



# Modernist architecture and ‘the tropical’ in West Africa: The tropical architecture movement in West Africa, 1948–1970

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## Abstract

This is a short account of the evolution and development of the Tropical Architecture movement in British West Africa, from the late 1940s to the early 1970s. It considers the conceptual grounding for Tropical Architecture, its key architects and a select number of buildings that describe the era. Set in a chronological format the paper considers the socio-political, economic and aesthetic reasons for the movement's initial rise and eventual demise. Whilst focusing specifically on the architecture of British West Africa at the time, it argues that the issues being dealt with and the Tropical Architecture produced in this region had resonance and similarities to what was going on and being built elsewhere in the world, indeed that tropical architecture was a globalised phenomenon in the 1950s, well before the contemporary discourses on globalisation. It concludes by discussing the demise of the movement and the banality of the contemporary, ‘post-tropical’ architecture, which is prevalent in West Africa today.

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## Introduction: the tropics and colony

Tropical architecture, used as a description of modernist architecture in Africa, had its birth in British West Africa, comprising the Gold Coast (Ghana), Nigeria, Sierra Leone, and the Gambia at the end of the Second World War. This was initiated by a group of architects who designed new

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Fig. 1. University of Ibadan (Fry Drew, 1951).

buildings in West Africa mainly at the behest of the then British Colonial government. African colonial policy, as elsewhere in the British Empire, had become more responsive to the development needs of the region and responded to the earlier reports on development in Africa.<sup>1</sup> The findings of these reports advocated better educational provision for natives and this resulted in a major school building programme; the First Gold Coast Schools Programme, being inaugurated in Ghana in 1945. In Nigeria also plans were put in place to inaugurate West Africa's first degree awarding institution, the University College Ibadan (Fig. 1). This has also been interpreted by historians to be the Colonial Government's response to the push for self-determination by some groups in West Africa at the time: the Government hoped that by providing better services and infrastructure to the masses it might ward off the growth of the independence movements. This had special relevance in West Africa, where members of the West African Frontier Force had seen combat in North Africa and elsewhere as part of the Commonwealth armed forces contribution to the War effort.

At the same time in the United Kingdom, architecture was gaining a transformed profile as the post-war economy picked up and there was the economic boom that followed. This was coupled with the international reach of the Modernist Movement through the CIAM<sup>2</sup> (Congress Internationale d'Architecture Moderne) meetings held throughout Europe, including the meeting held in the UK at Bridgewater in 1947, and culminated in the CIAM Athens Charter in 1952. British architects and Architectural Schools were equally influenced by this new 'international' movement. The Architectural Association (AA) by virtue of its location in central London and its international connections, had students and tutors who were at the forefront of the movement. In connection with the 'tropical' also the AA's close proximity and working relationship with the

<sup>1</sup>See, for example, Lewis (1962) and Colonial Office (1953).

<sup>2</sup>The International Congress on Modernism, or CIAM. See Mumford (2000).

School of Tropical Medicine and Hygiene created the background to the evolution of tropical design.

Many of the AA students at the time also found themselves billeted to tropical regions as research officers or part of the engineering corps as part of their time spent after graduation on national service. Thus when the architect Maxwell Fry, who had already spent part of his national service in the Gold Coast, was unable to secure employment in the United Kingdom he was suggested that he should consider working in the colonies. His initial appointment in Ghana as the planning advisor to the colonial office in Accra, can be seen as a key starting point of the era of tropical architecture in West Africa. Using the activities of Maxwell Fry and Jane Drew and their associates in Africa as a chronological design-time frame, the paper will discuss the movement's impact on the region, selecting three buildings which epitomise the design aspirations and achievements of the era, considering environmental design, socio-economic success, and building durability of each (Table 1).

### Tropical relationships to colony

Maxwell Fry's inauspicious entry to work in the tropics placed him in a unique position to see both colonial planning and architectural design from the inside and also the great potential that the region had for architectural projects. His service background in the tropics also gave him the requisite qualifications which must have helped him gain acceptance and build a working relationship to the colonial office. His wife Jane Drew also at his suggestion came over to Ghana, where they both initially had appointments as advisors in Town Planning in Accra.<sup>3</sup> Thus with the initiation of the Colonial Government-funded First Gold Coast School Building Programme (1945–1950), the couple were appointed as project architects.

