CLASSICAL MODELS OF URBAN STRUCTURE AND NIGERIAN TOWNS:
AN EXAMINATION AND PROPOSAL

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Title of Extended Essay: Classical Models of Urban Structure and Nigerian Towns: An Examination and Proposal

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ABSTRACT

It is often claimed in the geographical literature that the concentric zone, sector and multiple nuclei models of urban structure, as developed in the United States, have cross-cultural applicability. This paper attempts an application of these models to Nigeria's Old Towns, which have been in existence since before the period of British colonisation. These Old Towns have a dual character related to indigenous and colonial phases of growth. The old, pre-colonial section of the town expresses traditional Yoruba urbanism, whereas the new section was grafted to the former by the British colonial government in the early part of this century. Ibadan, one of Nigeria's principal Old Towns, is used as the main example in this study.

The classical models were developed with certain basic socio-economic assumptions which are valid in North America but not in Nigeria. Two analytical proposals to account for the structure of Nigerian Old Towns are suggested. The extended family system and the institution of chieftancy lie at the core of the first proposal. These social institutions are seen to account for the forms both of the urban residential quarters and the central nucleus in the older section of the towns, where the king's palace, the main market and a religious building are located. The form of the new section that grew up in the early part of this century is a result of the colonial government policy of separating the various Nigerian immigrant ethnic groups and the non-African community from the indigenous town. This policy, which constitutes the basis for the second proposal, is termed the principle of ethnic separation.
The application of these two proposals constitutes the major portion of the paper and it is suggested that these two sets of factors offer a superior explanation of the present structure of Nigerian Old Towns than is offered by the now traditional concentric zone, sector and multiple nuclei generalisations.
ACKNOWLEDGEMENTS

I wish to thank Professor Len Evenden, my senior advisor, for his patience and sincere help at all stages of this study. His encouragement was a strong motivational force throughout the whole period of library research and writing of the essay. I am equally indebted to Professor Sagar for his advice.

I would also like to thank Mrs. Gwen Fernandes, who, in a very motherly way, typed the essay free, and Angela Hamilton, for her invaluable help.
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INTRODUCTION

Nigerian urbanization is characterized by the fact that many of the towns are indigenous in origin but have grown in the last century under the impetus of, and organizing principles applied by, the British. These towns have thus acquired a "dual personality", through the amalgamation of two very dissimilar urban processes. This paper attempts to analyse Nigerian urban spatial structure from two points of view: first, in terms of existing "classical" urban theory, that is the concentric zone theory of urban development and, second, in terms of a growth process rooted in determinants of traditional kin group organisations and of past colonial administrative policies.

Some scholars, particularly Mabogunje and Nelson, have made the claim that the classical models of urban structure that were developed in North America in the pre-1945 period are applicable to Nigerian towns. The first of these models, formulated in 1923 by E. W. Burgess, is the Concentric Zone Model in which cities are considered to be zonally structured by a growth dynamics termed "invasion and succession". The second was by Homer Hoyt, who labelled his construct the "Sectoral Growth Theory". This was a further development of Burgess' ideas in that Hoyt's concern was mainly with the growth process of the residential areas, which he considered to be sectoral in nature because of the significant influences of transportation and economic variables. The Multiple-Nuclei Theory that Harris and Ullman published at the end of the second world war strongly stressed the growth of cities as due to the collective impact of the numerous growth foci in cities. These models are all critically analysed
in part one of the paper as a basis for the verification of their cross-cultural applicability claimed by Mabogunje and Nelson.

The second part of the study focuses on the various structural units of Ibadan, a city which is taken to be representative of Nigerian old towns. This part is further subdivided to correspond to the two fundamental divisions of the town. This approach highlights pertinent variables of the different processes that have created the structural units in the two sections of the city. The first process is indigenous to the Yoruba culture and therefore refers to the old, pre-colonial part of the city. This section was founded about 1827 by soldier-immigrants from all parts of the Yoruba cultural realm and, with time, had grown to be the largest indigenous town in sub-Saharan Africa. It has a structure that is associated in form with the strong cultural and sentimental attachments to the urban space by the inhabitants. This is due to the cohesive family pattern that is known as the extended family system. The effect of this cultural variable on the urban space is that the town is structured into well-defined family residential quarters where members of the extended family are obliged to build their houses. This imposes a growth pattern that is generally referred to as in situ growth, and includes an urban centre that performs both administrative and socio-cultural functions for all parts of the town.

In addition, the new section grew in response to the impact of British colonization. This era of Nigerian history was marked by improvements in transportation since many parts of the country were linked by rail and road. In consequence, there was a large influx of both Nigerians.
and Europeans into the town as traders and as colonial government workers. This led to the introduction of an urban location policy that aimed at spatially separating the various ethnic and racial immigrant groups, and putting some constraints on the directional expansion of the ethnic and racial residential units. This policy was also applied to the commercial area of the town and the location of educational and medical institutions. In this way, the contemporary structure of this new section is an end-product of the colonial administration's policy, and this is an urban process that sharply contrasts with that in the old part.

The explanations of the city growth by the classical models put heavy emphasis on economic principles, the importance of the urban core, the existence and effects of a social class structure, and the impact of transportation routes. However, these are not the basic criteria of growth of Ibadan. An alternative explanation that emphasizes the importance of the extended family system and the principle of ethnic and racial spatial separation that the colonial government vigorously implemented in laying-out new Ibadan is therefore suggested. This framework of analysis is felt to be sounder than the classical models in attempting to understand the structure and processes of the spatial expansion of Nigerian towns.
PART I
CLASSICAL MODELS OF URBAN STRUCTURE

A number of models have been formulated to provide valid generalisations of the spatial structure of cities. The most widely known are those developed by American scholars in the first half of this century. The first one, the concentric zone model, was formulated in 1923 by E. W. Burgess, while the sectoral model was put forward by Homer Hoyt in 1930. The multiple nuclei theory was formulated by Chauncy D. Harris and Edward L. Ullman just after the second world war. These models attempted an explanation of the factors and patterns of growth of the American cities. Each of these will be critically examined in terms of their main features and the basic assumptions upon which they are postulated. This is considered to be an approach that will be helpful in analysing their applicability to Nigerian old towns, the focus of the second part of this paper.

The Concentric Zone Model

This model, the first and also the datum for later developments, was formulated by Burgess, who was a University of Chicago Sociologist. He was particularly interested in human ecology. He and his associate, R. E. Park, applied biological approaches to the study of plant and animal communities to the various ethnic and racial communities in Chicago. Burgess was interested in the city's role as a determinant of human behaviour, and he aimed at understanding this and how to improve the city's social and moral order.² Field studies of social pathology that included a complete census were conducted in Chicago, and it was from those that large numbers of maps were produced that enabled Burgess to identify what he termed the
'city's natural areas'. From these he formulated the hypothesis that a city's spatial structure constitutes a series of concentric zones. Five such zones were identified in Chicago and these are outlined as follows.\(^3\) (Fig. 1).

Zone One: The Central Business District

This zone is at the centre of the city and it is the focus of commercial, social and civic life. The downtown retail district is the heart of the zone and it is here that department stores, smart shops, office buildings, clubs, banks, hotels, theatres and museums are concentrated. It is thus the headquarters of economic, social, civic and political life of the city. It is encircled by the wholesale business district with its 'market', warehouses and storage buildings. (Fig. 1).

Zone Two: The Zone in Transition

The first zone is surrounded by areas of residential deterioration caused by the encroaching of business and industry from the central business district. It has a factory district in its inner belt and an outer ring of retrogressing neighborhoods, of first-settlement immigrant colonies, of rooming-house districts, of homeless-men areas, of resorts of gambling, bootlegging, sexual vice and of breeding-places of crime. The zone has the greatest concentration of poverty, bad housing, juvenile delinquency, family disintegration and physical and mental disease. With increase in the level of prosperity, families and individuals escape from here into the next zone.

Zone Three: The Zone of Independent Workingmen's Homes

It is largely constituted by neighborhoods of second generation immigrant settlement, and the residents of the zone are those who desire
to live near but not too close to their work. The zone is a housing area
neither of tenements, apartments, nor of single dwellings, and its boundaries
have been roughly determined by the plotting of the two-flat dwelling, which
are generally of frame construction with the owner living on the lower floor
and a tenant on the other.

Zone Four: The Zone of Better Residences

The fourth zone is where the great middle-class of native-born
Americans, small businessmen, professional people, clerks and salesmen
live. Within these areas at strategic points are found important local
business centres and recreational units that include a bank, a drug store,
a high class restaurant, an automobile display row, a "wonder" motion-
picture theatre, a dancing palace, a cabaret, and a smart hotel.

Zone Five: The Commuters' Zone

Extending beyond the fourth zone is a ring of encircling small cities,
towns and hamlets, which taken together, constitutes the commuter's zone.
These are mostly dormitory suburbs because the majority of men residing
there spend the day at work in the first zone, returning only for the night.
The communities in the zone are the most highly segregated of any in the
entire metropolitan region because it embraces crime-ridden incorporated
villages and areas occupied by very affluent families.

Burgess extended the idea of concentric zonation to the metropolitan
hinterland with a radius of sixty miles and including sixteen counties in
three states. This extensive hinterland looked up to the metropolis as a
market and as its job centre.

The tenet of this model is city growth by the process of physical
expansion. Burgess thought this could be best illustrated "by a series of
Fig. 1

Traditional Models of Urban Structure.

Source: Bourne, Internal Structure of the City: Readings on Space and Environment.
concentric circles, which may be numbered to designate both the successive zones of urban extension and the types of areas differentiated in the process of expansion. However, concentric zones were considered by him to be "an ideal construction of the tendencies of any town or city to expand radially from its central business district."

This process of physical expansion of the city was called "invasion and succession", a plant ecological term that strongly applied to the growth of the various ethnic communities in Chicago at the time of Burgess' study of the city. This urban growth mechanism was explained in details by him when he wrote:

"The population movements from the centre towards the periphery of the city or the resultant of outward pressure and local community, take the form, therefore, of successive waves of invasion. Succession as a process has been studied and its main course charted as (1) invasion, beginning often as an unnoticed or gradual penetration, followed by (2) reaction, or the resistance mild or violent of the inhabitants of the community, ultimately resulting in (3) the influx of new-comers and the rapid abandonment of the area by its old-time residents, and (4) climax or the achievement of a new equilibrium of communal stability."

The main stimuli that set the process in motion were the pressure exerted by businesses and industries and the residential pull. Thus a demographic growth of a community led to the outward expansion from its centre by the ecological process of competition through which an ethnic group succeeded another in the use of an area. The growth process involved a distribution type that "sifts and sorts and relocates individuals and groups by residence and occupation", and consequently the low-class people were concentrated in the least attractive parts of the city while the high-class citizens lived furthest away from the city centre and in the scenic parts of the city.
Burgess put heavy stress on the importance of the central pressure on city growth, and this indicates the type of assumptions that he made in building the model. The most explicit assumption he made was that the city population grew mainly through in-migration, especially of alien ethnic and racial groups, who had different purchasing powers and standards of living. Consequently, the city population was heterogeneous, and this was a major factor for the appearance of the various ethnic residential zones that he differentiated. The second assumption was a city with a mixed commercial-industrial base. This was exemplified in the land use characteristics, e.g. the central business district, the wholesale business district and the factory areas, which Burgess described in detail. An assumption of the economic and cultural factors was also made, and this implied private ownership of property, economic competition, and the existence of specialized economic institutions occupying distinctive buildings and areas. Furthermore, he assumed that transportation is equally easy, rapid, and cheap in every direction within the city.

The importance he attached to the central business district was due to an assumption he made about the geometry of space in which physical area increased as the square of radial distance away from that point. Furthermore, space was thought to be in short supply at the centre, but it became more abundant with distance from the centre. The occupancy patterns assumption was the fifth major one that Burgess explicitly made. A further major assumption about occupancy pattern implied that the wealthy members of the city had a high degree of locational freedom whereas members of the lower classes were more severely restricted with respect to residential
location within the city. These assumptions significantly influenced the conclusions that Burgess drew from his studies, and they are worthy of being fully understood before the conclusions can be cross-culturally extended.

The model has been criticized for a number of reasons in spite of Burgess' assertion that it was an "ideal construction", which could be strongly influenced by what he called distorting factors, especially the physiographic characteristics of the site of the city. Burgess considered lake, river, railway lines, historical factors that affected the location of industry, the relative degree of the resistance of communities to invasion to be a few of these distorting factors. 9

John Quinn, who, although accepting the major principles of the model, recognized two major types of criticisms: (a) that the model lacks validity in research or description; (b) the fact that the number of real world distortions is so great as to destroy the model's value, even though the general tendency is as predicted. 10 Concentrating on the latter criticism, Quinn asserted that the concentric zonal pattern could only result if there was a strong positive correlation between straight-line and ecological (or time-cost) distance. He also pointed out the probable correlation between major routeways and the zones and claimed that "accessibility surfaces distort the simple structure of the Burgess model and a rectangular spatial structure may be entirely consistent with a circular ecological (time-cost) structure". 11

Quinn's other attack on the model was his recognition of the irrelevance of the model to a poly-nucleated city, which would not fit the simple
concentric pattern postulated by the model. He also charged Burgess for neglecting the factor of inertia. He claimed that:

"Immobility is considerable within cities, for buildings, streets, railroads, and occasionally even some cultural groups, are not easily transferred to other locations. Accessibility surfaces also change over time, and not uniformly, so that developing cultural patterns are imposed upon a generally conservative existing mosaic. The degree to which a city re-orders itself to the new influences depends on the mobility of people and capital, the readiness with which people will move and write off earlier capital investments, and the importance to them of marginal benefits in, for example, accessibility".\(^{12}\)

Thus the inclusion of this factor in the concentric zones model means that a detailed history of the city under study will have to be understood before it can be justifiably compared with the theoretical expectations of the model.

The idea of zonal homogeneity that Burgess strongly emphasized in the model had also been criticized on the grounds that many of the differentiated zones were actually functionally heterogeneous. Thus the first two zones had commercial, industrial and residential functions, while the last one contained a wide variety of sub-communities of different social status.\(^{13}\)

This criticism provided a basis for the development of an alternative theory, the sector theory, by Homer Hoyt a decade after Burgess published his work.

In spite of these major criticisms of the concentric zone model, Burgess' contributions to a search for an orderly growth pattern of American cities is immense. His model remains to-day the datum for other models of urban structure, and it is still a meaningful investigative hypothesis of American cities, albeit in an historical context since the
cities have undergone structural changes since the end of the second world war. The second major classical model of urban structure was put forward in 1939 by Homer Hoyt consequent on his detailed study of some 204 American cities, with financial support provided by the Real Property Inventories of the civil works administration.

Sectoral Growth Theory

Like Burgess, Hoyt attempted to generalize upon the process of urban spatial growth in the pre-second world war period. He was primarily interested in the residential function of the urban area and it was this aspect of the urban spatial structure that he heavily stressed. His model of the growth pattern of American cities is generally known as the wedge or sector theory or the axial growth theory.

The concept of axial development that was first postulated by Richard Hurd consequent on his study of New York city at the turn of this century was refined by Hoyt in his sector theory. According to this theory, city growth takes place along main transportation routes or along lines of least resistance to form a star-shaped city. The distribution of residential areas of differing physical qualities, as defined by rent levels was deeply analysed in terms of their location relative to the other urban structural units. However, contrary to the claims of Burgess, Hoyt did not find those areas forming concentric circles. He classified the residential areas into high and low grades, and from the numerous cartograms he developed from field study data, he found that each class had a tendency to locate in one or more pie-shaped sectors. Furthermore, each sector was found to grow radially along distinct radii with new growth on the arc
of a given sector tending to take on the character of the initial growth in that sector. His cartograms clearly indicated a tendency for the high-grade residential areas to follow a definite and ordered path during city growth and therefore allowing the development of the sector theory of residential structure to extend into one of neighbourhood change.

Some of the main factors that strongly influence the growth direction and pattern of the high-status residential sector were identified as follows. 18

1. High-grade residential growth tends to proceed from the given point of origin, along established lines of travel or toward another existing nucleus of buildings or trading centres.

2. High-grade residential growth tends to progress toward high ground which is free from the risk of floods and to spread along lake, bay river and ocean fronts, where such waterfronts are not used for industry...and where such...exist and offer the attraction of bathing, yachting, cool breezes in summer, and a wide expanse of water with its uninterrupted view, rent areas tend to follow the contour of the waterfront in long, narrow lines of growth.

3. High rent districts tend to grow toward the section of the city which has free, open country beyond the edges and away from "dead end" sections which are limited by natural or artificial barriers to expansion. The lure of the open fields, golf courses, country clubs, and country estates acts as a magnet to pull high grade residential areas...
4. The higher priced residential neighborhood tends to grow towards the homes of the leaders of the community...

5. High grade residential areas tend to develop along the fastest existing transportation line.

6. Real estate promoters may bend the direction of high grade residential growth.

With such well-identified factors that influence the directional growth pattern of American cities, Hoyt was more explicit than Burgess on the dynamics of city growth, although he made the same basic assumptions about the city as Burgess did. He paid a lot of attention to the physical characteristics of homes and neighborhoods, and he termed the process of occupancy pattern "filtering" by which:

"the higher-income groups periodically demand new housing and their former homes are bought by lower-income groups, for whom they represent an improvement in living standards. Thus homes slowly filter down the social scale and individuals filter up the housing scale".19

Thus, by examining the significance of land pricing, major transport routes and by taking into account both distance and direction from the city centre, Hoyt's theory, based on empirical findings, is very insightful into the forces that shape the urban space, and it is much closer to reality than the zonal model.

The third classical model, which "merely continued the process of bringing the original zonal model closer to the reality of large cities",20 was developed after the second world war.

Multiple Nuclei Theory

The concept of the city as an aggregation of land-use types developed around multiple nuclei21 was formulated by Chauncy D. Harris and Edward L.
Ullman. The tenet of the theory is the presence of multiple growth foci, some of which had existed from the inception of the city while others might have developed during the growth of the city. The number of these nuclei is a function of the size of the city. Five districts that had developed around individual nuclei in most larger American cities were identified as: the central business district, the wholesale and light manufacturing district, the heavy industrial district, the residential district and the suburbs and satellites. These growth nuclei were a result of the historical development of the cities and the operation of localization forces.

The multiple nuclei theory placed significance on a combination of factors in the development of city structure. These factors are:

1. Certain types of economic activity require specific facilities i.e. a retail district needs intracity accessibility to attain a profitable volume of sales, port activities require a harbour and so these are to be found in the waterfront, and wholesale activities exist near bulk transport facilities.

2. Many activities benefit economically through geographic agglomeration. Thus retail activities may cluster to facilitate comparison shopping and financial institutions may locate in close clusters to make close face-to-face communication by decision makers.

3. Some unlike activities mix badly. For example, extensive users of land, such as bulk storage yards, are not compatible with retail functions, requiring dense pedestrian traffic.

4. As a result of land competition within the city, some users will be prepared to bid higher than others can afford for the
more desirable sites. The users unable to pay, or the
users that demand extensive tracks of land, will of
necessity locate in the less desirable areas. 24

In this way the city comprises an aggregation of more or less distinct
districts, whose numbers varies with the area and numerical size of cities.
The occurrence of sub-districts, e.g. specialist sub-districts within the
central business district was identified. The residential area, comprising
over half the entire urban area, was also recognised to be the most
extensive functional unit of the city; it was classified into sections of
different status largely on the basis of rental values of land, determined
by site and access considerations. 25 Minor nodal areas such as airports,
universities, and open belts were considered as distinct foci. This theory
tends to destroy the idealized construct of the earliest theory by heavily
stressing the great urban growth complexities. However, the diagramatic
representation of the model is much more difficult to compare with maps of
sample cities than are the previous two models. Thus while the ideas of
the model mirror reality in a more satisfactory way, the diagram is very
abstract and therefore far removed from the real world.

The main merit of these classical models is their utility as investiga-
tive hypothesis of the urban structure. The concentric zone model is
particularly useful in aiding an understanding of the socio-cultural forces
operating to change the city structure; however, its assertion of zonal
homogeneity is not particularly realistic. The concentric zone and sectoral
models assumed only one major centre in the urban space and that it was
around this central core that the urban land uses were arranged more or
less symmetrically in concentric and radial patterns. This assumption had been a major point of criticism of the models, and this is why the multiple nuclei theory appears to be much more closer to reality than these.

These theories complement one another and many elements of each are recognizable in the vast majority of North American cities. However, the basic assumptions made (which were valid at the time the models were formulated) and the expected outcome of those traditional models have been radically changed as a result of the recent transformations of the urban structure. These transformations are the result of the increase in automobile ownership, rapid post-war demographic growth, increase in housing construction, shopping facilities, and increase in social and industrial mobility. It is these changes in the socio-economic characteristics of people with their consequent imprints on the urban structure, necessitating modifications in the classic models, that require further examination.

RECENT MODIFICATIONS OF THE TRADITIONAL MODELS OF URBAN STRUCTURE

The theoretical explanations of the city structure discussed earlier were formulated prior to the outbreak of the second world war. Since then there has been tremendous progress in transportation technology along with developments in the construction industry. Furthermore, the concept of a city, in terms of its land uses, has undergone revolutionary changes.

Nelson identified the major factors of the city growth patterns in the U.S. as the heterogeneous population, which creates a two-society situation; the persistent desire of Americans for a space-consuming single family detached house encouraged by governmental mortgage policy, and the changing forms of urban transportation which affect the arrangement and function of
elements in the structure of the city. These factors, which strongly operate in the post-war era, are a result of what Hoyt called the extraordinary changes in the American economy which has a profound influence on the structure of cities.

In a review of the classical models of city structure in 1964, Homer Hoyt identified factors which severely weakened the validity of the zonal and sector theories. There has been tremendous changes in the number of cities with a million people, from ten to twenty-two between 1930 and 1964, while the population of people living in the suburbs has increased by about 47 per cent between 1950 and 1960. On the other hand, the population of the city centre, now mostly occupied by the non-white population, declined by 39 percent during the same period. The per capita national income also rose from 757 dollars in 1946 to 2,500 dollars in 1963. There were about 23 million private passenger automobiles in the U.S. in 1933 but this number had increased to over 100 million. The main effect of this factor has been the increasing importance of highways in the efficient functioning of cities. These changes, in sum total, specifically modified the features of the traditional models in a number of ways. There is therefore a need for the modification of these models to take into consideration the major impacts of the recent technological developments as well as the behaviour of city dwellers.

The central business district which Burgess described as the focus of the city's commercial, social and civic life has now been reduced in its dominance over the city. This is mainly due to the construction of a hierarchy of shopping centres in both the suburbs and on the periphery of
the central city. The components of the urban commercial hierarchy are the regional shopping centre, the community and neighbourhood shopping centres, ribbon and the corner-convenience goods stores. However, it is the regional shopping centre, which performs the most complex functions, that has the greatest impact on the downtown stores. This is because it directly competes with downtown in the sales of general merchandise. The value of sales outside of the central business district of major U.S. cities have increased by about 59 percent compared with about 3 percent in the central business district. The planned shopping districts, with free automobile parking, are also of greater acreage than the combined areas of the central business district in all of the U.S. cities. Also, there has been a decline in wholesaling here due to increase in direct sales by manufacturers to merchants. Urban renewal programs have considerably reduced the slum conditions that characterised the core area in the zonal theory. These changes were vividly summed up by Hoyt:

"...the overall decline in the predominance of central retail areas, the rapid growth of office centres in a few sites compared to a static situation in others, the emergence of redeveloped areas, and intown motels, the former descriptions of patterns of American cities must be revised to conform to the realities of 1964."

The wholesaling and high manufacturing activities, which in the 1923 model was a ring around the central business district, have been strongly influenced too. Many of these are now located in the suburbs, where land is relatively cheap and which is also easily accessible to workers because of the high increase in mobility. Here, there is ample land for one-story plants and storage, and for parking lots for workers.

The residential districts are structurally changed because the heter-
The homogeneous urban population tends to sort itself out into fairly homogeneous
neighbourhoods with economic status and race as the main indices of
segregation. Residential expansion is mostly on the suburban fringes of
the metropolitan areas beyond the old central area—a phenomenon made
possible by the post-war increase in affluence and mobility. Hoyt maintained
in his 1964 review of the sector theory that the high-income families were
still definitely concentrated in certain sectors of the city, while the
urban poor are to be found in the centre. However, location of these high­
grade residential areas in rigidly defined sectors is no longer true because
of "the greater flexibility in urban growth patterns resulting from these
radial expressways and belt highways" and which have opened up large regions
beyond existing settled areas.

Ullman, in a postwar review of the multiple nuclei theory, noted the
relative decline in the importance of the central business district. It
had become the shopping centre for the large, low-income area around it
and an office centre of a reduced scale for older activities or small
concerns that can use inexpensive, vacant space or large amounts of labour.
He predicted a rapid increase in the economic importance of the hierarchically
planned shopping centres, the airports, and the educational, cultural, and
recreational centres that will be scattered over the city to serve the urban
dwellers. In this way this theory will continue to fit the highly flexible
modern urban scene. These two postwar reviews up-date the traditional models,
and in this way, they are much clearer reflections of urban contemporary
reality in America.
SUMMARY OF PART I

The classical models of urban growth are basically descriptive in nature, and the earliest two models strongly emphasised a central core which transmitted growth concentrically according to the Burgess' analysis of Chicago in the early 1920's. The five concentric zones that Burgess identified developed with reference to the heart of the city but the residential zones were recognized by the social and economic status of the residents.

Hoyt's analysis, basically an improvement on Burgess' model, lay much emphasis on rent-paying ability and the effect of transportation. The rent paying ability depended very much on the purchasing power of consumers, so his analysis had a socio-economic resemblance with Burgess'. The residential units reflected the status of the residents, with the upper class following scenic amenities while the low-income group were in units which were relatively of low quality. Harris and Ullman saw the growth of cities in terms of many foci whose number is a function of the size of the city. In this way, they considered towns to be a sum total of many land use types, each with its own growth nucleus. The post-war review of the models by Hoyt and Ullman drew them nearer to contemporary reality.

These models, however, had a common explanatory objective which is the growth mechanism of North American cities. Burgess' social geographic approach strongly influenced his conclusion of city growth by the process of invasion and succession. On the other hand, Hoyt thought that residential growth of cities could best be explained in terms of economic principles such as the rent-paying ability of city dwellers and the impacts of transportation lines. The authors of the multiple nuclei theory perceived the
city as a poly-nucleated one with each nucleus being capable of radiating
growth in all directions. However, this theory did not specify any growth-
inducing factors as the earlier models did.

These models are said to be valid in other cultural realms outside
North America; that is, the growth mechanism of cities anywhere in the world
are basically the same as in North America. This is considered a questionable
generalization, and the second part of this study attempts a verification of
such a claim through a detailed analysis of the structure and expansion
processes of Nigerian towns. Ibadan, which is the largest Nigerian old
town, is used as an illustrative example. The various structural units
of the town will be analysed in terms of their origin, and factors of
spatial expansion. This approach is taken because it facilitates a full
understanding of the mechanics of growth of Ibadan, and this in turn
provides the needed criteria for "testing" the cross-cultural applicability
of the classical models.

PART II
NIGERIAN TOWNS

Nigeria, the most urbanized country of sub-Saharan Africa, has
fourteen percent of its population in towns of over 100,000 people. Seventy-
five of the 32 largest cities in West Africa with 100,000 people are to be
found in Nigeria, where the two largest urban centres are Lagos, the chief
administrative centre, and Ibadan. The latter is both the largest town of
the Yoruba ethnic group and an indigenous African town that predates the era
of colonization.

Yorubas inhabit the southwestern part of Nigeria, and over fifty percent
of the population of 12 million (1963 census) are urbanized. They are the most urban of all African peoples among whom urbanization is considered traditional and not an outgrowth of cultural contact with the western civilization. Ibadan was a military capital of an empire that bore its name, but is now a state capital and has a population of half a million with an annual growth rate of about 3 percent.

Nigerian towns have been classified into those of European impetus which might be termed "new towns" and traditional towns. (Fig. 2). The former are those set up as transportation centres, administrative headquarters, and as resource exploitation centres by the British Colonial Administration. Examples of such towns are Lagos, Kaduna, Jos, Enugu, and Port Harcourt. Kainji is the newest of these "new towns"; it is well planned, with modern amenities provided for people displaced by the construction of one of Africa's largest dams built in 1964. The latter class of towns has a "dual personality" because they represent an amalgam of two different urban processes which are both indigenous and exogenous. The former is that which creates the traditional pattern of land use zones in the older, pre-colonial towns. The latter process, on the other hand, results from the impetus of the colonial administration. The joint operation of these processes results from cultural contact between Africa and the western world. Thus there are two towns in one: the older, traditional section, and the new, planned part. The two parts are, however, closely linked with each other in spite of the socio-economic differences between the occupants of the two sections. This basic two-part structure of towns is not unique to Nigeria since it is common to most parts of the Third World where there was urbanization prior
to the period of European colonization. 39

Three contrasting areas of Ibadan were identified by Onibokun with each general area having characteristic functions, structures and growth types. These are:

1. the traditional part of the town
2. the newer inner suburbs of recent immigrants and almost all major offices, large commercial houses, business firms, banks, state government ministries, and other large-scale economic investments.
3. the peripheral suburbs, including the government financed housing estate, and the residential districts of government officials. 40

These broad urban structures were recognized by Mabogunje (1962 and 1968) in his analysis of residential regions. His differentiating factors were the physical structure (i.e. the type of housing, quality of housing, routeways and open spaces) and the socio-economic and cultural characteristics of the population. 41 The other major structural units of Ibadan are the commercial area of both the old and new sections, and the relatively newly established educational institutions, especially the University of Ibadan.

THE EXAMPLE OF IBADAN

OLD IBADAN

Ibadan was founded as a war camp about 1827-9 42 by soldiers from the various sub-ethnic groups of the Yoruba cultural realm. The most predominant members of the camp were the Oyo, Ijebu, Ife, Owu and Egba soldiers. The strategic military location of the camp is clearly reflected in the physio-
NI GER IA N TOW NS : TRAD IT I ONAL AN D NE W

Key
- Traditional towns
- New towns
- Railway

Fig. 2
graphic characteristics of the site. Thus it developed on a central range of hills which are more than 700 feet in height, and these trend from the northwest to the southeast. There are also numerous other hills, but these are generally lower than 700 feet. Ogumpa and Kudeti are the largest streams in this locality. According to Ajayi, Ibadan's location on these hills was due to the soldier-settler plan to be at a point which could facilitate easy repulsion of attacking enemies. This period of Yoruba history was the beginning of the series of civil wars in Yorubaland that continued till the last quarter of the nineteenth century, when a number of towns similar in origin to Ibadan emerged.

As a result of the large influx of people into the war camp from other parts of the cultural realm, the camp developed into a permanent settlement. The large influx of people into the town was mostly due to the desire for protection, and the military leaders of Ibadan eventually became the best organized and most powerful at this period of Yoruba history. The camp was structurally settled on the basis of the immigrants' geographic origin within the Yoruba cultural realm. Thus the Oyo and Ife immigrants built their compounds around the present core of old Ibadan, while the Ijebu subgroup settled further away in the south-western part in an area known as Isale Ijebu. The early settlers provided settlement nuclei for the later ones in that the later group settled in parts of the gradually emerging town close to their kin. This was a strong and persistent trend and up until the present time there are a number of areas in Ibadan which have been colonised by people from particular Yoruba towns.

Because of the military origin of Ibadan, the city does not strictly
conform to the classical lay-out of Yoruba towns which Askari described thus:

"The classical plan of a Yoruba town resembles a wheel: the Oba's (i.e. the chief) palace being the hub, the town walls the rim, and the spokes, the series of roads radiating out from the palace and linking the town to other centres". 45

The most significant deviation from this classical town lay-out is the absence of the palace of Olubadan (i.e. chief of Ibadan) from the centre of the town. This again reflects the military origin of the town, and the types of administration that evolved were a synthesis of both the military and civil concepts. Two lines of chiefs were introduced by Oluyole, the most important ruler of Ibadan: one military, and the other civil. The most senior in the former was named Balogun while the latter was referred to as the Bale and each line had about four subordinate chiefs. In the early days of Ibadan history, the headship rotated between the military and civil headchiefs, and in this way, the palace did not assume a permanent position in the town. Up until the present day, there is no official palace in the town, but instead, "as the office of Olubadan passes from one family to another, so shifts the residence and the other paraphernalia of office". 46 As if to fill this vacuum, the local council's administration building, Mapo Hall, was located in the centre of the town in 1935, and it has consequently become a major element of Ibadan's urban traditional centre.

The main market, Oja Iba, is the second major element of significance in old Ibadan. (Fig. 3). It is named after Oluyole, who was one of the most distinguished early military immigrants 47 and the most famous Ibadan chief of the last century. The market was founded by Oluyole and it was located adjacent to his compound. This was in conformity with the Yoruba urban tradition of naming markets after either the Oba of the town or the
quarter chiefs. Oja Iba is the oldest market in Ibadan, hence its location in the heart of the town. A number of smaller markets are located in various parts of the town and these are usually sited near the compounds of their founders, who were normally the quarter chiefs. Examples of quarter markets are Oje, Elekuro, and Idioro. However, Oja Iba is the highest order in a hierarchy of the urban markets, and it is strongly linked with an extensive hinterland. With the exception of imported, expensive hardware, virtually any article can be obtained from here. Furthermore, it performs some sociological functions in that it is:

"...a point for meeting for such occasions as the out ceremony of youth societies, the burial obsequies of an aged parent or grand-parent, or the festivities pertaining to individual families or section of the city. Politically, here is where much news of local events is disseminated and in particular, where the ceremony of installing the titular head of the city is held." 

Oja Iba appears to be equally important for both marketing purposes as well as for its sociological functions. Its situation in the town clearly expresses its close relationship with the focus of political and ritual authority. It is the focal point for both pedestrian and vehicular traffic of this part of Ibadan because of its importance as the central socio-economic-cultural district.

This core area also acquires some spiritual significance because of the location of the central mosque here. The majority of people in old Ibadan are orthodox Muslims, who acknowledge the chief Imam as the spiritual head. The central mosque, with its main organization for the spiritual growth of the Moslems, is located in the centre of the town close to both the market and Mapo Hall.

In this way, the central part of Ibadan, like any other Yoruba town, is
a major focal point which induces a spatial value gradient that may conveniently be termed "proximity to the focus of power in both the material and ritual aspects." It is the oldest settled part of Ibadan and it has the highest population and accommodation densities in both sections of the town. This is the core region or what Onibokun called the heart of the city; it is an example of the urban nucleus which has existed from the very origins of the city, but its importance to the town is not in the economic sense that the classical models of urban structure emphasized. Rather, the joint location of the market, main mosque and Mapo Hall makes the centre acquire a completely different value from that of the traditional models. It is because of this that the urban centre is looked up to in a socio-cultural context and hence its consequent impact on a residential structure that is mostly organized on the very strong lineage system.

**FAMILY PATTERN AND THE RESIDENTIAL QUARTERS**

The socio-political organization of Yoruba cities is generally structured on the basis of the lineage system; thus the large towns are composed of well differentiated residential areas that are known as quarters or subquarters. Ibadan, in spite of the circumstances of its origin, has this basic spatial organization as have all other traditional Yoruba towns.

The Yoruba family pattern is generally referred to as the lineage system, sometimes loosely called the extended family or kinship systems, and this is:

"...a corporate group in which membership entails a rigidly prescribed series of common and reciprocal rights, duties, privileges and forbearances between members or groups of members in virtually every aspect of social life." 

Members of the lineage, or segment of it, live in solid, mud-walled,
Fig. 3

Compiled from various sources.
rectangular or semi-circular structures known as compounds. These are generally considered to be the visible expressions of the lineage.

These patrilocal dwelling units are one of the cultural institutions of the Yoruba, and they have three significant components: spiritual, social-interaction and administrative. The first one refers to the lineage ancestor, who is annually worshipped and is thought to have strong influence on all aspects of the lives of his descendants. He is therefore the main binding force among all the living members of the lineage.

The ancestor of the lineage was the founder of the portion of the urban land which the lineage members inhabit and collectively own. These portions are known as agbo ile or quarters, and all members of the family have a strong cultural and sentimental attachment to them. The origin of these quarters in Ibadan dates back to the early days of the city when the war camp was sectionally settled on the basis of the sub-ethnic origin of the soldiers. For example, the Ife and Oyo groups settled around Oja Iba, while the Ijebu settled at Isale Ijebu in the southeast. These founders have with time assumed the role of ancestors, and the portion of the camp which they occupied has also become the family property of their descendants.

Another process through which urban quarters evolved was through the acquisition of a large tract of land away from the settled parts of the important warriors. The appropriated lands which have with time developed into residential quarters were peopled by the relatives of these important warriors and newcomers from other towns who settled in groups according to their place of origin in the Yoruba cultural realm. However, the newcomers usually settled with the chiefs who originated from their home towns.
Examples of such quarters that developed through this process are Oje and Agheni which were initially isolated from the oldest settled part of Ibadan. The former consists almost wholly of descendants of chief Dele, the warrior chief who first settled here, and immigrants from Ogbomosho from where Dele originally came.

There are about 65 such residential quarters in this part of Ibadan, all of which are traditionally owned by the lineage members. These are named either after the ancestors, or after one of the numerous hills; examples of the latter are Oke (hill) Are, Oke Foko and Oke Labiran (Fig. 4).

The eldest living male member of the lineage administers the compound to ensure that there is maximum social interactions with minimum friction. In Ibadan, the head of the lineage is known as Mogaji, whose authority over the lineage group is supported by the constant invocation of the ancestor's name. He has both legislative and judicial powers to which all members must submit. The socio-economic intercourse of members of the lineage is a major cultural variable of the compound design. The cordial, obligatory relationships among members are essential for the continuity of the lineage as a unit.

The compounds, expressing as they do the fundamental organization of Yoruba people, are the basic units of the Yoruba society, and they are the smallest political unit of the indigenous urban government. The heads of the single families are directly responsible to the lineage head, who, as shown above, is also the head of the lineage residential quarter. The lineage members' occupation of quarters in Ibadan is such that:

"...members of one household are related by blood to members of the next household; and both are related to other households in such a way that all the households within a neighbourhood are related, in various degrees, to households in contiguous neighbourhoods. These patterns of primary associations are repeated all over the core (i.e. old Ibadan)"59
The quarter chiefs are in turn responsible to the Olubadan. These two classes of people, whose status is prescribed, make up the traditional elite of old Ibadan. The compound of the quarter chief is generally the nucleus of the quarter while all the quarters look towards the focal point of the town, which is the centrally located main market and the mosque. The residential quarters in old Ibadan clearly indicate the strong relationship that exists between social structure and spatial organization. This relationship is further illustrated by the type of growth that characterizes this part of the town.

RESIDENTIAL GROWTH TYPE

The lineage system has some significant cultural implications that strongly influence the pattern of urban growth. Because of the overriding influences that the ancestors have over all aspects of life of their descendants, the latter have elements of both fear and veneration in their attitude towards the ancestors. There is therefore a strong desire among members of the lineage group to identify with one another by not having a residential location away from the "fatherland" (i.e. the lineage residential quarter). The quarter is a cherished location, so much so that the old, corporate compounds are not abandoned by members, but instead they are broken up and replaced by multiple single family housing units.

This process of compound disintegration and its replacement by new, and better houses is what Mabogunje called growth by fission or in situ growth according to Onibokun. Through this growth process a single compound may be replaced by four to six new houses, all of which belong to lineage members who wish to maintain a spiritual link with their ancestors by
owning a house on the quarter. The major factors of compound breakup are the increasing participation in the modern monetary economy and the influences of foreign religions. As a result of the people's participation in the monetary economy, particularly through the production of cocoa, kolanuts and trade in both agricultural and industrial products, there has been an increase in the level of wealth accumulation. This eventually lead to a demand for a fairly independent living style and also to the building of modern houses. This factor has also been reinforced by the propagation of new religions, Christianity and Islam, both of which favour the nuclear family (monogamous and polygymous). In fact, both teach the concept of a man and his family in a house separate from members of his lineage group. The new religions therefore seriously undermine the cohesion of the family pattern which the corporate compounds strongly symbolize. This trend is to be found in both urban and rural areas of Yorubaland. In Ibadan this growth process has proceeded so far that virtually all available space within erstwhile compounds has been built up. The oldest settled parts of Ibadan have the highest accommodation density as a result of this cultural and sentimental attachment to the "fatherland". The urban "fatherland" is considered an inheritance that is collectively owned by all members, who have equal rights to it.

Having concentrated upon the compound as the fundamental residential unit of Yoruba cities, there remains the question of how these numerous components interrelate within the wider city. The various sections of old Ibadan are connected to one another by a labyrinth of footpaths which are not convenient for vehicular traffic. Many of these have been widened,
straightened and tarred so that the old parts can be connected with the various units of the new section. The main effect of the modern roads and vehicular traffic is that dwellings and shops compete for the favoured road sites, particularly along Ogunnola Street which is the life line of the two sections of the town. Neither the old narrow paths nor the recently constructed streets has influenced the directional and sectoral growth of this part of Ibadan. The influence of transportation was an important basic assumption that the classical models made to explain the physical expansion of North American cities. However, this assumption is certainly not valid in old Ibadan where the impact of transportation technology on expansion is minimum. This is because motorized transportation is a luxury that can only be afforded by the elites of the society who live in new Ibadan. Consequently, pedestrian traffic is much more important here than vehicular type. The expansion of this section of the town is therefore in terms of the cultural values of the people and not on the basis of the dictates of improved transportation technology.

Like other traditional Nigerian towns, Ibadan was walled for defense purposes, a factor that has been shown to be decisive in the selection of its site. In fact, the town had two walls; the first was built when the town was founded. The second was built in 1858 by Balogun Ibikunle, who was the military ruler of Ibadan at the time. According to Awe, this second wall had four main gates along the roads to important Yoruba towns i.e. Abeokuta, Ijebu-Ode, Oyo, and Iwo. The town wall, however, is no longer a prominent feature although it was a dividing line between the old and the new sections of the town.
The major structural elements of old Ibadan are thus the traditional centre which performs socio-cultural functions for all parts of the town; the numerous "fatherlands" that constrain locations of members of the extended families and consequently impose an in situ type of urban expansion. Residential growth in this part of Ibadan is therefore mostly due to the cultural values held by the people with regard to the joint location of the main urban market, administrative and religious buildings at the centre. These values also influence the attitude of lineage members towards the ancestors. The most important aspect of the ancestors' influence in this study is the obligation to build on the urban family land (i.e. the quarter). In this way, the expansion of this part of Ibadan is neither a response to economic principles such as the high scarcity value that the U.S. cities have and which is the main factor that is responsible for the pressure that the central business district exerts. Another aspect of the economic principles which influence growth pattern is the differences in the purchasing power between the upper and lower classes of the society. As a result the former demands high quality housing away from the centre and usually in scenic parts of the town. Such a social structure that is based on affluence is not characteristic of this part of Ibadan and consequently there is not a class which, through its wealth, strongly determines the pattern of expansion. The traditional elites, which can be called the upper class of the Yoruba society, strive to maintain a residential pattern that is defined on the basis of the kinship system. Even though there has been value re-orientation in the last ten decades as a result of the cultural contact with the West, the cultural values held by the indigenes of Ibadan are the
Fig. 4

The centre of Old Ibadan, showing the indigenous pattern of Yoruba Urbanization.

major decisional variables of having location or relocation and its consequent growth pattern in this part of the town. This very sharply contrasts with the new immigrant section that has a different developmental process.

NEW IBADAN

A. THE BRITISH COLONIAL ADMINISTRATION'S URBAN LAND POLICY

The last half of the 19th century was the period of British penetration into the interior parts of Nigeria, and the original base of expansion was Lagos. A British resident, the chief administrative officer for a territory, was first posted to Ibadan in 1893. This date marked the beginning of the formulation of land policies which are very strongly reflected in Ibadan's contemporary landuse structure.

In 1897, all the unoccupied land in the northern and western parts, inside and outside of the town wall, was acquired from the newly constituted Ibadan's Native Administration. The acquired land was later declared Crown Land, and it was put under the direct control of the Colonial Government. (Fig. 3). The official explanation for this policy was that the land was to be developed for residential and other purposes as it was thought fit by the new administration. This in effect meant that Ibadan's indigenes who, under the extended family system, collectively owned portions of the land around the town, lost their rights of land ownership.

The second component of the land policy was the system of leasing land for both residential and commercial purposes. This policy was directed mainly to the "strangers", both African and non-African, in Ibadan. There was a marked influx of people into the town in the period after the rail-
way was extended from Lagos in 1901. Ibadan’s local council was directed by the Colonial government to lease land to the various Nigerian ethnic groups in different parts of the town, particularly the area west of old Ibadan. The foreign trading firms were also granted land leases in the present-day main commercial area that is generally known as Gbagi.

An important ordinance, the Township Ordinance, was passed in 1917 by the British Colonial government. Its provisions were to apply throughout Nigeria, and so it was also a significant policy statement that strongly influenced future morphologic structure of Ibadan. The Township Ordinance provided for:

"...the creation, constitution and administration of all towns and municipalities in Nigeria with the exception of those native towns where the population was sufficiently homogeneous for it to be administered by a Native Administration".

The townships were classified into three: first, second, and third class townships. The only first class township was Lagos which, under the provisions of the Ordinance, was to be administered by a Town Council of ten members. Seven of the members were to be appointed by the Governor General while the remaining three were to be popularly elected. In fact, the latter group of members were elected in 1922, and this was the first election held in Nigeria. The second class townships were more in number; there were eighteen of these in 1919. Examples of towns in this class were Ibadan, Sapele and Warri in the West; Aba, Calabar Port Harcourt in the East, and Ilorin, Kano, Lokoja in the North. These were mostly large trading centres along the railway, on the coast or on the major navigable rivers of Nigeria. Furthermore, they were centres where European traders had established stores. They were to be established by officers appointed
by the Governor, and these were assisted by an Advisory Board. The third class townships were officially referred to as government stations, and these were thirty-eight in number in 1919. They were not of any commercial or administrative significance when compared to those in the second class, but they were administered in the same way as the second class towns.

Ibadan was a second class township, having acquired this status mainly because of its communication-induced growth; the railway opened it up to an influx of immigrants, both Nigerian and European, who were interested in trade and commerce. It is at the centre of the major cocoa-producing area of Yorubaland and, helped by the railway and road transportation network, it became the main collection and distribution centre for the cocoa belt. Ibadan thus had a strong pull for European exporting and importing firms.

A major implication of the 1917 Township Ordinance was that the immigrant part of the town, Gbagi, the railway station, and the residential areas for the non-Nigerian elements were collectively known as Ibadan Township. It is these structural units that developed as a result of the colonial administration's impetus that are referred to here as New Ibadan.

The land policy and the 1917 Township Ordinance were distinguished by their emphasis on ethnic and racial criteria in that the colonial government sought to have new, immigrant towns grafted to the pre-colonial towns. These immigrant sections were, unlike the old traditional ones, strictly laid out for the occupation of the various ethnic groups. Furthermore, the ordinance stipulated the lay-out of an area, away from both old
and immigrant sections, for the non-African immigrants. The policy of separation of people on ethnic and racial basis was extended further in that Gbagi, the main commercial area, was also laid out with the aim of separating the European, Levantine, and Indian trading firms from each other and from the African traders. Thus new Ibadan grew and developed under a vigorous policy that strongly constrained its developmental pattern. As a result of this colonial government policy, it is quite appropriate to analyse in ethnic and racial terms the spatial structure which resulted from it. The argument which follows thus identifies as a fundamental determinant of urban structure, the spatial separation of ethnic groups. This is called the principle of ethnic separation, and this framework of analysis helps to identify the significance of this government policy as a process of urban morphology in Ibadan and other towns in Nigeria. This urban process, as will be shown later, is operatively different from that in North American cities on which the classical models were based, and resultant urban structure also different. The analysis which follows casts a heavy doubt on the applicability of the classical models to Ibadan.

B. THE STRUCTURAL UNITS OF NEW IBADAN

1. Ethnically Exclusive Residential Units

Sabo

This was the first planned section of new Ibadan. It was solely meant for an ethnic group, the Hausa, who came from the northern parts of Nigeria. (Fig. 5). The first few arrivals of this group were settled near Oja Iba in the heart of old Ibadan. However, as their number grew, the Ibadan local council, acting on the advice of the Resident, moved these immigrants to the
present site in 1917. (Fig. 3). This was the year when the Township Ordinance was passed. Each member of the ethnic group was allocated a building plot in the northwestern section of the Crown Land within the town wall.

This is the largest Hausa settlement in Yorubaland. A major reason for this is Ibadan's importance as a transportation centre both with regard to the Yoruba cultural realm and the rest of Nigeria. Hausas are mostly engaged in interregional trade and so they are to be found in large numbers where there is an effective demand for the livestock that they supply and a large supply of the kolanuts which they demand. The high concentration of this group in Ibadan is due to the fact that it is a major area of kola-nut production which is in high demand in the northern Hausa markets. The influx of Hausas into Ibadan after 1901 was such that the traditional Yoruba hospitality of accommodating strangers in their compounds could no longer be extended to such a large group either in individuals' compounds or in areas of already high population and housing densities near the central market. The colonial government's policy of ethnic separation was therefore readily implemented through the manipulation of the local council to allocate building lots to the Hausas.

Sabon Gari has developed to such a degree that it is now the socio-cultural and economic centre of this ethnic group. The group appoints a chief, the Sarkin Hausawa, who mediates between the group members and Ibadan local council, acts as arbitrator in disputes within the quarter. He also appoints men to various titled positions to regulate the general affairs of the community. The large, near-by market, which deals mainly
with cattle (from the north) and kolanuts (for the northern markets), is virtually a Hausa Market since the ethnic group has a monopoly over the two most important items of trade. This further testifies to Sabon Gari's ethnic exclusiveness.

Makola

Initially another Northern ethnic group, Nupe, was officially settled with the Hausas at Sabo. However, all available space that was granted to the Hausas was already built up to its capacity by 1930. Its expansion outside of the wall was strongly resisted by the colonial administration, but instead a new settlement was planned east of Sabo for two northern ethnic groups, Nupe and Igbira. They were given the permission to erect temporary buildings since the administration could demand their evacuation at any time. In 1946 Ilorin Yorubas, who were treated as a northern ethnic group, were also officially allocated building plots at Makola. The expansion of this new ethnic quarter was eastwards and not northwards outside of the town wall. By settling the Nupes, Igbiras and Ilorin Yorubas in a residential unit, the principle of ethnic separation was given a new meaning, i.e. the separation of the northern ethnic groups from the southern ones. However, this principle gradually broke down as more immigrants came to Ibadan, particularly the Ibos and Edos and the other major southern ethnic groups in the immediate post-second world war period.

