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**TROPICAL IVORY TOWERS: A CRITICAL EVALUATION OF DESIGN
SYMBOLISM AND PRACTICAL ASPIRATIONS OF THE WEST AFRICAN
UNIVERSITY CAMPUSES IN THEIR FIFTH DECADE**

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ABSTRACT

Anglophone West African Universities have been in existence since the 1920s. First, they were externally accredited British university colleges, and from the 1960s onwards, they existed as full-fledged, independent, degree-awarding tertiary institutions. The University of Ibadan, Nigeria; Fourah Bay College, Sierra Leone, and the University of Science and Technology (now KNUST), Kumasi, Ghana, were amongst the first of these establishments in their respective countries.

The modernist ethos remained clear in these early African campuses projects, however each University plan was ultimately different. Their singularity was influenced by both, the socio-political context and the cultural aspirations of each country. This was strongly conveyed by the planners and advisers of the educational programs, who were strategically involved in the funding of the projects and in working with the planning team to achieve the construction of each one of the campuses.

The similarities and differences in approach to architectural design and planning since the founding of these university campuses in the late 1950s, as well as the issues facing their continued use and need for conservation in the 21st century, will be examined in this paper. A study of the goals of the architects and planners involved in designing these institutions will be undertaken also. It will focus on their similarities in background and training and their collaboration on other international design projects. Additionally, an evaluation of past campuses planning and design history will be made, as a way to facilitate the analysis of the successes or failures of these mid 20th century university campuses. The paper will consider also their ability to cope with today's tertiary education infrastructure needs and uses, over fifty years later, with the conflicting tensions of conservation and expansion to be dealt with. Finally, the tension between building conservation and needed campus expansion will be examined.

Introduction

"It is important that higher educational facilities should be provided locally to enable those to be benefited to make full use of them." Nnamdi Azikiwe, May 18th, 1955

In 1948, the University College of Ibadan, formally accredited to give degrees from the University of London, became the subject of a report by the Colonial Education office as to the possibility of it becoming an independent, degree awarding institution. In **1953** The University of Ibadan was established. With its academic credentials decided, the then Colonial Government commissioned a young architectural couple to design the campus for the new University.

Maxwell Fry and Jane Drew, who won the commission, were not new architects to West Africa as they had been involved in the First Gold Coast Education Project (dates) where they had designed a series of new primary and secondary schools for the expansion in education in the Gold Coast. Fry and Drew's links with the modern movement, CIAM and Team Ten have been recorded by others, the University of Ibadan commission, however could be viewed as the single project that gained the team immediate international exposure.

In the same period of the University of Ibadan campus commission a number of other higher college institutions were commissioned and planned for what was then British West Africa. Sierra Leone's Fourah Bay College, the Gold Coast's Kumasi Institute of Science and Technology, and Nigeria's University of Nigeria, Nsukka, were all institutions that were commissioned planned and designed between the mid 1950s to the late 1960s.

This paper examines this group of modernist institutions, all for higher education and all planned as campuses, removed from their respective cities, and designed to modernist planning and layout principles. An earlier group of Colleges including the University of Ghana, at Legon and the College of Arts Science and Technology in Enugu, Nigeria, preceded these University College building projects, in both age and styling and so are not part of the reviewed buildings in the paper.¹ What distinguishes this group of University buildings from their precedents and antecedents, are the architects who were involved in their design and planning and also the critical era, c.1955 – 68, in which they were designed.

The paper begins by presenting three key campus designs of the era, and reviewing their conceptual context, their planning layout and the key distinguishing features. It argues that each is distinctive to its context but also is part of a wider West African modernist design movement, which involved the same clients, architects, and stakeholders from the same influences and architectural networks.

It then explores the lives of these campus architects their network connections, and influences to understand how their backgrounds helped shaped their architectural ideas and plans for their campuses. It also examines the ways in which the public as stakeholders interacted with the new buildings, and what issues of conservation were immediately clear from the onset.

Finally the paper considers the contemporary state of the University campuses and buildings. It offers an analysis of their current use and need to select and preserve parts of this modernist heritage.

Higher Education in West Africa – the background

The context to University architecture and campus planning in West Africa

¹ The author Hess, (2000) has written about the University of Ghana, Legon, whilst Fry and Drew's, (1956) design primer, *Building in the Hot Humid tropics*, seems to refer to the earlier College building design styles found in provincial towns such as Enugu (Eastern Nigeria) and the earlier College designed layout in Ibadan (Western Nigeria)

like East Africa comes from a background of colonial rule, where the indigenous population had been involved in the administration and running of colonial protectorates. West Africa, unlike parts of Southern Africa, had relied on an educated indigenous elite population to help govern and run countries such as Nigeria, the Gold Coast (now Ghana) and Sierra Leone since the early 20th century. The climate and tropical disease seem to have deterred long-term expatriate settlement in the region.

