neighborhoods. Some examples here are the Kasbah in Hengelo of 1974 by Piet Blom, the Burgerweeshuis by Aldo Van Eyck in Amsterdam, the Montessorischool in Delft, and the offices of Centraal Beheer in Apeldoorn by Herman Hertzberger — p. 47.

Many of Aldo van Eyck's highly original ideas are indebted to African architecture. Van Eyck made several journeys to Africa starting in 1951, and published his thoughts in *Forum* and other media.³⁷ In addition to what he discovered during his travels to the Maghreb, he and his colleagues were greatly impressed by the Dogon area in Mali.³⁸ In the spatial organization and philosophy he witnessed in Dogon, Van Eyck recognized his own ideas about spatial organization, which he introduced to the Netherlands in order to enrich its postwar, stark modernist architecture and urban design.

These are just a few well-known examples of certainly many others. However, except for specific moments such as those mentioned above, a comprehensive

study has yet to be made of the history of African influence on modern architecture.

Nevertheless, it can be maintained that 'modern architecture' is by no means an exclusively European project, despite the apparent abnegation of African culture by Europeans in the nineteenth and twentieth century. Giles Omezi takes an intriguing position in suggesting that the modern project is as much African as it is European, in his exposé on the work of Demas Nwoko: 'Demas Nwoko's architectural resolution of the ideology of Natural Synthesis sought to place modernity beyond the ethnocentric confines of a purely European narrative, having successfully decoded its cynical nature through his art. The dwelling space he decided was also not subject to the constraints of this narrative. He sought to resolve in his architecture, a crisis at the heart of contemporary Africa; the nature of its modernity. He seems to have understood, that the process of modernity is not the sole property of Eurocentric thought and actions. 'The nature of technology is such that it is not the preserve of any race or time'³⁹ he wrote in 1992.⁴⁰

Methodology

It is obvious that critical reflection regarding individual cases took place after most of the field research had been carried out and the projects concluded.

I did not start my career in 1984 with the intention of search out new viewpoints, or defining an agenda for relevant African architectural issues to be researched, educated, and practiced in the second decade of the 21st century.

The idea to attempt to find answers to the above-formulated queries began to slowly take shape particularly after my return to Dutch practice in 2000 and after founding ArchiAfrika in 2001. From then onwards, I challenged my historical practical experience and coupled my contemporary experience with desk study and debate. I then realized that I had in fact gathered exceptional knowledge from my practical experiences in Africa, and that this knowledge was of possible relevance to the overall debate on architecture on the whole in general.

The idea for this work was born from a personal drive to deepen and challenge the thoughts and ideas that developed through my practical and research-related experience in Africa throughout the past quarter century. The research thus qualifies as a theoretical revisiting of 'reflective practice' or 'participative research' in Africa during the period of 1984–2009. This personal initiative was formalized into a doctoral thesis starting in 2008 on invitation by Wytze Patijn.

♦ STARTING POSITION

My perspective is obviously Dutch. It was shaped by the education I received initially through my father, politically colored left-wing family

35 Admittedly also Greek and Turkish architecture.

36 Joedicke, *Candilis, Josic, Woods* Stuttgart (Kramer) 1968 and Avermaete 2005.

37 Ligtelijn & Strauven (ed.), *Aldo van Eyck, Collected Articles and Other Writings 1947–1998*, Amsterdam (SUN) 2008.

38 Amongst others in particular Herman Haan and Joop van Stigt.

39 Demas Nwoko, *The Impoverished Generation*, p. 4, para 2. New Culture publications 1992.

40 Giles Omezi and Sola Ogunbanjo *Synthesising the appropriate: Architectural interpretation of Natural synthesis – Demas Nwoko to Bukka*. Paper presented at Africa Perspectives in Delft, December 2007 (not published) p. 7.

and friends, and a Montessori education, which, I believe, allowed me to develop an inquisitive and critical manner of observation that was backed by a reasonable knowledge of European cultural history. The second educational influence is my training as an architect at the Faculty of Architecture at the Delft University of Technology.

The situation surrounding Dutch architectural culture during my days as a student in the 1980s was described by Bernard Hulsman as ‘the Cuba of modernist architecture’.⁴¹ There was little space in the Netherlands for architectural considerations other than those derived from the modern movement of the 1920s and 1930s. Even Aldo van Eyck, who was inspired by African architecture more than any other Dutch architect, fulminated against anyone who thought differently, calling them ‘Rats, Posts, and other Pests (R.P.P.)’, in his lecture at the Royal Institute of British Architects in 1981. Architecture critic Hans van Dijk coined the term ‘Teachers’ Modernism’ to describe the mentality of architectural education in the Netherlands of the 1980s.⁴²

I perceived this situation as narrow and unsatisfying, and consequently my interest was drawn to the enemy’s camp, namely the postmodernists, and in general to ‘The Other.’ My master thesis project, a museum for natural history in the Artis Zoo in Amsterdam can be safely qualified as a postmodern design in its historical referencing and collage-like assembly.

In 1983 I began working as a researcher and designer in Africa while still a student in Delft and I have been working in the fields of design, construction, and research on the African continent ever since.

From 1983 to 1986 I was employed on a project basis by the Institut für Tropenbau and the related architectural firm of Georg Lippsmeier (L+P Architects) in Düsseldorf, Starnberg, and Dar es Salaam. I became involved as draftsman, designer, and researcher in projects in Somalia, Tanzania, Yemen, Japan, and Australia.

Simultaneously, from 1983 to 1985, I took on employment through the University of Amsterdam as a trainee, research assistant, and architect at the Direction Générale de l’Urbanisme et de la Topographie in the urban resettlement scheme for the informal areas of Ouagadougou.

After my graduation, I began working as an assistant designer in the office of J.B. Ingwersen in Amsterdam. Ben Ingwersen has been called ‘the Netherlands’ most Corbusian architect’ due to two projects he designed in Amsterdam, namely the Autoport and the school building on Wibautstraat. In 1987, I returned to the Lippsmeier architectural practice and was appointed resident architect in Dar es Salaam in Tanzania. In this position I was responsible for a wide range of building projects in East Africa.

After leaving L+P Architects in 1991, I was employed by Schröderplanung in Darmstadt, stationed in Bangui in the Central African Republic and was made responsible for building works for the Coffee Production Improvement Scheme through the European Union.

Afterwards, the architectural and engineering firm FBW Architects &

Engineers was established by Belinda van Buiten, Geoff Wilks, and myself, starting operations in 1991 with offices in Utrecht, Dar es Salaam (1994), Manchester (1995), and Kampala (1997). The firm focused on research, design, and building projects in East Africa and Europe.

I co-founded of ArchiAfrika in 2001, together with Berend van der Lans, Janneke Bierman, Joep Mol, and Belinda van Buiten. ArchiAfrika is an international networking organization responsible for the promotion of African architecture by means of documenting, reporting, and organizing the African Perspectives events held in 2005 in Dar es Salaam (Tanzania), 2007 in Kumasi (Ghana) and Delft, 2009 in Tshwane-Pretoria (South Africa), and in Casablanca in 2011. ArchiAfrika has been managed by African individuals and organizations since 2010, and the foundation ‘African Architecture Matters’ was established in Utrecht.

African Architecture Matters is a Netherlands based non-profit organization carrying out research, project organization, and project execution on diverse African architectural subjects. These include the ‘Mtoni Palace conservation project’⁴³; the ‘BluePrints of Paradise’ competition, in collaboration with the Afrika Museum in Berg & Dal; the ‘Master Studio Afrika’ on the Baixa de Maputo, in cooperation with Delft University of Technology, Eduardo Mondlane University of Maputo, and the University of Pretoria; and the ‘Immigration as Inspiration’ project on Diaspora housing issues in Casablanca and the Netherlands, in collaboration with Casamemoire.

African Architecture Matters is guardian of the Dr. Georg Lippsmeier heritage. The full research library of the ‘Institut für Tropenbau’ with over 3,000 titles and 4,000 slides on architectural topics in the developing world, ranging from the 1950s to 1991, was bequeathed to me in 2008. This heritage forms the core of the library that may support African Architecture Matters to become an international research center on African architecture of prominence.