Their engagement with this work and the information they gained led them, especially Fry, to become a regular speaker at the AA, Drew's architectural alma mater. This constant contact with the mother country, specifically London, where they maintained their 'head' office, also fostered the links that were made between the Building Research Institute and mainly British Architects in West Africa who needed technical advice on materials and environmental design for the tropics.<sup>4</sup> It also led to their joint-authorship of the book, *Village Housing in the Tropics* (Fry & Drew, 1947) which gives a charmingly dated account of both a Westerner's view of the architecture, and social anthropology of life amongst the 'natives' in the tropics.<sup>5</sup> It also can be read as an early development of their ideas in environmental design that they applied to their architectural design in the tropics.

Probably the most important development of this relationship between Fry and London was the power that his speaking engagements in the AA and elsewhere had in getting the word around the close architectural network in Britain that there was architectural work to be had in the British Colonies. This influenced both Leo De Syllas, a founding member of the Architects

<sup>3</sup>Information Source Drew J.

<sup>4</sup>The upshot of this was the establishment of the Building Research Institutes in Lagos, Nigeria, and Kumasi Ghana, both of which still function in the area of building research today. See, *Building Research Establishment (1950–58)*.

<sup>5</sup>Fry and Drew (1947).

Table 1  
Timeline<sup>a</sup>

Date	Activity
1945	Maxwell Fry does national service in Ghana. James Cubitt does national service in Burma. Leo De Syllas works in Jamaica.
1944–46	Fry and Drew serve as town planning advisers in Gold Coast.
1945–1950	First Gold Coast school building programme.
1947	CIAM Conference, Bridgewater, (Fry, Drew, de Syllas attend). Village Housing in the Tropics published (Fry and Drew). James Cubitt sets up office in Gold Coast (1951).
1953	Tropical Architecture Conference, University College, London. Fry & Drew appointed Architectural Advisors in Chandigarh.
1954	AA school of Tropical Architecture commences (Fry director). Architects Co-Partnership (ACP) set up office in Lagos. Ove Arup sets up office in Lagos.
1956–1957	Oil drilling commences in Oloibiri, Southern Nigeria. Christ Church Cathedral School (Godwin and Hopwood).
1958–1960	Ghana independence (1958) Nigeria (1960). University of Ibadan complete 1959 (Fry, Drew). Co-operative bank Lagos 1959 (Fry, Drew). Bristol Hotel.
1961	Elder Dempster offices Lagos (James Cubitt).
1963	Education building course AA Tropical School. AA restructure Architecture course at Kumasi. University of Lagos staff flats & playground (Vaughan–Richards).
1966	IDA, Education Project, Nigeria (1966–1977). Coups d'état Ghana and Nigeria. Nigeria-Biafra civil war (1966–1970). Oluwakitan House, Alan Vaughan–Richards.
1970	AA Tropical Architecture School closes and moves to UCL with Koenigsberger to become Development Planning Unit.
1972	Oil crisis–Nigeria achieves short term financial windfall, non oil producers sink into recessionary climate, End of era.

<sup>a</sup>Adapted from Le Roux and Uduku, 2003.

Co-Partnership, who had earlier worked with Robert Gardner Medwin team in Jamaica on the Colonial Government-funded new housing redevelopment plan in the late-1940s, and James Cubitt, who had done national service with the Navy in Burma, both AA Alumnae, in their setting up practices in West Africa in the 1950s.<sup>6</sup>

<sup>6</sup>Interview with Grice M. (2003) and Uduku and le Roux's (2003).

Another key figure in the British Tropical Architecture and education movement was Otto Koenigsberger, the founder of this journal. Initially employed as a research fellow at the school of Tropical Medicine in London, Koenigsberger had had earlier careers; as an archaeologist in Egypt and as an architect to the Raj in India. He moved over to the Architectural Association in 1953, to help set up and run the Tropical Architecture School. He had been instrumental to the School's founding through his encounter with the Nigerian student, Adedokun Adeyemi and his help with the subsequent planning of the first conference on tropical architecture, organised by the University College London, (UCL) and the London School of Tropical Hygiene, in 1953.

The conference deliberations called for the initiation of a Tropical Architecture School to provide relevant architectural training for students from the Tropics.<sup>7</sup> The University College London's prevarication in setting this up led the AA to run the course instead. Thus in 1954 the AA School of Tropical Architecture was inaugurated with Maxwell Fry as its first Director for 2 years but run and subsequently headed from 1956 for more than a decade by Otto Koenigsberger.

During his headship, he became involved in numerous research projects and acted as consultant to the United Nations on a number of missions to developing countries. He was also co-writer of the seminal textbook on tropical architecture, *Manual of Tropical Housing and Building*.<sup>8</sup> The Tropical School had a lifespan of 17 years within the AA, and finally moved to the University College London, where it became an autonomous body: the Development Planning Unit, with connections to the Bartlett School of Architecture, other University Departments and international bodies and still exists to the present day.<sup>9</sup>

An offshoot of the AA Tropical school was the Architecture School at the University of Kumasi, in Ghana. Otto Koenigsberger, the then director of the AA Tropical School, had been invited by the University of Science and Technology Kumasi's Vice Chancellor to redevelop the architecture course there. Most of the staff at the newly oriented architecture school had been lecturers at, or students of the AA Tropical Architecture course. This fledgling school was at the epicentre of architectural education in West Africa for its first decade of existence, with eminent architectural visitors such as Buckminster Fuller, and an international cast of academic staff. After the 1966 Military *coup d'état* in Ghana it lost much of its international staff and linkages, although the school remains in existence today.

## Theoretical concerns

This background underpinned the evolution of the Modernist, 'Tropical' Architecture Movement, and its embodiment of environmental design and architectural technology within a tropical context. The development and establishment of a Tropical Architecture movement in West Africa has a wide context. There are the issues of independence and nation, and what that means in the physical built form. The issues of 'comfort', as perceived and measured in a warm humid climate, different from the temperate context, and finally those of building materials—in both technical and socio-aesthetic terms. These are seen in the context of the "them" (those being

<sup>7</sup>Foyle (1954).

<sup>8</sup>Koenigsberger et al. (1974).

<sup>9</sup>See Wakeley (1983).



Fig. 2. Christ Church Cathedral School (Godwin and Hopwood, 1961).

built for) and “us” (those who were designing the buildings) frame. Considering each of these contexts from a chronological perspective, one notes that the body of ‘tropical’ buildings in West Africa were all built within a specific time frame; the late 1940s to the late 1960s. The colonial style that had preceded this, establishing a recognisable post-vernacular architectural style. By the late 1960s, the post-tropical era, had commenced, marked by anonymous generic corporate design aesthetic, that adopted the faceless banality of the glass façade and the bland utilitarianism of the breeze-block structure punctured with louver-glass windows and the ubiquitous air-conditioning unit.

In contrast, most of the tropical buildings had been successfully designed to respond to climate, as the building research laboratories and design primers written by Fry and Drew and others had suggested. Considering the research and analysis carried out to attain the design guidance in the 1950s was done devoid of significant computing power, this must have been a particularly onerous undertaking. School design was particularly suited to the passive-cooling, approach.<sup>10</sup> The ACP’s Olowogbowo school (1953) and Godwin and Hopwood’s Christ Church Cathedral School (1956) both built in Lagos, aptly highlight this (Fig. 2). The most ambitious of these passively designed buildings being the office blocks such as Fry and Drew’s Co-operative bank, Lagos (1959) that was built to be entirely reliant on passive cooling, with no designed central air conditioning system for the building.

ACP architects in Nigeria developed a window-sunshading system for their primary school designs, whilst the development of patterned templates for wall sunscreens reached its peak in Fry and Drew’s University of Ibadan library complex (1951); here the functions of materials,

<sup>10</sup>Passive cooling is a phrase encompassing all modes of producing building comfort without the use of mechanical systems; such as fans or air-conditioners. Schools were generally designed to make maximum use of natural cross ventilation, though appropriate building siting in relation to prevailing wind direction.



structure, comfort and aesthetics coalesce to achieve an entirely appropriate architectural response to the functional and programmatic responsibilities of a symbolic academic building in a tropical context. Thus these buildings became ‘laboratories for living’ as pronounced by the Modernists in the Athens Declaration.<sup>11</sup>

To appreciate the ‘tropical’ response to architectural design in Africa one needs to consider the core relationship between local building use and their reading of the modern building. Anthropologists long established that daily transactional life amongst West Africans occurred outdoors, with buildings only performing the function of shelter from more adverse elements such as rainfall, and as places to sleep at the end of the day. The need for appropriate passive cooling and environmental design could on the one hand thus be relevant to those who worked in the small formal Western sector, and not that of the masses, who were quite able to negotiate their own ideal comfort zone in day to day life; literally by sitting in the shade with a cooling breeze in the midday sun. When considered in relation to the knowledge that most vernacular architecture has adequate thermal insulation to provide comfort in the evening and early morning, when sleeping occurs, there is a question as to what this new form of environmental conditioning brought to everyday life. On a similar basis, Michael Grice, a founding member of the ACP group, who worked with the ACP offices in Lagos in the 1950s, confirmed that none of the school buildings his firm built during their time in Nigeria, were able to be built within the specified budget.<sup>12</sup> The *brises soleils*, or louvered façades, and reinforced concrete shells exact an economic as well as environmental price to pay. In some ways it could be said that the costs that were associated with the pristine nature of the tropical modernist architectural style helped to bring about its short period of popularity on a continent that could never really afford this investment in style.