This West African indigenous ruling class was initially educated in Europe. The elite were able to fund the education of their children in the universities of Oxford Cambridge and London, whilst the then colonial government had competitive scholarships in place for local students to study subjects such as agriculture, tropical medicine and administration in these and other universities such as Edinburgh, and Liverpool. With the rising number of potential tertiary education students, the colonial government initially set up higher colleges to award intermediate qualifications such as HNDs and diplomas in relevant disciplines.

The Yaba Higher in Lagos was one of these institutions. It had a Higher College, which awarded students the higher qualifications needed to gain entrance to universities abroad and to employment within the Colonial civil service. It eventually became the Yaba College of Technology, which awarded HNDs and diplomas with a specialism in textiles and the creative arts. In the Gold Coast, what was eventually to become part of the campus of the University of Science and Technology had initially been a Science College, that again awarded intermediate qualifications in science and its allied subjects.

These institutions, as precursors to the future Universities were generally designed and built by the “public works departments” of the colonies in which they were located. Their design was generally ‘colonial’ in style and as likely to have been designed by draughtsmen in the PWD departments, supervised by engineers. Most had noticeable design formats, thus the National College of Arts Science and Technology in Enugu, (Nigeria) had similarities with both the Nigerian College of Arts Science and Technology in Samaru (which became incorporated in the ABU Zaria in 1962) and also the aforementioned Yaba Higher College.

By the late 1940s with the end of the Second World War and the move towards political change in the Colonies, the Colonial Government moved to improve higher education facilities in its colonies. A number of white papers and reports on the state of higher education and future needs in the colonies were commissioned. In the case of Nigeria this led to the recommendation that the University of London accredited degree awarding college in Ibadan, (Western Nigeria), should become a full fledged university in its own right. Similar circumstances were behind the setting up of the University of Science and Technology in Kumasi.

It should not however be forgotten that there were two near full fledged independent higher institutions in West Africa before the flurry of new campus building from the late 1950s. The first being Fourah Bay College (f.1827 as a missionary school and linked with Durham from 1876-1967 specialism theology and education) in Sierra Leone, that had transformed from being a secondary higher college to being a degree awarding institution. It did however benefit from the campus building boom to come from the mid 1950s onwards as its campus was expanded and more educational buildings which were designed in ‘post-colonial’/ post ‘missionary’ style were added.

Similarly the University of Legon Ghana (f. 1948 with UL accreditation) had begun life as an external college also of the University of London. Designed by the American architectural firm, Harrison, Barnes and Hubbard, (between 1949 and 1959), the campus is described as having Japanese – oriental characteristics and pre-dates the case study campuses this paper discusses. (Source Crinson, 1992)

The Three Case Study Campuses

This paper discusses and compares three campuses designed for the universities of Ibadan, Science and Technology Kumasi, and Nsukka, between the mid 1950s to the mid 1960s as exemplars of the modernist design movement's style and interpretation in West Africa.

The campuses were primarily designed by a group of British trained architects who sometimes collaborated on projects, but as often were in direct competition with each other for valuable commissions. Having had similar educational and cultural backgrounds, and importantly exposure to the new "modern movement" architecture, it is perhaps not surprising that the campuses do have similarities but it is argued they remain distinctive to their local contexts.

THE UNIVERSITY OF IBADAN

Architects; Maxwell Fry, Jane Drew and partners

Commissioned: 1953

Completed from 1955

Main commission: Campus layout + key buildings including the University Library various Halls of Residence and the Refectory Buildings

FIG. ONE – UNIVERSITY OF IBADAN MASTERPLAN

FIG. TWO – UNIVERSITY OF IBADAN LIBRARY

The University of Ibadan masterplan and campus is the most internationally known and recognized of the West African campuses of the 1950s and 60s. It was the first major commission for Fry and Drew, that placed them in the international spotlight. Fry and Drew worked to develop a campus for the New University that was 8 miles from central Ibadan and had temporary buildings occupied by the military cantonment in Ibadan. There was ample land and Colonial government funding for the design of both the masterplan layout and also for the key buildings which remain the recognizable icons of the University.

As with campuses elsewhere in tropical Africa, residential quarters were also built, to become part of a University social community and also as accommodation for the considerable number of expatriate staff who initially taught and helped set up the University.