Most of the work I carried out – as far as relevant for this thesis – took place in the field and encompassed the design and execution of building projects; field research for urban restructuring; architectural historic research for conservation and restoration projects; drafting of structure and master plans for large scale projects such as hospitals, school complexes, tourist schemes and religious complexes; geomorphologic, programmatic, and demographic research for feasibility studies and contextual research in general.

The reflections and ideas that I developed through this work were first recorded in built structures as well as drawings and reports. Secondly, they were recorded in text and image form (sketches, photographs) in private notebooks numbered from 1 to xxx, which were produced over the past twenty-five years.

Yet, up the end of the twentieth century, these personal reflections were seldom mirrored or challenged by theoretic sources. Naturally, dis-

41 Hulsman ‘De tijd heeft stilgestaan. Nederland, het Cuba van de architectuur’, in: *NRC Handelsblad*, June, 26, 1992, p. 1.

42 Van Dijk ‘Het Onderwijzersmodernisme,’ in: B.Leupen et al. (ed.) *Hoe modern is de Nederlandse architectuur?* (1990) pp. 173-190.

43 Folkers et al. (ed.); *Mtoni-Palace, Sultan & Princess of Zanzibar Utrecht* (ArchiAfrika) 2010.

cussions took place with peers, enlightened, and educated clients, friends, and so and, but debate with academic theoreticians was rare.

I first encountered academics and literature after cofounding ArchiAfrika at the beginning of this century. My above reflections and conclusions were, to a certain extent mirrored by desk research in the years 2000-2002 and summarized in the publication *Discretio* in 2003.⁴⁴ This work came to light with contributions by those such as George Ssendiwala, partner at FBW and senior lecturer at Makerere University in Kampala, Hubert-Jan Henket of the Delft University of Technology, and Koen Ottenheim of the University of Utrecht – with the role played by my main work partners Belinda van Buiten and Geoff Wilks also being vital to the project.

‘Discretio’ was the basis of the book ‘Modern Architecture in Africa’. It was the publisher Henk Hoeks who invited me in 2006 to rework ‘Discretio’ into a specific book on architecture in Africa. It can be stated that from that date my empirical knowledge became balanced by theory in earnest.

There were three main sources of theoretical input into the research:

- 1 The first source was desk research through literature. The above-mentioned IFT heritage, enlarged by a growing private library on African architecture, is an important collection from which I was able to select relevant literature.
- 2 The second source was through direct counseling by Bruno De Meulder of the Catholic University of Leuven, Henk Hoeks, and Heinz Kimmerle, former Chair of Intercultural Philosophy at the Erasmus University of Rotterdam. They critically reviewed my findings and put me on track to trace further information and reading material.
- 3 Involvement as curator and member of the scientific committee of the African Perspectives conferences of 2005 in Dar es Salaam, 2007 in Kumasi, Ghana and in Delft, and 2009 in Tshwane-Pretoria provided me with the third source. This source was indispensable for the opening of topical issues in the field.

♦ SELECTION OF THE CASE STUDIES

The thesis is built around nine case studies, based on design and building projects in which I have been personally involved. The cases have been placed within a broader historical and geographic context through the analysis of literature, interviews, and field experiences elsewhere in Africa. All of the cases, with the exception of Lalibela, were subject to revisiting in the period between 2006 and 2009, during which the first volume was written. The revisiting consisted of physical inspection, study of reports as far as available, and interviews with historical and contemporary stakeholders.

My initial motivation to work in Africa was rooted in a missionary vision. I wanted to contribute to the development of the African continent with my energy, time, and professional knowledge. This was not the only motivation, but it was an important one. The aid-funded projects are the projects that, in general, best responded to the criteria on which I selected my case studies.

This is an aspect I recognized in retrospect, but it is nonetheless a remarkable one, considering that approximately half of the projects I have worked on in Africa were funded from sources other than aid. Out of the thirty-seven projects mentioned in the thesis that are listed below, twenty-seven were aid-funded (73%). Of the nine projects that were selected as case studies, six were financed solely and directly through foreign aid (67%), two were financed predominantly through foreign aid (22%), and one through local commercial finance (11%, Dobie House). The projects that were selected as case studies are marked in the list in the shaded rows.

The case studies are shown on the inside of the back cover of this volume.

44 Folkers 2003.

Start date	Project title	Project location	Project nature	Client	Funding agency	Project expertise, design, and management	My role	Completion date
1984	Aménagement des quartiers spontanées de Wagadogo-Nossin (pilot project Larlé Extension)	Ouagadougou, Burkina Faso	Urban re-structurization of spontaneous settlements and master plan	Direction Générale de l'Urbanisme et de la Topographie	Dutch government (DGIS)	UvA (Coen Beeker), Haskoning, René van Veen	Field assistant and researcher	1989
1984	Bureau DGUT	Ouagadougou, Burkina Faso	Realization of a site office	Direction Générale de l'Urbanisme et de la Topographie	Dutch government (DGIS)	Antoni Folkers, ADAUA (Barthélémy Ouédraogo)	Design, building supervision	1984
1985	Gutachten FOE	Dar es Salaam, Tanzania	Expertise and rehabilitation proposals	University of Dar es Salaam	Government of the FR of Germany (GTZ)	Lippsmeier + Partner (Michael Radtke)	Research, design and reporting	1985
1985	Hippodrome de Nossin	Ouagadougou, Burkina Faso	Conversion of hippodrome into public park	Direction Générale de l'Urbanisme et de la Topographie	Dutch government (DGIS)	Antoni Folkers	Design	Not executed
1987	Nyangao Hospital	Nyangao, Tanzania	Renovation and extension of a rural hospital	Benedictine Fathers	Misereor, Benedictine Fathers	Lippsmeier + Partner	Design and site supervision	1990
1987	Pegasus House	Dar es Salaam, Tanzania	Conversion of industrial complex	DT Dobie & Co	Private investment	Lippsmeier + Partner	Design and site supervision	1989
1987	Peramiho hospital	Peramiho, Tanzania	Renovation of rural hospital	Benedictine Fathers	Misereor, Benedictine Fathers	Lippsmeier + Partner, later FBW	Design and site supervision	2001
1987	Prokura Kurasini	Dar es Salaam, Tanzania	Renovation and extension of procure	Benedictine Fathers	Benedictine Fathers	Lippsmeier + Partner	Design and site supervision	1990
1988	St Joseph's Cathedral	Dar es Salaam, Tanzania	Restoration	DSM City Centre Parish	Parish, various donors	Lippsmeier + Partner	Design and site supervision	1991
1988	College of Business Administration	Dodoma, Tanzania	Rehabilitation	College of Business Administration	Government of the FR of Germany (GTZ)	Lippsmeier + Partner	Expertise, design and site supervision	1990
1988	DT Dobie House	Dar es Salaam, Tanzania	New residence	Private client	Private investment	Lippsmeier + Partner, later FBW	Design and site supervision	ongoing
1989	Morogoro Leprosarium	Morogoro Litisha (Songea) Tanzania	Rehabilitation	Benedictine Fathers	Deutsche Auszatsiche Hilfswerk	Lippsmeier + Partner	Expertise, design, and supervision	1990
1989	Msasani Slipway	Dar es Salaam, Tanzania	New development of multi-functional commercial centre	Msasani Slipway	Private investment	Lippsmier + Partner, later FBW	Master plan, design, site supervision	ongoing
1989	Mbinga Diocese	Mbinga, Tanzania	New diocesan complex	Mbinga Diocese	Various donors	Lippsmeier + Partner	Master planning, and design	1993
1990	Bagamoyo Hospital	Bagamoyo, Tanzania	Rehabilitation and restoration	Government of Tanzania	Government of the FR of Germany (GTZ)	Lippsmeier + Partner	Design	1992
1990	USAID offices	Dar es Salaam, Tanzania	Office conversion	USAID	Government of the USA	Lippsmeier + Partner	Design	1990
1990	Pemba dispensaries	Island of Pemba, Tanzania	Rehabilitation, extension and new development	Government of Tanzania	Government of the FR of Germany (GTZ)	Lippsmeier + Partner	Expertise, Master plan, design	1990
1991	EC Coffee Program	Bangui, Central African Republic	Development of industrial buildings	Government of the CAR	European Commission	Schröder Planung Darmstadt	Tender documents and management	1991
1991	Minara Miwili Hotel	Stone Town Zanzibar, Tanzania	Restoration of townhouse	NC Group	Private Investment	FBW	Design	Not executed
1991	Ras Kutani Hotel	Mjimwema, Tanzania	New development of a tourist lodge	Selous Safari Co	Private Investment	FBW	Master plan, design and site supervision	1993

Start date	Project title	Project location	Project nature	Client	Funding agency	Project expertise, design, and management	My role	Completion date
1991	Tabora School for the Deaf	Tabora, Tanzania	Rehabilitation and extension	White Fathers	Misereor, Cebemo	FBW	Master plan, design and site supervision	1999
1991	Bukoba Cathedral	Bukoba, Tanzania	Restoration and completion	Kagera Diocese	Various donors	FBW	Design	Ongoing
1992	Turiani Hospital	Turiani, Morogoro Tanzania	Rehabilitation and extension	Precious Blood Sisters	Misereor	FBW	Master plan, design and site supervision	2000
1993	Mikumi Hospital	Mikumi, Tanzania	Rehabilitation and extension	Mikumi Hospital	Memisa (Cordaid)	FBW	Master plan, design and site supervision	1998
1993	Selous Safari Camp	Selous Game Reserve, Tanzania	New development of a tourist lodge	Selous Safari Co	Private investment	FBW	Master plan, design	1999
1993	Mtinko Hospital	Mtinko, Singida, Tanzania	Extension	Carolus Borromeus congregation	C.Borromeus congregation, Misereor	FBW	Master plan, design and site supervision	1999
1994	Stiegler's Gorge Lodge	Selous Game Reserve, Tanzania	New development of a tourist lodge	Azania Investments Co	Private investment	FBW	Master plan, design	Not executed
1995	Namanyere Hospital	Namanyere, Tanzania	Rehabilitation and extension	Sumbawanga diocese	Cordaid	FBW	Master plan, design and site supervision	1999
1995	Tigray Dispensaries	Tigray region, Ethiopia	Rehabilitation, extension and new development	Government of Ethiopia	Cordaid	FBW	Expertise, Master plan, design	1996
1996	Virika Hospital	Fort Portal, Uganda	Reconstruction (after earthquake)	Diocese of Fort Portal	European Commission, Misereor, Cordaid	FBW	Master plan, design and site supervision	2001
1997	Vd Wel Residence	Arusha, Tanzania	New residence	Private client	Private investment	FBW	Design and site supervision	1999
1997	Kilembe mines Hospital	Kilembe, Kasese Uganda	Rehabilitation	Government of Uganda, Diocese of Kasese	Cordaid	FBW	Master plan, design	1999 – aborted due to civil war
1998	Hamerton House	Zanzibar	Rehabilitation	British High Commission	Government of the United Kingdom	FBW, Landplan Icon	Design	2000
1999	Lalibela rockhewn Churches	Lalibela, Ethiopia	Conservation measures	Government of Ethiopia	European Commission	FBW	Master plan, design	not executed
2006	Arumeru House	Usa River, Arusha, Tanzania	New residence	Private client	Private investment	FBW, GMP	Design	2008
2006	Mtoni Palace	Mtoni, Zanzibar	Conservation measures	ZNZ Government, Mtoni Marine	Mtoni Marine, Netherlands Embassy Tanzania	FBW, TU Delft	Research, master plan, design, site supervision	ongoing
2006	N'gambo	Zanzibar	Urban development	Antoni Folkers	Various sources	KU Leuven, TU Delft, Antoni Folkers	Research	2009

The cases were selected according to the following criteria:

- 1 A long term and profound personal involvement as designer and/or researcher;
- 2 Relevance to the respective discipline;
- 3 Sufficient availability of documentation (drawings, photographs, reports, literature);
- 4 Interviews with contemporary and historical stakeholders;
- 5 Revisiting of the projects.

As example of the reasons to select the case of the Ng'ambo in part I → pp. 60-96:

1 A long term and profound personal involvement as designer and/or researcher: in the period from 1985 to date I was involved as a researcher and/or designer of individual projects such as the Stone Town Conservation Scheme (1985-1990), design of the Minara Miwili Hotel (1990-1991), design and execution of Mtoni Marine Hotel (1990 to date), refurbishment of Hamerton House (1997-1999), research and design of the Mtoni Palace conservation project (2003 to date), advisor to the KU-Leuven master thesis research project on Ng'ambo by An Cornelis in 2008, and advisor to the photographic art project on the comparison of Zanzibar New Town and GDR New Town under Scholz by Mieke Woestenburg (2007-2009);

2 Relevance to the discipline:

how the ideals of the revolutionary government influenced the city development from early colonial planning to the contemporary laissez-faire situation, the juxtaposition of the historical Stone Town and the informal Ng'ambo, and the superimposition of the axial and orthogonal Zanzibar New Town onto the organic Ng'ambo structure;

3 Sufficient availability of documentation:

the well stocked and organized Zanzibar archives, rich and original material from the National Archive in Kew, the British Library, the Anthropological Library of the British Museum, Cambridge University Library, historical photographs and literature from the Dr Georg Lippsmeier library fund (IFT-archives), as well as material from my own collection.

4 Interviews with contemporary and historical stakeholders:

the city planner Ghalib Awad, project developer Nicola Colangelo, and former head of the Zanzibar planning department and honorary state secretary Mohammad Salim Sulaiman. Correspondence with researcher Garth Andrew Meyers (Kansas University).

5 Revisiting of the projects:

yearly work visits from 2005 to 2009.

All case study projects qualify as examples of European modern architecture imported into Africa. These projects were based on design and planning principles that were initially conceived behind European desks and in European architectural practices, whether the project was a large-scale urban development or a small-scale rainwater gutter. The subsequent encounter with the African context led to challenges varying in nature. This is what is at the core of this thesis, and which merits most attention.

Returning to the urban scale and the rainwater gutter scale brings us, as examples, to following findings: The analytically developed, structural plan for a city was challenged by the traditional African land rights and informally developed systems of trade and manufacturing → pp. 79, 124-128; the aluminum gutter was challenged by the enormous temperature strains and torrential African showers → pp. 178-188.

Structure and content of the thesis

The structure of the thesis follows the subdivision of the research queries into four sub-queries on four respective fields.

This subdivision leads to the four main parts of the thesis:

I 'Working on the African city' (Urbanism and architecture in Africa)

II 'Building in Africa' (Building technology and architecture in Africa)

III 'African comfort' (Building physics and architecture in Africa)

IV 'Monument care in Africa' (Architecture in the African heritage context)

Each part consists of one or two introductory chapters that present the context and specific challenges involved in the project, followed by two or three case analyses and a concluding chapter on the contemporary situation and future projections.

The five introductory chapters of the four parts: (part I) 'The Lost Cities of Africa' and 'The Modern African City'; (part II) 'Farewell to the African Arcadia'; (part III) 'The People and their African Environment' and (part IV) 'From Imhotep to Docomomo' paint the historical context up to the moment that the case-projects were carried out. These chapters together describe the history of the encounter of European modern architecture with African architecture up to the late twentieth century, as seen from the perspective of their respective disciplinary.

Knowledge of the pre-1884 situation is thought essential to understand the dialectics between Africa and the modern European World. However, the history of African architecture is described so thinly that it is hard to refer to other publications to acquaint the reader with sufficient knowledge required to understand the 1884 position. For these reasons, the historical overview begins before 1884.

Practical experience is reviewed and critically analyzed in the nine case studies entitled 'The Other Side of Zanzibar' and 'Popular Housing in Ouagadougou' in part I; 'The Faculty of Engineering in Dar es Salaam' and 'A Field Office in Wagadogo' in part II; 'The Dobie House,' and 'Turiani Hospital' in part III; 'The Rockhewn Churches of Lalibela,' 'The Restoration of St. Joseph's Cathedral,' and 'The Completion of the Mater Misericordia' in part IV. Each case study in itself consists of a specific introduction on the geographical and historical context, a project description and the findings of the revisit.

The projects selected for the case studies are shown in image on the inside of the back cover.

The 'Turiani Hospital' case study in part III, for example, commences with a

description of the geographical and financial constraints throughout time followed by the completion of the master plan in 1992, which marked the beginning of my involvement with the project. The works that were designed and executed subsequently in the period 1992-2000 are explained and analyzed, above all in relation to the specific challenges in the field of water management and microclimate. The study concludes with findings of the revisit in 2007.

The four concluding chapters: 'The Contemporary African City' in part I; 'Inno-native African Building Technology' in part II, 'Restitutions and Autarky' in part III and 'Monument Care in Africa' in part IV describe the contemporary situation and the issues that are identified on the basis of findings made through the case analyses.

These topical issues are summarized in the concluding chapter of this thesis in the form of answers to the above research queries. Then some suggestions are outlined in the form of propositions for a dialogue on the theory and practice of African architecture.

Definitions and Restrictions

This thesis is about reflection on architectural practice, in which the encounter of my European thought and practice with the cultural, technological, and natural African context is analyzed.

The title 'Modern Architecture in Africa' rouses varying expectations, which is due to the different existing interpretations and translations of the word 'modern.'

The notions of 'modern' and 'modernist' are to be read in the broad sense – not merely in their aesthetical or ideological parameters, but as a perceived and commonly understood notion of European development ideas, which eroded in the process of attempting to understand the encounter between the European and African architectures that I experienced. As such, 'modern' is no longer a reference to a distinctly defined concept, but rather to a perception. The process of erosion itself is described in the analysis of the cases and the final findings as well.

From the debates held at the first African Perspectives event in Dar es Salaam in 2005 may here be quoted a telltale example of this process. At source of confusion came to light at the close of the conference entitled 'Modern Architecture in East Africa around Independence.' Hilde Heynen alluded to this misunderstanding in her preface to the conference proceedings: 'This clash (about the value of modern heritage in Africa) between European expectations and African realities was reconfirmed, albeit in a completely different way (...). Here, it manifested itself as a different understanding of what was to be the central topic of the conference. For the European speakers, it was very clear that the topic was 'modernist architecture in East-Africa around independence'⁴⁵ – meaning that the focus was on a specific historical period and that the

fundamental issues focused on today's valorization of the buildings that emerged during that period. The other speakers more or less stuck to this scheme as well. However, the way in which discussions with the audience [consisting of a vast majority of East-Africans] almost always diverted away from these supposedly central issues, was very revealing indeed. Again and again the focus shifted from historical and conservation issues towards the question of 'how to build today.' Many people in the audience indeed understood 'modernist' not as a historical category referring to a clearly identifiable (and therefore closed) period of the past, but as an appealing qualification that should also apply to buildings of the present.'⁴⁶

The term 'architecture' has been applied in this essay to the built environment in a broad sense. In scale it ranges from the individual building, rural settlement, or cultural landscape to the metropolis. Architecture is planned and built by humans, all human-built environments can thus qualify as architecture. According to the above definition, anyone can qualify as an architect, not only professionals who are academically trained.

'Africa' is treated as the continent as a whole, but the emphasis of the research is on sub-Saharan Africa. South Africa and the Maghreb are less represented, however they explicitly form part of the discourse. The uniqueness of South Africa's history and current position in the World, plus the strong ties of the Maghreb with the Oriental world and its relative isolation from the rest of the continent via the Sahara, might be a reason to exclude them from these regions — p. 13. However, it could be argued that Ethiopia should also be excluded, because of its unique geographic position and history, and Madagascar as well for being an island with strong Asian roots. In the thesis, my personal experience is limited to the twelve African countries in which I have worked; Tanzania, Kenya, Uganda, Ethiopia, Egypt, Mozambique, Central African Republic, Ghana, South Africa, Burkina Faso, Mali, and Morocco — p. 15.

Including the entire continent in the essay, on the other hand, makes it possible to highlight the continent's important architectural links and the specificity of its architectural expression and principles in relation to the rest of the world. This position was formulated during the second African Perspectives event, the conference on 'African Architecture Today' in Kumasi in 2007. The closing statement this time was that, notwithstanding the extreme diversity of the architecture throughout continent, one may speak of a 'unified body of experience' that is rooted in an 'organic, spiritual Africanness,' and creating unmistakably 'African Architectures' that recognize regional variety.⁴⁷ To this the 'wish to establish an African architecture' may be added, which was expressed by multiple presenters at the conference, a desire to give identity to an undervalued culture. For José Forjaz, for instance, this desire was expressed as 'this African architecture [...] must be for all Africans as it was, traditionally, for many centuries. In that difference we may find the key for its difference from all other parts of the world.'⁴⁸

45 Heynen is also confused here; the title of the conference was 'Modern Architecture in East Africa around Independence'.

46 Hilde Heynen, A Challenging Encounter, in: Folkers et al. (ed.) 2005, p. 10.

47 Handwritten conclusions of the closure session Antoni Folkers, *Cahier XXV* (unpublished) Kumasi 8th June 2007.

48 José Forjaz, 'What is an African architecture? Proceedings of African Architecture Today,' on <http://www.mudonline.org/aat/papers.html> Kumasi, June 2007.

This thesis may be qualified under *African Studies*. Hence, the ghost of Said's 'Orientalism' looms large.⁴⁹ This danger was always imminent during the compilation of my writing — p. 17. It was raised again not too long ago by Manthia Diawara in context with comparable issues in African film culture: 'Even today, any Tarzanist artist or entrepreneur can come from Europe or America and take whatever he/she wants from Africa without any regard for Africans themselves. The lessons we learn from 'Bamako' (a film by Sissako) are that the images of Africa belong to Africans, and that they cannot be appropriated by some European or American capitalist or artist in need of self-aggrandizement in the West. [...] Thus, if a creative contemporary cinema is going to come out of Africa, it will be created by Africans themselves, not by a son or daughter of Tarzan; Godard notwithstanding.'⁵⁰ Humanitarian 'Tarzanism,' according to Diawara, applies to European aid workers who think they can solve Africa's problems by landing there, hand-picking some people, and organizing them to fight against ignorance, disease, and corruption whilst staying clear of the generally rotten African governments.⁵¹

Why then should a Dutch architect write about African architecture? Has there not already been enough written and hypothesized by western authors on Africa, in order to stigmatize yet again an important part of its culture — this time, architecture?

I may not be able to respond to this question satisfactorily at this time — pp. 14-17. I feel myself part and parcel of an ongoing debate, in which Said's position, dominant over the past two decades, is now being challenged. Against Said's position, it can be argued that curiosity for curiosity's sake is a healthy human attribute, and that there is not always a second agenda hidden behind this curiosity.⁵²

Findings and Conclusions

♦ MODERN ARCHITECTURE IN AFRICA — CRITICAL REFLECTIONS ON ARCHITECTURAL PRACTICE IN BURKINA FASO, TANZANIA, AND ETHIOPIA (1984-2009)

The central research query: *how have housing, urban planning, and building projects executed in Burkina Faso, Tanzania, and Ethiopia by means of European (aid) import during the period between 1984-2009 held up in relation to the African context?* is answered in detail in the concluding chapters of the four parts, and the summary of these specific findings are listed in the following concluding chapters of the four parts.

In this chapter, a response is attempted to the generalized query following the central research query: *what findings can be distilled from the encounter between late twentieth century European architectural thought and African architectural culture?*

It may be generally concluded that modern architecture has left an indelible mark on Africa and that it has been widely accepted. The formal language of European modern architecture did firmly take root in Africa and was generally adopted as the expression of the new Africa since Independence — pp. 51-53, 163-164. The grids of N'gambo New Town and Wagadogo — pp. 81, 116, the Uhuru and Suka funfairs — pp. 91-92, 132, and the Michenzani and Bilimbambili housing schemes — pp. 88, 129 stand proof that the governments and population alike were seduced by the aesthetics of modernity that would display the city's progress to the outer world.

There is reason to believe that modern architecture, through the appropriation and modification of the modern skeleton by the African spirit and context, will continue to play an important role in the development of African architecture. The contemporary appropriation and adaptation of modernism as currently taking place, for instance in the African 'Ultramodern architecture' hype — p. 213-216] may support this expectation.

The road of preserving or reintroducing traditional vernacular African architecture as a solution to the future of architecture on the continent is a dead-end strategy — pp. 210-212, 347. This architecture will survive a while longer, and its rudiments are becoming tourist destination in itself — pp. 202-204, 348. This is an unfortunate loss, but it is unproductive to shed tears over its demise. It is impossible to safeguard or revive original African architecture, because it would not help to bring back the old spirit, which inevitably disappears into the dark African forest.

However, vernacular architecture, be it traditional or contemporary, should play an important role in the development of African architecture. It is in this architecture that the African response to European modern architecture is possibly most outspoken.

It is through fusion of modern and vernacular African architecture that workable solutions for the spatial development of Africa may be expected. Hybrid solutions, *métissage* of culture and creativity in architecture may bring innovation and improvement, in a 'Baroque complexity' as proposed by Graafland and Chungling Kwa — p. 147. In pluriformity as it has happened to the design of food, which is an art form related to architecture. Food worldwide — that is, for those who can afford food of a certain quality, which, unfortunately, excludes a large percentage of the world's population — has immensely improved over the last quarter century due to the Diaspora of various food cultures.

Perhaps the most charged finding is that there has always been a fundamental misunderstanding between European and African positions. This misunderstanding goes beyond the cultural differences between African and European partners. It can be compared metaphorically to a form of autism, illustrated by the way which typical European architectural

49 Said 2003.

50 Manthia Diawara, *African Film — New forms of Aesthetics and Politics*, Prestel, Berlin 2010, p. 119.

51 Diawara 2010, pp. 76-77.

52 For instance the editorial by Afshin Ellian in *NRC Handelsblad*, July 17, 2010.

pet-subjects, such as centrally planned public social housing — pp. 44, 223-224 or stabilized mud technology — pp. 224-226 are being recycled twenty years later, despite their obvious shortcomings in the African context.

This situation is largely rooted in the colonialist era when the ideal urban or structural planning system strived for strict segregation. In a way, such segregation suited a purist modernist planning ideology and analytical approach, which resulted in physical separation and zoning [see, amongst others pp. 40-42]. However, this does not explain the situation entirely, as the lack of African response cannot only be prescribed to European dominance or aloofness. There was, according to Kingelez and Addo, a certain phlegmatic attitude from the African perspective throughout the past century — p. 228 and opening citation.

This finding makes palaver, or dialogue in itself, a conditional agenda for making progress in the mutual understanding between Africa and Europe. Investing in such a dialog could well become a very productive cooperation, as can be concluded from the case study on 'Popular housing in Ouagadougou' [pp. 108-137, 146-148].

Ultimately, it seems that the next stage in the development of architecture will entail the creation of a sustainable built environment. A sustainable built environment is required throughout the world and not only in Africa, however, Africa is still the most sustainable continent in the world, in terms of per capita use of energy, minerals, and water. The search of sustainable research, education, and practice in Africa and the rest of the world will demand a hybrid and pluriform approach through true dialogue. The direction proposed is to see ways in defining the eclectic response to romantic and purist twentieth century modernity.⁵³

♦ WORKING ON THE AFRICAN CITY

The sub-query on urbanism and architecture in Africa was formulated as: *what can be learned from the results of different European urban planning and design methodologies that were applied to the African cities; in particular of experiences in Zanzibar and Ouagadougou?*

For both the N'gambo and Ouagadougou cases it is apparent that the past century provided clear ground for import of planning and design ideologies of various kind and origin, even going beyond the Western-European origin as in the case of Zanzibar.

The various low-cost housing schemes of Ouagadougou — pp. 128-131 and Zanzibar — pp. 76-77, 84-89, though rationally planned and of thoughtfully executed, have proved to be too costly for the country. Only a few thousand middle or upper class citizens benefited from these schemes, compared to the half a million citizens who benefited from the far more modest plan for Ouagadougou's spontaneous settlements.

The African city of today may well be described as chaotic, but at closer inspec-

tion, it does in fact function. It is amazing to see how vibrant and pleasant African city life can be. This functionality of the city is often ascribed to 'informal' structures but, as we have seen, these informal structures have become intertwined with the 'modern skeleton' of the city — p. 143, 147-148. This modern skeleton, introduced by European planners and urban designers, encompasses both the physical and immaterial aspects, such as a structural vision, a master plan, planning regulations, and infrastructure.

The book *Planet of Slums*, an influential work on the cities of the developing world by Mike Davies, states that 92.1 percent of Tanzania's urban population is housed in slums.⁵⁴ In other words, Dar es Salaam, which is by far the largest city of the country, would consist most likely of at least 90 percent slums. UN-Habitat⁵⁵ defines a slum household as a group of individuals living under the same roof in an urban area who lack one or more of the following:

- 1 Durable housing of a permanent nature that protects against extreme climate conditions.
- 2 Sufficient living space, which means not more than three people sharing the same room.
- 3 Easy access to safe water in sufficient amounts at an affordable price.
- 4 Access to adequate sanitation in the form of a private or public toilet shared by a reasonable number of people.
- 5 Security of tenure that prevents forced evictions.

According to this definition, the majority of the neighborhoods of Dar es Salaam qualify as slums. At the same time, the notion of 'slum' is interpreted, by most people I know, as squalid living conditions, consisting of makeshift and filthy neighborhoods from which it is impossible to escape.

This is not exactly an optimistic take on the African city, and indeed Davies' book is grim reading. Yet, a closer look at Dar es Salaam's slums — figures on p. 53, bottom and p. 140] shows a city in transition, admittedly not provided with all of the modern amenities we are accustomed to in Europe, but still far from a squalid collection of shacks. It is advisable to be careful with the use of the term 'slum'. There is no doubt that there are neighborhoods in great African cities that do not provide humane living conditions, but there are far larger areas in those same cities that might not meet western standards, but are a far cry from a hopeless 'slum'.

The Larlé Extension — pp. 134-137 and Ng'ambo — pp. 76-78, 90 in Zanzibar qualify as informal settlements and, according to the UN Habitat definition, as slums. Yet people here live a respectful life, maybe not in conditions that match our standards, but in neighborhoods that are well-maintained, clean, safe and vibrant. The houses are largely technically sound and decorated to be attractive. The new extensions to Ng'ambo — p. 218 are again 'informal,' but at a closer inspection they adhere to a modernist town plan and the housing typologies are adopted from European modernity. This makes it difficult to qualify them as 'informal settlements.'

⁵³ For instance that, which Michiel Schwarz and Joost Elffers coined as 'Sustainism' in their 'Manifest voor het sustainisme,' *NRC – Handelsblad* Jan. 14, 2011.

⁵⁴ Mike Davies, *Planet of Slums*, London: Verso, 2006, p. 24.

⁵⁵ www.unhabitat.org/documents/.../SOWCR%205.pdf - consulted October, 13 2010.

I would like to make a case for the abolition of the division of the African city into ‘formal’ and ‘informal.’ This division was a deliberate colonial construct — p. 40, and it fitted very well into European, modern architectural and analytical thinking. It is now time to ‘deconstruct’ this artificial division. At this stage, African cities might still be spared a deepening of the imagined cleft between the haves and the have-nots.

Cities are built but they also build themselves.⁵⁶ If this simple statement may be accepted as a starting point for the research, planning, and practice required to build African cities, there are two consequential findings that need further attention: *the value of popular architecture in building the city* and *the right to, as well as the necessity and fun of self-building*.

The case studies focusing on Zanzibar and Ouagadougou have shown that a modern skeleton of the city is important but not alone sufficient to realize an African-aspired, African modern future. For these relatively well-managed smaller metropolises, the modern skeleton is still strong compared to megacities, such as Lagos and Kinshasa — pp. 141-143, 283-284.

There is no future thinkable for the booming African city without popular architecture, and therefore, again, popular and academic architecture should join hands rather than act as contradictory forces — pp. 147-148, 216-219. The term *popular architecture* was suggested by Paul Jenkins, which mirrors the term popular music, to refer to ‘spontaneous,’ ‘non-academic,’ ‘contemporary vernacular,’ or ‘informal’ architecture.⁵⁷ Continued ignorance and abnegation of African popular architecture could even prove harmful. Research into popular architecture is, in my opinion, a matter of high priority. This research must begin with the premise that understanding of relationship between the hardware of the modern African city and the underlying world, as explained by De Boeck — pp. 143-144, is a different understanding than the dialectics between the physical modern European city and its contemporary culture.

Most popular housing qualifies as *self-built*, if defined as the act of building a house controlled, designed, and/or carried out by the dweller himself. In Africa, a vast majority of the dwellings are self-built. This situation will not change in the years to come, notwithstanding new building regulations or new large-scale initiatives in institutionalized, low-cost housing projects — pp. 44, 223-224. For this reason it is thought advisable to maintain and improve popular, African self-built culture wherever possible.

As a side step, self-building has been marginalized for a long time in the Netherlands. It may enjoy a modestly growing popularity today, but the populace has meanwhile forgotten the culture of building that today still exists in Africa. In the Netherlands, popular taste degenerated in the process of a long tutelage of architects and later project developers, realtors, and system-builders. This could be reversed; architectural education to become part of secondary education curricula.

♦ BUILDING IN AFRICA

The sub-query on building technology and architecture in Africa focused on the apparent controversy between late Modernist approaches and Appropriate Technology approaches, in order to shed light on the encounter of European and African building cultures: *How has European modern building technology proved itself in Africa; in particular, how can the results of late modernist building technology of the 1970s and the appropriate technology of the 1980s, as encountered in Dar es Salaam and Ouagadougou, be compared?*

The technology applied in the Faculty of Engineering (FOE) in Dar es Salaam was of European import origin. So was the DGUT site-office in Ouagadougou. The FOE building structure, in its simple ‘structuralist’ typology and sturdy technology, survived and served its function better than the vaults of the stabilized mud buildings in Ouagadougou. However, the fixtures and installations of the FOE building failed, because they were dependent on imported technology, materials and management.

In terms of technology, the modern reinforced concrete skeleton has become paramount in both academic architecture and in the popular building sector as well. This skeleton – derived from Le Corbusier’s ‘maison domino’ – secures and safeguards citizens against natural disaster such as fire, flooding, hurricanes, and earthquakes. It also offers space for the *sukuma-twende*, or stone-by-stone gradual building tradition of Africa — p. 219 because it is flexible and allows for future alterations and extensions to the building.

The corrugated galvanized iron roof-sheet and the standardized cement block are also undeniably products of modern European architecture — pp. 222-223. Though not always appreciated by European scholars, aid institutions, and practitioners in their application in the housing for the millions and millions of poor African citizen, the sheer quantity of these building elements found on the continent is best proof of their value. So far, no other components have been able to compete in building the exploding contemporary African city.

The above facts – the success of the gi-sheets, the cement block and the reinforced concrete skeleton – provide added argument for the abolition of the informal city, of ‘informal architecture’. The vigor and creativity of popular African architecture may prove to be an incredible inspiration for the future of the profession on a global scale. As for instance, Joe Osae-Addo, Francis Kéré, and Heinrich Wolff verify in their work, ‘Inno-native technology,’ starting off with basic traditional and industrial materials and grassroots technology,⁵⁸ carries strong potential for refreshing architecture — pp. 222-233.

An important finding in the study on African building technology is the issue of temporality versus durability, what I may call the Bijdendijk-dilemma — p. 199-200. This dilemma concerns the importance of the relationship between lifespan and the level of sustainability of a building. Durable buildings have become the rule in Europe, even for structures

⁵⁶ De Boeck 2004, p. 144.

⁵⁷ Interview with Paul Jenkins, Edinburgh, June 2010.

⁵⁸ Coined by architect ‘Ora Joubert as ‘Afrotech’.

that can be expected to enjoy a short life span. This results in a great deal of non-sustainable wastage → pp. 287-288. The life span of a dwelling or other built structures can usually be much better adapted to their anticipated functional life span, which is the case in African traditional architecture → pp. 155-159, 237-238. This is similar to fashion apparel. Marrying sophisticated technology with organic materials in Inno-native fashion may play an important role in an overall reconsideration of the life span of specific architecture → p. 233.

♦ AFRICAN COMFORT

The sub-query on building physics and architecture in Africa was formulated as *how did European modern architecture respond to the African physical context; in particular, have late twentieth century innovative adaptations to modernist principles as applied in building projects in Tanzania proved to be an improvement in relation to traditional African architectural response to climate?*

The planters' house typology as applied by the European colonists in the first half of the twentieth century proved to be optimal for the warm humid climate zones of sub-Sahara Africa from a technical point of view → pp 243-247. This typology was satisfactorily reapplied in the designs for both the Dobie House → pp. 262-265 and Turiani Hospital → pp. 276-281 in terms of microclimate control. This supports the conclusion that a lot of money and energy can be saved on mechanical installations by applying time-proved building solutions that are based on local experience.

European modern architecture in Africa between 1945 and 1975 expressed itself predominantly in a late International Style, which was in itself strongly influenced by Mediterranean architecture → pp. 244-251. The shining white, flat-roofed buildings of the International Style were however not as suitable for most of the sub-Saharan climate zones → p. 249 as they pretended to be. Heterogeneous African traditional architecture, which European modern architects discarded as irrelevant for the development of the continent until 1975, had proved itself more sustainable in regards Africa's various climatic contexts → pp. 237-241.

However, the spread of mechanical air-conditioning from the 1960s onwards made any attempt at climate respondent architecture redundant, at least for those with money, such as the colonials and post-colonials → p. 284. The emphasis on climate respondent architecture reemerged with the AT movement of the 1980s → p. 192 and again in the sustainable building ideology that was introduced at the very end of the twentieth century.

In the Dobie House and Turiani Hospital, a number of innovative technologies were applied in order to win and save energy, as well as to harvest, save, heat, and purify water. However, not all of them successful in the end → pp. 264, 274-281. These technologies reappeared ten years later on the sustainable building agenda in the Netherlands, which confirms the suspicion that Africa did in fact serve as a testing grounds for European modern architecture → p. 163.

One core finding⁵⁹ is that the success of transfer of technologies depends highly on cultural acceptance. If there is little or no understanding of the (immaterial) local culture, then the sustainability of the architectural intervention may well fail, regardless of how well it is equipped with technical devices of high sustainable merit. The comprehensive understanding of context, including natural, cultural and social context is baptized *Restituitas* → p. 288. *Restituitas* was proposed as a fourth pillar to Vitruvius' framework by Eoin O'Cofaigh and his team in the important, EC-commissioned study 'A Green Vitruvius'.⁶⁰ Cultural identity is thus a core issue for the sustainable future of the African built environment. What then is and will be African architectural identity is another issue for research, but a warning is in place here. The propagated fusion of African and foreign culture may create construed identities. The dominant European writing culture to date has been strongly influencing the development of African cultural identities. The question of whether African identity is defined by Africans or by outsiders is explained in this thesis as the Silvester-dilemma → p. 347. This goes back to Osaë-Addo's and Kingelez' statements on presumed African shyness or laziness → p. 228: was it the Congolese artist Pume Bylex or the European producers who created the coherence and conclusions in Bylex' theories in the film 'God is No Bylex?'⁶¹

A last finding of importance from the case studies concerns the relationship between autarky and centralized systems. Modern European architecture between 1950 and 2000 relied heavily on centralized infrastructural systems in developing the African built environment. The investments made into these infrastructural systems ultimately fell far short of that which was required → pp. 143-145, 283-285. The strive for independence from central infrastructure by means of autarky → pp. 288-290 may in fact result in more affordable and sustainable comfort to the African citizen.

♦ MONUMENT CARE IN AFRICA

What has been the impact and role of European aided monument protection in Africa as experienced in church restorations in Tanzania and Ethiopia? was the sub-query on architecture in the African heritage context.

The restoration and conservation works analyzed in the three case studies share a grassroots approach. Even though the architects and engineers who worked on these schemes were of European origin, they were no experts at all in the field of monument care and they were not supported by specialists or controlled by regulations. This is due to the fact that all three are pioneering projects in the field of monument protection in sub-Sahara Africa.