Ekotedo and Inalende

Yorubas from outside Ibadan also had their own residential section in new Ibadan. The early immigrants from the sub-groups of Egba, Ijebu and
and Iliesha settled in an area west of Oke Aremo, a ridge that still separates old Ibadan from the new section. This early immigrant settlement was not laid out in the same way as Sabon Gari and Makola. Thus it has identical characteristics with old Ibadan in terms of house form and the presence of numerous footpaths that are not suitable for vehicular traffic. Its growth was both eastwards to Oja Iba and westwards to Gbagi. Amunigun and Agbeni areas, where most of these early Yoruba immigrants are fully participating in the town's trade and commerce, now form the link between old Ibadan and Gbagi.

With more inflow of immigrants, particularly from Lagos, Ekotedo and Inalende were laid out for this group of Yorubas. With greater improvement in the national road network and the linking of Lagos by rail with the eastern part in 1927, more ethnic groups, particularly Ibos, Ibibio, and Ijaws from the East, and Edos from the present-day Mid-western state, came to Ibadan in large numbers. These southern, non-Yoruba ethnic groups had their own residential area adjacent to Ekotedo. In fact Ibadan local council laid out the building plots, as in the other structural units of new Ibadan, but it was only the indigenes of Ibadan who were allowed to have these plots. Houses were built and rented out to the immigrants.

The proximity of Ekotedo and Inalende to old Ibadan is of some significance. The Yoruba immigrants share identical cultural values with the inhabitants of old Ibadan. Their physical isolation from Ibadan indigenes was therefore not considered necessary; this sharply contrasts with the positions of Sabo and Makola relative to old Ibadan.
Fig. 5

The main ethnic groups of Nigeria.

Source: Udoh, Geographical Regions of Nigeria.
The Early Nigerian Elite Suburb

The southwestern part of new Ibadan developed as a suburb for the emerging Nigerian middle class which was at first participating in commerce and trade. It later grew, particularly after the second world war, as a working class suburb, where civil servants, senior personnel of the numerous commercial firms, and professionals such as lawyers, teachers and medical doctors live.

As in the northwest part of the town, the local council laid out building plots in this area, and these were at first purchased by other Yoruba sub-ethnic groups. The predominant sub-group was the Ijebu whose members, through wealth accumulated from trade and commerce, built modern, Lagos-style houses which were much better than elsewhere in the town. These were either owner-occupied, or rented to the educated elites who could afford to pay the relatively exhorbitant rents charged.

As in the other residential units, the Ibadan local council was an instrument of implementation of the new administration's policy of the lay-out of the ethnic residential units. What is significant about this particular unit was the economic status of the people living here who were much more affluent than any group of people in the town. However, its ethnic composition, which was initially homogeneous, was similar to the other areas. Like Makola, Ekotedo and Inalende, the suburb's homogeneous ethnic composition later changed to one where live almost all members of Nigerian ethnic groups which have the financial resources. This signifies a breakdown of the principle of ethnic separation which was the major factor that created the structure of Ibadan, and, indeed, the old towns of
Nigeria. This is due to the fact that the Colonial Administration was not willing to grant more land for residential uses in the rest of the Crown Land, and as a result of this, ethnic mix was inevitable. Furthermore, many of these ethnic residential units acquired greater locational significance as a result of their proximity to one or the other of the main employment centres. This factor contributed to the breakdown of the principle in that many workers want to live close to work and what really matters now in any given area is the availability of good quality houses for the workers. In this way, the principle of ethnic separation is functional these days as a tool of analysis of the historical process of urban morphology because of the increasing rate of ethnic mix in each unit. Even in Sabo which was originally meant for Hausas, there are now other ethnic groups, both northern and southern, but the Hausas still form the majority of the population.

Residential Suburb

The non-Nigerian "strangers" in Ibadan were isolated from both old Ibadan and the Nigerian immigrants' residential units. It was pointed out above that a criterion for the categorization of townships in the 1917 Ordinance was the presence of a fairly large number of non-Nigerians who were engaged in trade and commerce in the town. Ibadan, by virtue of its position, exerted a strong pull on this class of immigrants.

With the posting of a Resident in 1893, Agodi area in the northeast of old Ibadan was developed as both the administrative and residential sector for the new colonial government. This was on the Crown Land and it lay outside of the town wall where the various ethnic residential units were
laid out in conformity with the principle of separating the various ethnic groups. At present there are five units of this class of residential suburb. The oldest two were Agodi and Jericho Reservations; the latter was built in 1939 when Ibadan was made the capital of the Western Provinces and consequently more Europeans came to the town as civil servants or as managers of the many commercial and industrial enterprises located in the town. The other three were built in response to both the political and economic developments of Nigeria with its consequent need for the concentration of high-level manpower in Ibadan which has continued as the capital.

These political and economic developments were the major contributory factors to the application of the principle of ethnic separation in these suburbs. The British elements dominated the Colonial Administration, transport, and part of commerce while the other European ethnic groups, particularly the Germans, French, and Italians were officially restricted almost exclusively to commerce. There was an official classification of the reservation on the basis of the occupational structure of the European community. Thus Agodi, Links, and New Reservations were for the administrators, while Jericho and Commercial Reservations were for those in business. This community was poles apart from the other parts of Ibadan.

Since the era of self-government in 1959, the suburbs has been occupied by the Nigerian modern elites in both government service and the private sector of the economy and by a handful of non-Nigerians who are engaged in commerce. This class of people are elites by virtue of their educational and economic achievements as opposed to the traditional elites in old Ibadan. Membership of the latter class is through connection with the
the royalty and age; and thus one is not a member by virtue of personal achievements. The occupation of the suburb by the educated elites is an example of the Africanization of a colonial structure that is very characteristic of independent Nigeria, and it is another evidence of a breakdown of the principle of ethnic separation. This is because the elites are from the various Nigerian ethnic groups who have since occupied positions held by the non-Nigerian immigrants originally occupying the suburb.

In response to the demand for high quality houses, the Western Nigerian government established the Western Nigerian Housing Corporation in 1959. This body was charged with the responsibility for providing moderately-priced houses for people in different income groups. Bodija Housing Estate was the first of such government financed housing projects in the state; three types of houses of differing qualities were built and offered for sale. The basic differences in each class of houses are the number of rooms in each house, the quality of the building materials used and the architectural designs of each class. More recently, Kongi layout was added to Bodija to meet the ever increasing demand for houses in the town. Like the old suburb houses that were built during the colonial era, Bodija and Kongi houses are occupied by the modern elites with the financial resources to pay the rent.

From the analysis above it becomes apparent that new Ibadan developed very differently from the older section. Each residential unit was laid out specifically for a group of people, either Nigerian or European. Furthermore, each unit was physically separated from each other, and the conclusion may be drawn that new Ibadan is an aggregation of separated structural
units. Again this structure is an end product of a specific process: the application of the principle of ethnic separation by the colonial administration was the major factor for the grafting of this part of the old section. The contemporary structural units of Ibadan can certainly not be analysed in great depth without an understanding of the working of this principle which is the fundamental explanatory variable. Attempts may be made to study the structures using economic principles but the approach will be superficial in that the major operation of economic forces in the urban space is a very recent phenomenon. The present cannot be fully understood without coming to grips with significant historical events that in sum total created the contemporary urban structure. To this end, the principle of ethnic separation remains basic to the analysis of the morphology of new Ibadan.

NEW IBADAN'S GROWTH PATTERN

A major difference between old and new Ibadan is in the pattern of residential growth. The former section had been shown to have a growth characteristic called "fission" or in situ growth. However, the latter area grows by a process that Mabogunje called spatial expansion,80 which has vertical and horizontal components.

In fact the Nigerian "stranger's" residential units were laid out on plots that measure approximately 50 ft. by 100 ft. The expansion of these was in some cases (Sabo and Makola) constrained by the colonial administration through resisting their directional growth into the Crown Land outside of the town wall. However, the area's growth is through building on the measured-out building plots and in a particular cardinal direction.
Oyeluse gave an idea of the rate of growth of a section of new Ibadan through his analysis of two sets of aerial photographs taken in 1961 and 1965. The growth of Ekotedo and Inalende was determined through the rate of the area's encroachment on the floodplain of Ogumpa stream that flows through Ibadan. The acreage of the floodplain was reduced from 223 acres to 73 acres within a five year period. The direction of expansion is both to the south and east since expansion in any other direction means an encroachment on a different part of the Crown Land, which is renamed Government Land. The directional expansion of this area is therefore due to the official restriction imposed by the colonial government and which is still in operation. Furthermore, its growth is a response to the pull of the near-by railway station and Gbagi. This structural unit (and indeed all the other units of new Ibadan) does not assume the simple geometric shapes that Burgess and Hoyt postulated in their models of U.S. cities.

The five Reservations and the Housing estate make up the high quality residential districts of Ibadan. These have the lowest population and housing densities in the whole of the city. In this way, it is functionally similar to the zone of better residences of Burgess' zonal hypothesis with regard to its location relative to the other structural units of the town. However, the expansion of this unit is neither concentric, axial, nor with reference to the main commercial area. It originated within the concept of racial and ethnic separation that the colonial administration introduced. This concept has, however, been given an economic interpretation in that the suburb is now almost wholly occupied by those who have both the educational qualifications and the economic power to qualify as the modern elites.
The areal expansion of this unit of the urban residential structure is a response by the government to the housing demands of the modern elites, and it is certainly not an economic response to the pull of any structural units of the town. In fact the growth of the various units of this section of the town is not with reference to any one zone, and it may be concluded that this basic difference in the expansion mechanism in both parts of Ibadan from the classical models apparently invalidates the application of these models to Ibadan. Both Burgess' and Hoyt's models assumed a single urban core that stimulates expansion concentrically or sectorally, but this is not so in Ibadan, which is a poly-nucleated city, and whose expansion is seriously influenced by the official urban land policy of, first, the colonial administration, and, now, by a Nigerian controlled government. Although policy of ethnic segregation has virtually broken down in terms of the locational freedom of city dwellers, it is still operative with respect to constraining directional expansion of many of the structural units. This is because the policy has been Nigerianized by the government by changing the name of the 1897-acquired land from Crown Land to Government Land and implementing the restrictive growth aspect of it.

GBACI

This is the main commercial area, and, like all the other structural units of this part of the town, it developed from the priming decision of the colonial administration. It was laid out just two years after the railway was extended to Ibadan, and its adjacency to the railway station indicates the close economic link between the two.
Gbaj was divided into leaseheld plots and these were allocated by the local council on an annual rental basis. The action of the council, like all others in new Ibadan, was in response to the British Resident's request "for the demarcation and survey of a special part of the city for the European traders". As a result of the railway link between Lagos and Ibadan, other non-European and non-African traders arrived in the town in fairly large numbers. This led to the strict enforcement of the principle of ethnic separation in that all the Lebanese traders were concentrated in the present-day Lebanon Street at the suggestion of the British Colonial Administration.

New Court Road was exclusively reserved for European firms, i.e. British, French, German and Swiss. Furthermore, the Indian and Syrian traders were separated from both the European and Nigerian traders. The latter, who are mostly the early non-Ibadan Yorubas that settled on the western edge of old Ibadan, were restricted to the eastern edge of the commercial area. Their shops lined the main streets that link the old section with the rapidly growing commercial area around the railway station.

From these early beginnings, wholly characterised by the application of ethnic and racial physical separation, Gbaj has assumed a purely economic developmental pattern. As a result of the close economic relationship between Gbaj and the railway station, the choicest site for the location of trading firms is near the latter. In fact the railway station is now the major rent-deciding variable. The ability to compete for a choice site is dependent on rent-paying capacity, and this is greatly affected by the scale of operation. The latter is also closely related to the racial complexion of the distributive trade in the town. The
European firms have the largest scale of operation, and this certainly increases their rent-paying ability. This class of trading firms are in fact mostly concentrated near the railway station. These are succeeded by the Levantine and Indian firms, and they are succeeded in turn by the Nigerian-owned shops. The latter, as it was noted above, provide a link between Gbagi and Oja Iba further to the east.

The type of expansion that characterizes this area is identical with that found in the various ethnic residential units, i.e. growth by spatial expansion. It was expanded northwards by the local council in 1930, but, through economic competition among the trading firms, it has grown eastwards to the Ogunpa floodplain where it coalesced with the early Yoruba immigrant residential area. However, its westward expansion is constrained by the government-acquired land. The vertical component of its growth is clearly evident in the increasing number of high-rises here, and these are a measure of the scarcity value that Gbagi has recently acquired.

Gbagi functions as the most important nucleated retailing centre, and it is strongly differentiated internally in a characteristic that is common to all matured central business districts. Its northern and southern margins are Ibadan's wholesaling district, and a large traditional market, Dugbe, is located nearby as a place for the marketing of both industrial and non-industrial goods, particularly foodstuff. Unlike the trend towards a decrease in the relative economic importance of the central business district in North American cities, Gbagi is still the most important centre of gravity of economic activity. A major reason that can be suggested for Gbagi's dominance of urban retailing is the relatively low purchasing power.
of people living in Ibadan, and this is an important factor that does not justify the establishment of a second commercial area. The other type of retailing business that Mabogunje (1968) identified are the business thoroughfares but these, in sum total, are of much smaller scale than Gbagi.

Four levels of urban retailing hierarchy—regional shopping centres, community business centres, neighbourhood business centres and isolated convenience stores—and ribbons business have been effectively competing with the North American central business district. However, this is not so in Ibadan, where there are only two levels of retailing business: Gbagi and business thoroughfares. Consequently, Gbagi still has greater volume of sales than all the town's business thoroughfares combined. Another sharp difference between the nature of retailing business in Ibadan and North American cities is the economic future of the central business district. Ullman made a post-second world war prediction that the central business districts of the U.S. cities will continue to decline in their economic dominance over other levels of retailing activity. This pessimistic prediction does not seem to be applicable to Gbagi for reasons discussed above. Even Morrill's claim that it is a natural central-place process for outlying shopping centres to develop as a city grows remains to be proved valid here. Meanwhile, one can confidently predict a continued dominance of Gbagi for a fairly long period of time.

Although Gbagi is the most important core in the two sections of Ibadan, but, contrary to the theoretical explanations of the impacts of the city core on the growth of all sections of the city, it does not radiate
growth to all the structural units of Ibadan. It certainly stimulates growth in the near-by residential units of Ekotedo, Inalende and the southwestern suburb, but its influence on residential relocations on the older part is not of much significance. Perhaps the most applicable principle of the classical models to Gbagi is the fact of its existence as an urban structural unit, albeit in a two-in-one town. Its origin and impacts on the other parts of the town are deviations from the classical models that are significant enough to warrant a more meaningful explanation. This will be approached by recognizing Ibadan as a poly-nucleated town, and thus the impacts of Gbagi on the expansion of Ibadan can be stressed with respect to the new section of the town.

INDUSTRIAL AREA

Up to now, Ibadan has had no area of industrial concentration in spite of its being the largest single industrial centre of western Nigeria. This is a reflection of the state of industrial development of Nigeria, a country that has functioned largely as a producer of industrial inputs for the European, particularly British markets. The industries at Ibadan have been classified into four major groups: the traditional craft industries, small-scale modern industries, large-scale industries, and service industries. The major industries in the large-scale class are the Nigerian Tobacco Company which employs over 500 workers, soft drinks, fruit canning and plastic factories, and furniture making and tire-retreading establishments. These are mostly located in the southwestern part of the town on the original Crown Land. Some of these, particularly the tire-retreading factories and a large number of the medium sized
group or industries are located in an area which is adjacent to the southwest suburb.

The large-scale industries are mostly owned by foreign, private investors, while the medium-size and small-scale ones are owned by Nigerians. Location of industries do not indicate a strong positive correlation with ownership, but the adjacency of the latter group of industries to the southwest suburb shows the preference of the industrial investors to locate near home. This is particularly true of the tire-retreading industries which are owned by an Ijebu man\(^89\) whose sub-ethnic group was originally the most predominant group in this early Nigerian elite suburb.

**POST-SECOND WORLD WAR ESTABLISHMENT**

The important post-war political and economic growth of Nigeria has its imprints in Ibadan, and these have become morphologic elements of the town. A major effect of these is to be seen on the directional growth patterns of the various residential units.

A significant facet of colonization is the implantation of economic and socio-political institutions in the major urban centres. These were invariably sited with the aim of separating the foreign institutions from the indigenous ones. In other words, educational, medical and political institutions are located away from the old-established part of the town. In Ibadan, these were located on the Crown Land outside of the town wall. The location of these institutions was guided by the extension of the principle of ethnic separation which, it has been argued, is the primary explanatory variable of the structure of the new section.

One such early post-war institutions that was established was the
University of Ibadan. It was located on a five-square-mile area outside the walled town on the north-west part. However, its Teaching Hospital is located on the northern periphery of the indigenous part. The location here might have been influenced by the same factor that strongly affected the lay-out of the ethnic residential units. That is, it was sited close to the area of population concentration which it is meant to serve; secondly an alternative location that is further away will cause a lot of inconvenience to the populace among whom traffic was, until very recently, mostly pedestrian.