The “them and us” mode of thought, as touched upon when discussing building use, is central to the appreciation of tropical architecture’s success, or otherwise in becoming integrated into the mindset and design aspirations of its receiving public. In the case of this early genre of tropical architecture in West Africa it seems that there is a level of disassociation in expectations and aspirations between those for whom the architecture was designed and those who produced the design. Revisiting the example of Fry and Drew’s Co-operative building in Lagos, one notes that since the mid-1970s the building has been fitted out with air conditioning units—despite its being designed to function as an entirely passively cooled building. Here, we have a direct conflict between user aspirations and satisfaction and known function. The key element to note here is the symbolic perception of the air conditioner, not as simply a machine to provide comfort, but as a status symbol—working in a modern office block, like driving a modern car (in tropical West Africa) requires air conditioning—even when the ambient temperature is tolerable. It also gives another clue to the demise of tropical architecture in Nigeria particularly, where with cheap fuel costs in an albeit short-lived crude oil-financed economy, the pragmatic functionality of tropical modernism lost status to the high-energy steel and glass boxes from the USA.

From a programmatic or functional viewpoint the off-quoted example of low-rise flats designed to house low-to-middle income ‘Lagosians’ who were decanted from slums and areas to be

<sup>11</sup>See footnote 2 [Mumford \(2000\)](#)

<sup>12</sup>Interview with M. Grice, AA London, January 8th 2003.



Fig. 3. Holy Cross School, Lagos, Fry, Drew and Partners (c.1961).

demolished for the construction of the city's road system, probably illustrates this best.<sup>13</sup> The flats were designed with modern kitchens and balconies, but soon had to be altered to allow women to use their mortars and pestles in the kitchen and not on the balconies that were at risk of collapsing due to the reverberations caused by constant mortar-pounding at meal-times.

Much of the architecture produced in the tropical era was not so functionally inappropriate, but spaces that had often been designed as part of the aesthetic composition of the modern, such as pilotis and corridors became quickly appropriated by users for unscheduled uses; thus in schools balconies were frequently extra classrooms or staff office areas, whilst the free flowing space of the pilotis, regularly became filled in and used as a 'functional' space (Fig. 3). On a more pragmatic note, the pristine cool white buildings beloved of the architectural photographers, were generally un-maintainable in the high humidity West African climate where much of this architecture was situated, (or in the case of Northern parts of West Africa the Sahara sand-carrying *harmattan* wind was equally detrimental to buildings). Many of these buildings have endured layers of over-painting or been left to deteriorate. Given these climatic conditions and the continual heavy use of many of these buildings especially the public schools, it is a testimony to their design that most remain in use 50 years since their construction. Three key buildings of the era, are analysed here.

### Tropical buildings

Considering again the chronological frame of Fry and Drew and their architectural legacy in West Africa one can attempt to categorise tropical buildings either by time, or by type: early

<sup>13</sup>See Peil (1991).



tropical in construction being pre-1955, (the Ghana Schools project), mid-tropical being 1955 to early 1960s (University of Ibadan), late tropical being late 1960s to the early 1970s (Student Hostels University of Lagos). Typologically one could have educational institutions, offices and private residences. In an attempt to cover both frames, Fry and Drew's Ibadan University complex, James Cubitt's Elder Dempster Office building, and Vaughan Richards' private house design have been chosen as examples of both type and era of the Tropical Movement.

*University of Ibadan (Fry Drew and partners, 1951)*

The University of Ibadan was designed by Fry and Drew to entirely modernist principles. Ibadan, situated in the warm humid zone, was designed with environmental considerations uppermost in its conception. The master plan sprawls across the contours of the site, determinedly orientated north south, in long thin strips to take advantage of prevailing winds for ventilation requirements. There is the continued use of glass louvres and concrete shading devices such as screen walling on north and south west- and east- facing walls as a form of protection from direct sunlight and overheating. West and east facing walls are generally blank. The campus is comprised of teaching residential and public facilities. The teaching facilities comprising lecture theatres, the library and laboratories have been designed particularly with environmental considerations in mind, learning blocks being oriented with their longer sides facing north-south and single depth in design.

The library was designed with access corridors on each bank and interior shutters to protect books from storm damage. Screen walling with insect filters from copper mesh also has been incorporated on each major elevation. The residential blocks for students were designed around courtyards as 'halls', the design keeps the main blocks oriented appropriately for optimum cross-ventilation. The blocks focus in on the courtyard that is an external social space in its own right, being semi-overlooked by the screen wall clad residential blocks. The basic design of these blocks have not changed although these structures have been most affected by the phenomenal increase in student numbers and subsequent overcrowding of rooms in The University of Ibadan, built on a generous government commission, had a palette of materials based on framed concrete and infill breeze block construction. Pre-cast screen walling was also used extensively as were concrete louvres. For the refectory block, folded concrete shell was used as a roof, which was also used later for the Chapel. Whilst these materials were not indigenous, they were readily available for import and were used successfully under good contractual building supervision on major projects. Fifty years on, these spaces still work within the contemporary contexts that they have had to adapt to. This has often meant that buildings now endure heavy use by significantly more students than had been planned for, and are subject to minimum maintenance and upkeep.<sup>14</sup>

*Elder Dempster offices, Lagos (James Cubitt and partners, 1961)*

The second of two corporate offices, the first built in Freetown, this building is placed on a corner site with a very narrow frontage onto what was then the Lagos Lagoon, (now it is

<sup>14</sup>A version of this description has already been published in Le Roux H. and Uduku, O. The AA in Africa, Exhibition, Architectural Association, London 17th January–14th February, 2003.

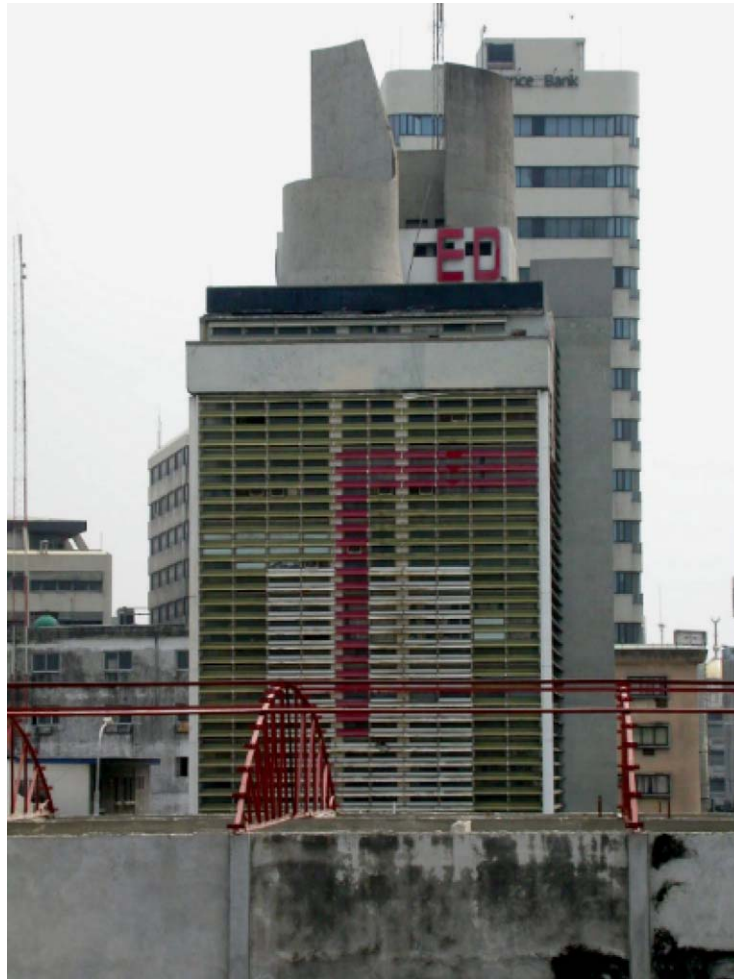


Fig. 4. Elder Dempster, Lagos (James Cubitt, 1952).

reclaimed land, and the site of a major flyover) (Fig. 4). As the maximum height that had been imposed by the Lagos town planning authority the top part of the building, bearing the company's logo had to be set back from the main façade. It is built on a concrete raft foundation and as a reinforced concrete frame. It is glazed on all sides, and then has a layer of sun breakers that have been designed to reduce heat gain but still allow views to the Lagoon. Fully air conditioned, and comprises a service core including vertical circulation. The moulded forms on the roof bear the company logo, the service floor and the staff canteen. Inside there is also parking space and a profusion of art work which provide both abstract and direct references to the shipping business.<sup>15</sup>

<sup>15</sup>Abridged from notes of John Baker, founding member, James Cubitt and Partners, 2003. See also [West African Builder and Architect \(1964a\)](#), 130 Elder Dempster, Lagos.

Environmentally the building abdicates much of its responsibilities by being fully air-conditioned, however the design of the louvres, discussed below meant that there had been some thought to solar glare that the large areas of glazing were sure to cause. Its use of relatively high technology materials for 1960s Lagos although adding to the aesthetic quality of the design, does make it a high profile commission at a cost of £450,000 in 1961. John Baker, one of the founding partners of the practice had this to say about the louvers:

“The sun breakers were carefully designed to minimise the solar heat load on the building without completely excluding views of the harbour, and the finish of vitreous enameled steel was chosen to resist, without maintenance, the highly corrosive mixture of salt air and smoke in conditions of high humidity. It was this finish which offered the possibility of giant abstract patterns over the façade in the house colours of the shipping line, red and white over a background of sage green” Baker (2003).

#### *Vaughan Richards house, Ikoyi–Lagos*

This house was designed in phases by the architect Alan Vaughan-Richards, a former student of the AA Tropical School. Alan Richards arrived in Nigeria, initially employed to run the ACP office and its West Africa projects in Lagos. He eventually took over the office and set up his own practice when ACP pulled out of Nigeria in the early 1960s. Some of his most well-known works of the period are the Staff Flats and Jaja Hall, both at the University of Lagos (see [West African Builder and Architect, 1964b](#)). Married to a Nigerian, Ayo Vaughan, from the well-connected Lagos family, Vaughan Richards subsequently merged his own practice with Royce Ibru, and the joint practice won a number of commissions including the University of Lagos master plan.

Vaughan Richards house is an exploration in design and function, as the architect explores the boundaries of the formalistic architectural design schedule with the plasticity and organic nature of Western Nigerian architectural and artistic form. It carries on in its exploration from his Olaoluwakitan house (1965) designed for a Lagos family in Ikeja, Lagos ([Fig. 5](#)). His move towards this exploration of form was deliberate, in attempting to work within a freer design context. It also enabled him work successfully with artists and other designers contributing to the

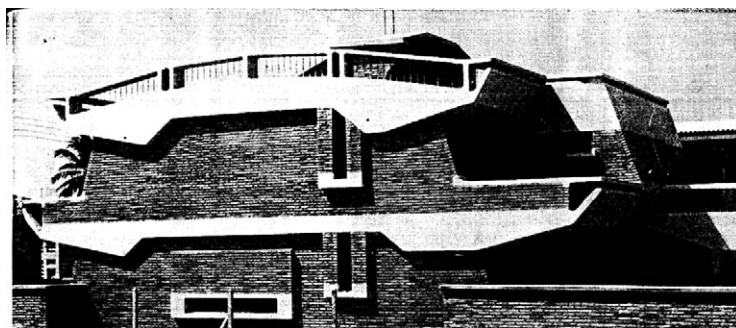


Fig. 5. Olaoluwakitan House, Lagos (Alan Vaughan Richards, c.1966).

final design.<sup>16</sup> He advocated the eventual use of pressurised, treated timber, for his designs, but accepted that until there had been more research done on the product, poured reinforced concrete was the practical material that could be used. Environmentally the buildings were well designed to avail themselves of natural cooling through air circulation through and under the building.

By using plastic exploratory forms, aesthetically Vaughan Richards' buildings were unique in their merging of traditional architecture in West Africa with the modern. The architecture's uniquely recognisable form made it identifiable and popularly accepted as new Nigerian architecture within the Nigerian public. Unfortunately its cost of production meant that there were only a few of such buildings that were constructed, in more affluent areas of Lagos. His most publicly accessible work is the public play sculpture in the grounds of the University of Lagos staff quarters. This is actually a scaled down model of his proposal for Akerele House, at Alagbon, Lagos—the house was never built but the play sculpture is a fitting interactive three-dimensional marker to his work.

A sample of books which best epitomise this tropical era in West Africa would include the earlier mentioned *Village Housing in the Tropics*, Koenigsberger's *Roofs in Warm Humid Climates*, and Koenigsberger et al's *Manual of Building in the Tropics*.<sup>17</sup> All three publications share the theme of environmental design for the tropics. Their range and depth differ considerably. *Village Housing in the Tropics* is a narrative that incorporates rules of thumb for tropical design as were common in the 1950s. *Roofs in Warm Humid Climates*, the most technically written of the three, shows the level of research and development that was carried out into tropical architecture in the 1950s and 1960s, mainly in research laboratories, with field tests taking place in locations such as West Africa, the West Indies and South East Asia. This level of tropical research activity has possibly only now been again attained by the use of computer modelling and design analysis, mainly in South East Asia, possibly in Arup's passive-cooling designed office block (in Harare being the only exception).<sup>18</sup> The final book in the trio, remains in publication in Saudi Arabia Emirate and India, and could be considered the seminal handbook on tropical architecture. It remains a 'manual' for Tropical Architecture schools throughout the world as had been intended.

## West African tropical in context

West African Tropical Architecture can be studied ontologically, with a chronological overlay, however, to appreciate its contribution or significance to the wider, international legacy of 'early'

<sup>16</sup>This is a key distinguishing feature of Vaughan Richard's work and the third phase of the West African tropical design movement. His temporary accommodation for the university of Lagos at Idi Araba, Lagos had him collaborate with the major artists of the time, Onabrakpaya and Enwonwu, (*West African Builder and Architect*, Vol. 4 no. 1 pp. 2–5, 16), whilst later work by James Cubitt and Partners, (*Senate House University of Lagos*, 1979) and Design Group, (*National Museum Kaduna*, c.1985) would commission major artwork from Nigerian artists.

<sup>17</sup>Fry and Drew (1947), Koenigsberger (1965), Koenigsberger et al. (1974).

<sup>18</sup>Similar to Fry and Drew's Co-operative bank, this office building was built to depend primarily on natural ventilation and cool air being drawn through the building to produce cooling, thus doing away with the typical central air conditioning systems. See *Architectural Review*, Vol. 200 no. 1195, Sept 1996, Special Issue, Sustainable Architecture, "Mixed Development, Harare, Zimbabwe, Pearce Partnership, (article by Catherine Slessor) pp. 36–40. Also *Arup Journal* (1997).

(pre-1975) tropical architecture, it is important to consider the relationship of this architecture and its era with other tropical sites in the world. Beginning with the architects Maxwell Fry and Jane Drew, the links between West Africa and Asia are seen to have been complimentary as their standing as key architects of the tropical movement in Africa influenced their appointment as advisors to Le Corbusier and his team in their construction of Chandigrah. Leo De Syllas, a founding member of ACP, (Architects Co-partnership) who worked intensively in Nigeria for a decade producing a credible body of work also had worked in Jamaica, prior to his helping the group set up partnership in Nigeria. There is no doubt either that there was a relatively limited, select magazine market which publicised architectural work that was being built outside Europe, specifically in this case, the UK and to a lesser extent the USA. These journals such as the *Architectural Review* thus became the source and form of advertisement for the new Tropical architecture scene in many countries as far apart as South East Asia, the West Indies, West Africa and parts of Latin America.<sup>19</sup>

There was also the influence of the technical literature discussed earlier. The Building Research Station at Garston published its overseas building notes, which provided technical information on tropical materials to an international audience of architects and builders throughout the British Commonwealth and further afield. The short-lived magazine, the *West African Builder and Architect* also was published in the UK and thus had limited circulation in Britain as well as its publishing commitment to the major practices and firms with interests in West Africa. Most architectural books that discussed tropical architecture at the time were engaged in the representation of these buildings as seductive coffee table images, and less in the interrogation of the ideas and concepts behind the design. The visual imagery of the buildings portrayed in Kulterman's *Africa Builds*,<sup>20</sup> is very much the mediated image of the author, similar to the stylistic images and plans of the glossy architectural magazines. Chronologically the late 1940s to the early 1960s cover two of the most important decades in the architectural life of the tropical modernist movement the cities of Brasilia and Chandigrah were being built, Britain's now discredited post-war mass housing project was under full steam, and in the US the Bauhaus refugees including Mies van der Rohe were making their architectural statements in America's cities and university campuses.

Parts of Latin America and the Caribbean also had their cities influenced by the movement, pre-revolution Cuba had the middle class Havana suburb, Vedado planned and designed in the modernist idiom.<sup>21</sup> (Scarpaci et al., 2002) In other parts of Africa, including the Southern African cities of Durban, Cape Town and Johannesburg, and also Nairobi and Dar es Salaam in Eastern Africa, a number of buildings, clearly show the influence of the tropical modernist movement. However, the less exacting climatic character of Southern and Eastern Africa has produced an architectural style, which is arguably closer to the 'mainstream' modern. North Africa also was a test bed for new architecture; the ACP group who had worked in Nigeria went on to design a number of schools in Tunisia. Le Corbusier also produced his plan for Tunisia also at this time. Aside from ACP, there were other companies that had links and networks that transcended national boundaries: James Cubitt worked in Nigeria, Ghana, Sierra Leone, and then in Libya,

<sup>19</sup>See for example *Architectural Review* (1959).

