

**THE REPUBLIC OF TURKEY
BAHCESEHIR UNIVERSITY**

**ORNAMENTATION IN NIGERIAN
ARCHITECTURE: TRANSFORMATION OF
ORNAMENTATION IN NIGERIAN ARCHITECTURE
FROM TRADITIONAL TO CONTEMPORARY**

Master's Thesis

MOHAMMED SAGIR KABIR

İSTANBUL, 2016

**THE REPUBLIC OF TURKEY
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**GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES
MASTER OF ARCHITECTURE**

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quality and content as a thesis for the degree of Master of Science.

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Istanbul, 2016

Mohammed Sagir Kabir

ÖZET

NİJERYA MİMARİSİNDE SÜSLEME: NİJERYA MİMARİSİNDE GELENEKSEL OLANDAN ÇAĞDAŞ OLANA SÜSLEME DÖNÜŞÜMÜ

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Nijerya geleneksel mimarisi ile çağdaş mimarisi arasında kolonicilik, modern çağ ve teknolojiye yaşanan ilerleme nedeniyle çok zayıf bir ilişki var. Nijerya’da koloniciliğin hayata geçirilmesiyle birlikte Nijerya geleneksel hayatı ve kültürü dönüşmeye başlamış ve bu durum Nijerya’da geleneksel ve çağdaş mimari süslemesi arasında zayıf ve etkisiz bir bağ oluşmasına neden olmuştur. Nijerya’da binaların duvarlarında ve diğer mimari öğelerin yüzeylerinde süsleme olarak şekil ve örüntülerin kullanılmasıyla, geçmişte geleneksel mimaride kullanıldığı gibi, yöntemler, malzemeler, kültür ve kimliğin yanı sıra, çağdaş tasarımda kullanılan süslemede bir takım değişiklikler yapılmıştır.

Geleneksel mimari ile ilgili temel bilgi, yerel iklimsel koşullar, yerel çapta erişilebilir malzemeler, basit inşaat tekniği, yaşam biçimi, gelenekler ve bölgedeki sosyoekonomik şartların meydana getirdiği birikimi açığa çıkardığında ortaya çıkmaktadır. Geçmişte, Nijerya mimarisinde var olan süsleme Nijerya’yu oluşturan geleneksel toplumların ayrılmaz bir parçası anlamında fonksiyonel özelliğe sahipti. Nijerya toplumunda süslemenin bir zamanlar geleneksel mimari rolleri çeşitli etkenlerin etkisi altında kalmıştır ve bu etkenler teknolojik ilerleme, hızlı kentleşme ve aynı zamanda kolonicilik olarak sıralanmaktadır. Binaların iç ve dış duvarları üzerinde yapılan süsleme ile ilişkili sosyalleşme süreçleri ve bu ilişkinin Nijerya toplumu içindeki işlevi, eskiden gelenek ve görenek olarak korunurken, sosyal değişimlerin etkisi altında süratle bozulmaya yüz tutmuştur. Örgün eğitimin yanı sıra, geleneksel sanatkarlar ve usta yapımcıların Nijeryalıları geleneksel süslemenin gerçekleştirdiği toplumsal işlevle tanıştılabileceğine ve böylece toplumsal kimlik, uyum ve

daha önceden süslemenin görenekteki ve geleneksel olarak gördüğü görevin kültürel devamlılığının sağlanacağına inanılmıştır.

Bu çalışma, Nijerya mimarisinde geleneksel olandan çağdaş olana dönüşümü ortaya çıkarırken, binaların mimari öğelerinin yüzeyleri üzerinde tasarlanan değişik süslemeleri incelemeyi amaçlamaktadır. Bununla birlikte, çalışma, Nijerya'daki farklı kabilelere bağlı olarak toplumsal hayatta nasıl yankı bulduğunun yanında, Nijerya mimarisinde süslemenin farklı türlerine ulaşmayı veya bunları anlamayı amaçlayacaktır.

Anahtar Kelimeler: Süsleme, Geleneksel Süsleme, Dönüşüm, Malzeme



ABSTRACT

ORNAMENTATION IN NIGERIAN ARCHITECTURE: TRANSFORMATION OF ORNAMENTATION IN NIGERIAN ARCHITECTURE FROM TRADITIONAL TO CONTEMPORARY

Mohammed Sagir Kabir

Architecture

Supervisor: Prof. Dr. Sema Soygeniş

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The link between Nigeria's traditional architecture and contemporary architecture is very impuissant due to the factors like colonialism, modern era, and advancement of technology. The advent of colonialism in Nigeria transmuted the traditional life and culture of Nigeria which engenders an impotent connection between traditional and contemporary architectural ornamentation and Nigeria. With the utilization of forms and patterns as ornamentation on the surface of walls and other architectural elements of building in Nigeria, some changes have been made on ornamentation in the contemporary design as well as the methods, materials, culture and identity as it was utilized in the traditional architecture of the past.

The primitive knowledge on traditional architecture has come to existence when it reveals the accumulation of local climatic conditions, locally available materials, simple construction technique, living style, traditions, and socioeconomic conditions of the region. In the past, ornamentation in Nigerian architecture was functional in the sense that it was an integral part of the traditional societies comprising Nigeria. Various factors affected the once traditional architectural roles of ornamentation in Nigerian society and this includes technological advancement, rapid urbanization and also colonization. The socialization processes associated with ornamentation on walls of internal and external part of a building and its function within Nigerian society, once preserved by custom and tradition have been unsettled rapidly by social changes. It was believed that the traditional craftsmen and master builders,

as well as formal education, could acquaint Nigerians with the social function performed by traditional ornamentation, hence serving to promote the social identity, cohesion, cultural continuity that was formerly provided by ornamentation that functions in custom and traditional way.

This study aims to examine on variant ornamentations, designed on the surface of architectural elements of buildings in finding out the transformation in Nigerian ornamentation from traditional to contemporary architecture. It will also aim to achieve or to see different kinds of ornamentation in Nigerian architecture, as well as how it reflects with the social life depending on different tribes in Nigeria.

Key Words: Ornamentation, Traditional Ornamentation, Transformation, Material.

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1. INTRODUCTION

Architecture is as old as humanity. Regardless of the scope or level, architecture is being defined, man has seemingly had an inbuilt reasoning to provide shelter with as much importance as feeding is a vital requisite for survival. This fundamental requisite has been in a state of progress and development throughout time, from home in caves to skyscrapers and to the most recent ones which could respond to stimuli in the environment. In the process of creating a convenient, satisfactory and suitable shelter, this has been achieved by the human race in different ways to especially relate to the conditions of their immediate external environment.

Traditional architecture and its ornamentation depend on the combination of living style, architecture, religious beliefs, local climatic conditions, and availability of materials. Therefore, traditional buildings depend on the relationship between people and their environment, materials, ecological, social and economic factors. Traditional architecture can also be differentiated according to the availability and type of materials in a certain region, local needs, reflecting local tradition or culture.

There are similarities and at the same time differences in both socio-cultural structure and ideological orientation in Nigeria. Nigeria is a country with the highest number of ethnic groups in Africa, and these ethnic groups share different religious practice and also uphold different social practices and concept. The country is divided into three regions such as the northern part that is mostly dominated by Hausa ethnic group, south-eastern by Igbo, and south-western by Yoruba ethnic group. With these differences in regions, culture and tradition, the traditional buildings as well tend to be different in terms of concept, structure, construction method, and space organization. Materials such as mud, stone, grass, wood, palm, and other vegetable materials were used in the construction of traditional buildings in Nigeria (Mbiti, 1991).

Building ornamentation has been carried out since when people started to make some patterns, symbols, geometric shapes, and quoting from the religious books using alphabets on surfaces of architectural elements and other objects. These symbols and shapes have then been used as

an identity of the people living in that particular environment, and as time goes by, people started making some changes to the ornamentation due to some factors like a change of available materials, international influence, cultural changes, and advancement of technology. Geometric shapes, figures of living creatures, and different colors were added to the ornamentation for political status, historical purposes, to make it look more attractive to the eye, and to give meaning to the object or architectural elements that are ornamented. Other factors that are effective include the materials used for the ornamentation, the tools that are used in creating the forms and patterns, and the method used for ornamentation.

The traditional architecture of Nigeria is well known not just for its flat and domed roof, ribbed vaulting, but also for its ornamentation on the surface of building elements like the roof, entrance door, windows, façade, parapet, and buttresses (Atolagbe and Fadamiro, 2014). Ornamentation in traditional Nigerian architecture can be classified according to the form of the figures, a region where the building is located, type of material used, ornamentation reflecting social statuses such as culture and identity. The form of ornamentation depends on the region, tribe, social status, and most importantly the owner of the building. This means that the form of ornamentation in north Nigeria is different from the one in south-east Nigeria, and the same goes with that in south-west Nigeria and vice versa. These forms started to change gradually from a traditional ornamentation whereas the forms are designed according to the people's culture, tradition, and religious belief, to a contemporary ornamentation whereas the ornamentation is done in multifarious forms on a single surface of an architectural element. However, these factors have been influential as a result of colonialism. When the British came into the country and started changing the lifestyle of the people as well as the architecture to a European one, advancement of technology, and modernism. Hence, these give rise to a contemporary architecture and ornamentation in Nigeria (Carroll, 1992).

1.1 STATEMENT OF RESEARCH PROBLEM

Ornamentation is expressed on architectural elements like windows, doors, finishes, roofs, fenestrations, furniture etc. In the early times, the walls of caves and rocks, as well as those of mud huts, have presented an attractive surface for decoration. But indeed, the two-dimensional art that still exists till today was first carried out on rock walls because they were the only flat

surface available (Trowell, 2003). Ornamentation can be expressed using colors as an art as a two-dimensional or using geometrical shapes in carving the surface of the element as a three-dimensional ornamentation.

However, in Nigeria, ornamentation is visually expressed in the exterior and interior part of a building; it can also be classified in different ways. Different shapes and pattern are used for ornamentation in Nigerian architecture both on the traditional and contemporary buildings, as a result of differences in region, tribe, culture, tradition, and religious belief. Due to technological advancement and other factors, various changes were made from traditional architecture to that of the contemporary one.

- a. What was ornamentation like in the past?
- b. What is the purpose and characteristics of ornamentation in Nigerian traditional architecture and why?
- c. What is it now (ornamentation)?
- d. What changes were made between the ornamentation of traditional and contemporary architecture?

This study aims to find answers to the questions above, by explaining on ornamentation in Nigeria regarding architecture. It also aims to find answers regarding the transition or changes in ornamentation from traditional to contemporary examples.

1.2 SCOPE AND LIMITATION

This research is going to be conducted by studying, analyzing the ornamentation in traditional and contemporary and what changes were made on ornamentation in Nigerian architecture and how these changes happened in time from Nigerian traditional architecture to contemporary architecture. Randomly selected examples of ornamentation will be analyzed from traditional to contemporary in order to be able to know, easily understand, and highlight these changes.

This research, however, will be limited to the examples from traditional architecture before the coming of Europeans to Nigeria with some examples from that period to the contemporary ones starting from when the Europeans started coming to Nigeria and after the independence of the country in 1960 till date.

1.3 METHODOLOGY

Primarily, this research will be a preliminary research whereas the research is used to be able to acquire an understanding of underlying reasons, opinions, and motivation. It also helps in providing insights into a research problem or developing ideas or hypotheses (Slevitch, 2011).

So, this research will make use of different techniques for its analysis, such as:

- a. By way of review of pertinent existing literature such as Nigerian publications (history of Nigerian architecture), architectural magazines, architectural data books, journal articles, seminar papers and reports.
- b. Evaluation of pertinent existing facilities i.e. case studies as a physical observation. Visit of the existing buildings and its facilities in Nigeria. Drawings and pictures of these building would be used for this purpose.
- c. Comparative analysis of ornamentation of traditional and contemporary architecture with regard to the region and culture differences.

2. TRADITIONAL ARCHITECTURE IN NIGERIA

Traditional architecture can be described as the combination of factors like living style, local climate conditions, simple construction techniques, socio-economic conditions, and the available materials of the region. The importance of traditional architecture includes the relationship between the buildings and material, culture, social, and economic factors. Therefore, traditional architecture is categorized based on the availability and type of material in the region at that time, local needs, and also reflecting local tradition and or culture. Tradition can be referred to what has been handed over from generation to generation and architecture can also be referred as the design of buildings and structures for convenient human habitation and utilization (Rikko and Gwatau, 2011).

In this measure, architecture could be described as the art of designing buildings and structures for suitable human habitation and utilization, regarding such factors as the variation in social values for the fulfillment of the social comfort in different societies. The tendency in presenting these values with the kind of life and tradition of the people joined with factors like availability of materials and the use of buildings, will determine the kind of building and design that will function in that society. A good architecture should be able to please most of the user's requirements which include one's physical needs, emotional needs and intellectual needs (Atolagbe and Fadamiro, 2014).

Thus, traditional architecture has evolved for a long period of time in which it has been handed from generations to ours in order to keep the culture and tradition of a society in place and for convenient human habitation and utilization. It can generally be said that traditional architecture is well suitable to the climatic condition of its surrounding, and cultural beliefs which people pass on from generation to generation (Denyer, 1978). People try as much as possible not to forget their culture, their belief, what they learn from their forefathers, they also try to teach those things to their children in terms of what and how their culture is, what it says and what it teaches them. This is how tradition works; it is essential as it also changes with people's belief; it is an essential continuity of the past in the present.