The southwestern part of the old section was where land grants were made to the various Christian Missions since the middle of the last century. However, it was not until 1945 that developments in terms of the spatial concentration of Mission secondary schools and churches took place on a fairly large scale. The indegenes are mostly Moslems and are not very responsive to Christian teachings. The immigrants, particularly the other Yoruba sub-ethnic groups, are Christians, and, as noted above, are concentrated on the western edge of old Ibadan. There is an apparent relationship between the immigrant Yoruba residential units and the concentration of Mission schools in this part of the town. This relationship falls within the general framework of the principle of ethnic separation. This is a question of locating religious and educational services close to a particular ethnic group who are the major "consumers" of these services.

A similar relationship also exists on the eastern side of the old section as a result of the introduction of free elementary education in 1955 for children of school-age throughout the Western Region. This was
introduced by the first Nigerian-controlled government as a means of increasing the level of literacy in the society. An aspect of the spatial effects of this program was the concentration of both elementary and secondary schools on the eastern edge of the town. These schools were established primarily for the indigenes of Ibadan just as the Mission schools are mostly meant for the Christian immigrants of the town.

The political aspect of these post-1945 developments was the assumption of power by Nigerians. This change required the erection of public buildings which would both house the new government and symbolically express Western Nigerian regional autonomy. Three major results of this development were the erection of a regional parliament, a House of Chiefs (i.e. the upper house whose members were the appointed traditional rulers), and the expansion of the secretariat. These public buildings were concentrated at Agodi which had been the seat of the colonial administration since 1893. The political development, more than any other factor, was mostly responsible for the influx of immigrants into Ibadan and the consequent spatial expansion of the town since 1952. This is because Ibadan, as the capital of the Western Region, has the highest concentration of employment opportunities in the region. Furthermore, the development resulted in the formation of two new important classes: the professional politicians who were the elected representatives of the people and the senior civil servants. The latter class had long been in existence but its members were very few in number because of the colonial government policy of treating Nigerian workers as junior civil servants. On the eve of independence many of these were promoted to occupy posts formerly held by the expatriate civil servants.
It was these two classes that mostly demanded the expansion of the suburbs that was formerly occupied by the expatriate administrators.

The new institutions that result from the cultural contact with the West have in sum total constituted what can be called urban growth nuclei. Although they were not located purposely to stimulate growth in any parts of the town, they have, with time, strongly influenced the growth pattern of many parts of both old and new Ibadan. These nuclei are able to stimulate growth because they are important urban employment centres and workers generally wish to live close to them.

Because the suburbs expanded in response to the pressures exerted by the new classes, it may be suggested that these classes gave a socioeconomic interpretation of this urban structural unit which was originally meant for the exclusive occupance by one racial group. Again this further emphasises the nature of growth of this section of the town which is not at all in tune with the classical theoretical explanations of urban growth. This type of urban expansion can be described as one that results from the regional government’s responses to the impetus provided by independence. This type also characterises the Bodija Housing estate which was wholly financed by the regional government.

In the wake of these socio-political developments, some parts of the town suddenly acquired locational significance as a result of their proximity to the growth-inducing nuclei. Examples of such fast growing parts are around Ekotodo, Sabo and Makola which are much nearer to the expanded regional government’s secretariat, the University of Ibadan, and the Teaching Hospital than any parts of both old and new Ibadan. These are
the main employment centres in the town. The response of these residential units is through private investments in buildings of a higher quality for the workers than the old houses of these areas. This is an economic spatial response which is also true of the southwest suburb and the eastern end of the indigenous section of the town. In the case of the former area, members of the new social classes are attracted here because of the already existing concentration of people of similar economic status. However, another important factor of its expansion is its proximity to Gbagi, the industrial area, and the concentrated secondary schools near-by. Some of the important schools here are Ibadan Grammar School, St. Luke's College, and St. Anne's College. The expansion of the southwest suburb into the fringes of the town started with the construction of the government-financed Liberty Stadium in 1960 and the inclusion of three major approach roads to it. Prior to this time, development had been mainly concentrated on the Ibadan-Ijebu-Ode road, and the built-up area was only a few blocks deep. However, the location of the stadium in this area led to the demand for building plots inland, it therefore becomes apparent that its growth is a response to the near-by growth nuclei.

On the eastern part, expansion is in response to the location of many schools which are "invariably followed by the development of private residential quarters". Thus a number of modern houses have been built in the districts around Olayanju, Yemeto, Aremo and Aperin to be rented to the numerous teachers and other workers required to serve these schools. The growth of this area is also partly due to the gradual outflow of people from the heart of old Ibadan where there is an acute shortage of housing
Although Gbagi predates the era of rapid development of Ibadan, it also functions as a growth stimulating point for many parts of new Ibadan, especially the near-by residential units, which, in effect, respond to the numerous growth nuclei at the same time. The importance of these post-war developments are such that, collectively, they constitute expansion foci which have had far-reaching impacts on all parts of Ibadan. Their effects on the urban growth process appears to be immense, and these effects need to be better understood so as to facilitate a deep analysis of the growth mechanism of the town. Furthermore, a deeper appraisal of the impacts of the nuclei can help in the determination of the nature of an alternative explanation to the classical models.

SUMMARY OF PART II

Ibadan, like the other indigenous towns of Nigeria that existed before the era of colonization, is two towns in one: old and new Ibadan. Each section has its own structural characteristics which are due mainly to the different developmental processes that created them. The old section has a structure that results from the strong influences of the kinship system which attaches importance to members living together in clearly defined sections of the urban space. The result of this is the structuring of this part into numerous family residential quarters, all of which have the central market, Mapo Hall, and the central mosque as the major socio-cultural foci. The various residential units, Gbagi, the industrial area, and the political, educational and medical institutions located in new Ibadan are a result of the colonial administration's policy of spatial
separation of ethnic and racial groups and the newly introduced socio-political institutions. Thus the structures of the two sections of the town result from indigenous patterns of urbanization in one and implantations of foreign processes of urban development in the other.

The types of expansion that result from these are that by fission in old Ibadan, where there is a very strong attachment for the "fatherland", and by spatial expansion, which is mainly due to the influences of the scattered growth nuclei and the regional government's initiatives. These expansion mechanisms neither impose a concentric nor a sectoral structure as hypothesised by the traditional models of urban growth. Thus economic and transportation models of urban growth do not provide satisfactory theoretical explanations for the growth pattern of Ibadan. The spatial impacts of the social organization of the family pattern and the priming decisions of the colonial administration to separate the various immigrant groups from one another and from Ibadan indigenes are suggested to be a more meaningful framework of analysis for the developmental pattern of Ibadan.

CONCLUSION

To the extent that Ibadan is typical of Nigerian towns, it may be claimed that the classical models developed by Burgess, Hoyt, and Harris and Ullman do not apply to Nigerian towns. Some of the features of the models are to be found in the town, particularly in new Ibadan where there are specialised areas such as Gbapi, and the modern elite residential area. However, the mere presence of these do not justify the extension of these models to Ibadan and, indeed, to the other Nigerian towns. This is because the models, particularly Burgess' and Hoyt's, make basic assumptions such
as the economic competition for the highly valued central place, and a mixed commercial and industrial base. These basic assumptions are made in order to be able to explain how the various urban landuse units originated and developed to their present level. In Nigeria, these assumptions are not particularly valid because of the country's weak industrial base. In fact the indigenous part of Nigerian towns predates the period of modern government that attempts industrialization through the process of import substitution.

The origin and mechanics of development of Ibadan's spatial structural units is best explained in terms of the cultural values of the urban dwellers and the colonial administration's priming decision to separate people and institutions. The most significant cultural value of Ibadan people, for the purpose of this study is the extended family system which, it has been argued, is the major reason for the internal zonation of old Ibadan into residential quarters. These are ancestor-founded portions of urban land that are now solely inhabited by descendants of the founders. Members of the lineage are obliged to live here and submit to the headship of the Mogaji, and they are also expected to patronise the quarter market. The various quarters in Ibadan originated through the ancestor, and they are built-up through the process of in situ growth. Thus the most significant assumption to be made in an attempt to theorise on the origin of the quarters is the role of the ancestor and his secular and spiritual influences on his descendants. All the various urban quarters have a central focus where administrative, religious and marketing institutions are jointly located. This traditional urban centre is actually an institutional one
which radiates its socio-cultural influences to all parts of the town.

New Ibadan originated very differently from the older part, and the former's developmental process is also significantly different. The various structural units here have their origin in the British colonial administration's policy of ethnic separation that was vigorously implemented in the early part of this century. A number of reasons were officially given for this policy; one of them was that the separation of the various "native" groups would prevent ethnic conflicts. However, this author considers the official explanation to be unconvincing. The origin of this section was certainly not a conscious attempt made to separate the structural units in order to facilitate an efficiently functioning new town. Rather it originated from a policy of urban apartheid which, from the administration's viewpoint, was considered to be capable of minimising both racial and ethnic conflicts in Ibadan. The decision to locate Gbagi close to the railway station was made with economic and commercial motives, but the early internal characteristics of the zone are in conformity with the policy of separating Africans, Europeans, Indians and Levantines from one another. Unlike old Ibadan, the basic assumption here is not cultural but sociological in that the colonial government presumed that ethnic mixing could lead to conflicts, hence the need for separation. The various structural units have expanded as a response to the post-war urban nuclei. This response is mostly economic in nature, but the elite section grows through the government initiative.

Thus the origin and growth pattern of Ibadan is better understood in a
different framework from those of the classical models which are said to provide a basis for cross-cultural urban comparison.\textsuperscript{92} Schnore, in his critical review of the literature on the spatial structure of the cities of the U.S. and Latin America, suggested a number of important factors which can facilitate full "testing" of the classical models, particularly Burgess', in areas outside North America. These major factors are population growth, topography, transportation, class structure, and the economic base of the cities, all of which are thought to be relevant in determining patterns of residential distribution and the subsequent changes in the patterns.\textsuperscript{93} However, these have been shown to be secondary explanatory variables which do not, individually or collectively, impose the hypothesised spatial structures of the models. It therefore becomes a dubious claim that the models are of universal applicability. In Ibadan the significant principles of the models are either completely absent (i.e. in the older part) or they are at a very low-level of maturity. The investigative hypothesis proposed is that cultural values and the significant role of systematic and deliberate planning in the early periods of new Ibadan are the primary controls over the nature of urban spatial development in Nigeria. This hypothesis is founded upon the view that towns are a product of a particular culture,\textsuperscript{94} and in the case of Ibadan, the urban structural elements support the view in that it is, like the other Nigerian towns, a product of both traditional and foreign processes of urbanization.
FOOTNOTES

1 Mabogunje's book, *Urbanization in Nigeria*, (Univ. of London Press, London, 1968), is the most authoritative work on Nigerian towns. Chapter 7 of this book is devoted to an extensive examination of the classical models of urban structure in which he concluded that the models are applicable to Nigerian towns. Nelson, an American geographer, made the claim that the models "provide a basis for cross-cultural urban comparison" in the *Journal of Geography*, vol. 68, 1969, as reprinted in Bourne, L.S., *Internal Structure of the City* (Univ. of Oxford Press, 1972) p. 80.

Although Mabogunje used these models as a basic framework, he did not provide any rationale to justify his usage. Therefore it is necessary not only to refer to the fact that he has introduced these models as a conceptual tool of analysis for Nigerian cities, but also to refer back to their accepted explication in order to be able to set the present argument in an appropriate context with Mabogunje.


3 The main characteristics of the five zones are largely taken from Burgess' original work, "Urban Areas", in Chicago: An Experiment in Social Science Research (eds.) T.V. Smith and L.D. White, (Greenwood Press, New York, 1929).


5 Ibid., p. 86.

6 , (1928) quoted from Johnston, op. cit., p. 91

7 , "The Growth of the City..." op. cit., p. 91.


9 Burgess, E.W. op. cit., p. 89.

10 Johnston, R.J., op. cit., p. 72.

11 Ibid., p. 72.

12 , p. 74.


15 Berry, B.J.L., "Internal Structure of the City" in Bourne, L.S. (ed.) op. cit., p. 100.


17 Nelson, H.J., op. cit., p. 79


19 Johnston, R.J., op. cit., p. 87.

20 Ibid., p. 95.


22 Nelson, H.J., op. cit., p. 79.


24 This section is mostly extracted from A.J. Rose, op. cit., p. 62 and Harris and Ullman, op. cit., p. 283-4.


26 Harris and Ullman, op. cit., p. 286.

27 Nelson, H.J., op. cit., p. 75-76.

28 Ibid., p. 76.


33. Murphy, R.E., *op. cit.*, p. 216.


39. The references given here validate the claim:
   


45 Krapf-Askari, E., op. cit., p. 139.


49 Krapf-Askari, E., op. cit., p. 45.


52 Mabogunje, A.L., op. cit., p. 207.


54 Harris, C.D. and Ullman, E.L., op. cit., p. 283.

55 Wheatley, P., op. cit., p. 394.


64 Awe, B., op. cit., p. 15.

65 Mitchel, N.C., op. cit., p. 290.

66 Mabogunje, A.L., Urbanization in Nigeria, ... op. cit., p. 112.

67 Ibid., p. 113.

68 This is also true of all Nigerian towns in this class.

69 This is a Hausa term for a 'new town'. The term clearly distinguishes between the indigenous parts and that meant for the Hausa immigrants. In northern Nigerian towns, "sabon gari" refers to the area where southern Nigerians live.


71 Ibid., p. 41.

72 A major reason for the creation of "sabon gari", in the northern parts of Nigeria was to prevent the mixing of the politically conscious, Christian southerners with the Moslem northerners. This was considered to be politically dangerous to a peaceful administration of the north. The major historical reasons for the creation of "sabon gari" is fully analysed in G. Olusanya's article, "The Sabon Gari system in the Northern States of Nigeria" in Nigeria Magazine, vol. 94, 1967, pp. 242-8.

This in effect conformed with the policy of separating the southern ethnic groups from indigenes of particular towns in northern Nigeria.


"Ekotedo" is a Yoruba word which means "The settlement of the people from Lagos".

This is identical with northern Nigerian towns, where "Tudun Wada" is closer to the old town, and it was reserved for northerners who are not indigenous to the particular town. See G. Olusanya's article, op. cit., p. 245.


Ibid., p. 60.


Mitchel, N.C., op. cit., p. 298.

Oyelese, J.O., op. cit., p. 49.


Mabogunje, A.L., op. cit., p. 123


Ibid., p. 116.

Mitchel, N.C., op. cit., p. 298.
90 Ibid., p. 298.

91 Oyelese, J.O., _op. cit._, p. 52.


BIBLIOGRAPHY

PERIODICALS


**BOOKS**


Bourne, L.S., Internal Structure of the City, (Oxford Univ. Press, Oxford, 1971). The following articles were consulted:

1. Berry, B.J.L., "Internal Structure of the City".
2. Hoyt, Homer, "Recent Distortions of the Classical Models of Urban Structure".

Breese, G.W., The City in Newly Developing Countries, (Prentice-Hall, Inc. 1969).


Johnston, R.J., Urban Residential Patterns, (G. Bell and Sons Ltd., London, 1971).


Lloyd, P.C., et. al. (eds.) The City of Ibadan, (Cambridge University Press, 1967)


Mayer, H.M. and Kohn, C.F. (eds.) Readings in Urban Geography, (Univ. of Chicago Press, 1959). The following articles were consulted:

2. Proudfoot, M.J., "City Retail Structure".


YORUBA HOUSEFORM

by

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B.A. (hons.) Ahmadu Bello University, 1971

AN EXTENDED ESSAY SUBMITTED IN PARTIAL FULFILLMENT OF

THE REQUIREMENTS FOR THE DEGREE OF

MASTER OF ARTS

in the Department

of

Geography

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SIMON FRASER UNIVERSITY

APRIL 1974

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ABSTRACT

Yoruba houses, like those of the various cultural groups in tropical Africa, are generally thought to be a mere place of abode and shelter from the tropical downpour and the sun. This is a physical environmental view which underestimates the importance of the socio-cultural values of the Yoruba in house formation.

The Yoruba household is considered in this paper to be a structured, socio-cultural institution which has three important components. The overriding influence of the lineage ancestor on the household makes up the first component, and this is considered to be the spiritual foundation of the institution. The head of the lineage forms a link between the ancestor and the living members. He ensures maximum cohesion among the extended family members through the exercise of his legislative, judicial and administrative powers. The roles of the lineage head constitute the second component of the institution, i.e., the administrative component. The complex socio-economic interactions among the members of the extended family make up the third component.

These three main components jointly determine the siting of Yoruba houses, the various building and space-formation elements of the house, the processes of construction and the materials used for building. Thus socio-cultural factors, as opposed to physical environmental ones, are considered to be the primary forces that create Yoruba house forms.

(iii)
ACKNOWLEDGEMENTS

My advisors, Professors Evenden and Sagar, were of great help in making this study a success. This is sincerely appreciated. I wish to thank Professor Phil Wagner, who gave me an insight into the socio-cultural variables that strongly influence houseform. His help at the preliminary stage of this study was invaluable.