Structurally the main buildings use standard concrete and post construction. The infill panels follow the modernist function and climatological response. Much use is made of the Brise Soleil as a cooling and shading device in both the Hostel blocks and also in the Iconic Library complex. Buildings were planned and laid out to make the most of the cooling effect of cross ventilation and where possible the avoidance of direct sunlight penetration into key work areas.

The University library effectively works as a double skin with the exterior being protected from the elements by the brise soleil façade, whilst the more sensitive areas of the building, such as the repository for rare books did have air conditioning. The halls of residence were balconied to allow for air flow in intermediate spaces, and ran with a single bank corridor to enable all rooms achieve some form of cross ventilation.

The campus and its buildings are now more than 50 years old and remain in full use. Student numbers have more than tripled since its inauguration in the late 1950s, and there are pressures on all its facilities. The main iconic buildings such as the library remain in average condition, and there has been funding for some maintenance. However the recording and upkeep of the more detailed parts of the building fabric are yet to become a pressing priority for Nigeria's conservation group, part of the commission for antiquities and monuments, who are part of the Federal Ministry of Culture's department of Culture,

Kumasi University of Science and Technology, Ghana

Architects: James Cubitt and Partners, followed by Kenneth Scott

Commissioned: 1960

Completed: 1963/64 onwards

Image 3. Science Block / auditorium

Image 4 Detail of University lecture theatres

This was the second publicly funded university in Ghana, the first being the University of Ghana at Legon. It had started life as the Kumasi College of Technology in 1952, which was affiliated to the University of London. The college had been built to focus on technological education, education and engineering, as well as the teaching of art and allied subjects. With its transformation to University status, the education department was moved to Winneba and the Education department moved to what became the University of Cape Coast.

The architects initially involved in the transformation, to the initial College status of the campus were James Cubitt and Kenneth Scott. Cubitt, like Fry and Drew had been trained in London at the Architectural Association, he had however already become an established architect in West Africa, with practices in Lagos, Accra, and commissions being undertaken in Sierra Leone. Prior to this project he had already been involved in developing the masterplan and initial building designs for the University of Nigeria. Cubitt's design team worked on the extensive campus layout of the University and the initial buildings for Pharmacy and Agriculture. It is alleged that Cubitt's team fell out with the clients over the structural stability of an auditorium building on the site and that Kenneth Scott and partners who completed the masterplanning of the campus and other building of the campus until the 1960s 1960s.

Kenneth Scott was also no stranger to Ghana, although Australian by birth, was educated in the UK, and lived worked and died in Ghana. His house, Scott house remaining one of the iconic modernist movement buildings in Accra. He and his design team were involved in designing a number of significant buildings that formed the central core of the University. Also involved in subsequent masterplanning activities were Arthur Williamson (1958) and G Christopher (1960). Fry and Drew are also credited with the design of the great Hall building which is one of the iconic focus points of the campus. (Intsiful monograph). Later one the Ghanaian architects J. Owusu Addo and W.S. Asamoah also contributed to the development of the later campus buildings.

The campus thus in some ways became a receptacle for the exposition of modernist design styles and planning in a tropical context. Unlike the University of Legon, which was designed as a near exclusive entity, the University of Science campus has continued to evolve and become reinvented with contributions from successive generations of architects.

The campus benefited from a generous World Bank/Ministry of Education grant at the end of the 1980s, and has had significant upgrading to its building fabric. Like the other two university case studies described, student populations have more than tripled in the past half century and the facilities designed have had high usage. The university does have an archive office and there has been some attempt to both archive and restore the key exemplar modernist buildings on the site such as the Agriculture Auditorium (concrete shell construction) and the University Staff Club (modernist pilotis, beam and post construction).

The University of Nigeria Nsukka

Founded 1960

Commissioned 1955/56

Initial Architects – James Cubitt and Partners

Insert Image here – newly refurbished university library
- campus masterplan as at 1981

The University of Nigeria, Nsukka, (UNN) holds the claim of being (English speaking) West Africa's first fully indigenous university. Founded after a commissioned report on higher education in West Africa, the university was built from scratch as a new tertiary institution, with the guidance of academics and administrators from Michigan State University, USA and Exeter College, England.

Its initial development and planning was given as a commission to James Cubitt Architects in 1955/6. After initial debates about whether it was to be a collegiate institution (following the traditional British and East Coast American traditions) or based on the American land grant system, the University was planned on the Land Grant model, and the campus layout design reflected this in its hostel/dorm arrangement with central facilities such as refectories, and study areas.