Monument protection as an expression of cultural identity was a rarity in Africa, although it perhaps has its origins in Egyptian Antiquity → pp. 301-306, 341. The European colonialists hardly considered African built heritage worthwhile conserving until after 1975, with the exception of Maghreb' Antiquity. A case in its own is the reconstruction of the mosque of Djenné by the French around 1907 → p. 348. One late colonial initia-

59 Not restricted to building physics.

60 O'Cofaigh 1999.

61 *God is No Bylex*, film produced in 2007 by Cargo Media Ruimte.

tive was the listing of monuments, such as, for instance, Mtoni Palace on Zanzibar → p. 341.

The lack of interest in built heritage was inherited by the regimes of the new, independent nations. This may be due to the fact that the vast majority of built heritage in Africa dates from the twentieth century, hence the colonial period. This African position towards built heritage is by and large unchanged today → p. 343, and African involvement in international organizations that are active in the worldwide conservation of built heritage, such as UNESCO, Icomos, the Aga Khan Trust for Culture, and Docomomo remains rather small. Most schemes to conserve African built heritage are thus initiated from abroad, such as the measures taken to conserve the rockhewn churches of Lalibela → pp. 317-322.

European governments are also active in the field through what is known as 'shared built heritage' schemes. 'Shared built heritage' is heritage of colonial origin and its notion is an unhappy construct; it reeks of neocolonialism because it implies a claim of the former colonialists on this heritage, and I side with Johan Lagae in his opinion to openly call this heritage 'colonial heritage' → p. 343 and to leave its future in the hands of the owners, the African nations.

So far pragmatism seems to guide the contemporary policy of African institutions in their reaction to these foreign initiated conservation programs. Monuments attract tourists, experts and 'projects' that bring in cash and opportunities in the slipstream.

Monument building and monument protection related to, for instance, the struggle for independence or the memory of important feats or persons is now emerging in Africa on a fairly large scale. It may also point to a growing adoption of monument protection along the lines of European architecture. The initiatives for the restoration works on both St. Joseph's Cathedral → p. 326 and the Mater Misericordia in Bukoba → p. 336 were taken by local institutions.

The notion of 'authenticity' is another construct of European architectural thought. The authentic state of a medieval Dutch church is extremely vague to define and completely impossible for the great mosque of Djenné → pp. 347-348.

'Monument protection' and the implementation of conservation measures in Africa still is dominated by European culture as stated above. The need to conserve built heritage seems not to be inherent to the African mind, whereas *immaterial* heritage plays a vital role in the traditionally predominant oral African culture. The way built heritage is conserved through the European modern architectural approach leads to freezing the built environment. Dematerialization of the built heritage by means of developing the notion of the 'intangible' or spiritual heritage of space and place → pp. 347-348] may be helpful in the thawing process.

Propositions

- 1 Import of technology from Europe to Africa has less than a 25 percent chance of success if it is not supported by an understanding of, and adaption to, African culture.
- 2 The Venice Charter can be modified to apply to Africa and the Netherlands by replacing the criteria of physical authenticity with the criteria of immaterial heritage.
- 3 Architecture should be taught at secondary schools in Africa and the Netherlands to revive and improve self-built culture.
- 4 The fact that the tomb of the African architect Imhotep has never been found by any academic Egyptologists is more proof that he still is the most ingenious architect ever to have lived.
- 5 Modernism was an architectural style belonging to the period from 1920 to 1960, which was sold as a scientifically supported ideology of social relevance.
- 6 Purism in architecture, as advocated by the Cistercians, Ibadhi, and modernists sprouts from romantic idealism and tries to purge the world of evil, with the goal to create order in accordance with a divine template.
- 7 Teachers' Modernism as defined by Hans van Dijk, which dominated education and thought at the Faculty of Architecture at Delft University of Technology in the 1970s and 1980s was comparable to classicist and beaux-arts approaches in its normative-aesthetical teaching conventions.
- 8 The Teutonic nobles were responsible for inventing Gothic architecture, when they were roaming through the high-pillared halls and the perpetual twilight of the interminable beech tree forests that covered Germany until the late Middle Ages, as described by *Forstingenieur* Christian Kuchli.
- 9 The periostacum of the Conus Auger is malacological proof that beauty can be entirely purposeless and, thus, as Alain De Botton argues, must be a remnant of the divine.
- 10 Everything is true, if you believe that everything you believe is true. ('Alles is waar, als je gelooft dat alles waar is wat je gelooft.' Marten Toonder, 'Letter to the author', May 9th, 1988)

Stellingen

- 1 Het importeren van Europese technologie in Afrika heeft een slaagkans van minder dan 25% indien het niet geschraagd wordt door kennis van en respect voor de Afrikaanse cultuur.
- 2 Het Charter van Venetië kan gaan functioneren voor Afrika en Nederland indien criteria gebaseerd op fysieke authenticiteit vervangen worden door criteria gebaseerd op immateriële waarden van het erfgoed.
- 3 Er zou architectuuronderwijs gegeven dienen te worden op middelbare scholen in Afrika en Nederland om de zelfbouwcultuur te stimuleren en te verbeteren.
- 4 Het feit dat de academische Egyptologen het tot op heden niet is gelukt de graftombe van Imhotep te ontdekken is wederom bewijs van het feit dat deze

Afrikaanse architect de grootste aller tijden is.

5 Het Modernisme uit het tweede kwart van de twintigste eeuw was een architectuurstijl die werd verkocht als een op wetenschap gestoelde ideologie in dienst van de maatschappij.

6 Het purisme in de architectuur, zoals bijvoorbeeld gepredikt door de Cisterciënzers, de Ibadhi and de Modernisten, komt voort uit een romantisch idealisme dat tracht de wereld te zuiveren van het kwaad, met als ultiem doel een op een goddelijk patroon gebaseerde orde te bereiken.

7 Het 'Onderwijzers Modernisme' zoals door Hans van Dijk gedefinieerd, domineerde het architectuuronderwijs op de Technische Hogeschool van Delft in de jaren zeventig en tachtig van de vorige eeuw en als zodanig vergelijkbaar met de esthetisch-normatieve onderwijsmethoden van de classicisten en de beaux-arts.

8 De Gotische architectuur werd uitgevonden door de Teutoonse ridders die zwierven door het schemerdonker van de eindeloze, hoogstammige beukenwouden die, volgens de *Forstingenieur* Christian Kuchli, Duitsland tot het einde van de middeleeuwen bedekten.

9 Het periostracum van de Conus Auger is malacologische bewijs dat schoonheid volstrekt nutteloos kan zijn en daarom een overblijfsel is van het goddelijke zoals De Botton beweert.

10 Alles is waar, als je gelooft dat alles waar is wat je gelooft. (Marten Toonder, *brief aan de auteur* 9 mei 1988)

Epilogue

My position in Africa, after 1987, has become increasingly distanced from African governments due to experiences with corruption and the low performance of government officials. I never took on a project where corruption was involved, even though I had several chances of acquiring major commissions if I would share some of the fees with a governmental official, who was instrumental in getting me the job.

Most of my work was implemented through an independent approach, perhaps as Diawara coined, as a true 'Tarzanist'.⁶² I cannot but claim that my trust in African professionalism has been low: from the beginning via the intrinsically discriminatory culture in which I grew up, during my career in Africa via the condescending attitude of the majority of the white people with whom I worked, and, finally, via the disappointing experiences with some African professionals with whom I worked. I wish it were different, I wish I had been less condescending myself.

But when I started working as an architect in Tanzania I was the 228th architect to be registered in the country, and the 44th member of the Architectural Association of Tanzania. Certainly over half these numbers were European architects, and most of these had departed or passed away. Tanzania is a country of now almost forty million people, my home country consists of barely sixteen million people, of which, I have been told, are some 10,000 architects.

No wonder that, to my European standards, I often felt alone in the midst of ignorance: 'big fish, small pond.'

But this situation is rapidly changing. The era of European dominance is most definitely over. And European dominance will not be replaced by Chinese dominance in Africa, as some people say, it will be African control of Africa. This will certainly apply to the development of the planned built environment: it is only a few years since sub-Saharan, African architects came to stage, and until recently, African architectural theorists could be found only with the help of a large magnifying glass. Call it the *Afrenaissance* as did Thabo Mbeki and Ali Mazrui, the era of Kingeles has commenced – as the opening citation of this thesis postulated.