Thanks to my typist, Owen Fernandes, who typed the essay as a sort of "parting gift", and to Angela Hamilton for successfully piloting me through the bureaucratic trip of the graduate program.
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INTRODUCTION

The Yoruba, who number some 12 million (1963 census), comprise the second largest ethnic group in Nigeria and are mostly found in the southwestern part of the country. However, there are a few thousand members of this ethnic group in the adjacent countries, particularly in parts of Dahomey and Togo. In Nigeria, the Yoruba ethnic home is fairly continuous, extending from Lagos on the coast to Jebba on the River Niger. This area constitutes the ethnic home of the Yoruba. (Fig. 1).

Yorubaland, like other parts of sub-Saharan Africa, lies within the tropics, with high temperatures and heavy rainfall all year round. The southern parts are thickly forested, and the coastline is fringed with lagoons. The tropical forest gives way to the dense Guinea Savannah in the interior parts. Soils are predominantly reddish laterites. These tropical woods and the various laterite soils are extensively utilized to furnish materials for building houses.

The Yoruba are traditionally subsistence farmers, a role implying a way of life that places heavy emphasis on agricultural production for family consumption. Some of the subsistence crops produced are yams, cassava, cocoyam, maize and guinea corn. Farming is generally considered as a way of life and not necessarily a way of earning a living. However, there has been a change in this attitude to agricultural production since the introduction of cocoa, rubber and other cash crops in the early part of this century. These relatively new crops are now the main source of family income; in a few instances, a substantial amount of wealth has accumulated.
This paper attempts to identify the major factors that determine the Yoruba houseforms, past and present. It has often been asserted that Yoruba houses, which are also known as compounds, and indeed houses of other ethnic groups in sub-Saharan Africa, are built primarily to shelter people from the rains. Furthermore, the houseforms are thought to be of secondary importance so long as the people are effectively sheltered from the environmental hazards of the tropics. This approach assumes that it is the building materials and technology that create the Yoruba houseform to which the householders have no choice but to adapt. This is far from the truth.

The approach used in isolating the complex forces that influence Yoruba houseform is by examining the socio-cultural systems of the Yoruba and enquires how this in turn affects the utilization of the environmental forces. The family pattern, which is variously referred to as the extended family, the lineage system, or the kinship system is examined since this is the most important socio-cultural factor influencing houseform.

There is a technical difference between the three terminologies of the family pattern; this will be briefly clarified. The extended family according to Murdock, consists of two or more nuclear families affiliated through an extension of the parent-child relationship rather than of the husband-wife relationship. It typically embraces an older man, his wife or wives, his unmarried children, his married sons, and the wives and children of the latter.1

A kinship system, in contrast to the extended family, is not a social group, and neither does it correspond to an organised aggregation of individuals. This system is defined by Murdock as:
Fig. 1
The main ethnic groups of Nigeria.
Source: Udoh, Geographical Regions of Nigeria.
"...a structured system of relationships, in which individuals are bound to one another by complex interlocking and ramifying ties. Particular kinship bonds, isolated from one another, may and often do serve to unite individuals into social groups such as a nuclear family or a lineage, but kinship systems or wholes are not, and do not produce social aggregates".2

Thus the kinship system, while not itself a social grouping, is essential to social organisation, referring as it does to the complex of rules governing descent, succession, inheritance, marriage, extra-marital sexual relations and resistance in the society.

The lineage system differs from both these designations in that it is a patrilineal descent group in which membership carries with it certain distinctive attributes. Examples of such attributes are facial marks, totemic names that are sometimes used in greetings or in praise-songs, food taboos and the possession of a common deity.3 While the lineage system is made up of both sexes, it is the male members who form the de facto lineage group, as expressed, for example, in the practice whereby women move to their husbands' compounds on marriage but retain their lineage affiliations. Lloyd considers the lineage to be a strong feature of the Yoruba social structure in which a man regards his position in two ways:

"...firstly, as a lineage member descended in the male line from the lineage founder and entitled to inherit movable property, land and titles belonging to the lineage members as a group; secondly, as an individual descended from parents and grand-parents belonging to other lineages, forming a corporate group only in relation to himself and from whom he has no rights to inheritance (except in so far as they are members of his own lineage) but whose aid we may ultimately seek in certain situations".4

Schwab differentiates between "lineage" and "lineage group"; the former refers to both the dead as well as living members while the latter refers only
to members living at any given moment. This distinction is followed in the present study.

The Yoruba family pattern is considered in this paper to match most closely the framework of the lineage system as described above. The strong influences of the lineage ancestor, oriṣun, on his descendants are taken into account; also the intricate socio-cultural relationships among the lineage group, and the role of the lineage head of spiritual link between the ancestor and the living members of the group are discussed. The influence of the family pattern on the form of the house, the choice of materials used for construction, and the process of construction itself are all indicated. The physical environment, particularly the rainfall and temperature patterns, is discussed in relation to houseform. This approach facilitates linking houseform to the life patterns and religious beliefs of the Yoruba and thus gives an understanding of the meaning of the various houseforms.

It becomes apparent that socio-cultural factors are the primary form-creating forces while the physical environmental ones are secondary. The former forces are of such importance that this author considers the house to be a structured institution. The house as an institution has significant components that strongly influence the various physical elements of the house and the construction process. These components are also responsible for the existence of separate lineage residential quarters in both Yoruba villages and urban centres and these indicate a strong relationship between social structure and space. This relationship is apparently characteristic of many West African ethnic groups but the present focus is limited to the
Yoruba. The ranking of the forces into primary and secondary ones is not intended to de-emphasize the fact that the two groups of forces operate jointly to create the ideal environment that is culturally comfortable, spiritually meaningful and socially acceptable. Even the introduction of new building materials and new house styles in the last one hundred years does not change the cultural yardstick for measuring the significance of a house, and this again shows the inadequacy of the environmental deterministic framework for analysing Yoruba houses.

I THE CORPORATE COMPOUND

A. The Elements of the House

The traditional Yoruba housing unit is a compound, agbo ile, which literally means a flock of houses. The architecture of the compound fully takes into consideration the "circumstance of life" in Yorubaland. Thus the physical form of the house can be explained in terms of the socio-cultural factors and the major elements of climate, rain and heat. The former are the primary form-creating forces. However, it must be pointed out that these two groups of factors are not mutually exclusive since the building technology, though complex in the context of other cultures in the tropics, has not been able to 'conquer' the environmental forces.

This corporate residential unit is made up of a rectangular mud structure of adjoining rooms, facing inwards onto a common veranda, which in turn surrounds a courtyard in the center. (Fig. 2a). The compound houses three groups of people: omo ile, the male and the unmarried female members of the patrilineal sib who are collectively known as the 'children of the house', aya ile, the wives of the male members of the lineage, and
the non-lineage members, alejo, who live there as a result of the hospitality of the sib members, and so any vacant room could be allocated to them. Lloyd observed the proximity of alejo's quarters near the main gate to the compound in his study of Shaki in northern Yorubaland. The need for space allocation to enhance the cultural values, norms, and the effective social interactions among the members of the lineage primarily determines the house form.

The compound is the basic unit of the society, and the Yoruba considers the idle, the lineage, that normally inhabits the compound, to be eternal, whatever the internal differentiation or dynamics. The head of the lineage is the bale (lit. father of the house) who has his own separate house in the compound. This is usually of higher elevation, and it faces the main entrance gate. His is the largest apartment of the compound, and it is made up of two rooms; one of these is used as a parlour for receiving visitors, a family court where, among the other functions he has to perform for the lineage group, intra-family disputes are settled by him and where important decisions which affect the whole family are taken. The location of the bale's apartment relative to the main gate is due to the role he is expected to perform as the custodian of the lineage members. His apartment is isolated from others in the compound because, as the oldest member of the lineage, he is the first in order in the lineage hierarchy, a hierarchy solely based on age seniority. As a result the social distance that the age hierarchy establishes is incorporated in the houseform by the separation of the baba ile's house from the other apartments of the compound.

One of the functions of the bale is the assignment of "living quarters
within the compound" to the members of the lineage. In this way, the apparently single, undivided compound which a visitor observes is internally segmented, with each single family (i.e. a male member of the lineage and his wife or wives and children) having an apartment to itself. This is usually a room of about ten feet square which affords shelter and safety for the belongings of the family. Thus each "wife of the compound", available, has a room assigned to her and her children; a room is also allocated to the unmarried youths for communal use, or else "they may share with a father or elder married brother". The bale also assigns rooms to the adult married men of the compound, but some of them may have to share with their wives if there is not enough space. Each room opens onto a veranda which runs throughout the building on the inner side of the compound, and there is a common wall between adjacent rooms. The rooms function as retreats for sleeping at night after the day's work on the farms, for lying in during a period of illness, and for confinement in childbirth. The allocation of space for the two sexes, the adults, and youths of the compound reflects the culturally constrained patterns of behaviour within the family. Women are generally "owned" by their husbands, who see marriage primarily as a means for procreation, and a woman's social standing is mainly dependent on the number of children she bears. As a result of the men's perception of their wives, the latter usually live with the children. Thus the children form very close ties with their mothers from the early part of life and this bond remains "one of the most potent effects throughout life".

The veranda that runs throughout the compound is a multifunctional unit (Fig. 2a) where most of the compound has to be passed, and Ojo likens
Source: Barher, Igbogora.
Old and new house plans.
Fig. 2

Modern type

Older type of house

LIVING AND COOKING
VERANDA
SLEEPING
SLEEPING
COOKING
LIVING AND
SLEEPING
it to a living room of modern houses in that all visitors are received here. This is a place of social interaction among members of the lineage group in that it is here that "everyone eats and drinks and talks in the full view of everyone else" (Fig. 3). Yoruba traditional craft industries which are not completely carried on in open spaces away from the compound take place in the veranda. Basket weaving, leather working and wood or calabash carving by men, hair-dressing, ginning, carving, and vertical-loom weaving by women are examples of such activities which take place here. Traditional seating stools such as mats, and skins of animals are normally hung on the walls along the veranda and they are brought down and set on the floor to seat important guests such as in-laws, elderly relatives from within or without the town. On the veranda every single family has a fire-place for cooking and this is made up of two or more hearths immediately adjoining the wall. The various cooking utensils - a mortar, grindstone, earthenware pots, and dishes of various kinds for cooking and serving food - are also kept near the fireplace. The domestic fowls, chicken (adie), guinea fowl (awo), pigeons (eiyele), ducks (pepeye) and turkeys (tolotolo) - as well as the domestic animals - goats (ewure), sheep (agutan), dogs (aja), horse - are kept here in the evenings. The fowls are usually kept in pens made of mud, or a basket with a lid which is placed on the veranda. However, they wander in the courtyard and to other parts of the town in the daytime and are therefore not in any way obstructive when the householders are using the veranda for other purposes. The dry season, which varies from three to five months in Yorubaland, can be unbearably hot at times, and at this time of the year, the veranda acquires another function of being a comfortable sleeping place for the householders. This is certainly the most
intensively used part of the compound. Although it is not normally more
than eight feet in width, care is taken during the construction stage
to ensure that it has plenty of air and sunshine while the roofing type is
designed in such a way to shade it from the direct rays of the tropical
sun. The part of the veranda alongside a woman's room is for her use
as an important adjunct to her room and she is normally responsible for
keeping that part of the veranda clean. Sweeping both the courtyard and
the veranda is one of the morning duties of the "wives of the house".

The typical traditional houses had no windows, and so the rooms "had
to be illuminated by lamplight even when the sun was at its highest out­
side". However, a few did have small, round holes of about nine inches
in diameter and they were usually stuffed with rags so that a limited amount
of light would be allowed inside. Windows, which in modern houses allow
free movement of air inside the room, were not considered necessary since
the rooms were primarily used as a night retreat and storage. Thus the
day-time uses of the rooms are relatively insignificant and the discomfort
that accompanies the very hot day temperatures is not experienced. Moreover,
the building materials, particularly the thick mud walls, and the ceilings
which are made of mud, have the physical property of being both heat retentive
and a poor conductor of heat and so the compound is neither too cold at night
nor too hot during the day. Windows were therefore considered unnecessary
since the maximum level of human comfort defined in terms of heat and air
supply inside the rooms is achieved through the choice of materials and air
circulation between the room and the veranda.

The door frames of Yoruba houses are of small dimensions; they are
about one-and-one-half feet in width by about four feet in height.
classified the traditional doors into three: (i) a curtain woven with the inner soft part of palm-branches; (ii) that made from a number of palm branches held together with two or three sticks driven through them; (iii) a wooden panel usually of one piece. These door-types show the influence of the environment in the choice of building materials, whose durability is an important decisional variable. Palm trees grow abundantly throughout most of Yorubaland and, if the branches are allowed to dry a bit before being made into a curtain of various types, they can last at least six years.

The last class of doors is considered to be the most superior so that its use signified distinct considerations of rank and prestige. It was usually elaborately carved and brightly painted. The tropical hardwoods were used to carve this type of door in order to resist the ravages of insects. Here again, the environmental factor, durability as well as social prestige and level of technology are variables which justify the use of this door. The Yoruba door is not meant to lock out thieves and intruders into the single family's privacy, but rather it is intended to prevent the domestic fowl and animals from entering the sleeping rooms. In fact life in the compound is corporate; the feeling of solidarity is very strongly developed among the members, who not only lend goods but offer free services to one another, and the children move freely from one part of the compound to the other.

The rooms have strong ceilings which are made of rafters of palms arranged in a lattice and plastered with thick mud. As a result of this, the room remains dark both day and night. The ceilings, like all the other
elements of Yoruba houses, function in various ways that reflect both the economic, climatic and social variables that in sum total determine a house form. Thus the space between the roof and the ceiling is used for storing agricultural produce such as yam (isu), cassava (paki), maize (agbado) and cotton (owu) which will be consumed during the famine season that lasts from April until July. Some of these are stored until the time when maximum profits may be made and this again is during the famine season. The access to this important store is from the veranda side, where the "roof slants to rest on supporting pillars placed in front of the inner walls of the room". 30

The mud, being a poor heat conductor slowly releases at night the heat it has absorbed during the day and consequently rooms remain comfortably warm even during the cold harmattan season. The same property of the ceiling makes heating by log fires very effective during the cold season, at childbirth, or a time of sickness that necessitates confinement in the room. It is also capable of keeping off whatever small amounts of rain leak through the roof.

The compound is built of mud; lateric soil which bakes under the heat of the sun is normally the choicest soil-type for the mud. The compound walls are seven feet high on the average, and there are seven layers (Fig. 5a), each being about a foot thick. 31 These walls have mud foundations, and the structure looks solid since the compounds are built to last about one hundred years. 32 However, the compounds of the swampy, coastal parts of Yorubaland are built with rafia poles. Walls are usually built of a timber framework that is then doubled and rendered with mud. In spite
Fig. 3
The inside of a Yoruba compound, showing a section of the veranda and the courtyard.
Source: Mabogunje, *Urbanization in Nigeria*. 
of the use of rafia poles, the compound in this part has the same form as those in other drier areas. Thus the form of the house may be seen to be characteristically Yoruba, with building materials varying with locality and availability. To this extent, "they make certain forms impossible, and, in acting as a tool, they modify forms".  

The effect of the environment is further evident in the roofing and thatching materials which some scholars use as a criterion for the zonation of houses in Yorubaland. In the coastal lagoons, palms are used for roofing and thatching; the hardwoods of the tropical forests are used in the forest zone while the grasses of the savannah area serve the same end in the northern parts of Yorubaland. However, house form is not drastically altered because of variations in the roofing and thatching materials. The roofs are all saddle-shaped with a side slanting outwards away from the courtyard and the other inwards to the courtyard. This is what Ojo called "impluvial or rain-collecting architecture".  

The rectangular or circular-shaped open space within the compound is known as the courtyard (Fig. 2a) (agbala) and this varies in size from one part of Yorubaland to the other. In fact it is a function of the numerical size of the lineage group that lives in the compound. The household density varies greatly; in Oshogbo, it ranges from fifteen for the smaller lineages to 500 in the larger ones; Igbo-Ora has an average of from five to twenty, Fadipe suggests an average of 40, Bascom, for Ife, a range of 70 to 140. There is a clear relationship between the household population and the areal extent of the courtyard. This space is used for tethering the domestic animals, particularly the sheep and the goats, and as a poultry run.
Some of the indoor activities which normally take place on the veranda may also be carried on in this open space; and it may contain a well for the supply of water for the domestic consumption of the householders. The courtyard usually contains a drought-resisting shrub and wooden supports for pots containing potions. The shrub serves as a time indicator through the variations in its shadow length; the potions are kept ostensibly for the wellbeing of the lineage by the bale, whose duties include nursing the sick members of the compound, and taking remedial measures to prevent an outbreak of epidemics. The area of the courtyard decreases with time since it is often used for constructing more rooms when the need arises. This may come about as a result of male members of the lineage getting married and therefore requiring more privacy. This is an aspect of growth by internal fission that is characteristic of Yoruba rural settlements and urban growth.

This growth process involves the piece-meal demolition of the compound and the erection of new ones on the old site, where the great grandfather was buried. Erecting a house on the burial ground of the lineage ancestors is considered "a great achievement, a sign of gratitude to the father's spirit, and an evidence of pride in one's paternal heritage".

There is a major entrance gate to the compound and this is located opposite the section of the compound that is occupied by the head of the family. The strategic location of the bale's apartment in relation to this main gate enables him to know who is coming in or going out of the compound. This is one of his numerous responsibilities to the compound members. There is occasionally a minor outlet gate located along the side. At night and
in times of danger the gates are closed by strong double wooden doors. Yoruba houseforms can be classified into three types on the basis of their architectural complexity. The analysis given above refers to commoners' compounds, which constitute the objective of this paper. The second class is the compound of the quarter chief, which is generally built on the same pattern as those of the ordinary extended families. However, there are two or three courtyards, but the number depends very much on the chief's rank in the traditional government headed by the Oba, King. There were in the past usually two courtyards, an inner and an outer; the chief and his wives had the former to themselves while the latter was used for receiving the inhabitants of the compound, more especially on ceremonial occasions such as the religious celebrations. The compound of the chief forms the nucleus of the lineage residential quarter, adugbo. The traditional palace, the Afin, is the third class and it is the most complex; this was designed to conform to the belief that the Oba was "the archpriest of the living members of the society, and he was expected to live in the Afin "unseen, unheard and untouched except on the few but important occasions when he performed his spiritual and political duties".

Yoruba houses of all classes are an institution wherein the bale has legislative, executive and judicial powers which he wisely uses to ensure maximum and, ideally, frictionless interaction among all the members of the lineage living in the compound. The pattern of behaviour within the compound is culturally determined, and the forms of social intercourse strongly influence the elements of house discussed above.
B. **Building Materials**

Yoruba houses are constructed through the judicious use of the resources of the environment, more particularly the soil and the trees of the forest and the grasses of the savannah. The use of materials is decided by tradition, religious proscription, concern for durability, and location within Yorubaland. Traditional use of environmental resources is based on centuries of experience which has taught householders the most appropriate materials for the various parts. The durability of these is equally important since compounds are meant to last for a long period of time during which only minor repairs are expected to be made. The religious taboo on some materials is partly derived from these factors and partly from the medicinal perception of the resources. Thus the use of some tree-types, or grass-types is not only considered unwise because they do not last for a long time, but because they are a lineage taboo, or they are believed to bring bad luck to householders who use them.

The compound walls are built of mud, the lateric soil is the choicest soil-type for this. With the exception of the swampy coastal south, lateritic soil of various qualities is everywhere common in Yorubaland. The coastal area has soil-types that vary from dark saline to dark fresh-water mud, sands and clays and these are not particularly good for building purposes. The compound walls have seven layers, and each is roughly one foot high and one foot thick (Fig. 5a). The choice of this type of soil is due to the fact that it is relatively more resistant to the weathering processes of the tropics, where the total annual rainfall varies from 72 inches in the coastal area to about 50 inches in the northern part. The height of approximately seven feet is a convenient one since it creates enough vertical space between
the floor and the ceiling. This allows free, erect movement of the householders without being hindered by the mats and the skins of animals, meant for sitting and lying upon, which are rolled up when not in use and placed on pegs which project from the ceiling. The thickness of the wall is meant to make it strong, and this also ensures that both the erosive and weathering processes cannot significantly weaken it in a short span of time. The climatic effect of this material is that both the sun and the rain are effectively kept out with the result that the interiors remain cool and dark all day.

The same material is also used for plastering the lattice of palm rafters of the traditional ceiling. This is allowed some two weeks to dry before the compound is roofed, so that the material will be hardened. It will then be effective for storage of farm products, as well as giving a strong protection against fire which was a great threat in the past.

Local materials are also used for roofing and thatching the houses; the materials used depend very much on availability. In the relatively drier, northern parts, the predominant material is grass, especially guinea grass, ikin, but the resources of the adjacent forests are also utilised. (Fig. 5a). Roofing materials within the rainforest zone consist of wooden poles of varying sizes which are commonly used as girders, beams, rafters and joists. The lattice that holds the thatch is plaited from mid-rib poles of the oil palm and wine palm (Fig. 5b). Some of the climbers of the flora are used as plaiting ropes. Ewe eron (leaves of the phrynium plant), and ewe gbodogi (leaves of the sarco phrynium species) are commonly used as the thatching materials. In the southern, lagoon-fringed parts, rafia palms of various types are used extensively. Their thick mid-ribs are used along with wood
A new house style that is based on the age-long Yoruba concept of a house as a social institution.

Source: Crooke, "Sample Survey of Yoruba Rural Building."
as beams, joists and rafters. The distinction among the three zones of roofing and thatching materials identified is only true to a certain degree, because it is possible to have two roofing materials being utilized within a single vegetation zone. In any case there is a strong correspondence between traditional roofing materials and vegetative cover of the locality (Fig. 6). The choice of roofing materials within a given area depends on hardness, durability, and high resistance to insects so that the various house elements are well protected. Furthermore, the householders feel protected from climatic hazards.

While the Yoruba way of life, shared group values, and the search for culturally ideal environments are the major decisional variables that determine the rectangular, or semi-circular form of the compound and its elements, the materials used for the walls, thatching and roofing certainly modify this basic form. The building materials are in essence a means to an end irrespective of location within Yorubaland.

C. The Processes of House Construction

Houses are constructed after a number of factors—physical, spiritual, social, and economic are seriously considered so that the rigid structure can be of value for a long period of time. The importance of these can be better perceived if it is remembered that the ensuring of lineage continuity is the main reason for the existence of Yoruba compounds.

Site Selection

The site of a new compound is carefully selected, first on cultural grounds which Onibokun vividly describes thus:
"...members of the extended family have a strong cultural and sentimental attachment to the "fatherland" (i.e. the portion of the urbanland traditionally belonging to the family). Underlying this conception is the belief that a person must be buried under his own roof. As a result, surviving children of deceased heads of households jealously and sentimentally safeguard the burial grounds of their fathers. In cases where the compound house inside which the great grandfathers were buried are now in ruins, the children strive to rebuild on the ruins".51

Thus having a house on the ruins of the old compound, or continuous with those of other members of the lineage, is an achievement and a manifestation of an identification with the lineage group. This desire to identify with one's lineage is what Lloyd called an obligation to build a house on the family land, regardless of one's wealth. In his studies of two large Yoruba towns, Ondo and Ijebu Ode, he observed that:

"...the rich trader builds his house on the land of his kin group adjacent to those of the poorest members of his family".52

Non-conformity with the cultural variables in the choice of a site is attributed to the shortage of land for further expansion within the old compound areas, and the wish for greater independence on the part of the younger generation.53 but then "each man returns to his own compound within the town to exercise his social, traditional and political rights".54

A secondary factor of site selection is physical. Compounds are built on natural flat plots within the site. Such physical irregularities as the mole-hills, depressions, ant-hills marches and exposed rock mass are avoided. Consideration is also given to the drainage of the site so that the courtyard could be maximally used all the year round. Thus a suitable gradient for the compound will be such that the subsurface channel through which the water that collects in the courtyard finds its way out.

Orientation of traditional houses is also related to the cultural factors that determine houseforms. There is a general tendency towards
compactness rather than dispersal and this helps to emphasize the blood relationship of the inmates of a group of compounds known as adugbo, quarters or ward. This reflects the tendency for members of a compound to be inward looking and this is equally true of the people who inhabit the wards. This compactness of compounds with little space between gives the impression of disorderliness, but in reality a subtle order based on socio-political structure of the society binds the compounds together. This structure makes the quarter chief's compound a local focus, and the Oba's palace a town's center of socio-cultural gravity.

There is no ideal pattern for orientating the houses in response to the environmental forces, particularly the climate, but instead strong ceilings and roofing help to shield compound inmates from rain and the direct rays of the sun. The orientation pattern is therefore mainly due to the hierarchy of the traditional government, which is made up, starting with the lowest order, the head of the lineage, bale, the quarter chief, Olori Adugbo, and the Oba, the crowned King, whose centrally located palace can be regarded "as the emblem of Yoruba architecture".56

Until recently house building was usually carried out communally in such a fashion that a "man can invite his relatives, his friends, or members of his club to form a working bee, Owe."57 It is the lineage group that is the primary work group, however. The members of the working bee are normally repaid with food (such as amola, ivan, isu, etc.) drinks (emu, palm wine, burukutu, beer brewed from maize and guinea corn, and refreshments cromo, oranges, obi, and gbania, kola nuts). However, the working bee concept is fast dying out now because of the prevalence of wage labourers, and the
availability of money to hire them. This is a recent development consequent on the introduction of cocoa as the main cash export crop in the greater part of Yorubaland.58

There is labour specialization based on sex at the various stages of house construction. Male members are much more involved than the females; the former clear the site, mix the mud, erect the walls, provide the thatching and roofing materials, for the ceiling, and finally roof the house. Men and male youths are all involved in various ways. Walling specialists are now available but their technical knowledge is not of a high enough degree that they could be clearly classified as a social group. Most walling tradesmen work free for their kinsmen or are paid a token amount.59 The women's role is chiefly in the preparation of food for the working bee, and they get water from either a nearby well or from a stream for mixing the mud.

The convenient time for the construction of the traditional house is the dry months of November to April. This is another effect on the Yoruba house building process of both the climate and the subsistence economic system. This period is the most convenient because the main lull in the farming year is during this season and this makes it less difficult for many people to combine farming and building activities with little serious overlap.60 The wall of the new building is normally erected a short while after the rains "when collections of water can still be found in pools, potholes and depressions or nearby streams".61 With little overcast at this time of the year, the layers of the mudwall that are piled on one another at an interval of four days have the best prospect of continuous sunshine which bakes them.
(a) A small rectangular model house with layered walls and grass roof.

(b) The thatching lattice prior to roofing.

Roofing Materials

(c) Leaves

(d) Grass

Fig. 5
This is also the time when the roofing and thatching materials are abundantly available and more readily accessible because of the relative ease with which both the forest and the tall savannah grass can be penetrated.

There is a time sequence in the construction processes, starting with the erection of the layered, mud-walls, with the preceding layer being allowed to be sun-dried before another was added. The time interval is usually four days, which means that the building stage takes over a month to complete. The ceiling is next worked upon and, depending upon the size of the compound, it may take two to three weeks to complete, after which it is allowed to be sun-dried for some ten days. Roofing and thatching follow as soon as the walls and ceiling are thoroughly dried and this does not normally take more than a few hours to two or three days; the amount of time spent depends on the size of the compound and the number of people working on it. The floors of the rooms are filled with reddish lateric mud, and this is allowed to harden after several days of floor "beating" with flattened sticks. Mud beds are also erected at this time. The floors are then polished with dark green material that results from the fermentatin of leaves, ilinrin: This is extended as background to the bright colours of the white designs on the wall. This last stage, before occupation, is carried out by the "wives of the house". The occupation of the house is normally preceded by a sacrifice to the lineage ancestor, who are believed to have influence on the relations of living persons to one another. As a result of this, there are:

"...elements of both fear and veneration in the Yoruba attitude towards their ancestors for, in addition to blessing, the ancestral spirits can bring misfortune, temporary or eternal, to their descendants".
The various stages of the building processes may not necessarily be completed during a single building season. It may take two or more seasons before the compound is occupied; much depends on the labour force available and the speed of work, and, in the present day, on the financial resources.

The use of domestic (family) and community (village or towns) labour, and the need to invoke the spirit of the ancestors for protection for all members of the lineage, imparts meaning to the traditional compound as a social institution.

II. HOUSE FORM - CREATING FACTORS

A. Socio-Cultural Factors

Yoruba compounds are built for members of the lineage who have a common ancestor. The inhabitants are collectively known as the idile. The lineage reckoning is patrilineal, which means that affiliation is through the male line, a child becoming a member of his father's lineage whose taboos he respects.64

Three types of lineage membership have been identified in Yoruba society by Fadipe; these are blood membership, relationship by marriage and the non-legal secondary membership.65 The blood membership refers to all to whom relationship by blood can be traced both in the paternal line as well as in the maternal. Patrilineal reckoning is much more common over the greater part of the society, although Lloyd regionalised the cultural realm into two with the northern half reckoning through the father's line, while the southern half have matrilineal descent.66 Marriage by and large is virilocal so that a woman goes to live with her husband; this is the basis of Fadipe's second type of kinship. Non-legal secondary lineage membership is relation-
ship neither by blood nor by marriage, but by the choice either of both parties or of one with the tacit concurrence of the other. This type corresponds to Bascom's foreigners of the compound, Alejo, who are considered members of the lineage for most practical purposes. However, they, and their children cannot inherit the headship of the lineage.

Members of an adile have certain rights, duties, and privileges, some of which are the rights of residence in the lineage compound and to work idile farmland outside the settlement. Members are expected to exchange economic goods and services, to adhere to the lineage occupation, and to make contributions to the marriage ceremonies of members as well as to the burial expenses of the lineage elders. It is therefore a corporate residential group defined by reference to the most distant ancestor, Oriṣun, (literally, progenitor) who is the symbolic figure of the lineage unity and who gives his name to the lineage. Functions performed by public and formal arrangements such as the old age pension scheme, health insurance, and the social security scheme in the developed countries are performed in Yoruba society by, and for, the members of the extended family. The compound, a common residence of the lineage group, functions as a place where its members can share daily personal intimacy and its unity is strengthened by economic and spiritual bonds through the ancestral worship.

The corporate spirit that prevails within the lineage group is primarily due to the influence of the ancestor, who is considered immortal and to whom all members owe allegiance. The ancestor is believed to:

"... provide sanctions reinforcing accepted social behaviour and generates a series of reciprocal rights and duties among members that are paramount factors in the corporate unity and solidarity of a lineage".

The ancestor is worshipped by all members of the compound hence Fadipe's
claim that this worship is the "most ancient and the most universal" and is very prominent during funeral ceremonies. He is therefore the main focus of the compound.

The bale is the most important and the eldest male living member of the compound, whose status is prescribed because of his age, and whose position is traditionally considered sacred. It is on this basis, age, the ordering principle in the compound and in the society at large, that the bale is able to command the respect of the householders. He has a number of duties to perform to the lineage members, and seven of these were enumerated by Fadipe. The bale is expected to preserve peace and order within the compound so that there could be maximum interaction among members with a minimum of friction. As the chief law-giver and magistrate of his compound, he is expected to settle quarrels between husband and wife, between co-wives of the same polygamous husband, and between other members of the compound. He punishes anti-social behaviour such as theft, incest, disrespect for elders, and the misdeeds of young people who break the peace of the compound. His legislative powers include the fixing of the time to return to the compound at night, and issuing such orders from time to time as to what is to be done in cleaning the compound or in cleaning its surroundings.

These functions are considered in the design stages of the compound, hence his apartment is set apart in the compound with one of his rooms serving as a "court" of family "justice", as well as being the "sick bay" for members of the compound. The compound is the smallest unit of the traditional government in that the bale represents the Oba in that section
of the town. The compound is therefore an important primary group, albeit the smallest political unit in the society and its government is like that of the town or village at the micro level. Thus the bale is a member of the socio-political hierarchy of authority in the society at large.

The second component of the lineage are the male members who belong to it through blood relationship. The males individually constitute the second level of authority within the compound in that they are heads of the single families, whose sum total make up the greater proportion of the lineage membership. Their rooms and those of their wives are allocated to them by the bale according to the possibilities offered by the building. The single families are individually and collectively responsible to the bale, the head of the lineage government who in the past was "responsible to the town or village authorities for raising the taxes imposed upon his compound and for raising the levy of men either for public works or for military purposes". Each family confines its attention to its own part of the compound, hence the more intensive use of the veranda per family. However, this does not mean there is not much free communication. In fact most of the life of the compound is passed on the veranda so that it is only a limited amount of privacy that is possible.

Women members of the compound belong to the extended family through marriage but it is the male members who form the de facto extended family group. The women members are primarily perceived as rearers of children who ensure family continuity. They are therefore a decisional variable in the design of compounds which must be spacious enough to have a room for a woman and her children, and an access to the part of the veranda
adjacent to her room to be used, among other things, as the kitchen. The role of women is further seen in the fact that they are responsible for the welfare of their daughters and their sons, at least until the latter are old enough to work with their fathers in the field.

The inclusion of the courtyard and the veranda as the medium of effective social intercourse among the lineage members is due to an element of the psychology of the Yoruba, which Fadipe describes:

"The Yoruba derives a great deal of strength from being in company as contrasted with being left to himself. Being far more of an extrovert than an introvert, he feels his pain relieved by the expression of concern and sympathy on the part of others and his labours are lightened by the same process". 73

Thus while the ancestral worship reinforces social behaviour in the lineage and its government headed by its eldest and, according to custom, wisest male member, strives to ensure the prevalence of corporate spirit among members; the psychological desire for meaningful interactions in part contribute to the creation of an open space within the compound. The courtyard serves as the place of worship of the ancestors. It is also the recreational ground for everyone to play the game of avo either under the shade of the shrub or under the shadow of the roof. An aspect of this recreational function is the evening story telling to the children by the elders, and this is meant to instill morals and ensure cultural constancy.

The compound is therefore a multifunctional institution that caters for residence, storage, recreation, religion, and meaningful social interactions among the lineage members. These functions are under the direct control of the bale through the judicious execution of his legislative,
Fig. 6
Vegetation Zones of Nigeria.
Source: Perkins and Stembridge, Nigeria: A Descriptive Geography.
judicial and executive powers invested in him by tradition. These functions of the house account for the Yoruba attitude towards the house; thus it is with pride that one refers to ile temi (my house) agbo ile wa, the family compound and ile baba mi, my father's house. This is proudly carried a degree further by the different attitudes towards one's own town and a town where one earns his living. To an immigrant Yoruba,

"...the new place, whether a large city or a metropolitan center, is a "farm", and his original home town, whether it is a village or a hamlet, is a home".74

Thus the socio-cultural factors are very significant ones in the analysis of the determinants of Yoruba houseform.

In what ways does the climate affect the houseform? How is the perception of the house influenced by the environmental factors which are a part of the variables to be considered in a house that caters for all the circumstances of life? The next section focuses upon the question of the influence of environmental factors upon the Yoruba houseform.

B. Physical Environmental Factors

While Yoruba compounds have a physical form that ensures their function as a socio-cultural institution, the importance of climate appears to be that of a modifying factor. It is a secondary factor of the form-generating forces to which houses respond through the use of certain materials, orientation and structure.

The degree to which the Yoruba utilizes the resources of the environment in building his house has been analysed elsewhere in this paper. This section will point out the pertinent relationships between these and the climate. Yorubaland lies between six and ten degrees north of the equator; it is therefore characterised by all-year-round high temperatures, with the
annual average being 80°F. Both the diurnal and annual ranges are small. The annual rainfall ranges from 72" to about 50"; the rainy season decreases in length from twelve months on the coast to about 9 months in the northern parts. Relative humidity is high all the year round in the southern parts, but it is only so during the rainy season in the interior. The cold, dry season increases in length from the coast to the interior. Climatic elements to which Yoruba houses respond are rain, heat, wind and solar radiation. As a result of this response, the various parts of the building may be considered environmental control devices which make houses function effectively to protect the way of life being carried on in the compounds. The deliberate choice of mud as a building material is due to its great capacity to retain heat and to its relatively high degree of resistance to the erosive work of the tropical downpour. It is capable of absorbing heat during the day and releasing it during the night. Inhabitants are also sheltered from rain and the direct sunlight. The universal saddle-shaped roofs (i.e. a roof pitching from a central beam downwards on four sides) of Yoruba houses is a response to the climatic elements, particularly rain. The importance of this response may be associated with the environmentalist view of the Yoruba house, but this would be a wrong interpretation. The environmental adaptation that is so evident in the houses could be viewed as expressive of the level of building technology.

Strong winds characterise the rainy season, so long eaves are deliberately designed to shelter the very intensively used veranda. The eaves also help to protect the wall from the strong, violent winds that precede this season.
The building materials and design do take account of the major climatic stresses, nevertheless the primary influence on architectural design remains socio-cultural. This influence provides the perceptual framework of a house as an ideal social environment that is institutionalised whereas the climate is a modifying factor.

III. RECENT INNOVATIONS TO HOUSEFORMS

Changes which have taken place in Yoruba houseform may be viewed in evolutionary perspective. Changes now seen are consequent on the cultural contacts with the western world. The chief cultural agents have been the missionaries, the colonial administrators and the repatriated slaves from Brazil, who returned to Lagos and Abeokuta in the last century. However, the new architectural concepts were adapted to the cultural environment, and this plus the phenomenal changes in the other cultural variables caused Schwab to consider the whole of Yoruba society to be transitional:

"...in the sense that the old is in the process of disintegration and new forms are rapidly emerging. However, it is the internal and traditional patterns that determine the particular form and direction of the effects which the external alien forces of change exert". 75

The Main Factors of Change

The "external alien forces" that Schwab referred to are the introduction of new religions, Christianity, and Islam, and an economic system which, collectively, work towards weakening the socio-cultural factors, i.e. the lineage system as a houseform determinant. The Yoruba lineage system is being seriously weakened, according to Bascom, by four major forces. Increased mobility, consequent upon the end of the intra-ethnic war in the last century, is considered to be one of these factors. This is facilitated by the development of new forms of transportation, particularly by road and
position, role and prestige have been very seriously undermined. This effect results from the introduction of party politics which made the Obas "become the pawns on the chessboard of the politicians". The head of the lineage is no longer an effective representative of his family, and his ritual role is now being performed by the churches and mosques.

Christianity and Islam are relatively new in Yoruba culture; they were both introduced only in the last century. These, along with western education, are components of the agents of cultural erosion which lead to the breakdown in the importance of compounds as the basic unit of the society. The two religions strongly preach the concept of a nuclear family to their new converts. This idea of "one man, one wife" was expressed in terms of ownership of building as "one simple family, one house". In accordance with the doctrines of the new faiths, a convert builds a house separate from the compound of his lineage group, he has full authority over the members of his immediate family and often has his parents, brothers and sisters living with him, but he does not live entirely outside the intercourse of members of his lineage.

Yoruba architecture is therefore very strongly influenced as a result of socio-economic developments that accompanied contact with the western world. The effects of these changes are through the use of new building materials, and the introduction of a new architectural style.

New Materials for New House Styles

The resources of the environment which were considered important for building purposes in the past are now generally thought of as being inferior. This change of perception is due to the main factors of change
Fig. 7

A "Brazilian" house.

Source: Mabogunje, Urbanization in Nigeria.
rail, which the British Colonial government designed to establish Pax Britannica as a means to full access to economic and political domination of Yorubaland and other parts of Nigeria.

Money economy, through the introduction of cocoa about 1900, is another weakening factor. This important export crop is dominant in the forest section of Yorubaland, and, along with palm oil and palm kernel, served to put substantial sums of money in the hands of many individuals, both the farmers and the traders, the latter an economic class that emerged from the new economic system. Differences in income and wealth give rise to individual differences in tastes and expectations; the effect of this development was felt on kinship ties and family authority. However, major impacts were the strains and stresses which were imposed on the form and design of the compounds, in that the 'improving' members of the lineage were anxious to break up the compound and to enclose and improve their portion of it. This compound disintegration and its replacement by modern, single-family units gives rise to growth by fission, or in situ growth in urban centres. The economic factor of disintegration is also responsible for building new, single family houses in places outside the sacred, family land; this is more so in towns where there is a shortage of land. In the rural areas, this leads to "elongated growth" along the approach roads, but away from the other members of the lineage in the old compound. However, contact is still maintained with other lineage members.

The imposition of British political ethics also has destructive influences on the society, especially over the Yoruba traditional elites, i.e. the head of the lineage, the quarter chiefs, and the Oba, whose status,
Fig. 8.

A variant of "Brazilian" architecture; this is a popular variant in both the urban centres and rural areas of Yorubaland.

Source: Crooke, "Sample Survey of Yoruba Rural Building."
noted earlier which introduced new and better alternatives. Lagos, a Yoruba town that is now the capital of Nigeria, is the major point of contact with the outside world. It is through here that innovations were received, adopted and diffused to the hinterland. In this respect, Lagos is the gateway not only to Yorubaland but to the whole country.

The replacement of the mud wall by baked-brick wall was the first change introduced in the second half of the last century by the American Baptist Mission. This was soon adapted by the other missions, and both the colonial government and wealthy individuals. It was followed by the use of cement to plaster mud and brick houses, which enable the new houses to better withstand the tropical climate. This is a new form of response to the environmental factors and also a means of ensuring a long-lasting house. The new materials were adopted because of these reasons. Cement blocks and stones were later introduced as building materials and so houses in Yoruba towns can be classified now on the basis of the material used to build the walls. A number of these materials are locally available in the raw form, but will have to be "transformed" with the help of industrial technology before being used. Mud, the raw material for brick making, and stones are readily available throughout Yorubaland. Limestone is another local resource that is being used for cement production near Lagos.

Corrugated iron sheets replaced leaves and grass as the roofing material of houses. The material was first used in Lagos, as a means of overcoming the "incessant hazard of fire which was becoming a real threat to the commercial life of Lagos in the mid-nineteenth century." Sawn timber is now used for the framework of the roof instead of flexible poles and sticks.
This material is both fire and rain proof, and so now commonly used in all parts of Yorubaland especially since the end of the second world war. The shape and pattern of compounds and the new, single family houses are still basically what it was in former days. There was a post war boom that resulted from the accumulated profits from the sale of cocoa. This is the major reason for the diffusion both further and further geographically and lower and lower on the economic scale of these new materials and houseforms.

The traditional even skyline which was so characteristic of Yoruba settlements, is now a thing of the past because of the new building designs for both private, public and religious uses. The new building types that have recently changed the townscape are the government offices, churches, mosques, and privately-owned houses. The commoners' houses have two basic designs: a rectangular one-storey house with a central communal space from which sleeping rooms lead off on either side, and the "Brazilian"-style storey houses, petesi or ile oke.

The first type of housing design is more widespread in the rural areas. New building materials are used and there are windows, and doors that can be padlocked. The corridor is used in some areas as the kitchen (Fig. 2b). In the case of the latter, there is an open space between the main house and the kitchen and this serves the same functions as the courtyard of the old compound. Most of the old compound courtyard functions can also be performed in the common corridor. The kitchen is regarded as the domain of the women and a self-respecting male member will not frequent it. The new house type is essentially a compound on a different scale, and neither the use of the new, more durable materials, nor the design to accommodate a nuclear family have changed its meaning in an institutional sense.
The second model was introduced by the ex-slave returnees from Brazil, hence its name, the "Brazilian Style". (Fig. 7). This design "involved the use of numerous ornamental frills to doorways, pillars, balconies and verandas, as well as the application of bright colours to the house". Like the first model, it has a common corridor onto which rooms open from both sides (Fig. 8). The model is an adaptation of the compound pattern to a new architectural style in that it houses a group of closely related people, it has a backyard for cooking and storage, and in which the domestic fowl are also penned. In some cases, it forms just a section of the larger compound which may serve as the residence of the male members of the family, or only that of the bale (Fig. 4); it faces the street while the compound is partially hidden behind it.

The rate of adoption of any of these models depends considerably on the wealth of individuals. A poor farmer who cannot afford all the new materials may adapt the rectangular model, and use the traditional building materials. The storey house is a sign of affluence and "the greater the number of storeys, the higher the regard for the owners' command in the society".

CONCLUSION

The Yoruba house is a cultural institution which is expressed by its physical structure. The spiritual focus of this institution is the ancestor, whose worship was formerly much more important than at present. All members of the lineage are emotionally tied to each other through having a common ancestor and this strongly influences all the other aspects of life within the compound. This particular component of the institution can
be considered as the *spiritual foundation*.

The existence of family residential quarters in Yoruba towns and villages is due to the influence of the ancestor because all members of the family are obliged to build on the family land. Thus the site of a compound is determined by this component. Further direct influences of the ancestor are manifested in the building labour force, which is mainly made up of the lineage group, and the family religion. The latter is, of course, the cult of the ancestor to whom sacrifices have to be made annually for his protection over, and blessings on, his descendants. As a result of his significant influences in the family, the day-to-day relationships among members of the lineage are also affected by him.

The compound has an organizational form which is fully incorporated with the other levels of administration in the society at large. The lineage head, whose ultimate source of authority is in the ancestor, heads the compound's government. His energies are therefore devoted to building on the spiritual foundation through the exercise of his legislative and judicial powers. In performing this role, the lineage head technically functions as the link between the family ancestor and the living members of the lineage. This explains why he has a separate and spiritually dignified apartment in the compound which facilitates carrying out his numerous roles that are significant to all the members of the compound. He also has profound influences on the architectural conventions of the compound such as the size of the individual elements of the compound, and he oversees all the states of the building operation. This institutional component can be viewed as an *administrative* one which ensures the prevalence
Fig. 9.
Another variant of "Brazilian" house with a courtyard that indicates a strong relationship between old and new Yoruba house styles.

Source: Crooke, "Sample Survey of Yoruba Rural Building."
of the corporate spirit among all members of the lineage as well as the non-members living in the compound.

Through good administration of the head of the extended family and the constant invocation of the ancestor's name, the compound is one of la coexistence paisible. This is because meaningful social intercourse among all lineage members is facilitated by the two components discussed above. The intercourse is not only verbal, but it is also in terms of exchange of free service and economic goods. The free exchanges lead to the acceptance of a philosophy of interpersonal relationship that can be summed up as a collective ownership of goods and a collective responsibility for the socio-economic welfare of all members of the family.

This explains the general attitude of the male members of the lineage towards the "wives of the house". The latter group are individually regarded as "our wives", the "wives", in turn, regard all the individual male members, both adults, married or not, and the children, as "our husbands". Furthermore, the "wives of the house" regard the female members, who are married and therefore living outside of the family compound, as "husband". This attitude is primarily enjoined by the direct and indirect influences of the spiritual foundation of the compound, whose head ensures that the corporate spirit prevails without much friction. These complex relationships within the compound inmates constitute the third major component of this Yoruba institution, that is social intercourse. This is an important variable that is taken into account in the planning stage of the Yoruba compound. The intensively used veranda and the courtyard are two major elements of the compound that facilitate uninhibited social
interactions among members of the lineage.

The spiritual foundation, and the administrative and social intercourse components make up the institutionalisation of the Yoruba compound. These structural components are very intricately interwoven and therefore not separable in reality. They constitute the socio-cultural factors that determine the Yoruba compound in terms of site choice, position relative to other parts of the town, orientation, building materials, and the individual elements of the building. Since they define what the architectural design of the compound is, it could be said that they create the ideal environment which makes possible the eternal existence of the institution.

The environmental deterministic view of the Yoruba compound as a mere place of shelter appears to be one based on lack of full understanding of what the compound represents. The evident influences of the environmental resources on the house do not justify the perception of it in this framework. As a structured institution, the compound puts into consideration all circumstances of life of the Yoruba, hence its multifunctional purpose. In view of the analysis in this paper, it is quite apparent that a meaningful approach to the study of the Yoruba compound in this particular respect is that it adapts to socio-cultural as well as the physical environment. The adaptation process involves making possible the creation of the ideal form as well as its modification. These in turn facilitate the efficient functioning of the compound as it is socio-culturally designed.

The exposure to outside influences has a lot of impact on the coherence of the lineage and hence on the houseform. However, these influences in sum total amount to putting "new wine in old bottles". Thus the use of new
materials and the introduction of new house styles do not radically alter
the Yoruba's conception of a house as an institution. The use of new
materials is a new way of responding to the physical environment. The
newly introduced styles are in many cases a compound on a lower level
from the old, traditional one because they are similarly structured and
are still multifunctional.

It is this institutionalisation of the compound that accounts for
the Yoruba's pride in it. The compound has an emotional meaning: the
physical expression of the organic nature of the lineage that, until very
recently, defined an individual's social, economic and spiritual life.

2. Ibid., p. 92.


4. Ibid., p. 241.


13. Ibid., p. 44.


18 Ibid., p. 19.


21 Ibid., p. 99.


23 Ojo, G.J. Afolabi, African Arts, ... op. cit., p. 15.

24 Fadipe, N.A., op. cit. p. 100.

25 Ojo, G.J. Afolabi, Yoruba Culture, ... op. cit., p. 147.

26 Fadipe, N.A., op. cit., p. 98.

27 Ojo, G.J. Afolabi, African Arts, ... op. cit., p. 15

28 Ibid., p. 15


30 Ojo, G.J. Afolabi, op. cit., p. 17.

31 Ibid., p. 15.


34 Ojo, G.J. Afolabi, Yoruba Culture, ... op. cit., p. 150.

35 ..., African Arts, ... op. cit., p. 17.

37 Barber, C.R., op. cit., p. 16.


40 Krapf-Askari, E., op. cit., p. 58.

41 Ibid., p. 58.


44 Lloyd, P.C., op. cit., p. 236.

45 Ojo, G.J. Afolabi's Yoruba Palace is a deep analysis of this complex Yoruba architecture. This part of Yoruba houseform will be touched upon only as it affects the commoners' houses.

46 Yoruba Culture, ... op. cit., p. 134.


49 Ibid., p. 98.

50 Ojo, G.J. Afolabi, Yoruba Culture, ... op. cit., p. 150.

51 Onibokun, Adepoju, op. cit., p. 347.


59 Crooke, Patrick, *op. cit.*, p. 54.


64 Barber, C.R., *op. cit.*, p. 18.


71 This section is largely based on Fadipe's detailed analysis of the bale’s qualifications, duties, and responsibilities on pp. 106-109 in *The Sociology of the Yoruba*.

73 Ibid., p. 107.

74 Onibokun, Adepoju, op. cit., p. 348.

75 Schwab, W.B., op. cit., p. 352.

76 This section is largely based on W.R. Bascom's "Urbanization Among the Yoruba", in The American Journal of Sociology, vol. 60, 1955, p. 405.

77 Mabogunje, A.L., op. cit., p. 119.


80 Fadipe, N.A., op. cit., p. 115.


82 Ibid., p. 70.

83 Crooke, Patrick, op. cit., p. 70.

84 Mabogunje, A.L., op. cit., p. 89.

85 Krapf-Askari, E., op. cit., p. 60.

86 Ojo, Afolabi, "Traditional Yoruba Architecture", op. cit., p. 73.
SELECTED BIBLIOGRAPHY