Cubitt and his team met with the then premier of the Eastern region of Nigeria to discuss the masterplanning and design of this new Campus university from 871 hectares of elevated virgin tropical forest. The initial masterplanning was agreed and commissioned. However Cubitt and his team fell out over their proposal to use indigenous materials to design the student accommodation blocks.

Unfortunately the master plan was not fully completed on account of the Nigerian civil war, (1966 – 1970) although there was the limited completion of the original commission after the war, between 1970 and 71. Cubitt and team were subsequently recommissioned in the late 1970s to revise and complete the masterplan which was finally completed in 1981.

The UNN masterplan and design layout provides a slightly different experience to the previous two campuses discussed. Its 'newness' is clear, as it was designed from a 'tabula rasa' site. Furthermore, with its American campus credentials, the cosy nature of the UK university campus was dispersed with, and a more ambitious grand masterplan was instituted for the campus.

However the geo-political events leading to the Nigerian Civil meant that the fledgling campus found itself at the centre of the breakaway Republic of Biafra. The campus was the backdrop for the rebel commander Odumegwu Ojukwu's 'war' speech, and had its buildings commandeered briefly for the war effort. However the campus and buildings suffered substantial damage as the nationalist troops captured the Nsukka area early on.

The aftermath from 1970 had consequences for the UNN's development. The main part of the University that had been bombed during the war was not rebuilt, and it took until the 1980s before the masterplan was revisited.

The University campus, though conforming to the 'campus' masterplan thus does not have the same group of 'iconic' buildings which characterized both UST Ghana and the University of Ibadan. The grouped halls of residence and teaching faculty areas were built piecemeal through contractors, with less influence from architects.

Some parts of the campus such as the staff club and rest house, and the Cubitt designed Nnamdi Azikiwe Library are recognizable parts of the campus infrastructure. Aside from the library James Cubitt Architects were involved in the design of the mathematics and science, physics and chemistry, and science lecture blocks and hall respectively.

As at 2009 the Nnamdi Azikiwe library as illustrated in this paper, had undergone a full refurbishment and final completion with international funds. The refurbishment however has paid

limited respect to the initial library design as conceptualized by the Cubitt team, it however does provide the necessary infrastructure and academic functions for the student population of one of Nigeria's largest Universities. Other buildings have remained robust and 'fit for purpose', remaining in use for the University's student needs. The campus has remained a 'work in progress', as more buildings have been built and added to the campus masterplan.

Conclusions

This paper sought to evaluate the development of University campus design in British West Africa in the post War Modernist period. Its argument that West African Universities of this era had a unique evolution, has been substantiated through the historical and contextual analysis which has been produced for each of the three universities analysed. The similarities in their evolution however have all been highlighted as evidenced by their connections with the University of London, and in the case advisors from Michigan State and Exeter Universities.

Also the exploration of the biographic details of their architectural planners and designers, the cross over and collaboration of architects such as James Cubitt are evident. These cross overs and collaborations continued, as the Cubitt team was involved in the later design of the University of Ife in Western Nigeria, and some buildings such as Senate House at the University of Lagos.

Did the modernist conceptualization of the Tropical University campus work? From this analysis the answer has to be yes, more than fifty years on, these aspirational citadels and ivory towers of achievement have generally weathered the effects of overcrowding, limited maintenance, and in the case of the University of Nigeria full fledged civil war. This is surely a testimony both to the architects and designers of the modernist functional ideal, the aspirations of the nationalists of the day to provide higher education to the masses in tropical architecture.

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University of Nigeria Nsukka
Founded 1960
Decree 1955
Advisers Michigan State University USA/
Exeter College UK
Initial Architects James Cubitt and Partners

Image 4 Female Dormitory Block





Nnamdi Azikiwe

Library, University of Nigeria, Nsukka.

Nnamdi Azikiwe Library was established in October, 1960. The library is located in Nsukka, Enugu State, Nigeria. The University Librarian is Omekwu, Charles O. (Ph.D) E-mail: library.unn@unn.edu.ng, unnlibrary@gmail.com

More on Nsukka

Commissioned 1955

Advisers Michigan State University USA/

Exeter College UK

Initial Architects James Cubitt and Partners

SPRINGER, WIEN (University of Nsukka, Nigeria, 1957-1971, 58 (2) arch. James Cubitt
James Cubitt project website

] **University of Nigeria Nsukka**

Area: 871 hectares

Completion : 1981

Contract Sum : \$25.5 million

Project Description:

