A STUDY OF ARCHITECTURAL MONUMENTS IN SOUTH-EAST ZONE OF NIGERIA: EVOLVING APPROPRIATE LISTING CRITERIA

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DECLARATION

I, NDUKA Emmanuel Okechukwu, a postgraduate student of the Department of Architecture, with Registration No. PG/PhD/04/38166, do hereby declare, on my honour, that this thesis has not been previously presented, either wholly or in part for the award of any other degree, diploma, certificate or publication in any University, other Higher Institution or elsewhere.

…… ……

NDUKA EMMANUEL OKECHUKWU DATE

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APPROVAL/CERTIFICATION

NDUKA EMMANUEL OKECHUKWU, a postgraduate student of the Department of Architecture, with Registration No. PG/PhD/04/38166, has satisfactorily completed the requirements for the award of the Degree of Doctor of Philosophy in Architecture. To the best of our knowledge, the work embodied in this Thesis is original, and has not been submitted in part or in full for any other Degree, Diploma, Certificate or Publication of this University or elsewhere. However, he bears full responsibility for the contents of this work.

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DEDICATION

To Felicia Uzoamaka Nduka

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ABSTRACT

The diversity of Nigeria with about 370 indentified ethnic groups, and each expressing its own history and culture, and reacting to various external architectural influences, gave rise to multiple variations in architectural products classified and listed as monuments. Architectural monument is a building or structure designed and built to commemorate and important or great historic event or in memorial of a famous person. It could be a historic building (very old building) or structure preserved for its unique architectural style/design, construction material and methods (technology) and aesthetic characteristics. A preliminary survey on some architectural monuments in the South-East zone of Nigeria revealed traditional design concepts and construction methods/ingenuity worthy of consideration as criteria for listing architectural monuments. But available documentation however revealed that the existing criteria for listing architectural monuments in Nigeria are generalized and thereby failed to capture the intrinsic peculiarities of the ethnic diversity in Nigeria. Therefore, the aim of this study is to search and identify the intrinsic peculiarities worthy of consideration as criteria for listing architectural monuments in the South-East zone of Nigeria and to evolve appropriate and comprehensive listing criteria for architectural monuments in the South-East zone of Nigeria. This study adopted historical and qualitative research methods in combination with descriptive survey and correlation analysis of data from literature reviews and field study. Also, Factor Analysis (FA) or Principal Component Analysis (PCA), a statistical technique was used in processing the data gathered for this study.

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background of the Study

Great and historic events most times are recorded in literary forms like poems, tales, stories and writings. Sometimes, significant historical events, though documented in literary forms, are recorded in an aspect of the material culture of a people as architectural monuments.

By monument a society remembers its collective past and formulates its present identity. According to Brooks (1997), "People have always intended monuments to be permanent; they are meant to last forever in order to educate and remind future generations of their collective past and values the society deems significant. Therefore, monuments are almost always made of lasting materials – stone, marble, bronze, steel, or iron" (Brooks, 1997, p. 4). Robert Ivy (2002) stated that, "…a monument comprises, a designed and constructed physical object intended as a commemoration" (Robert, 2002, p. 85). They are designed and built as a lasting public tribute to a person, a group of people, or in commemoration of a historic event. It could be a building or structure that is preserved because of its historical, cultural, technological or aesthetic importance.

The ancient Roman Empire or civilization, which "ruled" the world politically, before and after the death of Christ (BC-AD), designed and built magnificent architectural structures to commemorate notable events in her history and in them, showcased the level of technology available at the time. Those structures are now monuments. Their examples are: Triumphal Arches to celebrate and commemorate historic events (victory in wars) like the capture of Jerusalem (Arch of Titus, Rome after AD 81), (Arch of Tiberius, Orange, late first century BC) originally, commemorated the conquest of Gaul but later its inscription was changed to honor Emperor Tiberius. There were other architectural structures such as temples, theatres, circuses, meeting places and houses designed and built that are now monuments. Their examples are: the house of the surgeon, Pompeii (fourth to third century BC), acclaimed to have been one of the largest houses of its time in the region (Southern Italy) and more solidly built (Fletcher, 1999, p. 225-281).

According to the Federal Ministry of Culture and Tourism (FMCT) 2007 brochure, in about the 14th and 15th centuries the geographical area now known as Nigeria was home for several kingdoms (civilizations) and tribal communities until late 19th century when Britain consolidated her rule over the country. Each of those early kingdoms (civilization) left behind its unique architecture. Examples are: the Hausa mud houses inspired by North African

civilization; the Yoruba palaces with elaborately carved doors and verandah posts, and the classical architectural style introduced by slaves repatriated to Nigeria from Latin America in the 19th century. There are also the stone or rubble wall houses of the Ibos. All these make for architectural monuments of high technical and artistic culture in Nigeria.

This study understands that Nigeria's ethnic diversity (more than 370 known ethnic groups) and geographical distribution of same gave her a rich and enviable heritage of architectural monuments that needed to be appropriately, listed and positioned towards effective contribution to the national economy. This is because, countries like the USA, Egypt, Germany and India to mention a few, with great and remarkable history, designed, built and preserved architectural monuments considered to have enduring value as memorials relevant to their countries' histories and development (civilization) for generations (present and future) to appreciate and cherish. Examples are; the Independence Hall, USA (TWHNGS, 2007.8, p. 96); the Pyramid fields from Giza to Dahshur about 5000 yrs old, Egypt (TWHNGS, 2007.8, p. 69); Cologne Cathedral about 1248 yrs old, Germany (TWHNGS, 2007.8:30) and Taj Mahal, India (TWHNGS, 2007.8, p. 134).

Nigeria, on her part, though has witnessed significant historical events worthy of being recorded in the architecture of the people as befitting memorials or architectural monuments within the vast landscape adorning the nation; the reverse has been the case. Historic events are hardly recorded in architectural forms as monuments. Some historic buildings that are listed as monuments and ought to be positioned for effective contribution to the national economy, are either pulled down for a totally new development in the name of urban re-engineering or neglected. Examples are; the Habah's mosque in Maigana which had only a wall measuring 1.2m x 4m x 45m left standing as at 1989, the 'Elephant House' in Lagos, seen as a piece of beauty was dismantled for the erecting of a modern skyscraper, Government House at Zungeru destroyed in order to construct a federal road in 1988. Only two concrete columns were left to mark its location almost a century ago. In 1997, part of Kano city walls and gates were destroyed by the state government to give way to a by-pass road (Udoh, 2007, p. 18).

Recently (June 7, 2007), the Douglas building used as Government Lodge Owerri, was set ablaze by unknown persons. The one storey structure was built with timber imported from Sierra Leone and was the official residence of former colonial master, Mr. Douglas.

The International Tourism Promotion and Co-operation Department, Federal Ministry of Culture and Tourism Abuja, compiled in April 2005, some list (about 40 numbers) of architectural monuments in Nigeria (FMCT, 2005, : Tourist's Guide Brochure). Also National Commission for Museums and Monuments (NCMM) listed 33 architectural monuments (including South East Zone) in Nigeria (NCMM, 2010.REF: TF128/T/Vol.II/373).

Note: The list is not exhaustive. There are some structures that have met all the official conditions of listing as monuments but yet to be officially acquired, declared and gazetted as such. Several others are yet to be discovered even going by the existing listing criteria. The list will continue to grow as the awareness is created and wider range of criteria is established through research.

According to Udoh (2007), the list of scheduled monuments in the federation as compiled by the Historical Society of Nigeria in 1967, was about 67 in number. From the list, architectural monuments are twenty eight (28) structures. Apart from the fact that the listing criteria for these monuments have not been revisited and updated through research, it is gathered that no concrete effort has also been put in place to update the list, or even to ascertain the number of the monuments that are still in existence (Udoh, 2007, p. 18). This poses a serious challenge not only to the academic but also to our research institutes.

This study intends to create an awareness of the urgent need to evolve appropriate listing criteria for our declared architectural monuments. Also, it understands that architecture is a global phenomena and its tradition is as varied as many primitive societies, traditions and cultures worldwide. Therefore, it follows that every age (zone of Nigeria) has its own style of

architecture because buildings must suit the way of life of the people of each age (zone) who use or created them (Eneh, 2008, p. 9).

According to Chukwuali (2005), throughout history, architecture has remained a dominant form of representation of cultural and traditional norms of various groups of people. Culture finds expression in architecture of a people, as a repository of their tradition and way of life. Monuments and historical buildings stand as testimonies to the existence of any group of people. It should be people specific and should also represent the way of life of such people (Igwe, et al 2008, p. 227). Furthermore, any discussion of cultural identity must be location-specific. This is because Nigeria's diverse ethnic nationalities are decisively different and any search for a national architectural identity would tantamount to a wild goose chase (Chukwuali, 2005, p. 15-17).

Saad (1996) affirmed that, "most significant architectonic elements, symbols and the very character of the built environment in Nigeria appear so diverse and dissimilar that an attempt to link them up to the social, cultural, physical, ethnic, linguistic, historical and other determinants of form of human built environment appears to be a futile academic exercise" (Saad, 1996, p. 2). Saad reasoned that because Nigeria is an amalgamation of various ethnic groups and nationalities, each with distinct cultures, languages, religion and historical background, an attempt to define in organic terms the architectural signs, symbols and forms for these different communities will often result in the compilation of hundreds of particular studies which are so differentiated. Saad, further opined that the gradual but significant shift in the climatic and physical conditions (temperature, rainfall, vegetation and available natural resources) of the country (Nigeria) as one moves from the south to the north, no doubt, has a role in determining which local building materials are available, which system of technology should logically develop or be adopted, and what type of spatial disposition would be more appropriate in a given context (Saad, 1996, p. 3).

This study understands that because of the diversity (ethnic, cultural, social and religion) and differences in climatic seasons in the various zones (six geopolitical) of Nigeria, the listing criteria for architectural monuments should not be the same for the present six geopolitical zones of Nigeria. Rather, the listing criteria should reflect the peculiarities (ethnic, cultural, social, religious and climatic) of each geopolitical zone. A study of listed architectural monuments in South-East zone of Nigeria and the existing listing criteria may reveal some architectural elements peculiar to the South-East zone though relevant to be considered as listing criteria but may not have been considered as important.

This is because according to Chukwuali (2005), 'this is even more relevant because in a culturally pluralistic country like Nigeria, ethnic nationalities that make no deliberate and conscious effort to retain their cultural identity easily get assimilated by other more vibrant and dominant cultures…A tested viable option appears to be the strengthening of regional interpretations and criteria which will find acceptance within the given ethnic nationality where its meaning and content are better understood' (Chukwuali, 2005, p. 17). Therefore, if no conscious effort is made to identify and list the positive and distinguishing or peculiar architectural elements of a people's architecture (architecturally as monuments), that architecture is likely to be eroded and finally destroyed by the dynamism of change, and of space and time.

Therefore, this research intends to study architectural monuments in South East zone of Nigeria and their listing criteria in order to consciously identify peculiar architectural elements or characteristics which might be unique and evolve appropriate listing criteria for architectural monuments in this zone as a subset of National listing criteria so as to position them to contribute effectively to the national economy.

1.2 THE STATEMENT OF THE PROBLEM

Architectural monuments in Nigeria are not appropriately listed. The diversity of Nigeria (about 370 identified ethnic groups) with each ethnic group expressing its own history and

culture, responding to its unique environmental contextual condition and reacting to various external architectural influences, gave rise to diversity of architectural products listed as monuments and of the criteria for listing them . From the available documentation, the criteria for listing of monuments are not appropriate (location/zone specific) but generalized thereby not capturing the intrinsic peculiarities of the different ethnic zones in Nigeria. Therefore, the architectural products so listed are not appropriately classified, thereby exposing the monuments to eminent threat of destruction and in no way positioned to contribute to the Nigerian national economy.

1.3 AIM OF THE STUDY

The aim of the study is to evolve appropriate listing criteria for architectural monuments in the South-East zone of Nigeria that recognize the peculiarities of the zone as a subset of the National listing criteria with a view to contributing to comprehensive national listing criteria for architectural monuments in Nigeria.

1.4 STUDY OBJECTIVES

The study intends to achieve its aim through the following objectives:

a. Identification of listed architectural monuments in South-East zone of Nigeria and their geographic locations.

b. Identification of the listing criteria used for existing architectural monuments in Nigeria.

c. Review of foreign experience in listing architectural monuments.

d. Comparison of characteristics of architectural monuments among the constituent states in the South-East zone of Nigeria and determination of the adequacy or otherwise of listing criteria for architectural monuments.

e. Evolving appropriate listing criteria for architectural monuments in South- East zone of Nigeria.

f. Adoption of the new (appropriate) listing criteria in Nigeria.

1.5 RESEARCH QUESTIONS

To carry out this study, the following research questions were raised:

1. Are there listing criteria for architectural monuments in Nigeria?
2. Are the architectural monuments in South-East zone of Nigeria listed based on the existing listing criteria for architectural monuments in Nigeria?
3. Are these listing criteria appropriate and comprehensive?
4. Are there other appropriate listing criteria that should guide the listing and classification of architectural monuments in South-East zone of Nigeria?

1.6 HYPOTHESIS

H_{01}: There are no significant location specific peculiarities for listing architectural monuments in South-East zone of Nigeria.

H_{02}: There are no appropriate and comprehensive criteria for listing architectural monuments in South-East zone of Nigeria.

1.7 SCOPE AND DELIMITATION OF STUDY

The scope of this study is limited to listing criteria for architectural monuments. The study will search and identify the existing listing criteria for architectural monuments in Nigeria and abroad. Then subject them to test in order to determine whether they are appropriate and comprehensive for listing architectural monuments found in the South East zone (Abia, Anambra, Ebonyi, Enugu and Imo States) of Nigeria.

1.8 SIGNIFICANCE OF THE STUDY

Architectural monuments in Nigeria are not given the needed attention and recognition. Therefore, it is intended that this study is will highlight the relevance and importance of architectural monuments to the development of the national economy.

This study intends to evolve appropriate listing criteria for architectural monuments in South-East zone of Nigeria and create an awareness of the urgent need to preserve and maintain our architectural monuments (heritage). The study will direct the attentions of the public and private sectors to the possible economic benefits of investing in the development and preservation of architectural monuments.

The study will inspire the need to record in architectural form, some significant national and historical events as monuments, identify and locate architectural monuments in the South-East geopolitical zone of Nigeria and bring recognition to them within and outside Nigeria.

The study will place Nigeria on the world map in respect of architectural monuments, generate reservoir of historical monuments that will help to inspire some sense of history and the need for specialization in the study of architectural monuments (historic buildings) in our schools of architecture, encourage home coming of our citizens abroad and reduce capital flight (foreign exchange) caused by vacationing abroad instead of within Nigeria. In addition, it will stop the present neglect, lack of maintenance of existing architectural monuments and in some cases, their total destruction in the name of urban renewal.

1.9 POTENTIALS AND LIMITATIONS OF STUDY

This study will contribute to the information base of architectural monuments in the South-East geopolitical zone of Nigeria with a direct impact on the nation's economy, and multiplier effects on cultural, social and political growth of the nation. It will stimulate interest in the study and specialization in architectural monuments in Nigerian schools of architecture.

Inaccessibility of information arising from persistent un-willingness to give out valid information and data (secondary data) that would aid the research and the bureaucratic bottle neck approach by relevant government ministries in releasing data, was a fundamental limitation in this research. Almost every information or data is classified and respondents need clearance from a superior officer before releasing information.

1.10 JUSTIFICATION OF STUDY

Architectural monuments are not just old or historic buildings, but great and important structures that commemorate significant historic events and civilizations. Evolving appropriate listing criteria for architectural monuments will definitely have a far reaching social, cultural, political and economic benefits to South-East zone in particular and the nation in general.

The need to create the awareness of the dangerously, fast disappearance of our architectural monuments, their preservation and maintenance cannot be overemphasized because the few architectural monuments that exist are not maintained, giving rise to their dilapidation. The study will sensitize and encourage the desire towards specialization in architectural monuments in our schools of architecture.

The study will boost the economy and place Nigeria on the world architectural monuments map by way of identifying and exposing the architectural monuments in South-East zone to the world, attracting tourists both from within and outside the country, increasing internally generated revenue through the sale of literature and art works on the architectural monuments and creation of employment or job opportunities in the country.

CHAPTER TWO

2.0 THE STUDY AREA

2.1 Location

The study area is South-East geopolitical zone of Nigeria. Nigeria is a Republic on the south coast of the West African continent. Also, Nigeria is the most populated Black Country in the world (FMCT, 2007, Tourism Brochure). World Population Report, Population Reference Bureau, estimated 162.08 million persons (http://www.population.com, 2010, Tue Jan 5). Nigeria is located between Latitude 4 and 14 degrees north of the Equator and between Longitude 3 and 14 degrees east of the Greenwich Meridian (Saad, 1996, p. 1). To the North and North-East, the country is bounded by the Republics of Niger and Chad, to the East by the Republic of Cameroon, to the South by the Atlantic Ocean and to the West by the Republic of Benin (Figure 2.1).

Figure 2.1: Map of West Africa showing, location of Nigeria and border countries; Benin, Niger, Chad and Cameroon

Source: Collins Atlas for Nigeria, 2009.

Nigeria occupies a total land area of 923,768 sq km of which approximately, 13,000 sq km (1.4%) is covered by water and 910,768 sq km (98.6%) is covered by land, ranging from thick mangrove forests and dense rain forests in the South to the near-desert condition in the North-Eastern corner of the country (Ibe; Nymphas, 2010, p. 38; Collins, 2009, p. 10).

Primarily, Nigeria is located within the lowland humid tropics, just north of the equator and is generally characterized by a high-temperature regime almost throughout the year. In the far South, mean maximum temperature is about 32 degrees Celsius while in the North, it is 41degrees Celsius. However, the mean maximum temperature is 21 degrees Celsius in the South and under 13 degrees Celsius in the North which has a much higher annual range. The mean temperature for Nigeria is 27 degrees Celsius, in the absence of altitudinal modifications (Ibe; Nymphas, 2010, p. 38).

2.2 Ethnic Composition

Nigeria is made up of diverse ethnic groups of which the three major ones are the Hausa-Fulani, Yoruba and Igbo. These major groups represent about 70% of the population. Also several other groups, including the Kanuri, Tiv and Ibibio numbering more than one million (1m) persons each, constitute about 10% of the total population. The remaining 20% of the population represents more than three hundred smaller ethnic groups (FMCT, 2007, Tourism Pamphlet), (Figure 2.2).

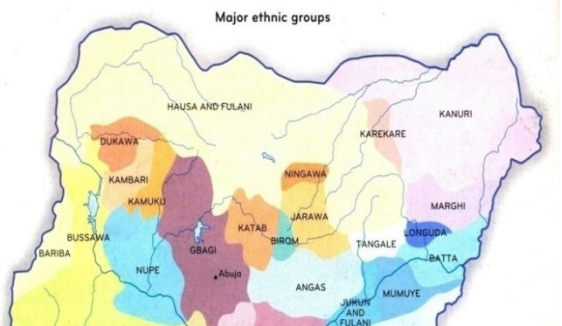


Figure 2.2: Map of Nigeria showing the major ethnic groups
Source: Collins Atlas for Nigeria, 2009.

Nigeria is made up of 36 states and Abuja as the capital (Figure 2.3). For easy administration, Nigeria is grouped into six (6) geopolitical zones namely; North West, North Central, North East, South West, South South and South East (Figure 2.4). The composition of these zones is the following:

North West: Jigawa, Kano, Katsina, Kebbi, Sokoto and Zamfara States.
North Central: FCT (Abuja), Benue, Kaduna, Kogi, Kwara, Nassarawa, Niger and Plateau States.
North East: Adamawa, Bauchi, Borno, Gombe, Taraba and Yobe States.
South West: Ekiti, Lagos, Ogun, Ondo, Osun and Oyo States.
South South: Akwa Ibom, Bayelsa, Cross River, Delta, Edo and Rivers States.
South East: Abia, Anambra, Ebonyi, Enugu and Imo States.

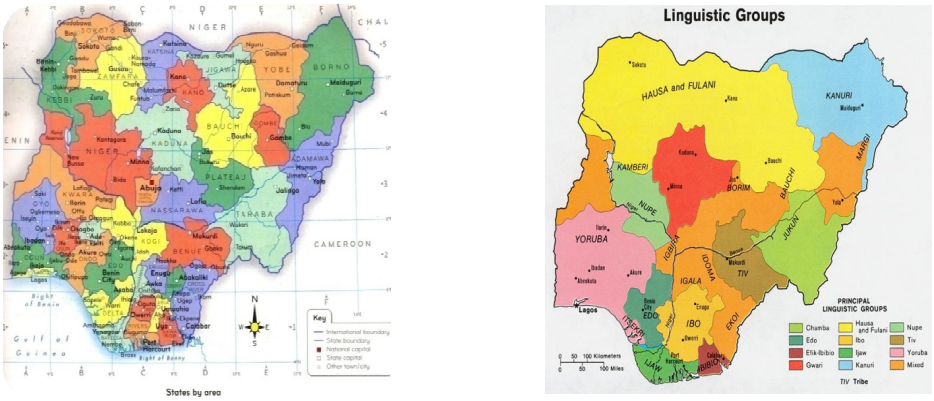


Figure 2.3: (l-r) Map of Nigeria showing the 36 states and Abuja the Federal capital; Map of Nigeria showing the Linguistic Groups
Source: Collins Atlas for Nigeria, 2009; Retrieved from: www.ihsnigeria.com/execution.php

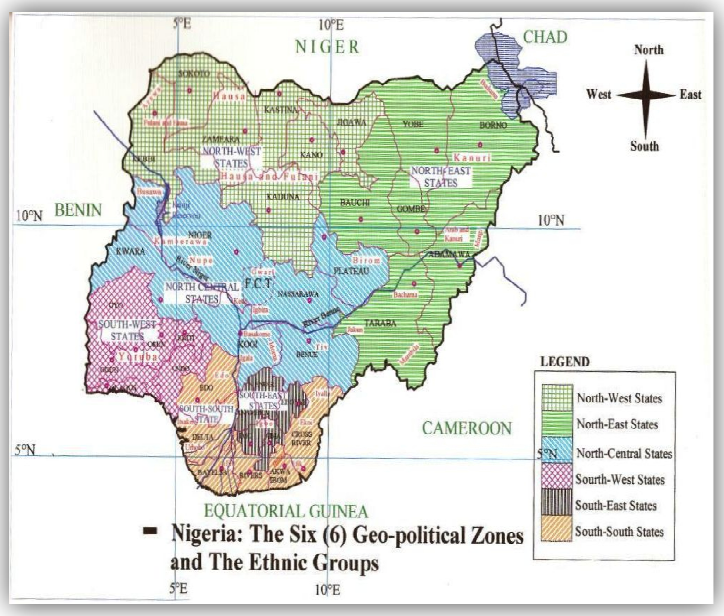


Figure 2.4: Map of Nigeria showing the Geopolitical Zones
Source: Federal Ministry of Women Affairs, 2004.

2.3 South East Geopolitical Zone

The South East geopolitical zone is predominantly inhabited by the Igbo people or 'Ndi igbo'- the ethnic group whose native dialect is Igbo language (Figure 2.5).

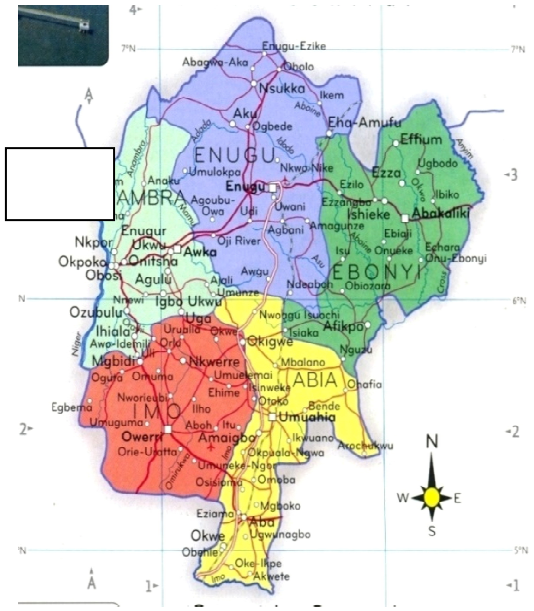


Figure 2.5: Map of Nigeria showing the South East Geopolitical Zone
Source: Collins Atlas for Nigeria, 2009

They have historical heritage dated back to the Stone Age and are industrious people with vibrant and colourful cultural displays. The origin of this people has not been fully ascertained but intriguing theories or histories linked the Igbo people to the Jewish state of Israel. Another theory claimed they migrated from Egypt, through the Sudan and southwards to their present location, during the Stone Age era (http://www.cometonigeria.com, 2006-2010). W[illegible] theories or histories are correct; this study believes that this group of Nigerians h[illegible] cultural heritage (architecturally as monuments) that ought to be identified and appropriately listed, and positioned towards national economic development.

Abia State

This state was created out of Imo state in August 27, 1991 with Umuahia as the capital. Abia state lies within approximately, latitudes 4 degrees 40' and 6 degrees 14' North and longitudes 7 degrees 10'and 8 degrees East. It is bounded on the North and North West by Enugu, Ebonyi and Anambra States; on the East and South East by Cross River and Akwa Ibom States; on the South and South West by Rivers State and on the West by Imo State. Abia State has 17 Local Government Areas (LGA) and occupies land area of 4,900 sq km and with an estimated population of 2.8 million persons. (http://www.nigeriagalleria.com/Nigeria/States_Nigeria/Abia_State.html; Collins, 2009, p. 11and 21).

Anambra State

This state was created from the then East Central State in 1976 with Enugu as the capital. Later, in August 27, 1991, a further state creation gave birth to Enugu and Anambra States with Awka as the capital of Anambra State. The state is bounded on the North by Kogi State; on the East and South East by Enugu and Abia States; on the South by Imo State and on the West by Delta State. Anambra State has 21 Local Government Areas (LGA) and occupies land area of 4,865 sq km and with an estimated population of 4.2 million persons. (http://www.nigeriagalleria.com/Nigeria/States_Nigeria/Anambra_State.html; Collins, 2009, p. Ibid)

Ebonyi State

This state was created out of Abia and Enugu States in October 1, 1996 with Abakaliki as the capital. Ebonyi State is bounded on the North by Benue State; on the East by Cross River State; on the south by Abia State and on the West by Enugu State. Ebonyi State has 12 Local

Government Areas (LGA) and occupies land area of 6,400 sq km and with an estimated population of 2.2 million persons. (http://www.nigeriagalleria.com/Nigeria/States_Nigeria/Ebonyi_State.html; Collins, 2009, p. Ibid).

Enugu State

This state was created out of the then Anambra State (what was formerly known as Anambra North) in August 27, 1991 with Enugu as the capital. Enugu State is bounded on the North by Kogi and Benue States; on the East by Ebonyi State; on the South by Abia State and on the West by Anambra State. Enugu State has 16 Local Government Areas (LGA) and occupies land area of 7,534 sq km and with an estimated population of 3.3 million persons. (http://www.nigeriagalleria.com/Nigeria/States_Nigeria/Enugu_State.html; Collins, 2009, p. Ibid).

Imo State

This state was created out of the old East Central State in February 3, 1976 with Owerri as the capital. Imo State lies within latitudes 4 degrees 45' and 7 degrees 15' North, and longitude 6 degrees 50' and 7 degrees 25' East. It is bounded on the North by Anambra State; on the East by Abia State; on the South and West by Rivers State. Imo State has 26 Local Government Areas (LGA) and occupies land area of 5,288 sq km and with and estimated population of 3.9 million persons. (http://www.nigeriagalleria.com/Nigeria/States_Nigeria/Imo_State.html; Collins, 2009, p. Ibid).

The list of scheduled National Monuments in this zone (South-East) is the following:

Abia State:

1. Chief Okoroji's House at Arochukwu.
2. Obu House Elu Ohafia.
3. Omo Ukwu Temple of the Ndi Ezera Compound, Asaga Ohafia.
4. Chief Ochu Kalu's House Ndi Okereke in Abam near Bende.

Enugu State:

1. Chief Odo Nwokolo's (Nwodo) Palace at Ukehe

Anambra State: Nil.

Ebonyi State: Nil.

Imo State: Nil.

(This list was compiled and published in the Journal of Historical Society of Nigeria Vol. 4.1 No.1in December 1967). But according to Udoh, (2008), a superintendant of monuments, National Museum of Unity and Monuments Enugu, most of the listed monuments no longer exist. However, two other structures were added to the list of monuments in this zone by the National Commission for Museums and Monuments (NCMM). The structures are, in Anambra State: Chief Atuchukwu's House, Amichi (Peace and Reconciliation Building, declared monument January 15, 2006) and in Abia State: Ojukwu Bunker (Subterranean Seat of the Government of the Republic of Biafra).

CHAPTER THREE

3.0 LITERATURE REVIEW/THEORETICAL FRAMEWORK

3.1 Introduction

In this chapter, the study establishes the theoretical framework upon which the research is based. Definitions of monuments, architecture and architectural monuments are discussed. Ownership classification of monuments is highlighted, scheduling a structure, what it means and the processes carried out before a structure is considered scheduled. Furthermore, the study discusses listing of monuments, listing category, procedure for declaring a national monument and criteria applied for listing monuments nationally and internationally. Some identified architectural monuments are also discussed.

3.2 Monument

The word 'Monument' is derived from the Latin word *'Monumentum'*, *'Monere' or 'Moneo'* (Encarta Dictionary, 2007; Brooks, 1997, p. 4). This means to 'Remind' or 'Warn'. In other words, a monument is something that reminds or warns someone or a people of past event or civilization, technology or architecture. It could be a structure, such as a building or sculpture, erected as a memorial or something venerated for its enduring historic significance or association with a notable past person or event (http://www.answers.com/topic/monument, 2009). A monument could be something that represents or stands as a witness to an event, agreement or covenant. It could be in the form of a statue, an altar, paintings or signs to mention a few.

"Monuments last much longer than words. Civilizations are remembered by buildings. There is nothing more important than architecture" – Philip Johnson (1906 - 2005).

"Architecture is life,…taking form…therefore it is the truest record of life as it was lived in the world yesterday, as it is lived today or ever will be lived" – Frank Lloyd Wright (1867-1959).

The quotations above, making references to architecture as 'life' and monuments as 'something that last by which civilizations are remembered in the form of buildings', it could then be said that architecture as 'life', is a process and monument (building or structure), product of that architectural process.

Kerri (1994), defined monument as "An immovable work of art, architectural site and building of historical aesthetic interest. They are usually unique old structures preserved to enable future generations learn about the people and the society who made or produced them". They can be tombs, shrines, statues, defensive wall, moats and fortresses, causeway, bridges, rock paintings, monolith, petro glyphs (Udoh, 2005, p. 13).

UNESCO convention Article 1 defined monument as "Architectural works of monumental sculpture, paintings or structures of an archeological nature, inscriptions and cave dwellings, and a combination of features which have outstanding universal values from the point of view of history, art or science" (Udoh, 2007, p. 18). The UNESCO Article gives a broad definition of monument and points to the fact that there are categories of monuments namely; **man-made** and **natural** monuments.

Man-made monuments are structures **designed** and **built** either in memory of a person or to commemorate an important and great (historic) event. Examples are the Taj Mahal, a mausoleum in India, commissioned in 1632 by Emperor Shah Jahan for his late wife Mumtaz Mahal (Figure 3.1) and Arc de Triomphe (Triumphal Arch) in Paris (Figure 3.2),

commissioned by Emperor Napoleon Bonaparte in 1806 as a monument to commemorate his war victories (http://www.greatbuildings.com 2009; http://www.paris.org/monument/arc, 2009).

Figure 3.1: Taj Mahal, India.
Source: Brooks, 1997.

Figure 3.2: Triumphal Arch, Paris
Source: Brooks, 1997.

Natural monuments are natural **marvels** or naturally occurring phenomena that are unique in appearance/aesthetic. Examples are, the Zuma rock in Abuja (Figure 3.3) Idanre hills in Ondo and Wase Rock in Plateau State (Figure 3.4) all in Nigeria; the Grand Canyon in Arizona (Figure 3.5) and the Devils Tower in northeastern Wyoming (Figure 3.6), both in USA (http://www.vanguardngr.com/2010/12/7-000-mountain-climbers-converge; http://www.nps.gov/grca,Jan3,2010; http://www.nps.gov/deto, Oct3,2008).

Figure 3.3: Zuma Rock, Suleja Nigeria
Source: http://en.wikipedia.org/wiki/file:Zuma rock.jpg.

Figure 3.4: Wase Rock, Plateau State Nigeria
Source: http://www.uni.edu/gai/../wase_rock_1.jpg

Figure 3.5: Grand Canyon in Arizona, USA
Source: http://www.nps.gov/grca, Jan. 3, 2010.

Figure 3.6: Devil's Tower in Wyoming, USA
Source: http://www.nps.gov/deto, Oct. 3, 2008.

3.3 Architecture

Architecture is defined as the art and science of designing and constructing buildings or the art and practice of planning and designing buildings (Encarta Dictionary, 2007; Adam, 2003, p. 56). Architecture, as a work of art, should appeal to the sense of perception as something beautiful and as science; it should observe the established laws and rules of designing and constructing which relate to machines, engineering and the use of materials. According to Oluseyi (2007), "architecture exerts powerful visual effects on the environment traceable to the past and evident in the contemporary times. Visually, successful building (architecture) exhibits physical unity……., material homogeneity and psychological appeal" (Oluseyi, 2007, p. 382). Further Oluseyi (2007) stated that, designs in architecture are concerned with the creation of a building's tangible and visible form while Le Corbusier viewed architecture as

the masterly, correct and magnificent play of volumes brought together in light (Ibid). But can one refer to all buildings as architecture?

According to Mitias (1994); "not all buildings are usually thought of as architecture. The word 'architecture' most readily is used when speaking of building that is not casual or routine but planned, thought about, and designed by people educated as architects. The level of education includes, much instruction in how buildings are to be designed, how their construction is organized, where they should be located and much else" (Mitias, 1994, p. 4). Then if monuments are products of architecture, it means that architectural monuments may not be just any building or structure. In other words, any building or structure referred to as architectural monument, ought to be conceived at the onset as one, be planned and designed by educated people (architects), be great and important. In addition, it should express the values and culture of the people that affirm their identity and vitality (Ibid).

John Ruskin (1819-1900), distinguished between building and architecture. According to Ruskin, 'building' meant the actual construction with regards to the requirements of the intended use while 'architecture' was concerned with those features of an edifice which were above and beyond its common use, and therefore provided it with particular qualities. Ruskin saw architecture as 'the art which so disposes and adorns the edifies raised by man, for whatsoever uses, that the sight of them may contribute to his mental health, power and pleasure'. This it was observed, emphasized the artistic treatment that added to the aesthetic appreciation of the building. Also, Ruskin understood that good architecture needed a good building and although he liked to distinguish between these two aspects, he saw them together contributing to one whole. Ruskin looked at architecture at different levels, from the whole spatial and compositional disposition down to the minute details and the choice of materials (Jokilehto, 2008:176).

According to Uchegbu (2007), "Architecture is an art that is closely related to culture of a people. Every piece of architectural work has a lot to say about the time and culture that gave

birth to it. As such, different ethnic groups (geopolitical zone) that are found in Nigeria have particular styles of traditional or vernacular architecture peculiar to them...” (Uchegbu, 2007, p. 462). Furthermore, Uchegbu (2007) affirmed that the continent of Africa which was perceived by the colonial masters as one without any civilization has a rich civilized culture, empires and kingdoms whose achievements could be compared to those of Europe (Figure 3.7). Some testimonies of these achievements Uchegbu (2007) stated have survived till this modern time. Examples are the city walls and moats of ancient Benin City, the Zaria city wall and some palaces of Obas and Emirs still stand as a reminder of an era when Africans were in control of their destiny and could express their values, creativity and civility in prodigious design and crafting of their shelter (Ibid).

Figure 3.7: Sukur Kingdom in Adamawa State, Nigeria about 500years. Top (l-r), Tradition of origin and the composition of terrain. Bottom (l-r), Gateway to the Kingdom and a typical traditional homestead
Source: Sam-Amobi, C., 2009.

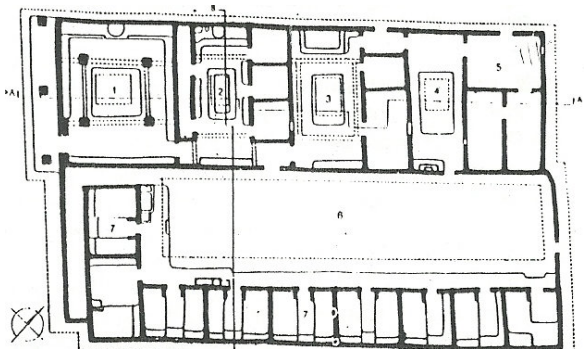
3.4 Architecture in Nigeria

A brief survey of the architecture of some ethnic groups (Bini, Igbo, Yoruba and Hausa) in Nigeria is discussed as a representation of some geopolitical zones in Nigeria. Presently, in Nigerian landscape, it has been observed that the expression of our cultural heritage in architectural forms has diminished and in its place, new forms and trends in building designs and construction, inspired by colonial and modern industrial age are now in vogue. Examples are the Nigerian Communications Commission (NCC) and Central Bank of Nigeria (CBN) buildings in Abuja (Figures 3.8 and 3.9). Before the colonial era, certain building design forms, construction methods and layouts were identifiable as representation of a given ethnic group (geopolitical zone) in Nigeria (Figure 3.10 a, b, c and d). But this can no longer be said of the present day Nigeria because according to Uchegbu (2007), architects (designers) grapple with what has been borrowed (ideas, materials, technology and standards) from the west (advanced countries) in an attempt to modify and have it suited to the Nigerian environment (Figures 3.11 and 3.12).

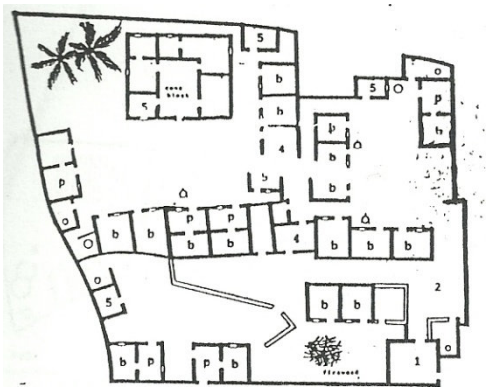
Figure 3.8: NCC Building (Swanky Building) Abuja
Source: Oluseyi, 2006

Figure 3.9: Central Bank of Nigeria (CBN) Abuja
Source: http://www.cenbank.org/contacts/Pix.asp

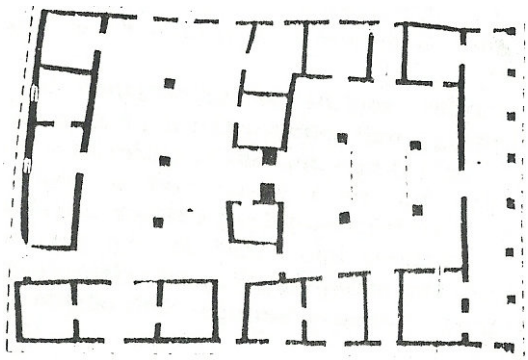
Therefore, architectural forms in Nigeria have moved steadily directly away from the expression of culture in design to meeting the demands of modern industrial age, grappling with a lack of appropriate technology and economic problems, all of which define the present trend of architectural form in Nigeria (Ibid).



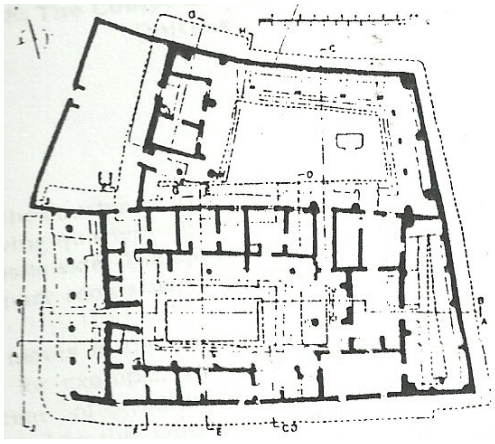
a. Design layout of chief Uzama Edigi Palace, 'Enogie of Use' (An Edo Chief compound), Benin City



a. Design layout of an Hausa compound, Zaria



c.Design layout of Chief Akeran's House (a Yoruba Chief compound) Ife.



d. Design layout of Chief Umera Ozi's House (an Igbo (Chief compound), Onitsha

Figure 3.10: Design layouts (a, b, c, d) representing some ethnic groups (geopolitical zones) in Nigeria
Source: Dmochowski, 1990 Vols. II and III; Saad, 1996.

Figure 3.11: National Assembly Building, Abuja
Source: Oluseyi, 2006

Figure 3.12: National Mosque, Abuja
Source: Oluseyi, 2006

According to Gutkind (1953), Nigerian architecture, like others in Africa, is deeply enmeshed in ethnography and anthropology. Traditional African architecture, which some regarded as vernacular architecture is actually an expression of the people's way of life and traditional values (culture). Therefore, architectural forms (or monuments) within this framework, is tied to different ethnic cultural practices. The Nigerian architecture before the colonial era depended on the social, cultural and religious background of the identified ethnic groups, and some environmental factors such as landscape and vegetation (Ibid: 463). A close look at pre-colonial architecture found within the Benin (South West zone) and Ibo (South East zone) kingdoms respectively revealed rich cultural heritage peculiar to these ethnic groups.

3.5 South Southern Architecture

According to Uchegbu (2007), the Benin kingdom which flourished between the 15th – 19th centuries in mid western Nigeria, had a rich cultural heritage which included its prodigious architectural forms. The Oba's palace was the most outstanding architectural masterpiece in all its territory. The design it was observed, portrayed grandeur and influence of a powerful ruler. Also, the people of Benin were popular for their brass and bronze works (technology and skill) which mostly adorned the walls and columns of the palace. The plan of the royal palace was divided into living spaces and an open courtyard. This is characteristic of most

residential buildings in southern Nigeria especially, the residences of wealthy men. The courtyard is often used for ceremonies (weddings, child naming and initiations) and official engagements. The building materials usually were mud bricks or blocks, timber, thatch leafs, palm and stone (Ibid).

According to Saad (1996), the Binis traditionally, have a well developed and very elaborate political and social institution centered on divine kingship (Obaship). In order words, the Oba (king) is the first in the political and social hierarchy then followed by chiefs of various important grades, occupying definite niches in the political hierarchy. Royal courtiers and free commoners come next then the royal servants and slaves at the lowest echelon of the socio-political hierarchy (Saad, 1996, p. 6). This arrangement is reflected in Bini architecture, where the Oba lived and still lives in a complex and elaborate palace consisting of aggregation/series of apartments or houses, compounds and various spaces of religious and political significance surrounding numerous open courtyards (Figure 3.13). The residences of the various important chiefs are often smaller versions of the palace of the Oba but still complex and elaborate in conception to reflect the importance of the chief and the resources at his disposal (Ibid, p. 7).

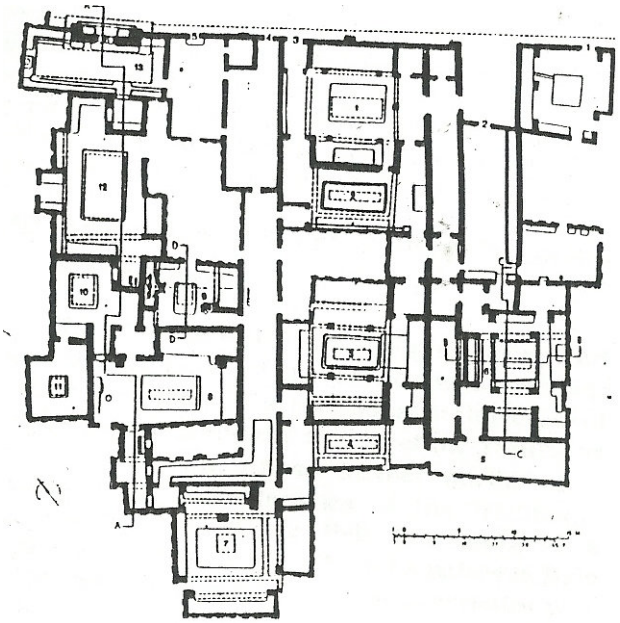


Figure 3.13: Design layout of the Palace of Oba Akenzua II, the Oba of Benin
Source: Dmochowski, 1990 Vol. II.

A typical example of such magnificent Benin architecture is the first storey building (called in the Bini language, *Egedege N'Okao*, meaning, the storey building number one) located in the historical city of Benin owned by Chief Iyamu Osawe (a Palace Chief), the *Inneh* of Benin was erected in 1906 (Figure 3.14). History had it that in 1897, the British colonial masters invaded the ancient Kingdom of Benin purportedly to avenge the death of one Captain Philips and six other members of his team. This invasion left the ancient Kingdom in ruins! Magnificent buildings/structures were destroyed and cultural objects (artifacts) were looted (stolen). For example, the magnificent Palace of Oba Ovonramwen N'Gbasi was completely razed down by the British troops and enviable cultural artifacts in the Palace that now adored many famous museums all over Europe and America were looted (Enogholase, 2006, p. 52). But out of the ruins, emerged the first storey building mentioned earlier on, *Egedege N'Okao.*

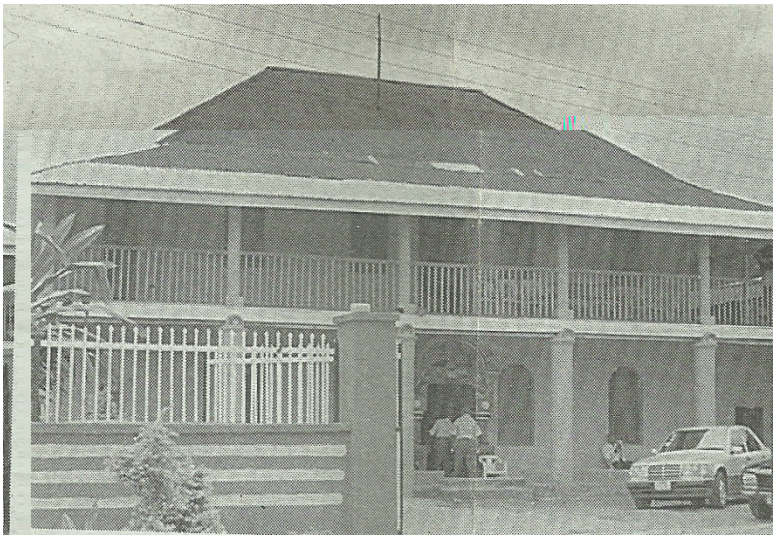


Figure 3.14: First Storey Building in Benin (Egedege N'Okao) owned by Chief Iyamu
Source: Enogholase, 2006

Egedege N'Okao is one hundred years old (now 105yrs) and is situated at No. 3, Erie Street, off Sokponba Road, Benin City. This monumental building according to Enogholase (2006) is a reposite of the richness of the ideational and material culture of the Benin people. Built from furnace fired red bricks, expensive steely iroko and mahogany woods used for the decking, railings and roofing, the building has remained strong and immovable, has survived the test of

time, a century of vicissitudes, scorching sun, corrosive weather, destructive pests particularly termites and the catastrophic rain storms. This is a testimony to the architectural mastery of the Bini masons, craftsmanship and the quality of the traditional building materials. **Egedege N'Okao** was claimed to have been designed and supervised by a British Colonial Officer, Mr. Crawe Reade whom Chief Iyamu Osawe employed. A tour of the building reveals six huge Roman columns (classical design element, expressing external influence) on the ground floor, a major parlour with four specious adjourning rooms. This arrangement is replicated upstairs and linked to the ground floor by a wooden staircase. There is a courtyard behind the building, facing adjourning apartments for the Chief's harem and other family members. According to Chief Oronsaye, Chief Iyamu Osawe's first traditional home (claimed to be 200years old before the errection of Egedege N'Okao) reveals **an alter of achievers** and **a hall of rituals** which indicate faithful harmonization of spiritual and material in the home of the rich. It contains ancient edifices, cultural artifacts and shrines. Also Enogholase (2006) claims that the local labour (woodworkers, builders, masons and even medicine men) were assembled to build palatial structures in those days and that the materials used in building Egedege N'Okao were 90% locally sourced. Egedege N'Okao mud walls are near bulletproof and the structure dimension is 16 x 10 meters (48 x 30 feet). It was observed that a peep into the history of Benin architecture reveals the skill and dexterity of the natives in the construction of the Oba's Palace which the British invaders destroyed. It is claimed that the Egedege N'Okao is the third storey building in Nigeria besides that of Calabar and the one in Badagry, Lagos State, constructed by the early Christian Missionaries in Nigeria (Ibid).

3.6 South Eastern Architecture

On the other hand, Isichei (1976) claims that excavation from Igboukwu in South East Nigeria revealed a lot about the life style of the Igbos before the colonial period (Uchegbu, 2007, p. 464). According to Uchegbu (2007), although the Igbos had a decentralized government and did not build large empires like Oyo and Benin, they still had a remarkable culture which was reflected in their art works and architecture. Saad (1996) stated that the Igbos lacked complex political institution of divine kingship therefore had no need for elaborate palaces and chiefly

houses. According to Saad (1996), “Complex structures like the palaces of Benin, Akure, Bida, Kano and Zaria had no functional relevance in the ‘republican’ domain of the Igbo. Consequently, Igbo architectural imagination is more stretched in the creation and construction of shrines, religious temples and hall for secret societies that regulated the conduct of members of the community” (Saad, 1996, p. 8).

However, under the influence of the Binis to the west, the Igbo of Asaba and Onitsha developed a fairly elaborate political system with **Obis** (paramount chiefs) that required palaces to house them. Even at that, the palaces of the Obis did not resemble that of the Obas of Benin (who it was claimed, ruled over the western part of Igboland at one time) yet there are certain features that distinguish Igbo palaces from those of the Binis and Yoruba (Ibid). A prominent feature of architectural form among the Igbos was the **‘Entrance Gateway’** (Figures 3.15; a, b, c and d), which could be likened to the Triumphal Arches of the Roman civilization and the concept of the **‘Obi’** (reception and spiritual lounge) (Uchegbu, 2007, p. 464).

The Entrance Gateway indicates the status of the family and the richness (carvings, moldings and paintings) on the walls or door leaf has a lot to say about the head of the family. That is whether the head is Royal, a Warrior, an Ozo, Nze, or Rich. The gateway not only serves the primary function of permitting wanted visitors and restricting unwanted ones, but announces to the passer-by, the status of the family behind the gateway.

a. Traditional Entrance Gateway Basden, Niger Ibo

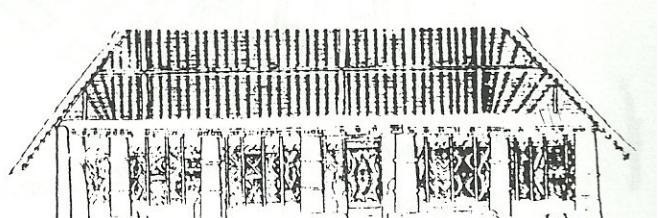
b. Entrance Gateway (1979) of Igwe Ezeokoli's compound Nnobi, Anambra State

c. Entrance Gateway of Chief Nwandu's compound Enugwu Ukwu, Anambra State

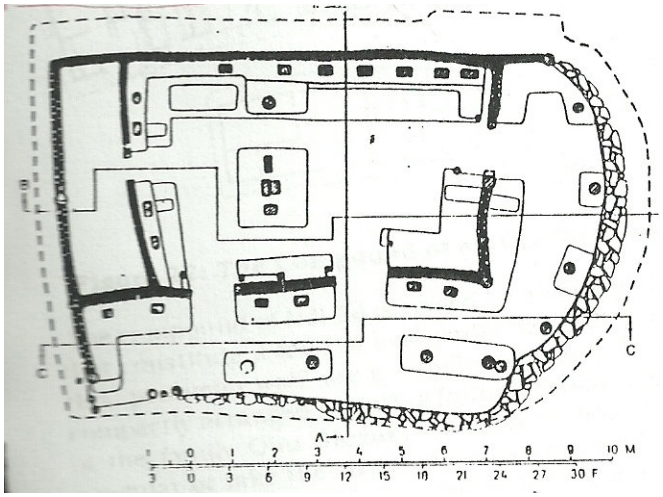
d. Entrance Gateway of Chief Onyiuke's compound Nimo, Anambra State

Figure 3.15: Over leaf (l-r) Traditional Entrance Gateways constructed with local materials (mud, timber, thatch) Top (l-r) Entrance Gateways constructed with local and modern materials (stones, cement)
Source: Okoye, I. (Ijele), 2002

The Obi (reception and spiritual lounge) is another prominent feature of Igbo architecture. It is an outer court or space for the family head and usually square or rectangular shaped low walled pagoda type structure often located close to the entrance gateway (Figure 3.16; a, b). It is the place where the family head receives and entertains his visitors or guests and consults with his gods or dead forefathers. There also the family head, educates his children (mostly the male children) on the culture and traditions of the community, and different arts and crafts of the people through folklore and other practical exercises (Figure 3.17). The Igbos like many other ethnic groups in Nigeria, are polygamous, as such, the Obi traditionally is also used by the family head as a meeting place with his wives and family members (Uchegbu, 2007, p. 465).



a. Façade of Chief Umera Ozi's 'Iba' or 'Obu' of Onitsha, 1910.



b. Plan of an 'Obu' as a dwelling space of Ndi Ezera Omu-Ukwu compound, Asaga Ohafia

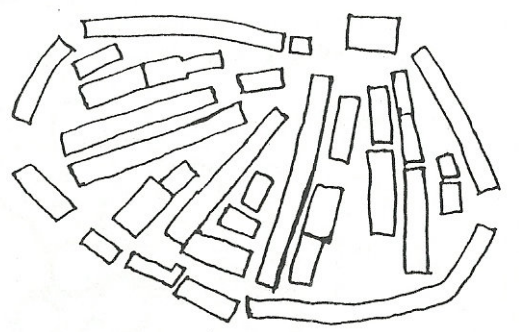
Figure 3.16: Over leaf (a) and Top (b), 'Obi', the reception and spiritual lounge, located immediately after the entrance gateway in a traditional Igbo compound.
Source: Dmochowski, 1990 Vol. III

Figure 3.17: Top (l-r) and bottom; Interior of the 'Obi' of Chief Nwodo of Ukehe showing the consolidated mud platforms as seats, fire place and sleeping platform. There are two small doors leading into a secret inner chamber behind the 'Obi'. The roof is made of thatch and supported by tree trunks
Source: Author's field photos. 2008

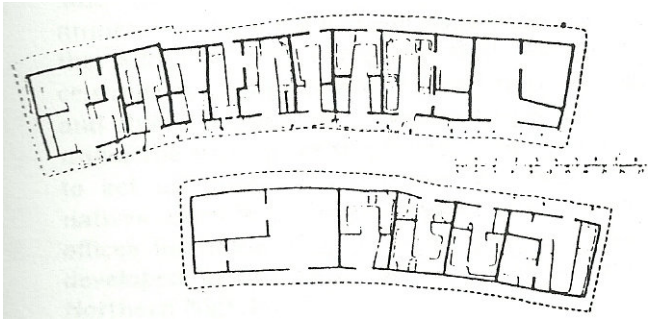
Saad (1996) claims that, the basic template of Igbo architecture seems to have been derived from the **'Iba' (**Obi or Obu), a primary place of worship erected for the religious needs of an extended family (Saad, 1996:8). An example is the compound of Chief Umera Ozi of Onitsha built in 1910. It is claimed to reflect the characteristics of Igbo traditional architecture. According to Saad (1996), the features transferred from the 'Obu' temples to the chief's residence include the main entrance veranda and the central courtyard around which worshippers congregate in the typical temple. The main courtyard is surrounded by living rooms, sleeping spaces and a parlour or a reception hall. There are built-in mud platforms on the entrance side facing the courtyard which provide seating for the chief and important guests during family ceremonies. The chiefs living quarters which are much larger than the ordinary rooms used by other members of the family face directly the entrance on the opposite side.

The portico in front of the house, reminiscent of a similar space in Yoruba architecture, is raised above the street level. The architrave is supported by colonnade consisting of seven huge pillars or columns covered with black and white geometric decorative patterns. The main difference with the portico of a Yoruba Chief's residence is in the material used in the construction and design. The Yoruba Chief it was observed would employ sculptured columns in the creation of his colonnade while the Igbo Chief would use puddle mud pillars.

The Igboland of Ohafia extraction has a different conception of traditional compound exemplified by the 'Obu' House of Ndi Aja family at Ohafia Elu. It was observed that the Ndi Aja compound is ringed by oblong houses that constitute a kind of oval perimeter wall. Inside this wall are a number of oblong houses compactly arranged and radiating from the plaza in front of the family 'Obu Shrine'. The courtyards are irregular shapes of narrow segments of a circle informed by the radial arrangement of houses (Figure 3.18; a and b). These courtyards serve similar purpose to those of the Yoruba or the Binis. The perimeter houses are the quarters for the women while the radial houses inside are for the house heads and male members of the compound (Ibid, p. 9-10).



a. Plan showing the compound arrangement of Chief Ndi Aja family of Ohafia with the 'Obu' in front.



a. Plan showing the arrangement of different family units attached to each other horizontally forming some sort of chain along the perimeter. (Umuokoro family compound, Ebem Ohafia).

Figure 3.18: Traditional compound and family unit arrangement of the Igbos from Ohafia
Source: Dmochowski, 1990 Vol. III.

This study found out (from personal interviews) that the radial arrangement has some cultural and security implications. Like the 'shigifa' in the traditional Hausa compound so is the 'Obu' in Igbo (Ohafia) traditional compound. It is very unlikely for a stranger to pass through the 'Obu' without being noticed or a criminal to escape from the compound through the 'Obu' without being caught. Also it will be difficult for anybody to enter the women quarters without being seen by house heads whose quarters are directly opposite. Uchegbu (2007) affirmed that the arrival of the Europeans in Nigeria and subsequent colonization brought a lot of changes with respect to the culture and the architecture of the people. A new breed of elite professionals, businessmen and politicians emerged mostly in the southern part of Nigeria. Their architecture, religion, education, social and family life all began to witness a hybrid of African and European styles. But contrary to the southern experience, the northern part of Nigeria was very slow in imbibing this foreign influence (Uchegbu, 2007, p. 466). They retained and maintained their architectural forms and style influenced by their culture and religion. This is why a lot of their traditional architecture can easily be spotted in the Nigerian traditional architecture landscape.

3.7 South Western Architecture

The Yoruba, like the Binis developed very elaborate political and social institutions centered on divine kingship. The Oba as the paramount Chief and head is supported by other important chiefs on the political hierarchy, followed by royal courtiers and commoners, with the royal servants and slaves occupying the lowest echelon of the hierarchy. The traditional Yoruba architecture reflects these realities (a complex aggregation of houses, compounds and spaces of religious and political significance). An example is the compound of Chief Akran, which provides a model of Yoruba extended family compound (Saad, 1996, p. 7).

A tour of the Chief Akran compound reveals a grand veranda supported by columns and arches announcing the frontage of the residence. After the veranda, passing through a decorated panel entrance door, is a courtyard with a sunken impluvium (pool) surrounded on all sides by verandas. From this section (courtyard) through another doorway, one is brought

into an inner central space which is completely roofed. The roof is supported by three pillars (columns) thereby taking care of the otherwise large span. This inner space is basically the family space and is surrounded on three sides by the living rooms, kitchens and storage spaces. The fourth side has three windows to allow light and ventilation into the space (Figure 3.19). It was observed that the compound of a commoner's house may replicate the pattern described above but smaller in scale and less elaborate in decorative and other details. Also it may contain only one courtyard. The prominent feature in the architecture of the Yoruba and the Binis is the grandiose front verandas and high pitched (steep) thatch roof (Ibid, p. 8).

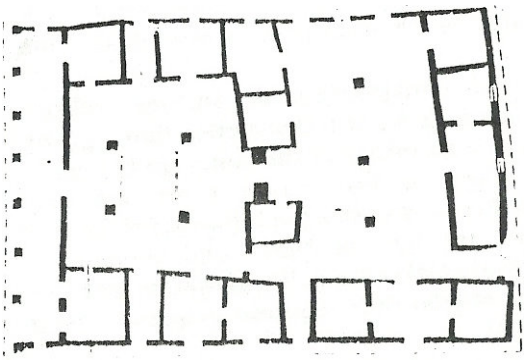


Figure 3.19: Plan of Chief Akeran's compound, showing a model of a typical Yoruba extended family compound
Source: Dmochowski, 1990 Vol.II.

3.8 Northern Savannah Architecture

According to Saad (1996), "A typical Hausa compound as may be found in Kano, Zaria, Sokoto, or Katsina displays a high degree of complexity and marked hierarchy of spatial privacy as one moves from the outside to the inside. It is often surrounded by a mud wall, a grass matting fence (zana) or more recently, by a concrete block wall. The main entrance hall opening to the street known as the **"zaure"** (Figure 3.20), separates public realm of the outside world from the private world of the extended family inside" (Ibid, p. 4).

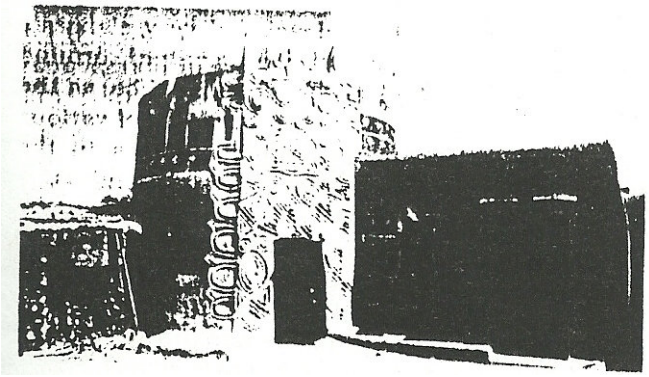


Figure 3.20: Circular Zaure (entrance hall) with dome mud roof, Zaria
Source: Saad, 1996

The **zaure** is an important space in the architecture of the Hausas' because of the functions that are held there, security purposes and cultural/religious demands. The head of the compound as observed receives guests and conducts business in the zaure. Many of this entrance hall or gate (zaure) is constructed in mud with domed or flat mud ceiling and roof employing the famous "Hausa vault" technique. They are mostly rectangular in shape but in some place like in Zaria, they (zaures) are circular in form and have domed or flat roof just as their rectangular counterparts (Ibid, p. 5).

As had been observed earlier, the zaure is an important space due to the security and control measures it offers to the compound. After the zaure, is the first courtyard (outer) of the house known as '**kofa gida'** or '**kofar gida'** (literally meaning entrance door to the house). But it should be understood as an 'opening' or 'space' through which one accesses the interior of the compound. According to Saad (1996), this is a semi-public domain often enclosed by buildings and parts of the compound wall. The space defines the limit access to adult male visitors to the compound except for close relatives and intimate friends of the household head. The rooms found there are sleeping spaces for unmarried male members of the compound and occasional visitors. Also, animal pens, horse stable and outdoor sanitary facilities (latrine and bath) secluded by a screening wall are located or found in this section of the house. An inner reception hall known as **'shigifa'** opens into this outer courtyard (Figure 3.21and 3.22).

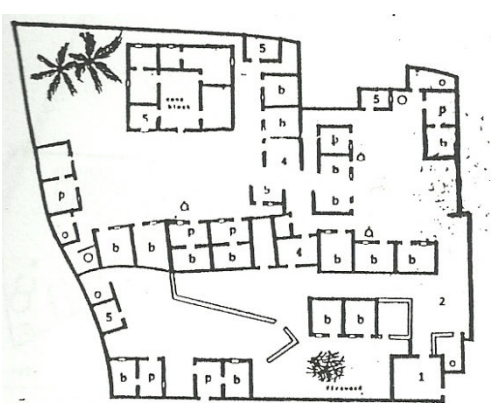


Figure 3.21: Layout of a Hausa compound showing the zaure (1), shigifa (o) Kofa gida (2), sleeping quarters (male/female), animal pens
Source: Saad, 1996.

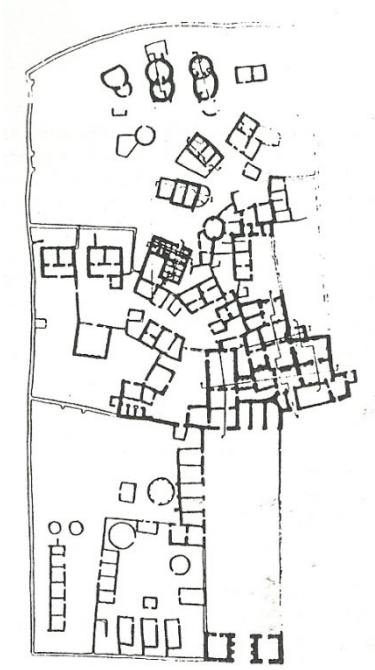


Figure 3.22: Layout of the Palace of Emir of Zaria showing the zaure, cikin gida, kofa gida, sleeping quarters, shigifa and rest of the Palace compound
Source: Dmochowski, 1990 Vol. I.

Saad (1996) stated that, the 'shigifa' is a smaller inner zaure used as a more private male social space where the house head (turaka) can relax in private with intimate friends and members of his family. Also it was observed that large compounds may contain a number of 'shigifa' each leading to a separate residential unit within the compound. The 'shigifa' opens into the inner courtyard ('cikin gida' or 'tsakar gida') of the compound and adjacent to the

'shigifa', is the domain or private sleeping quarter of the household head which often opens into the inner courtyard. In other words, the 'shigifa' is a transitional space between the outer courtyard ('kofar gida') and the inner courtyard ('cikin gida'). In a more prosperous compound, it is observed that the head may have a section of the 'shigifa' consisting of a room and parlour, with the parlour having two external doors, one opening to the outer courtyard (kofar gida) and the other opening to the inner courtyard (cikin gida). This gives the head the vantage position of knowing and controlling the goings on between the outer courtyard and the inner courtyard (Ibid).

Traditionally, the 'cikin gida' is regarded as the women quarters and constitute the major part of the compound. The married women spend most of their married lives within this part of the house especially, if their husband or the head of the compound practices 'purdah' (Islamic custom of seclusion). In this part of the compound, facilities that will help in the wellbeing of the women are located there. For instance, sleeping quarters (for the women, their young children and female visitors or relatives), children play area, kitchens, storage, granaries, chicken coops, bath rooms and toilets, a well or standing tap for water and a number of other functional spaces.

The materials of construction of the traditional Hausa compound are mud, thatch and split palm trunks known as **'azara'**. These materials according to Saad (1996) are reusable thereby allowing evolutionary changes in the compound in response to changes in family size and structure to be reflected in architectural space. Studies by Prof. F.W. Schwerdtfeger (1982) covering 50years (1915–1965) and Trevor Marchand (1994) covering 40years (1952-1992) with respect to the development of a number of compounds in Zaria, revealed the physical space growth dynamics of the compounds, the evolution of spaces within the compound, changes in architectural forms and preferences (Figure 3.23). According to Saad (1996), initially, residential buildings mainly consisted of mud round huts with thatch roofs but gradually through natural decay and changes in taste and forces of urbanization which made thatch more scarce, these forms (architectural) had to be changed to rectangular structures of

conical shaped sun dried bricks (**'tubali'**) to be roofed with **'azara'** reinforced mud roofs in the form of domes or flat roofs. And to avoid the perennial maintenance that is required of mud roofs, the roofs may be enveloped in corrugated iron sheet structure for protection against the elements. This way the beautiful vaulted ceilings are retained while ensuring longevity for the roof structure (Ibid, p. 5-6).

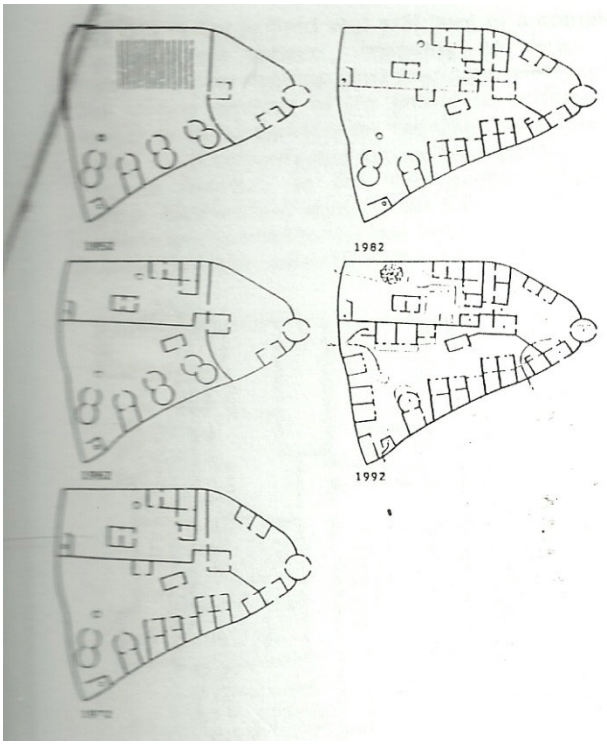


Figure 3.23: An Hausa compound showing growth process in response to changes in family size in Zaria. Left (t-b) 1952, 1962, 1972 Right (t-b) 1982 and 1992.
Source: Saad, 1996.

Also, with the advent of cement and corrugated iron sheets, new structures are constructed within the compounds with these 'permanent materials'. The traditional earthen floor is replaced by sand-cement screed floor, puddle mud plaster used for decoration, replaced by cement grout. It was observed that this process (the use of 'permanent materials') of change is an on-going one in the traditional compound with the modern non-recyclable materials gaining the upper hand. This makes it difficult for the natural remodeling aspect of the traditional compound to continue as before. Otherwise, the traditional Nigerian compound continues to behave like a living organism that responds to changes in the size and needs of the extended Nigerian family (Ibid, p. 6).

3.9 External Architectural Influence

Nigerian people it has been observed make architectural decisions which result in concrete architectonic forms that yield insights into the very cultures and environments that they represent and live in. Also Nigeria has a diverse structure (with over 370 identified ethnic groups) and each ethnic group expressing its own culture or sub-culture, history, responding to unique environmental condition and reacting to various external pressures and processes of urbanization, westernization and modernization (Ibid, p. 4).

It is a well established fact that colonization of Nigeria by the British had its influence (positive and negative) on the traditional settings (architecture, culture, religion, government to mention a few) of the host community/ethnic group. Some ethnic groups like the Igbo were quick to embrace the western influence, some others like the Hausa and Yoruba were slow and selective while some like the Binis resisted. The abolition of slave trade in the 17th century brought to Nigeria a style of architecture referred to as 'Brazilian Architecture' in the South West zone. Slaves that were repatriated from South (Latin) America after the abolition introduced the Brazilian style of architecture in Lagos, Nigeria. According to Saad (1996), "these houses contain some formal and symbolic characteristics acquired as a result of

complete cultural synthesis" (Ibid, p. 12). Vlach (1984) stated that, "the Yoruba changed their houses, but they changed them in a way that made an imported design profoundly their own" (Vlach, 1984, p. 3). Marafatto (1983) in his 'Nigerian Brazilian Houses' stated that original Portuguese functional stylistic concepts were modified in Brazil before importation to West Africa. According to Marafatto (1983), the Yoruba conception of spatial relationship linked to the traditional family organization were added to the imported architectural style to create a new model of residential architecture known as the **Nigerian Brazilian House**. In other words, the formal symbolic elements of the Nigerian Brazilian House are derived from Portuguese colonial residences in Brazil, while the spatial organizational structure originates from the typical Yoruba compound (**agbo-ile**). Further, Marafatto (1983) identified five prototypes of Brazilian residences in Lagos but these were grouped into three models by Saad (1996).

Model 1

This is a detached house on one floor with no upper stories (bungalow). This house derives directly from its Brazilian ancestor. Rooms are symmetrically arranged on both sides of a central corridor-cum-living room (Figure 3.24). This central space is used for most collective domestic activities just like the inner courtyard of the traditional Yoruba 'agbo-ile'. Some other activities could take place outside this space if the building has a fence wall at the back of the enclosed yard. According to Saad (1996), this model could have up to six or eight rooms lined up on either side of the central corridor (Ibid).

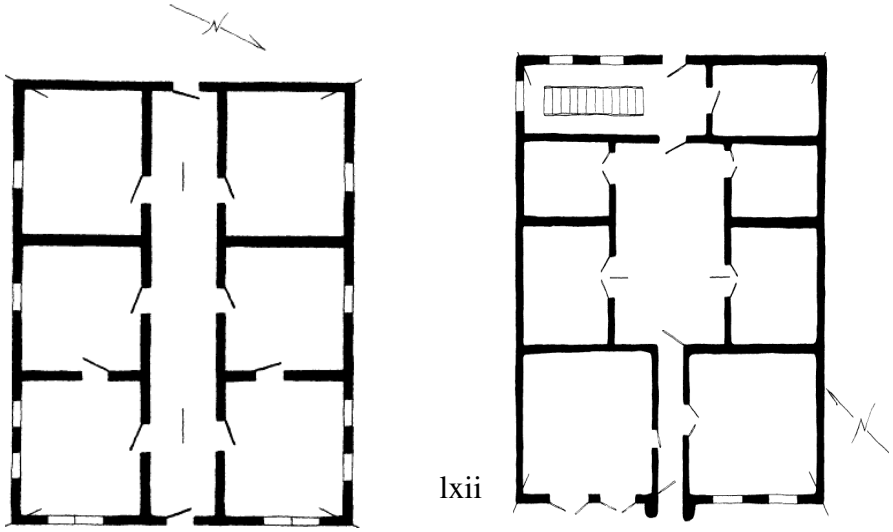


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Figure 3.24: Plan of a contemporary Yoruba bungalow influenced by Brazilian architecture. Rooms are symmetrically arranged on both sides of a central corridor/hall, 1969
Source: John Vlach, 1974

Figure 3.25: Plan of two-storey Nigerian Brazilian house derived from the Sobrado concept, 1929
Source: John Valch, 1974

Model 2

This model of Nigerian Brazilian House is on two or more floors (stories) (Figures 3.25). According to Saad (1996), this vertical development is derived directly from the Brazilian 'sobrado' concept. The floors are linked vertically by one or two stairs located at one or both ends of the central corridor, depending on the size of the dwelling. The main entrance is symmetrically placed in relation to the façade of the building. The spaces for the productive activities like retail and wholesale trading are close to the façade (front) while domestic activities like cooking and washing/bathing are located at the back on the ground floor. The upper floor serves as the residential quarters of the head of the household and all the rooms face the corridor which functions purely as the passage way on this level (Ibid, p. 13).

Model 3

This model according to Saad (1996) is also on two or more floors with an external gallery and staircase, and a portico at the road level. The spatial concept is different in that the passages are kept separate from other elements of the dwelling by putting them in direct relationship with the outside. The internal spatial organization however, is similar to that of the previous models. The rooms for the wives and children together with the services are on the ground floor, while the domain of the head of the family is on the first floor. Further Saad (1996) observed that this type of residence often exhibits a great quantity of stylistic decorative elements of Brazilian origin such as banisters, small pillars, wooden balconies, embellished perforated verandas, decorated architrave, columns and window hoods (Ibid).

The basic elements that distinguish the Nigerian Brazilian House from other residential buildings in Lagos and environs are the style of their windows, ribbed pillars; stuccoes and

grating that are traceable to baroque aesthetics of Brazilian colonial style (Figure 3.26). Famous examples of Nigerian Brazilian Houses in Lagos are under protection by the National Commission for Museum and Monuments for the historical or aesthetic significance. They include the Fernando House at Tinubu Square (Ijolo Bar), Oba of Lagos Palace, Water House of Kakawa Street and the Old Secretariat on Marina with certain baroque features which blend well with the Brazilian architecture in Lagos (Ibid).

Figure 3.26: An example of Nigerian Brazilian House in Lagos, Nigeria with elaborate decorations around the windows and entrance facades
Source: John Vlach, 1974.

3.10 Traditional Nigerian Architectural Elements

From the examples discussed above, this study was able to identify basic areas of characteristic similarities and dissimilarities amongst the traditional Nigerian architecture representing four cultural zones – North (Hausa), South West (Yoruba), South East (Igbo) and South South (Edo or Bini) zones. They are the following:

Similarities:

Entrance Element – Though the form, size and design may differ from one cultural group to another, there is always a defined separation of the external space from the internal space. For the Hausa, it is the 'zaure' (entrance/reception hall). The Yoruba, Edo or Bini, verandah and the Igbo is the entrance gate (Figures 3.27, 3.28 and 3.29).

Figure 3.27: (l-r) Entrance gate into the Palace of HRH Chief J.N.Ofomata 'Obu of Nanka'and entrance gate into the Palace of Obi Onyiuke Nimo both in Anambra State.
Source: Author's field photos, 2008

Courtyard – This is another traditional Nigerian architectural element common in all the zones. In the North, there are various courtyards, 'kofar gida' and 'cikin gida' (outer and inner courtyards). The first courtyard referred to as the outer courtyard is the semi public space while the inner courtyard is an exclusive private space. As stated earlier, the outer courtyard ('kofar gida') defines the limit access to adult male visitors to the compound while the inner

courtyard (‘cikin gida’) is an exclusive private space for the women of the compound and their children (Ibid, p. 5).

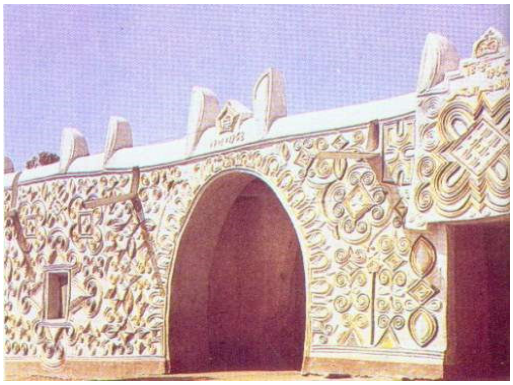


Figure 3.28: Emir of Zaria’s Entrance Gate

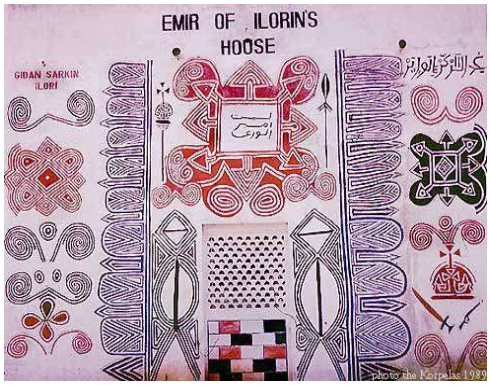


Figure 3.29: Emir of Ilorin’s House

Source: Boomie, O.;
http://www.motherlandnigeria.com/../emir_entrance.jpg
http://www.motherlandnigeria.com/../emir_of_ilorin_house.jpg

For the Yoruba, there is also an outer and inner courtyard. The outer courtyard is often open to the sky like in the North, while the inner courtyard is covered. Their functions are about the same as those in the North except that, the inner courtyard is for private activities (bathing, cooking and sleeping) while the outer courtyard is for public activities like reception and meetings (Figure 3.30). The Edo or Bini have series of open courtyards serving various functions ranging from social and or political reception to religious and ritual ceremonies (Figure 3.31). The Igbo have open courtyards like the Bini for social and cultural activities.

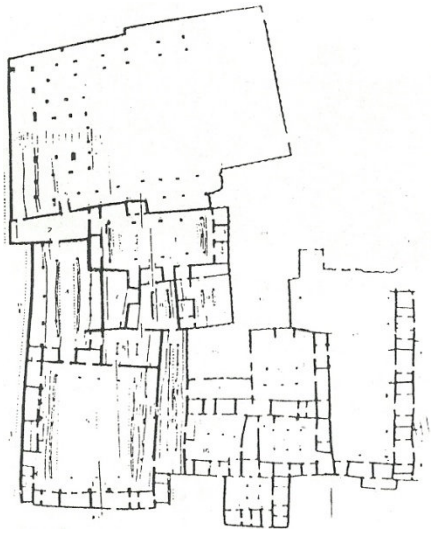


Figure 3.30: Layout of the Palace compound of the Deji of Akure, Afin Akure showing the various courtyards (inner and outer) within the complex.
Source: Dmochowski, 1990 Vol. II

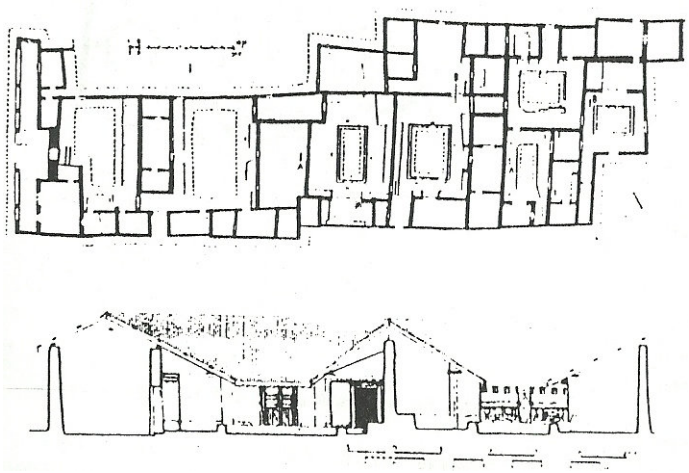


Figure 3.31: Top, layout of Chief Elerewe's House a Benin Chief's residence showing the various open courtyards; Bottom, section through the residence showing the open courtyards
Source: Dmochowski, 1990 Vol. II

Growth/Expansion Tendency – The traditional Nigerian compound is expandable. This is identifiable in all the zones mentioned above. According to Saad (1996), traditional Nigerian compound continues to behave like a living organism in its response to changes in the size and needs of the extended Nigerian family. This is a common feature to all Nigerian communities. (Ibid, p. 6 and 17). For the Hausa in the North, new structures are either attached to the existing ones or built separately within the compound. The Yoruba in the South West, growth is a complex aggregation of various houses, compounds and spaces of religious and political significance developed as the need arises or the family increases. For the Edo or Bini in the South South, growth is complex and elaborate, consisting of series of apartments surrounding numerous open courtyards, serving as living quarters for the household head, his extended family, court servants and slaves. While the Igbo (Ohafia) in the South East, new structures are attached to the existing ones thereby expanding horizontally along the perimeter of the compound.

Space Organization – Spaces are organized and designated for functions like the kitchen, bathroom, toilet and storage, living room or parlour and bedroom. They are often separate units and accessed through the courtyard. This is common feature in all the zones under discussion except for the Brazilian and Portuguese influenced Nigerian architecture where kitchen, toilets and storage spaces are integrated within the same building (Ibid, p. 16). According to Saad (1996), circulation spaces within traditional Nigerian compound tend to be less articulate. Spaces between buildings or routes leading directly from one building to another or from one door to another define the circulation. In a typical Yoruba, Edo and Igbo compound, verandas and passage-ways between rooms are the most common form of circulation spaces. Also among the Hausa of the savanna belt, narrow passage-ways between rooms and open paths within compound constitute the main circulation spaces (Ibid).

Construction Material – Nigerian traditional architecture basically is constructed using traditionally available materials within the locality. Materials like earth in the form of clay, puddle mud or laterite and stone for the building walls and straw, thatch or mud for the roof are commonly seen in Nigerian traditional architecture. Therefore, no matter the form these traditional local materials are turned into before use, their availability and use, cuts across the various cultural zones of Nigeria (Figure 3.32)

a. Obi Onyiuke Nimo, built 1875 and rebuilt 1903

b. Storey building of HRH J.N. Ofomata, Nanka 1925

c. First Palace of Larooye, Ataoja of Osogbo, Osun

d. Carved timber entrance door to HRH Ofomata's Palace gate, Nanka

e. Traditional building from Sukru kingdom, Adamawa

f. Wall detail of the storey building of HRH J.N. Ofomata Nanka

Figure 3.32: Left (t-b), Obi Onyiuke Nimo, built with red stones and mud; Palace of Larooye Osogbo, built with puddle mud/laterite, thatch and carved timber trunks; traditional hut in Sukru kingdom built with stones, mud/laterite and thatch; Right (t-b), HRH Ofomata storey building built with local red stones, mud, timber boards and decorated with cement; carved entrance gate door to HRH Ofomata's palace and wall decoration on the storey building

Source: Author's field photos, Sam-amobi, C. 2009, Babatunde, J. 2006

Differences:

Storage Facility – Storage facility for farm produce is varied in the zones under discussion. In the North, grains are stored in a cylindrical earthen structure (granary) suspended on three earthen stands and roofed with thatch (Figure 3.33). This structure stands alone and is found within the traditional Hausa compound layout (Figure 3.34). In the Igbo traditional compound, no structure is built for the storage of grains instead grains are sun dried and stored in clay pots which are kept in the kitchen ceiling. Sometimes, some grains (maize, wheat, beans) are tied with the stalk and hung over the fire place in the kitchen.

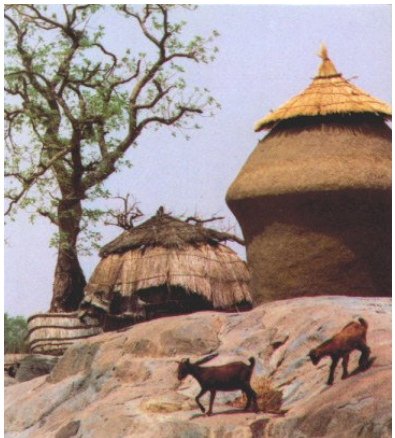


Figure 3.34: Traditional Hausa compound layout

Figure 3.33: Earthen Storage facility (granary)
Source: Boomie, O; http://www.motherlandnigeria.com/../traditional_granery_in_north.jpg
http://www.motherlandnigeria.com/../new_post10.jpg

Reception Lounge – This facility is predominant in traditional Igbo architecture unlike the Hausa, Yoruba and Edo architecture. It is normally located immediately after the entrance gate, separate from the main building and serves as a reception lounge ('Obi' or 'Obu') where visitors to the compound are first welcomed. Some traditional ceremonies like marriage, ancestral worship/rituals and child dedication could take place there. But for the Hausa, there is no 'Obi' or 'Obu' but 'zaure'; the Yoruba and Edo; verandah.

Roof Structure – The roof design and structure are varied in the zones. For the Hausa, the roof is either dome or flat. The external and internal spaces are sculptured and carefully decorated in embossed features taking advantage of the plasticity of the materials (clay, puddle mud or laterite). The great interiors of the Hausa urban architecture are famous for their embossed designs, vaulted and ribbed reinforced mud ceilings (Ibid, p. 17). The Yoruba, Edo and the Igbo traditional roof is pitched and covered with thatch or straw.

Courtyard – The access to the courtyard are different in the zones. Male members of the community are allowed to go beyond the outer courtyard in the Yoruba, Edo and Igbo communities. But this is not allowed in the Hausa and some Yoruba community where the practice of 'purdah' exists.

From the discussions above, the Nigerian Brazilian House architectural form or style is one out of many external influences that affected the traditional architectural forms or styles in Nigeria. It is evident that there are similarities and dissimilarities in respect to architectural style, construction material, culture and external influences as a result of colonization and or migration of people from one location to another. These affected in no small measure the character of traditional Nigerian architecture. Every external contact or influence contributed to the history of that area (zone) architecturally and that should be noted. That is why this study thinks that the criteria for listing architectural monuments in Nigeria should recognize the perculiarities of the various zones in Nigeria. Therefore, the need to evolve appropriate listing criteria for architectural monuments in the South East Zone of Nigeria.

3.11 Architectural Monument

An architectural monument is a building or structure designed and built to commemorate an important or great historic event or in memorial of a famous person or individual. It could be a very old building (historic building) or structure that survived many years without noticeable dilapidation and or preserved for the purposes of its unique architectural style, building material, construction methods (technology) and aesthetic characteristics. Such a building or structure should portray the culture, values and emotions of the people that initiated it, and could be of a large scale and listed as architectural monument by an Act of the government. It could be a compound or an estate with a lot of unique historical buildings or structures. The important thing is that it tells the story of the architecture of past civilizations or events. Examples are, the Pyramids in Egypt (Figure 3.35), Old Residency, Calabar (Figure 3.36), the Parthenon in Athens (Figure 3.37), Colosseum in Rome (Figure 3.38) and All Saints Cathedral Church, Lagos (Figure 3.39) to mention a few.

Figure 3.35: Pyramids in Giza, Egypt.
Source: Brooks, 1997.

Figure 3.36: Old Residency in Calabar, Nigeria
Source: Author's field photos, 2007.

Figure 3.37: Parthenon (447-432) Athens, Greece
Source: Microsoft Encarta, 2008

Figure 3.38: Colosseum (Flavian Amphitheater) Rome
Source: Microsoft Encarta, 2008

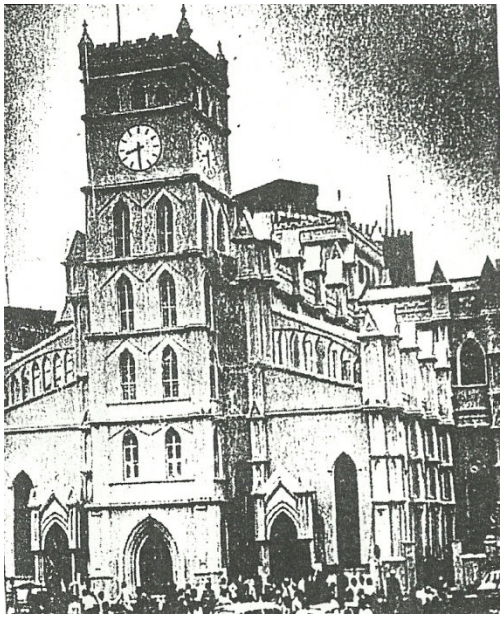


Figure 3.39: All Saints Cathedral Church on Marina, Lagos

Source: Okafor, I, 1996

Obasi (2008) stated that, “architecture constitutes a veritable chronicle in stone and provides a key to the habits, thoughts and aspirations of the people and without knowledge of this art, the history of any period lacks that human interest with which it should be invested”. The study of architecture, he further stressed, “opens up the enjoyment of contemplating buildings, with an appreciation of their purpose, meaning and charm, and every structure conjures up the conditions of past ages” (Obasi, 2008, p. 24). Similarly, Chukwuali (2004) stated that, “there is hardly a better way to study the life-style, cultural values and traditional disposition of a people than to critically analyze the basic elements of their residential environment” (Chukwuali, 2004, p. 9). In other words, it could be affirmed that some architectural structures, besides the provision of shelter and security for a people, could serve as ‘library’ of information with regards to a people’s history.

Igwe (2008) in his discussion on ‘Architecture: the quest for cultural identity’, opined that, “Architectural monuments stand as timeless representations of tradition and culture. They also, carry a historical message about the connection between human beings and the built environment” (Igwe, et al 2008, p. 225). According to Igwe (2008), buildings are generally perceived as products of social and cultural conditions. This probably explains why architecture is used to pursue cultural identity. For instance, the Romans used their architecture to express their power and prosperity (Ibid, p. 226).

Anderson (2007) stated that, “...Architecture must satisfy its intended uses, must be technically sound, and must convey aesthetic meaning... Architecture then survives not only as beautiful objects, but as documents of the history of cultures; achievements in architecture that testify to the nature of the society that produced them” (Encarta Encyclopaedia, 2008). Brooks (1997) attests that, “monuments celebrate towering achievements in architecture. Whether built to celebrate the victories of war, the passing of presidents, or the loss of a nation’s young, these monuments range in scale from the epic to the intimate, and represent

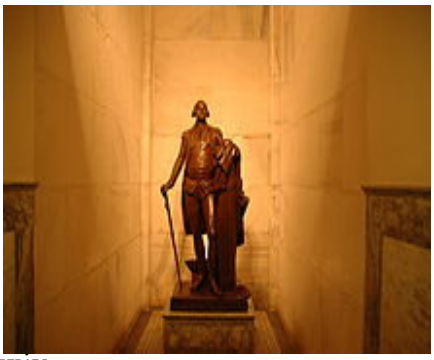
the visions of some of history's most ingenious architects, artists and sculptors" (Brooks, 1997, p. 1).

3.12 Monumentality Question

The question of monumentality of a building/structure has been observed to be a subject of interest and debate since the beginning (the twentieth century) of the modern movement in architecture. The monumentality questions were –

- The desirability of the structure,
- The proper architectural approach when the structure is deemed desirable,
- The relationship of the structure to other physical expression in the community (Creighton, 1962, p. 6).

In 1961 in America, there was an architectural competition announcement for a monumental concept (a memorial) for Franklin Delano Roosevelt, one of the past Americans Presidents. A year later (1962), the Federal Commission of Fine Arts, rejected the design adjudged the best (out of 574 designs) by a professional jury as not being 'harmonious' with the three adjacent memorials; the Washington Monument, the Jefferson Memorial and the Lincoln Memorial all in Washington DC (Figure 3.40; a, b, c). The reason was that the proposal was, 'lacking in repose, an essential element in memorial art' (Ibid). In other words, the proposal (design) did not blend with the physical community of existing structures and not reflective of memorial art. This official stand it was observed raised many questions about the nature of the architecture of memorials and monuments.



a. Washington Monument

Washington Statue

b. Jefferson Memorial

Jefferson Statue

c. Lincoln Memorial

Lincoln Statue

Figure 3.40: Architectural Monuments in Washington DC, USA
Source: http://en.wikipedia.org/wiki/JeffersonMemorial
http://en.wikipedia.org/wiki/WashingtonMonument
http://en.wikipedia.org/wiki/LincolnMemorial

One of the slogans of the early proponents of the modern movement in architecture was that *monumentality no longer had any justification*. In other words, there is no good and acceptable standard or criteria for judging monumentality and the issue of monumentality of a structure is irrelevant. For instance, Walter Gropius an American architect wrote, "the old monument was a symbol for a static conception of the world now over ruled" (Ibid, p. 7). The word monument though used in a very literal and limited sense in the manifestos of the twenties, the symbolic nature of monumental composition was not totally, discarded in practice. Rather, the architect's creative efforts were transferred from buildings dedicated to princes and potentates to those devoted to broad social purposes like schools, factories et cetera. The social purpose aspect of modernism in architecture was what appealed most to its

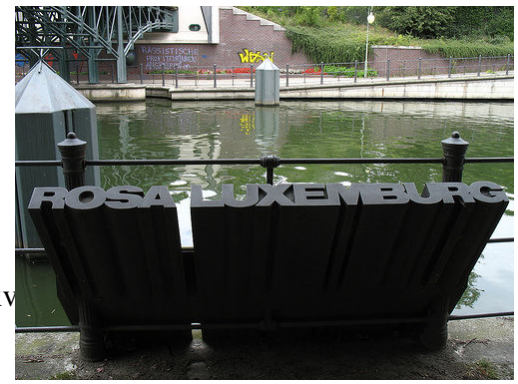
rationalizers and assessors like Lewis Munford who wrote in *The Culture of Cities*, "The notion of a modern monument is veritably a contradiction in terms; if it is a monument it is not modern and if it is modern, it cannot be a monument" (Ibid). In his opinion, monument is *'the house of the dead'* as against *'the dwelling house' or 'the living house'*. Later Munford and some other writers accepted the issue of monumentality of a structure in its more extended definitions.

Montgomery Schuyler (1891), still on the issue of monumentality, referred to the Brooklyn Bridge (Figure 3.41) as "one of the greatest and most characteristic of the monuments of the nineteenth century". It appeared, then, that there was nothing wrong with monumentality any longer, so long as "the monument" served what Arthur E. Morgan (former chairman of the Tennessee Valley Authority) called "the democratic spirit in architecture", and did not use its "grandeur and dominance" for the benefit of "royalty, nobility and power" (Ibid, p. 8). Therefore, accepting monumentality as an adjunct of community service and in appearance, so long as the purpose was democratic, articulate architects and their critics moved onto the thesis that monumentality was simply a matter of *scale*, the addition of *emotional qualities* to the *functional one* and a factor of the *hierarchy of types* and *uses* of buildings.

Figure 3.41: Brooklyn Bridge (l-r), showing the pedestrians and a side view of the bridge
Source: http://photobucket.com/images/brooklynbridge/

This generated some argument that in 1948, it was reported, the British Architectural Review, conducted an inconclusive symposium entitled, “In Search of a New Monumentality”. The symposium, it was reported brought critics like Sigfried Giedion and Henry-Russel Hitchcock to the defence of “emotional impact” in architecture. A year later (1949), Matthew Novicki wrote, “the controversial problem of monumentality…does not in fact depend on any form but is a problem of scale”. He concluded that “monumentality, in the sense of a contrast between architecture of exceptional importance and the size of an individual, has its true and eternal qualities of which man should not be deprived” (Ibid). Later, Lewis Mumford who served on the advisory Committee to the Franklin Delano Roosevelt Memorial Commission, and helped to write the program for the competition wrote, “thus we have accepted monumentality as a matter of scale, of consistency with the aims of a democratic society, of hierarchy within the range of building types and purposes – and of ability to produce, using the vocabulary of modern architecture, a significant and emotionally convincing result” (Ibid, p. 9). Monumentality he observed is fundamentally, a problem in expression, not in function, technology or economics.

The debate on monumentality inspired the emergence of various schools of thought and periods. For example, the Expressionists, Modernists, Purists, Brutalists, Sculpturalist, to mention a few. The Expressionists are of the opinion that monuments should be “*massive, lasting and impressive*”. They believe in the use of *heavy masonry forms*. Examples of the expressionist monuments are Mies van der Rohe’s monument to Karl Liebnecht and Rosa Luxemburg in Berlin (Figure 3.42, a, b and c). This era was regarded as the smoothing-off period of cleaned-up masonry structures that furnished inspiration for contemporary solutions to the monumentality question.



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a. Mies Monument to Karl and Rosa in Berlin b. Rosa Luxemburg Park in Berlin

c. Portrait of Rosa Luxemburg

Figure 3.42: Monument to Karl Liebnecht and Rosa Luxemburg by Mies van der Rohe in Berlin
Source: http://www.google.com.ng/.../2006/LudwigMiesvanderRoheRc
http://en.wikipedia.org/RosaLuxemburg
http://open.salon.com/blog/lostinberlin/2009/05/31/whoisburiedinrosaluxemburgstomb

The modernists approached the question of monumentality by blending *classical elements* with *modern ideas*, *technology* and *materials* to create, *"modern monuments"*. Examples of these "modern monuments" are Liberty Memorial in Kansas City by H.V.B. Mangonile (Figure 3.43) Jefferson Memorial (classical revival/ neoclassical building) in Washington DC by John Russel Pope and Lincoln Memorial (in form of Greek Doric Temple) in Washington DC by Henry Bacon. But ironically, according to Creighton (1962), "Interesting as some of these compositions (modern monuments) were in refinement of detail and in translating to monuments and memorials, the style which had provided the inspiration for most of our state

capitols and many of our other government buildings, they seemed like school exercises, and achieved none of the simple directness of expression that had been reached by the third adjacent memorial in Washington – the obelisk on a knoll which is Washington's monument" (Ibid). He further stated that the attempts to reject the classical approach and substitute a "modern" monumentality were often equally massive, and sought to attain their expression through masonry piles.

Figure 3.43: Liberty Memorial by H.V.B. Mangonile, Kansa City.
Source: http://www.pbase.com/wlhuber/kclib.

The purists on the other hand are of the opinion that monuments should be of *clean geometric forms* (like rectangle, square). Furthermore, in the United States, the *domestic scale* which was being developed for one contemporary expression could not be brought up to the *monumental scale*; nor could anyone succeed in bringing down to the level of a comprehensive memorial the *urban scale* of the developing skyscraper solution. Therefore, for a long time, buildings of an intermediate scale (memorials, churches, university buildings, hospitals) remained the weakest expressions of the new architecture. It seemed for a time that the very materials which provided both the rationale and the expression of the architecture of our time (glass, steel, aluminum, plastics) were characteristically inappropriate for perpetuating an ideal or immortalizing a personality (Ibid, p. 10-11).

The brutalists in their contribution approached the question of monumentality from the angle of *materials used* and the *development of the plan*. This was a challenge to the purity of the early designs of the First Machine Age in respect to technological rationale and aesthetic

expression. The sculpturalists, searched for a more *plastic*, *sensuous* and *sculptural* expressions. A classic example is Le Corbusier's chapel at Ron champ (Figure 3.44). Later, in the sixties, the period of chaoticism arrived, demonstrated and defended by the algebraic and geometric involutions of Space-Framers, the Geodecicist, the Hyperbolicists, and the Suspensionists; the shape-searching Sculpturalists and Virilists, the nostalgia of the Nouveau Artists-Nouveau and the Neo-Libertarians. It suddenly appeared that many possible new approaches to the concept of monumentality were being developed. It was observed for example, Le Corbusier changed from purism to an independent and original monumentality, exemplified in his Chandigarh buildings, dramatized at Ron champs and formalized at La Tourette, of tremendous influence. The plastic potentials of concrete were capitalized and demonstrated, and of necessity the steels and other metals began to compete. A new interest also was developed in masonry; for example Rudolph at Wellesley, Saarinen at Yale and Kahn at Pennsylvania showed very different, very original ways to use brick and stone. Whatever the philosophy and reasoning, the result was often more heroic in scale, broader in surface, more broken, ornamental, and emotional in detail than the curtain-wall culmination of the earlier modern movements (Ibid, p. 12).

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Figure 3.44: Ron Champ Chapel by Le Corbusier, France
Source: http://photos.igougo.com/pictures...Ronchamp-France.html

It was observed and later discussed within intellectual architectural circles, the question of hierarchy which hinted at the possibility of a new monumentalism: a hierarchical range implies not only an "unimportant" building at one end of the scale, but an "impressive" building at the other. An example was an award winning firehouse described by the jury that selected it as "violating the hierarchy" of buildings in its community but being too impressive and too monumental. Based on the above context, architects and critics alike suggested that a distinction be made between "background" and "foreground" architecture. That is, the anonymous architecture that simply does its job well and the more creative, even monumental architecture of the geniuses who cannot be restrained (Ibid, p.13).

From the discussions above, one may summarize the considerations for the monumentality of a piece of architecture as follows –

- Scale of the structure; that is, the apparent size, whether it's massive and impressive.
- Design approach or style; that is, the uniqueness of the design approach or style.
- Design form or shape of structure.
- Aesthetic expression or ornamentation of the structure.
- Construction material used in realizing the structure.
- Hierarchy; that is, the relationship of the structure within the range of building types or existing structures within the community or environment.
- Emotional significance; that is, whether the structure has emotionally convincing result. For example, the advisory committee constituted and headed by Honourable Francis Biddle to advise the United States Congress on Franklin Delano Roosevelt Memorial said, "In our discussions… we must look rather to the character and work of Franklin Roosevelt to give us the theme of a memorial that will do him the honour he deserves and transmit his living image to future generations. In reviewing Roosevelt's whole achievement, three characteristics seem to stand out as indissolubly part of the man. The first was his warm

feeling for people…. In this light, a memorial for Roosevelt must be accessible, and the visitor to it must feel intimately embraced and received by it, not put at a great distance from the man by reason of his eminence. The second salient fact about Roosevelt….was the good-neighbour policy. The good-neighbour policy is one of give and take, on the basis of need and sympathy….That attitude and that help made Roosevelt's name to be loved throughout the world as the highest symbol of America generosity and understanding. Finally, growing out of the good-neighbour policy was Roosevelt's vital sense of need for taking in all mankind as neighbours and friends. To create a fitting memorial for Roosevelt, not merely must his native soil and his American heritage be brought into the picture – the rest of mankind be vividly present, in some form, to give the full circle of his influence…" (Ibid, p. 22).

A monumental structure therefore, could be seen as a very important and influential building which could be extremely large, impressive and with special/unique architectural elements or ornamentation, uncommon construction materials, skill and technology, and be able to convey emotionally, the character of the individual in whose memory the structure is built or the significant event that is being commemorated.

In summary, the issue of monumentality is subjective and the debate endless but the burning questions are do we have an architectural expression that will memorialize the past and point to an inspiring future? Does our affluent society provide the background of emotional inspiration that can produce a monument? Does our society recognize the need to appropriately list, design, preserve and maintain architectural monuments in order to effectively position them for possible national economic revenue?

3.13 Monuments Ownership Classification

In Nigeria, there are three classifications of monuments ownership namely; private, state and national ownerships. **Private monuments** are owned and maintained by individuals, families and communities. **State monuments** are acquired and maintained by state governments while

National monuments are those acquired, declared, gazetted and maintained by the federal government (Udoh, 2005, p. 13). Decree No. 77 of 1979 of the Federal Republic of Nigeria, established the National Commission for Museums and Monuments (NCMM) and empowered the commission to have access to monuments, both declared and undeclared for the purpose of inspecting them and doing such acts as may be required for the maintenance and where necessary to remove the monuments or any part of it for the purpose of repair or reproduction for such a period as may be deemed necessary by the commission (Ibid).

3.14 Declared, Scheduled and Potential Monuments

A **declared monument** is an object or structure that met all the prevailing listing requirements/conditions of a monument and has been officially acquired by an act of the government, gazetted and declared effective on a date prevailing. According to Udoh (2004), a declared monument can be regarded as an antiquity but not all antiquities are monuments. The most significant difference between monument and antiquity is their mobility tendency. Antiquities are readily mobile, while monuments are usually immobile in nature (Udoh, 2004, p. 21). Before an object or structure is declared a national monument, some steps are taken. Decree No. 77 of 1979, Part II section 13, sub-section 1-5, states the following steps –

1. The Commission (NCMM) may if it considers that any antiquity (monument) is in need of protection or preservation and ought in the national interest to be protected or preserved publish notices to that effect in the Federal Gazette and in the appropriate State Gazette and cause a copy of the notice to be served to the owner of the antiquity concerned and every such notice shall –

(a) Specify the antiquity and the place where it is or is believed to be;
(b) State that it is intended to make an application to the Head of the Federal (Military) Government to declare the antiquity to be a national monument; and
(c) State that any objection to such declaration shall be lodged with the Commission within two months from the date of publication of the notice.

2. The Commission shall in any case in which it is reasonably practicable so to do, cause a copy of any notice published under subsection (1) above to be posted in a conspicuous place on or near the antiquity to which it relates and additional copies shall be sent to the local government in which the antiquity is located and the Secretary to the local government concerned shall post a copy of such notice in a conspicuous place in the principal office of such local government.
3. From the date of publication of a notice under subsection (1) above, until the publication of an order by the Head of the Federal (Military) Government under subsection (5) of this section or if no such order is published until the expiry of three months thereafter, it shall be an offence to destroy, deface, alter, remove or excavate or to transfer the possession of the antiquity to which the notice relates except with the permission in writing of the Commission. Provided that nothing in this subsection shall be deemed to prohibit the doing by the holder of a mining title of any act in relation to an antiquity which is within the area to which the mining title relates if such act is authorized by the mining title and the holder has given the Commission at least one month's notice in writing of his intention to do such act.
4. The Commission shall within one month after the publication of a notice under subsection (1) of this section, submit to the Head of the Federal (Military) Government in such manner as may be prescribed, its application for the declaration as a national monument of the antiquity to which the notice relates.
5. An application submitted under subsection (4) of this section shall be considered by the Head of the Federal (Military) Government together with any objections furnished in relation thereto and the Head of the Federal (Military) Government may with the prior approval of the National Council of States by order published in the Gazette either declare the antiquity to which the application relates to be a national monument, or notify his refusal to do so: Provided that no such declaration shall be made after the expiry of three months from the date of publication of the notice under subsection (1) to which the application relates (NCMM Decree No 77, 1979:A509-A510).

A **scheduled monument** is an object or structure that met the entire prevailing listing requirements/conditions of a monument and has been officially acquired by an act of the government but yet to be gazetted and declared (Udoh, 2007, p. 18). A scheduled monument is a monument of national importance that has been given legal protection under the monuments act. Scheduling is the process of adding monuments to an already existing list of monuments. The NCMM has the authority to compile and maintain scheduled monuments of national importance. The process of scheduling involves **visiting** the site/location of the object or structure intended to be considered for scheduling, **inspection/investigation** in search of important attributes, **documentation** of findings and **communication** by way of formal writing in details the findings and proposal to schedule or not schedule to the owner and or occupier of the site/location of the object or structure. It is important to note that scheduling is an ongoing process; monuments are assessed and reassessed in order to update available knowledge and understanding. A scheduled monument may be de-scheduled if it no longer meets the quality expected of a modern scheduling. For instance, if the significance of a scheduled monument no longer exists or has changed with new information.

A **potential monument** is an object or structure that met the entire prevailing requirements/conditions of a monument but is yet to be officially acquired, gazetted and declared (Udoh, 2004, p. 21). Examples are; St. Paul's Church Opobo in Rivers State, First storey building at Badagry Lagos State (Figure 3.45) and Iba Odili's Palace at Onitsha, Anambra State to mention a few. It has been observed that lack of frequent inspection or monitoring and poor funding have robbed Nigeria of some identified potential monuments. A typical example is the Elephant House in Lagos. It was claimed that the government neither sought nor fully acquired it thereby, making the initial owners not in favour of such an exercise which resulted in an outright sale of the property and eventual demolition of the structure for a new development in the name of urban re-engineering (Udoh, 2007, p. 18).

Figure 3.45: First Storey Building in Badagry, Lagos State.
Source: http://www.freemaninstitute.com/nigeria14.htm

3.15 Listing of Monuments

Listing is compiling or cataloguing of objects, buildings or structures identified as having special architectural, historical or cultural significance/interest. Listing is done in order to identify and give legal protection to the best of architectural heritage. Listing ensures that the special interest (architectural, historical and or cultural) of a listed building is protected and carefully considered before any alterations, either internally or externally is done.

A **listed monument** is that object, building or structure judged to be of special national architectural, historical or cultural significance/interest and is included on the statutory list or register of "listed buildings". Also, any objects or structures fixed to the building and or within the curtilage (surrounding) of the building which although not attached to the building but form part of land within which the building exists, are treated as part of the listed building (http://www.heritage.co.uk/apavilions/glstb.html; March 1997).

Historic buildings are structures with distinctive character that cover diverse aspects of life and periods ranging from education to recreation, defense to industry, residential homes to places of worship. They are precious and finite asset, and powerful reminders of the work and way of life of earlier generations. They play an influential part in a people's sense of national and regional identity. They are listed so as to accord them statutory protection. Listing recognizes their historic importance which in turn ensures that their potential for the study of history and wider issues such as sustainability, community identity, place-making, social and economic regeneration are all fully explored (http://www.historic-

scotland.gov.uk/index/heritage/searchmonuments/historic_buildings.htm; http://www.heritage.co.uk/apavilions/glstb.html, march 1997).

The Nigerian Urban and Regional Planning Law, Decree No. 88, of 1992 Part III, item 64 – 69 states the following with respect to listing of buildings –

64 (a) In the performance of its functions under this Decree in relation to control of advertisements, trees and buildings of special architectural or historical interest, the Control Department shall, compile a list of such buildings of special architectural or historical interest.

(b) In carrying out its functions under paragraph (a) of this section, the Control Department may also obtain a list of buildings of special architectural and historical interest from individuals and corporate bodies for compilation.

65. A building may be included in the Control Department's list if –

(a) the building is of historic or special architectural interest;

(b) its exterior contributes to the architectural or historic interest of a building or a group of buildings of which it forms a part;

(c) a desirable man-made object or structure is fixed to the building or a part of the land comprised with the cartilage of the building.

66. The Control Department may before compiling of a list consult such persons as may appear appropriate as having special knowledge of or interest in a building of architectural or historic interest.

67. The Control Department shall deposit a list of buildings of special architectural or historic interest with appropriate State or Local Government.

68. The Control Department shall publish in the Gazette a list of buildings of special architectural or historic interest within its jurisdiction.

69. A listed building may be demolished, altered or extended if the Control Department gives a written consent for the execution of works on the listed building: (a) provided however that the National Commission for Museums and Monuments' consent shall be obtained before the demolition, alteration or extension. (b) for the purposes of this

section, the Control Department referred to means the Federal Development Control Department (NURP Decree No.88, 1992: A1035-A1036).

3.16 Criteria for Listing

The United Nations Educational, Scientific and Cultural Organization (UNESCO) whose permanent headquarters is in Paris, France is a specialized agency of the United Nations (UN), established in 1946 to promote international collaboration in Education, Science and Culture. Besides its support of educational and science programmes, UNESCO is also involved in efforts to protect the natural environment and humanity's common cultural heritage. Such efforts to protect humanity's cultural heritage was seen in the 1960s, when it helped to sponsor efforts to save ancient Egyptian monuments from the waters of the Aswan High Dam and in 1972, sponsored an international agreement to establish a **World Heritage List** of **Cultural Sites** and **Natural Areas** that would enjoy government protection (Karen M. 2005, Encyclopaedia Britannica).

For a property (site, object, building or structure), to be included on the World Heritage List, it must be of outstanding universal value and meet at least one or more of the following six (6) cultural and four (4) natural criteria.

Cultural Criteria:

1. represent a masterpiece of human creative genius;
2. exhibit an important interchange of human values, over a span of time or within a cultural area of the world, on development in architecture or technology, monumental arts, town-planning or landscape design;
3. bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living or which has disappeared;
4. be an outstanding example of a type of building, architectural or technological ensemble or landscape which illustrates a significant stage in human history;

5. be an outstanding example of a traditional human settlement, land-use, or sea-use which is representative of a culture, or human interaction with the environment especially when it has become vulnerable under the impact of irreversible change;
6. be directly or tangibly associated with events or living traditions, with ideas, or with beliefs, with artistic and literary works of outstanding universal significance. The UNESCO World Heritage Committee considers that these criteria should preferably be used in conjunction with other criteria;

Natural Criteria:

7. contain superlative natural phenomena or areas of exceptional natural beauty and aesthetic importance;
8. be outstanding examples representing major stages of earth's history, including the record of life, significant on-going geological processes in the development of landforms, or significant geomorphic or physiographic features;
9. be outstanding examples representing significant on-going ecological and biological processes in the evolution and development of terrestrial, fresh water, coastal and marine ecosystems and communities of plants and animals;
10. contain the most important and significant natural habitats for in-situ conservation of biological diversity, including those containing threatened species of outstanding universal value from the point of view of science or conservation.

    The protection, management, authenticity and integrity of properties are also important consideration (http://whc.unesco.org/en/criteria/, 2005).

Nominations for listing on World Heritage List is based on three classifications namely – **cultural**, **natural** and or **mixed cultural** and **natural** criteria. From the above ten (10) World Heritage Criteria, six (6) criteria are classified under **cultural heritage** and four (4) criteria are under **natural heritage**.

3.17 Definition of Cultural Heritage

According to World Heritage Convention, **cultural heritage** is defined as:

- **monuments**: architectural works, works of monumental sculpture and painting, elements or structures of an archaeological nature, inscriptions, cave dwellings and combinations of features, which are of outstanding universal value from the point of view of history, art or science;
- **groups of buildings**: groups of separate or connected buildings which, because of their architecture, their homogeneity or their place in the landscape, are of outstanding universal value from the point of view of history, art or science;
- **sites**: works of man or the combined works of nature and of man, areas including archaeological sites which are of outstanding universal value from the historical, aesthetic, ethnological or anthropological points of view (http://www.environment.gov.au/heritage/about/world/criteria.html, April 2008).

From the definition above, architectural monuments are classified under cultural heritage. According to Ahmad (2006), "culture and heritage are…..fundamental aspects underpinning a country's national identity and sovereignty. Cultural heritage including historic buildings, sites, cultures and other invaluable assets are the distinguishing elements that encapsulate a nation's soul and spirit. Cultural heritage is unique because it portrays the vibrant, largely traditional communities thriving in a culture of tolerance, peace, diversity and continuity in the midst of modernization and social change. As items of national pride, cultural resources…have been promoted as tourism products to generate income" (http://www.hbp.usm.my/conservation/ASEANHeritage/culturalheritage.htm; Ahmad, 2006:52-62).

Ahmad (2006) defined culture as, "the whole complex of distinct spiritual, intellectual, emotional and material features that characterize a particular society or social group and its way of life. It includes the arts and literature as well as lifestyles, value systems, creativity, knowledge systems, traditions and beliefs". Cultural properties (like architectural monuments, arts, science, technology to mention a few), Ahmad (2006) stated, are often shared, learned,

symbolic, transmitted across generations, adaptive, and integrated (Ibid). Also, heritage, on the other hand, according to Ahmad (2006) refers to "an inheritance or a legacy, things of value which have been passed from one generation to the next". It encompasses the traditional notions of heritage as culture, places and buildings, as well as archives and records, and the impact of technology. Heritage which relates to the remains of the past should be cherished and well preserved as national treasures for posterity. Furthermore, Ahmad (2006) further affirms that, the concept of cultural heritage invariably differs from one nation or region to another, and in a broad sense, perceived as movable and immovable assets of artistic, literary, architectural, historical, archaeological, ethnological, scientific or technological values that embody the essence of a nation. Recognizing the significance of cultural heritage and developing the relevant general criteria will provide the rationale for subsequent management decisions pertaining to conservation, preservation, access and the delivery of related conservation programs (Ibid).

Ahmad's discussion above with regards to cultural heritage (of which architectural monument is a component), reveals the fact that a country's national identity and sovereignty is encapsulated in that country's listed cultural heritage. According to Ahmad (2006), a country's cultural heritage is unique in the sense that they portray the vibrancy of the identified traditional communities existing within that country in terms of their spirituality, intellectual, emotional and material features characterizing a particular society or social group. Cultural properties (like architectural monuments) are of value (national treasures that should be cherished and preserved for posterity), symbolic, learned, integrated and transmitted across generations. Since the concept of cultural heritage as stated by Ahmad (2006) differs from one nation to another or from one region to another, recognizing the significance of cultural heritage and developing the relevant general criteria and more specifically, evolving appropriate listing criteria for architectural monuments in South East, Nigeria, will help to position them towards contributing effectively to the national economy.

3.18 Definition of Natural Heritage

According to World Heritage Convention, **natural heritage** is defined as:

- natural features consisting of physical and biological formations or groups of such formations, which are of outstanding universal value from the aesthetic or scientific point of view;
- geological and physiographical formations and precisely delineated areas which constitute the habitat of threatened species of animals and plants of outstanding universal value from the point of view of science or conservation;
- natural sites and precisely delineated natural areas of outstanding universal value from the point of view of science, conservation or natural beauty (http://www.environment.gov.au/heritage/about/world/criteria.html).

As observed earlier on in the study, natural heritage (monuments) are natural 'marvels' or naturally occurring phenomena that are unique in appearance and or aesthetics. They are unique in the sense that only nature and not man has input in their formation or creation. They are simply, **'nature's marvels'.** Nigeria is richly blessed with this class of natural heritage, declared and undeclared. Examples are Zuma Rock in Suleja, Abuja; Wase Rock in Wase Local Government Area of Plateau State, Riyom Rock (Figure 3.46) and Assop waterfalls (Figure 3.47) also in Plateau State, Olumo Rock (Figure 3.48) in Ogun State and Ikogosi Warm Springs (Figure 3.49) in Ekiti State to mention a few.

Figure 3.46: Riyom rock, Jos Plateau State Figure 3.47: Assop waterfalls, Plateau State
Source: http://www.motherlandnigeria.com/.../riyom-rock.jpg&img
http://vencarta.com/assop-water-falls/

Figure 3.48: Olumo Rock, Abeokuta Ogun State
Source: Boomie, O;
http://www.motherlandnigeria.com/../olumo_rock.jpg

Figure 3.49: Ikogosi Warm Springs, Ekiti State
Source: Boomie, O;
http://www.motherlandnigeria.com/../ikogosi_springs.jpg

In April 2005, the Federal Ministry of Culture and Tourism (FMCT) published a tourist's guide brochure, listing about 236 National Heritage as tourists' attractions indicating their descriptions and locations in Nigeria. From this list, 45 items were classified under natural heritage, 42 as cultural heritage, and 37 as monuments. The list also identified 20 eco-tourism sites and 72 mixed cultural and natural heritage items (FMCT, 2005, Tourist's Guide Brochure).

3.19 Listing Category

Scotland Historic and Listed Buildings Council, categorized/graded listing of buildings into three (3) namely –

- **Grade 1:** Buildings of exceptional national or international outstanding architectural or historic interest. These are buildings whose significance is beyond dispute.
- **Grade 2a:** Buildings of regional and more than local importance, or major examples of some particular period (architectural), style or building type which may have been altered.

- **Grade 2:** Buildings of local importance, representing an important part of built heritage of special interest, warranting every effort to preserve them (http://www.historic-

scotland.gov.uk/index/heritage/historicandlistedbuildings/listing.htm, Dec, 2009; http://en.wikipedia.org/wiki/listed_building, Nov. 2009).

3.20 Procedure for declaring National Monument

The National Commission for Museums and Monuments (NCMM) Abuja stated the following as procedure for declaring national monuments in Nigeria:

1. **Request and intention for declaration:** The request to declare any structure (architectural or sculptural) a national monument must be made in writing by the owner of the structure which could be an individual or a community. Alternatively, the NCMM may initiate the move when it identifies a structure that could be declared a national monument.
2. **Professional visit and assessment:** Following the formal request in writing, a team of professionals (like architects, archaeologists, engineers – structural/chemical, historians, biologist, surveyors, photographers to mention a few) will visit the site to inspect the structure and determine whether it qualifies to be declared a national monument.

3. **Determination of location and values of site:** During the visit, the following activities are to be undertaken by the professionals;

- Determination of geographical location of the structure,
- Mapping of location of the structure,
- Surveying and Condition Assessment of the structure,
- Photography and Photogrammetry,
- Documentation and Identification of characteristic features of special interest of the structure,
- Determination of values of the structure,
- Ascertain the ownership of the structure.

4. **Stakeholders meeting:** Stakeholders meetings (at least two) should be held with concerned individuals and or groups.

5. **Public Notification:** A public notice of two (2) months to the effect of the intention of the NCMM to declare the monument is pasted on the structure. A copy of the notice is sent to both the secretary to the Local Government and the State Government for gazetting.
6. **Newspaper Publication and State Declaration:** The intention to declare an identified structure a national monument, is published in the national newspapers for two (2) months and if no objection is received, then an application is made to the State House of Assembly to declare the structure a State Monument. When the bill is passed to that effect, it is declared a State Monument.
7. **National Assembly/Presidential Approval:** The NCMM, through the Honourable Minister of Tourism, Culture and National Orientation will send the request for listing as a National Monument to the Chairman, House Committee on Tourism, Culture and National Orientation who in turn sends the request to the House of Representatives and the Senate of the National Assembly for debate. If passed at both houses, the bill is then presented to the President of the Federal Republic of Nigeria for assent. On this final presentation and approval by the Legislative and Executive arms of Government, the structure is declared a National Monument.
8. **Gazette:** The declaration is then gazetted by the Federal Government of Nigeria and forwarded to the National Commission for Museums and Monuments for notification and documentation (NCMM:TF 128/T/Vol. II/ 373/August 19, 2010).

3.21 Criteria for Listing Monuments in Nigeria

The National Commission for Museums and Monuments (NCMM, 2010) Abuja stated the following as the basic criteria for listing monuments in Nigeria:

1. Rarity of particular type
2. Threat of damage and or extinction
3. Level of significance / historical value
4. Geographical distribution

(NCMM: TF128/T/Vol. II/373/August 19, 2010).

3.22 Listed Buildings and Architectural Monuments in Nigeria

The National Commission for Museums and Monuments (NCMM, 2010) Abuja compiled a list of 33 listed buildings and architectural monuments in Nigeria. The following are the listed buildings and architectural monuments, and locations –

1. Chief Okoroji's House, Arochukwu Abia State. This house was built in 1880. It revealed a highly developed construction skill, beautifully formed facades, architectural details and decorations. The most striking features of the building are its height and the length of its roof in the front. It was declared a monument on March 19, 1963.
2. Obu House, Elu Ohafia, Abia State. This was a meeting house for the Ndi Anaga family. The monumentality of the building is the magnificent effects created by three rows of richly carved posts supporting the roof and dividing the interior into three narrow aisles. The pillars are carved with representations of warrior masqueraders and women carrying loads, combined with geometrical or perhaps stylized botanical patterns. It was declared a monument on March 19, 1963.

3. Chief Ochu Kalu's House, Ndi Okereke Abam near Bende, Abia State. This building considered old was built before the Aro expedition of 1901-02 with local building earth (mud). Its most striking feature is the central court, a fairly regular rectangle about 21x26 ft. (7.0 x7.2 m) enclosed by four wings about 12ft (3.0 m) wide. The uniform width is due to the structural limitations of the roof construction and the plan bears certain resemblances to similar courtyards in Onitsha and Benin. The most cherished and jealously guarded part of the *Mgbaja* is a small room in the east corner of the South wing, where ritual sacrifices took place. The room has three doors; the main door leading from the central court; a door to the ceremonial couch and providing access for the Priest to his room in the east wing; and a door above the sacrificial altar at the back of the room leading to the cell in which the victim was kept. The structure of the building is earthen daub on a wattle frame work. The eaves of the impluvium roofs are earthen work and the ridges supported by forked poles set inside the partition, walls and part of their structural frame. There are decorative doors (3 Nos.), two of them richly adorned in the manner

typical of Ohafia and imitating (not structurally) the panned appearance of the framed doors. In the west wing of the entrance room, is a beautifully carved post supporting the ridge beam and adorned with antelope horns. This structure was declared a monument on March 19, 1963.

4. Omo Ukwu of Ndi Ezera Clan, Asaga Ohafia, Abia State. This Temple is an impressive structure because of its great size and the carved figures with which it is adorned. The posts and beams supporting the beautifully constructed roof are about 12 inches (30 cm) thick and richly carved. The walls are painted in geometrical patterns and the main glory of the structure is the collection of twenty-two (22) carved figures of which some of them are over life size, standing around the interior walls, along the façade of the veranda and forming a group in the centre of the temple. This formidable group (three carved figures) stands side by side, with the central figure carrying in its arms the effigy of the defiled ancestor, the patron of the temple. This Temple was declared a monument on March 19, 1963.
5. Chief Nwodo's House at Ukehe, Enugu State. This is a large mud and thatch building (residence) of the *Agunechube* family. The compound consists of an entrance gate, shrine and the Chief's Principal abode called 'Obu-Oshue'. The walls are impressively decorated with traditional wall patterns in black and with scores of beautiful rare enamel plates mainly of Portuguese origin. The architectural and historic value of the house is very significant in that the whole compound is beautifully planned and the chief glory is the 'Obu-Ushue", a nearly perfect example of that particular type of building. This building was declared a historic monument on February 15, 1964.
6. Old Residency (now national museum) Calabar, Cross River State. This was a divisional office and residence of the colonial master during the colonial era. The structure (timber) was fabricated in Britain in 1884 and erected at Old Calabar to accommodate the British administration of the Niger coast territories. The structure, furniture and fittings are virtually an historic house. It was declared monument together with the compound and its contents on August 14, 1959.

7. Old Consulate at Calabar, Cross River State. This is a fine example of a late 19th century house prefabricated in Britain, shipped and erected on the face of the hill over-looking the river, at the other end of the town from mission hill. Its main historical interest lies in its association with the early days of the Consuls in Calabar between 1861 and 1874. It was declared historic monument on August 14, 1959.
8. Chief Ekpo Bassey's House at No. 19 Boko Street, Calabar Cross River State. This is a prefabricated timber house built by Chief E.E. Bassey in 1886. Parts of the building were prefabricated in Germany and England/Scotland and shipped to Nigeria. This structure was declared historic monument on August 14, 1959. Note: Presently, the building is neglected and the structure is dilapidated.
9. Chief Ogiamen's House Benin, Edo State. This is a fine example of a Benin traditional style house built before the British expedition against Benin in 1897. This house has an elaborate system of courtyards and altars, unique as an important chief's house and protected under the Antiquities Act of 1953 because of its architectural eminence. The fire that gutted the city of Benin following the British invasion did not affect the building. It was declared monument on May 26, 1959.
10. Chief Enogie Aikoriogie's House in Obasagbon, Edo State. This house is mainly composed of a courtyard that survives the original building probably built in the second half of the 19th century. The building has many features which indicate direct link with the architecture of Benin. For example, horizontally fluted walls, central impluvium (pool), carved decorations on timber walls indicative of Benin architecture. The plan of the building is symmetrical having the main entrance door and the main altar on a longitudinal axis and the eight heavy mud pillars supporting the side lintel walls. These pillars measure 2ft 6in x 4ft (750mm x 1200mm) in plan and 8ft (2400mm) high. The house and the compound was declared monument on June 1, 1961.
11. Benin City Wall, Edo State. The most impressive City walls in the Southern part of Nigeria. The highest point of the walls are 30ft (10m) high and the ditch 30ft (10m) deep making a total incline of 60ft (20m). Unfortunately, the walls have been extensively used as a source of building materials. The site thereof, comprising the land lying within fifty

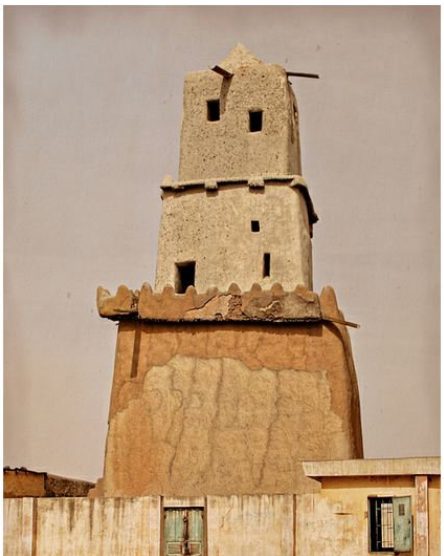
feet of the crest of the walls on the inside and within hundred feet of the crest of the walls on the outside; provided that all existing building sited within fifty feet of the crest of the walls on the outside was declared monument on June 1, 1961.

12. Rabeh's House (Fort Dikwa) at Dikwa, Borno State (Figure 3.50). This was the residence of Rabeh, a general who came from the Sudan and ruled over Borno Kukawa the old capital of Borno. He established his headquarter (great fort) at Dikwa where he remained till 1900 when the French troupe oustedand killed him at Gajibo in Borno. The house and the compound was declared monument on April 23, 1959.
13. Gidan Madakin in Kafin Madaki, Bauchi State (Figure 3.51). This was built by the celebrated master builder (Mallam Babban Gwani of Zaria) renown in Hausa land for his architectural skill about the period 1850-1860. Mallam Gwani was killed at Birnin Gwari in 1862 by his patron who will not want any other to have a house of his kind or finer than his own. The 'zaure' (entrance hall) is 13ft x 28ft (4.3m x 9.3m) with a flat roof supported on four massive square columns. The roof is constructed in 'azare' (thatch), timber and mud. Their ancient traditions and unspoilt architectural character are among the most revered buildings with its splendid type of domed roof and very impressive form of arches. The main hall (approx. 7m x 5m) is fitted with leather covered doors and its roof is supported with one central beam. The perimeter walls vary in size, south side wall is about 44ft (approx.15m) long and 15ft (5m) high; north-east wall, about 31ft (10.3m) long and 20ft (approx. 7m) high. Adjacent is the mosque, the construction of the interior of which is similar to that of the 'zaure' of Gidan Makama in Kano. The house and compound was declared monument on February 16, 1956.

Figure 3.50: Fort Dikwa (Rabeh's House) Borno State
Source: http://www.northernnigeriatourism.com

Figure 3.51: Gidan Madaki, Bauchi State
Source:http://www.nigeriamuseums.org/monuments.htm

14. Ate Ogu Tumulus, near the Palace of the Ate of Idah, Benue State. This is a large earth mound behind the houses bordering the west side of the main road leaving Idah for Ankpa. Its name implies that people were killed there in the past or alternatively that it was a site for Ogu sacrifice which is usually that last rite in the traditional sequence of funeral ceremonies. Another explanation of the name is that one Onoja Oboni, a legendary Igala giant, employed his army to build on the site a tower that would reach the sky and enable him to carry war up to heaven. But the tower collapsed and buried most of the workers leaving the mound in its present form. A less common story is that the mound forms the ruins of a former tower similar to one called Odogo in the Ate's present compound and is associated with Agenapoje, an early female member of the present dynasty. This was declared monument on December 15, 1964.
15. Gobirau Minaret Katsina, Katsina State (Figure 3.52). This imposing minaret or tower is said to be over 400ft (133m) tall originally. It was built when Islam was finding its feet at Katsina during the reign of Sarkin Katsina Koran who offered tempting gift to any Mu'azzin who could climb to the top of the tower to call people for prayers. Several people died trying to reach the top. Neglect and inability to reach the top to effect repairs caused the falling down and the reduction in height of the tower to what it is today. It was built with mud and palm timbers and is said to be all that remains of the mosque constructed in Habe times before the holy wars of Shiek Usman Dan Fodio. Parts of the 15.25m tower are thought to be about 250 years old. It was declared ancient monument on August 13, 1957.



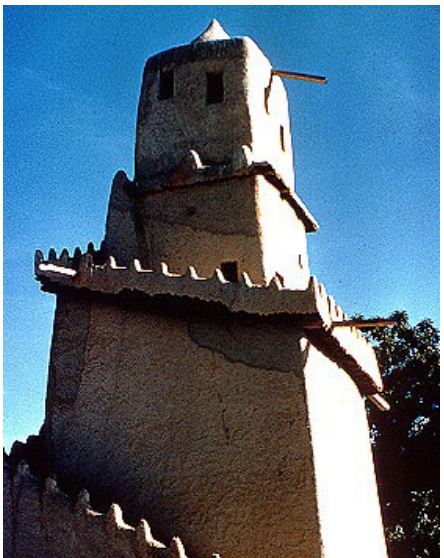


Figure 3.52: Different views of Gobirau Minerate, Katsina
Source: http://www.nationalmirrowonline.net/arts_culture_new

16. Habe Mosque at Maigana, Katsina State. This mosque is believed to be three hundred years (300yrs) and is mostly in ruins. According to tradition, the Emir would risk death if he looked at his mosque. Maigana is an old walled town, now a village, fourteen miles from Zaria on the Jos Road. It was declared monument on December 15, 1964.
17. Institution in Northern Nigeria. It was built with local building materials Teacher Training College Katsina, Katsina State (Figure 3.53). The Old college was opened in 1921 to become the most famous and influential educational and in traditional style by local craftsmen. They are buildings at character and charm; their thick walls and gracious arches gave them an air of strength and solidity as well as beauty. It was declared ancient monument on April 23, 1959.

Figure 3.53: Old Teachers Training College, Katsina
Source: http://www.nigeriamuseums.org/monuments.htm

18. Zaria City Wall Zaria, Katsina State. This wall perhaps, remains the best preserved defense wall in the whole of northern Nigeria cities. It is built of mud and circumnavigates the city, running between 14 to 16 kilometers long and pierced by eight gates. However, the rains of over 50 wet seasons have battered down the mud walls and in some places, they have disappeared altogether. It was declared historic monument.
19. Gidan Makama of Kano, Kano State (Figure 3.54). This is on an ancient site and dates back to about 1750. It is one of the oldest buildings in Kano. The construction of the building reflects its ancient tradition and unspoiled architectural character. The compound is large and is divided into three enclosures, each of them entered by separate monumental gate house (zaure) set along the road in the northern perimeter wall. The house and the compound was declared monument on April 23, 1959.

Figure 3.54: Gidan Makama, Kano
Source: http://www.uiowa.edu

20. Habe Mosque at Bebeji, Kano State. This mosque believed to have been started around 1770 was built in three stages. The latest report has it that the mosque is mostly in ruins and no trace of the ancient mosque remains today as it has been completely pulled down and rebuilt in modern style technology. What a loss of national heritage! It was declared monument on December 15, 1964.
21. Kano City Wall, Kano State (Figure 3.55). This Fortress built by nature for herself against infection and the hand of war during the reign of the twentieth Emir, Muhammed Rumfa,

achieved its greatest pre-eminence in Hausa land. It was declared ancient monument on April 23, 1959.

Figure 3.55: Kano City wall, Kano
Source: http://www.nigeriamuseums.org/monuments.htm

22. Old West African Force Fort at Okuta, Delta State. This Fort was built in a fine defensive position. Now a site only. It was declared historic sites and about 1900 for the defense of Borgu. It overlooks Okuta town and commends the area within three hundred feet (300ft) of the perimeter of the wall of the Fort on April 23, 1959.
23. Old West Africa Fortier Force Fort at Yashikera, Kwara State. This Fort is smaller than Okuta Fort and was built between 1897 and 1900 to defend the Borgu frontier. The Fort was built with stone, 30 yards square with guard posts at three corners. The stone structure was originally faced with mud, most of which has been washed away. There are traces of mud huts inside the Fort. It was declared historic sites and the area within three hundred feet (300ft) of the perimeter of the wall of the Fort on April 23, 1959.
24. Ilojo Bar (Casa De Fernandez), at No.6 Ali Street and No. 2 Bamgbose Street Lagos, Lagos State. This building owned by Mr. D.A. Olaiya was built about 100 years ago and of the greatest architectural interest of all old buildings in Lagos. It was one of the first modern style buildings built by Nigerians shortly after Lagos became a colony by a free slave family returning from Brazil. It is one of the most striking of the Brazilian style houses in Lagos with attractive arched doorways and windows, fine iron balustrades and a

statue. The Brazilian style has influenced much of present day architecture in Yoruba land. The structure and the compound in which it is situated was declared historic monument on April 5, 1956.

25. Old Iga Building in Iga Idunganran (Oba's Palace) Lagos, Lagos State. This structure (Old Iga) was constructed according to the traditional plan of wide spread impluvia, the internal design of which is in the particular style of Benin architecture. The present Oba of Lagos lives in a modern building constructed in 1959 as an extension to the oldest remaining parts of the traditional palace (Old Iga) which is said to date from the reign of Oba Akinsemoyin (C. 1704-20), for whom it was built by the Portuguese in return for trading rights in Lagos. It was stated that though the Portuguese financed the building, they did not interfere with the traditional building methods except for the provision of clay (pottery) roofing tiles as fire protection. The clay tiles have since been replaced by corrugated iron sheeting. This structure was declared historic monument on February 15, 1964.
26. The Water House at No. 12 Kakawa Street Lagos, Lagos State. This is one of the oldest houses remaining in Lagos among the best example of the Brazilian style architecture or building. It is an exceptionally well proportioned building and contains fine iron works. The lower storey is nearly 90 years old while the upper storey is about 50 years. The land formed part of a crown grant to Hijinio Pinta da Fonsacca in 1864 and the house must have been started shortly after this date. It was declared monument on July 27, 1961.
27. Old Secretariat Building Lagos, Lagos State. The Secretariat Building and all its appurtenances was declared national monument on August 6, 1982.
28. No. 10, Elias Street Lagos, Lagos State. This is an old Brazilian style house built in 1880 by Santo da Silva, designed and constructed by Brazilian craftsmen. It was built of stone in the style of the Italian renaissance with pointed arched windows and pastel coloured enamel tiles. The house and the surrounding land was declared historic monument.
29. Tsoede's Tomb at Gwagwade, Niger State. The tomb is a circular structure built of mud and thatch, and about 12ft (3.6 meters) in diameter with its floor built up to about 3ft (1 meter) above the ground level. It stands beneath a baobab tree in the centre of a circular

compound surrounded by a mud wall at present in bad state of repair, with a small entrance hut. It is the burial place of Tsoede the legendary hero of the Nupe people who died at Gwagwade from a wound received when returning from a friendly trial of strength with Sarkin Yawuri. It was decalered monument.

30. Government House at Zungeru, Niger State. This house was built in 1902, the year Lord Luggard established the administrative headquarters of the Northern Province at Zungeru. In 1916 when the headquarters was move to Kaduna, the structure was completely dismantled leaving only the concrete foundations and pillars. It was declared historic monument on February 13, 1962 under the National Authority.
31. Mai Jimina's House at Wushishi, Niger state. This was the house occupied by the first three British army officers, known as Mai Jimina, Mai Hakorin Yaki and Mai Farin Kai, stationed at Wushishi during the campaign against Abubakari Estu Nupe and Ibrahim Emir of Kontagora. It was declared historic monument on February 13, 1962 under the National Authority.
32. Shrine of Osun in King's Market at Oshogbo, Osun state (Figure 3.56). This shrine opposite the palace is said to be built on the house of the first Ata-Oja of Oshogbo. The building contains an important collection of very old wood carvings and is built at an impluvium courtyard of which there are few examples left in Oshogbo. It was declared monument together with the shrine, its grove, the surrounding land within a radius of 25ft (8.3 meters) from the Northern-most corner of the shrine building.
33. Ancient City of Surame in Sokoto, Sokoto State. This city was founded by Muhammadu Kanta Sarkin Kebbi whose empire is said to have included Yauri, Nupe, Kano, Katsina, Gobir, Zaria and Agedesin the early 16th Century. The town it was believed existed for 184 years 4 months and 20 days and was abandoned about 1700 when the capital was moved to Birnin Kebbi. An ancient Baobab tree mark the site of Kanta's house and wall to which magic properties are attributed. Although abandoned about 260 years ago, the walls still stand to a height of 15ft to 20ft (5.0 to 6.6 meters) including the line of the main roads of the area lying within a distance of 300ft (100 meters) on the crest of the walls. It was declared ancient monument on August 15, 1964 (NCMM: TF128/T/Vol. II/373/August

19, 2010; http://ojeikere.blogspot.com/2009/06/declared-monuments-and-site-in-nigeria.html; http://www.e-nigeria.net/museum.html).

Figure 3.56: Osun Shrine, Oshogbo Osun State
Source: http://www.nigeriamuseums.org/monuments.htm

In addition to the above list of listed buildings and architectural monuments in Nigeria as compiled by the National Commission for Museums and Monuments (NCMM) there are some other list of monuments picked from other research studies. The following are some of them –

1. Foot Bridge (steel bridge) at Zungeru, Niger State (Figure 3.57). This was an interesting example of indigenous engineering before the advent of railway and development of roads in Nigeria. It was built by late Lord Luggard in 1904 and rebuilt in 1954 in Kaduna garden. It was declared monument on February 16, 1956 (http://ojeikere.blogspot.com/2009/06/declared-monuments-and-site-in-nigeria.html).

Figure 3.57: Steel Foot Bridge at Zungeru, Niger State
Source: http://www.nigeriamuseums.org/monuments.htm

2. King Jaja Statue, Rivers State. King Douglas Jaja was one of the fourth kings from Opobo who founded the Opobo town in 1870. He became the king of Opobo and was later exiled to India. The statue and the surrounding land within the radius of 30 meters was declared monument on August 14, 1959 (Ibid).
3. Stone Causeway at Bokos, Plateau State. It was an intricately and painstaking arranged stones forming a bridge over the stream. The Causeway together with the area of land including the stream within the radius of 90 meters was declared monument on February 16, 1956 (Ibid).
4. Stone Causeway at Butura, Plateau State. This also comprises intricately and painstaking arranged stones forming a bridge across the stream. The origin of the stone structure is not known but evidence suggests it existed there before the Riyon tribes arrived between 150 and 200 years ago. It was declared monument with an area of land including the stream on February 16, 1982 (Ibid).
5. Nanna of Itshekiri Palace Koko, Delta State. The building was constructed between 1907 and 1910 with the local Koko earth stabilized with grey clay and the walls finished in white chalk. According to Pa Tony, a direct descendant of Chief Nanna, "Nanna's Palace was designed by Nanna and his Accra-trained children". It comprises a big courtyard with rooms arranged around it. Chief Nanna was dethroned by the British interlopers and sent into exile at the beginning of the 18th century. The building in recent years has suffered much deterioration as well as bastardization by quark restorers. The Palace was declared national monument on August 2, 1990 and is protected by Decree No. 77 of 1979 (Ibid; Achibong, 2008, p. 28).
6. Chief B.O. Atuchukwu's House at Amichi, Anambra State. This house hosted meetings, negotiations and ceremonies which led to the end of the Nigerian civil war on January 13, 1970. It was in this house that the instrument of surrender from the former Biafran Acting Head State (Lt Gen. Philip Effiong) was handed over to the then Col. Olusegun Obasango. The house was declared a national monument and Centre for Peace and Conflict

Resolution, by the National House of Representative in 2007 (Vanguard Newspaper, 2007, Across the Nation, South East, Nov. 9, p. 14).

7. Chief Iyamu Osawe's House Benin, Edo State. This house was built after the British invasion of ancient kingdom of Benin in 1906. It is the 1st storey building in the historical Benin City (and 3rd storey building in Nigeria besides that of Calabar, Cross River State and Badagry, Lagos State) called in Bini language, *'Egedege n'okao'* meaning, the storey building number one. This house is 104 years (2010) and is situated at No. 3 Eric Street, off Sokponba road, Benin City. According to Enogholase (2006), "this monumental building is a reposite of the richness of the ideational and material culture of the Benin people… The building has survived the test of time, a century of vicissitudes, scorching sun, corrosive weather, destructive pests particularly termites and the catastrophic rain storms, is a testimony to the architectural mastery of the Bini masons, craftsmanship and the quality of the traditional building materials". The building materials used in the construction of Egedege n'okao was 90% locally sourced. They were furnace fired red bricks, expensive steely iroko and mahogany woods used for the decking, railings and roofing. The building has carved door lintels, arched windows, rugged beams, panes, wooden staircase linking the ground floor to the upper floor, six huge Roman columns and the aesthetic tastes which revealed the royal class of the owner. It was designed and supervised by Mr Crawe Reade, a British colonial officer (Enogholase, 2006, p. 52).
8. Ojukwu's Bunker Umuahia, Abia State. This became the seat of Biafran government during the Nigerian civil war after Enugu was captured by the federal troops. The famous bunker, a sobering architectural masterpiece was designed and constructed by Biafran engineers led by Egnr. Joel Onyemelukwe in 90 days (April – June 1968). The underground building is 26.9ft deep (approx. 9.0 meters) and has a living room, secretary's room, kitchen, bathroom and store. The bunker is ingeniously supplied with an escape route as well as pipes that run from the Bunker to the open lawn through which the bunker is ventilated (Adeboboye, 2010, p. 27).
9. Mbari Shrine in Owerri, Imo State (Figure 3.58). This is a mud structure roofed with corrugated steel sheets. It has a pent floor and is filled with a lot of moulded and carved

human figures. The walls are decorated with traditional patterns in white and black colours.

Figure 3.58: Mbari Shrine, MOTNA Jos
Source: http://www.nigeriamuseums.org/monuments.htm

3.23 Theoretical Framework

The ethnic diversity of Nigeria, varied culture and material resources, point to the fact that there are identifiable differences in architectural products classified as monuments. This makes each zone distinct from another. According to Uchegbu (2007), "… every piece of architectural work has a lot to say about the time and culture that gave rise to it and as such, the different ethnic groups found in Nigeria have particular styles of traditional or vernacular

architecture peculiar to them…" (Uchegbu, 2007, p. 462). Also Chukwuali (2005) observed that ethnic nationalities that make no deliberate and conscious effort to retain and preserve their cultural and architectural identities get easily assimilated by other more vibrant and dominant cultures. According to Chukwuali (2005), a tested viable option to the preservation and retention of ethnic (zonal) architectural identity is the strengthening of regional interpretations and criteria which will find acceptance within the given ethnic nationality where its meaning and content are better understood. In other words, if no conscious effort is made to identify and list the positive and distinguishing or peculiar architectural elements of a people's architecture, that architecture is likely to be eroded, destroyed and finally forgotten. Based on the above, this study intends to evolve appropriate listing criteria for architectural monuments located in the South East zone of Nigeria which will be part of comprehensive listing criteria for architectural monuments in Nigeria. Also this study believes when this is achieved, architectural monuments in Nigeria will be properly positioned to contribute effectively to the national economy through tourism.

To achieve this goal, the study reviews one or two internationally recognized architectural monuments in order to acquaint with foreign experience in listing architectural monuments. It compares the characteristics of architectural monuments amongst the constituent states in South East zone with a view to determing the adequacy or otherwise of the criteria for listing architectural monuments.

3.24 Foreign Experience

In addressing this, the experience of India with respect to architectural monuments is studied and analyzed. Some of the greatest monuments of the world are found in India. They are timeless wonders that continue to inspire people to create something more beautiful and architecturally superb. The monuments found in India are not only structures built of stones, bricks and mortar, they are stories in themselves. Stories of valor, of great rulers, of great societies, of great people who built them and of a great civilization that is more than 3000 years old!

3.25 Taj Mahal

The Taj Mahal, often referred to as the 'Monument of Love' is India's most famous architectural wonder. It is believed that no other monument in the world can match its beauty and grandeur. Taj Mahal is an architectural marvel in massive white marble (mausoleum) built in the 17th century by one of India's Emperor (the fifth Mughal Emperor), Shah Jahan in memory of his beloved (third wife), Mumtaz Mahal. It is located in Agra (northern India) and set amongst a well laid out serene ambience. Taj Mahal is regarded as the finest example of Mughal architecture in India and a symbol of eternal love (Figure 3.59).

Figure 3.59: Top (l-r) Approach view overlooking the central water pool; view from River Yamuna Bottom (l-r) View showing the garden, reflective pool and the Taj; artistic depiction of Mumtaz Mahal

Source: Encarta Encyclopedia, 2008; http://en.wikipedia.org/wiki/File:Mumtaz_Mahal.jpg

The story had it that Shah Jahan loved his wife (Mumtaz) so much that after she passed away in 1631, decided to immortalize their love by building the Taj Mahal. According to records, the construction began around 1632 and was completed around 1653 (21years). Taj Mahal, built over 350 years ago has not lost its romantic aura which attracts millions of visitors to India. According to UNESCO World Heritage, Taj Mahal is a sublime expression of architectural skill, a historic and romantic destination (http://www.delhi-tourism-india.com/tours/taj_tiger.htm). It is a mesmerizing sight; a beautiful marble structure considered to be aesthetically perfect in its design and because of its 'everlasting' charm, can boast of being one of the most popular architectural monuments in the world.

3.26 Architecture of Taj Mahal

In 1983, UNESCO World Heritage Site declared and cited Taj Mahal as 'the jewel of Muslim art in India and one of the universally admired masterpieces of the world's heritage' (Taj Mahal: Wikipedia free encyclopedia). The 'Taj', considered an example of the finest of Mughal architecture, incorporates design traditions and elements from Persian, Ottoman, Indian and Islamic architectural styles. The Taj Mahal complex is made up of the mausoleum, mosque, gate house, meeting house, pavilions (2) and large expanse of land (300-meter square *charbagh,* a Mughal garden) meticulously designed and lavishly landscaped (Figure 3.60 a and b). The Taj was lavishly constructed in white marble inlaid with semi-precious stones and stands on a square plinth consisting of a symmetrical building with an arch-shaped doorway (*iwan*), crowned by large "onion" shaped dome. The base structure is essentially, a large cube with chamfered edges and many chambers, measuring roughly 55 meters on each side. On the long sides, a massive vaulted archway (*pishtaq*), frames the arch-shaped doorway (*iwan*) with a similar arch-shaped balcony (Figure 3.61). Basically, the design is completely symmetrical on all sides of the building. That is, all the sides of the building are designed and

embellished the same way. There are four minarets (towers), each measuring more than 40 meters tall and facing the chamfered corners directly at each corner of the plinth (Figure 3.61).

Figure 3.60 a: Plan showing the layout of Taj Mahal complex (clockwise), Pavilion, Entrance Gate, Pavilion, Mosque, Taj Mahal, Meeting/Guest House.
Source: http://en.wikipedia.org/wiki/File:TajPlanMughalGardens.jpg

Figure 3.60 b: Top: (l-r) Entrance gate, Taj Mahal framed by Entrance gate archway;
Bottom (l-r) Entrance gate view from within the complex, Mosque
Source: http://en.wikipedia.org/wiki/File:TajMosque.jpg
http://en.wikipedia.org/wiki/File:Taj_12.jpg
http://en.wikipedia.org/wiki/File:Taj_08.jpg
http://en.wikipedia.org/wiki/File:Entrance_fort.JPG

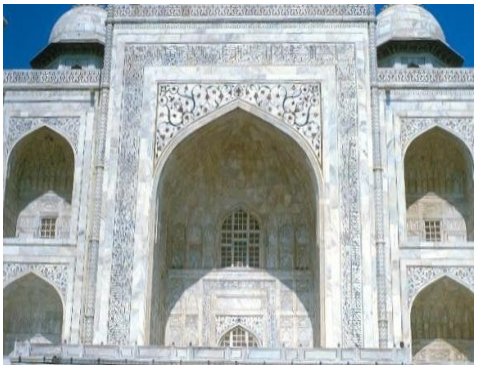


Figure 3.61: (l-r) View of Taj showing the EntryArch; View showing the Minarets facing the chamfered corners, walkways, green lawns and the water pool
Source: http://en.wikipedia.org/wiki/File:TajEntryArch.jpg
http://en.wikipedia.org/wiki/File:TajMahalinMarch2004.jpg
http://en.wikipedia.org/wiki/Taj_Mahal

These minarets are designed as working minarets, a traditional element of mosques where a *muezzin* (a person who calls Muslims to prayer) calls the Islamic faithful to prayer. Each minaret is divided into three (3) equal parts by two (2) walk-in balconies that ring the tower. At the top the tower, is a third (final) balcony surmounted by a *chattri* (kiosk) that mirrors the design of those on the tomb. The minaret *chattris* share the same finishing touches (design and embellishment), as the dome; a lotus design topped by a gilded finial. It is said that each of the minarets were constructed slightly away from the plinth, so that in the event of collapse which was a typical occurrence during that period with many such tall construction, the construction materials would fall away from the tomb rather than on the tomb.

The main chamber, houses the cenotaphs or false *sarcophagi* (coffin/casket) of Mumtaz Mahal and Shah Jahan (Figure 3.62) while their actual graves are at a lower level. At top (roof), the main chamber, is a 35 meters high dome sitting on a 7 meters high cylindrical

'drum'. The top of this dome is decorated with a lotus design and gilded *finial* (carved decoration at the top of spire or arched structure) thus blending traditional Persian and Hindu decorative elements and accentuating its height as well. At the corners of the main dome are four smaller domed *chattris* (kiosks). They replicate the 'onion' shaped main dome in design and decoration but are open by the sides of the bases, to introduce light into the interior (Figure 3.63). The *finial* was made of gold until the early 1800s when it was changed to bronze. Also the design on the *finial* has half moon whose horns point heavenward, a typical Islamic motif. The placement of the finial on the main spire, the horns of moon and finial point combine to create a trident shape, reminiscent of traditional Hindu symbols of *Shiva* (Hindu god/deity).

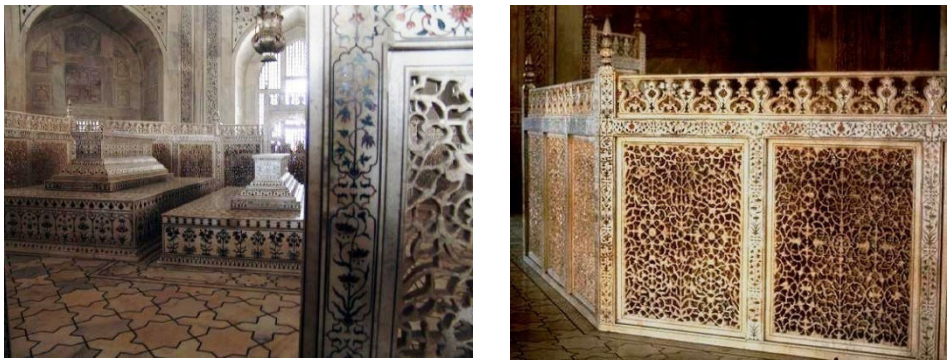


Figure 3.62: (l-r) View of the main chamber and the cenotaphs of Shah Jahan (l) and Mumtaz (r); Delicately carved marble screens used to screen off the cenotaphs
Source: http://en.wikipedia.org/wiki/File:TajCenotaphs3.jpg
http://en.wikipedia.org/wiki/File:TajJoli1.jpg

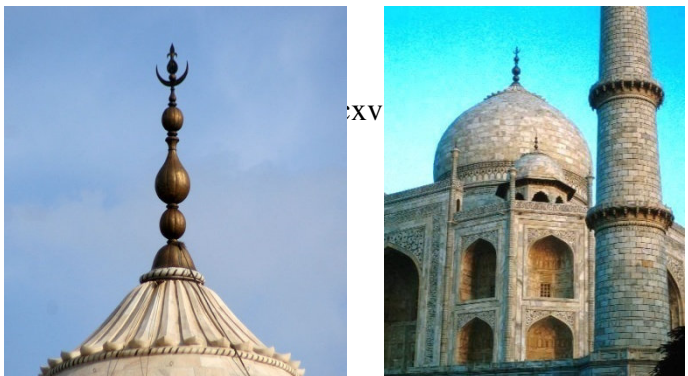


Figure 3.63: (l-r) Top of the onion dome showing the lotus design and gilded finial;
Chamfered edge of the Taj crowned with the chattris (kiosk) and minaret
Source: http://en.wikipedia.org/wiki/File:Taj_Mahal_finial-1.jpg
http://en.wikipedia.org/wiki/File:TajAndMinaret.jpg

Decoration of Taj Mahal

The decorations on the Taj Mahal were observed to be among the finest found in Mughal architecture. The decorative elements could be grouped into calligraphy (writings), abstract forms or vegetative motifs (figure 3.64). This is because Islam prohibits the use of anthropomorphic (human/animal) forms for decoration. They were created by applying paint or stucco, or by stone inlays or carvings. The calligraphy found on Taj Mahal was created by Persian calligrapher **Amanat Khan** (http://en.wikipedia.org/wiki/File:Taj_Calligraphy.jpg; http://en.wikipedia.org/wiki/Taj_Mahal). They are of florid *thuluth* script. The calligraphy is made by jasper inlaid in white marble panels and those on the marble cenotaphs in the tomb is extremely detailed and delicate (see the tombs of Shah Jahan and Mumtaz Mahal). Throughout the complex, passages from the *Qur'an* (Islamic scripture) are used as decorative elements.

Figure 3.64: (l-r) Herringbone Plant Motifs, Calligraphy on Pishtaq and Guldasta Geometric Decoration.
Source: http://en.wikipedia.org/wiki/File:Taj_Decorations.jpg
http://en.wikipedia.org/wiki/Taj_Mahal

Abstract forms as decorative elements are found in the plinth, minarets, gateway, mosque, jawab, and to a lesser extent, on the surfaces of the tomb. The domes and vaults are worked with *tracery* (window ornamentation) of incised painting thus creating elaborate geometric forms (Figure 3.65). On most areas that are joined, herringbone (interlocking 'V' shape pattern) inlays define the space between adjoining elements. For contrast, white inlays are used in sandstone buildings/structures and dark or black inlays on the white marbles. The mortared areas of marble works are stained or painted dark thus, creating geometric patterns of considerable complexity. Building floors and walkways are done in contrasting tiles or blocks in *tessellation* (prototype) patterns.

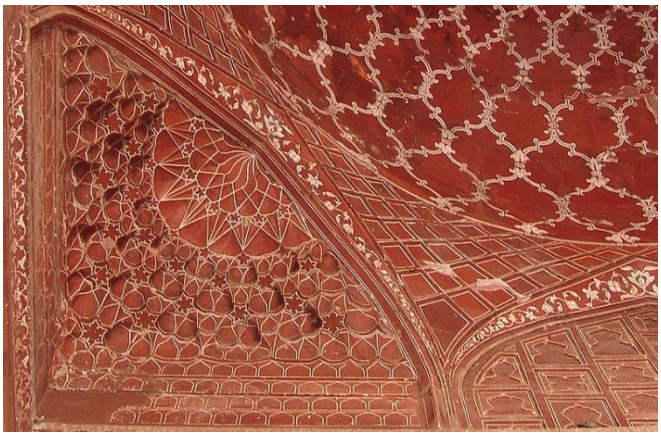


Figure 3.65: Top, Incised Paintings on the ceiling; Bottom (l-r) Delicate Pierced work, Jali detail
Source: http://en.wikipedia.org/wiki/File:Taj_Decorations.jpg
http://en.wikipedia.org/wiki/Taj_Mahal

The marble used for the decorations, are polished to emphasize the exquisite detailing of these carvings. The dado frames and archway *spandrels* (space between arches) are decorated with *pietra dura* (stone painting) inlays of highly stylish, almost geometric vines, flowers and fruits (Figure 3.66). The inlay stones are yellow marble, jasper and jade leveled and polished to the surface of the walls. The inlay works are not *pietra dura* (stone painting), but *lapidary* (stone engraving) of precious and semi-precious gemstones.

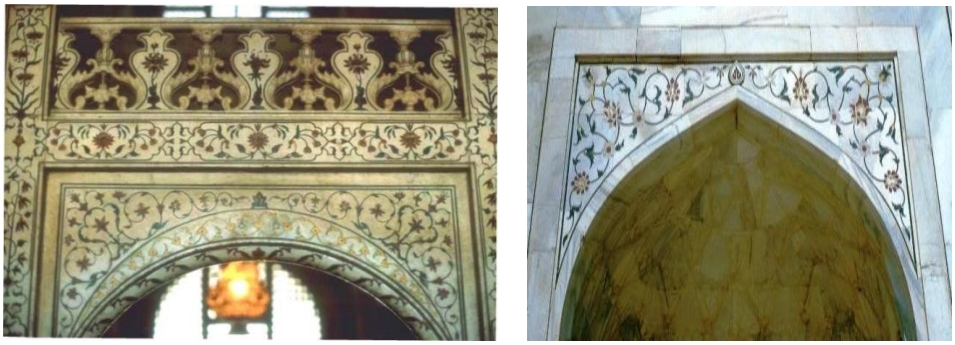


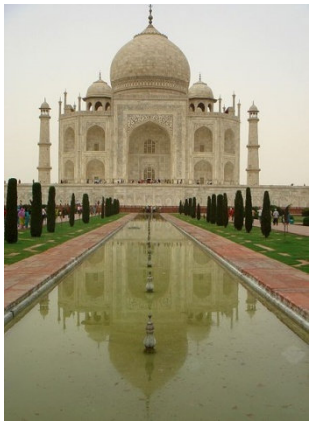
Figure 3.66: (l-r) Arch of Jali showing delicate inlays and Spandrel details over Main Iwan
Source: http://en.wikipedia.org/wiki/File:Taj_Decorations.jpg
http://en.wikipedia.org/wiki/Taj_Mahal

Again, Muslim tradition forbids elaborate decoration of graves; hence Mumtaz and Shah Jahan are laid in a relatively plain crypt (underground chamber/vault) beneath the inner chamber with their faces turned towards Mecca. Mumtaz Mahal's cenotaph is precisely at the

center of the inner chamber with a rectangular marble base of 1.5m by 2.5m. The base and casket are elaborately inlaid with precious and semiprecious gems. There are calligraphic inscriptions of praise to Mumtaz on her casket, and on the lid of the casket is a raised rectangular Lozenge, suggestive of a writing table. Shah Jahan's cenotaph is besides and bigger than Mumtaz's (his wife). It reflects the same decorative elements on a slightly taller base but with astonishing precision lapidary and calligraphy that identifies Shah Jahan. On the lid of Shah Jahan's casket, is a sculpture of a small pen box and writing tablet, traditional Mughal funerary icons decorating men's and women's caskets respectively (see Figure 3.62). Calligraphic inscriptions listing ninety nine (99) names of God are found on the sides of the actual tomb of Mumtaz Mahal. Few of the listed names are, 'O Noble, O Magnificent, O majestic, O Unique, O Eternal, O Glorious….' Also Shah Jahan's tomb bears calligraphic inscription that reads, 'He traveled from this world to the banquet hall of eternity on the night of the twenty-six of the month of *Rajah* (Hindu ruler) in the year 1076 *Hijri* (holiday) (http://en.wikipedia.org/wiki/Taj_Mahal).

Garden/Landscape of Taj Mahal

Taj Mahal is set on 300 meter square garden (*charbagh*), a Mughal garden with raised walkways that divide the garden into four major sections and sixteen (16) sunken parterres (flower beds) (see Figure 3.51, Layout of Taj Mahal Complex). There is a raised marble water tank (*al Hawd al-Kawthar* or 'Tank of Abundance'), at the center of the garden, halfway between the tomb (mausoleum) and gateway. A reflecting pool along the approach view (North-South axis), flanked by walkways reflect the image of Taj Mahal (Figure 3.67).



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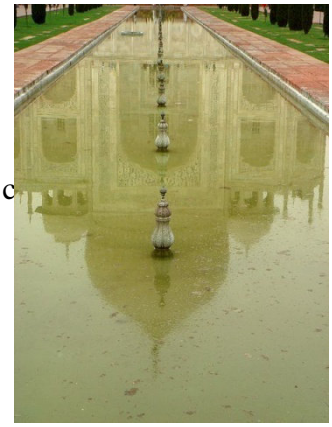


Figure 3.67: (l-r) Approach view showing the Pedestrian Walkway, Garden, Reflecting Pool and Fountain
Source: http://en.wikipedia.org/wiki/Files:TajPlanMughalGardens.jpg

The design of the garden, believed to be inspired by Persian gardens and introduced to India by the first Mughal Emperor Babur, is laid out with avenues of trees and fountains. The design layout is said to symbolize four flowing rivers of Paradise and reflects the gardens of Paradise derived from the Persian 'walled garden' (*paridaeza*). 'Paradise' in mystic Islamic texts of Mughal period is described as an ideal garden of abundance with four rivers (representing the promised rivers of water, milk, wine and honey), flowing from a central spring, separating the garden into North, South, East and West. Most Mughal gardens (*charbaghs*) are shaped rectangular with a tomb or pavilion in the center. But the Taj Mahal is different and regarded as unusual in that the main structure; the tomb, is located at the end of the garden. The layout of the garden and its architectural features (fountains, brick and marble walkways, and geometric brick-lined flowerbeds with terraced gardens and ponds (*Shalimar*) (Figure 3.68), show some similarity with 'Moonlight Garden' and suggestive of the fact that the Taj Mahal garden may have been designed by the same person; Engineer Ali Mardan (http://en.wikipedia.org/wiki/Taj_Mahal; http://en.wikipedia.org/wiki/orgins_and_architecture_of_the_Taj_Mahal).

Figure 3.68: View of the Taj Mahal Compound showing, the Great Gate, Pedestrian Walkway, Garden and Reflecting Pool
Source: http://en.wikipedia.org/wiki/Files:TajPlanMughalGardens.jpg
http://en.wikipedia.org/wiki/origins_and_architecture_of_the_Taj_Mahal.

Gateway of Taj Mahal

This main gateway (*darwaza*) is a monumental structure primarily, constructed with sandstone and marble, reminiscent of Mughal architecture of earlier Emperors. Its archways mirror that of the tomb's archways and its side arches (*pishtaq*), incorporate calligraphy that decorates the tomb. Its decorations are bas-relief and inlaid (*pietra dura*) decorative elements with floral motifs. The ceilings are vaulted and walls have elaborate geometric designs like those found in the other sandstone buildings of the complex (see Figure 3.60) (Ibid).

Mosque and Jawab of Taj Mahal

These are two grand red sandstone buildings at the far end of the complex that open to the sides of the tomb. The two structures are precise mirror images of each other and their rear sides are parallel to the western and eastern walls. The western structure is a Mosque and the eastern structure referred to as Jawab (the answer) was primarily designed to create architectural balance and may have been used as a guesthouse or meeting house (see Figure 3.60, Layout of Taj Mahal Complex). The distinctions between these two structures include the lack of a niche *(mihrab*) in the mosque's wall facing Mecca and in the jawab, the floors have geometric design, while in the mosque, the floor is in black marble and inlaid with outlines of 569 prayer rugs. The Mughal mosques of that period divided the sanctuary hall into three areas; a main sanctuary and slightly smaller sanctuaries on either side. But at the Taj Mahal, each sanctuary opens onto an enormous vaulting dome. These outlying structures (*masji*- mosque, *jawab*- meeting/guest house and *darwaza*- gatehouse), were completed in 1643 (Ibid).

Construction of Taj Mahal

The construction was said to have started in 1632 CE (1041 AH), a year after the death of Mumtaz Mahal, on the south bank of the river Yamuna in Agra, and was completed in 1648 CE (1058 AH). The project 'Taj Mahal' was realized through human and animal labour. It was stated that a labour force of twenty thousand (20,000) workers was recruited across northern India. Sculptors from *Bukhara*, calligraphers from *Syria* and *Persia,* inlayers from southern *India*, stonecutters from *Baluchistan*, a specialist in building turrets and another who carved only marble flowers were part of a thirty-seven (37) man-team that formed the creative unit (Wikipedia free Encyclopedia: Origins and Architecture of the Taj Mahal).

Some of the members of the building team are the following:
Ismail Afandi (a.k.a. Ismail Khan), of the Ottoman Empire considered as a premier designer of hemispheres and domes. He designed Taj Mahal's main dome ('onion' dome). **Ustad Isa** and **Isa Muhammad Effendi**, both of Persia (Iran), trained by **Koca Mimar Sinan Agha** of Ottoman Empire, are credited with a key role in the architectural design but there is little evidence to support this claim. **Puru** from Benarus, Persia (Iran) was mentioned as a supervising architect. **Qazim Khan**, of Lahore, cast the solid gold finial (Ibid). **Chiranjilal**, a lapidary from Delhi was the chief sculptor and mosaicist.

Amanat Khan, from Shiraz Iran was the chief calligrapher. His name was inscribed at the end of the inscription on the Taj Mahal's gateway. **Muhammad Hanif** supervised the masons, **Mir Abdul Karim** and **Mukkarimat khan** of Shira, Persia (Iran), handled finances and management of daily production.

According to the article, 'Origins and Architecture of the Taj Mahal' (http://en.wikipedia.org/wiki/origins_and_architecture_of_the_Taj_Mahal), it was stated that over one thousand (1000+) elephants were used to transport building materials during the construction. Teams of twenty (20) or thirty (30) oxen were strained to pull blocks on specially constructed wagons and water from the river was drawn by a series of animal-powered rope and bucket mechanism (*purs*), into a large storage tank further raised to a large

distribution tank from where it was passed into three subsidiary tanks and finally, piped to the complex (http://en.wikipedia.org/wiki/Taj_Mahal). An area of about three acres was said to have been excavated, filled with dirt to reduce seepage and leveled at 50 meters above riverbank. Wells were dug and filled with stone and rubble as footings of the tomb. Instead of lashed bamboo for scaffold, colossal brick scaffold was constructed. The brick scaffold was said to be so enormous that the foremen estimated that it would take years to dismantle. But according to a legend, Emperor Shah Jahan decreed that anyone could keep the bricks taken from the scaffold and it was all dismantled overnight by peasants (Ibid).

A fifteen kilometer tamped-earth ramp was built to transport marble and materials to the construction site and an elaborate post and beam pulley system was used to raise the blocks into desired positions. The plinth and tomb was said to have taken about twelve years (12yrs) to complete, while the remaining parts of the complex (minarets, mosque, jawab and gateway), an additional ten years (10yrs). The materials used in the construction were sourced from all over India and Asia. The *red sandstone* from **India**, the *translucent white marble* from **Rajasthan**, the *jasper* from **Punjab**, *jade* and *crystal* from **China**. The *turquoise* was from **Tibet** and the *lapis lazuli* from **Afghanistan**, while the *sapphire* came from **Sri Lanka** and the *carnelian* from **Arabia**. In all, twenty eight (28) types of precious and semi-precious stones were inlaid into the white marble (Ibid).

Design of Taj Mahal

The Taj Mahal though considered the zenith of Mughal architecture, the identity of its architect remains a mystery. This is because the Emperor (Shah Jahan) under whose reign it was commissioned and built was believed to have played an active role in its design due to his obsessive drive for perfection. According to Milo Beach (Art Historian), “This is something we simply have to speculate about. We know that Shah Jahan was interested in architectural decoration and design. Clearly, he was consulted. He was probably very interested in continually seeing the plans as they developed and commenting on them, and suggesting changes that might be made. The idea that he did any more than that, in terms of the design, is

unrealistic. Clearly it's a building that was designed by professional architects who knew what they were doing, not by a prince and an amateur" (http://www.pbs.org/treasuresoftheworld/taj_mahal/tlevel_2/t3build_design.html).

Further, it was suggested that a European architect was responsible for building the Taj, but this is contradicted by the existence of monuments previously constructed in India. Milo Beach adds, "…I can't imagine that there was one architect for the Taj Mahal or for any of these buildings (monuments)….I mean it had to have been a team effort for such an enormous undertaking….a building like the Taj grows out of the earlier artistic traditions in India, and in Iran as well, traditions that a European architect would know virtually nothing about. So I think it's extremely unlikely (there's certainly no historical evidence whatsoever) that there was a European architect" (Ibid).

The great love by Shah Jahan for Mumtaz was traditionally held as an inspiration for Taj Mahal. The design was conceived to reflect heavenly paradise on earth. According to mystic Islamic texts, 'paradise' was described as a garden filled with abundant trees, flowers, plants (vegetation) and rivers (water), representing the promised rivers of water, milk, wine and honey (http://en.wikipedia.org/wiki/origins_and_architecture_of_the_Taj_Mahal). Therefore, the concept of Taj Mahal was to create an earthly replica of Mumtaz's house in paradise (seen in the entire complex and informs the design of all its elements), and to serve as an instrument of propaganda for Emperor Shah Jahan. He described the Taj thus: *'should guilty seek asylum here, like one pardoned, he becomes free from sin. Should a sinner make his way to this mansion, all his past sins are to be washed away. The sight of this mansion creates sorrowing sighs; and the sun and the moon shed tears from their eyes. In this world this edifice has been made; to display thereby the creator's glory'* (http://en.wikipedia.org/wiki/Taj_Mahal). Also, a number of secondary principles of which hierarchy is the most dominant informed the design and appearance of the complex. It is observed that a deliberate interplay was established between the building's elements, its surface decoration, materials, geometric planning and its acoustics. This interplay extends from what can be seen with the senses

(eyes), into religious, intellectual, mathematical and poetic ideas. The constantly changing sunlight that illuminates the building reflected from its translucent marble is believed to have a metaphoric role associated with the presence of God.

Symmetry and geometric planning played an important role in ordering the complex and reflected the arts emanating from Emperor Jahan's imperial patronage. Simultaneous ideas of pairing, counterparts and integration, reflecting intellectual and spiritual notions of universal harmony are expressed in bilateral symmetry. The Mughul *Gaz* (unit of measurement), which is a strict and complex set of implied grids, provided a flexible means of bringing proportional order to all the elements of the Taj Mahal. The hierarchical use of red sandstone and white marble in the Taj Mahal is of symbolic significance. The Mughals elaborating on the concept traced to earlier Hindu practices as written in the Hindu sacred literature (*Vishnudharmottara Purana*), white stone buildings were recommended for the priestly caste (*Brahmins*) and red stone buildings for the warrior caste (*Kshatriyas*). Thus, by building structures that employed such colour coding, the Mughals identified with the two leading classes of Indian social structure and defined themselves as rulers in Indian terms. Also, red sandstone had significance in the Persian origins of the Mughals where red was the exclusive colour for imperial tents. In the Taj Mahal therefore, the relative importance of each building in the complex is identified by the amount of white marble used in its finish (http://en.wikipedia.org/wiki/origins_and_architecture_of_the_Taj_Mahal).

Ustad Ahmad Lahauri (a.k.a. Isa Khan), an architect in the court of Emperor Shah Jahan from Lahore, is most often credited as the Chief/Principal architect or plan drawer of the Taj Mahal, based on a seventeenth century manuscript which claims that **Ustad Ahmad** was the architect of both the Taj Mahal and the Red Fort at Delhi (http://www.pbs.org/treasuresoftheworld/taj_mahal/tlevel_2/t3build_design.html).

Cost of Taj Mahal

It is difficult to put a definite/actual cost expended in realizing the Taj Mahal. Estimates of the cost of construction vary due to difficulties in estimating construction costs across time. But the total construction cost has been put at about 32 million Rupees at that time, which if converted to present day currency rates, will run into trillions of Dollars (http://www.wikipedia.org/free/encyclopedia/tajmahal; http://en.wikipedia.org/wiki/Taj_Mahal).

3.27 Possible Criteria for Listing as Monument

History behind the building

That is, the original idea that inspired the design and construction of the complex. Taj Mahal referred to as 'The Monument of Love' was built by the fifth Mughal Emperor Shah Jahan who ruled over India as a monument to immortalize the love for his late wife, Mumtaz Mahal. This emotion of Love was profoundly expressed and felt in the finishes applied on the structure and general layout of the complex environment.

Construction Materials

Taj Mahal is regarded as one of the world's famous architectural wonders of which no other monument in the world can match its beauty and grandeur. Taj Mahal was constructed using materials from all over India and Asia. The quality of materials used in the construction and finishing of this structure is the best. Examples are white marble inlaid with a lot of precious and semi-precious stones/gems like gold, bronze, jade and crystal, jasper, sapphire and turquoise, carnelian to mention a few. But in all, about twenty eight (28) types of precious and semi-precious stones were applied (http://en.wikipedia.org/wiki/Taj_Mahal).

Construction Technology

Taj Mahal was built in the 17th Century and remains an architectural marvel till date. The technology was indigenous and imported but not 'high tech', precise and superb craftsmanship.

Construction Cost

Monumental buildings are mostly built by wealthy entities, such as governments and religious orders, and in more modern times, corporations have also acquired the resources to build monumental buildings. Taj Mahal was built with the wealth of India during the Mughal Empire's period of greatest prosperity. The total cost of construction has been estimated to be about 32 million Rupees at the time which now runs into trillions of Dollars if converted to present currency (Ibid).

Size/Scale of Building

Though size alone does not make a monumental building, but Taj Mahal is a massive and imposing white marble structure set amongst a well laid out serene ambience garden.

Age of Structure

Taj Mahal built in 17th Century is believed to be more than 350 years old. Even at that, it has not lost its romantic aura, structural stability and beauty which attract millions of visitors to it. Also, it is believed that because of this everlasting charm, Taj Mahal can boast of being one of the most popular architectural monuments on the planet earth.

Design Style

The Taj Mahal is considered the finest example of Mughal architecture, a style that combines elements from Persian, Ottoman, Indian and Islamic architectural styles. UNESCO World Heritage Site in 1983 cited the Taj as 'the jewel of Muslim art in India and one of the universally admired masterpieces of the world's heritage'. The design style of the Taj is

distinctive and identifiable. The building is completely symmetrical on all sides. That is, all the sides of the building are designed and embellished the same way. For example, on every side, a massive vaulted archway (*pishtaq*) frames the arch-shaped door way (*iwan*) with a similar arch-shaped balcony on either side of the main arch, additional *pishtaqs* are stacked above and below. This motif of stacked *pishtaqs* is replicated on the chamfered corner areas as well (Figure 3.69).

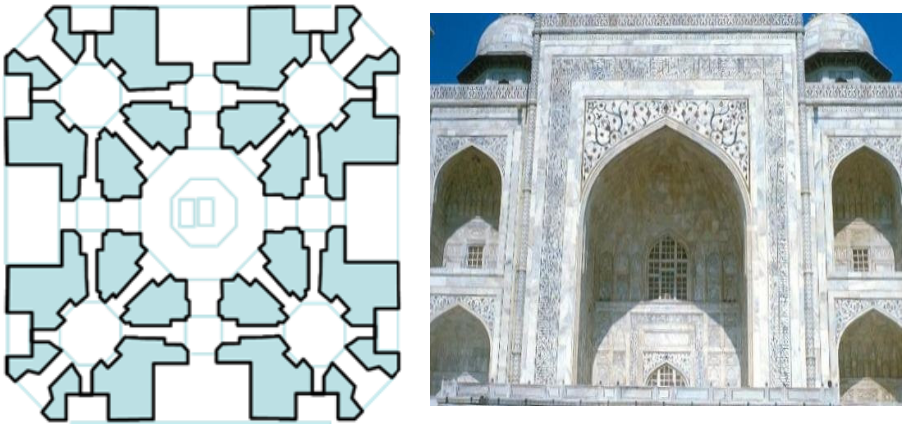


Figure 3.69: (l-r) Floor Plan of Taj Mahal showing the chamber and the tombs, Main Iwan and side Pishtags (balconies).
Source: http://en.wikipedia.org/wiki/Files:TajEntryArch.jpg
http://en.wikipedia.org/wiki/Files:TajPlan.jpg

Design Elements

The basic design elements in the Taj are of Persian origin. The large 'onion' shaped white marble dome crowned by gilded *finial/spire* (carved decoration) is unique and most spectacular feature. The four (4), 40 metres tall minarets (prayer towers), domed *Chattris* (kiosks), and tall decorative spires.

Decorative Elements and Wall Writings

The exterior decorations of the Taj are unique and among the finest to be found in Mughal architecture. They are grouped into **calligraphy** (writings), **abstract forms** or **vegetative motifs** and made by applying paint or stucco or by stone inlays or carvings.

3.28 The Baha'i House of Worship

The Baha'i House of Worship popularly, referred to as the 'Lotus Temple' is an architectural beauty to behold (Figure 3.70). It is believed that this structure revolutionized the concept of worship by its design and serene spiritual atmosphere. This monument in marble is dedicated to the purpose of prayer, meditation and spiritual upliftment. There is no clergy in the temple, no idols, no pictures, no sermons, and no rituals. It is a place for communication between man and his creator God.

Figure 3.70: Baha'i House of Worship (Lotus Temple)
Source: http://en.wikipedia.ng/wiki/Lotus_Temple

According to Ravi Shankar, the sitar maestro, recounting his experience when he visited the Lotus Temple said he was, *"so deeply moved visiting this great beautiful place that I find no words to express my feelings"*. Dizzy Gillespie, the late renowned Baha'i jazz musician exclaimed, *"I cannot believe it! It is God's work"* and an Indian diplomat described the Lotus Temple as a *"symbol of spiritual refinement of mankind"* (http://bahai.in/Bahai-House-of-Worship/Stories-Articles/the-lotus-of-bahapur-a-magnet-for-the-heart.html).

The Baha'i House of Worship became the recipient of accolades and world-wide acclaim soon after its completion in December 21, 1986. Work on the temple started on April 21, 1980. The following are some of the awards:

- Award for **excellence in religious art and architecture for 1987** was conferred upon Mr. Fariborz Sabha (Lotus Temple Architect) by the International Federation for Religious Art and Architecture, USA.
- Award for structural design, for **producing a building so emulating the beauty of a flower and so striking in its visual impact** 1987, by the Institute of structural Engineers, UK.
- Award for **excellence of its outdoor illumination** 1988, by the illuminating Engineering Society, North America.
- Award for "the most finely built concrete structures" 1990, by the American Concrete Institute, USA.
- Award for **the magnitude of service in promoting unity and harmony of people of all nations, religions and social strata, to an extent unsurpassed by any other architectural monument world-wide** 2000, by the GlobArt Academy of Vienna, Austria (http://www.indianetzone.com/2/bahai-temple.htm; http://en.wikipedia.org/wiki/Lotus_Temple; http://bahaikipedia.org/India; http://bahai.in/Bahai-House-of-Worship/Stories-Articles/the-lotus-of-bahapur-a-magnet-for-the-heart.html).

This House of Worship is located in New Delhi, the capital city of India and was dedicated to public worship in December 24, 1986. It sits on an area of 26 acres of land.

3.29 Architecture of the Baha'i House of Worship

It is believed that the 'Lotus Temple' is in obedience to the command of Baha'u'llah enshrined in the most holy book of the Baha'i religion which states, *"O people of creation, build ye houses as perfect as can be built on earth in the name of Him who is the Lord of Revelation…"*Therefore, Baha'is have endeavoured to their utmost to build houses of worship as beautiful and distinctive as possible (http://bahai.in/Bahai-House-of-Worship/Stories-Articles/the-lotus-of-bahapur-a-magnet-for-the-heart.html).

The Baha'i House of worship sometimes referred to as 'Taj Mahal of the 20th century' or 'the marvel of 20th century architecture' is a massive pure white marble structure whose concept was derived from the *lotus flower*, an India sacred flower, found commonly in dirty stagnant water but rising up pure and unsullied. Also the lotus flower, besides being the national flower of India, has been associated with religion (Hinduism, Buddhism, Zoroastrianism or Islam) and religious activities in India. It is believed that the lotus symbolizes the purity and tenderness of spiritual reality as it rises, untouched, unblemished from the stagnant pools and quagmires of the earth. It reminds man that he too can achieve this state while still living in this material world (http://bahai.in/Bahai-House-of-Worship/Stories-Articles/an-architectural-marvel.html).

Mr. Fariburz Sabha (Architect of the lotus temple) reacting to the issue of the "lotus" concept said, *"I was looking for a concept that would be acceptable to the people of all the different religions that abound with such rich diversity in India. I wanted to design something new and unique, at the same time not strange but familiar…something which would be loved by the people of different religions. I studied the art, culture and religions of India from books…The deep respect for the lotus, spontaneously evoked in India hearts everywhere…loving attachment to this sacred flower, convinced me to end my search for further ideas for the design. However the critical question…yet to be answered…how a flower could be translated into a building?"* (http://bahai.in/bahai-House-of-Worship/meet-the-architect/extracts-from-interviews-with-the-architect.html). Thus by adopting the form of the lotus flower, the temple gives the impression of a lotus flower yet to blossom (half-open) afloat and surrounded by its leaves (Figure 3.71). The temple complex is made up of the house of worship, basement floor (housing service components like mechanical and electrical systems), library, reception centre, administrative building, and ancillary block, restrooms block and garden. There are walkways around the structure with beautiful curved balustrades, bridges and stairs, which surround the nine pools (Figure 3.72).

Figure 3.71: Lotus Temple surrounded by Water Pools and Walkways.
Source: http://bahaikipedia.org/India.

Figure 3.72: (l-r) Lotus Temple view showing Water Pools and suspended Terraces with Balustrade
Source: http://en.wikipedia.ng/wiki/Lotus_Temple

Decoration of the Lotus Temple

The Baha'i House of Worship though complex in architectural and engineering designs is devoid of any symbol or image of any idol or god which commonly is found in most houses of worship, temples and religious buildings. This is based on the fact of the Baha'i core teaching principle of oneness of God, religion and mankind.

This house of worship is basically, finished and decorated in white marble. The flooring of the auditorium is of white marble, the finish of the walkways and stairs of the outer portion is of red sandstone thus offering a majestic contrast. The most basic idea in the design of this house of worship is that of light and water, used as its fundamental elements are responsible for the ornamentation of the temple in the place of the statues and carvings found in other temples (Figure 3.73) (http://bahai.in/Bahai-House-of-Worship/Stories-Articles/the-lotus-of-bahapur-

a-magnet-for-the-heart.html; http://bahai.in/Bahai-House-of-Worship/Stories-Articles/an-architectural-marvel.html).

Figure 3.73: (l-r) Views of the Entry Points to the Temple showing the red sandstone Walkway/Entry flooring, curved Balustrade and white marble shells
Source: http://en.wikipedia.ng/wiki/Lotus_Temple

Garden/Landscape of the Lotus Temple

The Lotus Temple is planted on a well designed and landscaped garden with water pools and fountain. Water pools and fountains are very important landscape elements in Indian gardens and the Lotus Temple has its own share of these landscape elements. Also, these pools and fountains around the Lotus Temple help to cool the air that passes over them into the temple and at the same time, the green lawns, represent the green leaves of the lotus flower afloat on water (Figure 3.74).

i

Figure 3.74: Top and Bottom (l-r) various views of the Lotus Temple showing well designed and Landscaped Garden, Water Pool and Fountain.
Source: http://en.wikipedia.ng/wiki/Lotus_Temple

The climate in India has been observed to be very hot for several months in the year. Thus the problem of ventilating the worship space became apparent. Ventilating this space artificially, would be very expensive to install and maintain, thus 'natural ventilation' system based upon 'smoke test' performed in Imperial College of London was adopted. The results demonstrated that with openings in the basement and at the top, the building acts like a chimney drawing up warm air from within the worship hall and expelling same through the opening at the top of the dome (Figure 3.75). Also, complementing this "chimney" system of ventilation, are two other ways:

a. A set of exhaust fans arranged in the dome to cool the concrete shell and prevent transference of heat back into the temple
b. A set of fans funnel air from the auditorium into the cold basement where it is cooled and recycled back into the auditorium (http://bahai.in/Bahai-House-of-Worship/meet-the-architect/extracts-from-interviews-with-the-architect.html).

Figure 3.75: (l-r) Opening on top of the Dome with exhaust fans to aid natural ventilation through horizontal openings (r) at the basement level
Source: http://en.wikipedia.ng/wiki/Lotus_Temple

Construction of the Lotus Temple

The construction started April 21, 1980 and was completed December 21, 1986 (6yrs and 8mths). Flint and Neill Partnership of London were the consultants and the ECC Construction Group of Larsen and Toubro Limited were the contractors that executed the construction of the temple (http://bahai.in/Bahai-House-of-Worship/Stories-Articles/an-architectural-marvel.html; http://bahai.in/Bahai-house-of-Worship/meet-the-architect/extracts-from-interviews-with-the-architect.html).

The Baha'i temple designed with the concept of a lotus flower afloat, inspired serious structural engineering tasks. This beautiful concept of the lotus had to be converted into definable geometrical forms like spheres, cylinders and cones, which were translated into equations and then used as a basis for structural analysis and engineering drawings. The resultant geometry was so complex that it took the designers over two and half years to complete the detailed drawings of the temple (http://bahai.in/Bahai-House-of-Worship/Stories-Articles/architectural-blossoming-of-the-lotus.html).

The lotus flower has three sets of petals (nine petals per set). The outermost set of nine petals referred to as the 'entrance leaves', open outwards forming the nine entrances all around the temple. The next set of nine petals (inner leaves) which appear partly closed, rise above the 'entrance leaves' to form the main structure housing the central hall. Then the last set of petals partly open at the top is covered with a glass and steel roof providing protection from rain and functioning as skylight, introducing natural light into the auditorium (Figure 3.76).

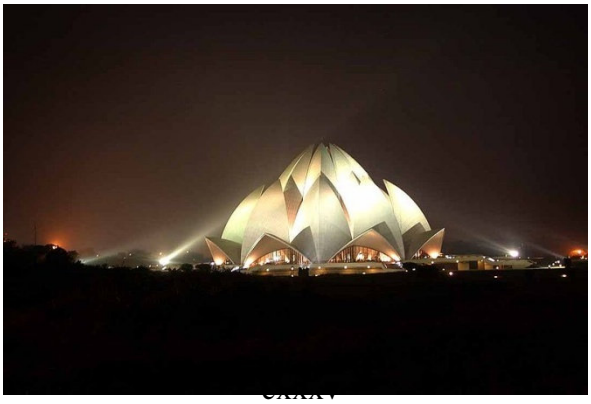


Figure 3.76: View of the Lotus Temple at night, showing some of the 'entrance leaves' and the partly open patels defining Temple.
Source: http://en.wikipedia.ng/wiki/Lotus_Temple

Due to the complexity of the design, the construction was done in stages. The structure was divided into convenient parts – first the basement and the inner podium were done; then the arches, all nine arches were cast one after the other in two lifts until the circle was completed. The inner leaf, radial beams and central hub commenced after the completion of all the arches. Then structural steel staging for the inner leaf was erected. The shells (120 degrees apart) were taken up three at a time, and cast in two lifts, one after the other, up to the radial beam level, ensuring always that the difference in height between the shells cast was not more than one lift. This process was repeated until all nine segments were cast.

Casting of the central hub was done as an independent activity, and after all the shells were cast, they were connected to the hub by casting the radial beams. Then allowing for sufficient curing for the concrete, the inner leaf along with the radial beams were de-scaffold, leaving the central hub supported. Later, the remaining portion of the inner leaf was done (Figure 3.77) (Ibid).

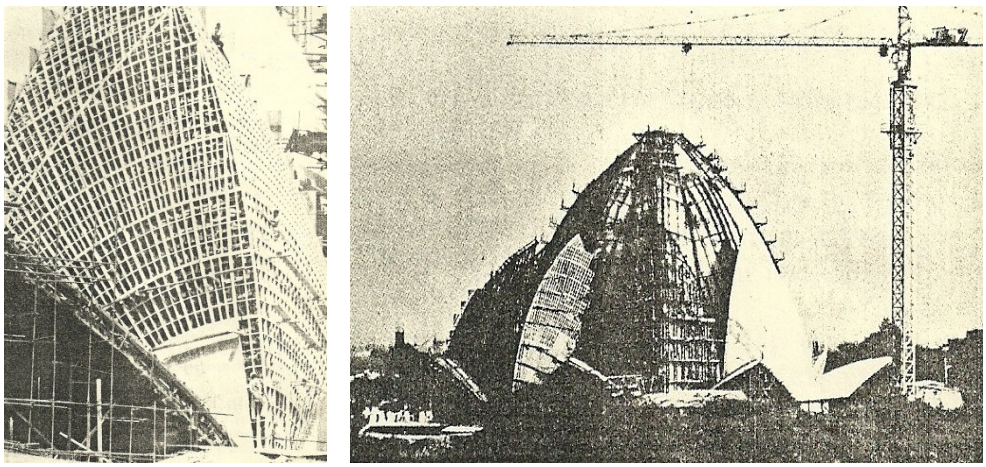


Figure 3.77: (l-r) View showing construction processes and stages (1984 – 1985).
Source: Indian Baha'i News, 1987.

The interior dome was done after de-scaffolding (removal of framework) the inner leaf. The steel staging was modified and two folds of the interior dome shells were done one after another. For each fold, three shells (120 degrees apart), were done at a time and cast one after another. The boundary rib for each shell was done first and then the shell cast in one single lift. This process was repeated until all the shells were completed. The entrance and outer leaves were done as a parallel activity with the casting of the inner leaves and interior dome. Two entrance leaves and one intermediate outer leaf were done first. Thereafter, the outer and entrance leaves were cast alternately, first the outer leaf and then the adjacent entrance leaves. De-shuttering (removal of formwork) started with the outer leaves and followed by the intermediate entrance leaf. In this manner the remaining leaves were de-shuttered as and when the concrete attained full strength and the leaves adjacent to the shell to be de-shuttered were cast (Ibid).

The ambient temperature in India during summer was observed to be as high as 45 degrees Celsius therefore; the temperature of the concrete was controlled by adding a measured quantity of ice and by the pre-cooling of aggregates in air-cooled aggregate storage bins. Also, the entire concrete area was covered by tarpaulins to prevent cold joints due to stoppage of work during heavy rains and rain water entering the formworks (http://bahai.in/Bahai-House-of-Worship/Stories-Articles/architectural-blossoming-of-the-lotus.html; Indian Baha'i News, 1987).

Construction Materials and Labour

According to records, about 10,000 sq meters of marble quarried from the Mount Pentilekon mines of Greece was sent to Italy where each panel was cut to the required size and shape to suit the geometry and architectural pattern before transporting them to the site in India (Figure 3.78) (http://bahai.in/Bahai-House-of-Worship/Stories-Articles/architectural-blossomingof-the-lotus.html). Tests carried out on Indian cement revealed that the strength and other

properties varied considerably and the colour did not meet the architectural requirement (white structure). Thus, the entire quantity of white cement used was imported from Korea. Specially graded dolomite aggregates were procured from Alwar mines near Delhi and white silica sand from Jaipur. The reinforcement used in the white concrete shells as well as the binding wires were galvanized to prevent rusting of reinforcement on the white concrete (Ibid).

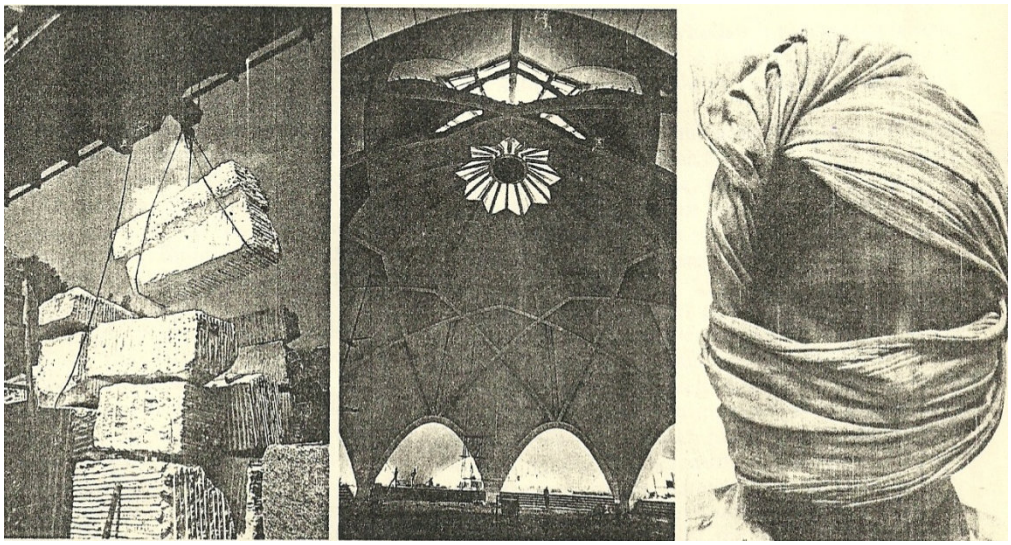


Figure 3.78: (l-r) View showing construction material (marbles), interior of the Temple and a workman
Source: Indian Baha'i News, 1990

Galvanized reinforcement for concrete it was observed is seldom used in India thus several tests were carried out to ensure that the mechanical properties of reinforcement would not be adversely affected due to galvanizing. A lot of timber was used for support and formwork; plywood for forming the petals (shells) with a protective coating applied over the surface, the plywood sheathing was lined by fibre-reinforced plastic sheets and joints sealed with epoxy resin and plaster of Paris. After the removal of the outer forms, the exposed surface of the concrete was covered with hessian and cured for twenty eight (28) days by keeping it wet continuously, using a sprinkler arrangement fixed at the top of the shells. White marble panels are fixed to the concrete surface with specially designed stainless steel brackets and anchors. It is worthy to note that all the marble work was carried out by carpenters who learned the skill of marble fixing within a few weeks, and were able to complete the work to the required

accuracy, two months ahead of the scheduled completion time. Besides the main consultants (Flint and Neill Partnership London) and contractors (Larsen and Toubro of ECC construction group), forty (40) engineers and eight hundred (800) labourers and skilled men (carpenters, fitters, bricklayers, glazers to mention a few) mostly of Baha'i faith, worked day and night to erect the splendid edifice (Ibid).

Cost of the Lotus Temple

The Lotus Temple it is remarkable to note, was funded through voluntary contributions made only by Baha'is throughout the world with a large sum of the funds having been provided by the believers in India. An Indian scholar who visited the lotus temple summed up this spirit of universal participation among the Baha'is told Mr. Fariborz Sabha (architect of the lotus temple) that, *'The Taj Mahal was built with the power of a king, but you are building this majestic edifice with the power of love"* (http://bahai.in/Bahai-House-of-Worship/Stories-Articles/an-architectural-marvel.html; Indian Baha'i News, 1987).

The total cost of the building was estimated to about ten (10) crore rupees ($30m); including all furniture and landscape. Actually, the Lotus Temple if considered commercially would have cost several times more. The whole project was not based on commercial considerations but on sacrifice and devotion. From the labourers to the supervisors, engineers and suppliers, all took it as a challenge and labour of love. Many worked totally voluntarily; some accepted a bare minimum wage for their expenses. According to Fariburz Sahba (the architect of Lotus Temple), '...it is mostly the poor people who have supported this project because of their appreciation of love, unity and beauty.. .' (http://bahai.in/Bahai-House-of-Worship/meet-the-architect/extracts-from-interviews-with-the-architect.html). It is impossible to value the Lotus Temple by the standard scales available for quality survey or project management. But conservatively, the cost was estimated at Rs 10,000,000 (about $30m USD) as at the time (http://bahai.in/Bahai-House-of-Worship/Stories-Articles/an-architecttural-marvel.html; Indian Baha'i News, 1987).

3.30 Possible Criteria for Listing as Monument

History behind the building

The Baha'i House of Worship (Lotus Temple), according to Indian Baha'i News 1987, was inspired by God stemming from the Baha'is principle of oneness – of God, religion and mankind, and obedience to the command of Baha'u'llah enshrined in the most holy book of the Baha'i religion, *"O people of creation, build ye houses as perfect as can be built on earth in the name of Him who is the Lord of Revelation…"* Shoghi Effendi, the Guardian of Baha'i faith initiated the process of building magnificent edifices at the World Centre of the Baha'i religion in Halifa Israel (http://bahai.in/Bahai-House-of-Worship/Stories-Articles/the-lotus-of-bahapur-a-magnet-for-the-heart.html).

Mode of Project Execution

The Baha'i House of Worship was executed through voluntary contributions and sacrifices made only by Baha'is (rich or poor) worldwide with the largest contribution having been made by the believer in India. They gave to the Glory of God to demonstrate their love for Him and believed such a monument will attract divine bounties and the spiritual atmosphere it will create will inspire many lives. The project cost cannot be commercially estimated because everything was based on voluntary sacrifice by Baha'i faithful (http://bahai.in/Bahai-House-of-Worship/Stories-Articles/an-architectural-marvel.html; http://bahai.in/Bahai-House-of-Worship/meet-the-architect/extracts-from-interviews-with-the-architect.html; Indian Baha'i News, 1987).

Design Style

The Baha'i House of Worship described as a **'symbol of spiritual refinement of mankind'** was indeed, a significant chapter in the making of Baha'i history on the Indian sub-continent. To describe merely the beauty and symmetry of the architecture of the Lotus Temple is not sufficient to immortalize a building. The architectural ingenuity (transformation of the image of a flower into an architectural structure), the design of the structure in the sense that there is no single straight line, every line is curved making every measurement a complicated

procedure and the feeling the structure evokes in the hearts of the people is important! Some comments retrieved from the visitors' book stated, that the Baha'i House of Worship, is 'the most beautiful building ever made', 'marvel of architecture' and 'Eight Wonder of the World'. Ravi Shankar, (sitar maestro) recalled he was *"so deeply moved visiting this great beautiful place, that he found no words to express his feelings..."* Dizzy Gillespie, (late Baha'i Jazz musician) exclaimed, *"I cannot believe it! It is God's work"* Mr. Fariburz Sabha, (Architect of Baha'i House of Worship) in his testimony said he desired *"To design a temple which would reflect the rich cultural heritage of India and at the same time, be compatible with the cardinal principle of the Baha'i Faith, that is the unity of religions…It should, on one hand, reveal the simplicity, clarity and freshness of the Baha'i revelation as apart from the beliefs and man-made concepts of many divided sects and, on the other, should show respect for the basic beliefs of all religions of the past and act as a constant reminder to the followers of each faith that the basic principles of all the religions of God are one"* (http://bahai.in/Bahai-House-of-Worship/Stories-Articles/the-lotus-of-bahapur-a-magnet-for-the-heart.html; http://bahai.in/Bahai-House-of-Worship/Stories-Articles/an-architectural-marvel.html; http://bahai.in/Bahai-House-of-Worship/meet-the-architect/extracts-from-interviews-with-the-architect.html).

Construction Materials and Technology

The Lotus Temple so emulating the beauty of a flower and so striking in its visual impact is regarded as "one of the most finely built concrete structure" (American Concrete Institute; 1990). Many of the construction materials were used for the first time in India. Examples are white concrete and galvanized reinforcement (Indian Baha'i News, 1987). Other materials used include; 10,000 sq meters of marble from Greece, white cement from Korea, specially graded dolomite aggregates from Alwar near Delhi and white silica sand from Jaipur, a lot timber and plywood (http://bahai.in/Bahai-House-of-Worship/Stories-Articles/architectural-blossoming-of-the-lotus.html). According to Fariburz Sahba, they had to do a lot of things for the first time in order to realize the structure. A unique and complex concreting procedure was developed where the concrete shells (13 cm thick and 25 m high) were cast in one continuous

operation, round the clock, during monsoon/peak summer season when the temperatures soar beyond 45 dgrees Celcius. The design of the structure was such that there was not one single straight line. Everything was in curvature, making every measurement a complicated procedure. The whole operation was carried out on the basis of thousands of geometrical co-ordinates. Also, it is worthy to note that all the marble work was done by carpenters who learnt the skill of marble fixing within a few weeks and were able to complete the work, to the required accuracy, two months ahead of the scheduled completion time (http://bahai.in/Bahai-House-of-Worship/Stories-Articles/architectural-blossoming-of-the-lotus.html; Indian Baha'i News, 1987).

Size/Scale of Structure

The Lotus Temple is one of the marvels of modern architecture. The impressive shining pure white marble, the majestic dome, the petals clearly standing out create a sense of grandeur and awe. The temple gives the impression of a half-open lotus flower afloat, surrounded by its leaves thereby capturing the imagination with its simplicity and elegance. This monument in marble is dedicated to the purpose of prayer, meditation and spiritual upliftment, and covers an expanse of 26 acres of land (See Figure 3.71) (http://bahai.in/Bahai-House-of-Worship/Stories-Articles/the-lotus-of-bahapur-a-magnet-for-the-heart.html; http://bahai.in/Bahai-House-of-Worship/Stories-Articles/an-architectural-marvel.html).

Design Elements

All around the Lotus Temple are walkways with beautiful curved balustrades, foot bridges and stairs that surround the nine pools representing the floating leaves of the lotus. Also the most basic idea in the design is that light and water are used as two fundamental elements for the ornamentation of the temple in the place of statues and carvings found in other temples. Flowers, shrubs and green grasses were used to create a serene environment. It is a remarkable tabernacle of peace and beauty and an engineering feat that will set standards for centuries (http://bahai.in/Bahai-House-of-Worhip/Stories-Articles/an-architecrual-

marvel.html; http://www.bahaihouseofworship.in/jewel-in-the-lotus; http://bahai.in/Bahai-House-of-Worship/Stories-Articles/architectural-blossoming-of-the-lotus.html).

3.31 Possible Regional Criteria for Selected Foreign Case Studies

Architectural monument as had been stated earlier, is classified under cultural heritage by the UNESCO and for any structure to be listed as architectural monument, it must be of outstanding universal value and meet at least one or more of the criteria for listing cultural heritage which are as listed below:

1. represent a masterpiece of human creative genius;
2. exhibit an important interchange of human values, over a span of time or within a cultural area of the world, on development in architecture or technology, monumental arts, town-planning or landscape design;
3. bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living or which has disappeared;
4. be an outstanding example of a type of building, architectural or technological ensemble or landscape which illustrates a significant stage in human history;
5. be an outstanding example of a traditional human settlement, land-use, or sea-use which is representative of a culture, or human interaction with the environment especially when it has become vulnerable under the impact of irreversible change;
6. be directly or tangibly associated with events or living traditions, with ideas, or with beliefs, with artistic and literary works of outstanding universal significance. The Committee considers that these criteria should preferably be used in conjunction with other criteria.

Based on the above listing criteria, the possible regional criteria for listing both the Taj Mahal and the Lotus Temple all in India, and which provided the rationale for identifying them as relevant case studies for this study are the following:

The Taj Mahal.

1. It is a unique/exceptional testimony to a religion, cultural tradition and civilization of the people who lay claim to the structure. The Taj is considered the finest and most sophisticated example of Mughal architecture, a style that combines elements from Persian, Ottoman, Indian and Islamic architectural styles. UNESCO World Heritage in 1983 cited the Taj as 'the jewel of muslim art in India and one of the universally admired masterpieces of the world's heritage' (http://en.wikipedia.org/wiki/Taj_Mahal; http://en.wikipedia.org/wiki/origins_and_architecture_of_the_Taj_Mahal).

2. It is an outstanding example of a type of building (mausoleum) and reflected the emotions of the author (Emperor Shah Jahan). Taj Mahal was commissioned soon after the death of Mumtaz Mahal, Emperor Shah Jahan's favourate wife who died during child birth in order to immortalize his love for her. The Taj is regarded as one of the most famous and recognizable buildings in the world and was conceived and designed as an earthly replica of Mumtaz's house in paradise and an instrument of propaganda for the Emperor Shah Jahan (http://en.wikipedia.org/wiki/origins_and_architecture_of_the_Taj_Mahal)

3. Taj Mahal represents a masterpiece of human creative genius. According to the official Mughal histories, several designers and architects (about thirty seven men) were mentioned by name as forming the creative team that built the Taj Mahal. People like Ismail Afandi (a.k.a. Ismail Khan) designed and built the dome; Qazim Khan from Lahore, cast the gold finial that crowns the dome; Chiranji Lal from Delhi, was the chief mosaicist; Amanat Khan from Shiraz, was the master calligrapher whose signature is inscribed on the Taj gateway; Mohammed Hanif, Multan and Quandhar, master masons from Delhi; and Mukrimat Khan and Mir Abdul Karim from Shiraz, chief supervisors and administrators. According to a 17th century manuscript, Ustad Ahmad (a.k.a. Isa Khan) an architect from Lahore, is credited to be the chief architect of the Taj Mahal (http://www.pbs.org/treasuresoftheworld/taj_mahal_2/t3build_design.html

The Lotus Temple

1. The Lotus Temple, like the Taj Mahal, bears a unique/exceptional testimony to a religion, cultural tradition, values and beliefs of the people who lay claim to the structure. The Lotus

Temple not only does it embody the spiritual aspirations and basic beliefs of the Baha'i community world-wide, it evokes exceptional sentiments in the hearts of people and significantly provided a unifying link in a land of myriad religions by bringing divergent thoughts into harmony by virtue of its principle of oneness of God, religion and mankind. According to Fariburz, 'I wanted to design something new and unique, at the same time not strange but familiar...something which would be loved by the people of different religions' (http://bahai.in/Bahai-House-of-Worship/Stories-Articles/the-lotus-of-bahapur-a-magnet-for-the-heart.html; http://bahai.in/Bahai-House-of-Worship/meet-the-architect/extracts-from-interviews-with-the-architect.html).

2. The Baha'i House of Worship represents a masterpiece of human creative genius in that the extremely complex design, called for the highest order of engineering ingenuity to be implemented by means of traditional workmanship. The Lotus Temple, it was observed, provided one rare exception with its remarkable fusion of ancient concept (derived from the Lotus flower), modern engineering skill, and architectural inspiration thereby, making it the focus of attention amongst engineers and architects the world over. The Indian Express (1986) aptly stated that the Lotus Temple symbolizes love between man and God and in World Architecture 1900-2000: A Critical Mosaic, Vol. 8, South Asia, the Lotus Temple is refered to as 'A powerful icon of great beauty that goes beyond its pure function of serving as a congregation space to become an important architectural symbol of the city' (Ibid).

3. The Lotus Temple is an outstanding example of a type of building (religious) and architecture. According to Fariburz Sabha (architect of the Lotus Temple), he wanted to design a temple which would reflect the rich cultural heritage of India and at the same time, be compatible with the cardinal principle of the Baha'i faith, that is the unity of religions. So he had to travel extensively in India to study its architecture before settling down to design. Fariburz observed that in India, the lotus flower has always been the fairest flower and has enjoyed an unparalleled popularity through the length and breadth of the country from the earliest times down to the present day. And besides being the national flower of India, it has been inseparably associated with religion, be it Hinduism, Buddhism, Zoroastrianism or Islam (http://bahai.in/Bahai-House-of-Worship/Stories-Articles/an-architectural-marvel.html;

http://www.bahaihouseofworship.in/jewel-in-the-lotus; http://bahai.in/Bahai-House-of-Worship/meet-the-architect/extracts-from-interviews-with-the-architect.html).

4. The Lotus Temple exhibits a unique development in architecture and monumental arts. The simplicity in decoration (devoid of any idols, statues, paintings/pictures or any religious elements) yet unique in aesthetics and grandeur, elicited bewilderment as well as favourable responses. According to Fariburz, he would feel successful if he could design something that communicates to people and creates such a relationship like that is between the artist, his work and the people which is the most satisfying factor in the art of architecture. Some visitors commented thus: 'The most beautiful experience. Its magnificence, charm and glamour are awe-inspiring. It reflects the dream of all humanity to bring together a new civilization for all people' 'Architecturally, artistically, ethnically, the edifice is a paragon of perfection' (http://bahai.in/Bahai-House-of-Worship/Stories-Articles/the-lotus-of-bahapur-a-magnet-for-the-heart.html; http://bahai.in/Bahai-House-of-Worship/meet-the-architect/extracts-from-interviews-with-the-architect.html).

3.32 Local Experience

In discussing the local experience, it is only the officially listed architectural monuments found in the study area (South East zone of Nigeria) that are considered. According to an official document from the National Commission for Museums and Monuments (NCMM), there are four (4) listed architectural monuments in Abia State, one (1) in Enugu State and one (1) in Anambra State (NCMM, REF: TF 128/T/Vol.II/373/August 19, 2010).

The following are the listed monuments in the South East zone:

Abia State: Chief Okoroji's House in Arochukwu, declared monument on March 19, 1953; Obu House in Elu Ohafia, declared monument on March 19, 1963; Chief Ochu Kalu's House at Ndi Okereke Abam near Bende, declared monument on March 19, 1963 and Omo Ukwu of

Ndi Ezera clan in Asaga Ohafia, declared monument on March 19, 1963. Chief Michael Iheonukara Okpara's House and Ojukwu Bunker in Umuahia.

Anambra State: Chief Atuchukwu's House (Peace and Reconcilation Building), Amichi. According to NCMM records, the Peace and Reconciliation Building was built from 1964-1965 and was finally opened in 1966. It is a two (2) storey building with halls measuring 10.60 by 5.10 meters on each floor and served as the Republic of Biafra's State House at a time during the Nigerian civil war (1967-1970). The peace accord meeting which technically, brought the thirty (30) months Nigerian civil war to an end took place in the first floor hall. It was in that hall that the then Col. Olusegun Obasanjo received the instrument of surrender from the former Biafran Acting Head of State, Col. Philip Effiong. In commemoration of that historic event, the building was declared a monument by President Olusegun Obasango (former President of Nigeria), on January 15, 2006. Also, the House of Representatives in 2007, on a motion moved by Rep. C.I.D. Maduabum (PDP Anambra), passed a motion designating the Chief B.O. Atuchukwu's house at Amichi in Nnewi South Local Government of Anambra State, a national monument (NCMM, Igboukwu, 2011; Okoli, 2007, p. 14).

Enugu State: Chief Nwodo's House at Ukehe, declared historic monument on February 15, 1964.

Note: There are a lot more structures identified and scheduled to be considered as monuments in the South East zone that are yet to be declared. An example is the 'Obi Igbo' or 'Obi Dege' of Igboukwu in Anambra State. A personal interview with the NCMM curator resident in Igboukwu revealed that the 'Obi Igbo' is the only surviving mud structure in Igboukwu to the present day and if nothing is done fast to secure and protect it, it will be destroyed by the family in the bid to expand their compound. According to historical tales, the man 'Igbo' was the ancestral head of the Igbo race and the 'Obi Igbo' is his 'Obi' built by him. The present state of the structure as shown in the photos was rebuilt in 1951. Originally, the structure was roofed with thatch but due to deterioration, the thatched was replaced with zinc roofing sheets

(Figure 3.79). Also, there are historic structures at Ahiara Imo State, which defined the Biafran struggle. The

structures are the St. Brigids Catholic Church Nnarambia Ahiara and the Ahiara Technical College (Figure 3.80). These structures are regarded as the 'sanctuary' and 'fountain' of the Biafran 'Revolution'. The St. Brigids Catholic Church was the venue of the Ahiara declaration, where the Biafran Leader (Late General Emeka Ojukwu), delivered the inspirational speech that formed the heart and soul of the Biafran struggle. The Technical College was the 'factory' where the Biafran Scientist manufactured war weapons like *Sure Battery*, *Ogbunigwe* (Ojukwu Bucket) and *Enemy Beer* (Obineche, 2011, p. 11). These historic structures are yet to be recognized and declared. Therefore, this study will only focus on the declared monuments in the South East zone. Two of the declared monuments in the zone will be discussed with respect to local experience. They are Ojukwu Bunker in Umuahia, Abia State and Chief Nwodo's House at Ukehe, Enugu State.

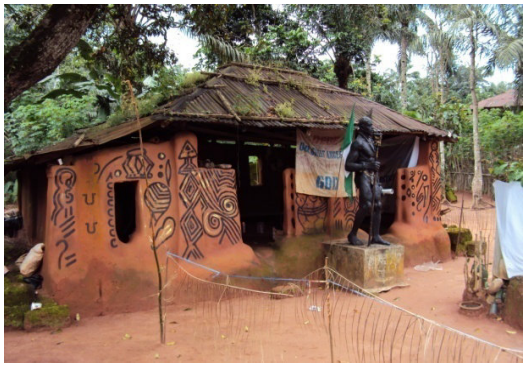
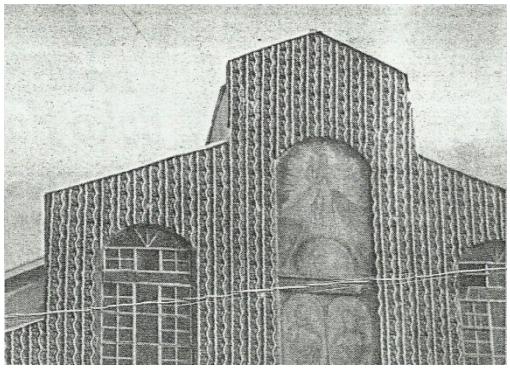


Figure 3.79: Various views of 'Obi Igbo' or 'Obi Dege' in Igboukwu, Anambra State. In front of the 'Obi' is the statue of Igbo, the ancestral head of the Igbo race. The Chief is the Great Grand Child
Source: Author's Field Photos, 2011



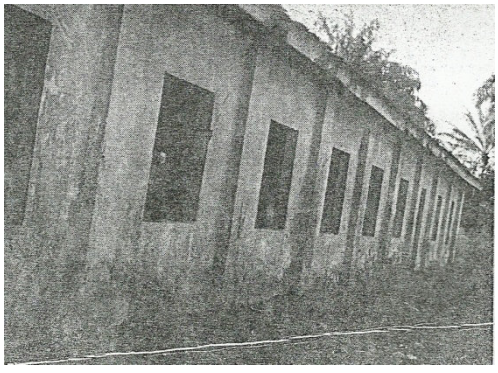
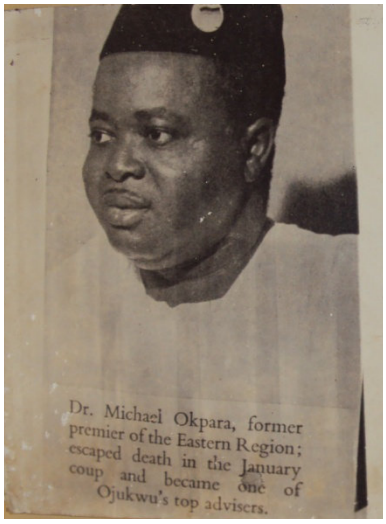


Figure 3.80: (l-r) St. Brigid's Catholic Church Nnambia, Ahiara and the Ahiara Technical College, Ahiara
Source: Obineche, C. 2011.

3.33 Ojukwu Bunker

Ojukwu Bunker (Subterranean Office of the Government of the Biafran Republic) is located in a serene section of Umuahia North Local Government, within the government layout on No.18 Okpara Avenue Umuahia, Abia State. This underground facility (architectural monument), was constructed during the Nigeria civil war which occurred from 1967-1970. According to Adeboboye (2010), Umuahia became the seat of the government of the Biafran Republic on September 28, 1967, after Enugu (the initial capital) was captured by the federal forces (Adeboboye, 2010, p. 27).

Ojukwu Bunker is within the private compound of the former Premier of Eastern Region, Dr. Michael Iheonukara Okpara (Figure 3.81). According to oral interview with Ibenye (2011), senior suprientendent at National War Museum Umuahia; when Enugu the then capital of Biafran Republic was captured by the federal forces, Dr. Michael Okpara availed his private house and its compound to the Biafran government to serve as the Government House. This private house and compound then became the seat of the Biafran government until January 13, 1970 when Biafra surrendered to the federal troops thereby marking the end of the Nigerian civil war.



Dr. Michael Okpara, former premier of the Eastern Region; escaped death in the January coup and became one of Ojukwu's top advisers.

Figure 3.81: Dr. M.I. Okpara's Portrait
Source: Author's Field Photo, 2011

The design of Dr. Michael Okpara's house, is reflective of the architectural designs of the 1950's – 60's. It is a simple straight line architecture but very functional. The building is approached from a fairly long drive-way that leads to the entrance porch of the house (Figure 3.82). The house is made up of three rectangular blocks; one on the left and two on the right but joined together. Each of the blocks is a storey (ground and upper floors) building connected through a passage and courtyard which is screened off from the public view with screen walls. From the courtyard, is a covered walkway that leads to the entrance of the bunker (Figure 3.83). According to oral testimony, on this part of the compound where the bunker is situated, was a thick forest which provided the needed camouflage (cover) for the seat of the Biafran government and made it very difficult to be spotted from the sky even with the constant air raids by the federal air force. It was declared a monument in 1985.

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Figure 3.82: (l-r) Drive-way leading to the Biafran Government House; Entrance Porch of the building
Source: Author's Field Photos, 2011

Figure 3.83: Top (l-r), Rear view of the Biafran Government House, covered walkway from the Courtyard leading to the entrance of the Bunker; Bottom, Entrance of the Bunker
Source: Author's Field Photos, 2011

Design of Ojukwu Bunker

Ojukwu Bunker was designed and built by indigenous professionals from the present day South East zone of Nigeria who were then in their early, mid and late thirty's of age. The architectural design was prepared by Arc. Frank Mbanefo Associates, a native of Onitsha in April 3, 1968 and the structural design was done by Agbim and Partner. Dr. Chuba Agbim is a native of Nimo. The Principal Engineer (building) was Engr. Joel Okechukwu Onyemelukwe, a native of Nnewi and the Building Superintendent was Mr. Lawrence O. Okany (diseased), a native of Ogidi. It is worthy of note that all the professionals mentioned above are from the present day Anambra State in the South East zone of Nigeria.

The design is a two-room chamber with a parlour/meeting room, bathroom, kitchen and store, service duct/passage (about 750mm wide) and two escape routes leading up to the surface at both ends of the chamber. There is a long passage of about 1.2 meters wide by 2.0 meters high with intermittent steps leading down to the underground chamber. In the meeting room there is a built-in steel safe where important government documents were kept (according to oral testimony) and on the walls are photo frames of the political advisers (Dr. Pius Okigbo, Prof. Kenneth Dike, Dr. Akanu Ibiam, Dr. M.I. Okpara, Mr. Cyprian Ekwensi and Dr. Mojekwu) to the Biafran government. The underground chamber is naturally ventilated.

Design Concept

The design concept, from observation could be said to be derived from the design of the habitation of a local bush rat called *'Ulili'*. This animal builds its abode underground by boring holes and creating various chambers for food storage, sleeping, nursery, entry and escape routes. The bunker according to records is 26.9 ft. (about 9m) deep into the ground.

Construction Materials and Labour

The materials used in the construction of the bunker is 100% local materials (cement, sand and aggregates, timber, nails, water pipes, tiles and iron reinforcement to mention a few). Nothing was imported or sourced from outside the Biafran State. Also the labour (carpenters, masons, electricians, iron mongers, to mention a few) used in realizing the bunker was completely sourced locally.

Construction Time and Cost

According to the records, the Ojukwu bunker was completed in ninety (90) days (between April and June 1968 by a team lead by Engr. Joel Onyemelukwe) in the heat of the civil war. In other words, the bunker became fully functional as the subterranean Office of the Biafran Government in ninety (90) days. The context of production, which is the level of ingenuity in design, construction speed and skill, technology available at the time, was something unique and remarkable bearing in mind that this project was realized during a period of instability in

the history of the South East zone. The cost of construction is not known for the simple reason that the focus was to get ready as soon as possible, a safe place for the Biafran government to operate from.

3.34 Possible Criteria for Listing as Monument

History behind the Structure (Historical Value/Significance)

As observed, this unique structure built during the Nigeria civil war that lasted for thirty (30) months was the seat of the Biafran government. It provided a safe 'heaven' as it were, for the Biafran government to operate from and was never discovered or destroyed by the federal troops throughout the civil war. To this effect, it is very significant to the history of Nigeria and the South East zone in particular because of the services for which it was put to.

Rarity of the Structure and Geographical distribution.

But for the civil war, there was no known structure (Bunker) like it in Nigeria or the South East zone. It was a structure of necessity bearing in mind the socio-political climate (civil war) at the time. Such a structure is also not commonly found or distributed in any of the known regions of Nigeria.

3.35 Chief Nwodo's House

This is a one storey building and the 'Obu' of the '*Agu ne chibe'* family of Ukehe in Enugu State. It was built with mud, timber and covered with thatch but presently, the roof is covered with zinc roofing sheets. The ground floor walls are made of mud and the upper floor walls are clad with corrugated steel sheets (imported from the UK) and punctuated with timber jalousie windows (Figure 3.84). The compound consists of an entrance gate, shrine and the Chief Nwodo's abode called 'Obu Oshue'. The 'Obu Oshue' also is built with mud and covered with thatch. Its roof is supported by tree trunks at intervals. There is the outer space (reception) with raised mud platforms which serve as seats and two inner chambers which are accessed through two small doors at each end. The inner chambers are the store and sleeping quarter for the Chief (Figure 3.85). The shrine which is situated in front of both the 'Obu

Oshue' and the storey building, is a small structure roofed with corrugated zinc sheets. It is worthy of note that all the structures in the compound were originally roofed with thatch but due to neglect and consequent dilapidation, the structures were re-roofed with corrugated zinc sheets. According to the National Commission for Museums and Monuments (NCMM), the architectural and historic value of the house is very significant in that the whole compound is beautifully planned and the chief glory is the 'Obu Oshue', a nearly perfect example of that particular type of building. This building was declared a historic monument on February 15, 1964.

Figure 3.84: Chief Nwodo's Storey Building within the compound overgrown with weeds. The upper level is covered with corrugated steel sheets (red) and timber jalousie windows (green)
Source: Author's Field Photos, 2009.

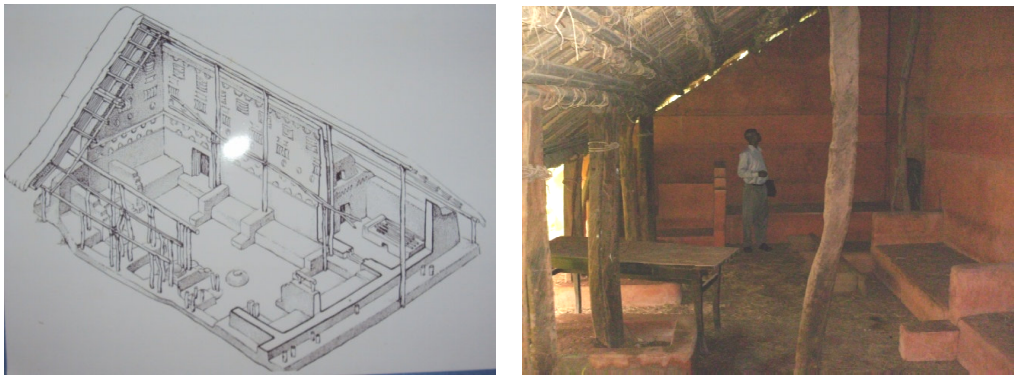

Figure 3.85: (l-r) Artist Drawing (isometric view) revealing the interior details of Chief Nwodo's 'Obu Oshue'; the real life interior, showing the stting platforms, supporting tree trunks and part of timber ceiling inside the 'Obu'.
Source: NCMM, 2010; Authors Field Photos, 2009

3.36 Possible Criteria for Listing as Monument

Construction Material and Labour

The construction materials (mud, tree trunks and thatch) and labour used in building the 'Obu Oshue'were totally indigenous and reflective of the type of technology available at the time.

Architectural and Historical Value

According to records (NCMM, 2010), the compound is beautifully planned and the 'Obi' or 'Obu Oshue' is a rare and pecfect example of this particular type of building.

Design of Building

The design of the 'Obi' is simple yet unique and functional in serving as a communal meeting place and a private abode of Chief Nwodo.

Decoration/Finishes

The walls of the structure are impressively decorated with traditional black wall patterns and scores of beautiful rare enamel plates mainly of Portuguese origin.

External Influence

The high social status of Chief Nwodo probably inspired the building of the storey structure within the compound with mud and imported corrugated steel sheets used as cladding on the upper floor. This was indicative of affluence at the time.

CHAPTER FOUR

4.0 RESEARCH METHODOLOGY AND PROCEDURES

4.1 Introduction

Architectural monuments have been observed as not just casual buildings but important structures that are conceived from the beginning as monuments, designed and constructed to commemorate great or significant historic events in the life of a person and or development of a people, nation or civilization. Also, it could be a very old building (historic building) or structure preserved for the purposes of its age, unique architectural style, building material,

construction methods (technology) and aesthetic characteristics. Such a building or structure should portray the culture, values and emotions of the people that initiated it.

Therefore, it means that for any structure to be referred to or identified as architectural monument, there must be some distinct, peculiar or unique architectural features, characteristics or elements that find expression in that structure. Furthermore, every architectural monument should to have some story to tell or history recorded as representation or testimony to the existence of some culture (civilization), technology or skill, and material. According to Edem (2009), "Not all buildings are prestigious affairs aiming to impress with size, volume, style and decorative detail. However, all buildings reflect the spirit of their time, or at least that of the people who commissioned them and the architect who designed them. More than any other human creation, a building represents the social context of a people" (Edem, 2009, p. 229).

Based on the above, this study is of the opinion that the listing criteria for architectural monuments in Nigeria would be varied and reflective of the diverse cultures and geographic location of the monument. Nigeria, for administrative purposes, is grouped into six geopolitical zones namely; North-East (NE), North-Central (NC), North-West (NW), South-West (NW), South-East (SE) and South-South (SS). The South-East zone is this research study area. Architectural monuments identified in this area are studied with a view to evolving appropriate listing criteria for the zone as part of comprehensive listing criteria for architectural monuments in Nigeria.

According to Osuala (2005), "There is more than one gate to the kingdom of knowledge. Each gate offers a different perspective, but no one perspective exhausts the realm of 'reality' whatever that may be" (Osuala, 2005, p. 170). Since no one research method can provide all answers to all questions and give insights on all issues, this study has adopted the **Historical** and **Qualitative Research Approach.**

Historical research approach because, issues are considered in relation to their time of existence, interpretation given or understanding ascertained of the past trends of attitude, events and facts (what happened, how it happened and why it happened or was allowed to happen). Also qualitative research method approach was adopted because distinct/subtle or peculiar characteristics of design elements, details and composition of same, construction materials and historical events or significance that inspired the concept of the architectural monuments and discovery of deeper levels of meaning for both locally and internationally selected ones were considered. Furthermore, Factor Analysis (FA)/Principal Component Analysis (PCA), a statistical technique was adopted in analyzing all the field data.

4.2 TYPES AND SOURCES OF DATA

The data for this study are both from primary and secondary sources.

a. Primary Source: Survey questionnaires, personal interviews and visits to architectural monuments sites (direct observation) within the South East zone of Nigeria.
b. Secondary Source: Internet search or information, literature/books, gazettes, reports and literatures (journals) on architectural monuments.

The process of gathering data for this study is by the following:

a. Internationally; selected architectural monuments were studied in order to identify the unique or peculiar elements and characteristics that made them qualify to be listed as architectural monuments, available listing criteria were identified and historical literature, reports/theories and scholarly writings on architectural monuments were studied.
b. Locally; surveys and visits to identified locations of existing architectural monuments in South-East zone were undertaken and critical studies conducted on them, interviews (in-depth) and casual conservations on subject matter were conducted, existing official

reports, gazettes and literatures studied, listing criteria identified and questionnaires distributed in respect of the study.

c. Thereafter, the data gathered or derived were analyzed in order to confirm existing listing criteria and or evolve new (appropriate) listing criteria for architectural monuments in the South East zone of Nigeria.

4.3 SAMPLE POPULATION, SAMPLE SIZE AND SAMPLING TECHNIQUE

According to the National Population Commission (NPC), Nigeria has a population of about 158.3 million persons (2010 estimate). The vital statistics based on age structure as captured by CIA World Factbook is shown below:

0 – 14 years	40.9%	(64,744,700)	male and female
15 – 64 years	55.9%	(88,648,000)	male and female
65 years and above	3.1%	(4,907,300)	male and female

(http://www.tradingeconomics.com/nigeria/population;

http://en.wikipedia.org/wiki/Demographics_of_Nigeria).

The South-East zone has an estimated population of about sixteen million, three hundred and ninety five thousand, seven hundred and four (16,395,704) persons. The detail and distribution of the above figure with respect to the five (5) states within the South-East zone is shown below.

Abia State	2,833,999
Anambra State	4,182,022
Ebonyi State	2,176,947
Enugu State	3,267,837
Imo State	3,934,899
Total	16,395,704

(http://www.nigeriagalleria.com/Nigeria/States_Nigeria/Abia_State.html;

http://www.anambrsstate.gov.ng; http://www.population.gov.ng/index.php..;

http://en.wikipedia.org/wiki/Imo_State).

Therefore, a sample being a part or a segment of a whole under examination, the figure (16,395,704) represents the sample of Nigeria's population (158.3 million, 2010 update; http://www.tradingeconomics.com/nigeria/population) under study.

Also the identified population (2010 update), which represents the sample frame (South-East zone) comprised all ages from 0 – 65 years and above is shown below:

0 – 14 years	41.5%	(6,804,217)	male and female
15 – 64 years	55.5%	(9,099,615)	male and female
65 years and above	3.1%	(508,267)	male and female

From the population breakdown above, it was observed that ages 0 – 14 years, 15, 16 and 17 years should be excluded from the sample population because they are under the statutory acceptable legal age (18 years) of maturity. Based on the above premise, ages 15, 16 and 17 years which accounts for about 11 million (6.9%) of Nigeria's population (United Nations Dept, of Economics and Social Affairs/Population Division, World Population Prospects: Comprehensive Tables) and ages 0 – 14 years accounting for 64.74 million (40.9%) of Nigeria's population were excluded leaving a population of 82.56 million (52.2%) for ages 18 – 65 years and above. From the population figure (82.56 million) above, South-East zone represents 10% (8.26 million) of the Nigeria's population for ages 18 – 65 and above. Therefore, the sample population adopted for this study is approximately 8.26 million (18 – 65 years and above). This was rounded off to 8 million. The breakdown is as shown below:

Nigeria Population	158.3 million	100%
South-East zone	16.4 million	10%
Ages 0 – 14 years	64.7 million	40.9%
Ages 15 – 17 years	10.9 million	6.9%

Ages, 0 – 17 years accounts for 75.6 million (47.8%) of Nigeria's population. This figure when deducted from 158.3 million, accounts for 82.7 million. Therefore, 10% of 82.7 million (8.27 million, approx. 8 million) represents the population of South-East zone which also, is the **sample population**.

Based on the above sample population (8 million approx.) for the South-East zone, the sample size was determined by applying the Sample Size Calculator formular: (http://www.surveysystem.com/correlation.htm).

$$SS = \frac{Z^{2*}(p)*(1-p)}{C^2}$$

Where Z = Z value (e.g. 1.96% for confidence level)

P = percentage picking a choice, expressed as decimal (.5 used for sample size needed)

C = confidence interval, expressed as decimal (e.g. .04 = + or – 4).

Confidence interval: This is regarded as the margin of error expected or allowed in any study and normally is the plus-or-minus figure reported. For example, if a confidence interval of 4 is applied and 47% of one's sample picks an answer, one can be 'sure' that if the entire relevant population had been asked the question, between 43% (47- 4) and 51% (47+ 4) would have picked that answer.

Confidence level: This is regarded as the level of accuracy and normally expressed as a percentage (%) of the population whose response/answer lies within the confidence interval. For example, 95% confidence level means that one can be 95% certain and 99% confidence level means that one can be 99% certain. But most studies apply the 95% confidence level. Therefore, when the confidence level and the confidence interval is put together, one can then say, that he/she is 95% sure that the true percentage of the population is between 43% and 51%. The wider the confidence interval one is willing to accept, the more certain he/she can be that the whole population responses/answers would be within that range.

Therefore, applying a confidence level of 95% and percentage error of 50% for the sample population of 8 million, the resultant confidence interval equals 6.2. Then inputing 6.2 confidence interval, population of 8 million and confidence level of 95%, the resultant **sample size** equals 250. This figure was adopted as the sample size for the study. Probability **sampling technique** was adopted for the study where all the identified selected sample

elements (respondents) of the population in the South-East zone have equal opportunity as the representative sample, bearing in mind that the object of study (architectural monument) is an uncommon/specialized area. Also the sampling instrument (questionnaire) was distributed equally (50 per state) amongst the states.

4.4 SURVEY AND DATA COLLECTION METHOD

4.4.1 Sampling Instrument (Questionnaire)

The questionnaire was designed to test the existing listing criteria for architectural monuments both within and outside Nigeria in order to establish whether they recognized the perculiarities of the various zones in Nigeria, and are appropriate and comprehensive. The sample elements (respondents) used in the survey for data collection were selected based on the assumption that the object of study (architectural monument) is not a popular subject of interest in Nigeria and within the study area such that, very few people are knowledgable in that area. Also affilliate professions, that is, those that are indirectly influencial, such as transportation and tourism/hospitality, environmental practitioners (engineers, landscapist, urban designers/planners, estate valuers to mention a few), professional consultants; such as lawyers, musicians, accountants to mention a few, that have personal interest in architectural monuments and civil servants who work in museums/cultural centres, were included as sample elements in order to have some spread. Below are the sample elements (respondends) as listed in the sampling instrument (questionnaire) used in the collection of data for the study:

Art Collector, Architect, Curator, Teacher/Lecturer, Monument Consultant, Historian, Archaeologist, Archivist, Town Planner, Professional/Consultant, Environmental Practitioner, Tourism/Hospitality, Transportation, Civil Servant and Artist. Also, some persons with special interest in architectural monuments were interviewed and their observations recorded.

4.5 DESCRIPTION OF SAMPLING INSTRUMENT

The sampling instrument (questionnaire) is designed to focus on the study quest which is architectural monuments in the South-East zone of Nigeria and their listing criteria. It is made

up of selected sample elements (respondents) based on the assumption earlier stated above, respondents' nationality and state of residence since the study is zone specific, only states in the study area (South-East zone of Nigeria) were listed. The listing criteria (four in numbers) for classification of architectural monuments in Nigeria as declared by the National Commission for Museums and Monuments (NCMM), the UNESCO World Heritage Site listing criteria (six in numbers) for the classification of cultural heritages under which architectural monuments fall within and seven suggested possible listing criteria for architectural monuments generated from the field survey (through interviews and observations) were listed. This brought the number of listing criteria for architectural monuments subjected to test to a total number of seventeen (17). These are the listing criteria shown in the sample survey questionnaire below.

4.6 SAMPLE QUESTIONNAIRE

UNIVERSITY OF NIGERIA, ENUGU CAMPUS

SCHOOL OF POSTGRADUATE STUDIES

DEPARTMENT OF ARCHITECTURE

STUDY QUESTIONNAIRE

This questionnaire is purely designed for academic research on Architectural Monuments. The research is *'**A study of Architectural Monuments in South-East zone of Nigeria: Evolving Appropriate listing Criteria'.*** The author will appreciate direct, specific and clear answers. Please be as honest as possible. Thank you.

Please tick/mark inside the box as appr☐iate.

1. What is your Occupation/Profession?

Art Collector ☐ Architect ☐ Curator ☐ Teacher/Lecturer ☐
Monument Consultant ☐ Historian ☐ Archaeologist ☐ Archivist ☐
Town Planner ☐ Professional/Consultant ☐ Environmental Practitioner ☐
Tourism/Hospitality ☐ Transportation ☐ Civil Servant ☐ Artist ☐

2. Nationality ☐

3. State of Residence? Abia ☐ Anambra ☐ Ebonyi ☐ Enugu ☐ Imo ☐

4. What is architectural monument?

   a. A building or structure designed and built to commemorate an important or great historic event. ☐
   b. A structure designed and built in memorial of a famous person ☐
   c. A building or structure (historic) preserved for its unique architectural features (elements) and style ☐
   d. A building or structure with rare aesthetic characteristic, construction method and building material ☐
   e. A shrine, tomb or mausoleum of a great/important personality ☐
   f. All of the above. ☐

5. State the type of architectural monument you know and its location?

   a. Shrine at b. Religious building at c. Tomb at
   d. Residential building at e. Public Building at
   f. Historic Building at g. Commemorative Structure at

6. The criteria for listing architectural monuments in Nigeria and abroad are listed below. Tick as many criteria as possible from the list which you think, should be considered for listing architectural monuments and structures in the South East zone of Nigeria.

1. Rarity of particular type of architecture monument/structure ☐

2. Threat of damage and or extinction ☐

3. Level of significance/historical value to the society ☐
4. Geographical distribution ☐
5. Age of the architectural monument/structure ☐
6. Context of production, which is the level of ingenuity in design and construction of the architectural monument/structure ☐

7. Source of construction material and type that is, whether the construction material is indigenous to the location of the architectural monument and whether the material is rare and or expensive. ☐

8. Construction technology available and applied, duration of construction and socio-political situation at the time of construction of the architectural monument/structure. ☐

9. Be an outstanding example of a type of building, architectural or technological ensemble or landscape which illustrates (a) significant stage(s) in human history. ☐
10. Represent a masterpiece of human creative genius of outstanding universal value. ☐

11. Exhibit an important interchange of human values, over a span of time or within a cultural area of the world, on development in architecture or technology, monumental arts, town-planning or landscape design. ☐
12. Bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living or which has disappeared. ☐

13. Be an outstanding example of a traditional human settlement, land-use, or sea-use which is representative of a culture (or cultures), or human interaction with the environment especially when it has become vulnerable under the impact of irreversible change. ☐

14. Be directly or tangibly associated with events or living traditions, with ideas, or with beliefs, with artistic and literary works of outstanding universal significance. ☐
15. Represent unique cultural technology/skill and architectural peculiarities/values in terms of design, form and embellishment, of a people, society or community. ☐
16. Be of an outstanding/rare aesthetic characteristic and or quality/value architecturally ☐

17. Be reflective of cultural concepts, values and purpose, and expressive of the emotions and political situation of a people, society or community that lay claims or initiated the architectural monument/structure at the time. ☐
18. All of the above ☐

4.7 STATISTICAL TECHNIQUE FOR DATA ANALYSIS

Data analysis is the breaking down or processing of information and or data gathered for a study into recognizable and understandable forms and giving interpretation to the findings. To accomplish that, the data for this study was analyzed using a statistical technique known as **Factor Analysis (FA)** or **Principal Component Analysis (PCA)**.

Factor Analysis (FA) or Pricipal Component Analysis is a statistical technique with a common objective to represent a set of variables in terms of a smaller number of hypothetical variables. That is, it assumes the existence of a system of underlying factors and a system of observed variables, which is linearly dependent on the underlying factors. Further, it assumes that there is a certain correspondence between these two systems and exploits this correspondence to arrive at conclusions about the level of influence of the respective underlying variables to the observed variables. This model has the advantage of determining interaction outcome through the use of pattern matrix and structural matrix, to arrive at the characteristics or variables that are most important in classifying, qualifying or capturing dimensions of change (Onodugo, et al, 2010, p.141). In other words, data collected for this study, shall be grouped based on similarities, coding range and described statistically as nominal or ordinal (proportions, percentages and ratios) data.

CHAPTER FIVE

5.0 DATA PRESENTATION, ANALYSIS AND FINDINGS

5.1 Data Compilation and Classification

The data generated from the field survey (by the use of questionnaires) was compiled and classified on state basis. That is, the responses were compiled and grouped according to the

identified respondents in each state of the South-East zone. The results are as shown in Tables 5.1 – 5.5.

Abia State

The survey showed significant and positive responses to some criteria for listing architectural monuments and structures (Table 5.1). This was clearly expressed by five (5) respondents such as the Civil Servant (26.90%), Curator (23.00%) and Teacher/Lecturer (15.30%), Architect (11.50%) and Professional/Consultant (7.60%). (See Appendix 7 for listing criteria responses in percentages % used in the generation of the Pie, Stacked line and Stacked column charts).

Table 5.1: Abia State Field Survey Data

	LISTING CRITERIA

Respondent and Nos.		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Art Collector																			
Architect	3	2	2	2		2	2	2	2	1	1	1	1	3	1	1	2	2	
Curator	6	5	4	6	2	4	6	4	4	6	6	4	5	6	4	6	6	5	3
Teacher/Lecturer	4	3	2	3		2	3	2	2	2		2	2	4	2	1	3	3	
Monument Consultant	1	1	1	1	1	1		1			1	1			1				
Historian	1	1	1	1	1	1	1	1	1			1		1	1	1	1	1	
Archaeologist																			
Archivist																			
Town Planner	1	1		1			1			1		1	1	1	1		1	1	
Prof'/Consultant	2		2	2	1	1	2			2	2	1	2	2	2	1	1	1	
Environmental Practitioner																			
Tourism/Hospitality																			
Transportation																			
Civil Servant	7	4	5	7	1	5	3	4	2	6	6	3	6	5	5	6	4	4	1
Artist																			
Sociologist	1	1	1	1		1	1	1	1	1	1	1	1	1	1	1	1		
Total	26	R E S P O N D E N T S																	

Minimal responses were recorded by four (4) respondents; Sociologist (3.80%), Historian (3.80%), Monument Consultant (3.80%) and Town Planner (3.80%) (Figure 5.1). Then zero response by the remaining seven (7) respondents out of the selected respondents. Out of the fifty (50) questionnaires distributed, twenty-six (26) which accounted for 52% were filled out while twenty-four (24) which accounted for 48% were returned unfilled (Figure 5.2).

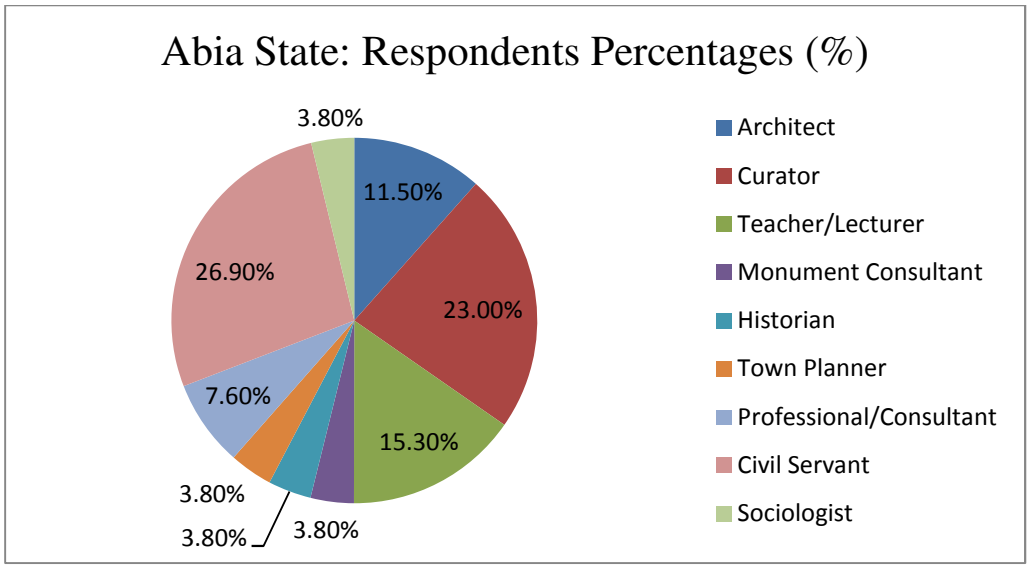

Figure 5.1: Pie Chart showing Respondents responses in percentages (%) from Abia State to the Criteriafor listing Architectural Monuments.

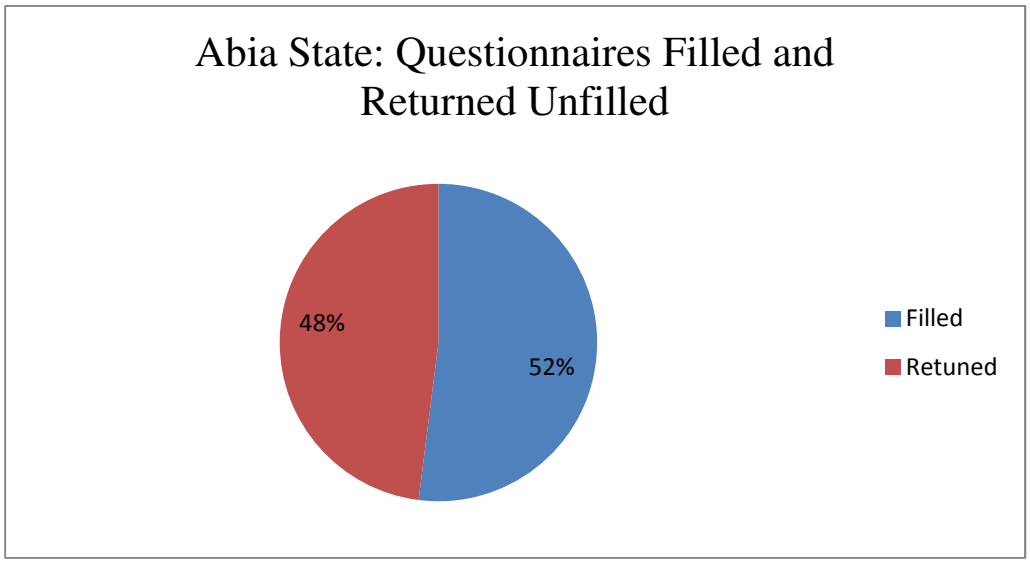

Figure 5.2: Pie Chart showing questionnaires filled out and returned unfilled in percentages (%) from Abia State.

The survey showed the number of responses to the listing criteria for architectural monuments from each respondent. That is, the number of criteria selected by each respondent from the seventeen (17) criteria listed.

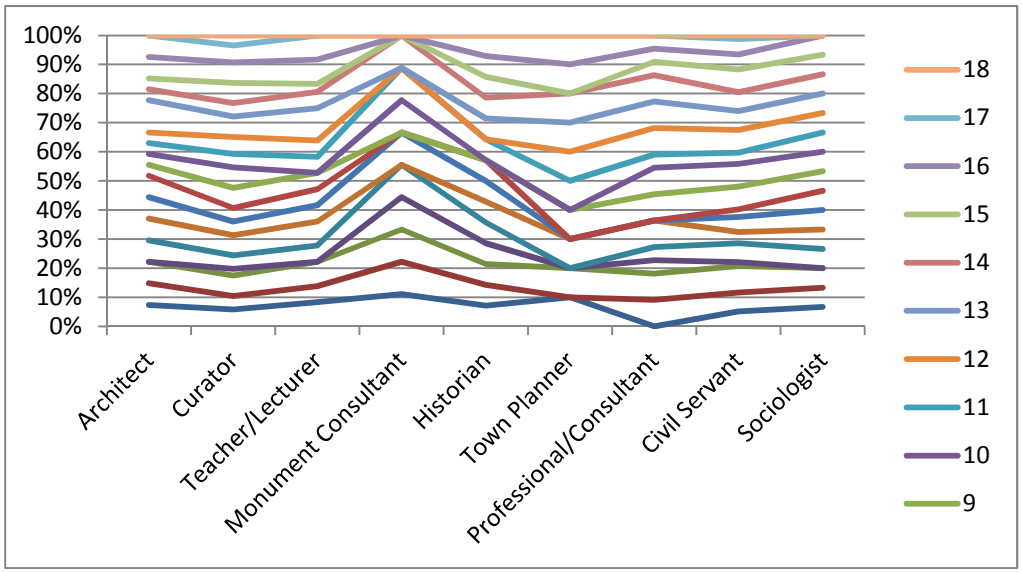

Figure 5.3: Stacked line Chart showing Respondents responses in percentages (%) from Abia State to the Criteria for listing Architectural Monuments

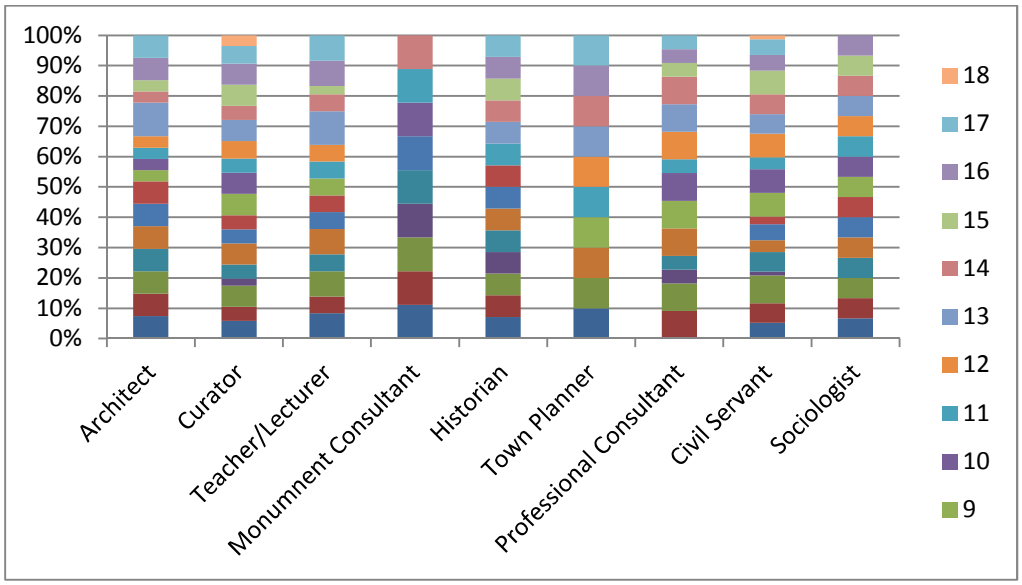

Figure 5.4: Stacked Column Chart showing number of responses in percentages (%) per Respondent from AbiaState to the Criteria for listing Architectural Monuments.

These were represented in the Stacked Line Chart (Figure 5.3) and Stacked Column Chart (Figure 5.4) for Abia State where responses are shown as horizontal lines in the Stacked Line Chart and as columns in the Stacked Column Chart. Each column represents a respondent and each horizontal bar on the column, represents the respondent's response to the criteria for listing architectural monument. The total numbers of bars (represented by different colours) on each column represents the number of responses by the respondent.

The survey though it recorded some appreciable responses from five (5) respondents (Civil Servant, Curator, Teacher/Lecturer, Architect and Professional Consultant), revealed a disturbing high level of unawareness and lack of knowledge on the subject matter (architectural monument and its listing criteria) from the rest of the selected respondents in Abia State. Therefore, the survey, suggests an urgent need to create public awareness and recongnition for architectural monuments/structures in the Abia State.

Anambra State

The survey (Table 5.2) showed significantly very high and positive responses from seven (7) respondents such as the Architect (36.30%), Civil Servant (15.15%), Teacher/Lecturer (9.09%), Archaeologist (9.09%), Town Planner (6.06%), Professional Consultant (6.06%), and Art Collector (6.00%). Minimal responses were recorded by the Environmental Practitioner (3.03%), Curator (3.03%), Artist (3.03%), Tourism/Hospitality (3.03%) and zero response by the remaining four (4) respondents of the selected respondents (Figure 5.5). Of the fifty (50) questionnaires distributed, thirty-three (33) which accounted for 66% were filled out while seventeen (17) which accounted for 34% were returned unfilled (Figure 5.6). (See Appendix 8 for listing criteria responses in percentages %, used in the generation of the Pie, Stacked line and Stacked column charts).

Table 5.2: Anambra State Field Survey Data

Respondent and Nos.		LISTING CRITERIA																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Art Collector	2	2		2			1	2	2	2	1	1	2	2	2	2		2	
Architect	12	12	8	12	5	12	11	11	11	10	12	12	10	10	12	12	10	9	4
Curator	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Teacher/Lecturer	3	3	2	2		2	2	2	2	2	2	2	2	2	2	2	2	2	1
Monument Consultant																			
Historian																			
Archaeologist	3	3	2	2	1	1	3	2	1	2	3	1	3	1	2	2	3	2	
Archivist																			
Town Planner	2	2	2	2	1	2	2	2	2	1	2	2	2	2	2	2	2	2	1
Prof'/Consultant	2	2	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Environmental Practitioner	1	1		1		1	1			1	1	1	1	1	1	1	1	1	1
Tourism/Hosp'liy	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Transportation																			
Civil Servant	5	4	4	5	3	5		4	4	4	5	4	4	4	4	4	5	4	3
Artist	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Total	33	R E S P O N D E N T S																	

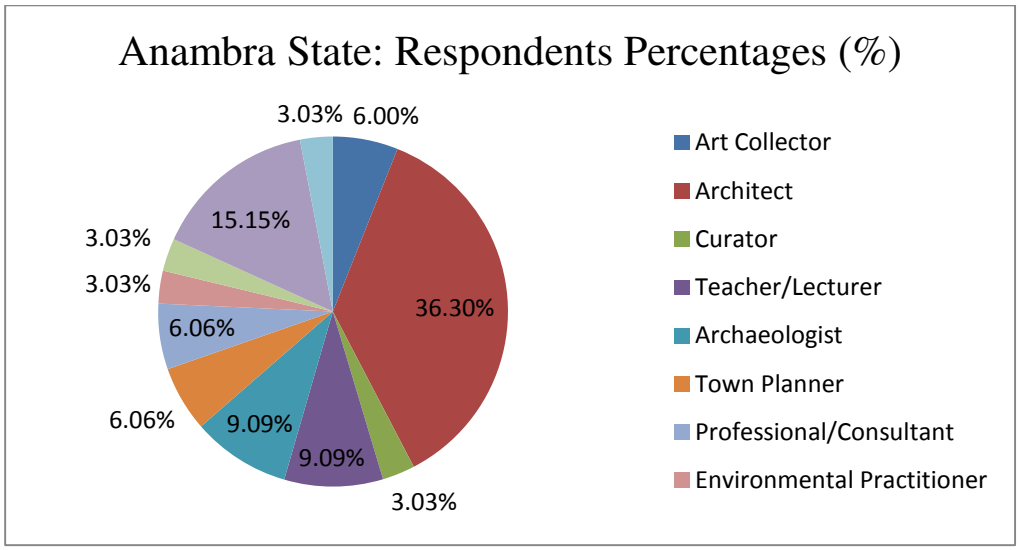

Figure 5.5: Pie Chart showing Respondents responses in percentages (%) from Anambra State to the Criteria for listing Architectural Monuments

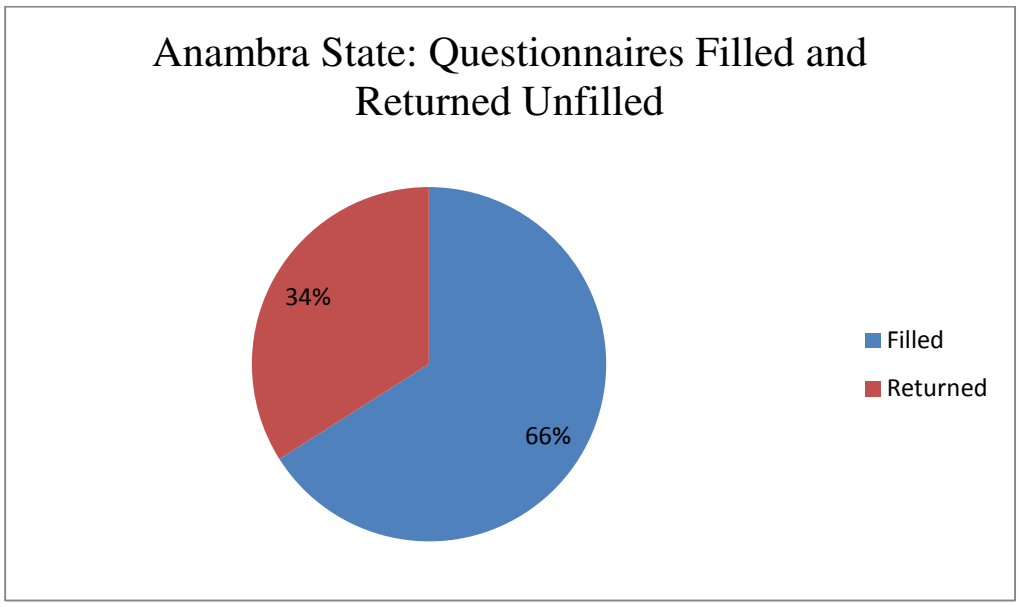

Figure 5.6: Pie Chart showing questionnaires filled out and returned unfilled in percentages (%) from Anambra State.

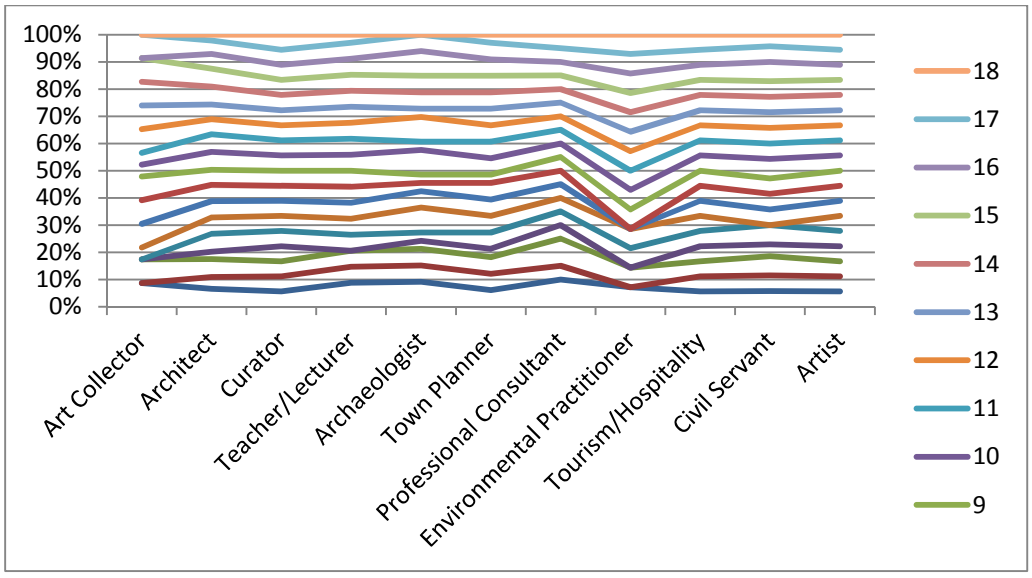

Figure 5.7: Stacked Line Chart showing Respondents responses in percentages (%) from Anambra State to the criteria for listing Architectural Monuments.

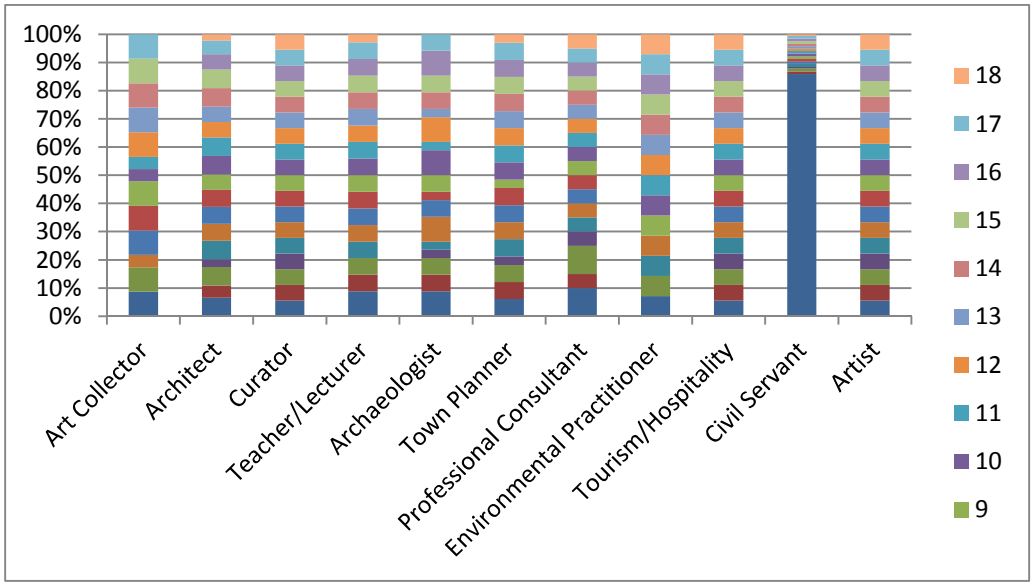

Figure 5.8: Stacked Column Chart showing number of responses in percentages (%) per Respondent from Anambra State to the criteria for listing Architectural Monuments

The survey recorded the number of responses (criteria for listing architectural monuments) selected by each respondent from the seventeen (17) criteria listed. These were presented in the Stacked Line Chart (Figure 5.7) and Stacked Column Chart (Figure 5.8) for Anambra State where responses by each respondent are shown as horizontal lines in the Stack Line Chart and as columns in the Stacked Column Chart. Each column represents a respondent and each horizontal bar on the column, represents the respondent's response. The total numbers of horizontal bars (represented by different colours), on each column represent the number of responses by the respondent.

The survey recorded appreciable level of responses from seven (7) respondents (as stated above), identifiable level of awareness and knowledge on the subject matter and spread from the selected respondents in Anambra State. Therefore, the survey, suggests the need to preserve and maintain existing architectural monuments/structures in Anambra State in order to position them to contribute to the state and national economy.

Ebonyi State

The survey (Table 5.3) showed significantly high and positive responses by three (3) respondents; Environmental Practitioners (54.76%), Civil Servant (23.81%) and Architect (9.52%). Minimal responses were recorded by the Town Planner (4.76%), Transportation (4.76%), and Art Collector (2.38%). Zero response was recorded by the remaining nine (9) respondents of the selected respondents (Figure 5.9). (See Appendix 9 for listing criteria responses in percentages %, used in the generation of the Pie, Stacked line and Stacked column charts).

Table 5.3: Ebonyi State Field Survey Data

Respondent and Nos.		LISTING CRITERIA																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Art Collector	1	1		1		1			1	1			1		1	1	1		
Architect	4	1	2	4	3		1	1	3	1	4	1	4	3	3	2	1	3	
Curator																			
Teacher/Lecturer																			
Monument Consultant																			
Historian																			
Archaeologist																			
Archivist																			
Town Planner	2	1	1	1			2	1				1	1	2	1	1	1		
Prof'/Consultant																			
Environmental Practitioner	23	16	6	10	7	6	14	12	11	14	11	15	13	16	12	15	7	14	3
Tourism/Hospitality																			
Transportation	2			1	2	1	1			2	1	2	1	1			1	1	
Civil Servant	10	3	2	6	5	2	3	3	1	3	2	4	5	7	5	5	2	3	
Artist																			
Total	42	R E S P O N D E N T S																	

Of the fifty (50) questionnaires distributed, forty-two (42) which accounted for 84% were filled out, while eight (8) which accounted for 16% were returned unfilled (Figure 5.10). The survey recorded the responses (criteria for listing architectural monuments) selected by each respondent from the seventeen (17) criteria listed. These were presented in the Stacked Line

Chart (Figure 5.11) and Stacked Column Chart (Figure 5.12) for Ebonyi State where responses by each respondent are shown as horizontal lines in the Stacked Line Chart and as columns in the Stacked Column Chart. Each column represents a respondent and each horizontal bar on the column

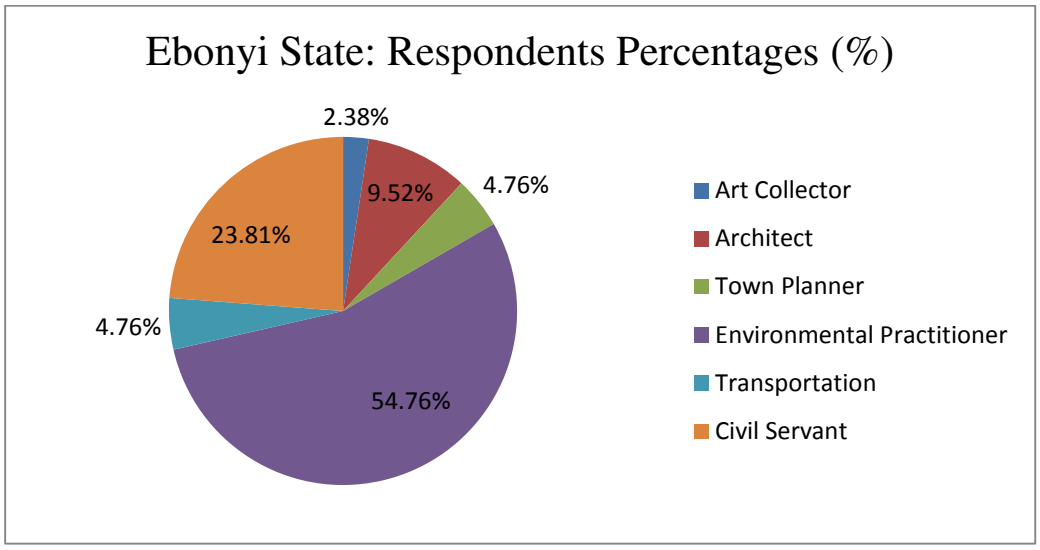

Figure 5.9: Pie Chart showing Respondents responses in percentages (%) from Ebonyi State to the Criteria for listing Architectural Monuments

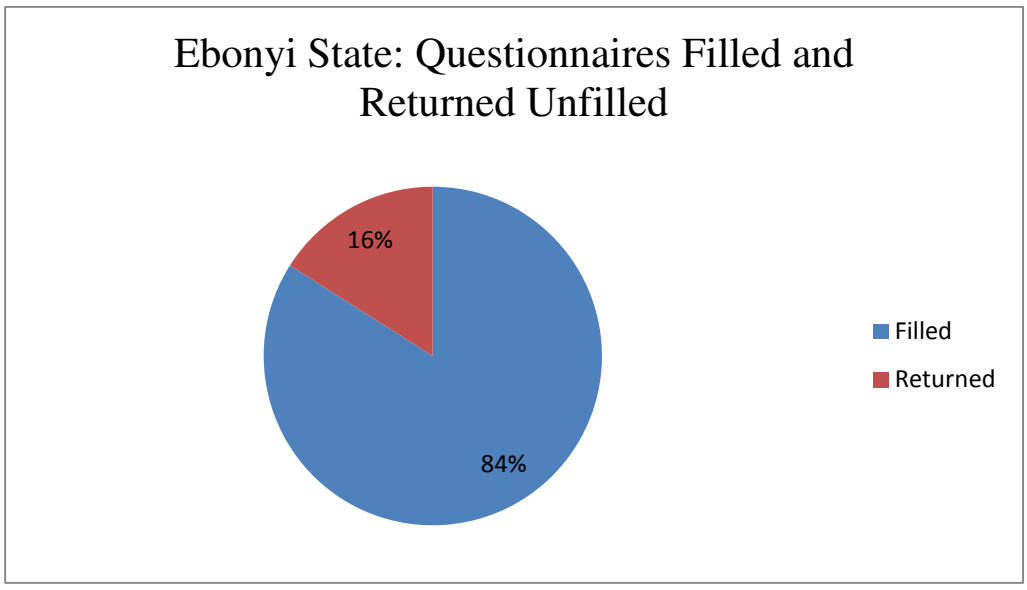

Figure 5.10: Pie Chart showing questionnaires filled and returned unfilled in percentages (%) from Ebonyi State.

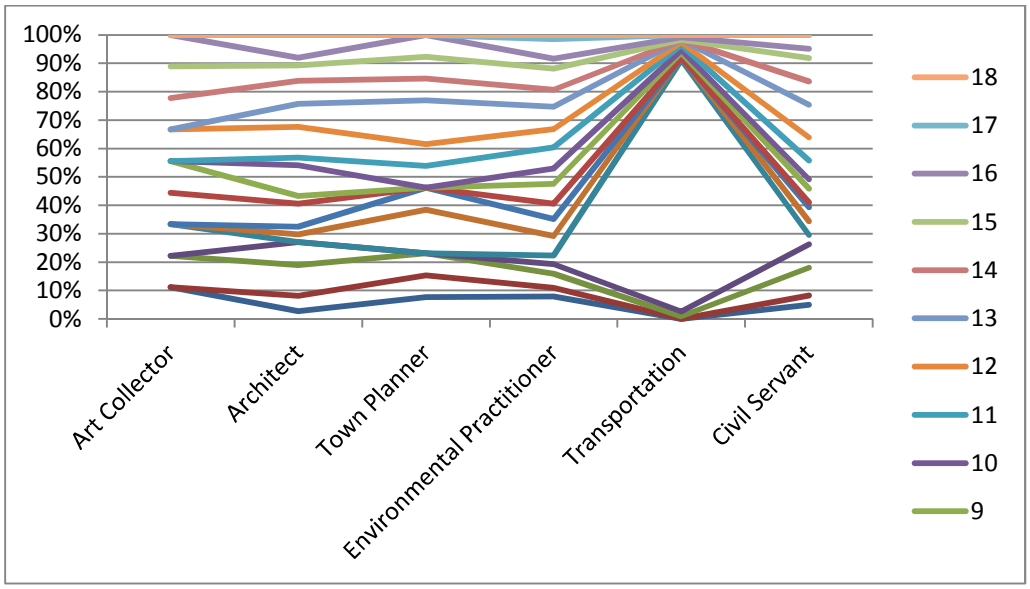

Figure 5.11: Stacked Line Chart showing Respondents responses in percentages (%) from Ebonyi State to the criteria for listing Architectural Monuments.

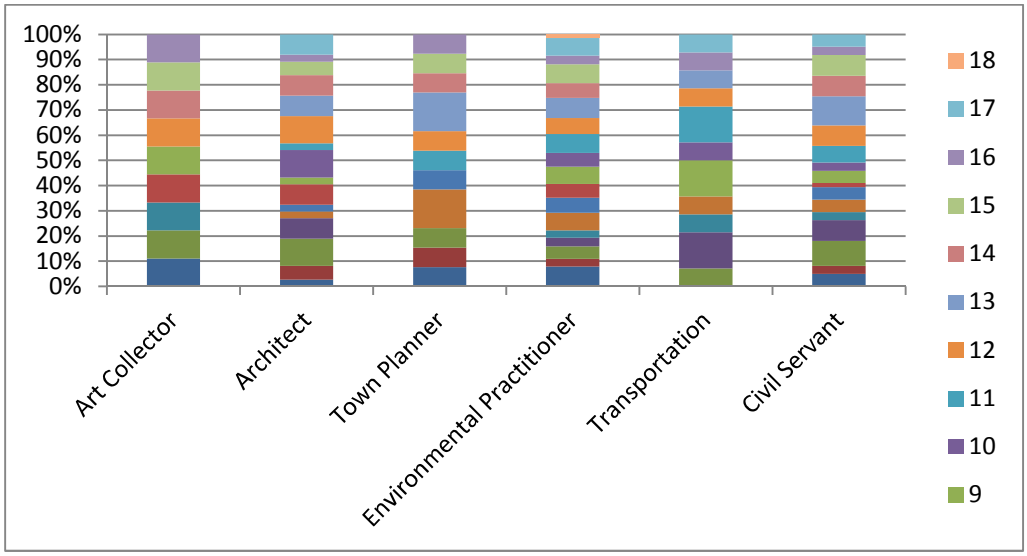

Figure 5.12: Stacked Column Chart showing number of responses in percentages (%) per Respondent from Ebonyi State to the criteria for listing Architectural Monuments

represents the respondent's response to the criteria for listing architectural monument. The total numbers of bars (represented by different colours) on each column; represent the number of responses by the respondent.

The survey showed a concentration of responses from only three (3) respondents (Environmental Practitioner, Civil Seravnt and Architect) thereby revealing a high level of unawareness and lack of knowledge on the subject matter, and insufficient spread from the selected respondents in Ebonyi State. Therefore the survey suggests the urgent need to create public awareness and inspire interest in specializing in the study of architectural monuments/structures in our schools of architecture.

Enugu State

The survey (Table 5.4) showed significantly very high and positive responses by three (3) respondents; Architect (40.82%), Civil Servant (24.49%), and Teacher/Lecturer (8.16%). Minimal responses were recorded by the Curator (4.08%), Historian (4.08%), Tourism/Hospitality (4.08%), Professional Consultant (4.08%), Town Planner (2.04%), Artist (2.04%), Monument Consultant (2.04%), Art Collector (2.04%), and Environmental Practitioner (2.04%). Zero response was recorded by the remaining three (3) respondents of the selected respondents (Figure 5.13). (See Appendix 11 for listing criteria responses in percentages %, used in the generation of the Pie, Stacked line and Stacked column charts). Of the fifty (50) questionnaires distributed, forty-nine (49) which accounted for 98% were filled out while one (1) which accounted for 2% was returned unfilled (Figure 5.14). The survey recorded each respondent's responses selected from the seventeen (17) criteria listed and represented them in the Stacked Line Chart (Figure 5.15) and Stacked Column Chart (Figure 5.16) for Enugu State. These responses are shown as horizontal lines in the Stacked Line Chart and as columns in the Stacked Column Chart. Each column represents a respondent and each horizontal bar on the column, represents the respondent's response to the criteria for listing architectural monument. The total numbers of bars (represented by different colours) on each column represent the number of responses by the respondent.

Table 5.4: Enugu State Field Survey Data

Respondent and Nos.		LISTING CRITERIA																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Art Collector	1	1	1			1	1	1	1	1	1			1	1	1	1		
Architect	20	17	12	19	2	18	15	11	13	17	20	9	14	11	14	16	15	15	1
Curator	2	2	1	2	2	2	1		2	2	1	1	1	1	1	2	1	2	
Teacher/Lecturer	4	4	3	2	2	4	2	3	3	3	4	2	3	3	4	2	3	3	
Monument Consultant	1	1	1	1		1	1			1	1		1				1		
Historian	2	1	1			1	2	1	1	1		1	1		1		1		
Archaeologist																			
Archivist																			
Town Planner	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Prof'/Consultant	2	1	1				1	1	1	1	1			1	1	1	1		
Environmental Practitioner	1		1	1		1			1	1	1	1	1	1	1	1	1	1	
Tourism/Hosp'lity	2	1	1	2		1	1				1		1	1	1				
Transportation																			
Civil Servant	12	10	9	12	4	9	9	7	7	10	7	12	9	12	12	11	7	7	
Artist	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Total	49	R E S P O N D E N T S																	

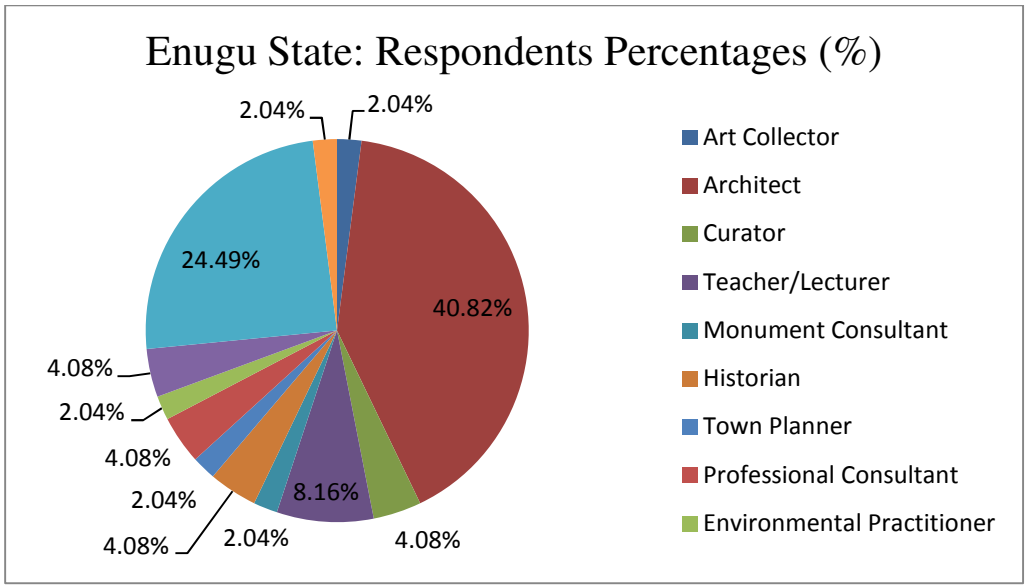

Figure 5.13: Pie Chart showing Respondents responses in percentages (%) from Enugu State to the Criteria for listing Architectural Monuments

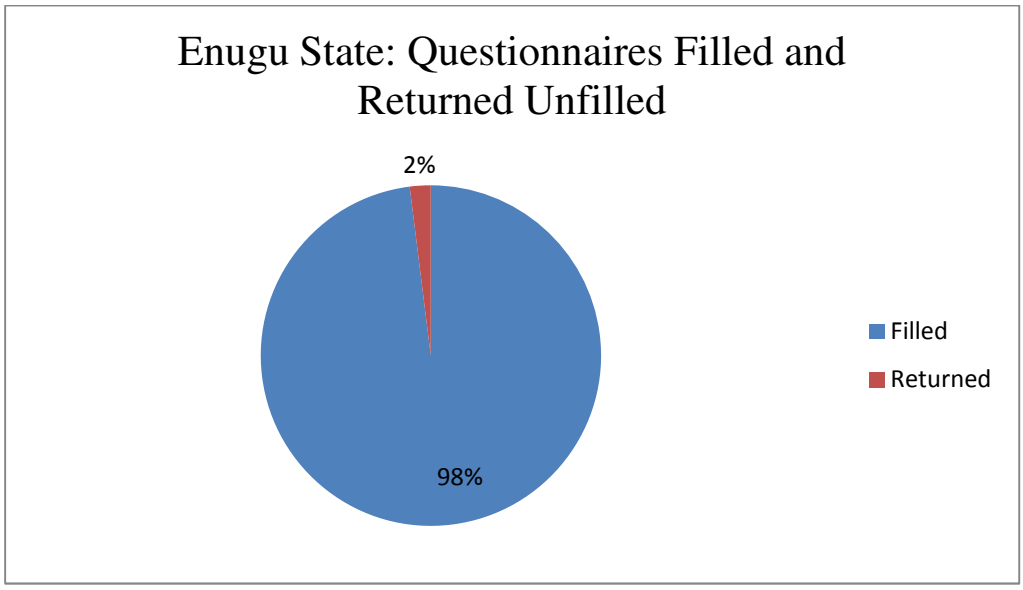

Figure 5.14: Pie Chart showing questionnaires filled and returned unfilled in percentages (%) from Enugu State.

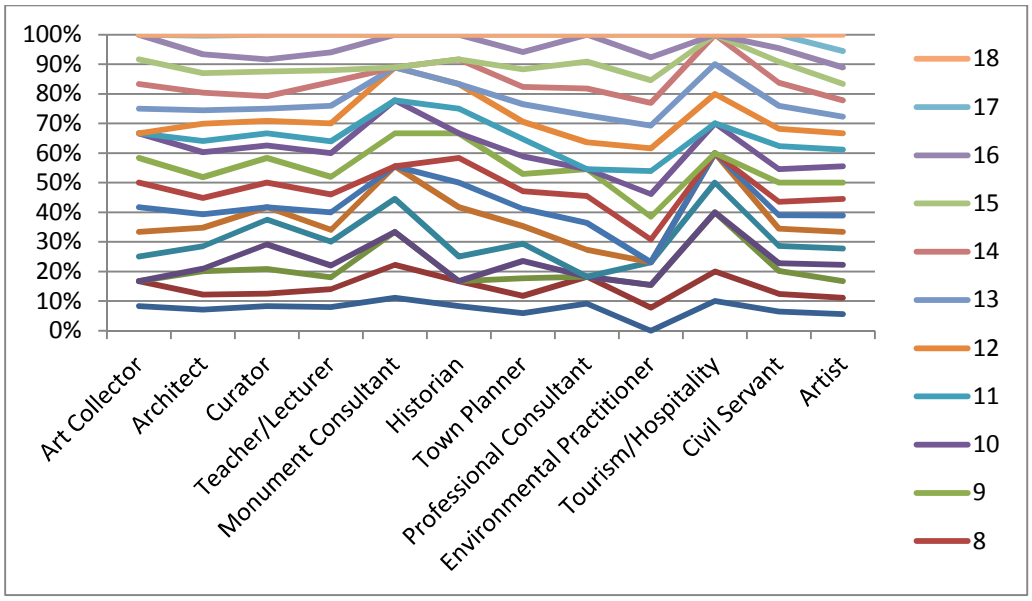

Figure 5.15: Stacked Line Chart showing Respondents responses in percentages (%) from Enugu State to the criteria for listing Architectural Monuments.

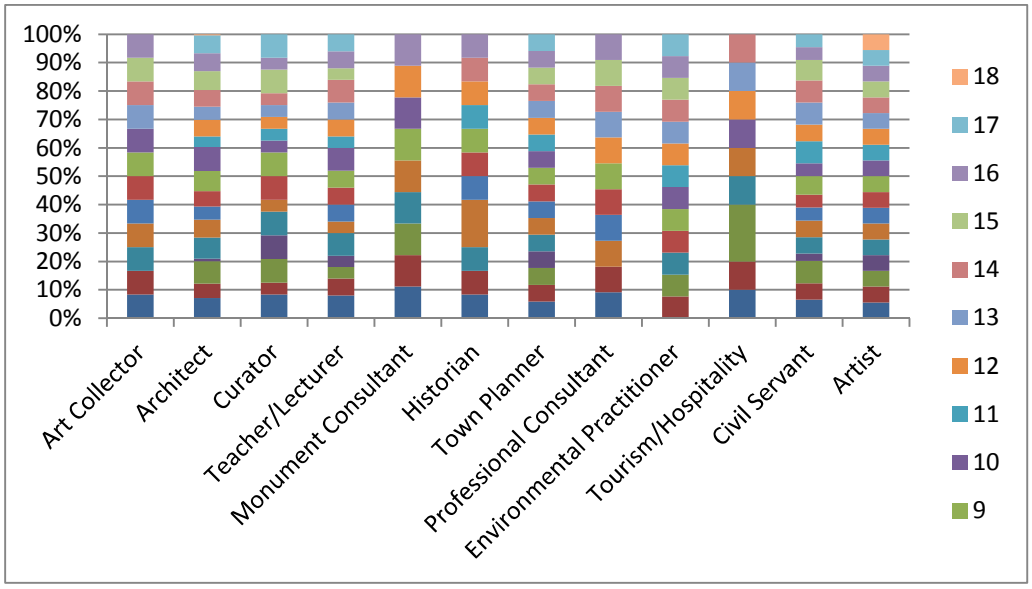

Figure 5.16: Stacked Column Chart showing number of responses in percentages (%) per Respondent from Enugu State to the criteria for listing Architectural Monuments

The survey showed significantly, very high concentration of responses from three (3) respondents (Architect, Civil Servant, and Teacher/Lecturer) and identifiable level of spread amongst the respondents, thereby suggesting high level of awareness and knowledge on the subject matter, from the selected respondents in Enugu State. Therefore, the survey, revealed the need to direct/draw the attention of both the public and private sector to investing in the development and preservation of architectural monuments in Enugu State.

Imo State

The survey (Table 5.5) showed significantly very high and positive responses by three (3) respondents; the Architect (72%), Environmental Practitioner (16%) and Art Collector (10%). Minimal response was recorded by one (1) respondent Tourism/Hospitality (2%). Zero (0) response was recorded by the remaining eleven (11) respondents out of the selected respondents (Figure 5.17). (See Appendix 10 for listing criteria responses in percentages %, used in the generation of the Pie, Stacked line and Stacked column charts). Of the fifty (50) questionnaires distributed, all fifty (50) were filled out (Figure 5.18). Also, the survey recorded the responses by each respondent from the seventeen (17) criteria listed and presented them in the Stacked Line Chart (Figure 5.19) and Stacked Column Chart (Figure 5.20) for Imo State. These responses are shown as horizontal lines in the Stacked Line Chart and as columns in the Stacked Column Chart. Each column represents a respondent and each horizontal bar on the column, represents the respondent's response to the criteria for listing architectural monument. The total numbers of bars (represented by different colours) on each column represent the number of responses by the respondent.

Table 5.5: Imo State Field Survey Data

Respondent and Nos.		LISTING CRITERIA																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Art Collector	5	4	5	5	2	5	3	5	3	4	4	3	4	4	3	4	2	4	2
Architect	36	27	24	23	24	30	29	34	32	29	28	30	25	30	30	27	29	23	21
Curator																			
Teacher/Lecturer																			
Monument Consultant																			
Historian																			
Archaeologist																			
Archivist																			
Town Planner																			
Prof'/Consultant																			
Environmental Practitioner	8	5	4	5	4	5	7	6	7	6	7	7	4	5	4	6	5	7	
Tourism/Hospital	1			1			1			1		1	1		1		1		
Transportation																			
Civil Servant																			
Artist																			
Total	50	R E S P O N D E N T S																	

The survey though had all (100%) the questionnaires filled out, showed a concentration of responses from only three (3) respondents (Architect, Environmental Practitioner and Art Collector) and identifiable insufficient spread of selected respondents within Imo state. This suggests significantly very high level of unawareness and lack of knowledge on the subject matter from the selected respondents in Imo State. It revealed the urgent need to create

awareness and highlighted the relevance/importance in developing architectural monument/structure in Imo State. This could be achieved by recording in architectural forms some significant historical/state events as monuments since from the survey the architect's responses was significantly very high and positive.

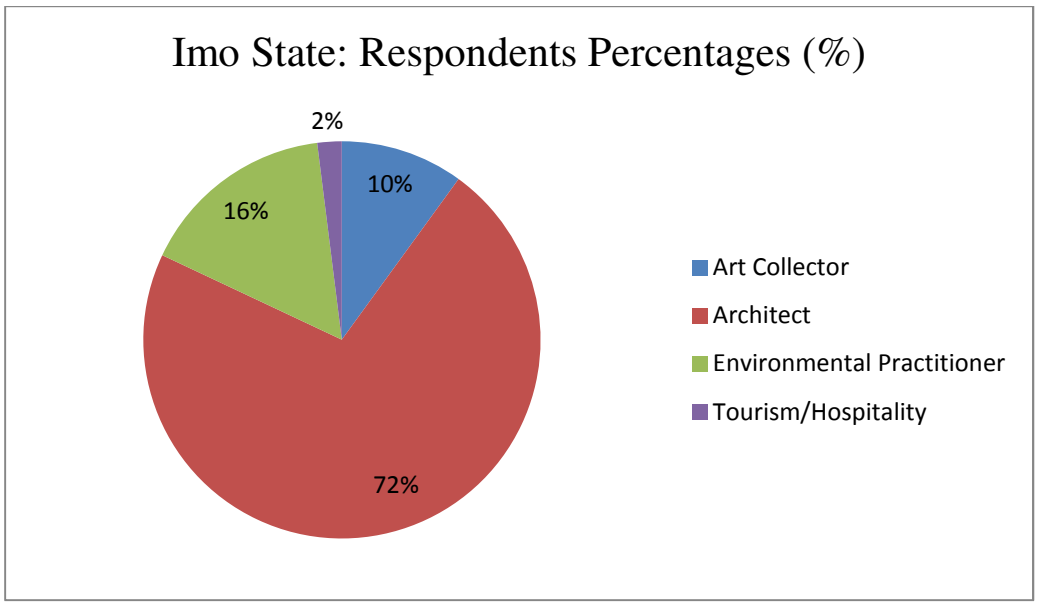

Figure 5.17: Pie Chart showing Respondents responses in percentages (%) from Imo State to the Criteria for listing Architectural Monuments

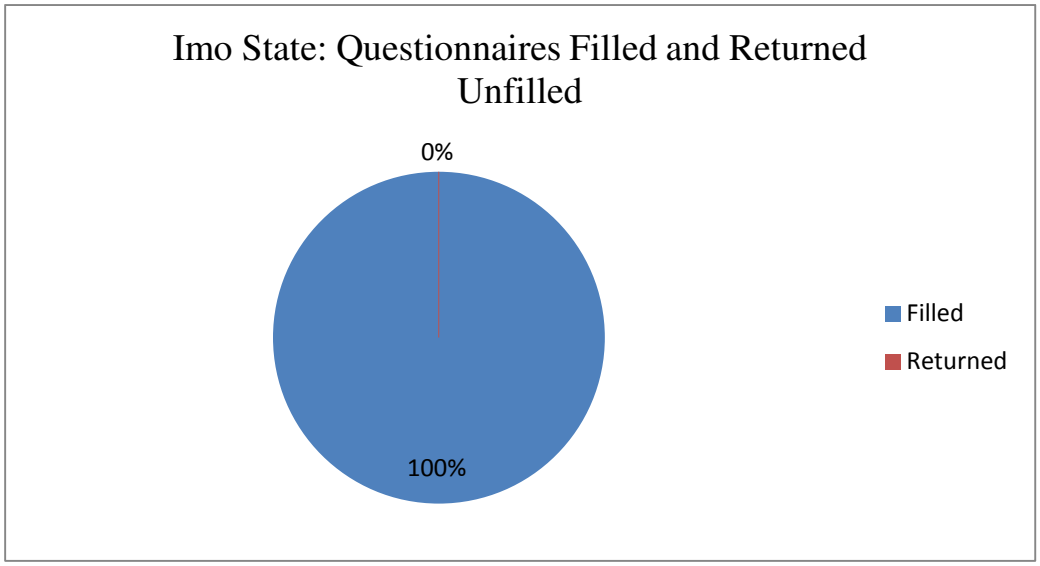

Figure 5.18: Pie Chart showing questionnaires filled and returned unfilled in percentages (%) from

Imo State.

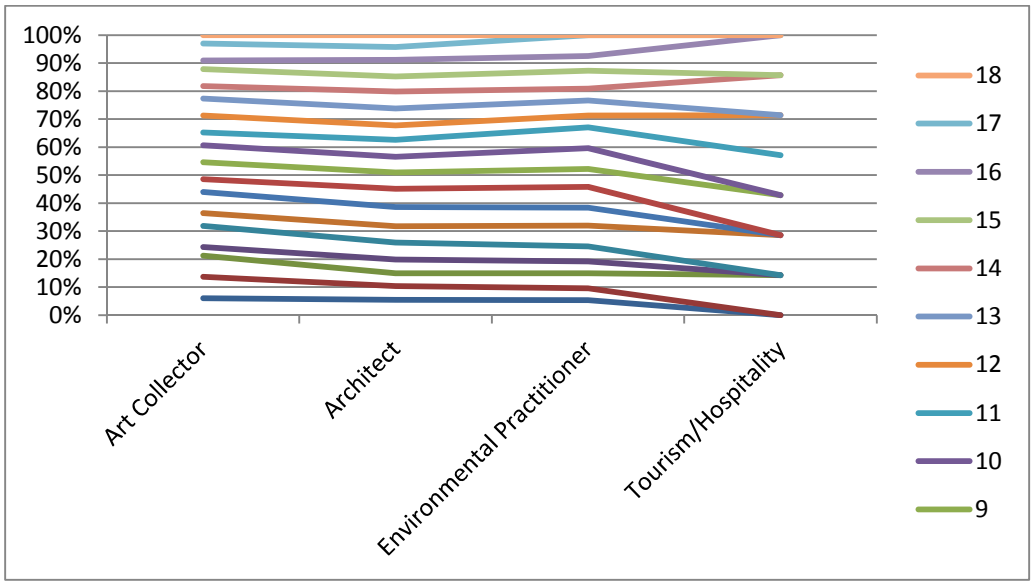

Figure 5.19: Stacked Line Chart showing Respondents responses in percentages (%) from Imo State to the criteria for listing Architectural Monuments.

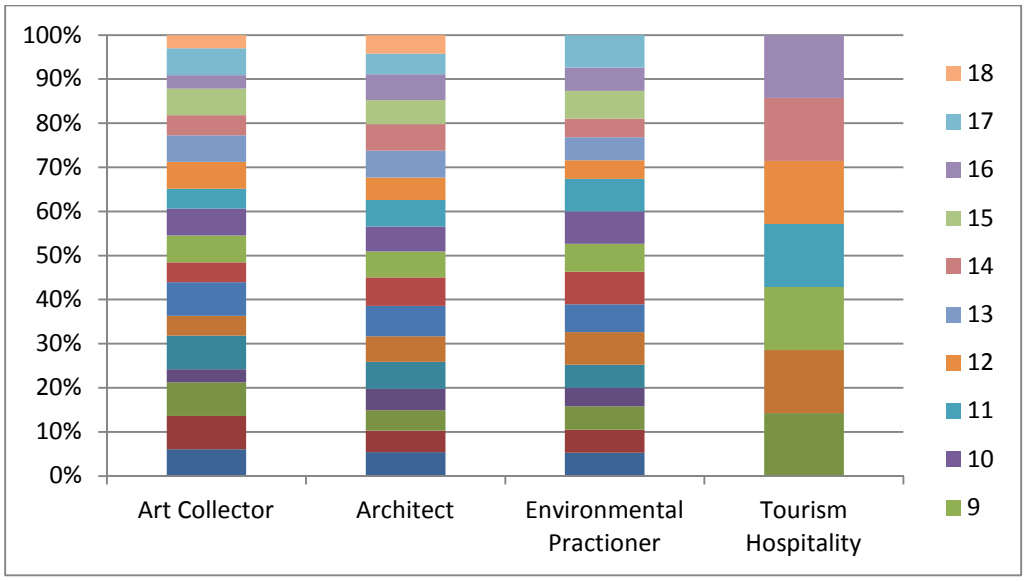

Figure 5.20: Stacked Column Chart showing number of responses in percentages (%) per Respondent from Imo State to the criteria for listing Architectural Monuments

Summary of Survey

Abia State: The survey revealed a disturbingly high level of unawareness and lack of knowledge on the subject matter (architectural monument and its listing criteria). This suggests the urgent need to create awareness and recognition for architectural monuments.

Anambra State: The survey identified appreciable level of awareness and knowledge on the subject matter and spread in the state. Thereby suggesting the need to preserve and maintain existing architectural monuments in the state in order to position them to contribute to the state and national economy.

Ebonyi State: The survey recorded very high concentration of responses on only three (3) respondents thereby suggesting very high level of unawareness and lack of knowledge on the subject matter which was identified by insufficient spread of respondents. Therefore, the survey suggests an urgent need to create publicn awareness in order to inspire interest in the study and specialization in architectural monuments.

Enugu State: The survey recorded significantly very high responses from the Architect, Civil Servant and Teacher/Lecturer. It identified some level of spread in terms of responses from respondents and revealed some appreciable level of awareness and knowledge on the subject matter. Therefore, the survey, suggests the need to direct the attention of the public and private sector to invest in the development and preservation of architectural monuments in Enugu State.

Imo State: The survey recorded appreciable responses from the Architect, Environmental Practitioner and Art Collector. This suggests insufficient spread and significantly very high level of unawareness and lack of knowledge on the subject matter in Imo State. Therefore, the survey reveals the urgent need to create some public awareness to highlight the relevance/importance of developing architectural monuments in Imo State. This could be achieved by recording in monument form, significant historical/state events by engaging the services of the architect since there was significantly very high and positive response from the architect.

5.2 DATA ANALYSIS AND FINDINGS

5.2.1 Data Analysis

The result of the Factor Analysis (FA)/Principal Component Analysis (PCA), reduced the eighteen (18) identified and suggested variables (criteria: national and international) for listing architectural monuments to four (4) principal components (Table 5.6) by only considering all the variables or components whose Eigenvalue is greater or equal to 1 (Table 5.7). Also variables or components whose rotated component matrix are from 0.5 and above (Table 5.8) and squared loadings from 1 and above (Table 5.9).

Table 5.6: Pricipal Component Matrix

Component Matrix[a]

	Component			
	1	2	3	4
q1	.502	-.255	-.490	-.186
q2	.494	.283	.221	-.508
q3	.303	.619	.006	.027
q4	.427	-.140	.668	.016
q5	.617	.033	.211	-.325
q6	.508	.197	-.417	-.303
q7	.611	-.277	-.133	-.208
q8	.694	-.297	.022	-.106
q9	.534	.144	.068	.297
q10	.624	.175	.062	.004
q11	.573	-.322	-.128	.419
q12	.534	.380	-.126	.287
q13	.496	-.284	.299	.139
q14	.568	.187	-.073	.392
q15	.638	.083	-.041	.066
q16	.570	.210	-.014	.031
q17	.621	-.276	-.194	.020
q18	.608	-.091	.182	-.055

Extraction Method: Principal Component Analysis.

a. 4 components extracted.

Table 5.7: Total Explained Variance

PC	Initial Eigenvalue		
	Total	% of Variance	Cumulative %
1	5.607	31.150	31.150
2	1.303	7.241	38.391
3	1.180	6.556	44.947
4	1.074	5.966	50.913
5	.966	5.369	56.282
6	.929	5.159	61.441
7	.897	4.984	66.424
8	.776	4.312	70.737
9	.730	4.054	74.791
10	.641	3.561	78.352
11	.628	3.489	81.841
12	.561	3.119	84.961
13	.523	2.907	87.868
14	.498	2.765	90.633
15	.469	2.607	93.240
16	.446	2.480	95.720
17	.391	2.174	97.894
18	.379	2.106	100.000

Extraction Method: Principal Component Analysis

Table 5.8: Rotated Principal Component Matrix

Rotated Component Matrix[a]

	Component			
	1	2	3	4
q1	.756	.100	-.067	.080
q2	.136	.138	.200	.745
q3	-.142	.548	-.120	.376
q4	-.072	.094	.769	.207
q5	.298	.168	.381	.519
q6	.516	.290	-.219	.406
q7	.626	.094	.263	.201
q8	.572	.169	.442	.173
q9	.137	.551	.274	.026
q10	.245	.458	.256	.298
q11	.483	.397	.358	-.323
q12	.135	.706	.023	.104
q13	.230	.165	.596	-.017
q14	.198	.666	.177	-.048
q15	.346	.460	.230	.188
q16	.234	.471	.161	.259
q17	.616	.236	.252	.012
q18	.313	.247	.446	.238

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

Table 5.9: Total Rotated Explained Variance

PC	Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %
1	2.765	15.363	15.363

2	2.678	14.878	30.240
3	2.104	11.689	41.929
4	1.617	8.984	50.913

Extraction Method: Principal Component Analysis

Note: PC – Principal Component

5.2.2 Findings

Component 1

This is highly and positively loaded on five (5) factors (Table 5.8)

Q1	Rarity of architectural monument/structure	0.756
Q6	Context of production of the architectural monument	0.516
Q7	Source of construction material, type, cost and availability	0.626
Q8	Construction technology applied, duration and socio-political climate at the time	0.572
Q17	Reflective of cultural concepts, values and purpose, expressive of emotions and political situation of the people that lay claims/initiated the architectural monument	0.616

Then with a total Eigenvalue or explained variance of 2.765, it explains 15.35% Variance and 15.36% cumulative of the criteria for listing architectural monuments (Table 5.9: Rotation Sums of Squared Loadings). Therefore, the index **rarity** which is defined by the variable, rarity of architectural monument/structure with a high factor loading of **0.756** (Table 5.8), represents component 1.

Component 2

This is significantly and positively loaded on four (4) factors (Table 5.8).

Q3 Significance/historical value of the architectural monument to

	the society	0.548
Q9	Outstanding example of a building type, architecture, technology ensemble or landscape in human history	0.551
Q12	Bear unique or exceptional testimony to cultural tradition or civilization living or extinct	0.706
Q14	Be tangibly or directly associated with events or living traditions, artistic and works of outstanding universal significance	0.666

Then with a total Eigenvalue or explained variance of 2.678, it explains 14.88% variance and 30.24% cumulative value of the criteria for listing architectural monuments (Table 5.9: Rotation Sums of Squared Loadings). Therefore, the index of **uniqueness** which is defined by the variable, unique or exceptional testimony to a cultural tradition or civilization, living or extinct, with a high factor loading of **0.706** (Table 5.8), represents component 2.

Component 3

This is significantly and positively loaded on two (2) factors (Table 5.8).

Q4	Geographical distribution of architectural monument	0.769
Q13	Outstanding example of traditional human settlement, land-use or sea-use, which is representative of a culture or human interaction with the environment vulnerable under the impact of irreversible change	0.596

Then with a total Eigenvalue or explained variance of 2.104, it explains 11.69% variance and 41.93% cumulative value of the criteria for listing architectural monuments (Table 5.9: Rotation Sums of Squared Loadings). Therefore, the index of **distribution** which is defined by the variable, geographical distribution of architectural monument with a high factor loading of **0.769** (Table 5.8), represents component 3.

Component 4

This is significantly and positively loaded on two (2) factors (Table 5.8).

Q2	Threat to damage and or extinction of architectural monument	0.745
Q5	Age of architectural monument/structure	0.519

Then with a total Eigenvalue or explained variance of 1.617, it explains 8.98% variance and 50.91% cumulative value of the criteria for listing architectural monuments (Table 5.9: Rotation Sums of Squared Loadings). Therefore, the index of **susceptibility** to damage and or extinction, defined by the variable, threat to damage and or extinction, with a high factor loading of **0.745** (Table 5.8), represents component 4.

5.3 DISCUSSION

5.3.1 Answers to Research Questions and Test of Hypothesis

This study, in order to address the identified problem that is the appropriateness or otherwise of the criteria for listing architectural monuments in Nigeria, raised the following research questions and hypothesis:

Research Questions;

1. Are there criteria for listing architectural monuments in Nigeria?
2. Are the architectural monuments in South-East zone of Nigeria, listed based on the existing criteria for listing architectural monuments in Nigeria?
3. Are these criteria for listing appropriate and comprehensive?
4. Are there other appropriate listing criteria that should guide the listing and classification of architectural monuments in South-East zone of Nigeria?

And it was hypothesized as follows:

Hypothesis;

H_{o1}: There are no significant location specific peculiarities for listing and classification of architectural monuments in South-East zone of Nigeria.

H_{o2}: There are no appropriate and comprehensive criteria for listing architectural monuments in South-East zone of Nigeria

5.3.2 Test Findings and Results

In testing the hypothesis, the result below (Table 5.10: Summary of the Factor Analysis (FA)/Principal Component Analysis (PCA) results discussed above), showed that the four (4) identified components derived from the eighteen (18) variables tested, accounted for only 50.9% of the known criteria for listing architectural monuments both nationally and internationally. The 49.1% un-accounted and unknown criteria for listing architectural monuments, suggests variance which could be attributed to the peculiarities of the other zones or regions in Nigeria that were not taken into consideration in the criteria for listing of architectural monuments in Nigeria. This implies that the eighteen (18) tested criteria (identified and suggested), that are applied in the classification of architectural monuments in Nigeria and the South-East zone are not appropriate and comprehensive. Also, it revealed that there are major significant criteria for listing and classification of architectural monuments in the South-East zone of Nigeria.

Table 5.10: Factor Analysis (FA)/Principal Component Analysis (PCA) Results

PC	Composite Variables	Factor Loading (Rotated)	Total Eigenvalue (Rot'Sums)	%Variance (Rot'Sums)	%Cumulative (Rot'Sums)	DVL	DV
1	Q1, Q6, Q7, Q8, Q17	.756, .516 .626, .572 .616	2.765	15.36	15.36	0.756	Q1
2	Q3, Q9, Q12, Q14	.548, .551 .706, .666	2.678	14.88	30.24	0.706	Q12
3	Q4, Q13	.769, .596	2.104	11.69	41.93	0.769	Q4
4	Q2, Q5	.745, .519	1.617	8.98	50.91	0.745	Q2

Note: PC – Principal Component, DVL – Defining Variable Loading; DV – Defining Variable.

Therefore, from the Factor Analysis (FA) results above, the four (4) identified criteria for listing architectural monuments in South-East zone are the following:

1. Rarity of architectural monument/structure (Q1: 0.756 loaded).

2. Uniqueness and or exceptional testimony to a cultural tradition, civilization (living or extinct) of architectural monument (Q12: 0.706 loaded).
3. Geographical distribution of architectural monument (Q4: 0.769 loaded).
4. Threat (susceptibility) to damage and or extinction of architectural monument (Q2: 0.745 loaded).

These are the cumulative of other subsumed identified variables and showed that there are significant listing criteria for architectural monuments that should be applied in listing and classification of architectural monuments found only in theSouth-East zone of Nigeria.

Answers to Research Questions.

1. Yes, there are criteria for listing architectural monuments in Nigeria.
2. Yes, architectural monuments in South-East zone of Nigeria are listed based on the existing criteria for listing architectural monuments in Nigeria.
3. No, these criteria for listing are not appropriate and comprehensive.
4. Yes, there are appropriate listing criteria that should guide the listing and classification of architectural monuments in South-East zone of Nigeria.

5.3.3 Summary of Listing Criteria

The following, listed according to sources, are the listing criteria for architectural monuments that were tested for this study.

UNESCO World Heritage Listing Criteria (Cultural Sites):

1. Represent a masterpiece of human creative genius;
2. Exhibit an important interchange of human values, over a span of time or within a cultural area of the world, on development in architecture or technology, monumental arts, town-planning or landscape design;
3. Bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living or which has disappeared;
4. Be an outstanding eample of a type of building, architectural or technological ensemble or landscape which illustrates a significant stage in human history;

5. Be an outstanding example of a traditional human settlement, land-use, or sea-use which is representative of a culture, or human interaction with the environment especially when it has become vulnerable under the impact of irreversible change;
6. Be directly or tangibly associated with events or living traditions, with ideas, or with beliefs, with artistic and literary works of outstanding universal significance.

Nigeria Listing Criteria:

1. Rarity of particular type;
2. Threat of damage and or extinction;
3. Level of significance / historical value;
4. Geographical distribution.

Proposed Listing Criteria:

1. Age of architectural monument/structure;
2. Context of production, which is the level of ingenuity in design and construction of the architectural monument/structure;
3. Source of construction material and type that is, whether the construction material is indigenous to the location of the architectureal monument and whether the material is rare and or imported;
4. Construction technology available and applied, duration of construction and socio-political situation at the time of construction of the architectural monument/structure;
5. Represent unique cultural technology/skill and architectural peculiarities/values in terms of design, form and embellishment, of a people, society or community;
6. Be of an outstanding/rare aesthetic characteristic and or quality/value architecturally;
7. Be reflective of cultural concepts, values and purpose, and expressive of the emotions and political situation of a people, society or community that lay claims or initiated the architectural monument/structure at the time.

CHAPTER SIX

6.0 CONTRIBUTION TO KNOWLEDGE, RECOMMENDATION AND CONCLUSION

6.1 Contribution to Knowledge

The study in addressing the topic, embarked on field surveys, literature search and reviews, and conducting of interviews. The study identified four (4) criteria for listing architectural monuments in Nigeria as approved by National Commission for Museums and Monuments (NCMM); and six (6) criteria for listing architectural monuments internationally as approved by the UNESCO World Heritage Sites. From the field surveys and interviews, some seven (7) more criteria for listing were suggested. All the seventeen (17) criteria for listing architectural monuments were then subjected to test by the use of questionnaire and the respondents responses were analysized using Factor Analysis (FA)/Principal Component Analysis (PCA) Extraction Method. The results from the analysis showed major significant revelation that contributed to knowledge with regards to listing criteria for architectural monuments in Nigeria.

The contribution to knowledge of this study lies in the fact that for the first time, standardized and more comprehensive and location specific listing criteria for Nigeria were developed where the **context of production** which included, technology, engineering ingenuity and resourcefulness in times of war or crisis were captured as well as the nature of the peculiarities of Nigeria's ethnic diversity. An example is the Ojukwu Bunker which was designed and built within ninety (90) days at the peak of the Biafran/Nigerian civil war when Biafra was cut off from external links. The works personnel, technology, engineering ingenuity and construction materials were all indeginous and locally sourced.

The study discovered that the **age of a structure** was not considered in the criteria for listing architectural monuments in Nigeria. This is significant because some old structures had been destroyed or dismantled by the government and some community in the name of urban re-engineering or expansion. An example is the 'Obi Igbo' or 'Obi Dege' in Igboukwu, Anambra State. According to oral record, the mud house is the residence of their ancestrial founder 'Igbo' and the only existing mud structure in the area. The great great grand child of 'Igbo' (Nze Charles Umeokonkwor) is threatening to pull it down in order to expand the compound and according to him, his mother who used to maintain the structure is too old to continue to do so.

This study contributed to knowledge by discovering that all the identified and listed architectural monuments in the South-East zone were not *'ab-initio'* designed and built to be monuments unlike what obtains outside Nigeria. They were rather **structures of circumstance** and did not express the emotions and or political situation of the people, society or community that lay claims or initiated the architectural monument/structure at the time.

Finally, this study revealed a very **high significant level of unawareness** and **lack of knowledge of the subject matter** (architectural monuments and their listing criteria) within the South-East zone of Nigeria. This was clearly shown in the responses from Abia, Ebonyi

and Imo States. While appreciable level of awareness and knowledge of the subject matter were identified in Anambra and Enugu States.

6.2 Recommendations

This study, based on the findings above hereby recommends the following:

1. There should be a conscious and deliberate creation of public awareness campaign as to the significance of architectural monuments to the development of the economy of Nigeria as a country and the states therein.
2. Architectural monuments in the South-East zone should not just be structures of circumstance but should be structures designed and built to express the emotions or situations of the people or society that lay claims or initiated them.
3. Efforts should be made to stop the destruction of all identified architectural monuments in the South-East zone in the name of urban re-engineering or expansion. Instead, deliberate effort should be channeled towards preserving and maintaining the identified architectural monuments in South-East zone.
4. There is the need to encourage the specialization in the study of architectural monuments in our schools of architecture. This will not only help in creating jobs, it will help to sensitize the people to value their architectural monuments.
5. Efforts should be made to inspire and encourage architects to record in architectural forms, significant historical, national and state events as monuments. This will encourage nationalism, enhance tourism and attract investment.

6.3 Conclusion

In conclusion, this study recognized the nature of the peculiarities of Nigeria's ethnic diversity (about 370 indentified ethnic groups), but focused its search on the South-East zone where little or nothing much is known about architectural monuments. This study by proving that the listing criteria for architectural monuments in the South-East zone of Nigeria is not appropriate and comprehensive, hopes that with its findings, architectural monuments in this zone will be appropriately listed and given recognition in order to contribute effectively to the

national and state economy. Furthermore, studies should be conducted with respect to identifying the various appropriate listing criteria for architectural monuments in other zones of Nigeria with a view to compiling comprehensive listing criteria for architectural monuments in Nigeria.

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Appendix 1

SAMPLE QUESTIONNAIRE

UNIVERSITY OF NIGERIA, ENUGU CAMPUS

SCHOOL OF POSTGRADUATE STUDIES
DEPARTMENT OF ARCHITECTURE

STUDY QUESTIONNAIRE

This questionnaire is purely designed for academic research on Architectural Monuments. The research is ***'A study of Architectural Monuments in South-East zone of Nigeria: Evolving Appropriate listing Criteria'.*** The author will appreciate direct, specific and clear answers. Please be as honest as possible. Thank you.
Please tick/mark inside the box as appropriate. ☐

1. What is your Occupation/Profession?

Art Collector ☐ Architect ☐ Curator ☐ Teacher/Lecturer ☐
Monument Consultant ☐ Historian ☐ Archaeologist ☐ Archivist ☐
Town Planner ☐ Professional/Consultant ☐ Environmental Practitioner ☐
Tourism/Hospitality ☐ Transportation ☐ Civil Servant ☐ Artist ☐ Sociologist ☐

2. Nationality ☐

3. State of Residence? Abia ☐ Anambra ☐ Ebonyi ☐ Enugu ☐ Imo ☐

4. What is architectural monument?

   a. A building or structure designed and built to commemorate an important or great historic event. ☐
   b. A structure designed and built in memorial of a famous person ☐
   c. A building or structure (historic) preserved for its unique architectural features (elements) and style ☐
   d. A building or structure with rare aesthetic characteristic, construction method and building material ☐
   e. A shrine, tomb or mausoleum of a great/important personality ☐
   f. All of the above. ☐

5. State the type of architectural monument you know and its location?

   g. Shrine at b. Religious building at c. Tomb at
   d. Residential building at e. Public Building at
   f. Historic Building at g. Commemorative Structure at

6. The criteria for listing architectural monuments in Nigeria and abroad are listed below. Tick as many criteria as possible from the list which you think, should be considered for listing architectural monuments and structures in the South East zone of Nigeria.

1. Rarity of particular type of architecture monument/structure ☐

2. Threat of damage and or extinction ☐

3. Level of significance/historical value to the society ☐
4. Geographical distribution ☐
5. Age of the architectural monument/structure ☐
6. Context of production, which is the level of ingenuity in design and construction of the architectural monument/structure ☐

7. Source of construction material and type that is, whether the construction material is indigenous to the location of the architectural monument and whether the material is rare and or expensive. ☐

8. Construction technology available and applied, duration of construction and socio-political situation at the time of construction of the architectural monument/structure. ☐

9. Be an outstanding example of a type of building, architectural or technological ensemble or landscape which illustrates (a) significant stage(s) in human history. ☐
10. Represent a masterpiece of human creative genius of outstanding universal value. ☐

11. Exhibit an important interchange of human values, over a span of time or within a cultural area of the world, on development in architecture or technology, monumental arts, town-planning or landscape design. ☐

12. Bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living or which has disappeared. ☐

13. Be an outstanding example of a traditional human settlement, land-use, or sea-use which is representative of a culture (or cultures), or human interaction with the environment especially when it has become vulnerable under the impact of irreversible change. ☐

14. Be directly or tangibly associated with events or living traditions, with ideas, or with beliefs, with artistic and literary works of outstanding universal significance. ☐
15. Represent unique cultural technology/skill and architectural peculiarities/values in terms of design, form and embellishment, of a people, society or community. ☐
16. Be of an outstanding/rare aesthetic characteristic and or quality/value architecturally ☐

17. Be reflective of cultural concepts, values and purpose, and expressive of the emotions and political situation of a people, society or community that lay claims or initiated the architectural monument/structure at the time. ☐

18. All of the above ☐

Appendix 2

Factor Analysis

[DataSet1] C:\ANALYSIS\nduka.sav

Communalities

	Initial	Extraction
q1	1.000	.592
q2	1.000	.632
q3	1.000	.476
q4	1.000	.648
q5	1.000	.532
q6	1.000	.563
q7	1.000	.511
q8	1.000	.581
q9	1.000	.399
q10	1.000	.424
q11	1.000	.624
q12	1.000	.528
q13	1.000	.435
q14	1.000	.517
q15	1.000	.419
q16	1.000	.370
q17	1.000	.499
q18	1.000	.415

Extraction Method: Principal Component Analysis.

Appendix 3

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.607	31.150	31.150	5.607	31.150	31.150	2.765	15.363	15.363
2	1.303	7.241	38.391	1.303	7.241	38.391	2.678	14.878	30.240
3	1.180	6.556	44.947	1.180	6.556	44.947	2.104	11.689	41.929
4	1.074	5.966	50.913	1.074	5.966	50.913	1.617	8.984	50.913
5	.966	5.369	56.282						
6	.929	5.159	61.441						
7	.897	4.984	66.424						
8	.776	4.312	70.737						
9	.730	4.054	74.791						
10	.641	3.561	78.352						
11	.628	3.489	81.841						
12	.561	3.119	84.961						
13	.523	2.907	87.868						
14	.498	2.765	90.633						
15	.469	2.607	93.240						
16	.446	2.480	95.720						
17	.391	2.174	97.894						
18	.379	2.106	100.000						

Extraction Method: Principal Component Analysis.

Appendix 4

Component Matrix[a]

	Component			
	1	2	3	4
q1	.502	-.255	-.490	-.186
q2	.494	.283	.221	-.508
q3	.303	.619	.006	.027
q4	.427	-.140	.668	.016
q5	.617	.033	.211	-.325
q6	.508	.197	-.417	-.303
q7	.611	-.277	-.133	-.208
q8	.694	-.297	.022	-.106
q9	.534	.144	.068	.297
q10	.624	.175	.062	.004
q11	.573	-.322	-.128	.419
q12	.534	.380	-.126	.287
q13	.496	-.284	.299	.139
q14	.568	.187	-.073	.392
q15	.638	.083	-.041	.066
q16	.570	.210	-.014	.031
q17	.621	-.276	-.194	.020
q18	.608	-.091	.182	-.055

Extraction Method: Principal Component Analysis.

a. 4 components extracted.

Appendix 5

Rotated Component Matrix[a]

	Component			
	1	2	3	4
q1	.756	.100	-.067	.080
q2	.136	.138	.200	.745
q3	-.142	.548	-.120	.376
q4	-.072	.094	.769	.207
q5	.298	.168	.381	.519
q6	.516	.290	-.219	.406
q7	.626	.094	.263	.201
q8	.572	.169	.442	.173
q9	.137	.551	.274	.026
q10	.245	.458	.256	.298
q11	.483	.397	.358	-.323
q12	.135	.706	.023	.104
q13	.230	.165	.596	-.017
q14	.198	.666	.177	-.048
q15	.346	.460	.230	.188
q16	.234	.471	.161	.259
q17	.616	.236	.252	.012
q18	.313	.247	.446	.238

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

Appendix 6

Component Transformation Matrix

Component	1	2	3	4
1	.594	.580	.452	.327
2	-.503	.578	-.428	.479
3	-.587	-.123	.769	.221
4	-.225	.561	.143	-.784

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

Appendix 7

Abia State Listing Criteria Responses in Percentages %

	LISTING CRITERIA																	
Respondents	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	RESPONSES IN PERCENTAGES %																	
Architect	7.69	7.69	7.69	-	7.69	7.69	7.69	7.69	3.85	3.85	3.85	3.85	11.54	3.85	3.85	7.69	7.69	-
Curator	19.23	15.38	23.08	7.69	15.38	23.08	15.38	15.38	23.08	23.08	15.38	19.23	23.08	15.38	23.08	23.08	19.23	11.54
Teacher/Lecturer	11.54	7.69	11.54	-	7.69	11.54	7.69	7.69	7.69	-	7.69	7.69	15.38	7.69	3.85	11.54	11.54	-
Monument Consultant	3.85	3.85	3.85	3.85	3.85	-	3.85	-	-	3.85	3.85	-	-	3.85	-	-	-	-
Historian	3.85	3.85	3.85	3.85	3.85	3.85	3.85	3.85	-	-	3.85	-	3.85	3.85	3.85	3.85	3.85	-
Town Planner	3.85	-	3.85	-	-	3.85	-	-	3.85	-	3.85	3.85	3.85	3.85	-	3.85	3.85	-
Professional Consultant	-	7.69	7.69	3.85	3.85	7.69	-	-	7.69	7.69	3.85	7.69	7.69	7.69	3.85	3.85	3.85	-
Civil Servant	15.38	19.23	26.92	3.85	19.23	11.54	15.38	7.69	23.08	23.08	11.54	23.08	19.23	19.23	23.08	15.38	15.38	3.85
Sociologist	3.85	3.85	3.85	-	3.85	3.85	3.85	3.85	3.85	3.85	3.85	3.85	3.85	3.85	3.85	3.85	-	-

Appendix 8

Anambra State Listing Criteria Responses in Percentages %

	LISTING CRITERIA																	
Respondents	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	RESPONSES IN PERCENTAGES %																	
Art Collector	6.06	-	6.06	-	-	3.03	6.06	6.06	6.06	3.03	3.03	6.06	6.06	6.06	6.06	-	6.06	-
Architect	36.36	24.24	36.36	15.15	36.36	33.33	33.33	33.33	30.30	36.36	36.36	30.30	30.30	36.36	36.36	30.30	27.27	12.12
Curator	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03
Teacher/Lecturer	9.09	6.06	6.06	-	6.06	6.06	6.06	6.06	6.06	6.06	6.06	6.06	6.06	6.06	6.06	6.06	6.06	3.03
Archaeologist	9.09	6.06	6.06	3.03	3.03	9.09	6.06	3.03	6.06	9.09	3.03	9.09	3.03	6.06	6.06	9.09	6.06	-
Town Planner	6.06	6.06	6.06	3.03	6.06	6.06	6.06	6.06	3.03	6.06	6.06	6.06	6.06	6.06	6.06	6.06	6.06	3.03
Professional Consultant	6.06	3.03	6.06	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03
Environmental Practitioner	3.03	-	3.03	-	3.03	3.03	-	-	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03
Tourism/Hospitality	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03
Civil Servant	12.12	12.12	15.15	9.09	15.15	-	12.12	12.12	12.12	15.15	12.12	12.12	12.12	12.12	12.12	15.15	12.12	9.09
Artist	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03

Appendix 9

Ebonyi State Listing Criteria Responses in Percentages (%)

	LISTING CRITERIA																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18

Respondent	RESPONSES IN PERCENTAGES (%)																	
Art Collector	2.38	-	2.38	-	2.38	-	-	2.38	2.38	-	-	2.38	-	2.38	2.38	2.38	-	-
Architect	2.38	4.76	9.52	7.14	-	2.38	2.38	7.14	2.38	9.52	2.38	9.52	7.14	7.14	4.76	2.38	7.14	-
Town Planner	2.38	2.38	2.38	-	-	4.76	2.38	-	-	-	2.38	2.38	4.76	2.38	2.38	2.38	-	-
Environmental Practitioner	38.10	14.29	23.81	16.67	14.29	33.33	28.57	26.19	33.33	26.19	35.71	30.95	38.10	28.57	35.71	16.67	33.33	7.14
Transportation	-	-	2.38	4.76	2.38	2.38	-	-	4.76	2.38	4.76	2.38	2.38	-	-	2.38	2.38	-
Civil Servant	7.14	4.76	14.29	11.90	4.76	7.14	7.14	2.38	7.14	4.76	9.52	11.90	16.67	11.90	11.90	4.76	7.14	-

Appendix 10

Imo State Listing Criteria Responses in Percentages %

Respondent	LISTING CRITERIA																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	RESPONSES IN PERCENTAGES %																	
Art Collector	8.00	10.00	10.00	4.00	10.00	6.00	10.00	6.00	8.00	8.00	6.00	8.00	8.00	6.00	8.00	4.00	8.00	4.00
Architect	54.00	48.00	46.00	48.00	60.00	58.00	68.00	64.00	58.00	56.00	60.00	50.00	60.00	60.00	54.00	58.00	46.00	42.00
Environmental Practitioner	10.00	8.00	10.00	8.00	10.00	14.00	12.00	14.00	12.00	14.00	14.00	8.00	10.00	8.00	12.00	10.00	14.00	-
Tourism/Hospitality	-	-	2.00	-	-	2.00	-	-	2.00	-	2.00	2.00	-	2.00	-	2.00	-	-

Appendix 11

Enugu State Listing Criteria Responses in Percentages %

Respondent	LISTING CRITERIA																	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	RESPONSES IN PERCENTAGES %																	
Art Collector	2.04	2.04	-	-	2.04	2.04	2.04	2.04	2.04	2.04	-	-	2.04	2.04	2.04	2.04	-	-
Architect	34.69	24.49	38.78	4.08	36.73	30.61	22.45	26.53	34.69	40.82	18.37	28.57	22.45	28.57	32.65	30.61	30.61	2.04

Curator	4.08	2.04	4.08	4.08	4.08	2.04	-	4.08	4.08	2.04	2.04	2.04	2.04	2.04	4.08	2.04	4.08	-
Teacher/Lecturer	8.16	6.12	4.08	4.08	8.16	4.08	6.12	6.12	6.12	8.16	4.08	6.12	6.12	8.16	4.08	6.12	6.12	-
Monument Consultant	2.04	2.04	2.04	-	2.04	2.04	-	-	2.04	2.04	-	2.04	-	-	-	2.04	-	-
Historian	2.04	2.04	-	-	2.04	4.08	2.04	2.04	2.04	-	2.04	2.04	-	2.04	-	2.04	-	-
Town Planner	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	-
Professional Consultant	2.04	2.04	-	-	-	2.04	2.04	2.04	2.04	-	-	2.04	2.04	2.04	2.04	2.04	-	-
Environmental Practitioner	-	2.04	2.04	-	2.04	-	-	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	-
Tourism/Hospitality	2.04	2.04	4.08	-	2.04	2.04	-	-	-	2.04	-	2.04	2.04	2.04	-	-	-	-
Civil Servant	20.41	18.37	24.49	8.16	18.37	18.37	14.29	14.29	20.41	14.29	24.49	18.37	24.49	24.49	22.45	14.29	14.29	-
Artist	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04	2.04