CONFERENCE CENTRE AND HOTEL LAGOS

- Proposals for a contemporary Nigerian Architecture

BY

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DECLARATION

I, Agboola, Olufemi Abayomi, do hereby solemnly declare that this dissertation is an authentic and original documentation of my research for the award of the 'Master of Science' in architecture degree of Ahmadu Bello University, Zaria; and that all references therein have been duely acknowledged.

Signed:

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DEDICATION

To the holy trinity for guidance and protection,

my parents for making it possible,

Funlayo, Ebunola, Adewale and Kayode for all their love.

'Femi Agboola

June '85

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ABSTRACT

PREAMBLE

What role can professionals in the building industry play in the current drive for nationalism? There have been calls for further development of our local building materials so as to reduce soaring building costs. Unfortunately, this is a specialized field in which the architect cannot participate fully, Nigeria has been blessed with an architectural history which can be further developed with todays technology. It is believed that this is within the architects sphere of influence. This is the motivation behind this thesis, its essence being to evolve a 'syntax' for contemporary Nigerian architecture,

A conference hotel has been chosen to practicalise the proposal as it would give an opportunity to bring out most, if not all of its characteristics,

PHILOSOPHY

Adictionary defines a conference as an appointed meeting for consultation or discussion. It is of special interest to all organisations being a productive method of organising research and results. The conference also acts as a setting for national and international co-operation. As such a conference hotel is a facility which primarily provides facilities for such activities,

Lagos being the most cosmopolitan state of the country requires such facilities as numerous conference are always being organized,

GOALS

1. To provide by means of a study of traditional architecture and other societal factors a synthesis which would form the basis of an edifice which we can relate to in design concept,

2. To provide an arhitectural space consistent and conducive to the aforementioned definition of a confe-rence complete with support facilities for the eventual users to work, live and relax,

SCOPE

Broadly defined, the project will consist of a conference centre and a hotel. As the conference centre should be capable of hosting international conference, it would have all the necessary support facilities,

ARCHITECTURAL SIGNIFICANCE

A public building such as a conference centre will eventually attract dignitaries, tourists and other categories of clientele, As such, its architecture should be an event in itself. For the purpose of this thesis, it is being used to experiment the theories behind the proposals for a contemporary Nigerian architecture. As such it sould be seen as an attempt to project an architecture that has a deep rooted history in tradition,

CONCLUSION

Certain architectural critics notable charles Jencks have talked about the death of modern architecture. Various schools of thought - post modernism, neo-classism have also grown since the later half Of the 20th Century. The general idea is that architecture should retrace its steps back to tradition. This thesis is an attempt to evolve such an architecture for Nigeria, the conference hotel being one of the many public facilities that could be used to experiment with the evolved concepts,

PREFACE

Since the main body of this dissertation was written at different times and under different conditions, it is imperative that a preface precedes it to explain the sequence of chapters.

Chapter one deals with the failure of the international style, hence the need for architecture to speak in a multi - faceted language as against the lingua Franca proposed by the post-war modernist architects.

The second chapter is on how the Japanese architects of the third and fourth generations have evolved a contemporary architecture for their country. It is intended as a guide to the authors proposal.

In Chapter three, the author makes his proposal and explains the philosophy behind it.

Chapter four speaks about the need for the conference centre and why it was chosen to test the proposed concepts.

Chapter five is intended to draw the interested reader into the roots of the business community in Lagos. It comprises of a short history and the British involvement in trade. It also establishes Lagos as the most cosmopolitan state in the country.

In Chapter six the author explains the characteristics of the chosen site and analysis the various forces at work on it.

Chapter seven covers the case studies and surveys and along with chapter eight which deals with the architects brief sets the stage for the evolved programme.

In Chapter nine, the author analysis the evolved design concept based on the analysis carried out and in the last chapter reports on the design and concludes.

Wishing you a happy reading.

"..... The architect who combines in his being the powers of vision, of imagination of intellect, of sympathy with human need and the power to interprete them in a laguage vernacular and true - is he who shall create poems in stone ....."

Louis H. Sullivan (architect)

But faith is an assurance of what is hoped for, a conviction of unseen realities.

Heb 11[1]

1. THE FAILURE OF MODERN ARCHITECTURE

1.1 The Cultural Roots Of Modern Architecture

An architectural revolution took place in the early 20th century as an offshoot of the industrial revolution. All traditional styles were declared null and void and architects looked on to airplanes, factories and industrial machines for inspiration. This aesthetic revolution took place for two main reasons.

1. Technological progress offered new building materials in glass, iron, steel and reinforced concrete. The modernists felt that the new materials should be exploited to help find solutions to modern architectural and urban problems. A break with architectiral tradition facilitated the inhibited exploration of the new materials and methods.

2. The flowering of capitalism in the 19th century created a growing wealthy middle class. Inexpensive manufactured goods were now available (mass production, industrial revolution) and the middle class could afford things that previously only the rich could afford. There was an upsurge in ornamental styles and sophisticated artists and critics were disturbed by peoples overindulgence and lack of taste. These artists in searching for ways to curbs this proliferation of styles spurred by technical capabilities and market demand, established rulers to define which kinds of ornaments

were good and which were bad, and which forms were appropriate to a function and which were not. This quidelines didn't help: the middle class would not be dissuaded from or directed in their lust for sumptous ornament.

The profusion of ornament was a crucial factor in the separation of the architect from the society and this alminated in the modern architectural revolution. This revolution solved the problem of middle class taste for the architect by elimination it as an alternative. All traditional formats were abandoned and a completely new aesthetic which was in dissonance with the old orders was forged. This break with popular (traditional) taste was the beginning of the elitist modern architecture of today.

It now remained for the modern architects to convince the people that the new style was best for them. Rule of compelling moral force had to be established to make the break with tradition comprehensible and acceptable to the public.

In propagating this new architecture, Walter Gropius described it as the 'inevitable result' of a logical process of design. Modern architecture looked the way it did because architecture obeyed certain demands based on supposed honesties.

- honesty of materials
- honesty of structure
- honesty in that the function of a building is reflected in its, form

- honesty that reflects the true spirits of the times in its architecture rather than reflecting elements of the past, and the demand that architects be true to themselves.

Modern architecture's obvious sources of visual inspirations are basically simple "clean" and "coldly precise" qualities that were first appreciated in the tools of modern times: airplanes, ships, industrial machinery and buildings. These became the origin of modern architects anti-traditional iconography. Realizing how unpopular their position was, modernists were careful not to let their aesthetic choices stand only on visual merits. They never said modern architecture would be more acceptable because it was more beautiful than traditional architecture. They theorized about a visual art but they rationalized their visual choices in exclusive moral (honesty and truths) terms.

Thus, modernists using poetic associations devoid of any rational basis, relied on the moral weight of culturally accepted premises to enforce essentially unpopular aesthetic choices. The ideas grafted an to architecture came from a number of influences.

1. - <u>From Capitalism</u> : The system wherein all energies are focused at increasing efficiency, at getting the most return for the least investment - modernists acquired the intellectual and emotional bias for a practical, functional approach to design. This approach worked towards the exclusion of all elements, such as

ornament, that served no practicable purpose, and the rejection of visual complexity in favour of simple forms that, it was felt, would better serve the simple, basic needs of life.

2. - The Protestant Ethic which attributed moral values to non-moral activities such as 'hard work' resulted in the tendency to attribute moral values to non-moral, specifically aesthetic choices. Thus, it was honest and beautiful to show materials in their natural state - dishonest to disguise it; honest to express the structure of a building on the extrior - dishonest to disguise it; honest to express the function of a building - dishonest to obscure it.
It was felt that the application of these and other moral imperatives represented direct, positive steps towards curing urban problems.

3. - A Self righteouness comparable only to that of the 19th century christian missionary led architects to assume that their own attitudes and values were proper for all others in the modern world, regardless of class, race or cultural differencies.

4. - Technological and Scientific Success encouraged the workship of change. It followed from a belief in the inevitable improvement of life, through technology, that social and aesthetic traditions were irrelevant.

5 - The erronous popular understanding of Darwins theory of evolution led people to believe that the physical evironment was the critical factor in social behaviour and that by changing an unsatisfactory environment, social harmony, could be restored. This misunderstanding also lent the apparent support of natural law to the idea that non-practical elements such as ornaments should be eliminated just as a species unused organs atrophy.

1.2 Problems of Modern Architecture

Two basic problems face the modern architect today that he is unable to handle.

1. After about fifty years of indoctrination, the majority of the public remains indifferent or hostile to the modern aesthetic. The predicted universal acceptance of modern architecture has never come to pass.

2. Evidence shows that throughout the world, modern architectural and planning ideas have failed whenever the architect disregards the social and aesthetic valorous of the users.

Lourie signs of this condition include a growing reaction against modern buildings in traditional contexts that try to be 'different' rather than fit in. And a new disposition of non western cultures, which formally accepted modern architecture because of a sense of cultural inferiority, to try to recapture their own traditional visal and social values.

The disillusionment with modern architectur came about because architects imposed their values on a public that did not share them.

1.2.1 Visual impositions

Proponents of modern (international) architecture say that its universal form language is the logic outcome of a rational approach to design with new materials and techniques. The onlooker is told that these new forms devoid of heritage, are 'functional' or economical' or 'dictated by new materials and techniques", but these are simply rationalizations for style preferences. There is no practical inevitability to modern forms. Modern architecture intentionally defies its older neighbours rather than standing beside them. It attempts to shock rather than sympathize.

While architects look upon the new architecture with pride, laymen eye it worily. At the osaka worlds' fiar, a "city of tommorrow" was shown embodying the most advanced concepts of modern architecture and planning. Unaware of these, the tour guides miscalled the exhibits the "city of sorrows".

1.2.2 Social impositions

The visual preferences of the modern movement were accompanied by implicit assumptions about how people live or how they should live - assumptions defined by the architect's personal values and built into each design by his placement of doors, windows and walls.

Few laymen or professionals see any alternatives to the prevalent sterile, annonymous architecture and the ideology that defends it. The most resigned laymen assumes this architectures naked forms come from economic necessity; the most enthusiastic sees it as a symbol of prosperity and modernity. In either case there has never seemed to be a choice about it because modern architecture has never been presented as a "style", it has been considered a movement of"truths" for so long that we are unable to think of it as a set of arbitrary, systemized aesthetic choices. By now it has become an ideological prison that traps professional and non-professional alike as soon as they are initiated into its rules.

1.3 The Bauhaus Social Programme

The Bauhaus was founded in 1919 by Walter Gropius a German architect. It became and remained a centre for all facets of modern design till 1933. During this brief period it developed the most coherent, systematic approach to the planning, design and construction of what Gropius called the "New architecture".

The Bauhaus claimed to have a scientific basis for identifying and accommodating peoples social needs in its sociological approach. Its major finding, which was in fact, neither sociological nor scientific was the supposed "minimun sociological requirement" for every person. However, social needs are not quantifiable in the way that this postulate suggests. This concept of "minimum requirements" which shows the continuing influence of "economizing action", was an economic category erroneously applied to human needs; it was ideology rather than sociology. Gropius made several pronouncements that were intended as sociological justifications for his architectural solutions.

1. People have no natural attachment to the ground.
2. People erroneously find larger apartments desirable.
3. Although single family houses are the most desirable, they are not a practical solution to modern housing needs.
4. There are cultural advantages to high-rise apartments because of the increased possibility of meeting people.

Since Gropius made this statements, much evidence has shown that none of them is necessarily true. For example.

1. An Indian city, Chandigarh, designed by Europeans without regard for Indian Socio-cultural background demonstrates that in some cases at least, people who are accustomed to having some small piece of land adjacent to their house suffer considerable strain if they are deprived of it.

2. It is an arbitrary imposition of values for the architect to say that people are mistaken to like larger apartments.

3. Ignoring the single family house as a design possibility amounts to the dismissal of the suburbs is a potential solution to urban problems.

4. Increasing the potential for contact doesn't necessarily increase the number of actual contacts. Since Gropius wrote about this aspect of modern life, the anonymity of high rise apartments has become legendary.

Thus the Gropius 'minimum social requirement' is at best the generalization of a specific cultural trait.

1.4 Application of the Modern Ideology - Chandigarh as a Case Study

1.4.1 Introduction

From the foregoing we see that the modern ideology is a statement or assumption about how people should live and how the containers in which they live should look. The basic belief was that this ideology was universally relevant to the modern industrial world because it advocated rational planning to meet the unique circumstances of modern life.

In the design of a house or city, the planning concept presumes the designers ability to predict how the plan will be used. The final success now depends upon the degree to which the predictions come true. If the users do not use it in the way the planner predicted, the planner and his planning concept have failed.

Finally, if the modern ideology is to be successful, the planning alternatives it proposes must prove more durable and desirable than the traditions it seeks to replace. If this happens, then the modernists have proven their point and we need never again consider tradition a factor in architecture.

1.4.2 The Study

Chandigarh capital of the Punjab and Haria a Provinces of India was designed and planned by Le Corbusier, a modernist according to the modern Western Principles. It offered a unique test to test the validity of the modernists theory because of the circumstances of its planning and growth. It was built on a virgin site, so there were no pre-existing traditional forms to hinder the relatively pure application of modern architecture and planning concepts.

Construction began in 1952 and by 1971, all major elements of the first phase had been completed and the second phase had began. The city lies on a plain in view of the Himalayan foothills. The first phase consists of thirty sectors, each a half mile wide and three quarters long, divided by a grid of major traffic arteries. The building height was restricted to two and half stories.

Special sectors were zoned for industry and a university but the typical sector consists of housing, a local shopping centre and local schools, and other community buildings. The typical residential sector has two places where cars can enter on an east-west commercial street, and this street has smaller roads leading from it to the housing area.

The Central Business district (C.B.D.), sector 17, is central and contains the governmental buildings designed by Le Corbusier. It is located to the north near a man-made lake, which was made by damming a seasonal river that used to run through the site. The land on either side now called leisure valley is the cities major park.

For purposes of this study, we shall discuss the city under three main topics.

1. Open spaces
2. Neighbourhood unit
3. Housing.

Open Spaces: The demand for open spaces, an important requirement of the modern movement, played a decisive role in Chandigarh's planning and is responsible for its suburban character. There exists three different scales of open spaces in the city.

a. The city-wide park or leisure valley.
b. The major park that runs north-south through each residential sector.
c. The smaller open spaces around houses.

-- The leisure valley was planned to be a focal point of activity for the city's residents. This idea is familiar to a Westerner as exemplified in the large parks in most European or American cities. Yet, when compared to its Western counterparts, leisure valley is under-utilized. The problem arising have applied to

nearly all aspects of Chandigarh's physical planning. The designers made assumptions about how people were going to use the city without taking into account the traditional way of life.

- The green spaces within the sectors particularly around the shopping centres and offices are better appreciated. These spaces correspond to spaces which are used in traditional Indian towns and villages for small gatherings and card playing. However these spaces around the sector shopping centres are so large that they destroy the urban setting characteristic of other Indian cities. The great size also gives rise to unlimited uses. Originally, they were planned as buffers between commercial and residential areas, but often they are also illegally used by shopkeepers and used as warehouses or extra factory space.

- The green spaces around houses are most successful as they follow the traditional pattern most closely. Yet, they could have been more successful if the designers had realized the durability of tradition.

The traditional Indian urban residential street is narrow (4-5ft) with the house ranging from 4-5 storeys. The custom is for the women to sit in front of their houses, talking among themselves while doing the daily chores. In Chandigarh, the streets are 80 to 100 feet across. People still sit outside, but the central space (piazza) is a no-man's land.

Neighbourhood Unit : Twenty-five of the thirty sectors are residential and are based on the neighbourhood concept. Gropius defined it as areas small enough to serve as organisms for reactivating social intercourse. The theory behind this is that it will encourage community feeling as people within a sector all come from approximately the same economic class. In the U.S., parents sent their children to schools within their neighbourhoods. These same parents also were involved in Parent - Teachers - Associations. As such the school became a focus for the community. This didn't work in India as public schools do not form the basis of the educational system. Parents send their children to schools depending upon the family's social status, religious beliefs and/or economic status. Thus the elementary school is not the unders of the community.

Housing : The study involves the thirteen types of houses that were designed by or under the supervision of the original planners.

Generally, the richer or more westernized the resident, the more likely he was to be satisfied.

The floor plan of the house shown is simple: Entry into a living room and passage straight through past the kitchen on the left and two connected bedrooms on the right to a rear verandah. The W.C.,

is in a small room on the verandah, separated from the rest of the house, thus suiting the Indian desire for cleanliness.

On examination only two rooms are used entirely as planned - one bedroom and the verandah with the W.C. Privacy is a strong point in the Indian home. When a visitor enters, the reception room (drawing room) must be visually separated from the family areas.

In this house plan, the private areas are the kitchen, bedrooms, rear verandah, courtyard and bathroom. The occupants found the living room too open in relation to the private areas and as such shifted its functions to the front bedroom and boarded up the connecting door to the other bedroom. The guest is still brought in through the intended living room but once in the new one, a curtain is drawn and the family can continue its business. The intended living room functions as a bedroom/dinning room. The second bedroom ratains its original function while its closet is converted into the family alter. The kitchen maintains its function although cooking is done on the floor in the traditional way while the raised work tops are used for storage.

Summary : The vindication of the modern ideology must be its giving something that is recognizably 'better'. This must be more than only closed sewers and indoor plumbing. It must include improvement or at least maintenance of the quality of life - that elusive element made up of many intangibles that, in sum add up to human dignity.

The single most telling failure of Chandigarh is its "lack of Indianess". The spaces are too open, its roads too broad. The traditional dense Indian city is sliced up into thirty separate islands each too sparsely populated to have an urban atmosphere - The closeness and human contact that characterize Indian life is absent due to the bad planning.

1.5 Conclusion

In spite of protestations, the tenets of modernism persits. Architects continue to pursue 19th century ideals, guided by the same principles. Modernists continue to argue from fundamentally the same set of a priori, pseudo-ethical principles. They continue to impose their own ideals of beauty and social truth and seldom admit the possibility that theirs may not be the only way.

The problem is not in getting reliable information about other peoples values. Techniques for finding form-relevant social information exist but architects resist their application.

1.5.1 Architect's Sphere of Influence:

The architect has relatively clear control over only two areas.

1. Whether the building fits harmonously with its surroundings or conflicts with it.
2. Whether the building conflicts with or accommodates the way of life of the people who must use it.

Until recently, newly industrialized countries have tended to embrace Western culture as a sign of progress and grasped at almost anything Western with a hunger that was taken as proof of the wests cultural superiority. There are certainly important

reasons for people in traditional societies to desire change - better Medical care and increased food production. Surely, these improvements will be accompanied by other changes. But if traditional physical contexts most change to some degree because of modernization, the new physical arrangements should be as well adapted as possible to the traditional living patterns that they will accommodate.

Because of its phenomenal industrial growth since the second world war, Japan is often described as being one of the most 'Westernized' countries. Yet Japan's successful entree into the modern world was facilitated by the persistence of a thoroughly Japanese tradition that continues to distinguish its industry.

Modern architects have intentionally ignore the importance of the fact that the present and future are rooted in the past. Throughout history, traditions have been modified to fit new situations while retaining their original signal purpose.

1.6 The Future

As the value of tradition is rediscovered we will not just formulate another set of preconceived ideas, this time about the proper way to make a building fit in or the proper way to accommodate behavioural patterns. Instead of another ideology, we need something subtler and more flexible: another state of mind. We need to acknowledge, without fear of losing out individuality, that this value other than the architects own deserve first consideration. This new state of mind does not require that the architect suppress their creativity. Creativity knows no bounds and can, this be broadened in the refined exploration of the craft of architecture, encompassing such problems as how skillfully the designer can evoke the spirit of a place (modern or traditional) through mass, detail, texture and other tools of his visual craft.

By using what exists as a stepping stone for what is to come, the architect can reinforce rather than undermine the character of neighbourhoods and cities every time a building is added.

2. A TREATISE ON CONTEMPORARY JAPANESE ARCHITECTURE

2.1 Introduction : Bruno taut on Japanese Architecture

Japan is perhaps the only country where a tradition different from that of the west, and not naturalistic or primitive - as in latin America - but cultured and highly sophisticated, has been effected by western contribution and has developed in an original way, attaining results of internatinal importance though amid many difficulties. It is therefore important to consider how it was that this happened, and what were the exact relationships between modern Japanese architecture and the heritage of tradition.

Bruno Taut from 1933 spent some time in Japan and made a decisive contribution to the study of local tradition, distinguishing the short lived elements from the permanent ones, still capable of development. He stressed this distinction which is still basic for the development of Japanese architectural thought: real continuity with the past could not establish itself through images linked with incidental situations, but through methods which could be generalized by means of critical reflection. He has this to say.

> "Naturally I do not wish to contest that locally conditioned peculariries do not have a great influence on architecture, but these are things which can never be understood by a non Japanese, and which therefore remain sterile even for the further development of Japanese architecture. For what are they essentially? They are - this may be sacrilege to many Japanese - the tea houses with their rooms for the tea ceremony. Their beauty - often great is beyond question, and yet in spite of all its fineness it is in itself sterile for modern Japan. This is not architecture, but improvised lyricism so to speak. But lyricism does not, as in poetry, readily convey itself in wood, bamboo, shoji, mats, stucco etc. The old masters of the tea ceremony stressed the unique subjectivity of the pure beauty of this atmosphere. They declared that it would be lost in repitition and they would certainly pronounce all the elements of the tea house to be "cheap" : Entrances made of trees left in their natural state, stucco applied on round bamboo, and even the rustic fence, the irregular stones in the garden, and the garden itself with its thousands of immitations in hotels, restaurants, and private homes .....what was meant to be a unique expression of spiritual personalty of a restful character turned out to be petrified rules and dry academicism - not only in the architectural details but in the tea ceremony itself."

The Japanese concept of building differs from the Western one and as such Western concepts were absolutely foreign to the Japanese mentality. In fact there was not even a Japanese word equivalent to 'architecture' i.e one that referred to all buildings in so far as they had any artistic value. In traditional language there was the term Zoka - building of houses and

Fushin - collection of funds for the construction or reconstruction of temples. These words could not be generalized, since they were inseparable from their respective ritual modes of procedure.

Hence KENCHIKU was coined. Originally intended to indicate mainly the artistic value of a building but in popular speech, it has come to mean the totality of technical operations in the building field.

2.2 Kenzo Tange On The Subject Of Modern Architecture

> " .... modern architecture and Japanese traditional architecture have common characteristics - simplicity, standization, openess, spaciousness and lightness .... simplicity or standization menas sometimes the formalistic. Openess or lightness means sometimes weakness, yes weakness, for example, against weather and climate. Now lightness or openess or spaciousness in the physical, and phychological meaning cannot satisfy peoples' energy or desires. They want more eternal or more durable feeling. They do not want weakness or tentativeness, but this weak and tentative feeling that we have in our tradition, sometimes appears in the so-called modern architecture of the world. Architecture always should be a reflection or expression of social structure .... This structure should not be considered static, but dynamic - always advancing forward from the past to the future .... This advancing social structure has some kind of emergy inside otherwise it cannot move itself. I think this energy is hidden or sleeping in the people bodies and minds but they do not recognize this energy in themselves. So we have to

> give the image to the peoples' desires or energy. I myself, and other younger generations in our our country are striving to overcome our traditional weakness and so called modernisms by trying to create new spaces and forms more suitable to their energy. This energy may be called vitality."

Kenzo Tange's work marked a new phase of development in modern Architecture. The fact that the fundamentals for specific local asignments have to be worked out with available means was realized. Above all these, Kenzo is one of the best students of ancient Japanese architecture. In fact, this causes a lot of misunderstanding in the interpretation of his works. He has discussed the tse shrines and the villa Katsura with superb knowledge of the details, but it remain false to desert that his buildings reflect this knowledge. In fact he strongly devices such attributes.

At the CIAM conference of September 1959, the Italian architect Ernesto N. Rogers expressed the view that architecture must find its way back to life once more, and for him, that means to tradition. As examples he named the city hall in Tokyo and the prefecture building in Takamatsu, both designed by Kenzo. Kenzo replied.

> "In other words, that would mean that I am in the same situation as Rogers himself in the case of his Torre Velasco. I however do not wish to be conservative. I do not believe that regionalism is an expression of the visible idiom which has been applied in a specific region traditionally. Many regionalist proceed like this, but in my opinion, it is a mistake to assume that the mere fact of regional differences should dictate creative energy. I believe that regionalism can lead to a result if each region with its own contradictions and difficulties fixes creative standards in order to overcome the local tradition. I believe that tradition can be neither preserved nor converted into a creative impulse. Creative work is expressed in our times in a union of technology and humanity. The role of tradition is that of a catalyst, which furthers a chemical reaction, but is no longer detectable in the end result. Tradition can, to be sure, participate in a piece of creation, but it can no longer be creative itself.
>
> We Japanese architects, in our endeavours to resolve the problems facing modern Japan, have devoted a great deal of attention to the Japanese tradition and have in the end, arrived at the point which I have sought to elucidate for you. If however, there can be detected a trace of tradition in my works or in those of my generation, then our creative powers have not been at their best, then we are still in the throes of evolving our creativity. I want by all meams, my buildings to be free of the label traditional."

Here, Kenzo spoke out against the superficial conception of the traditional, which was still occassionally applied to his earlier works. To him, the creative continuation of the tradition, to which the study of old works can contribute is of more importance. Just as the creative architect of past times produced its works out of a precise under-

standing of the exigencies confronting it, the creative architect of today would have to discover solutions to the problems facing us in the present.

The social limits of the Japanese tradition are seen clearly by Kenzo. This appears in an essay bearing the title "Creation in Present Day Architecture and Japanese tradition.

> ".... only through a positive attitude of grappling with the poverty of Japan, in other words, through denying our traditional attitudes and further boldly promoting technique is it possible for us to advance along this road towards typification ...."

Kenzo is not concerned at all with some kind of approximation of so called proto-modern designs to some historic architectural tradition or another: He is always sharply aware of the temporal boundaries and allows himself to be fascinated solely by the immediate creative act. Therefore his work differs drastically from the styles that are seemingly derived from the tradition, which, often executed with many compromises having been made, can aspire merely to an approximation in the sense of specific formal arrangements Kenzo loves tradition and its architectural achievements, but never commits the romantic error of assuming that, temporal, limits do not count. He knows that for our present situation, solutions are needed which are distinct from all traditional architecture: He works out of the

undermonstrable insight that tradition survives only when it is created afresh at every moment of time. This is shown in his works since 1960. It is also theoretically formulated in his paper published in 1966 entitled "Function Structure, and symbol". Here he draws conclusions from 20th century architectural history and his own contributions, and arrives at extremely useful findings. The development from 1920 - 60 is subsumed by him under the designation of 'functionalism' which in his opinion is based on a static relation between function and spice. The period beyond 1960 on the other hand he regards as belonging to what can be called 'structurism' i.e. a further developed from of functionalis, space is now what we now see to be the basis of communication.

> "The process of formalizing the communicational activities and flows within spaces is what we mean by giving structure to architectural or urban spaces."

Also from his present works, he has this to say.

> "Although until now, we have abstractly called spaces a place to 'live or a' place to work we cannot prescribe a space from such a static pattern alone. The prescribing factor must be the mobility and flow of people and things and visual communication."

As a final stage in the attempt at a theoretical approximation to present-day reality, Kenzo seeks to define spaces as communications folds in a symbolic sense:

> "I venture to say we need a symbolic approach to architecture and urban spaces in order to secure humanity, human meaning and human value in architecture and urban space."

In his work since 1960, Kenzo has been trying to get down to the fundamental conditions of architecture and he is now in a position to formulate the problem clearly:

> "Can modern technology restore humanity? Can modern civilization find channel linking itself and a human being? Can modern architecture and urban space be again the place for building up a human character?"

His theoretical answer and that given by his architectural and town planning work are affirmative and for the reasons above he can be accounted one of the great personalties in the field of architecture in the second half of the 20th century.

2.3 Kisho Kurokawa And The Metabolist Group

Kisho first stepped into the international stage in 1960 at the age of 26 when along with other architects, he founded METABOLISM, an architectural movement with a philosophy of change and growth. The philosophy was invented almost as a propaganda for the World Design Conference held that year in Tokyo. The members had studied the politics of European avant-garde movements and were determined to fashion an 'ISM' which would complete with those in the west. This affair was sponsored by the Japanese Chamber of Commerce. At that time he had completed his undergraduate degree at Tokyo University and graduate work in architecture at the Tokyo University.

To date, we could say there have been four generations of architects in modern Japan. The first, ushered in by the Meiji restoration of 1867, responded to efforts to raise the curtain shrouding Japan by welcoming the architectural styles of the west. The second generation, while reacting to the proliferation of Baroque banks and rennaisance offices infused its buildings with traditional, highly nationalistic Japanese styles. These were then exported to Asia, but this chapter abruptly terminated with her defeat in 1945. The third generation were of the post war period and were characterized by the work of Le Corbusier. Most important were Kunio Mackawa and Kenzo Tange. The fourth generation to which Kisho belongs started in the late fifties and set out to synthesize the best of both worlds - the quint essense of Japanese cultural history and the more pragmatic functionally rational modern architecture.

Kisho has this to say on tradition vis-a-vis modern architecture.

> ".....Although I reject traditionalism, I attach great importance to the influence which the culture of one country may exert on another. It is my belief that the cultures of different countries will stand individually but together allied with technology, to provide the future language of architecture. That modern architecture appears diffuse is proof that the

> cultures of different regions each contribute to the language of modern architecture, and as a result modern architecture will probably come to speak not with a lingua franca but with a complex and many faceted language."

METABOLISM 1960 - Proposals for a new Urbanism

This was the theme used by the metabolist group during the 1960 World Design Conference in Japan. They went on with a declaration and definition of what they meant by metabolism.

> 'we regard human society as a vital process, a continous development from a tom to Nebula. The reason why we use the biological word metabolism is that we believe design and technology should denote human vitality. We do not believe that metabolism indicates only acceptance of a natural historial process, but we are trying to encourage the active metabolic development of our society through our proposals.'

DEFINITIONS

Metabolism is thus a philosophy which values the presentation of relationships among architecture, society and nature while constantly changing with the passage of time. The basic kinetic form in which space develops is metabolism and its process is expressed as an increasing entropy.

- Metabolism doesn't assume any system of thought previously established and built up. It rejects all primary conceptual definition. Its effectiveness and the attention given it depend on its relevance to the problems facing contemporary architecture and planning.

- Metabolism is neither a form or a style. Rather it is an attempt to create a character for Japanese design responding to their particular social and cultural history.

The neologism, refered to as metabolism thus became an extended biological analosy of orthodox modern architecture. It compared buildings and cities to an energy process found in all of life: The cycles of change, the constant renewal and destruction of organic tissue. In many ways, it was just the ancient Taoist philosophy of cosmic change and eternal growth which makes for endless variations on the same theme.

One can see here the direct connection of metabolist cycles of change with Buddhist reincarnation, prompting the pun that metabolism should really be called Metabuddhism. Kisho contrasts it in many ways with the static notions of the west.

"We have in Japan an aesthetic of death, whereas you have an aesthetic of eternity (in the west). The Tse shrines are rebuilt every 20 years in the same form, or spirit, wheras you try to preserve the actual Greek Temple, the original material as if it could last for eternity."

THE PHILOSOPHY OF METABOLISM

To understand the philosophy of the metabolist group, it is necessary to give an outline of pertinent Japanese social history. This has greatly influenced this philosophy and would be discussed under five major headings.

- populations trends
- mobility
- technological orientation of modernization
- reliance on wood
- Buddhist culture.

POPULATION TRENDS - In 1721, at the height of the Tokugawa Shogunate (1615-1867), the population was 31 million. For the next century and a half, the pupolation varied between 31-33 million, with modernization during the Meiji Restoration in 1867, a sharp increase started. Between 1875 and 1975 it trippled to the present level of 105million. According to a projection made by the Institute of social Engineering the population will be 135 million by 2,000.

Modernization of the environment, advances in medical sciences, improvements in health and medicare systems, all supported and fostered by growth and development of the economy are so lengthening the average life span that soon Japan will probably have the largest elderly population, relative to the total population of any country in the world.

The speed of population growth has made it impossible to satisfy housing demands through the ordinary construction methods of the past. As such, the residential environment has deteriorated. The need to provide an annual minimum of 1.6million dwellings at minimal cost has become a passing social issue in Japan. Therefore there is a strong demand for the industrialization of residential buildings which has become a vital subject to the architect. His job is not to propose ideal models for society but to devise spatial equipment that the citizens themselves can operate.

MOBILITY - Since antiquity, the capital of Japan has been moved on a number of occasions for politial or religious reasons. Also, the clan lords under the Tokugawa Shogunate were made to spend alternate years in the capital city. This involved a lot of travelling. Another example of the readiness of the

Japanese to move about is the long established custom for agricultural workers to migrate to cities to seek employment for periods when farm labour is not required in rural areas.

Religious pilgrimages also occupy an important position in the way the citizens spend their leisure. This has led to new friendships, study and a cultural exchange among various religious and even to the formation of a kind of sex industry.

Today, two types of mobility are still features of Japanese life. First, 10% of the population changes its place of residence each year. Second mobility is of great importance in the faily lives of wage earners, and students who must travel from home and back, twice daily.

This readiness to move contrasts with the more settled system of the west, where life is focused on the home, extending out to a settled community. Hence the creation of HOMO MOVENS. This refers to people living in a time community, people of the future who wouldn't care much about owning possesions and stately homes, but will prefer to acquire the new status symbols of free movement and extensive credit.

The fluidity of the Japanese society stems from its homogenity and its history of centralized authority. The pyramidal power structure discouraged people from living in fixed places within regions.

TECHNOLOGICAL ORIENTATION AND MODERNIZATION - This is illustrated by the Meiji Restoration, when the Shogun, master of Japan for centuries was removed from power and the emperor took his place. These changes arose from a recognition of the need to alter the political system in order to open Japan to Western influences and in this way to introduce western technology and promote the industrialization of the nation.

The people who weilded power in the new government were eager to adopt western technology but without its accompanying philosophical rationalism or its social system; they intended to incorporate bare technology into the old Japanese tradition.

Since 1945, the technology that has been introduced into and developed by Japan has been immense. Industries like ship building, steel production, automobile manufacture e.t.c. have grown and developed as to acquire autonomous power sufficient to affect the entire nation.

The intention to apply technology to building is not merely to apply industrialization and prefabrication to mass-produced spaces at low cost. It is intended to restore to architectural spaces something of the characteristics and feelings of the individual human being.

Technology will continue to be important to Japan for other reasons. One of this is the dependence on imports for more than 30% of her food and more than 95% of her energy. As such Japan has no choice but to put the human brain, and technology to full use and to export the product thus obtained.

Geography accounts for yet another aspect of the Japanese reliance on technology. Japan consists of 37 million hectares of land, of which 20% is flat, the remaining area is mountainous. Of the flat area, 6 million hectares is devoted to agriculture and 1.1 million hectares to rivers, lakes a marsh. The area available for human habitation is only 2 million hectares. This is the area that a projected 135 million people will live by 2,000.

RELIANCE ON WOOD - Japan has a history that is rooted in the use of wood as the main building material. Since wood is temporary, the physical form becomes only the intermediary conveying the poetic essence of nature. The foremost symbol of the Japanese wooden building is the Ise shrine. The buildings are prototypes and for over a thousand years, their basic forms have been preserved unaltered. Rather, they are continually replaced with exact replicas every other decade.

This Japanese philosophy of continuity springs from the undercurrent of Buddhist thought pervading their culture.

BUDDHIST CULTURE - This was introduced into Japan from the Asian continent in the 6th century and by the 12th century, a number of distinctly Japanese Buddhist schools were established.

As such Buddhism has produced a consistent, profound, spiritual and philosophical basis to Japanese culture. It is impossible to discuss the essence of Japanese architecture, music, drama etc without referring to Buddhist philosophy.

DEVELOPMENT OF A CONCEPT

After an indepth study of the social history of the Japanese, Kisho proceeded to derive two basic concepts or ideologies which he has tried to develop. Inspiration for these concepts originated from his study of the Katsura Datached Palace in Kyoto. Also, the Japanese philosophy of continuity among achitecture, society and nature helped in the development of the concepts.

First is the EN-space (Japanese Engawa), which is an empty space viewed positively. Translated into built form, it becomes a semipublic space, circumventing the schizophrenic durality, or inside/outside of the west. Traditionally, these spaces are found in Japanese streets merge nature outside with private living accommodation within. A good example of a project in which he successfully utilized this concept is in the head office for the Fukuoka Bank in 1975 later this

enspace concept was broadened into a concept for architecture of the street. This took cognizance of the fact that traditionally, the Japanese never had plazas or squares. Activity took place in the streets. This included processions e.t.c.

Second is the Jiga. This is the Buddhist word for identity and self. He used this concept to explain, his capsule architecture notable along these were the Takara Beautillion and the Nakagin Capsule toner.

2.4 Conclusion

If Tange represented those architects who introduced Western architecture with western technology to Japan, then Kisho Kurokawa represents the new generation of Japanese architect that is trying to reintroduce a Japanese architecture with western technology. This is not to say that Tange and others have not drawn on Japanese tradition. The point is that they did not use the Japanese vocabulary in the composition of spaces.

Kurokawa thinks Buddhist. Therefore his philosophy is highly contradictory when viewed with western logic, orderliness and priority. He has written seventeen books so far on topics ranging from futurology, urban design, metabolism e.t.c. One theme is repeated, that is a concept of incompleteness, growth

and change with intuitive wholeness, not a theme of academic precision or logic. His philosophy is in direct contrast to western ideas of determinism and inevitability. The concept of metabolism is nothing but a sense of impermanence to Kurokawa, what makes this up is a multiple of selves - jiga which are linked by means of accidental encountering called En. Translated into English, Jiga means will, self, cell, living component; He calls it capsule. En means media where encountering takes place. - hence street architecture (Kairo). The world is thus a juxtaposition of free wills, coexisting sometimes in harmony and sometimes in conflict through En.

Kurokawa is more of a philosopher than an artist. He is unconcerned with details in his buildings. Consequently, his buildings, seem atimes unintelligible, uneven in detail and discordant in proportion.

It is important to note that the new breed of leading Japanese architects is predisposed to facing the changing world with a broad minded, all embracing attitude, which may not allow them to control the basis which can then shape their physical environment. The champion of these metabolists architects in contemporary Japan is Kisho Kurokawa.

3. SYNTHARC: Proposals For A Contemporary Nigerian Architecture

3.1 Introduction - Beyond Tradition

PURPOSE: Search for a syntax for contemporary Nigerian Architecture.

WHY: The need for a rational approach to urbanism in Nigeria.

DEFINITION: Contemporary architecture refers to present day architecture. The 'Nigerian' qualifies if as it relates to our own cultural context.

The mere mention of Nigerian architecture causes a stir in certain academic circles. The general consensus is that there is nothing so called. This is rather unfortunate as the author sees this as a defeatist attitude.

Various attempts at 'Nigerian architecture' have been made (hybridisation, form synthesis, use of local building materials or wall decorations (motiffs), using tradition as the main vehicle for the propagation.

Quoting Kenzo Tange:

> 'Creative work is expressed in our time in a union of technology and humanity. The role of tradition is that of a catalyst, which furthers a chemical reaction, but is no longer detectable in the end result. Tradition can to be sure participate in a piece of creation, but it can no longer be creative itself.'

In other words, tradition should be seen as a means to an end but not an end in itself. Within the Nigerian context, which involves a highly heterogenous

society, one is presented with a highly complex case. Nigeria, is a highly diversified country; there is nothing like Nigerian tradition. The country is basically divided into three major tribes - Hausa, Yoruba and Ibo. Numerous minority tribes also exist in the middle belt and Delta regions. Even among these three major tribes there exists other sub-divisions. As such, it is better to refer to Yoruba, Ibo or Hausa, tradition than to generalize them no Nigerian tradition.

Tradition as a sole vehicle for nationalization of our architecture also brings with it tribal sentiments. Rather than unifying this causes further diversification. No Yoruba or Ibo man would accept a domed or arched structure as being Nigerian architecture, since this features are associated with the Islamic architecture of the north.

On the subject of local building materials, one finds out that at least, their exists a unifying factor. All around the country, mud, whether reinforced with stones,,twings, bamboo or Azara is being used as the basic building material. It is hand moulded and used either wet or sundried. One should not however make the 'romantic error' that limits (Structural or otherwise) have not being reached. Extensive research has gone and is still going into local materials and the best use one can find for them is as infill (non load bearing) for framed construction. The unattractive bonding properties of mud and cement mortar plaster even renders its use as infill unattractive.

Raw materials necessary for manufacture of cement and steel exist in this country and it is just a matter of time and we won't have to import this materials again.

Having gone so far, we can now conclude that for us to evolve a syntax for contemporary Nigerian architecture we have to go beyond tradition. From the words of Tange, earlier reffered to, tradition should only be allowed to work as a catalyst. Tradition cannot be totally done away with as 'a country without tradition is a country without identity'.

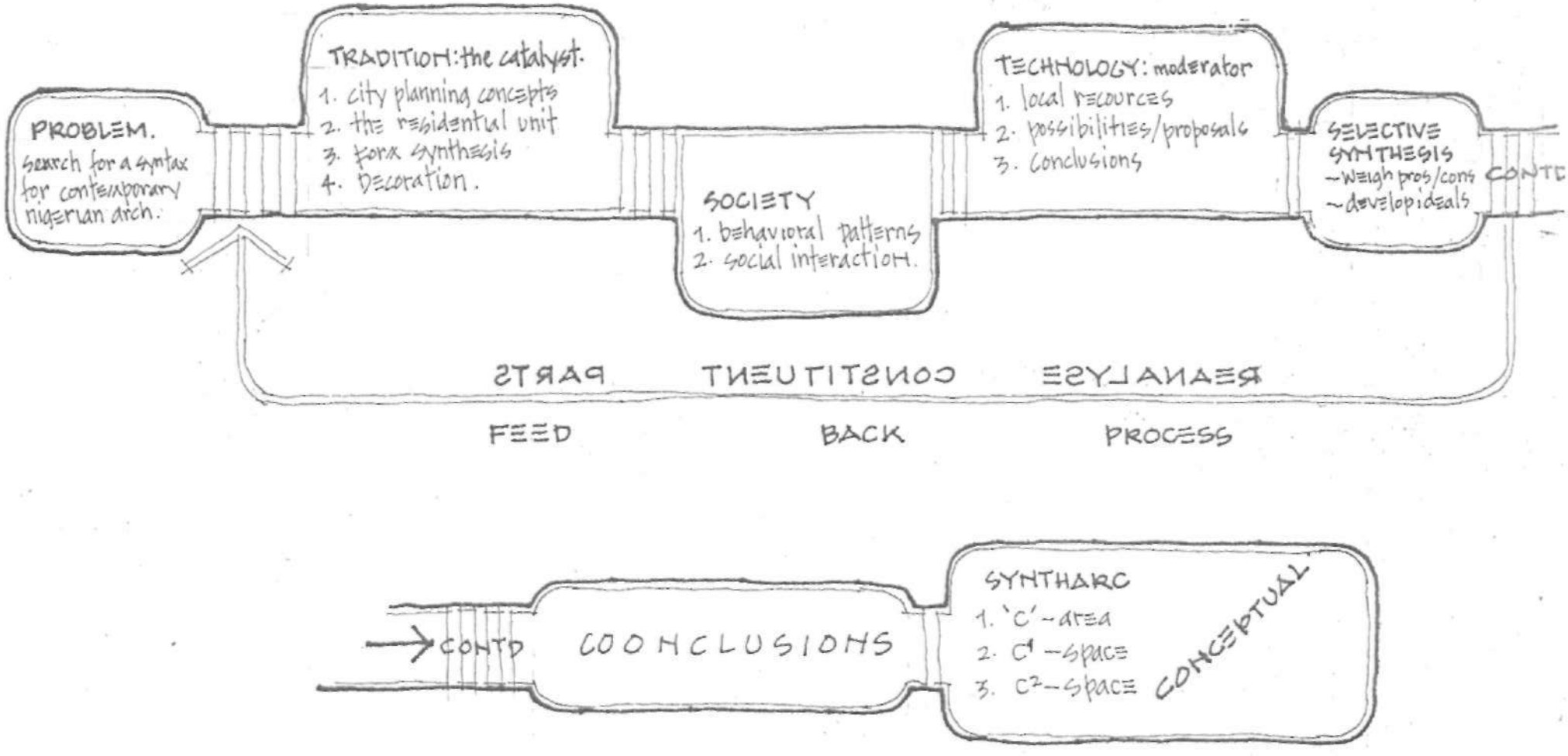
Beyond tradition, there is humanity as expressed by the society and technological advances.

The relationship between architecture and the sociology has always been stressed but no one seems to be laying much emphasis on it. However a study of the society itself would go a long way in acheiving an end. Quoting from Tange again.

> "Architecture always, should be a reflection or expression of social structure.... This structure should not be considered static, but dynamic - always advancing forward from the past to the future..."

In the proposal, technology has been used as a moderator. The author sees no point in proposing an architecture which would involve the importation of manpower. As such building materials are materials within our reach. However the state of the country's technology should not be seen as static.

This proposal can now be seen in a different view. We are now not only concerned with our traditional or vernacular architecture. Beyond this we have found more kind-



SYNTHARC is SYNTHESIS+ARCHITECTURE.

fig 3 SYNTHARC SCHEMATIC.

ing and rational factors with which we can propagate 'our' architecture. SYNTHARC aspires to work out a syntax which would involves a selective synthesis of three constitents. First is our traditional architecture, second is the society and third is technology. Using this SYNTHARC intends to evolve a future architecture which should stand the test of time. It is not necessarily true that this philosophy codified and fed into a computer for the sake of developing an organizational and technological basis for environmental design will then inevitably guide the architectural ideology of tommorrow. That would only lead to a prototype.

The evolusion would involve weighing pros and cons and then putting them side by side with such basic factors as would result from a detailed analysis. SYNTHARC would involve a sort of 'selective synthesis' to arrive at the desired results.

Concluding, the author will now refer to the words of Kisho Kurokawa fourth generation - Japanese Architect and founder of the metabolist group who have given Japan her own contemporary architecture by using western technology in a Japanese sociocultural context.

> " ..... Although I reject traditionalism, I attach great importance to the influence which the culture of one region may exert on another. It is my belief that the cultures of different regions will stand individually but together allied with technology, to provide the future language of architecture. That modern architecture appears diffuse, is proof that the cultures of different regions each contribute to the language of modern architecture, and as a result, modern architect will probably come to speak not with a lingua franca but with a completely and many faceted language."

3.2 Tradition (The Catalyst)

3.2.1 Introduction : The use of tradition as a catalyst in the evolusion of SYUTHARC is borne out of the fact that our architectural roots lie within our indeginous or vernacular architecture. Due to the diversity in socio-cultural and climatic conditions all over the country, certain architectural styles have evolved to satisfy these two basic conditions.The authors belief is thatthese stypes could further developed and synthesized to produce a national architectural character.

Nigeria being composed of numerous tribes of which twenty-one are considered to be of greatest importance, it would be very difficult if one had to study the architecture of all this tribes. Moreover most of the larger tribes have more or less influenced that smaller or minority ones. Therefore to lessen this burden the author has divided the country into three basic tribes. These are the Hausa, the Yoruba and the Ibos.

In order to facilitate a thorough study, traditional architecture has been broken into four parts. These parts are city planning concepts, the spacial configuration with the traditional residential unit, Form Synthesis and Decoration.

3.2.2 City Planning:

<u>KANO CITY</u> - The ancient city (birni) of Kano is chosen as a case study as it represents the typical Hausa city. Normally the city was inhabited by the

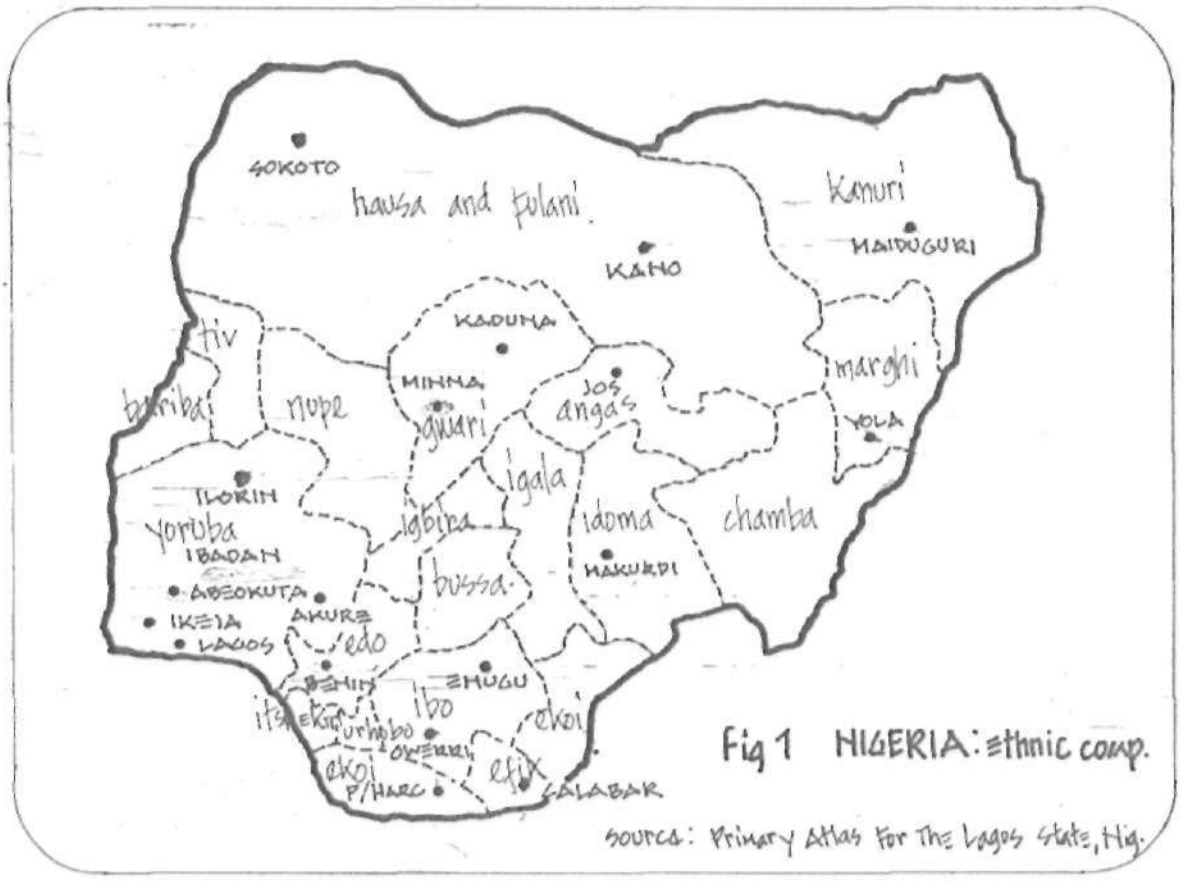


Fig 1 NIGERIA: Ethnic comp.

source: Primary Atlas for the Lagos State, Nig.

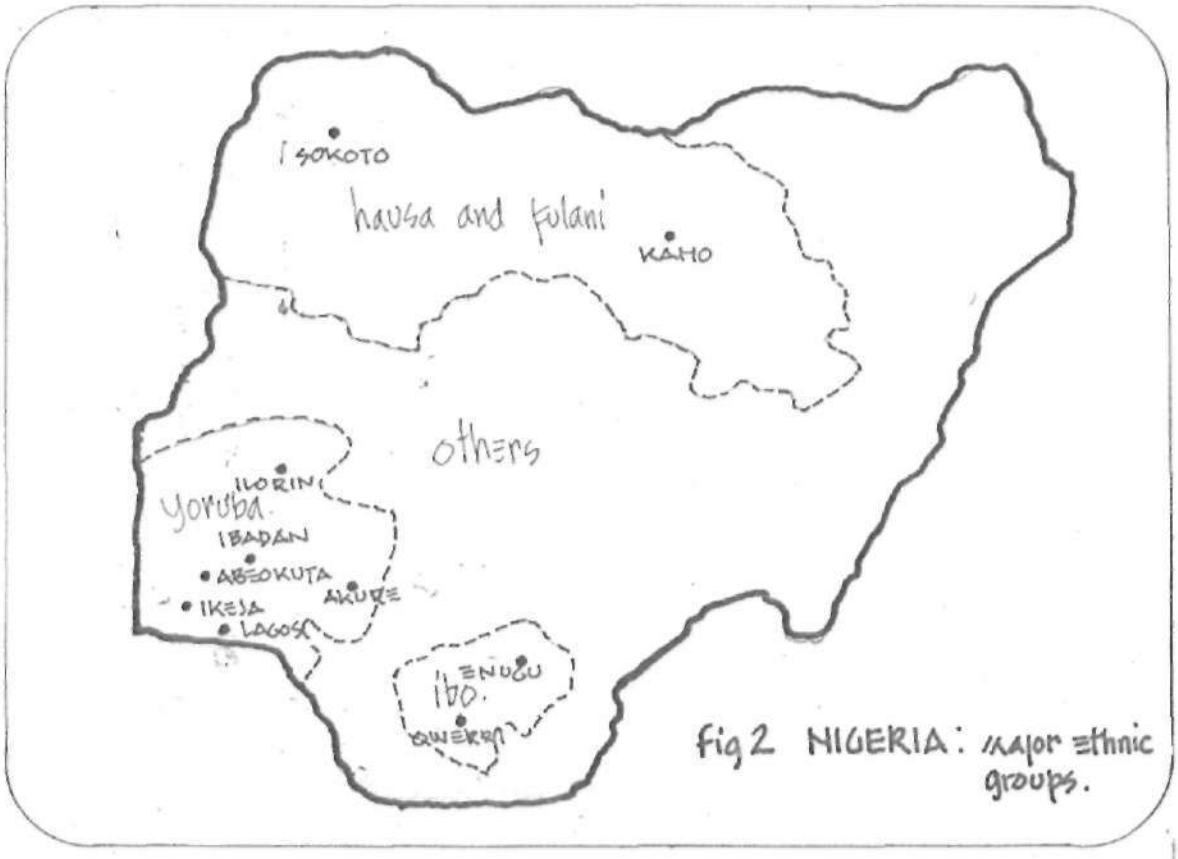


Fig 2 NIGERIA: Major Ethnic groups.

moslem citizenry and a high degree of urbanization was achieved. The inhabited quaters of the city was densely populated. Large areas within the city walls were also uninhabited and served as hiding places in times of war. This spaces also took accommodated any expansion and were used a farmland. The focus of the city was the emirs palace which was situated at the foot of the Dala hills which served as a defense strategy. From this 'centre' roads radiated out towards the city gates (kofar). This centre also accommodated the market place and the Friday mosque.

The birni (walled city) was divided into administrative wards (unguwar) each under a leadership (mai-unguwa). The wards were each tied up by ethnicity or myth of origin. In Kano their existed 126 wards. Each ward is further divided into 4 districts (Fuskoki) for administrative convenience.

The planning concept probably evolved out of the institution of the Emir as social, religious and political leader of the people. The need for his protection and defence accentuated the need to build around his residence.

OWO TOWN - represents the typical Yoruba town. Like in the Hausa cities, the palace (Afin) was almost like a town within a town. The palace was walled round to include the public square, market and a large area of forest thus covering about 44Ha and about 8% of the land within the walls.

Roads radiated from this 'centre' to the town walls. The palace walls were immediately surrounded by the houses of the important chiefs and elders and then by the citizenry.

Large uninhabited areas also existed within the walls. This concept of planning like in the Hausa example was aided by the institution of the Oba.

IBO VILLAGE - OKO, SOUTHERN NIG. The Ibos are a simple people in that they speak a number of related dialects, occupy a continous tract of territory and have many features of social structure and culture in common. Being highly fragmented, they were not formally politically unified. No large kingdoms comparable to the Hausa and Yoruba empires ever existed and political authority was widely dispersed among a large number of small territorial groups.

The typical Ibo settlement pattern consists of house clusters of homesteads irregularly scattered along cleared paths radiating from a central meeting place of the village which contains the shrines and grooves of the local earth deity and also serves as the market. However many of the Cross River Ibos among whom there is a tradition of compact settlement are divergent in this respect.

Larger communities often consisted of two or more units each with its own meeting place and radiating paths (ama). The land and home steads along a path are usually those of the men of one patrilineage consisting, in the case of one settlement by a small unit of male siblings and their children or in larger settlements of several such groups related patrilinearly.

Conclusion - After a careful study of the three examples, one discovers that there exists a similarity between Kano city and Owo town. The city walls were approached by

roads which radiated from the traditional rulers palace. This palaces were then surrounded by the citizenry. Although the Ibos never developed a strong royal institution, the small 'homesteads' or villages were grouped around a central meeting place. This could be compared to the other two examples.

One sees that all this cities or towns were planned around or core which accommodated a public facility be it the Obas or Emirs palace, market place or place of assembly.

3.2.3 Spatial Configuration

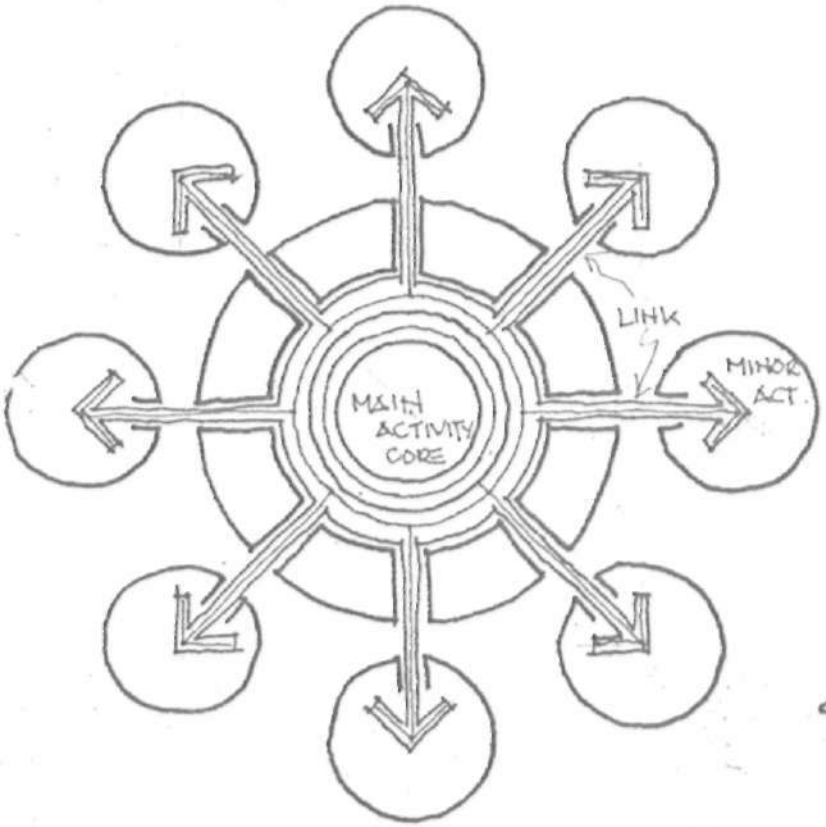
Traditional architecture is epitomized in the residential units and as such it has been chosen to study the arrangement of spaces in the traditional context.

The Hausa Compound (Gida)

Due to the importance attached to visual privacy, a compound is normally surrounded by a high wall (katanga) or by grass matting (Zana) in the rural areas. The wall thus served as a physical boundary for the compound.

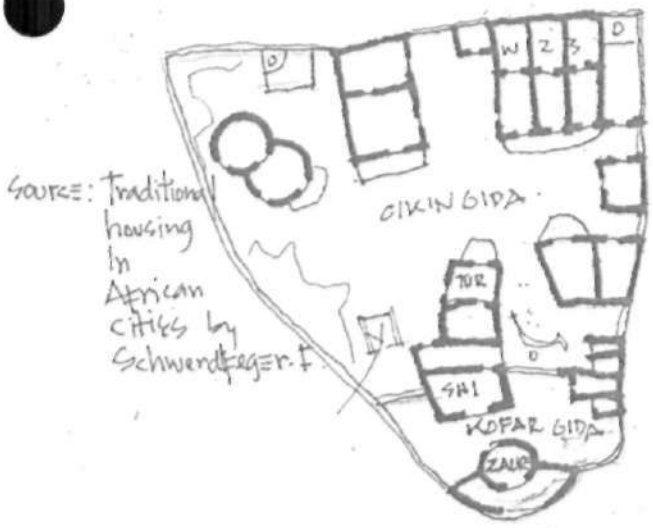
Sketch plan C is the conception of an ideal house or compound and is used to illustrate the arrangement of spaces within the compound.

Islamic influence and the practice of purdah have influenced the design of the Hausa compound. The women are walled off from public view and kept in the most private parts of the compound. A strict hierarchy of privacy is observed in space arrangement from outside to the innermost domain.



CONCEPTUAL!

fig 7 CORE CONCEPT. radial juxtaposition of minor activities around a core.



SOURCE: Traditional housing in African cities by Schwerdtfeger. F.



SOURCE: BETWEEN MYTH AND REALITY by Smd H.T.

fig 8 HAUSA COMPOUNDS (GIDA).

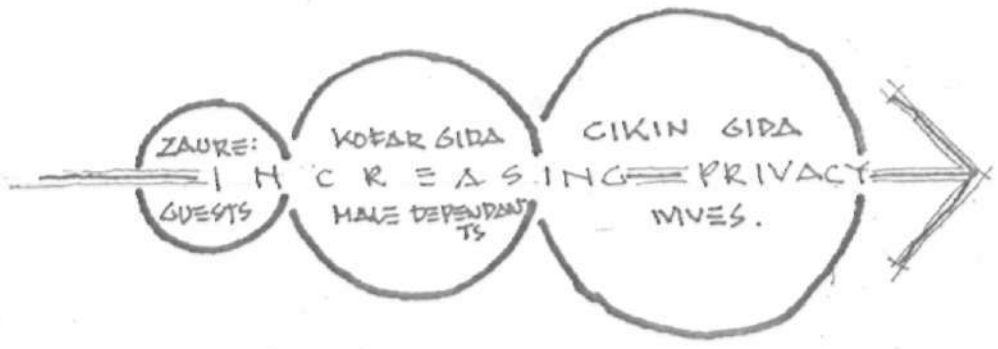


fig 11 HIERARCHY OF PRIVACY.

A typical compound is divided into three sections (sashes) which are partitioned off by walls or by matting. These are the semi public domain (sashen kofar gida), the sashen maigida and the sashen Mata. Entrance is through a gate (kofa) into the entrance hall (zaure). A large open space in front of the zaure serves to accommodate guests for a ceremony.

The Zaure serves as a place for the Maigida to receive his guests and transact his business. It is also the point of transition between the outer and the inner side of the compound (cikin gida).

Through the zaure is the smaller hall (dakin ganawa) where two or more people can retreat to confer. This hall opens into seni private courtyard (the sashen kofar gida). In certain compounds, a side entrance that avoids the zaure open into this courtyard.

The sashen maigida occupies a strategic location between the kofar gida of the male dependants (who reside in the sashen kofar gida until they marry) and the cikin gida of the female dependants. (sashen mata).

Entrance into the innermost chambers is through the shigifa which is usually attached to the maigidas private space (turaka).

The sashen mata is the apex of the hierarchy of privacy. All females dependants and young males below puberty live there. In big compounds, each wife has a bedroom, a sitting room and a latrine. The kitcehn is usually shared by all wives. In the courtyard one may find a fowl pen, granary, well or water tap.

The size of the compound varies. A gida may be as small as 50 square metres or as large as 500-600 square metres.

THE YORUBA COMPOUND (AGBO ILE)

This literllay translated to "flock of houses which literarilly refers to the cluster concept utilized in its design. The house form has resulted and is explained in terms of the sociocultural factors involved and the major elements of climate (rain and sunshine).

The compound is composed of several units each one devoting a family within the same patrilineal descent. The units are rectangular mud structures of adjoining room all facing inwards unto a verandah which in town surrounds a courtyard. The compound (agbo ile) housed three groups of people.

- Omo ile (children of the house, male and unmarried females)
- aya ile (wives of male members)
- alejo (non linage members)

The head of the linage (bale) had his own quarters in a strategic location which commanded a good view from the main entrance into the compound. His quarters was adjacent to a courtyard where among other functions he had to perform for the family, intra family disputes were settled and important decisions which concerned the whole family are taken. The location of the bale's apartment relative to the main gate is due to his role as custodian of the lineage.

Each room (which shared a common wall with adjacent rooms) opens into a verandah which runs throughout the

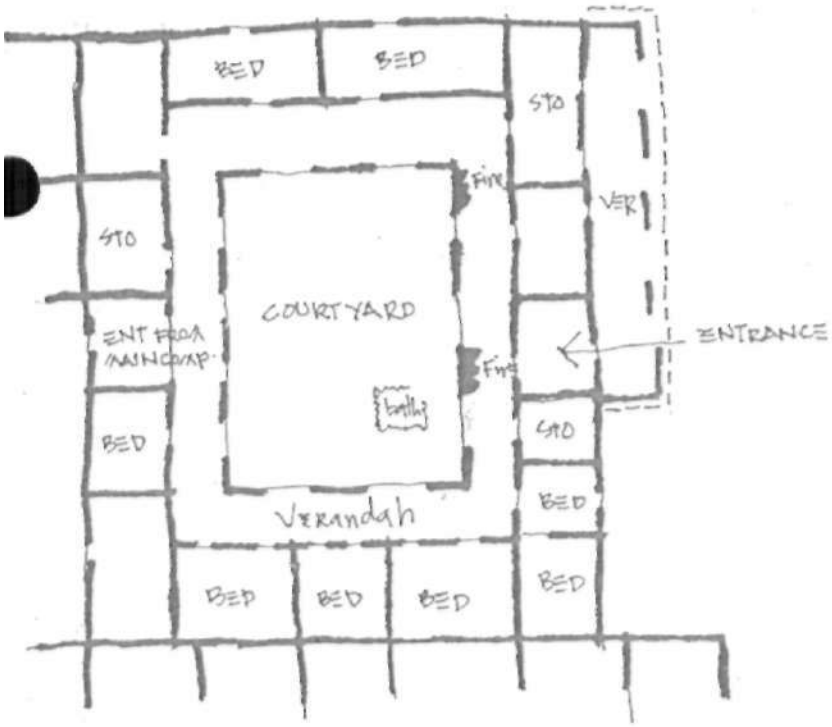


fig 9: YORUBA COMPOUND (AGBOILE)

source: traditional african cities by SCHWERDTFEGER F.W.

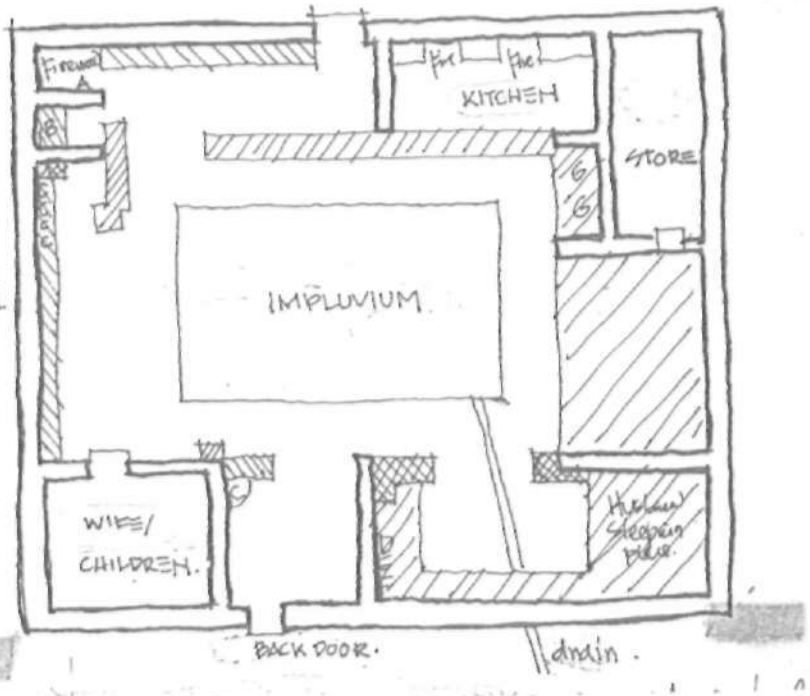


fig 10: IKA-IBO HOUSE

source: african traditional architecture. SUSAN DEMYER

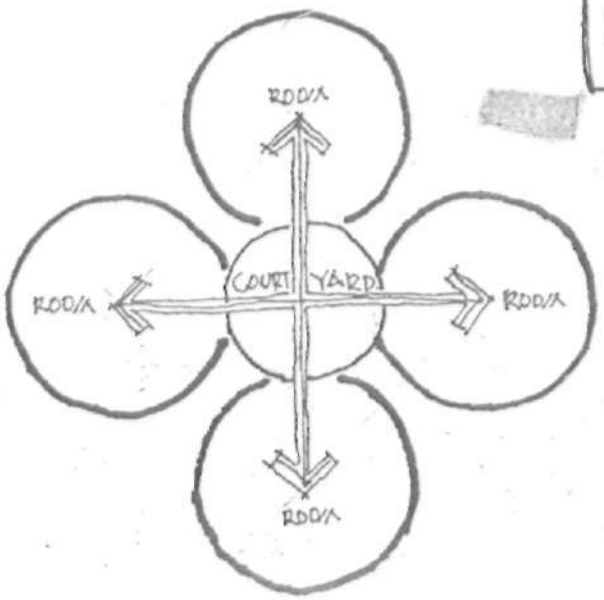


Fig 12: THE COURTYARD STYLE

building on the inner side of the compound. The verandah was a multifunctional unit and could be likened to the modern sitting room. Guests are received their and it served as a place for social interaction among members of the lineage. Eating, drinking, cooking e.t.c. took place there. Handicrafts, were also carried out on the verandah. A such the verandah was a semiprivate/public space.

The rooms were the apex of the privacy hierarchy. They served mainly as retreats for sleeping at night or lying down in sickness by members of the lineage. The rooms had no windows and illumination was by oil lamps. Some have circular windows (about 9" D) which were stuffed with cloth. This was to accentuate the desired privacy. The windows were not considered necessary because of the thick mud walls and tatched ceilings which kept interior cool.

The roofs are saddle shaped (tatched) with a side slanting outwards away from the courtyard and the other towards the courtyard. This is referred to as the impluvial style.

The courtyard which served as a spare varied in size from compound to compound and it served as space for social interaction and extension of services on the verandah. Animals were also kept their.

The Ibo Compound

The Ibo compound has grown out of the basic requirement of the family. These requirements were simple and similar, all being agricultural societies. Basically they

all needed a place for each member to sleep, a place for cooking, places for food storage and somewhere to protect animals at night, a place to eat and sit during the daytime.

The home stead normally consisted or different rooms planned around a central impluvium (abbreviated courtyard) which was used for collecting water from the inward sloping roofs. A mud wall separated the homestead from its neighbours. Roof is of tatch, palm leaves or grass and the floor is of beaten mud.

The Ibo compound shows definite Bini influnce due to the presence of the impluvium style which is more popular with the Binis. The Binis have on the other hand being influenced by the Yorubas. As such the courtyad still maintains its social basis and serves the same functions.

3.2.4 Form Synthesis

All traditional forms (on plan) reduce to the circle and the square. These are two of the three basic shapes (the third being the triangle) and have to be studied in detail to appreciate their effects. Since one would be restricted if only these shapes are used, various transformations involving them are also included.

The Basic Forms (Primary Shapes)

The circle is a centralized, introverted figure normally stable and self centering. A circle in the centre of a field reinforces its natural centrality. Associating it with straight or angular forms or placing an element along its circumference, induces it with apparent rotary motion.

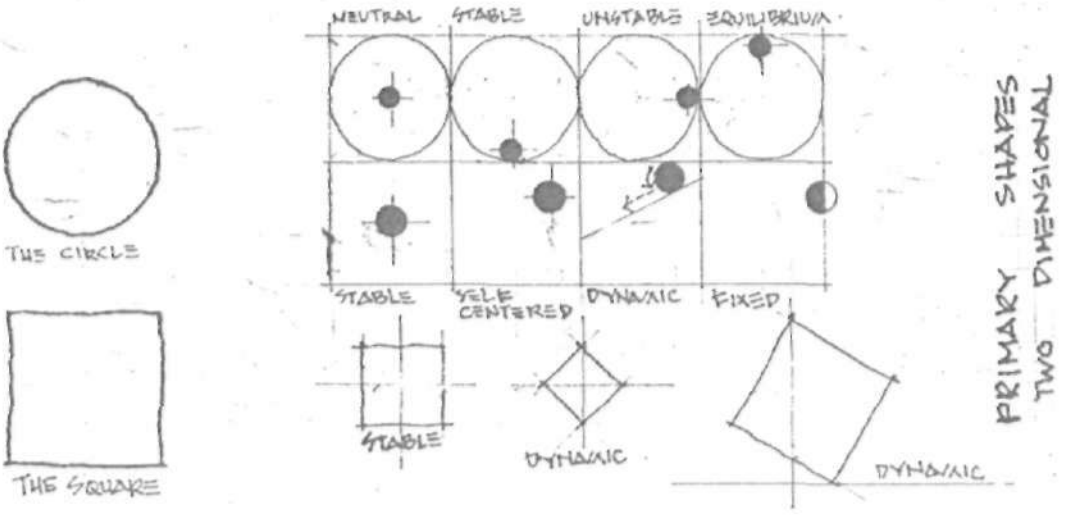


fig 13: BASIC TRADITIONAL FORMS - primary shapes.

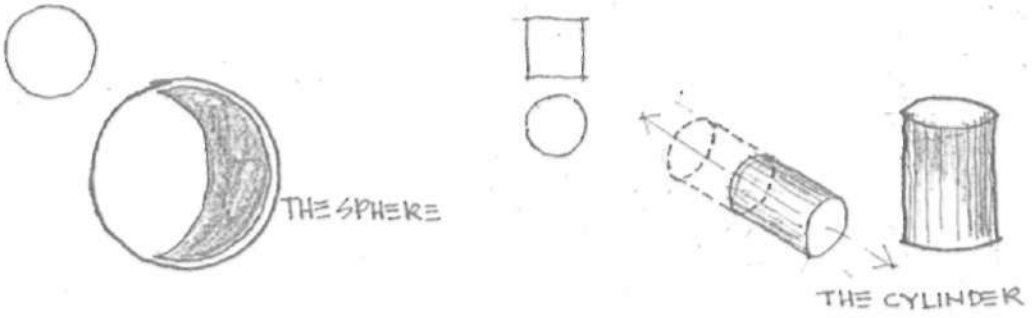
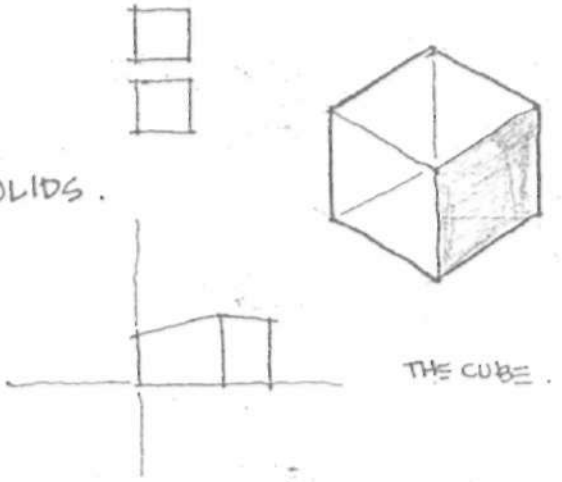


fig 14: PLATONIC SOLIDS.



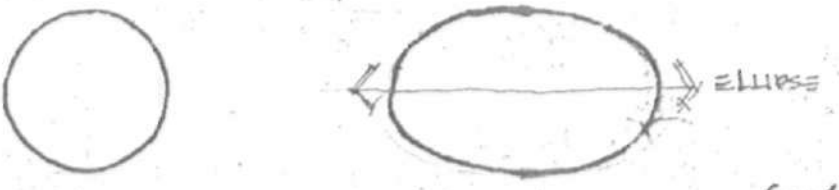
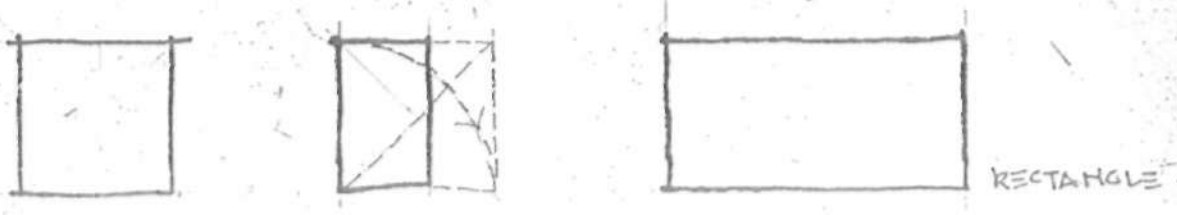


fig 15 TRANSFORMATIONS.



The square represents the pure and the rational. It is a static and neutral figure having no preferred direction. All other rectangles are variations, deviations from the norms by the addition of height or width. The square is stable when resting on one of its sides and dynamic when standing on one corner.

THEIR VISUAL PROPERTIES

This refers to the nature of shapes which affect the way we see them. This visual properties are in turn affected by the conditions under which we view them. These include perspective, distance lighting and visual field.

These visual properties are:

- Shape: This is the principal identifying characteristic of form; shape results from the specific configuration of a forms surface and edges.
- Size: The real dimensions of form; while this determines the proportions, its scale is determined by its size relative to other forms in its context .
- Colour: The hue, intensity and tonal value of a form's surface; colour is the attribute that most clearly distinguishes a form from its environment. It also affects the visual weight.
- Texture: The surface characteristics of a form - it affects both the tactale and light-reflective qualities of a forms surface.
- Position: A forms location relative to its environment or visual field.

- Orientation: A forms position relative to the ground plane, compass points, or to the viewer.

- Visual Inertia: The degree of concentration and stability of a form; it depends on its geometry as well as orientation.

PLATONIC SOLIDS

These result from the extension or rotation of the primary shapes to generate volumes whose forms are district, regular and easily recognizable. Circles generate spheres and cylinders while squares generate cubes.

- The Sphere: Is a centralized and highly concentrated form. It is self cartering and normally stable in its environment. It can be inclined towards a rotary motion when placed on a sloping plane. It retains its circular shape from any view paint.

- The Cylinder: Is centralized about the axis defined by the centres of the circular faces. It can be extended easily along this axis.

- The Cube: Is a prismatic form that has six square faces of equal size and twelve edges of equal length. The cube lacks apparent motion or direction. Even though its angular profile is affected by our view point, the cube remains a highly recognisable form.

TRANSFORMATION OF FORM

Possibilities exists for transforming the platomic solids into various forms. This variations are generated by three ways.

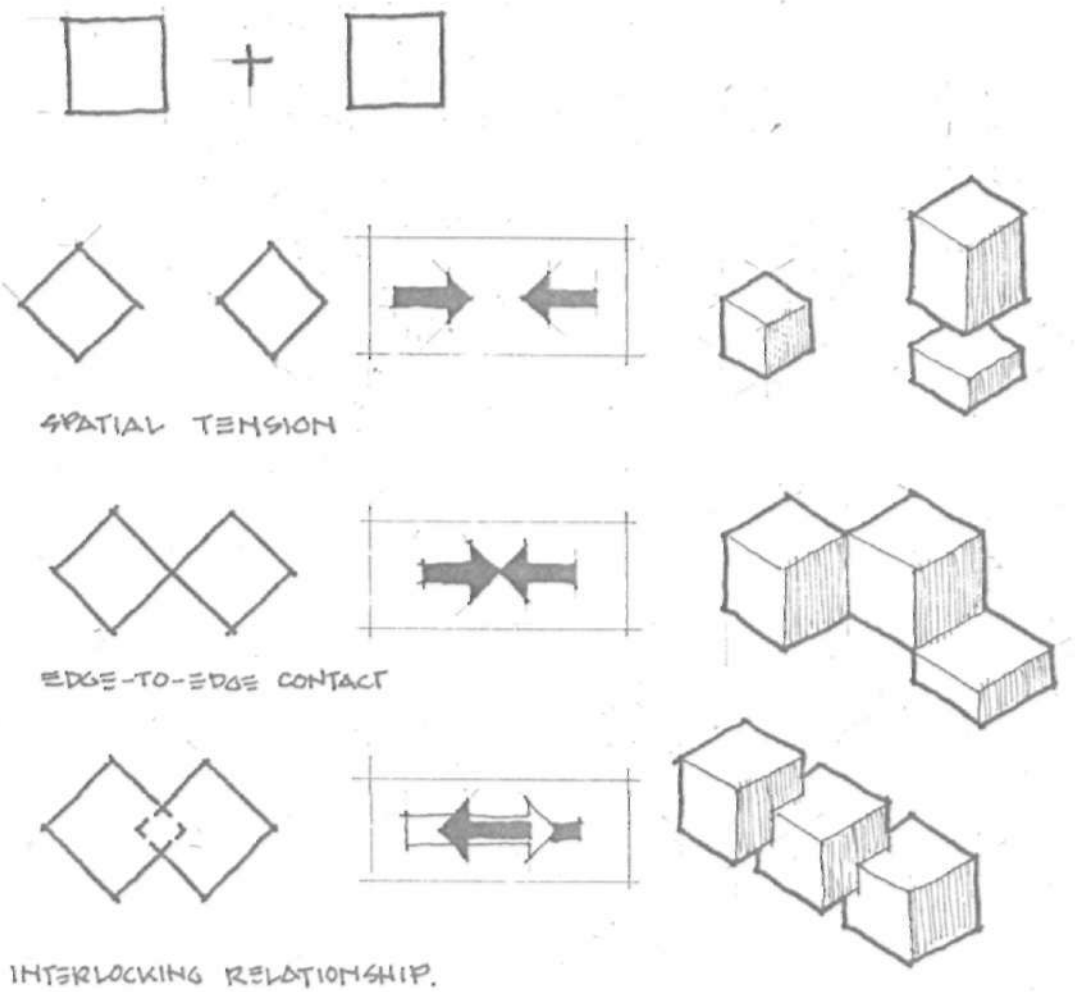
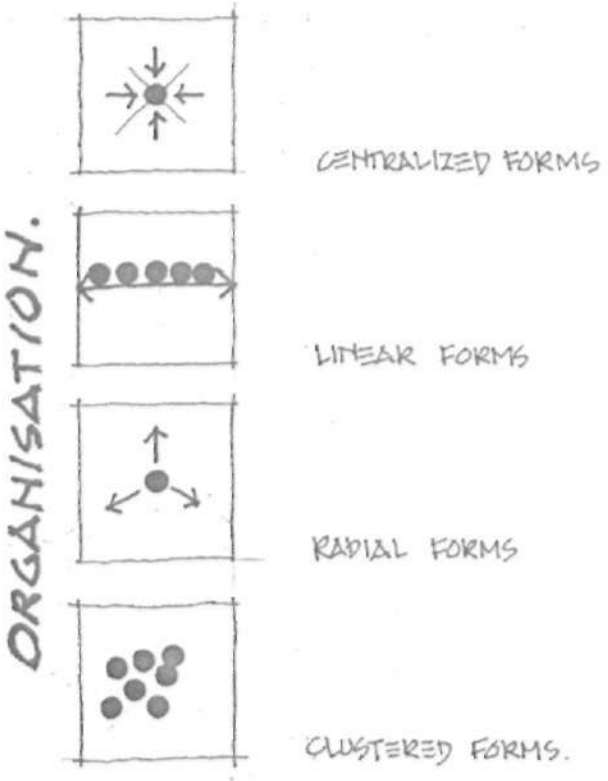


fig 16: ADDITIVE FORMS/ ORGANISATION.



- manipulation of their dimensions
- subtraction or
- addition of elements.

+ dimensional transformations, achieved by altering one or more of its dimensions and still retain its family identity.

+ additive forms: These are produced by the addition of another form to its volume.

- spatial tension: requires that the two forms be relatively close to each other or share a common visual trait such as shape, material or colour (see diagram).
- edge to edge contact: in this type of relationship, two forms share a common edge, and can pivot about that edge. (see diagram).
- interlocking relationship: two forms interpenetrate each others space. These forms need not share any visual traits. (see diagram).

Additive forms can be characterized generally by their ability to grow and merge with other forms. For us to perceive additive groupings as unified compositions of form, as figures in our visual field, the component forms must be related to one another in a coherent and close knit manner.

- centralized forms: consist of a number of secondary forms clustered about a dominant, central parent frame. (see diagram).
- linear forms: consist of forms arranged sequentially in a row. (see diagram).

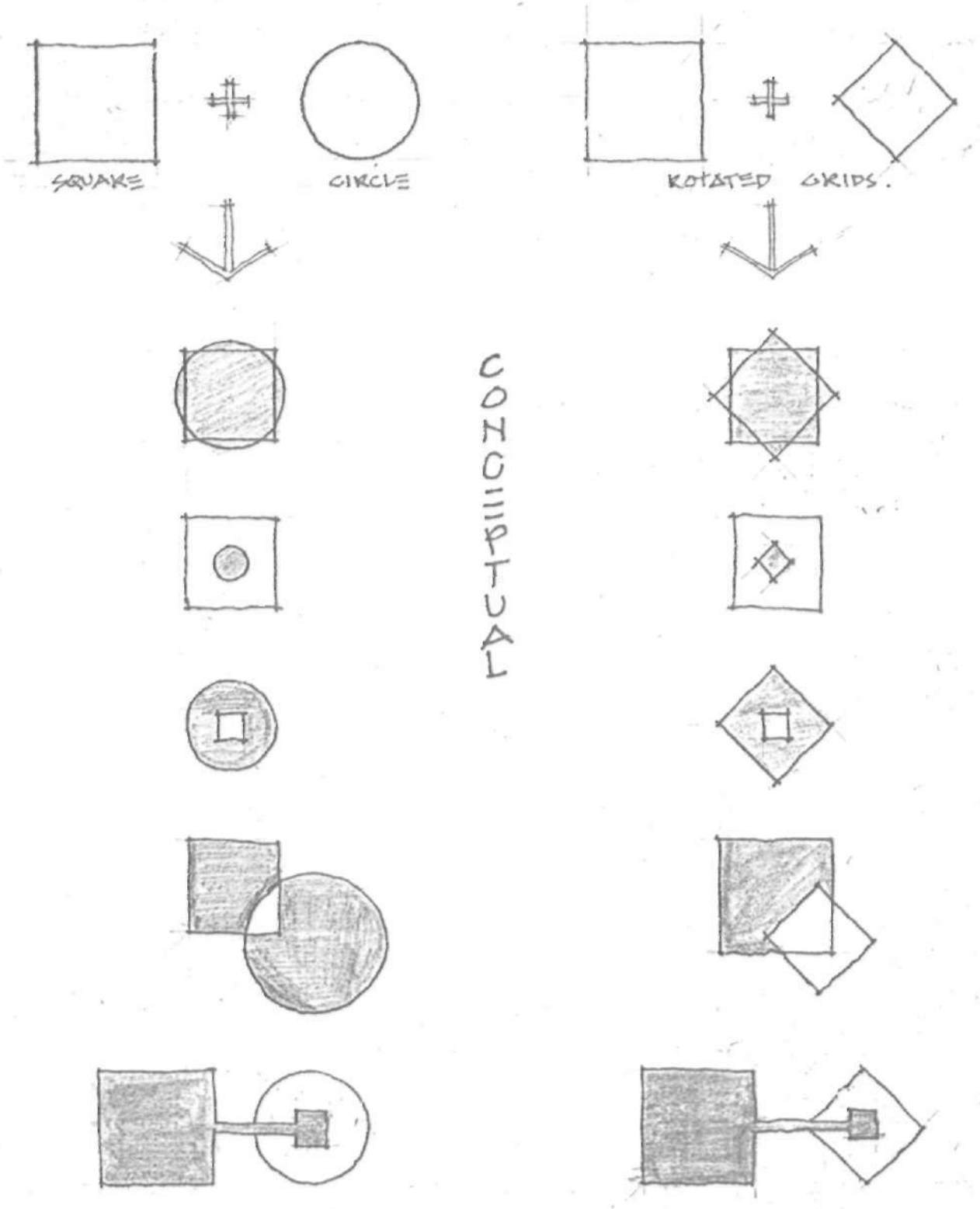


fig 17 : COLLISION OF FORMS (GEOMETRIC)

- radial forms: are compositions of linear forms that extend outwards from central forms in a radial manner. (see diagram).
- clustered forms: consist of forms whose relationships are regulated by three dimensional grids. (see diagrams).

GEOMETRIC COLLISIONS OF FORM

When two or more forms differing in geometry or orientation collide and interpenetrate each others boundary each will vie for visual supremacy and dominare. As such geometrial collisions will result in form such as required by the designer. (see diagrams).

3.2.4.1. Conclusion

From the above the designer is open to a wide choice of geometrial forms as result from the various means of transformation of the square and the circle. However care must be taken of the visual properties of the resulting forms so as to achieve the necessary rhythm both in two and three dimensions. A study of the elevations or facades of our traditional buildings points to the fact that the roof plays an undisputed role in the overall form of the building. In fact in most cases, it dominates the overall form. In translating this effect however one must take a lot of care.

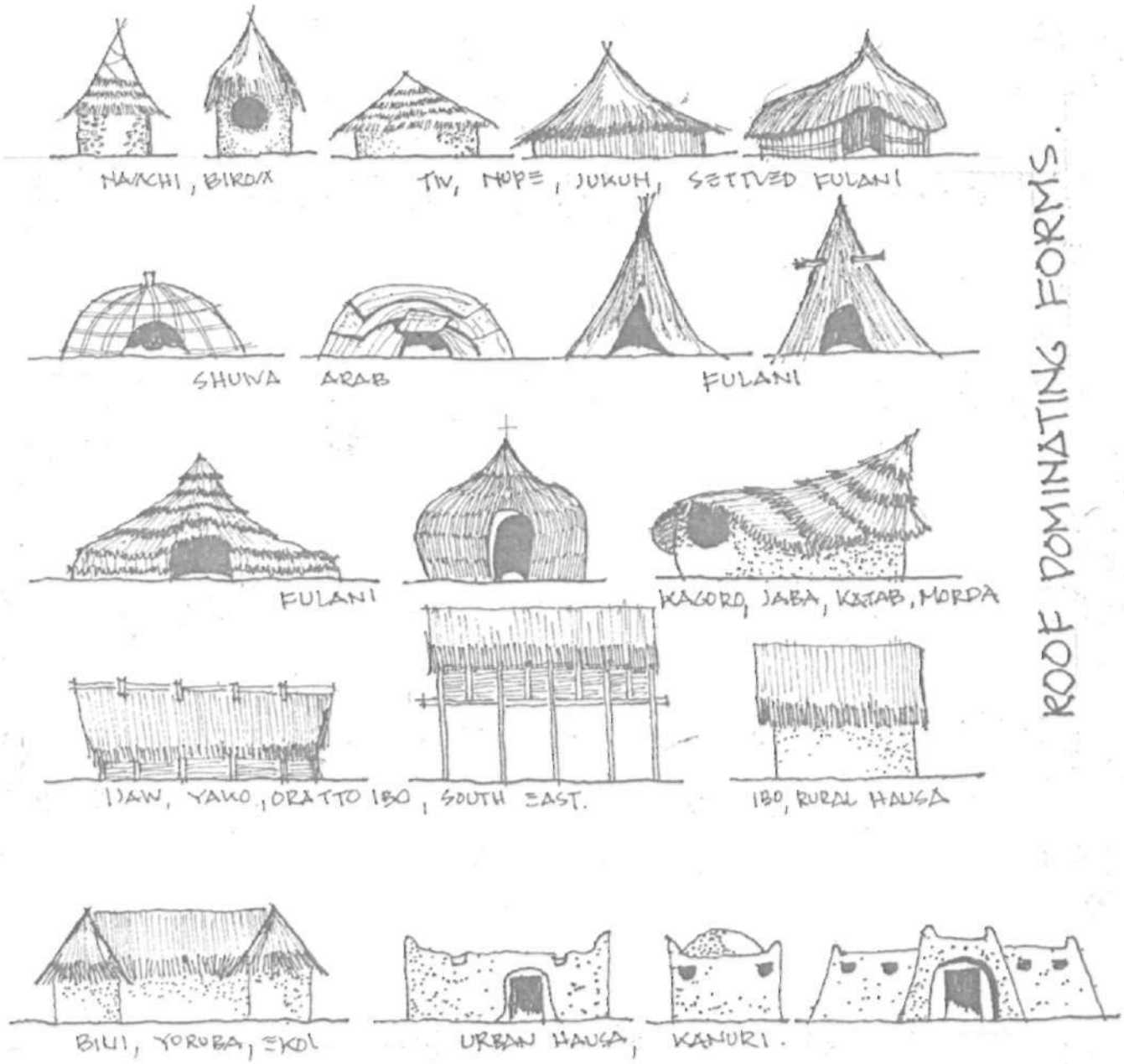


fig 18: A TAXONOMY OF NIGERIAN HOUSE FORMS.
SOURCE: TRADITIONAL AFRICAN ARCH.
by Susan Denyer.

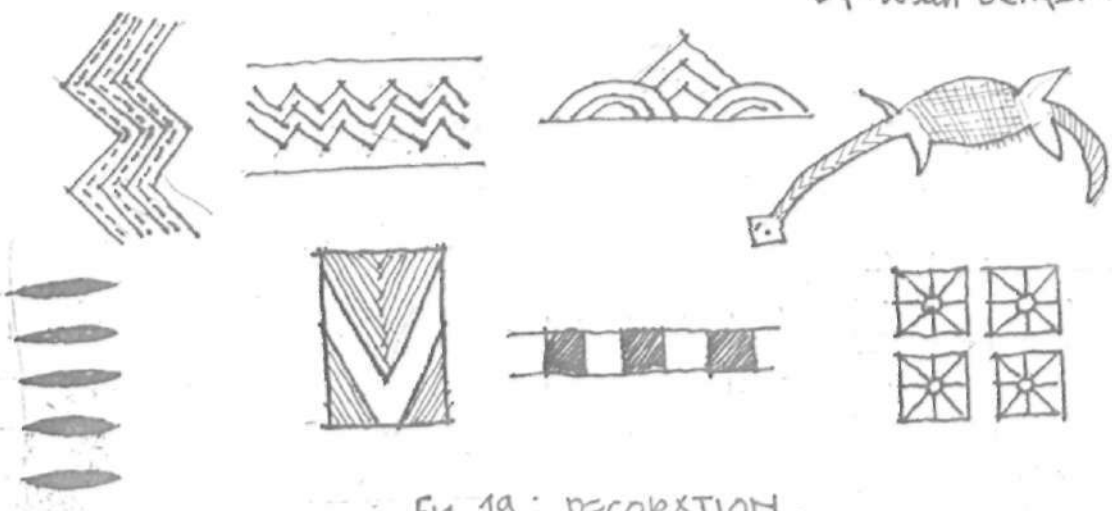


fig 19: DECORATION.

3.2.5 Decoration (Motiffs)

Decoration was done by motiffs, moral and patterns on the walls in traditional buildings. It had a lot to do with the society's value systems and it helps to establish personal and community identity and signal assertive or protective messages to those who could dicepher them. Decoration was not limited to buildings of the elites alone but was practised widely due to its uncomplicated application methods.

This was done on the mud walls before they solidified using wooden or metallic objects.

Conclusion

Traditional methods of applying decoration cannot be applied to contemporary architecture, Modern methods include the use of relief on treated woods and use of bas or bronze reliefs.

3.3 Society

At a point in the proposal, the author feels that the society should be symbolized in the evolusion process, afterall they would be the eventual users of any facility.

The relationship between architecture and the society has been stressed by various quarters but architects have always paid little or no regard to it. The Bauhaus under Gropius was known to have up with the theory of 'minimum social requirement for which it was heavily critisized.

When designing for a heterogeneous highly stratified society like in the Nigerian case, we see the necessity for close social interaction. The architect must be able to stimulate this by his use of space as a basis for communication or bridging the communication gap. Humanity should be able to find a place in our architecture. In our traditional buildings, such spaces were provided for in the courtyards which were more or less social oriented.

Right now, the casual passerby sees nothing of personal interest in the plain, clinical unadorned, sterile uniting facades of the 'international style. He or she just looks and night comment on the huge sums of money being spent on such buildings. Our people being natural out-door people should be able to relate in one way or the other with architecture.

3.4. Technology (The Moderator)

3.4.1. Introduction - Technology is defined as the practice, description and terminology of any or all of the applied sciences which have practical value and or industrial use.

Within the building industry it refers to advances made in building practice which covers structures, and use of material. The use of technology as a moderator stems from the factor that one has to think of design within certain limits if one wants to make maximum use of local resources which include manpower and materials.

Due to rapid urbanization, in major Nigerian cities, the construction industry is growing rapidly. Traditional building methods are gradually giving way to modern methods using reinforced concrete and steel. Prefabrication has also been utilized in certain cases. This modern methods have been used without weighing the pros and cons. Disadvantages of modern building methods are borrowing of technology and importation of materials, manpower and machinery traditional materials and technology have obvious disadvantages like low strength, durability, weather resistance e.t.c. but if improved using scientific methods, this disadvantages could be overcome. As such building costs will be reduced because there will be a reduction in importation. The development of brick industries all over the country is commendable. Blocks can be made to substitute sand crete in non load bearing elements in frame construction. Brick can also work in load bearing wall construction.

3.4.2. Technology Transfer - The present approach to technology transfer has not been exactly encouraging. It has been said that technology cannot be transfered to a passive recipient. It has to be seized and adopted energetically. If one is to learn from the examples of the countries of the far east as Japan, North and South Korea, China e.t.c., then this statement is very true. Third world countries want transfer of technology at low

costs but the western or developed countries want the maximum profit. This transfer is always restricted to assembly line or finishing production. As such more drastic step have to be taken if our state of technology is going to undergo an appreciable improvement.

3.4.3 Advantages and Disadvantages of Traditional and Modern Technology

The traditional methods of building are based an years of experience with materials, climate, techniques and sociocultural factors.

Due to the heat storing capacity and wall thickness of mud houses they are cooler in the hot season and warm in the cold season.

As the materials are locally available transport poses no problem and minimal machinery is required.

Problems posed by traditional methods include their low strength and durability, less resistance to the weather elements, and need for constant maintenance. Large spaces are not attainable. High insulation of thatch roofs is counterbalanced by leakages, high inflammability and insect attack.

On the contrary modern construction methods have certain advantages like saving time, minimum wastage of materials and good quality of workmanship due to controlled conditions in factory (prefabrication) and strict supervision.

The main disadvantages include

- The requirement of modern sophisticated machi-

nery and technical know how which is not available and has to be borrowed.

- the requirement of initial heavy capital investment and good transport system.
- requirement of importation of majority of the materials which is unevitable for the economy.

From the above we find that modern methods definitely have some advantages over the traditional methods. Traditional methods have certain limitations that still require a lot of improvement.

It is not the job of the architect to go into the technology of building material, yet he should be awave of existing improvements and be able to propose new ways for their use.

3.4.4 Recent Improvements

Different methods have been advanced to improve the quality of indigenous materials and technology.

A. Sundried Bricks - Clay is available in abundance to improve its quality we could.

1) Addition of hydrolic lime between 1%-2% of clay to make it stronger and harder than the traditional sundried bricks.
2) Addition of cement to form terracrete.
3) Addition of Bitumen, Benzol and other resins to stabilize the mud. It is added at the rate of 0,5-2% of the clay. The product is known as Butadobe. Since these additives are all products of the Petrolew industry of which Nigeria is a strong producer, this could be adopted as a good alternative.

4) Kiln firing of clay bricks improves its qualities.

B. Mortars - Lime mortar will help reduce costs where locally available. Mud mortar can also be used for bonding and if well plastered with cement mortar will have good strength and appearance.

Cement mortar and sisal fibres increases strength of concrete and reduces its bittleness. The construction requires no maintenance and costs are reduced by about half.

C. Timber - Treated timber could be used for structural skeletons, cladding and roofing although their exists the fire hazard.

D Bamboo - Cheap and could be used for internal partition walls if well treated. It can also be used in concrete as reinforcement as it has good tensile strength.

3.4.5 Conclusion

From the above, one finds out that both tradition and modern building methods have their merits and demerits. Due to the absence of structural steel in the country, designers still have no recourse but to make use of reinforced concrete.

However the use of concrete and sandcrete blocks should be discouraged as they are more extensive than the cellular kilu fired clay blocks. In load bearing wall construction, Kiln fired bricks could be used as they posses comparable strength as concrete blocks.

As such a marriage is proposed for modern and traditional techniques involving reinforced concrete frame and brick infill or load bearing walls.

3.5 The Slective Synthesis

Essentially, the synthesis is going to involve certain characteristics of the constitent parts which can be developed further than the stage at which they are now.

In traditional architecture one has to do away with certain features on elevation. These are features which point to a particular part of the country. Examples are the domes, arches and vaolts of the north. Certain traits could be used when they are structurally functional but not just for aesthetics. Others are the carved structural members found in the architecture of the Yorubas.

The use of local building materials in their native form also has to be done away with technology within our reach has shown that mud can be transformed into brick and cellular block which have compressive strength equal or even higher than sandcrete or concrete blocks. As such kiln fired (bunt) bricks are improvements on the local material and as such could be harnessed into the building industry to complement reinforced concrete.

After the elimination of such factors, one is left with a set of ideals which should guide architectural design.

3.6 Characteristics of the Proposal - Conclusions

After a thorough study of the consitutents of the proposal and subjecting them to the selective synthesis, one is bound to be left with certain factors which characterize the proposal - SYNTHARC

This are listed below.

1. ORGANIC DESIGN - choice of materials and least disturbance to site.
2. CONTAINMENT - strict adherence to hierarchy of privacy.
3. COMPACTNESS - cluster designs
4. PEDESTRIAN ORIENTED DESIGN
5. COURTYARD DESIGN STYLE
6. DESIGN TO HUMAN SCALE
7. DESIGN FOR CLIMATIC COMFORT
8. CLOSE SOCIAL INTERACTION
9. FLEXIBILITY FOR EXPANSION - dynamic approach to design
10. CENTRALITY - design around a core
11. ROOF DOMINATING FORMS
12. SIMPLE GEOMETRIC COLLISIONS
13. DECORATION - or ornamentation
14. CASUAL CIRCULATION PATTERNS

3.8 The Philosophy of the Concept

To facilitate a thorough understanding of the concept, it is necessary to be educated on its philosophy.

3.8.1 Theme

Syntharc ' 85 - proposals for a contemporary Nigerian Architecture.

3.8.2 Declaration

Syntharc recognizes the need for the evolusion of an architectural Syntax that is Nigerian and also that fundamentals for specific local conditions have to be worked out. This is to be achieved by a selective synthesis, hence the neology SYNTHARC being a marriage of synthesis and architecture.

3.8.3 Articles

1. SYNTHARC is not a style. Although the process of evolusion of the concept involves in its part different styles which have come to be very popular, syntharch should seen otherwise. It should be understood as a response to a social problem, a reaction to a need for us to identify ourselves with an architecture we can relate to.

2. SYNTHARC is not traditional or vernacular architecture. The heterogenous nature of our society forbids such an approach. Syntharch recognizes the fact that architecture without tradition is no architecture. As such, tradition is used as a catalyst. The final product is such that it is devoid of the tag traditional.

3. SYNTHARCH suggests or considers the diversification of society and its need to interact. It is important to realize that simply from the point of view of mankinds mental health, survival capacity and ressilienny as a species, it is advantageous to have cultural diversity - in the same way that ecological stability becomes possible only by maintaining a large diversity of species.

4. SYNTHARC recognizes the level of technology involved in building within this society. However there should be ample space for progress as the government is taking definite steps in technology transfer. Thus the present level should not be assumed as being static.

5. SYNTHARC is cyborg architecture. Cyborg is derived from cybernated organism, which is an organism which is partly automated, based on feed back and information process (half man, half machine). This refers to the dynamics of the concept. The whole building is expected to work as a system - functional to a high degree. Thy organic aspect relates also to its respect for the environment which encompasses the use of materials and least disturbance to existing landscape or ecology.

6. SYNTHARC could be broadly defined to be a selective synthesis in that it will make use of certain parts of three basic components. This process cannot be likened to a computerized synthesis. Selective synthesis is a more pragmatic synthesis involving weighing pros and cons and discarding unimportant features.

4 NEED FOR THE CONFERENCE CENTRE AND HOTEL

4.1 Choice

The choice of a conference centre and hotel for this thesis (proposals for a contemporary Nigerian architecture) is not arbitrary. Rather it is a choice that took into consideration several factors.

An obvious choice would have been a housing project but it has not been used for certain reasons. Successive Nigerian governments have recognized the need for mass housing schemes and have incorporated this into a housing policy, an appraisal of these schemes tend to suggest a failure of some sort. These may be attributed to various factors amongst which disregard to basic planning laws and politics have played a major part. Most of the schemes record commercial successes as tenants are eager to move into them as soon as they are completed. In some cases the houses are left unfinished and the owner/occupier is left to do the plastering and painting, thus rendering the project a caricature of the original architectural drawings.

In cases where the projects can be regarded as successful e.g. 1004 flats, Eko court, Adeola Odeku luxury flats, it is common knowledge that these flats are occupied by the upper echelon of the society at exhorbitant rents (as high as ₦30,000/annum). Because of the high rise nature of this flats and the peculiar Nigerian situation, for example, inadequate maintenance and electric power cuts, occupants usually suffer untold hardship. In certain quaters, a review of such

projects has been called for as these occupants are rich enough to own houses of their own. The present government is still looking into this and is yet to evolve its own housing policy.

Moreover, housing schemes are not supposed to be commercially oriented. Running costs, rents and other overheads are heavily subsidized by the government. Unsculpurous tenants let out a part of their property for a certain rent thereby defeating all the intentions of the government. Due to the heavy drain on the government coffers, housing schemes can only be successfully implemented in times of economic buoyancy. It is the contention of this author that any project the government or any organisation for that matter goes into now should be self sustaining eventually.. After initial building costs, there are little or no running costs charged to the government purse. Moreover tax and ground rents could be extracted from such projects.

For such projects, viability should be the main parameter for their implementation.

Concluding, in a country where mass housing is recognized as being necessary but is not of prime importance, housing cannot be effectively used to profess a new concept in architecture.

4.2 Need

Apart from the commercial success recorded by existing conference facilities in Lagos (The Nigerian Institute of International Affairs charges ₦400 per hour for use ot its facility), the need of a confe-

forence centre and hotel of international standards in Lagos is long due.

Quoting Architect William B. Tabler (From his contribution to Places for People edited by Jeanne M Davern).

> "to be sure, there hasx been some slowdown in the economy. But for any business, the telephone and mails are no substitute for face-to-face selling, face-to-face problem solving - and business men are going to continue to criss-cross the country and need hotels to stay in. What is more in today's business climate, more and more industry and trade groups meetings are absolutely essential, and we see more and more hotels near airports and in the major convention or airport-hub cities built for this purpose."

Although, the above statement was made in reference to the American situation as at that time, we have such a condition in the country today. The country's economy is not at its best but the conference centre and hotel serve such a wide range of individuals, organizations, government and political bodies that its need cannot be overemphasized.

A dictionary definition (chambers) says a conference is an appointed meeting (could be for between 5-500 delegates) for consultation or discussion. Being of special interest to all organizations, conferences serve as a productive method for organizing research and obtaining results. Conferences also acts as settings for national and international co-operation.

In the next chapter, the author has tried to bring to light the importance of Lagos as the commercial, sical, religious, political e.t.c. nerve centre of Nigeria.

It is true that the Federal Capital territory, Abuja will finally absorb some of these characteristics but Lagos will continue to be Nigerias business capital.

With the presence in Lagos of all Bank headquarters, Embassies and high commissions, various institutes, the Nigerian Chamber of Commerce, the Nigerian Stock Exchange the Nigerian labour congress and the Nigerian Institute of International Affairs, there is need for spaces where these bodies can have large conferences with their foreign or local counterparts. The presence of such International Socio-Philantrophic organizations such as Rotary International, Jarycees, Lions, Lioness and the various religious organizations also calls for facilities in which they can hold their conventions.

These are the categories of clientele the conference centre is being planned to attract. A certain percentage of the delegates obviously have to be accommodated, hence the requirement of the hotel.

The Economic Community of West Africa States (ECOWAS) has its headquarters in Lagos, but it doesn't have a suitable secretariat for use. Recently, tenders were advertised for the design of the ECOWAS secretariat in Abuja. Member countries are finding it very difficult to contribute their annual dues to the organization. How could they possibly fund such a gigantic project? As such, they could take up a contract with the management of the proposed facility which would give them an advantage in the use of the centre until their own secretariat is ready. This is just a proposal but the author thinks it a very pragmatic one.

Presently, the Nigerian Institute of International Affairs is enjoying a near monopoly of conferences in Lagos. They operate a four hundred seat conference facility which is booked solid all your round. However this facility does not offer simultaneous interpretation. This is only available in their three hundred seat hall. The Eko hotel banquet facility comes only as a second choice as their facility is not custom oriented to conferences. The Administrative Staff College of Nigeria in Topo Badagry is gradually turning into a conference centre. They have a three hundred and fifty seat auditorium and their proximity to the Badagry Creek and Atlantic Ocean gives it a resort characteristic which is becoming the fashion for modern conference centres. Other mushroom facilities exist, but this cannot boast of hosting a multi lingual conference. This is what the proposed centre is all about.

4.3 Architectural Aspirations

Apart from the reasons elucidated above, there exists certain salient factors which warrant the choice of such a project. First of all it must be understood that the author is attempting to put across a concept for Nigerian contemporary architecture. An architecture that if possible could be exported to other countries (as in the case of Japan) perharps with little modification.

A conference centre and hotel is a place that would eventually attract people from all over the world. As such the design itself must be an event

in itself. The success of such a project would depend on how well the users can appreciate its effectiveness.

The design of a conference centre and hotel also gives the designer a chance to try out the proposal on two aspects of design - housing as exemplified by the hotel and public building design as exemplified by the conference. As such a total attempt is being made to project all the potentials of such a proposal. The need as such is inevitable.

4.4 Lagos State Government Policy On Hotel Development

The following are extracts from Lagos State budgets, Lagos State Regional Plan (1980-200), the Lagos South-West Development Scheme (Badagry Creek and Environs) concerning hotel development in the State.

> "tourism development will be encouraged. The beaches in the State will be given adequate attention, and interested private entrepreneurs will be encouraged to invest in Hotel and Tourism Development. More attention will be focused on Hotel licensing, and the control of the growth and development of Hotel Industry in the State. In addition to this, Government will continue to participate in viable hotels and tourism Investment schemes."
>
> Extract from the text of the budget speech delivered by the military governor of Lagos State, Group Captain Gbolahan Mudashiru for the 1984 Financial Year on Tuesday 19th May 1984 - Budget iof the new direction.

4.4.1 Policy Statement

1. Encourage development of hotels, resorts and recreational facilities without any major involvement by government except for equity partici-

pation in three main hotels to be located, one each in the Lekki Pennisula, Ikeja Division and in Badagry.

2. Provide infrastructure for hotel development and plots for private developers who are ready to part the economic rents.

3. Provide land to resort developers who would act as government agents in developing large tracts of land for their own proposals or for eventual lease to indidual developers.

4. Tourism is not considered as a major priority.

culled from the Lagos South West development scheme Vol 6 prepared by the special technical committee.

From the above, it can be perceived that the government recognizes the need for and is ready to go into equity participation in any viable hotel project. The choice of Badagry town as site for the project even falls within government aspirations.

4.5 Conclusion

It seems pertinent that the demand for a conference centre and hotel in Lagos is assured. This is a singular factor to be reckoned with in establishing the hotel industry. This in turn depends on the level of economic activities in the country or the state.

The timing of hotel development will therefore be considered opportune when the demand and funding are available. As such a system of phasing should be encouraged so that activity can start in the complex even if it is not completed.

5. LAGOS STATE - A HISTORICAL PERSPECTIVE

5.1 Myths On The Origin

There are several conflicting myths. However, the general consensus including that of the Idejo chiefs (traditional land owners of Lagos) is that the Island city of Lagos or Eko was founded more than three hundred years ago by the Awori's of Isheri who were the first inhabitants.

All the versions agree that Olofin, whose descendants are the Idejo land owning white cap chiefs founded Lagos or were present before the Benin warriors of Oba Orhogbua arrived. The Idejos claim that Olofin was a son of Oduduwa, the ancestral father of all Yorubas.

The Benin version of the Myth is simply one of conquest. Oba Orhobua had established a camp in Eko as a base for raids against neighbouring Dahomey.

5.2 Population

By 1800, Lagos Island had a population of barely 5,000. This were however made up largely of the natives. Both slave trade and legitimate trade in oil palm, liquor etc caused a minor population explosion and by 1859, Lagos had a population of about 30,000. Majority of the immigrants came from surrounding areas bringing new religious (Ogboni, Islam e.t.c) new insitutions and customs. Along with them came wealth. By the end of the 18th century, Lagos though still periodically recognizing the Benin tutelage which had been established as early as the 16th cen-

tury, had become a power in its own right among the adjacent villages. The Ijebus, Egbas, Oyo, OIlorin, Ijesha e.t.c. had to court her friendship because of its favourable trade position.

Immigration into Lagos by 1920 had reduced the indigenes to a minority. Lagos now comprised of Apapa, Surulere, Idi-oro, Ebutte Metta, Lagos Island, Iddo, Ikoyi and Yaba. Towards the end of the 1921 population of Lagos was 100,000. It rose to 126,000 in 1931. Twenty years later, it had doubled and by 1962 there were 665,000 people living in Lagos city.

Due to improved housing conditions, free education, improved health care delivery and the fact that Lagos has remained the nerve centre of Nigerian business activities, Immigration has cautioned. Thousands of people troop into Lagos through its western border towns. Increased business, construction e.t.c. has enticed foreigners with the result that in 1980, the population was estimated at a staggering 5,000,000.

5.3 Early Growth And Trade

The early growth of Lagos could be attributed to its location near to the only permanent break through the sand spit into the main Lagoon along the Bignt of Benin; and its position near to the war torn Yoruba mainland which was a major sorne region for slaves. Initially the economy was based on fishing and

farming but by 1980, Lagos had grown to become the most notorius slave emporium on the West African coast. However, Lagos had some short comings as a part. Noteworthy was the offshore bar at the mouth of the Lagos entrance which restricted trade until the early part of the twentieth century when major development works were undertaken after Lagos was chosen as the terminus of the western railway. The series of war raying in the Yoruba hinterland also took its tolls on trading in Lagos. The collapse of Oyo in 1817, and the subsequent struggle among its successor states coupled with the need to halt southward advance of Islam into the country plunged the entire South West Nigeria into a series of wars that did not end until decisive British intervention in 1893.

Like the city states of the Niger Delta and the Calabar area, Lagos owed its early growth and prosperity to trade. In the words of captain John Adams, an early trader in West Africa, it was "the policy of the Lagos people, like those of Bonny, to be themselves the traders and not brokers." The town benefitted considerably from the wealth and education of ex-slaves who had made good in Brazil and freetown.

By 1900, Lagos was becoming a modern metropolis. Economically, it had developed even faster than in the period 1800-1850. It boasted electricity, a busy harbour and a railway terminus to convey produce from the hinterland.

Muslim and Christian schools dotted the town and it continued to attract the most adventurous from the provinces of Nigeria. Already, there were plans for pipeborne water and for a tramway.

5.4 Lagos Trading Community

The commercial community consisted of four main groups, of which three were of African origin. First were the Afro-Brazilians, ex-slaves who had purchased their freedom and returned to Lagos. In 1825, they had an ethnic ghetto of their own, the Brazwn Prominent members included Senhor Antonio Miguel d'Assum pacao, P.F. DaCosto e.t.c.

The second group were made up of Sierra Leonean (Saros) liberated slaves. They produced the most prosperous indegenous merchants and dominated the higher social circles. Messrs R.B. Blaize, Mohammed Shita Bey, J.S. Leigh were most outstanding. From their ranks came the African members of Lagos Chamber of Commerce.

The third group was drawn from the indigenous population of Lagos itself amongst whom were the white capped chiefs. They organized the Baba Isale system of clientship which involved the attachment of various hinterland communities to particular Lagos white capped chiefs.

The last group of merchants were the Europeans. There were mainly two groups - the Manchester commission houses of which Messrs Ashton Kinder and Company and the firm of John Walkden are examples and the Oil palm merchants of Hamburg and Liverpool.

Trade was mainly in slaves, palm oil and liquor. Most difficulties experienced by Lagos trades were related to the series of wars then raging in the Yoruba hinderland. The collapse of Oyo in 1817 and the subsequent struggle among its successor States, coupled with the need to halt the Southward advance of Islam into the country, plunged the entire s.W. Nigeria into a series of wars which did not end until Britain intervention in 1893.

However in 18181, the total trade in Lagos amounted to £333,659 in imports and £460,007 in exports. By 1890 it was £500828 and £595,193 respectively.

5.5 British Intervention

In 1851, Britain bombended Lagos, forced Oka Kosoko to flee the country and placed Oba Akintoye on the throne. Ten years later they annexed Lagos and the King was pensioned off.

After Annexation (1861), Britain governed Lagos through a governor resident in Lagos who was advised by a locally nominated legislative council. In 1866, Lagos lost its status as a separate colony and became part of the West African colonies with head quarters in Freetown, Sierra Leone. In 1872 the W. African colonies were reconstituted into two colonies - Sierra Leone and Gold Coast. Lagos regained its status as a separate colony. In 1906, it became part of the colony and protectorate of Southern Nigeria. Eight years later (1914), Northern and

Southern Nigera were united and Lagos became the capital of Nigeira.

When Nigeria became a Federation, Lagos was chosen as the Federal Capital. From the early 1950's the people were insistent in their demand for a seperate Lagos State, and when the military govt of General Yakubu Gowon divided Nigeria into 12 states in 1967, Lagos was one of them.

5.5.1 British Enterprise In Nigeria

This was spear headed by Mr. Goldie Taubman, who possesed rare business ability. This he combined with political and diplomatic skill of a high order. He had seen service in the engineers, had travelled widely in Africa - especially in Eastern Sudan and had become interested in the companies engaged in trading on the Niger.

He visited the Niger in the late 1870's and realized that amalgamation of the rival interests was necessary if a legitimate and profitable trade was to be built up. In 1879 he organized the United Africa Company with Lord Aberdave. The company was capitalized at £125,000 and Goldie was one of the directors. Two years later the name was changed to the National Africa Company.

The French formed two commercial associations - the Compaigne Francais de l'Afrique equatorial of Paris and the Compaigne du Senegal et de la Cote occidental d'Afrique of Marseilles. These later

faced ruin and had to merge with the British Interests in 1884. By July 13, 1886, the National African company with the approval of the Foreign Offie became the Royal Niger Company chatered and limited.

Financial Services

Before the establishment of the African Banking Corporation in Lagos, under the agency of Elder Dempster lines in 1891; local banking was limited and the trade in the colony and its hinterland was not sufficiently developed to require services of a European Bank. Merchants however often issued drafts to each other in the ordinary course of business, such drafts being drawn on their banks in Europe. There was extensive use of credit in commercial transactions in Lagos of which there are two types. One was the Yoruba Esusu, small credit associations often organized by friends or kings men as a capital market for social emergencies. The other was the Lgos regional credit sources largely constituted by major merchants in their dealings with one another.

In 1900, the Anglo African Bank was formed in Lagos but had to merge with the African Banking Corporation in 1912.

5.6 Conclusion

All the foregoing goes on to point to the fact that Lagos, even from antiquity has always been the gateway into Nigeria. Business, Banking e.t.c. have their roots in Lagos.

Over the years, Lagos has grown stronger and stronger and now accomodates all the big business houses in the country.

The movement to Abuja not withstanding, Lagos will continue to enjoy its present status as the investment or business centre of the country.

6. THE SITE

6.1 Choice Of Site

Choosing a site for the proposed conference centre has been governed by certain factors among which the Lagos State regional plan (1980-2000) and the development policies have played a major role. Accessibility to the site has also been considered. Socio-cultural, religious, historical factors and natural site attributes have also played a role in the choice.

6.1.1 The Lagos State Regional Plan (1980-2000) and Development Policies

Lagos State lies in the South western part of the country and covers an area of 357700 Ha of which 60,839 Ha (17%) is composed of Lagoons and waterways. The State is divided into twenty three area authorities.

In land area, the size of Lagos is about 0.4% of Nigeria and is the smallest state. Although it is the smallest state, it accommodates over 5% (about 5,092,000) of the estimated population of the country. The Lagos metropolitan area contains about 89% of this figure which is put at 4,518,000 although it is only 37% of the Lagos State land area.

When the state capital was moved to Ikeja in a bid to decongest the Lagos Island which also served as the Federal capital, the population swung in that direction. Ikeja being in the North of Lagos State, it was discovered that workers in

Lagos were residing in Ogun State which is easily accessible from Ikeja. As such, the Northward growth of Lagos had to be curbed.

The rate of population growth has been in excess of 9% per annum recently (see tables), this result in an additional 3000,000 persons per annum.

The relatively small metropolitan area coupled with the high population growth rates has resulted in an artificial high density. Average population density for Nigeria is about 85 persons per square kilometre. Lagos State has a density of over 15 times as the national average with 1305 persons per square kilometre. In the heavily built up urban areas of metropolitan Lagos, the density averages up to 20,000 persons per square kilometre.

This 'artificial' high population density has been caused by the concentration of development in the metropolis. However the government has realised this problem and as such emphasis is now on expanding on the east-west axis. To the east, the Lekki - Eti-Osa dual carriageway has commenced to encourage development of the Lekki Pennisula Scheme. The scheme includes zones for hotel development adjacent to the Atlantic Ocean. The government's development policy at the moment does not however favour hotel development. Efforts are geared towards the development of petrochemical industries and port related industries. As such, it is unsuitable for the proposal.

To the West, the Lagos Badagry expressway has been completed and is intended to facilitate the development of the Lagos South West Scheme. This scheme is expected to achieve high rates of growth and act as a counter balance to Lagos. It is also expected to encourage the development of tourism.

This scheme provides a possible choice as the government policy agrees with the proposal. This scheme includes Badagry Creek and its environs.

6.1.2 Accessibility

Access to the site is facilitated by road via the Lagos-Badagry express way. This road links the scheme with metropolitan Lagos via the Amuwo-Odofin interchange.

Two other roads are being proposed in that direction. First is the rapid mass bus transit route which terminates at the Amuwo odofin ferry station. It is expected to serve users of the ferry service and the public transport system. The second road is the F200 which is the Lagos - Sokoto expressway. A road is also proposed to link Mushin to Okokomaiko on the Lagos - Badagry expressway.

Access from the Muritala Mohammed International Airport is through the Apapa - Oworonshoki express-way with a turn off at the Amuwo-Odofin Interchange to join the Lagos Badagry expressway.

6.1.3 Other Factors

This include socio-cultural, religious, histo-rial factors and the natural attributes of the

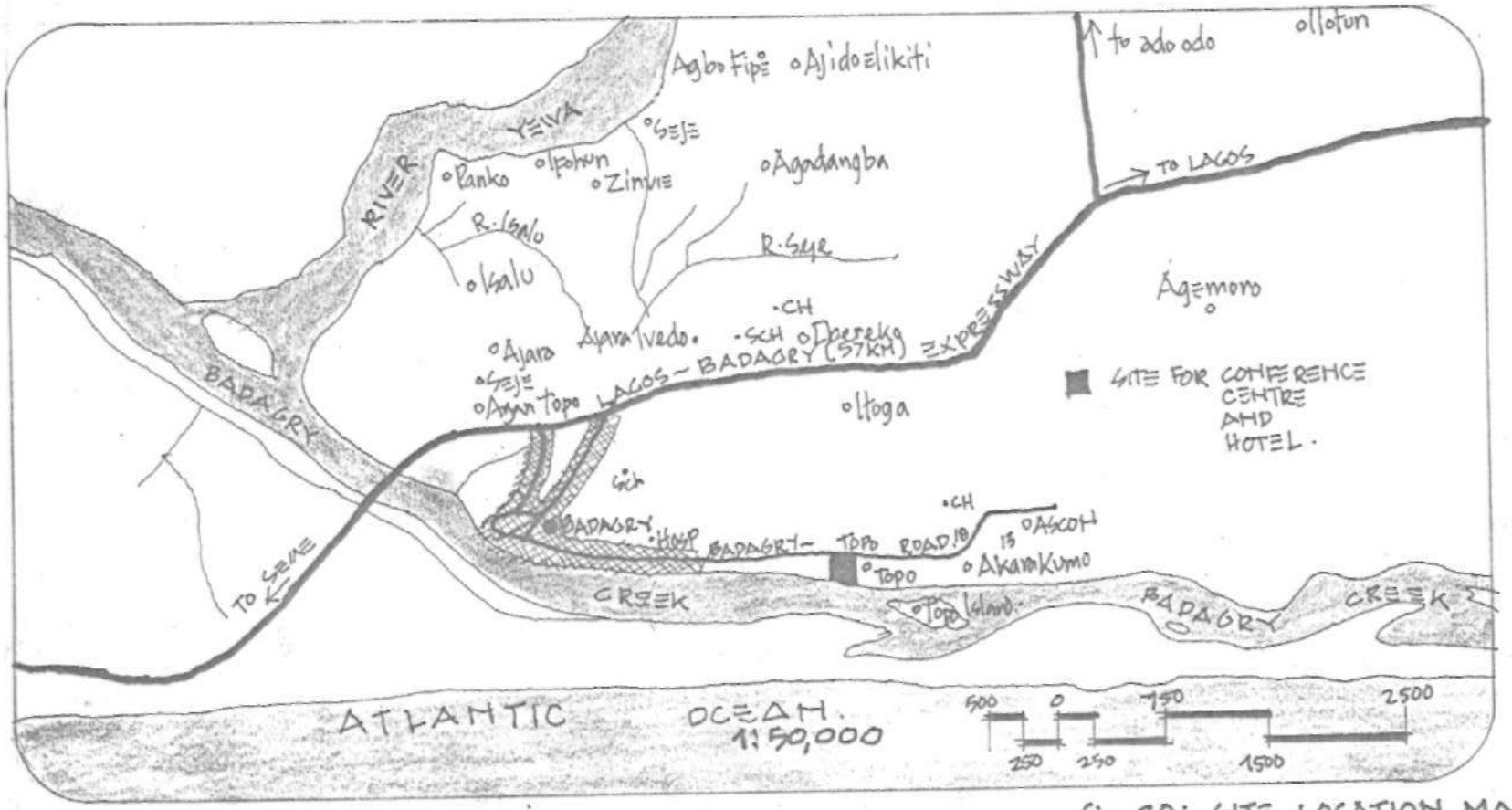


fig 20: SITE LOCATION MAP

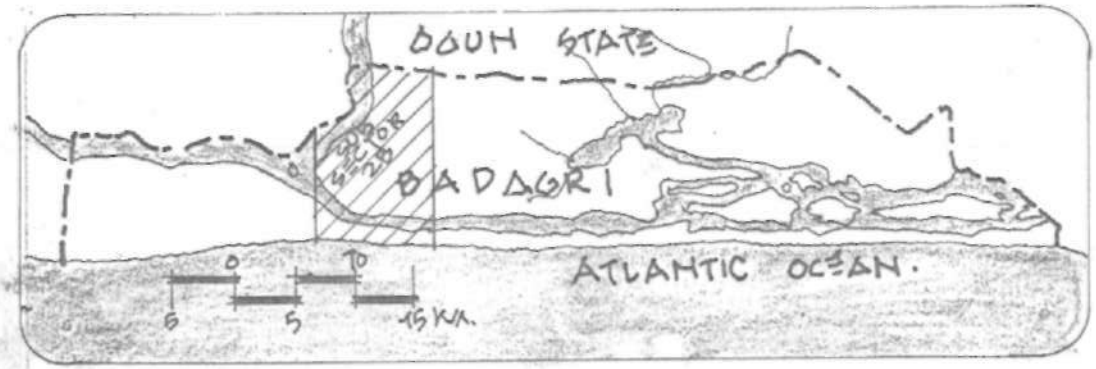


fig 21: SUB-SECTOR 2B lagos south west development scheme.

site (see site analysis) These are factors which naturally boost tourism and as such will attract usage of the hotel.

6.2 Lagos South, West Development Scheme (Badagry Creek and Environs)

6.2.1 Area description: The study area is easily destinguished from its title which gives its geographical location in Lagos State as well as its predominant features. It is a vast area west of the Amuwo-odofin (mile 2) interchange on the Oworonshoki-Apapa expressway to Seme on the Nigerian - Benin border, and some islands and coastlands west of the interchange up to the west mole of Takwa Bay. It encompasses all land immediately adjacent to the Lagos - Badagry expressway, stretching to the atlantic ocean in the south and the Lagos - Ogun State border in the north. The area is about 75km east west.

The whole area is divided into 3 sectors of which sector 2 is the largest and most relevant to the proposal. The sector is further subdivided into 4 subsectors.

Subsector 2A - Badagry Creek - Seme

Subsector 2B - Badagry Creek and Environs

Subsectors 2C and 2D - Ijanikin, Iwori, Ajido, Okekomaiko and Environs.

6.2.2 The Plan: The whole scheme has a total area of 747km^2 or 74700 Hectares. Of this the land mass is 666km^2. The total area of islands is 46.59km^2 184km^2

has been zoned for tourism and recreation purposes (HORERE) making 24.74% of the entire study area.

Subsector 2B: The chosen site falls within this subsector. The area comprises of land from the bridge over badagry creek on the Lagos-Cotonu express way and eastwards to Ipara in the north and stretching south to include two islands - one of which is topo with its coconut plantation. Many major towns and developments fall within this subsector e.g. Badagry, Akarakumo, Topo. The Administrative Staff College of Nigeria also falls within this subsector.

Within this subsector, a total area of 985.5Ha is zoned for hotel, resort and recreational development. The Site is planted with coconut on the beach side and grass on the lagoon side. The former site of the Topo mission that was later acquired for rehabilitation of erring soldiers is presently abandoned but is heavily used for picnics. Tourism in this area is favoured due to its proximity to the historical Badagry town.

6.2.3 Hotel Development Within Subsector 2B

A plot of 12.25Ha has been earmarked for an international conference hotel. This plot is bounded on the South by the Badagry creek and on other sides by the main institutual zone of the scheme and is serviced by the Badagry-Topo road. The location falls around Topo town on the mainland.

Further on the road is the Administrative Staff College. The sunny and beautiful atmosphere of the lagoon and beaches also are compliments of the site.

At the moment the only hotel in that area is the Hotel De James which is a privately owned small hotel. The state government also runs a small catering guest house.

6.2.4 Alternative Site

An alternative site for the proposal could have been found in sector 3 of the scheme. This comprises of 12 islands out of which one of the small sized ones could easily be developed into a 'conference city'. However problems arise as the government has no proposals for roads to links these islands. Transportation is mainly going to be by Ferry Service and mono rail gondola. This form of transportation is not ideal for the proposal.

6.3 Site Analysis

Increasing building costs, stricter controls on building construction greater demands for better internal environments, increasing energy costs and the need for flexibility to provide for changing uses of buildings, all point to the early analysis of a building site. Complex relationships are involved between varying environmental conditions and other site constants, the proposed building location, orientation, structure and envelope, the

activities which take place within the building nad environmental conditions these activities will require.

Environmental conditions could be macro climatic or micro climatic. The former is defined as the general climatic conditions for the locality and the latter is a detailed climatic condition within and immediately surrounding the site, produced by the interaction of the macroclimatic and the physical features of the locality.

6.3.1 Macro (LAGOS STATE) Analysis

PHYSICAL: Lagos State which lies within the warm-humid climate regions of the world has an area of about 357,700 Hectares of which 60,835 (17%) is made up of Lagoons and water ways. This vast expanse of waterways have given Lagos State its characteristic humid climate. The terrain is generally flat with the highest parts to the north being below 30m.

RAINFALL: Total rainfall in Lagos State averages at 180cm. The maximum occurs in June and is about 45.25cm. Minimum is in December and is 2.5cm.

TEMPERATURE: Temperature maxima varies between 81.7°F in August to 91.5°F in March. Minima is from 69.7 in August to 73.1 in March. This values are generally high and could become unbearable sometimes.

HUMIDITY: The humidity has being affected by the presence of large water bodies, notably the Lagos lagoon, Badagry creek and the Atlantic ocean. Rela-

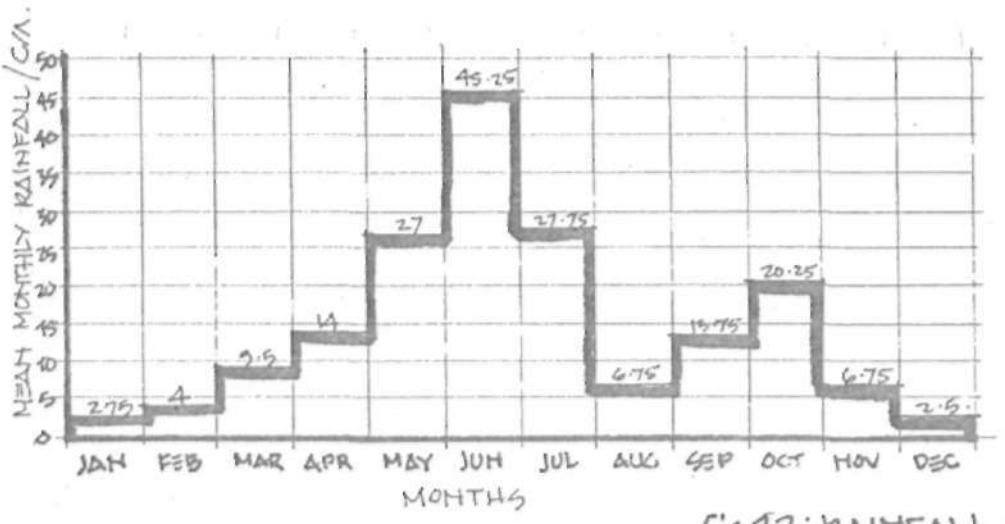


fig 22: RAINFALL DATA.

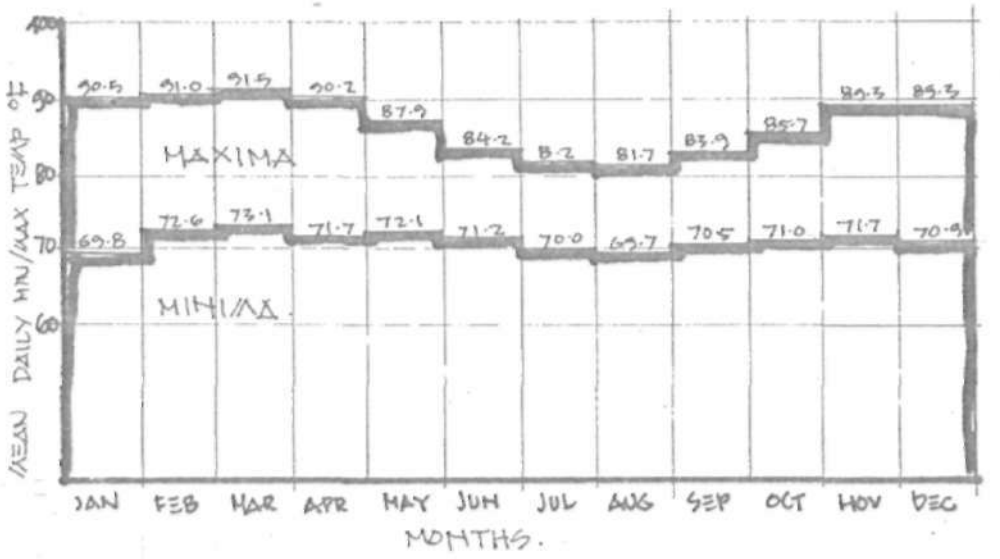


fig 23: TEMPERATURE DATA.

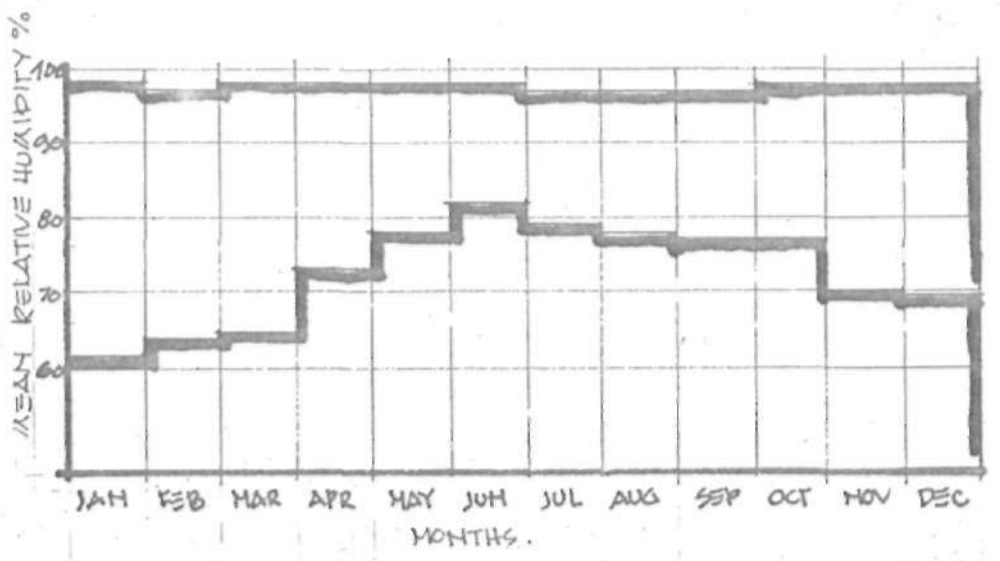


fig 24: RELATIVE HUMIDITY.

tive humidity values taken at 6.00a.m. show that it averages at about 97%. The value reduces in the afternoons to a 73% average.

PREVAILING WINDS: These are essentially the north east trade winds (dry tropical continental air) and the south westerlies (moist equitorial air). The former are dust laden, cold, dry and form harmattan. They are Saharan in origin and lasts from November to January. The later being cool and of equatorial maritinic origin are rian bearing. It last from February to October.

GEOLOGY: These are mainly deposits of the quaternary age. These are the youngest of the rocks of the baring. They are composed of mud, clay and sand accumulated along the coasts or blown sand left by the wind in the extreme north; or alluvium deposited by rivers along their valleys. They are loose surface deposits which have no yet hardened into real rocks.

SEASONS

1. Long-wet season: lasts from mid-march till July. It is characterized by heavy rains and high humidity.
2. Short-day season: or the July/August break. It normally masts for a month.
3. Short-wet season: lasts from September to October. Rainfall is not susually as heavy as during the first wet season.
4. Long dry season: or the harmattan period lasts from November to March. The mornings are cool and misty, with the mist disappearing with the rising sun. Afternoons

are hazy because of the dust particles in the air brought down by winds from the north.

6.3.2 Micro Forces

SITE LOCATION: The site which covers an area of 12.25 Hectares lies within the main institutual zone of subsector 2B, Lagos Southwest development scheme. It is bounded on the east and west by the institutional zone, on the south by the Badagry Creek and on the north by the Badagry Topo road. The location is at Topo village which is directly the historic Topo Island.

Accessibility is via the Lagos-Badagry expressway which links with the Apapa-Oworonshoki expressway at the amuwo-odofin interchange.

NOISE: Noise disturbance is expected only from the northern boundary of the site which is the Badagry Topo road.

DRAINAGE: The site slopes very unoticably towards the South. Slope analysis reveals a gradient of 0.05.

LANDSCAPE: The site is covered by patches of palmtrees. Ground cover is mainly of untamed, wild growing grass.

VIEWS: The best view is towards the Badagry creek in the South. Other views are mainly architectural and will consists of the buildings making up the institutional zone.

WINDS: Apart from the north east trades and the south westerlies, a third wind is made up of the breezes being experienced as a result of the currents from the Badagry creek. This breezes are cool and occur throughout the day but is most prevalent at night or early mornings.

TOPOGRAPHY: The site being generally low lying (below 20m); temperature is bound to be higher than the given figures for the macro-climate.

TEMPERATURE MODIFICATION: The low lying topography of the site causes a rise in the local temperature. However, this effect is alleviated by certain factors.

The presence of the creek has a modifying effect. Water having a higher specific heat capacity than land is warmer in the rainy season and cooler in the dry season. It is also cooler during the day and warmer at night than the terrain. Accordingly, during the day, breeze blows in from the creek to cool the site by convection while the hot air rises to replace it. A cycle is thus formed. At night the reverse takes place.

The natural ground cover consisting of grass, trees etc. stabilizes conditions through the reflective qualities of the species. Grass reduces temperature by absorbtion and cool by evaporation.

7. CASE STUDIES/SURVEYS

7.1 Introduction

In the choice of case-studies for this project, the author has tried to restrict the studies to similar projects in which the architect and his team have utilized local concepts in achieving their goals. Extensive local surveys have also being carried out to study how conference faclities have been accounted for in Lagos.

The facility in Saudi Arabia has been chosen as one in the international field. The architect has as his concept 'the temple' as exemplified by the conference centre and the 'residential hill' as exemplified by the hotel.

Coming nearer home in Africa, Kenya boasts of an international facility in the Kenyatta Conference centre. Here, the architect has utilized in his concept for the elevation, the use of the African 'meeting hut' from which he borrows the conical roof form.

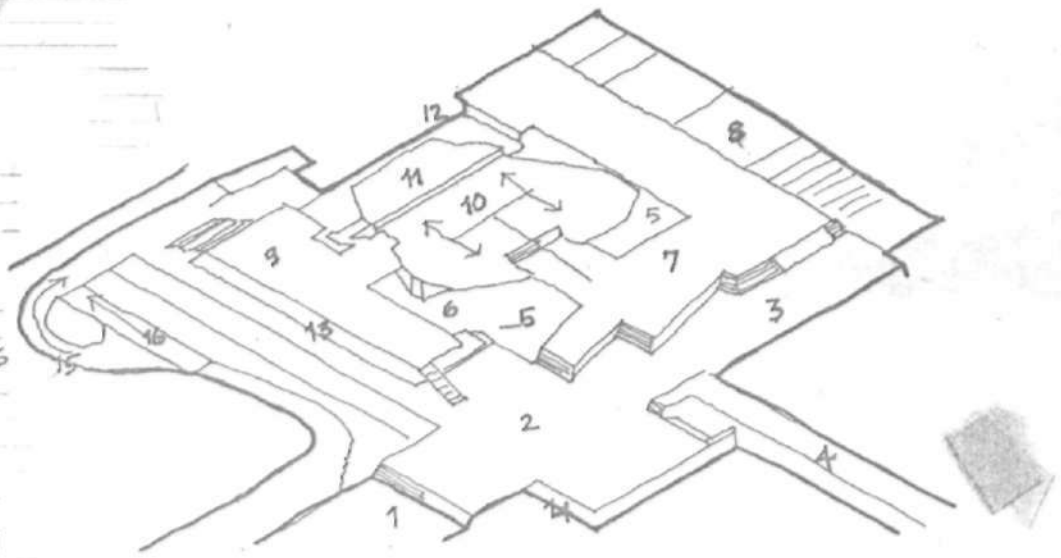
The remaining are local surveys in which existing conference facilities in Lagos and Kaduna have been studied.

7.2 Conference Centre And Hotel, Riyadh Saudi Arabia

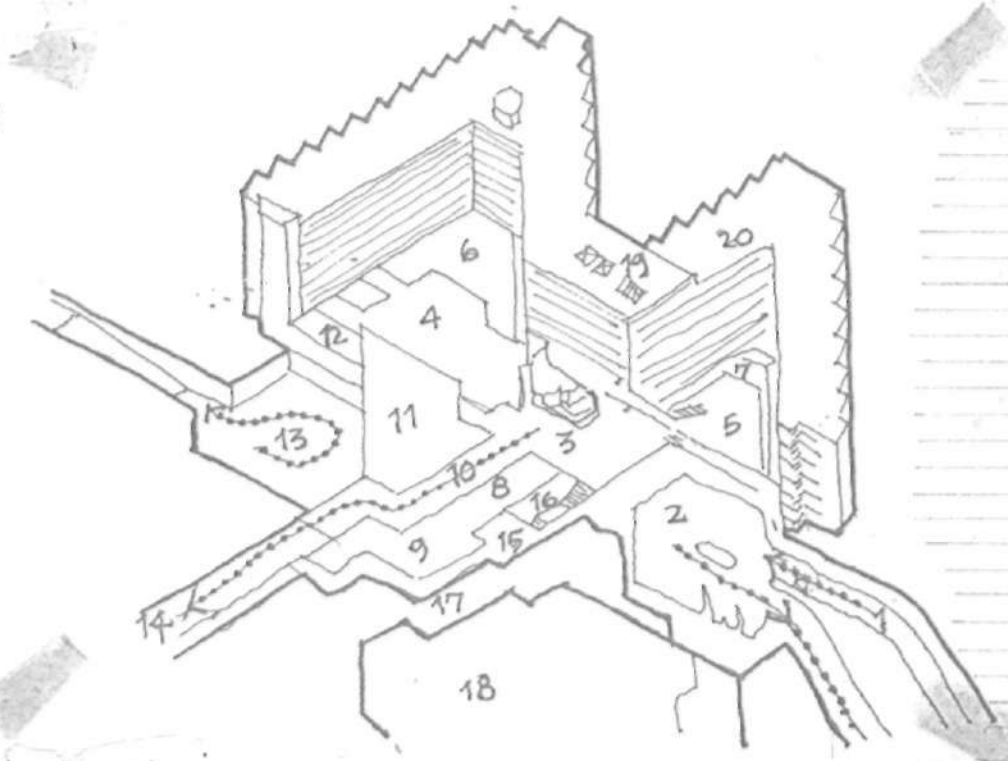
ARCHITECTS: Trevor Dennett and Partners

CLIENT: Ministry of Finance on behalf of the government of Saudi Arabia.

1 ARRIVAL
2 GEN. FOYER
3 EXH. GALLERY
4 LINK TO HOTEL
5 LOWER FOYER
6 REFRESHMENTS
7 UPPER FOYER
8 FIVE COMMITTEE RMS
9 VIP AREA
10 AUDITORIUM
11 STAGE
12 SERVICE ENT.
13 ADMIN UNDER
14 PRAYER ROOM UNDER
15 RAMP TO VIP AREA
16 TO CAR PARK.



ISOMETRY OF CONFERENCE CENTRE



EXPLODED ISOMETRY OF HOTEL.

1 guest entrance
2 car arrivals/main ent
3 reception
4 residents lounge
5 family room
6 court 1
7 court 2
8 shops
9 coffee shop
10 arcade
11 admin
12 terrace
13 service
14 link
15 terrace
16 stairs to restaurant
17 restaurant under
18 evening terrace
19 lifts/stairs
20 roof terrace.

fig 28: CONFERENCE CENTRE AND HOTEL SAUDI ARABIA.

SITE: 78,00 m^2 desert site bisected by wadi running north west to South east. Site is area north of the city scheduled for public buildings and is served by a new road which connects roads to airport and to Dariya.

BRIEF: Conditions for the conference centre stated that the building is intended for national and international conferences and seminars and will in time become a cultural focus for the capital city of Riyadh. The brief included a conference hall with 1400 seats with full technical facilities, five seminar rooms - one raked, to seat one hundred and ninety, extensive foyer space for circulation, exhibitions, refreshments, relaxation, administrative areas, accommodation for delegates, artists, facilities for press, VIP entrance, reception lounge, full service facilities and supporting accommodation.

The hotel was for two hundred double rooms, some capable of forming suites, lobby, reception area, extensive lounges, dining facilities for four hundred, coffee, barber and beauty shops, back of house facilities including kitchen, laundry, dry cleaning, storage, staff rooms and so on. The hotel was seen as an extension of conference facilities rather than a commercial hotel.

ORGANIZATION: Conference Centre - The hall is paced within a surrounding foyer planned on three levels which are interconnected - Entrance level opposite porte cochere opening into a general foyer and exhibition space extending full length of South east side, Upper level from which doors lead into the middle of the hall and which extends beyond the hall to serve as foyer to meeting rooms on North west side, and

lower level which provides additional foyer space and refreshment areas and off which lavatories and service areas. The V.I.P. reception is at upper level on the South west side within foyer volume and forming ceiling to offices below. Main access into hall is through a wide central opening which leads direct to cross - gangway. The hall has one thousand, four hundred seats and levelled but modelled ceiling 'floating over clerestory which admits natural light but can be blacked out if required.

Hotel - 'M' plan of bedroom wings with sawtooth north edge evolved from desire to have all two hundred rooms with patios facing north and as much privacy between them as possible. Apex of the 'M' provided central position for vertical circulation and service rooms. There are no internal corridors and bedrooms are entered off galleries which overlook covered courtyards formed in the angles of the M and rising full height of building. Drive in is by ramp up to first floor level so that most rooms are within one or two storey reach and kitchen, restaurant and service entrance is one the ground floor and isolated from the main circulation. Between the entrance, and covered court-yard are public lounges and reception area. To the left of the entrance is stairs which leads down to the restaurant and garden level and adjacent is the link with the conference centre which also serves some small shops. Administration is next to main lounge and near reception area.

LANDSCAPING: Other than drives the level site in front of the conference centre is planted with grass and palm trees following the line of exit drive to the east. The side of

the ramped drive to the hotel entrance are faced in limestone which is extended westwards as screen to hotel garden below entrance level. Entire landscape is watered by sprinklers and bubblers.

STRUCTURE: Conference Centre - the meeting room block is R.C. - construction with solid wall to foyer from which double beams span on to double columns forming with glazing and suspended sunbreakers on external wall to northwest.

Hotel - The bedroom wings are cross-wall construction. Internal courtyard system consists of raking R.C. beams leaning against bedroom wings. Thin slabs span between them to form light baffles. Flat roof over lounges is R.C. waffle slabs with beams on a $30/60^{\circ}$ grid suported on columns.

Trevor Dennett is an architect who genuinely tries to understand the physical problems of building and accepts the answers to them as part of the architectural form. In a country like Saudi Arabia, a long way from the steel works of the world and in the middle of a desert of sand, the obvious structural material is concrete which has the advantage of mass, in a situation where good thermal insulation and acoustic protection are much needed - the latter because Riyadh airports is close. Shrinkage of concrete aggravates the severe thermal movement problem which results from the hot sun in the day and clear, cskies at night which can be a problem in achieving good finishes.

SERVICES: The Conference centre is provided with conditioned air from a central plant. Input is at high level through diffusers. Air is extracted beneath seats into concrete ducts

and exhaust plenums. Roof space is kept cool by natural inlet and mechanical exhaust system. Committee rooms have individual A/C from plant rooms below. Throughout the centre, the structure of the building has been used to its greatest possible extent for conveyance of conditioned and vitiated air so that very little sheet metal ducting is used. The rooms are treated with simultaneous interpretation systems.

The hotel is provided with a full range of mechanical and electrical engineering services. It is Air conditioned all through. Bedrooms have individual fan-coil-units to which cooling water is piped through from a central plant; heating coils are electrical. Primary air is supplied from three fresh air plants. Central boiler plant supplies hot water. Kitchen and plant rooms are provided with conditioned air which has been exhausted from the restaurant, foyer and circulation. Beneath the hotel are undercrofts with primary air plants, hot water cylinders, distributor ducts and pipes.

ACOUSTIC TREATMENT: The walls of the hall are clad with travertine, soffit plastered and painted. Hall internally has timber flooring; oak platform, timber wall dividers with internal pavels of mid-blue shot silk, inherently fire proof, seating upholstered in terracitta wool fabric with black leather trim, ceiling enmeshed with structure and consisting of plastered coffers (white textured acoustic spray on expanded metal). The programme for the centre produces a rather distinctive type of auditorium. Since it has a large capacity, there is a natural desire to use it for other purposes than

those on conferences alone; so it is to some extent a multipurpose hall, though not to the extent of admitting uses which need a flat floor. It is therefore a raked auditorium and one intended for speech. Such a building is usually a theating but in this case, theatrical apurtanances have not been provided and there is natural light. The stage resembles a concert platform. Though the plan and shape approach those of a concert hall, the large volume which would give it a reverbration time (R.T.) suitable for music was not applicable and a considerable quantity of sound absorbent treatment was necessary. Ceiling pyramids are of absorbent plaster; the silk panels on the walls have same high frequency absorption and the cover hard board panels provide absorption of low frequency. The R.T. at full capacity would be slightly longer than the conventional recommendation for speech, in order to give a little help to music. Since speakers will be using microphones, it was not necessary to consider reflection of natural voices and consequently canopies and other such acoustical shapes are absent - their place is taken over by a group of loud speakers over the platform.

7.2.1 Critique

Site Concept: The idea of having two separate structures fore the conference centre and hotel (temple and residential hill concept) is highly commendable when one thinks about the heavy traffic expected at the entrances of both facilities. However, the forms chosen in the

design of both structures are in conflict. The M shape plan of the hotel, while allowing a central service core at the apex and for provision of covered and open court yards is in conflict with the overall square form of the conference centre. The effect is that one gets the impression that they are not part of the same complex. It could have been better if the two functions and their forms blended into each other and the site while maintaining the purpose of separating the traffic to both functions.

Parking seems inadequate on the hotel side. Conference Centre: Having the foyer distributed between three levels works out well, one doesnot get the impression that he or she is in a large space, although it is required for in the brief.

The flexibility obtainable from the stage design and the first five seating rows is applaudable in providing three different arrangements.

The meeting rooms should have been planned so that they could be converted into a large banguet hall for very large gatherings. The concept of flexibility should have been carried right through.

Private VIP lobby and rest rooms are not provided. Hotel: The privacy achieved by the sawtooth design of the bedroom wing is commendable, however this concept is not carried through in the interior design. This is evident from the furniture arrangement within the guestrooms. The concept of flexibility is evident again in that certain rooms are capable of being converted into suites. Front and back house activities do not clash. This shows a reaction to this

early in the design stage. The single loaded corridors allow for cross-ventilation. This also saves cost on artificial lighting as daylight is admitted direct into the galleries.

7.3 Kenyatta Conference Centre, Nairobi Kenya

ARCHITECTS: Karl Henrik Nos:v'k

CLIENT: The government of the Republic of Kenya

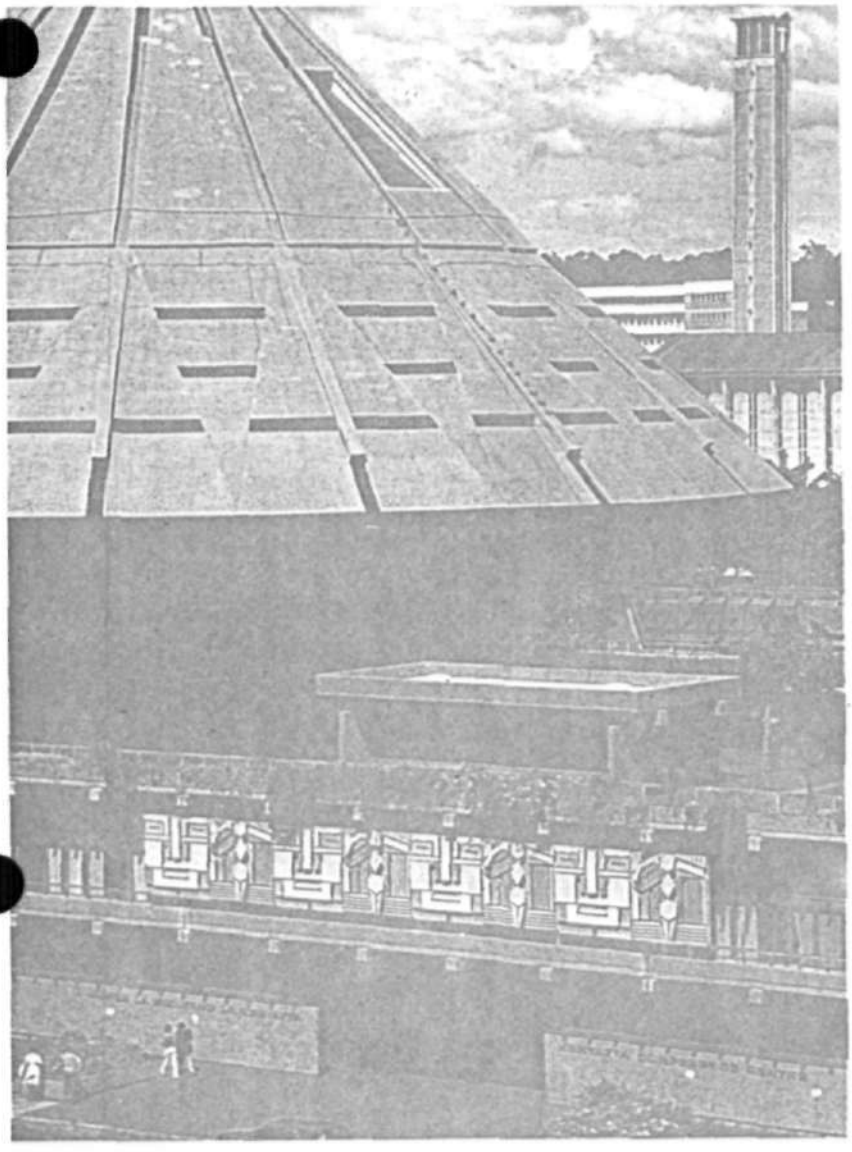
LOCATION: The conference centre is set in an open area of nearly a quarter of a square mile in the very heart of Nairobi. The complex comprises of an extremely large Plenary Sessions hall to the east, a strikingly beautiful amphitheatre to the west and a spacious linking building between the two, which itself is surmounted by the twenty-six storey administrative tower.

The centre is located on Harambee Avenue in Nairobi city centre.

At least, half a dozen hotels of international first class rating lie within walking distance of the centre this making it unnecessary to include one within the complex.

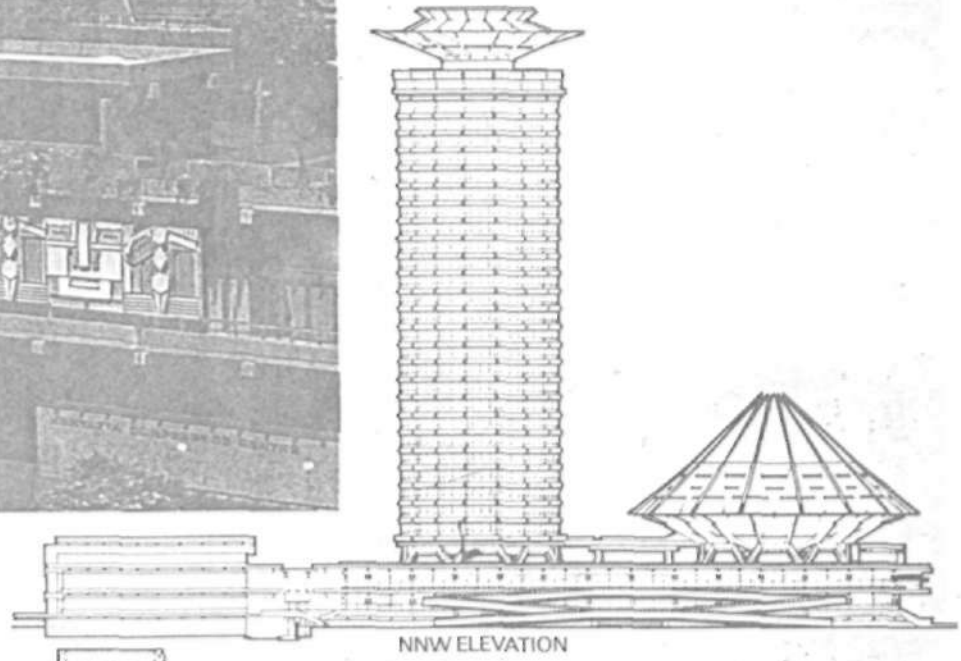
PLENARY SESSIONS HALL (MR 1) Facilities include complete sound amplification and recording systems, interpretation booths with simultaneous interpretation by wireless system in up to seven languages and two observer galleries.

The total floor area is 26,000 ft^2 which may be furnished to the hirers requirements. Seating alone may accommodate four thousand delegates, or up to three

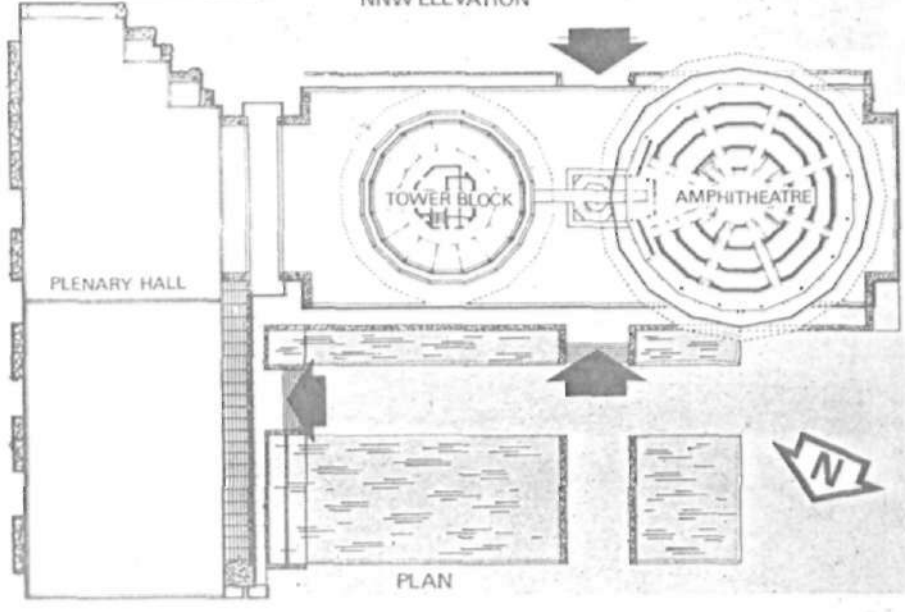


Left: The South-East entrance, with the covered walkway to the Amphitheatre in the background.

Below: Condensed Elevation & Plan.

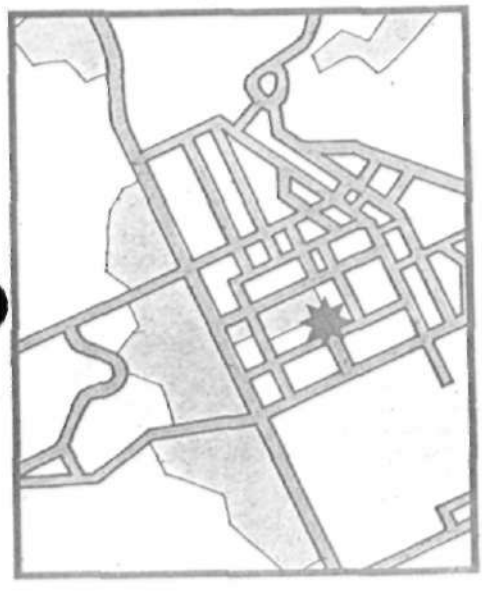


NNW ELEVATION



PLAN

Below: The Central siting of the KCC.



thousand, two hundred with tables, banquets can serve two thousand, five hundred while cocktail parties may host up to five thousand guests. The hall also functions as an exhibition centre.

MEDIUM SIZED CONFERENCE ROOMS (MR 2 and 3)

Each room has accommodation for about four hundred people in rooms or two hundred and sixty at tables, six language interpreters' booths with simultaneous interpretation by wire system, public address, microphone and tape recording facilities. The design concept of two separate rooms, each a mirror reflection of its neighbour, makes meeting rooms two and three uniquely suitable for bilateral type conferences meetings under one administrative head.

THE AMPHITHEATRE (MR 4) - The mushroom shaped amphitheatre seats eight hundred at tables on three balconies circling the main auditorium. The podium is on the centre balcony immediately above the entrance from the covered walkway leading at roof level across the main link building from the two main entrances to the complex. Opposite the podium are six simultaneous interpretation booths, in addition to which full recording and public address system are available.

PRESS FACILITIES

A speical telex room communicates with all parts of the world, whilst a speical switch-board serves twenty international telephone booths via the telephone desk. A press bar may be installed, serviced by steward staff.

TECHNICAL SERVICES

1. Interpreters booths linked by wire and wireless simultaneous systems.
2. Automatic tape recording
3. Public address system
4. Portable P/A system
5. International telephone communication
6. Telex communication.

7.3.1 Critique

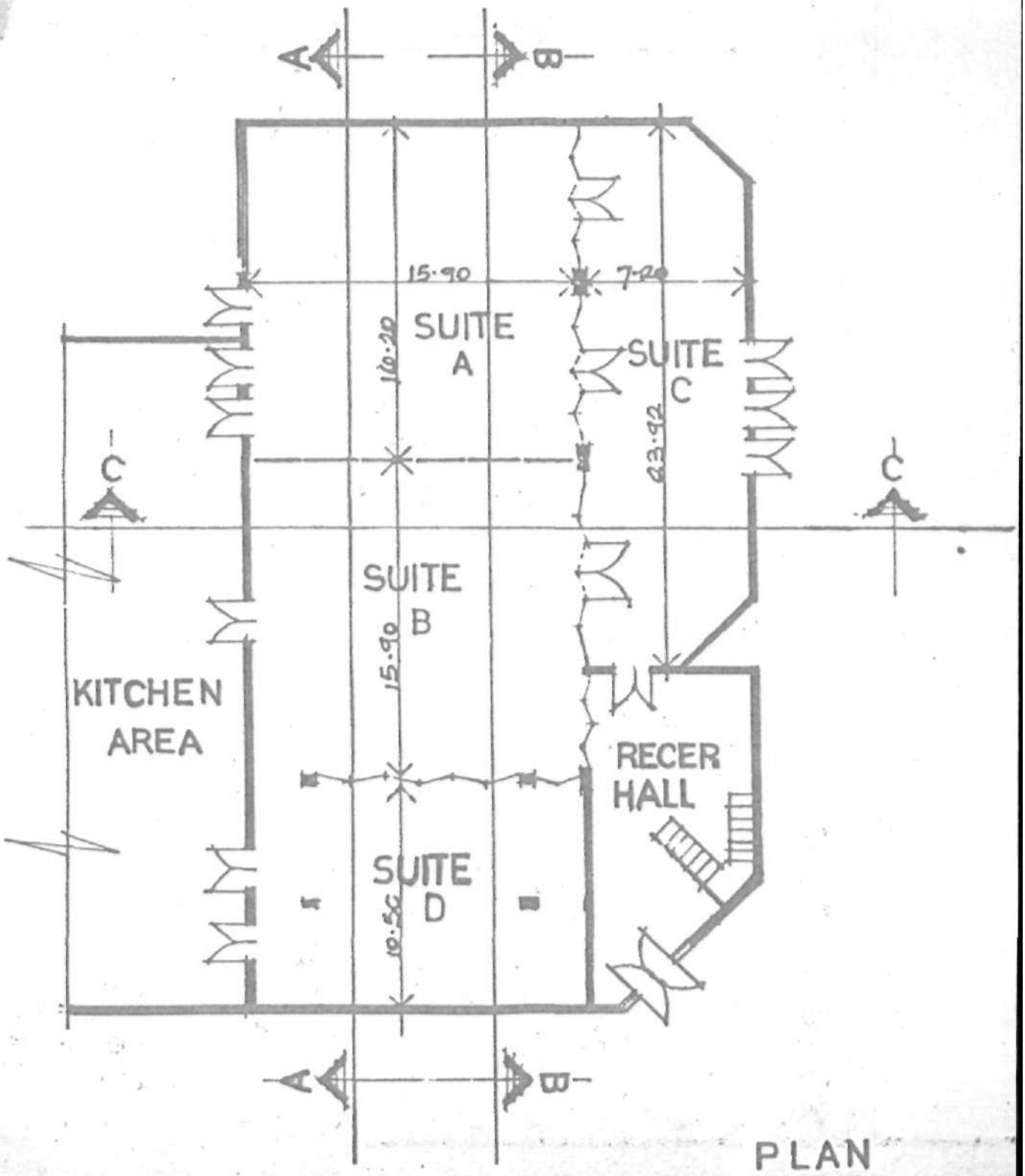
The design is very elaborate. Maximum respect has not being paid to flexibility. For instance the auditorium design is very rigid. The plenary hall should also be capable of being subdivided into smaller conference rooms.

7.4 Eko Hotel Banquet Hall, Lagos Nigeira

Details of Conference and Banqueting Facility

Room Style	Suite A	Suite B	Suite C	Suite D	Eko Akete ROOM	EPE ROOM
Reception	350	200	200	250	50	50
Theatre	300	150	150	200	50	50
Classroom	200	75	80	150	25	25
U-Shape	150	80	90	100	25	25
Board-room	150	100	120	150	20-25	20-25
Banquet	350	200	200	250	-	-
Dinner/Dance	200	80	90	100	-	-
Dimensions	15.5x16.2	15.5x 16.2	23.9x 7.2	15.9x 10.5	30'x19'	30'x19'
Height	5.4m	5.4m	2.7m	2.7m	9'x13'	9'x13'
Points	7x13amps	4x13 amps	3x13 amps	3x13 amps	3x13amps	3x13amps
Location	lst lokby	lst lobby	lst lobby	lst lobby	lst floor	lst floor

Conference Room Plans

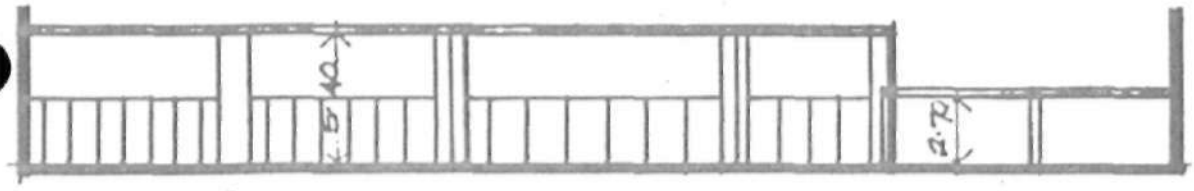


PLAN

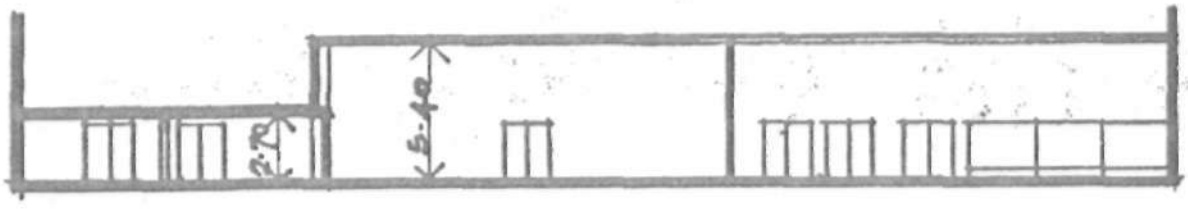
Sectional Elevations



SECTIONAL ELEV. CC



SECTIONAL ELEV. B B



SECTIONAL ELEV. A A

SECTIONAL ELEVATIONS

scale = 1 : 400

7.4.1 Critique

Site Concept: The separation of banquet and hotel lobby traffic is achieved by bringing them in through different entrances although both are on the same level. Site is filled up in front to provide a ramped entrance drive way. Grass is planted on lawns and watered by sprinklers. Landscapping is well done both inside and outside.

Hotel: Bedrooms are off double loaded corridors and are about four hundred and seventy. All rooms have patios which have a view of the Kuramo waters or the city scape. Roof terrace and restaurant are on the eleventh floor. The lobby on the ground floor is open and thus day lighting is abundant. All corridors are also well day lit.

Banquet Hall: It also serves as a conference facility. Essentially it is a multipurpose hall that serves various functions (see table). Maximum capacity is one thousand. With the use of folding, collapsible partitions, it is possible to sub-divide the hall into four suites of varying dimensions. Most suites have private entrances so they could be used simultaneously. The main entrance is through a reception hall. Suites are serviced by 13amp power points and microphone sockets. Kitchen area is provided adjacent to the hall to service banquets, lunches e.t.c.

Although the hall works well for banquets and such functions, conferences are not well taken care off. Recording and simultaneous interpretation facilities are absent. Acoustic draw backs are also manifested.

7.5 Hamdala Hotel, Kaduna, Nigeria

The hotel is located on Waff road and is bonded by club road and a service road on either side. The project was originally conceived as a hotel complex of a twelve storey tower block, containing at ground and first floors public and service areas with nine floors of bedrooms and a roof garden, terrace and night club. Adjacent to the central block was a cinema, ballroom and conference hall, garden and a 50m swimming pool. Included in the scheme was a car service station with petrol kiosks.

The bell room and cinema were omitted, the bedrooms lowered by 3 floors and the night club postponed as economy measures.

7.5.1 Critique

The hotel has been designed with total disregard for tropical factors. Total reliance on artificial lighting, mechanical plants result in badly ventilated and lighted areas when power fails. Kitchens are not well ventilated and food decays rapidly. Accumulation of heat is intensified as the design is devoid of direct openings to external, environment or external walls for the installation of airconditioning units.

Total enclosure of the bar causes feeling of being closed in natural light and ventilation are absent. The lounge is gradually being turned into a bar annex.

Double loaded corridors in bedroom wing is long and uninteresting, ill lighted and smells due to bad maintenace of toilets.

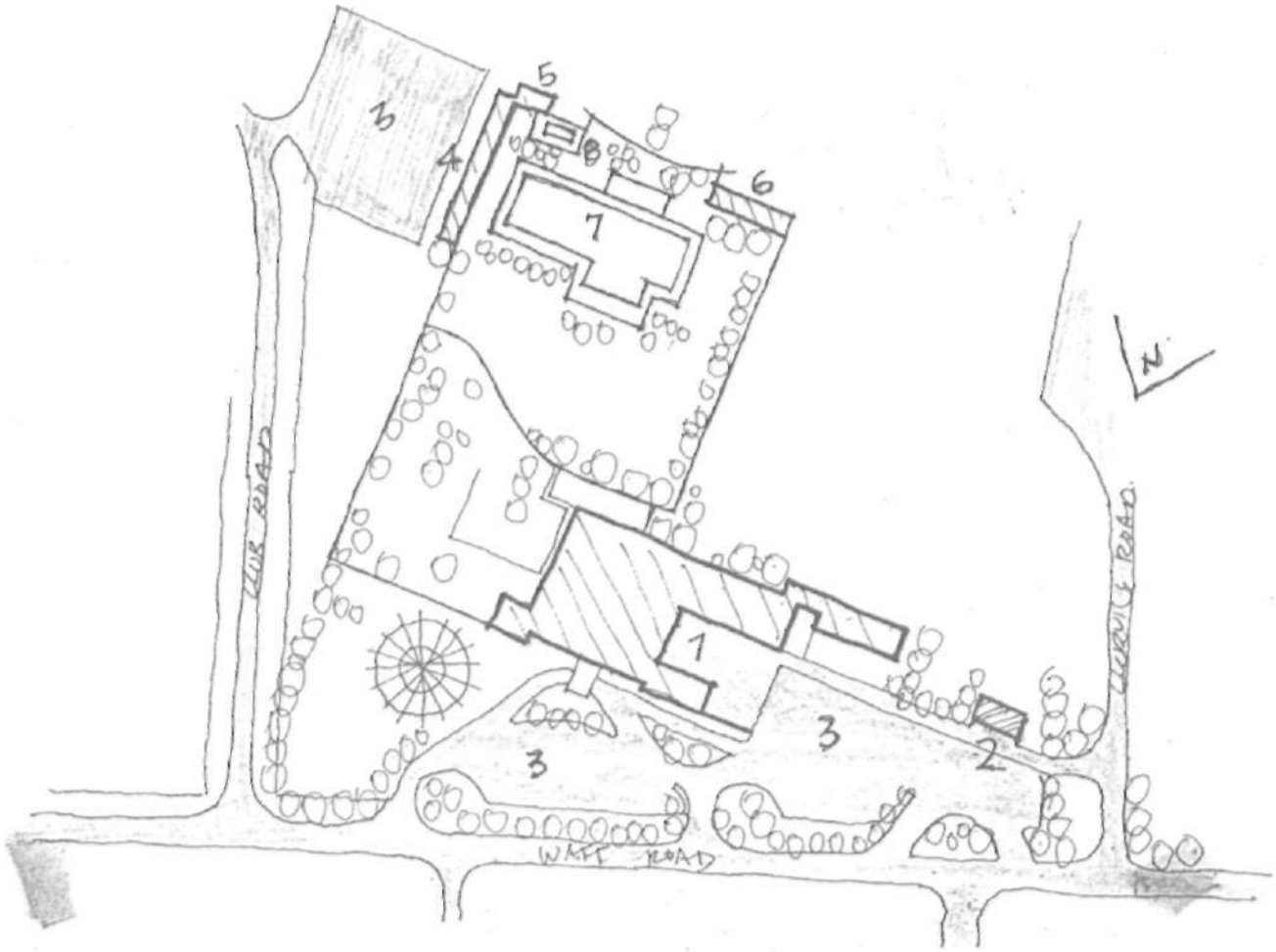


fig 31: SITE PLAN, HANDALA HOTEL KADUNA.

1 hotel buildings
2 car service station
3 car park
4 changing rooms/lavatories
5 plant
6 shelter
7 swimming pool
8 paddling pool

The functions area is served by the hotel lobby. This traffic is heavy during activities.

7.6 Nigeiran Institute of International Affairs

The Institute which is a department of the Federal Ministry of external affairs is located on Kofo Abayomi Road in Victoria Island, and is headed by a Director General.

The instiute, is a non-political and non-profit making organisation and it reserves the right to reject applications from persons or organisations whose activities might be considered incompatible with the aims and objectives of the institute.

FACILITIES	CAPACITY	CHARGES
Lecture theatre (commercial)	400	₦400/hr
Lecture theatre (noncommercial)	400	₦250/hr
Conference hall (commercial)	300	₦300/hr
Conference hall (non-commercial)	300	₦200/hr
Use of simultaneous interpretation equipment	-	₦150/hr
Ground floor foyer (for light refreshment)	-	₦150/day
Ground floor (for exhibitions and display)	-	₦500/day

7.6.1. Critique

At the moment, the Nigerian Insitute of International Affairs has a near monopoly on international conferences that take place in Lagos. This is because they have facili-

ties for simultaneous interpretation and speech recording. They also have facilities for exhibitions and light refreshments. They do not have resident interpreters, so organisations have to make their own arrangement.

7.7 Administrative Staff College Of Nigeria, Badagry

The administrative staff, college of Nigeria is a Federal government institution set up in 1979 and was intended to run short courses in administration for the staff of Federal government ministries and para-statals. Accommodation is provided in form of chalets and hostel rooms. The college has facilities for conferences in form of a hall and 7 smaller conference rooms and has been used extensively by other organizations.

The auditorium is pentagonal and is raked to seat three hundred and forty and thirteen on stage. The gallery seats eighty two; The arrangement is rigid and lends itself to no flexibility.

8. BRIEF PROPOSAL AND USER REQUIREMENTS

8.1 Brief

After going through the selected case studies, notably the facilities in Saudi Arabia and Kenya, a proposal for the Lagos facility was prepared.

FACILITY: Conference Centre and Hotel

SITE: Topo Village, Badagry Division, Lagos State

CLIENT/SPONSOR: Lagos State Government and Private entrepeneurs

USERS: Organisations (business, socio-philantropic, religious and political), tourists.

The Conference centre would consist essentially of a main conference hall, meeting rooms, exhibition, relaxation and circulation space and an administrative wing to take care of its operations. The Design of the main hall is of the 'theatre' type but as its main use is for speech, all theatrical appurtenances e.g flytower, dressing rooms and rehearsal rooms are omitted. The volume of the hall is one that does not allow a reverberation time which will suit drama. However, other activities such as music and film shows could be accommodated. The reverberation time for music will be increased by a full capacity audience. Stage design of the auditorium should allow for flexibility for different arrangements.

The meeting rooms would not be raked as they should be capable of being covered into a large banquet hall. A banquet kitchen should be attached to it.

The hotel section should be seen as a facility of the conference centre and not as a commercial hotel. However one cannot rule out the possibility of accommodating tourists and fun lovers due to its proximity to the beach. As such, shops, boutiques and a swimming pool should be part of the design. Certain guest rooms must be capable of being converted into smaller conference rooms or suites.

Due to the present economic state of the country, the facility is to be designed so that it could be built in phases with the first phase eventually paying for the subsequent ones. However, the first phase itself must be self sustaining so that it could function normally.

8.2 User Requirements

Conference Centre

1. Main conference hall (1000 seats)
2. Committee rooms/banquet hall
3. Furniture storage
4. Booths for interpreters
5. Administrative offices
6. Press room
7. V.I.P. lounge
8. Library
9. Banquet kitchen
10. Exhibition space
11. General foyer
12. Refreshment foyer
13. Rest rooms
14. Telephone booths
15. Service entrance
16. Car park.

Hotel

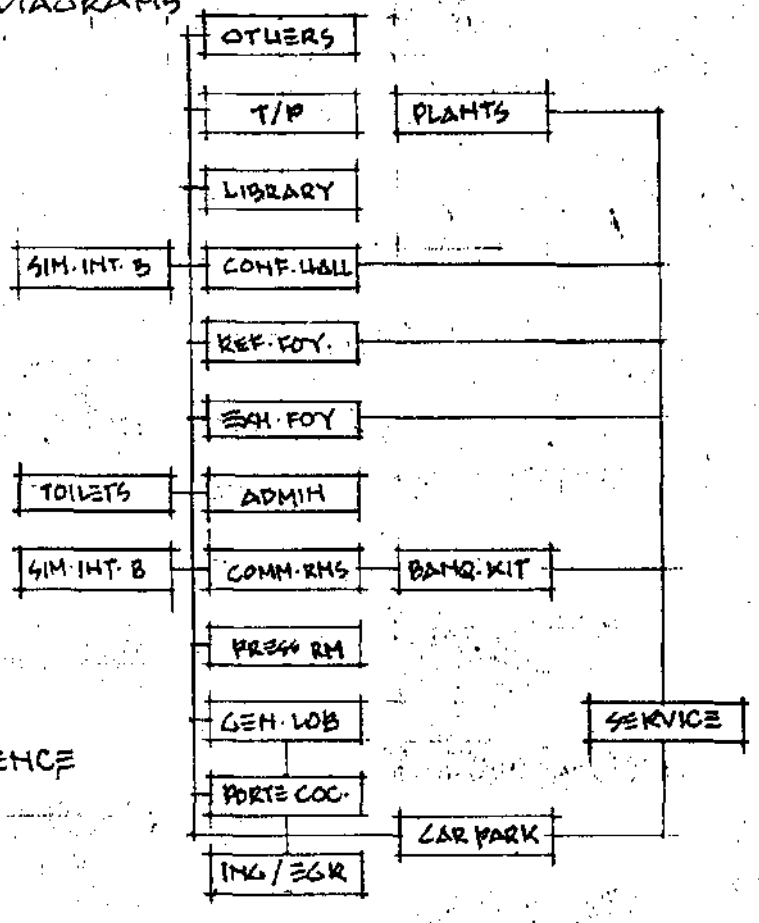
1. Guest rooms (250 min)
2. Hotel lobby
3. Shopping arcade
4. Travel bureau
5. Bank branch
6. Bar and store
7. Cocktail lounge
8. Restaurant
9. Main kitchen and stores
10. Administrative offices
11. Baggage check/storage
12. Elevator lobby
13. Room service
14. Control office
15. Laundry
16. Staff dining room/lockers
17. Rest rooms
18. Refuse collection
19. General Store
20. Plant room
21. Staff/service entrance.

8.3 Functional Parameters

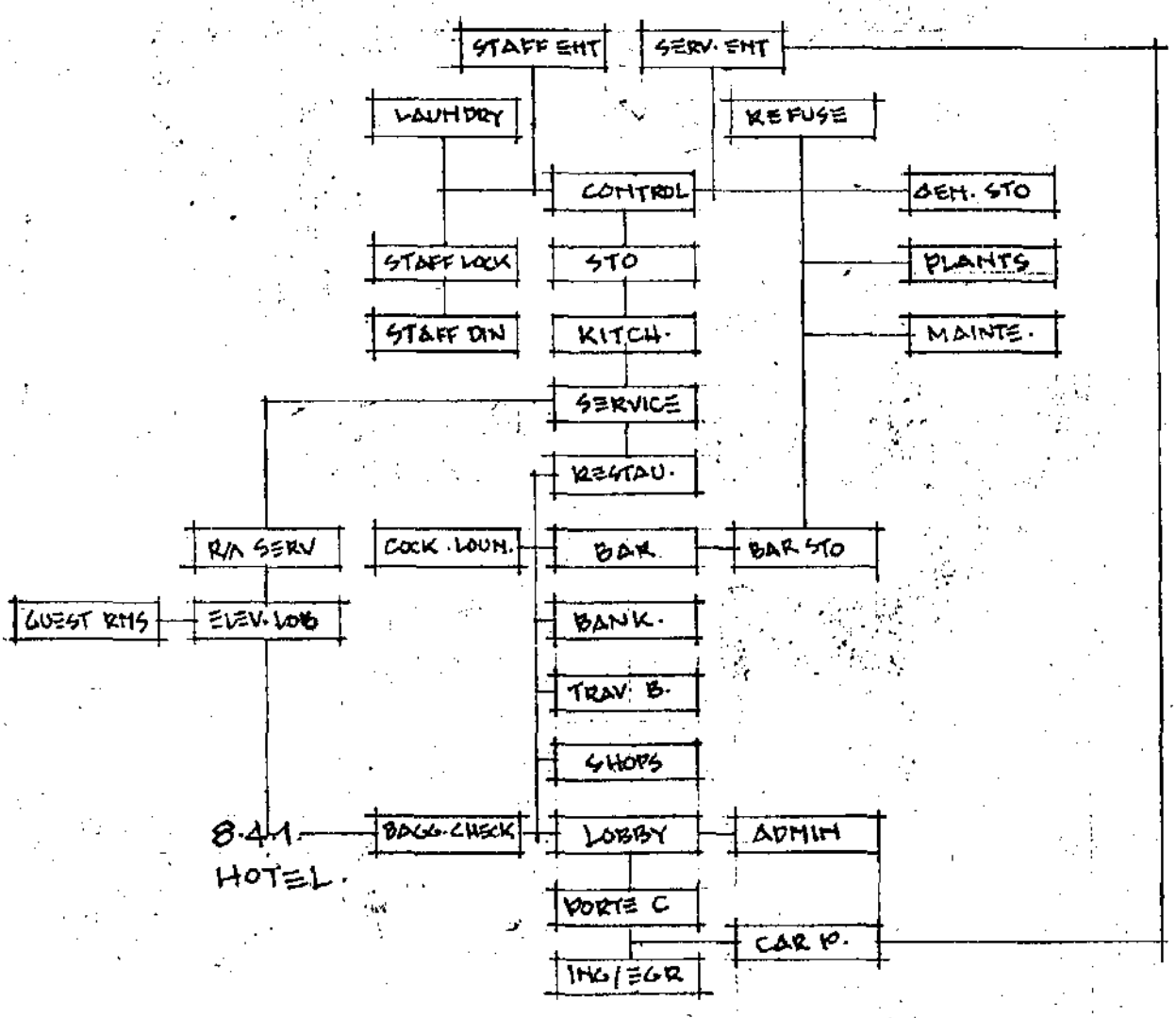
In preparing a functional diagram for the facility, certain criteria were used in judging flow and articulation of spaces. This include.

a. Separation of hotel lobby and conference traffic
b. Separation of vehicular and pedestrian traffic
c. Separation of service (back house) and guest (front house) traffic.

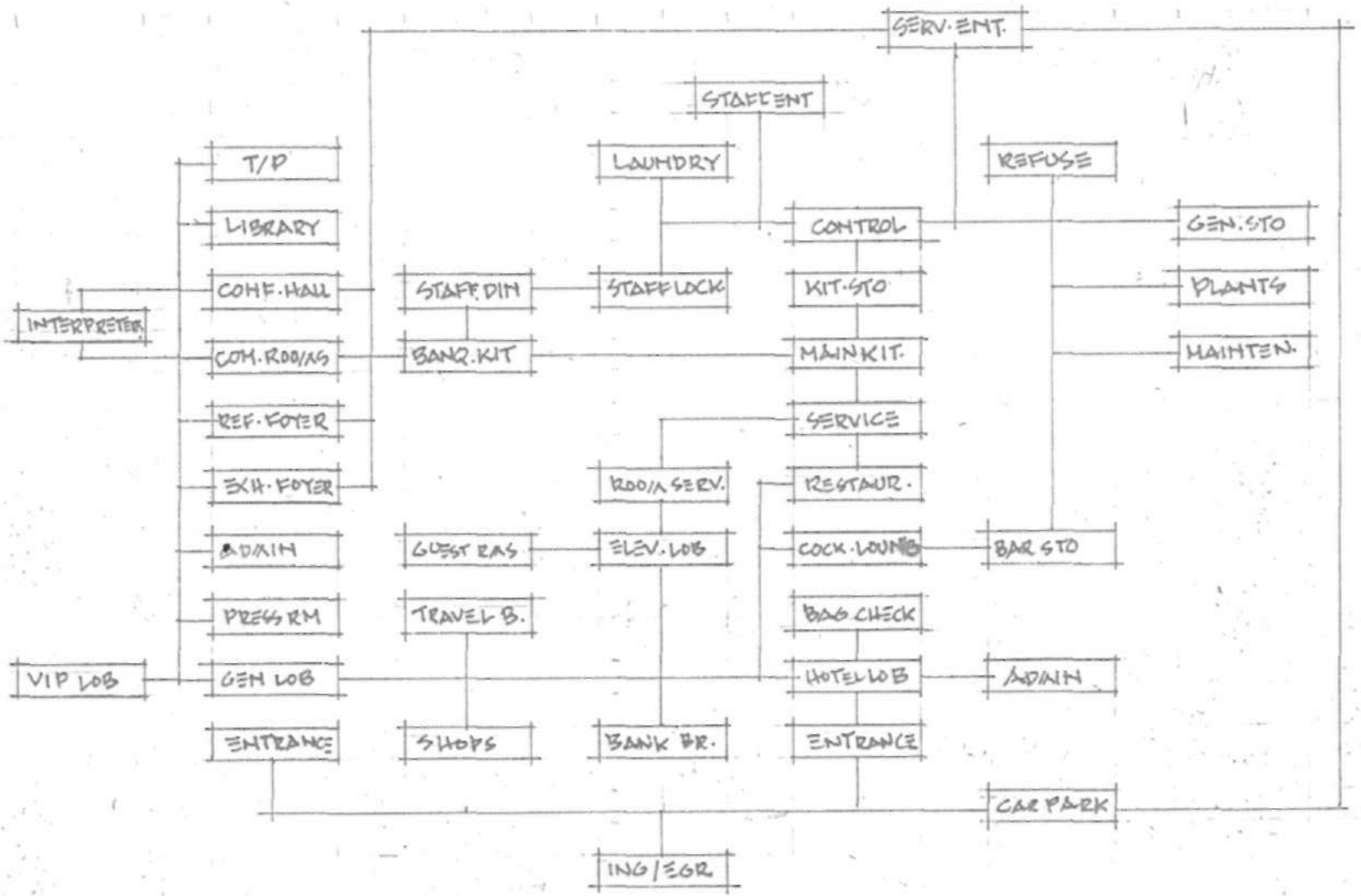
8·4 FUNCTIONAL DIAGRAMS



8·4·2.
CONFERENCE
CENTRE



8.4.1.
HOTEL.



8.4.3. COMPOSITE FUNCTIONAL DIAGRAM.

d. Use of circulation space and certain spaces as multifunctional spaces.

8.4 Functional Diagrams

8.4.1. Hotel section (see fig.)

8.4.2. Conference centre (see fig.)

8.4.3 Composite functional diagram (see fig.)

8.5 Design Analysis

The conference hotel could be defined as a public establishment offering guests and conference organizers against payment certain basic services: accommodation, conference facilities and catering. Circumstances of hotel operation also vary: in this case, it is a facility of the proposed conference centre and as such should be seen differently from a resort hotel.

8.5.1 The site

HEIGHT/DENSITY CONTROL: Maximum site utilization normally involves basement and possibly sub basement construction with high rise development. However due to the sub-urban nature of the location, high rise developments would not be welcome. As such, low rise development within a four storey limit has being proposed. This also excludes the use of guest elevators.

NUMBER OF ROOMS PER FLOOR: This is governed by fire regulations and house keeping organisations. The fire regulations include maximum distance of escape staircases from the farthest room and length of internal corridors.

For house keeping organisation, the number of rooms of average standard per floor should be a multiple of twelve to fourteen which is the number of rooms which can be efficiently cleaned and serviced by one room attendant. Efficient use of the stairs and service elevators and other aspects of circulation must also be considered.

EXTENSIONS: The initial stage of development may be difficult and expensive. Difficulties arise from marketing uncertainties, from the problems of securing suitable management and staff and from the determination of profitable levels of operation for each development. One method to overcome this is to provide for phase expansion. However, the initial size of the site and infrastructure must be large enough to meet the ultimate needs.

CAR-PARKING: Requirements, vary, however an average is put at 1.2 spaces/guest. Spaces should be provided for employees and service vehicles. Car parks may be concentrated or dispersed over the site. A concentrated system is highly favoured as it minimizes noise and disturbance. It can be located and screened to reduce the effects of head lights and noise. Costs of access roads, construction and drainage are also reduced.

LANDSCAPE: Apart from functional needs, space is generally needed for landscaping to improve the appearance of the building. The range of features which may be provided through landscaping extends from hard paving and man made sculptural forms to gardens, lawns and park lands. As such a combination of both natural vegetation (for perimeter and division) with with hard pavings (for paths, terraces and functional areas) is usually the most effective.

ACCESS: Points of entry must be learly defined, convinient, free from harzards and appropriate for the purpose. Provision must be made for:

Guest: arriving by private cars, taxis, public vehicles and/or foot with arrangement for their reception.

Staff: with security control.

Goods delivery: separate provision may be made for food items with a difficult delivery point for other goods.

Refuse and garbage storage and removal.

The entrance route for goods deliveries, maintenance services and refuse removal must be separated from that for vehicules used by guests. This is achieved by using separated access roads with appropriate directions and screening.

Staff entrances must be separated from those used by guest and prefarably separated from the goods delivery area, in the interest of control and secuirty.

8.5.2 Constructional Features

As mentioned earlier, a low-rise development is being proposed. Apart from respecting the suburban setting, the importance of environmental conservation cannot be over-emphasized. The layout may result in a cluster of low-rise units arranged around central facilities.

STRUCTURAL CONSIDERATIONS: Within the enclosure of the complex, it would be necessary to accommodate a variety of functions each requiring different provision for space.

The structural form of guestrooms is a series of cellular units based on repititive modular dimensions and arranged in rows along a corridor or grouped around a central core. Changes in dimensions e.g. For suites are kept within the module and limited to specific floors, wings or positions such as external and corners.

For public rooms - the emphasis is generally on creating large voids as far as possible free from obstruction to allow maximum flexibility in layout and design.

Other features which affect structure design include relative position of guest room wings and circulation cores, variations in ceiling heights of public rooms, limitations on the position of columns in certain areas, housing for engineering services within the ceiling void, and the need to provide support for underslung equipment such as movable partitions.

For practical and administrative reasons, the public areas invariably need to be located at or near street level. Service areas are positioned adjavent to or in floors below the public facilities. To provide segregation from public activities, quietness, elevated views and other benefits of height, guestrooms are usually on floors above the public levels.

If the site area and access considerations permit, the simplest structural solution is to plan the bedroom and public room blocks as separate structures. As such, the enclosure of public areas (of one or two storeys) permits a wide variety of building designs. Shell, folded, flat or pitched roof structures may be used, incorporating roof lights and other features.

The independence of design enables the plan shape to be modified to take advantage of ground levels and other features of the site. Design of the guest room block is also simplified both in that the structure and ducted services can be directly extended down to subfloor level.

STRUCTURAL SYSTEMS: Choice of structure system is affected by height and dimensions of the space. This choice falls into two main groups.

- load bearing walls of masonry.
- skeletal structures which may also provide a platform support for load bearing walls.

The former combines the advantages of traditional construction with its properties of durability, noise insolation and fire resistance. The cellular nature of hotel guestrooms lends itself to cross wall construction and the adaptability and variety possible, both in building design and choice of materials. This is competitive in construction costs of low-rise buildings although it has the disadvantage of slower and labour intensive erection.

Skeletal structures involving beams or slabs supported by a framework of columns are generally used for large space. The inherent lightness and structural continuity of framed buildings tends to create problems from noise transmission, heat transfer and need for structural fire resistance.

8.5.3 Entrances and Lobbies

The appearance of the entrances and the general foyer (conference centre) and their approaches is important as they typify the complex. The entrances must be clearly

defined and must provide a good view of the interior.

Provision must be made for guests arriving on foot or by motor car or taxi, for the ambulant disabled, and for coaches. As a rule, the entrance fore court should be at least 5.5m wide to allow two cars to pass and any overhead sign or projection must give sufficient height clearance for a coach (5m say). An extended canopy (porte cochere) provides a measure of shelter from wind and rain. It could be provided as an independent structure.

LOBBY/RECEPTION FOYER These include general circulation and waiting areas leading to the reception, cashier, information e.t.c. it also serves as an assembly point for guests and others attending other functions or using the restaurants. Ideally, it should extend directly from the main entrance and should be immediately conspicious on entry.

The size of the hotel lobby varies between 0.8 to 1.2 square metres per guest room while the size of the conference foyer is a function of the number of seats in the auditorium.

TOILETS AND RESTROOMS: This facility must be provided for main lobby/foyer, restaurant and other public spaces. Entrance must be different for men and women.

Typical minimum standard based on the total number of users are:

Fixtures	Male	Female	Space requirement
Water closet	1/100	1/50	$3.0m^2$
(Min)	2	2	
Urinals	1/25	-	$1.3m^2$
Wash hand basins	1/W.C.	1/W.C.	$1.5m^2$

8.5.4 Circulation and Transportation

Flow patterns of guests or delegates arrivals, departings and usage of facilities are determined partly by evaluating market surveys, partly by relating the experience gained in similar facilities elsewhere. In considering flow pattern, it is necessary to take into account the location of the hotel, main modes of transport for guests and the internal circulation of guest and staff.

The location of the facility should be such that it is accessible by road as this is the basic mode of transportation. Access for private cars and coaches should be provided.

SEPARATION: Routes taken by guests and delegates, non-resident customers and staff tend to follow distinct patterns and these establish clear relationships between the various areas of the complex. The layout must not only facilitate convenient and efficient circulation, but also provide separate routes for guests, staff and service personnel.

CORRIDORS AND STAIRS: In public areas, corridors involve loss of space and adaptability in addition to extra construction costs. As such, circulation should be through areas which are capable of other use (lounges, shopping areas) or which serve as focal points for multiple activities such as lobbies. The corridors leading to the guest-rooms have necessarily to be separted and here considerations of convenience, noise attenuation and privacy are important aspects of planning. Equally important is the need to provide for efficient room service, house keeping and maintenance work.

- Goods and services: the layout is determined by the need to provide efficient circulation between storage, working and service areas and the need to link the public and guest circulation at appropriate points. Stair-case design is largely dictated by fire and safety requirements. All staircases intended as egress routes from guestrooms in event of fire must be enclosed within a continous fire protected enclosure having a two hour rating. Access from each level must be through a vestibule, independently ventilated and lighted and fitted with self closing doors at least 1000mm wide.

RAMPS: These are used for disabled guests, service routes, transporting goods and equipment by trolley or hand. They are used where there are limited changes in level, particularly where steps are liable to cause harzards or difficulties. Recommended gradient is 1:12.

8.5.5 Guestrooms

The main business of the hotel section is essentially directed towards the letting of guest rooms. Single rooms are neither economical or attractive to the expected clientele. As such all the guestrooms are double rooms with twin beds. However, certain rooms must be designed so that they could be adaptable into suites.

SERVICING OF ROOMS: Access for house keeping, room service and maintenance must be carefully planned to ensure efficiency without unnecessary disturbance of the guest.

Service elevators and staircases should open into a service lobby providing direct access to rooms and closets

necessary for house keeping and other operations. Access must also be provided to engineering plants and services on each floor.

BATHROOMS: Most hotels provide an individual bathrooms with each guest room unit. The area of the bathroom is usually in the order of one sixth of the total bedroom area, and its position will govern the shape and the some extent the size of the guestroom.

For economy in plumbing, ventilation and construction, reduction of noise transmission to bedrooms; for access and maintenance requirements the bathrooms are grouped back to back in pairs and superimposed from floor to floor. Three basic arrangements are possible.

- bathrooms on external walls: allows natural ventilation and lighting. However there is a reduction in privacy and of light and view from the room.

- bathrooms interspaced between bedrooms: the width of the building is reduced by about 4,6m. The outer bathrooms have natural light and ventilation. Disadvantages arise from the elongated corridors and associated problems. Access to the service duct is through a guestroom and problems of noise transmission from the bathroom to adjacent guestrooms are likely to arise.

- bathrooms on internal walls: positioning the bathroom between the guest room and corridor leaves a narrow foyer. This aids privacy and could be used as a dressing area. The bathrooms require artificial lighting and ventilation but the common duct can be serviced from the corridor.

8.5.6 Restaurants, lounges, bars, banquet hall.

PLANNING CRITERIA: CIRCULATION. Entry into the restaurant should be through a reception lounge or foyer. This area will be used as an assembly point before entering or leaving the restaurant and as a lounge for cocktails and other drinks. The bar should be on the remote side of the lounge extension. Conveniencies should be positioned near the entrance lobby.

The lounge being an intermediary area should have decor that is inviting and relaxing but must not clash with that of the restaurant in style or flamboyance. The design of the bar should enable drinks to be served over the counter and by waiter service. Seats are required for patrons wishing to drink at the bar and may be in the form of seats or stools (with foot rests).

RESTAURANT DESIGN: Layout should take account of the features of the room, external vistas and internal displays and entertainment, circulation patterns of customers and staff, method of food service, seat groupings and types of furniture.

BANQUET HALL: Rooms intended for this purpose are usually designed to be multifunctional to ensure frequent use and lustify the high cost of providing the space. The hall must be capable of being converted into exhibition space or smaller conference rooms by using paritions.

Ventilation, airconditioning and lighting services to each area with indivudal control and balancing is required.

8.5.7 Conference Hall

The hall is essentially a raked one designed as an auditorium. Due to its capacity it could be used for other functions e.g. drama, music, filmshows, although it is being designed basically for speech. Design of Stage area should be flexible for different arrangements. The seating arrangement should include a writting area for microphones e.t.c. Rise of seating tiers should take cognisance of sight lines.

As delegates would be making use of electroacoustic appliance, strong reflectors are not required. Acoustic design is however required in case the hall would be used for speech. Reverberation time should be between 0.5 and 1.5 seconds. The volume of the hall is $7.5m^3$ - $14m^3$ per audience seat. For musical performance, the reverberation time will be appreciably increased if a full audience is in attendance.

8.5.8 Internal Environment

The interior design and decor has to meet a number of specific requirements.

- merchandising: it must be attractive, create awareness and interest.

- Operational: it must be easy to clean and maintain a good standard of appearance, resist damage and facilitate repair, replacement and rehabilitation with minimum disturbance of difficulty.

- Financial: it must provide the maximum benefit of space and facility for the minimum cost including costs of upkeep and renewal.

ing and conditioning, refrigeration, electrical distribution and equipment, communication and transmission facilities, elevators, catering, laundry and other operational services; and facilities for control, security and efficient management.

WATER SUPPLY: Large quantities required for personal use, food preparatory cleaning and general domestic purposes, fire fighting, cooling plants, boilers and laundries, and irrigation of grounds.

The Average requirement of each guest per day is about 140 litres. This has to be stored to ensure continuity of supply and at a suitable constant pressure. Alternative provisions include low level pressurized tanks or high level storage cisterns.

WASTE AND SOIL PIPES: Bathrooms should be grouped in pairs adjacent to vertical ducts so that short branch pipes can be used and a single stack system of drainage installed with the connections repeated from floor to floor. Pipes are also required in the kitchen areas.

DRAINAGE AND SEWAGE DISPOSAL: Provisions include facilities for both storm and sub surface water and foul water disposal, which usually need to be kept separate to facilitate drainage design and treatment of sewage. Drainage system for foul water should be as far as possible external to the buildings and be accessible. Conventional drainage gradients are based on a minimum self cleansing velocity of 0.76m/s but in situations where gravity flow is not practical, pumping systems may be provided.

Where a munioipal sewage system is not available, the developer will be require to provide effective means of sewage treatment pior to disposal of the effluent. Difficulties in sewage treatment may arise from neglect, smell, flies and unsightly appearance, but careful siting and screening out of view is required to solve these problems.

ELECTRICAL ENGINEERING SERVICES: Electric mains supplies are generally in 3-phase A.C. Main supply are often conditional on the provision of a mains transformer which may be located externally in a fenced off part of the site. The minimum capacity of the primary transformer should be 150% of the peak load requirements.

Emergency power systems must be well located in view of noise, fuel, space ventilation and maintenance requirements.

VENTILATION AND AIR CONDITIONING:Having recorded the clients brief and established external conditions (site analysis) and the desirable internal conditions, proposals for these services can be worked out. The need for mechanical as opposed to natural ventilation can be assesed and possible types of air conditioning can be considered.

Preliminary designs for the environmental services will lead to estimates of plant space requirements, preffered locations, access problems for installation, maintenance and replacement and ultimately to capital and running costs.

Ventilation services are required to provide oxygen for breathing and to remove stale air, smells and other products of occupation. Systems to supply and then to remove, air without any other conditioning are widely used. They may also be extract only combined with natural ingress of air or partial or complete air conditioning.

- Mechanical ventilation: Is utilized when the necessary volumes of air change rates cannot be provided by natural ventilation via windows, doors, louvered inlets and outlets. The basic equipment is simply an air intake, a suply air fan with filter, a distribution system and a means of discharged vitiated air.

Inlets, filters and fans must be located away from sources of pollution, where fan noise is not an embarassment, and where access is convenient. Ducts for pure ventilation require acoustic treatment and high and low velocity duct work will require noise attenuators.

Air is supplied through wall or ceiling mounted grills or diffusers with adjustable volume controls.

- Toilet extract: where toilets cannot be naturally ventilated, mechanical extract systems are required. This may involve ducts collecting from a number of toilets (hotel block) leading to the extract fans immediately before being discharged to the atmosphere, to ensure that any leakage is into rather than out of the ducts.

Fans will generally be small, but access is required and the duct work may require acoustic treatment. Vitiated air must be discharged at more than a minimum distance from any window or other air intake.

- Kitchen extract: Extracts vary from simple propellar type fans in exterior walls to systems with hoods, grease filters, ducts and auto-change over fans. The systems serve two purposes - to remove excess heat, smells and water vapour and to prevent these from entering adjoining spaces by producing slightly below atmospheric pressure in the kitchen areas, drawing air from other areas.

Air conditioning services involve the provision of filtered air at controlled temperature and relative humidity. Partial air conditioning may omit humidity control. The basic system consists of a means of cleaning, cooling, heating, humidifying and distributing air. This will involve a centra and/or local plant and water and/or air distribution system. Each part of these systems will have its own specific space and access requirements weights and preffered locations.

- Central plant: Consists of air intakes, filters, fans duct work, refrigeration machines, boilers, pumps, water treatment equipment and control in the form of individual but connected or packaged systems.

- Distribution and terminal units: In this case, space for insulation, expansion loops and anchors, control values and falls must be resolved.

Duct work systems are normally low or high velocity with relatively greater or smaller space requirements.

Return air systems may use false ceilings spaces or plenums must be insulated, and both supply and return air ducts may require fire and volume control dampers with access. Duck work of square or circular shape is of better performance.

Controlled directional air flow between rooms is achieved by the use of transfer grilles in or above doors or in partitions.

- Local units: These are generally either air-handling units using heated and chilled water from central plant to condition fresh and recirculated air or small packaged units containing their own refrigeration equipment, heaters fans and

and supplying conditioned air to single spaces.

Packaged air handling units require fresh air supplies and are generally roof mounted or in false ceiling voids with duct work systems. Smaller units are mounted in exterior walls to provide easy access for air to pass over their cooling coils as well as for fresh air for conditioning.

8.6 Fire Protection

The designer must asses the fire hazards which may affect the project. This is based upon both general and particular factors.

General factors include (1) The purpose of the building and (2) The nature of its constructions particular factors are (3) locations and siting of the building and (4) The manner in which the building is equipped and used fo for its purpose. Good building design lessens fire hazards to people through

- Good site planning and circulation
- Good fire resisting construction
- Good exist and escape route provision
- Good warning and fire defense system design.

FIRE DEFENSE AS A SYSTEM:- Satisfactory fire defense supplies a fully linked four part system consisting of:

1. Detection
2. Warning
3. Immeadiate attack
4. Calling the fire brigade.

The four parts may be linked in an automatic system e.g. sprinklers.

SELECTION AND DESIGN OF DEFENSE SYSTEM: The following factors should be considered -

Area, height, design and contents of building; and location of building.

Having obtained the results of the above consider,

1. Is a fully automatic defense system including its own warning system required?
2. Automatic detection and alarm system.
3. Manual alarms
4. Are wet or dry rising mains required
5. Are hose reels required.
6. What portable extinguishers are needed

8.7 Design With Climate

In order to get optimum results with regard to the climate conditions, one should tacked the problems of climate at the design stage.

The location of the project site falls within the warm-humid climatic zone, hence climatic design is governed by openess so that ventilation is made easier.

8.7.1 Climatic elements

These elements can be categorized under the following - solar radiation, air temperature, wind, atmospheric humidity and precipitation. All these have been discussed under the macro climatic forces (see chapter 6).

8.7.2 Comfort

In designing for the comfort of the eventual users, the primary requirement is maintenance of thermal balance between the human body and the environment.

Factors affecting comfort are broadly grouped into two. These are individual characteristics which include activity, acclimatisation and clothing; and environmental factors which include air temperature, radiation, humidity and air movement. The comfort zone defines a range of conditions in which thermal comfort is experienced. This is shown diagrammatically on the bioclimatic chart (see diagram) after Olgay. From the chart it is deduced that temperature should be kept between 21°C and 27°C and relative humidity should be kept between 20% and 80%. Since this conditions are not possible naturally, the use of artificial air-conditioning systems is proposed.

8.8 Schedule Of Accommodation

Space requirement quoted below are the optimum sp ces required. This spaces are used as guides in designing as a structural grid might cause some alterations.

Item	User requirement	Accommodation	Unit Area(m^2)	Total Area
1.	Questrooms	double	-	20-24m^2
2.	Bathrooms	-	-	3.8-4.2m^2
3.	Shops	-	-	20-25m^2
4.	Travels bureau	-	-	60-80m^2
5.	Bank branch	-	-	60-80m^2
6.	Lobby		1.2m^2/guest room	3456m^2
7.	Restaurant	400	1.3	520m^2
8.	Lounge/ban	50	1.8 - 2.0	90-100m^2
9.	Staff canteen	30	0.7 - 0.9	21-27m^2
10.	Staff lockers	60	.36m^2-0.4m^2	21.6-24m^2
11.	Laundry	-	-	200m^2
12.	Control office	1.	-	24m^2
13.	Room service			312 m^2
14.	Kitchen	-	0.6 of restaurant	
15.	General storage	-	0.5 of kitchen	156 m^2
16.	Hotel Admin (total)			250m^2
17.	Banquet hall	700	.9m^2-1.3	630-910m^2
18.	Banquet kitchen	-	0.2 of hall	122m^2
19.	Banquet store	-	0.2 of hall	122m^2
20.	Auditorium	1000	0.65-0.84	650-840m^2
21.	Stage	30	1.0	30m^2
22.	Foyer space		0.65 - 0.84	650-840m^2
23.	Control room	-	-	25-30m^2
24.	Booths	1	-	1.5-3m^2
25.	Conference (admin)	-	-	150m^2
26.	Press Room	30		
27.	V.I.P	50		
28.	Librabry			
29.	Telephone	6		
30.	Car park			
31.	Plant rooms			
32.	Standard office	1		20-24m^2
33.	Maintenance workshop	-		200m^2

9. CONCEPTUAL ANALYSIS

After considering the various forces at work on the site and analysing the proposed building from a functional point of view, the next thing is the evolusion of the site and building concept. It is at this point that the various analysis carried out earlier on (Chapter 3) have to be incorporated in the design.

Therefore three major factors have being involved in the concept.

1. the site analysis
2. the design analysis
3. SYNTHARC

As a reminder, the third factor could be summarized in three parts as follows - the 'C' area, the C' space and the C^2 space. These have already been defined and explained in chapter 3.

The analysis is going to be carried out under two basic subheadings - the site concept and the building design concept.

9.1 Site Concept

ORIENTATION AND FORM: These have been dictated by the two main climatic forces - sunshine and prevailing winds, and ingress to the site. The movement of the sun is generally in the East-West direction and the prevailing winds come in from the North east and South west. A compromise is found in orienting the buildings in a north - south direction with the form elongated on the east-west axis.

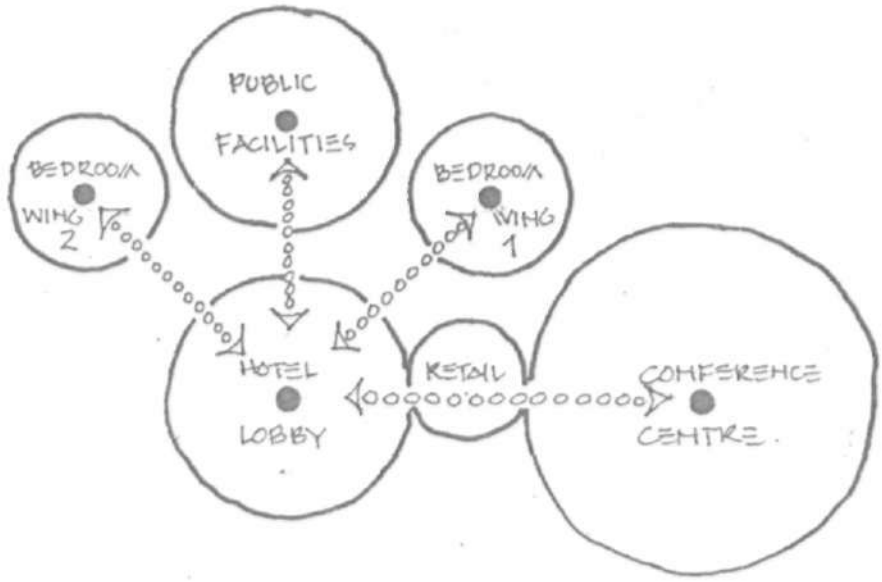


fig 33: SITE CONCEPT (BUBBLE)

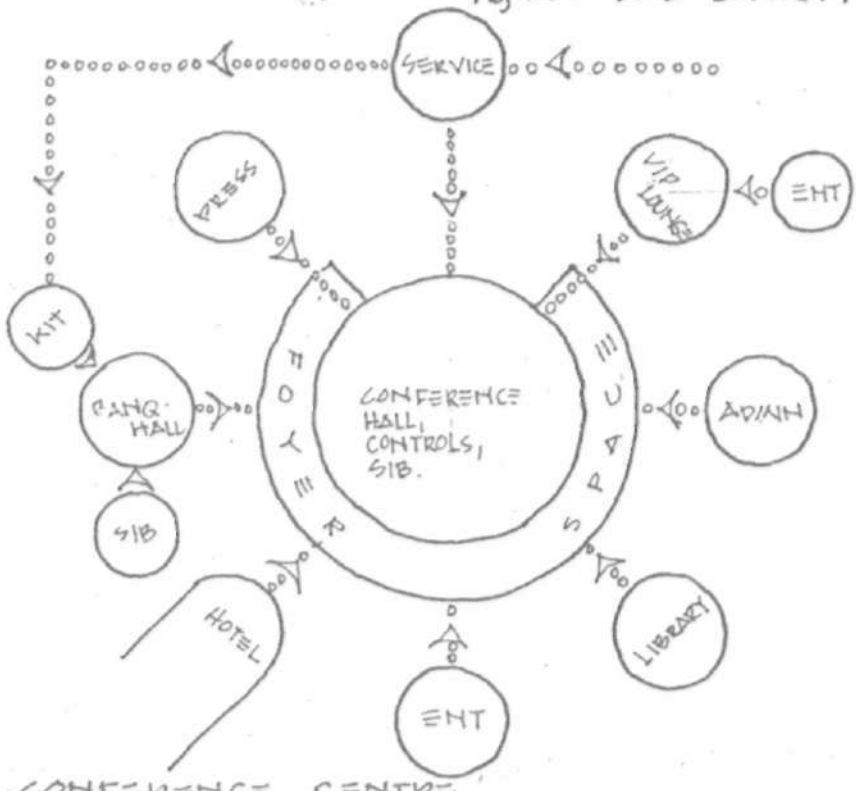
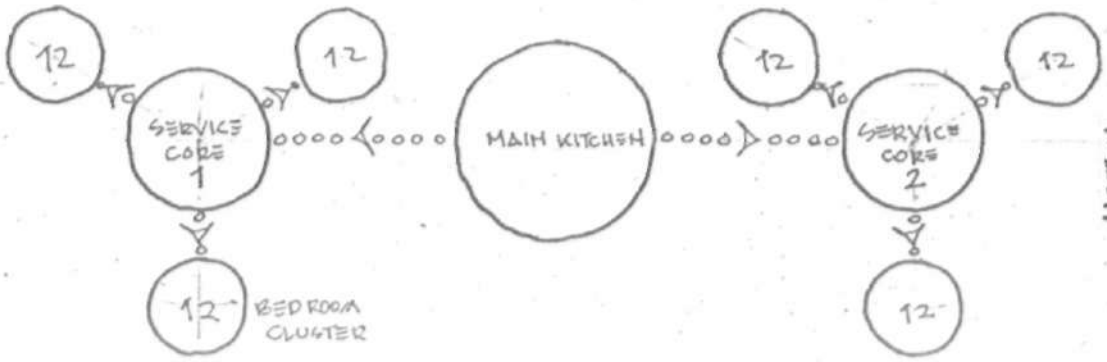


fig 34: DESIGN CONCEPT



HOTEL

As such, most openings and glazed areas face north or south where the sun's effect are not as harsh as in an east-west orientation. Since the prevailing winds now attack the building at an angle, their speed is reduced. This orientation also takes advantage of the breezes coming in from the creek and the beautiful view towards the back in the distant horizon.

CIRCULATION: Ingress is through two entrance as, however, after ingress, service vehicles and staff vehicles are separated from guest or private vehicles. The service/staff route circumvents the site and terminates at the service bay adjacent to the kitchen and plant rooms. Guests proceed up a ramped drive way to the hotel lobby entrance or the conference centre foyer. The main car park is to the right and is on ground level while a V.I.P. car park is provided in front of the conference centre.

Trees are planted on all external circular routes to reinforce the approach situation and at the car-parks to provide shade from the sun.

Access to all parts of the site is possible. This is most favourable to the fire fighting equipment in case of fire out breaks, Pedestrian routes follow adjacent tc all roads and zebra crossings are provided at all pedestrian - vehicular nodes.

VIEWS: The best view on the site is the view towards the creek and the beach in the distant horizon. As such, the restaurant and bedroom wings should take maximum use of this view. Since it might not be possible to make 100% use of this view, the site should be well landscaped to give a

befitting view to other parts of the complex.

THE RAMPED APPROACH: Entrance into the site is at ground level, but after a certain distance, guests for the hotel move up a ramped drive way to the first floor on which the hotel lobby are located. This has been so for a number of reasons.

1. Analysis of the soil type show that it is flood. This has not be helped by the very low gradient shown by the slope analysis (0.05). The water table is also as high as 0.2m in some places. All this point to an unfavourable natural drainage system on site for storm water.

2. The brief requires the accommodation of at least a quarter of the capacity of the conference hall in a maximum of four floors. This would require a mechanical system for vertical circulation. As one of the design strategies is to minimize the use of such systems, entrance at first floor level solves the problem as guests now have to ascend only two floors to the highest floor while the fourth floor is only one flight down.

3. Apart from the two reasons above, there is also the aesthetic advantage of a ramped entrance.

SEPARATION OF STRUCTURAL SYSTEMS: Separating the bedroom wings from the public space is of special advantage as both areas utilize different structural solutions. Public spaces are usually large spaces which make use of skeleton (framed Structural systems; while the bedrooms are smaller spaces in which traditional load bearing construction could be utilized.

The separation of the systems saves funds as less money is spent on foundations of the columns.

Placing the bedroom wings over the public areas also has the disadvantage of exceeding the four storey limit. This could be avoided by having more rooms on each floor but the increased length of corridors reduces service staff efficiency.

Access for fire equipment is also readily available by separating both structures.

GENERAL LAYOUT: In the general layout, the phasing process has been considered. The various phases are planned as self sustaining parts of a whole system. The conference centre is the first phase and it is linked to the hotel lobby area and one bedroom wing which make up the next phase. The third phase involves the second bedroom wing which also links the hotel lobby.

C - AREA: For the whole site, the hotel lobby and waiting area works as a core. From here, guests can be directed to any part of the complex. It serves as a distribution point as the conference centre, the main restaurant, recreation facilities and the two hotel wings radiate from this area.

C' - SPACE: The proposed layout consists of a number of parts making up a whole. Open spaces are sure to result from this approach. This afford adequate ventilation and day lighting for all the adjoining spaces. These areas would also be well landscapped prefarably with lawns to minimize glare.

C^2 - SPACE: An open space is proposed between the conference centre to the east, the hotel lobby to the west and the shops, bank and travel bureau to the south. It is open to the entrance and is adequately shaded from the sun and wind. This space is to serve as an area for social interaction. Non-resident guests visiting the public facilities have a place to relax. Resident guests too can make use of it as it will be accesible from the hotel and conference foyer. Landscapping should take note of intended activities with the space.

9.2 Building Design Concept

In the conceptualization of the component parts of the whole complex, a multicore approach has been utilized.

The first core is the conference hall and the second one is the hotel lobby. These cores are then linked by a circulation system which is adjacent to the C^2 space.

9.2.1 The Conference Centre

The main conference hall being the core, it is surrounded by a foyer (on three levels) from which all the other functions radiate. These other functions are in their turn linked to other functions which service them. The various rooms making up each minor function e.g. administration are proposed to be planned around courtyards which would allow for ventilation and lighting of these spaces.

9.2.2. The Bedroom Wings

The two bedroom wings which radiate from the hotel lobby are on either side of the room service. The room service is linked to the service core in each wing on the ground floor. This service core consists of the stairs, elevators, maids room and storage area. The service core then serves as a point of radiation for four clusters of bedrooms each cluster made up of a number of bedrooms.

10. CONCLUSION

As mentioned earlier (chapter 4), the proposed facility is intended to serve as an experimental building for SYNTHARC as it presents both public and private areas. Being a purely academic exercise, the planning has followed a strict adherence to the various concepts and characterstics which resulted from the analysis and synthesis of the components of SYNTHARC.

The evoled forms which have been articulated by use of available landscape have developed from the functions of the space. Certain problems have also arisen, but the architect has tried to solve as many of this as possible as the thesis is intended to be a problem solving exercise.

One can see that from the conceptualization to the design stage, the architect has been put in a 'strait jacket' so to say by the analysis. The final design is not an utopia by any means but the architect finds enough consolation in that a point has been made as his aspirations to evolve a contemporary Nigerian architecture is based on a solid foundation of a most enviable architectural history. There is still a lot of potential in SYNTHARC and it is the hope of the architect to improve or better it with each subsesequent design.

It is now left for our contemporary architects or architects of present day Nigeria to take up the challenge and let posterity test its adequateness. It is the belief of the architect that the architectural revolution that has swept through Japan and certain South American countries would eventually find its place in this country if proper attention and support is given to the right people.

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