62 Diawara 2010, p.76.

Curriculum Vitae

Antoni Scholtens Folkers was born on June 5, 1960 in Delft and followed secondary education (vwo) at the Haags Montessori Lyceum in The Hague, completed in 1978. He took courses in art and art history at the John Carroll University in Cleveland and the University of Utrecht (propaedeuse), he changed to architecture at the Delft University of Technology in 1979, from which he obtained his master diploma (engineer) in architecture and urban design in 1986 (cum laude).

Meanwhile, he began working for the Institut für Tropenbau in Starnberg (1983-1985), and for the University of Amsterdam in Ouagadougou (1984-1985). After graduation, he worked for J.B. Ingwersen (1986-1987) in Amsterdam and Lippsmeier + Partner (1987-1991) in Düsseldorf and Dar es Salaam, before founding his own practice, FBW, with offices in Utrecht (1991), Dar es Salaam (1994), Manchester (1995), and Kampala (1997).

In 2001 he was co-founder and first chairman of ArchiAfrika and in 2010 one of the founders and directors of African Architecture Matters. He published a number of articles and books on African architecture subjects such as *Discretio* (2003) and *Mtoni-Palace, Sultan & Princess of Zanzibar* (2010).

In addition, he still is director of FBW architects and responsible for the design and execution of work in the Netherlands and beyond. FBW was awarded various prizes for their work, such as the Dutch Brick Award for the Omnizorg Centre in Apeldoorn, and an European award for spatial development in nature for the Visitors' Center of Natuurmonumenten in Rheden.

Summary

Modern Architecture in Africa – critical reflections on architectural practice in Burkina Faso, Tanzania and Ethiopia (1984-2009)

The thesis concerns a critical revisit to and reflections of 25 years of architectural practice in Africa, through nine projects in which I was involved as designer and/or researcher (see inside back cover):

- 1 Urban development of N'gambo in Zanzibar
- 2 Housing development in Ouagadougou
- 3 The Engineering Faculty of the University of Dar es Salaam
- 4 The site office of the Wagadogo-Nossin resettlement project
- 5 The Dobie house in Masaki
- 6 The renovation and extension of Turiani hospital
- 7 The conservation of the rock-hewn churches of Lalibela
- 8 The restoration of St. Joseph's cathedral in Dar es Salaam
- 9 The restoration and completion of the Mater Misericordia church in Bukoba.

These nine case studies are approached from a broad perspective, which also presents the history and historiography of the African architectural context. This comprehensive perspective is essential for the thesis, due to the scarcity of available literature regarding the history of African architecture in general, and the encounter of African and European architectures in the twentieth century specifically.

The central research query is formulated as: *how have housing, urban planning, and building projects executed in Burkina Faso, Tanzania, and Ethiopia by means of European (aid) import during the period between 1984-2009 held up in relation to the African context?* This research query is subsequently reformulated

in a more general sense as: *what findings can be distilled from the encounter between late twentieth century European architectural thought and African architectural culture?*

The research query is applied to four disciplinary fields of architecture – urban planning and design, building technology, building physics, and monument protection – consequently leading to four sub-queries related to these fields. Each disciplinary sub-query is treated as a part of the thesis. The main body of the first volume of the thesis thus consists of four parts, each with an introduction, the respective case studies, and a concluding chapter on the contemporary situation of the discipline in Africa.

The findings taken from the four parts are summarized in the second volume of the thesis and elaborated into a number of propositions. The central conclusion is that, notwithstanding the fact that modern architecture imported from Europe has taken a firm foothold on the African continent, there is still an existing fundamental, mutual misunderstanding in the architectural relationship between Africa and Europe a century after the introduction of this architecture. The European attitude can be described as almost autistic in its stubborn lack of understanding of African culture and the African attitude as phlegmatic. Recently, however, mainly due to the fast growing numbers of African architects and architectural theorists, an intensive dialog is emerging that will forever change this situation and will contribute to sustainable innovations in African architecture.

Nederlandse samenvatting

Moderne architectuur in Afrika – kritische reflectie op architectuurpraktijk in Burkina Faso, Tanzania en Ethiopië (1984-2009)

Het proefschrift betreft de kritische terugblik op 25 jaar Afrikaanse praktijkervaring aan de hand van negen projecten waarbij ik als ontwerper en/of onderzoeker betrokken was (zie binnenzijde achterflap):

- 1 de stadsontwikkeling van N'gambo, een zogenaamd informeel stadsdeel van Zanzibar,
- 2 volkshuisvesting in Ouagadougou,
- 3 de ingenieursfaculteit van de universiteit van Dar es Salaam,
- 4 het projectkantoor voor het volkshuisvestingsproject van Wagadogo-Nossin in Ouagadougou,
- 5 het Dobie huis in Masaki,
- 6 het ziekenhuis van Turiani,
- 7 de overkapping voor de rotskerken van Lalibela,
- 8 de restauratie van de Sint Jozefskathedraal in Dar es Salaam en
- 9 de voltooiing van de Mater Misericordia basiliek in Bukoba.

Deze negen projecten worden belicht vanuit een brede benadering waarbij de voor die projecten relevante Afrikaanse architectuurgeschiedenis wordt beschreven. Deze wordt essentieel geacht vanwege de beperkte beschikbaarheid van literatuur over de geschiedenis van de Afrikaanse architectuur in het algemeen, en de confrontatie van de Europese met de Afrikaanse architectuur in de 20e eeuw in het bijzonder.

De centrale vraagstelling betreft '*hoe de verschillende uit Europese import (hulp) verwezenlijkte projecten in Afrika uit de periode 1984-2009 zich hebben bewezen in de Afrikaanse context*'. Deze vraagstelling is vervolgens meer algemeen geformuleerd als '*wat er kan worden opgestoken uit de ontmoeting tussen laat-twin-*

tigste eeuwse Europese architectuuroopvattingen en de Afrikaanse architectonische cultuur'.

Deze vraag wordt vervolgens opgesplitst in vier deelvragen die een herhaling van de hoofdvraag zijn maar dan toegespitst op vier disciplinaire vakgebieden van de architectuur: stedenbouw, bouwtechniek, bouwfysica en restauratie. Het eerste volume van het proefschrift is opgebouwd uit vier delen die de vier disciplines betreffen met elk een inleiding, de case studies en een schets van de huidige situatie op het betreffende vakgebied in het licht van de dialoog tussen Afrikaanse en Europese architectuur.

De bevindingen uit de case studies zijn samengevat in het concluderende hoofdstuk in dit tweede volume en vervolgens in een aantal stellingen uitgewerkt. De centrale conclusie is dat er ondanks het feit dat de moderne, uit Europa geïmporteerde architectuur zich onwrikbaar heeft gevestigd op het Afrikaanse continent, er een eeuw na de introductie van deze architectuur nog steeds sprake lijkt van een gebrek aan wederzijds begrip in de relatie tussen Afrika en Europa op het gebied van de architectuur. Het Europese standpunt kan als autistisch worden gekenmerkt, in haar volhardende onbegrip van de Afrikaanse cultuur. Het Afrikaanse standpunt is afwachtend en flegmatisch. Sinds kort, met name door de versnelde groei van het aantal Afrikaanse architecten en architectuurtheoretici, is er echter een dialoog aan het ontstaan die deze situatie zal gaan veranderen en een belangrijke bijdrage kan gaan leveren aan een duurzame vernieuwing van de Afrikaanse architectuur.

Colophon

Author Antoni Folkers

Graphic design Piet Gerards Ontwerpers

Printing Van Hooren bv

1

Urban development of N'gambo
in Zanzibar

→ pp. 60-96

2

Housing development
in Ouagadougou

→ pp. 98-138)

3

The Engineering Faculty
of the University of Dar es Salaam

→ pp. 170-198

4

The site office
of the Wagadogo-Nossin resettlement project

→ pp. 199-209

5

The Dobie house
in Masaki

→ pp. 256-267

6

The renovation and extension
of Turiani hospital

→ pp. 268-281

7

The conservation
of the rock-hewn churches of Lalibela

→ pp. 312-323

8

The restoration
of St. Joseph's cathedral in Dar es Salaam

→ pp. 324-331

9

The restoration and completion
of the Mater Misericordia church in Bukoba

→ pp. 332-339