<sup>20</sup>Kulterman (1963).

<sup>21</sup>See Scarpaci et al. (2002), Chapter 2. pp. 80–86.



the Max Lock planning group, responsible for the Kaduna plan (1966) (see, [Lock & Partners, 1967](#)) had worked earlier in Iraq, and Ove Arup, the consulting engineers, had offices throughout Africa, many of these firms had architects planners and engineers moving to and from different to countries and even continents.

The central link was however that between the UK and the cities in West Africa where project offices had been set up. With this constant criss-crossing of people companies and ideas it is no wonder that there was a constant evolution and revitalisation of this architecture over the two decades of its peak existence. It is also interesting to note that although we think about globalisation as a relatively recent phenomenon, Tropical Modernism was truly 'international' in character, due much to the global linkages of the people, institutions and companies that were involved in its planning and delivery.<sup>22</sup>

### Tropical meets the contemporary

By the late 1970s a number of factors contributed to the decline of the Tropical movement in West Africa. Principal amongst them was the political instability in both Nigerian and Ghana in 1966 after a series of *coup d'etats*, culminating in Nigeria in a bloody civil war. In Ghana the decline in cocoa prices created major economic demise. These events ended any serious construction projects for over a decade. Nigeria's post-war 1970s oil boom, boosted the economy into false illusions of wealth. The building industry and its patrons in turn became more involved in turn-key building contracts, and American-style high-maintenance architecture.

This American-style architecture is common both in the office arena and at domestic level.<sup>23</sup> Built on the premise that energy is cheap and style is more crucial than substance, contemporary architecture in West Africa today has little of the identity or the rigorous design approach that the tropical architecture era produced. The highly serviced glass box remains the standard office type and in domestic dwellings American suburban vernacular has made major inroads into urban areas, as well as 'hometowns', where the rich build their vacation dwellings. The anonymity of the architecture and the architects of this movement equally leaves this architecture with a glaring theoretical void. Issues such as climate, environmental awareness, and local consultation also are notably absent in the discussion of the architecture and philosophy of the era.

### Conclusions

The success of the modernist or tropical architecture movement in West Africa has been its robustness and longevity. Most of the key buildings of the era are now over half a century old and still in use. Its relevance and architectural 'fresh-ness', stand it in direct contrast to the more contemporary architectural styles that are prevalent in much of West Africa today. The fundamental underpinning of tropical design: designing with climate, has become a secondary or

<sup>22</sup>See [Crinson \(2003\)](#) for an alternative theoretical view; especially in Chapter 6, *Dialects of Internationalism, Architecture in Ghana* (pp. 127–156) where he considers Ghana's post colonial architecture within a post empire theoretical framework. Also see [Tzonis et al. \(2001\)](#) for a global critique, unfortunately with little reference to Africa.

<sup>23</sup>See [Uduku \(1996\)](#).

forgotten design frame for much of this architecture. With the exception of the earlier mentioned ‘Arup-sustainably engineered’ office block in Harare (see, [Slessor & Catherine, 1996](#)), and a strong environmental design movement in South Africa, West Africa and the rest of the continent have to rediscover much of the design theory and principles that were developed in the tropical era.

This need to re-discover if not re-invent the wheel, is now becoming crucial as the issues of sustainability have to be addressed at every stage of the building process. There is also a reinvigorated interest in designing relevant buildings which have a regional if not local design response—the idea of the original only being perceived as ‘native’ or ‘vernacular’ has been superseded by a more informed perception of the value of building upon and developing the indigenous to create a more unique climatic and environmental design response, as aptly shown by Vaughan–Richards work in the late 1960s. In this area the unchallenged leaders today are the architects in South East Asia, who have successfully created a regional design style of global significance.<sup>24</sup> The onus is on West African architects, whose architecture this paper has shown was once of international significance, to achieve a 21st century architecture, which aspires to, and surpasses what has gone before.

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<sup>24</sup>The work of the Malaysian Architects, Hamzah and Yeang exemplify this, see for example the article by [Sharp \(1989\)](#).

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