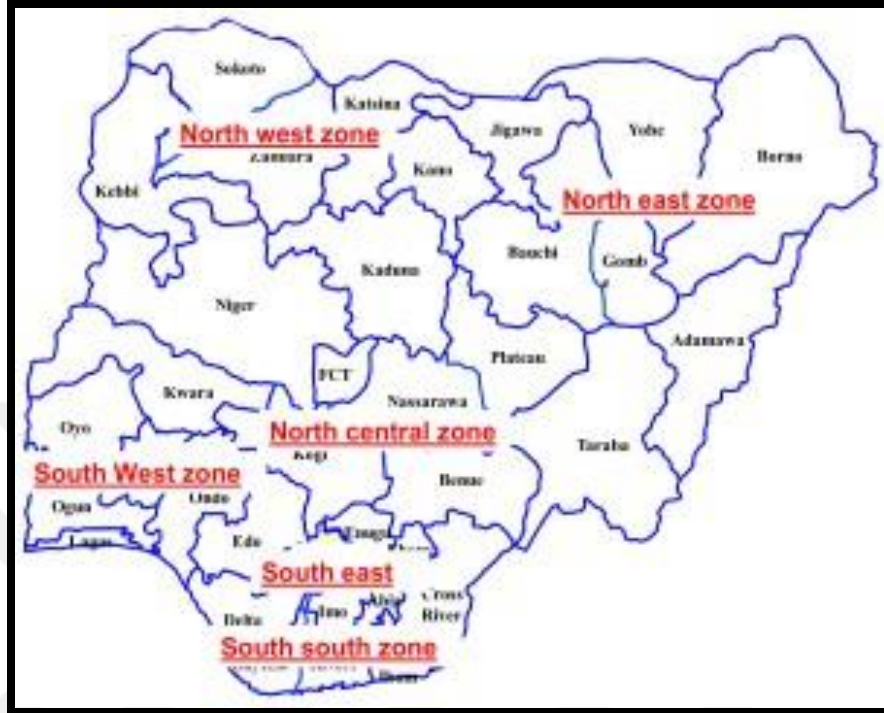
In a nutshell, with above general discussion on traditional architecture, the focus is going to be on Nigeria's traditional architecture. But before discussing on the traditional architecture in

Nigeria, one has to know the history of Nigeria, in order to have clear idea on Nigeria as a country itself. Then I will go further on discussing how the traditional building had developed in Nigeria, by discussing on each of the region's traditional architecture and the characteristics of each tribe.

2.1 INTRODUCTION

Nigeria is located in West Africa in the gulf of Guinea to the south, between Benin to the west and Cameroon to the east. It is placed at 10 degrees north on the latitude and 8 degrees east on the longitude. The Nigerian nation-state is far alike in both its socio-cultural structure and ideological orientation. As the largest population of African country, Nigeria's population was estimated at more than 150 million people, the nation comprises 36 states (and a Federal Capital Territory), and is further sub-divided into six geo-political zones which includes North-east, North-west, North central, South-east, South-west, and South-south (see Figure 2.1). Including religious lines, it is roughly occupied with the mostly Muslim north, and mostly Christian south in both sub-regions, whereby traditional religious practices are common, side by side. There are over 200 ethnic groups, speaking over 200 local languages and upholding highly-varied social practices and concepts (Falola, 2015).

Figure 2.1: A map of the federal republic of Nigeria and six geo-political zones



Source: <https://atiterkula.wordpress.com/2014/05/>

However, the three largest and most dominant ethnic groups are Hausa (north), Yoruba (south-west) and Igbo (south-east) which is all in the southern part of Nigeria. They are also the well-known ethnic groups in Africa, which have a historical background on architecture and also played a huge role in Nigeria's political status. And that is why I will be focusing only on these three ethnic groups. Nigeria was ruled under British colonial from the late 18th century to the time it gained independence in 1960. Traditionally, the local people are farmers; they mainly specialize in food crops (like millet, rice, beans etc.) until the arrival of the colonialists, who recommended such cash crops as cocoa, rubber and palm produce. And today, the nation's foreign revenue is largely derived from petroleum (Osaghae and Suberu, 2005).

Furthermore, Nigeria consist of five major geographic regions which include the hills and low Plateaus north of the coastal zone, a broad stepped Plateau extending to the northern border, along the Gulf of Guinea is a low coastal zone, the River Niger-River Benue valley, and a zone of mountains along the eastern border which is the country's peak point.

Nigeria consists of two principal rivers: the River Niger- River Benue basin, the Lake Chad basin, and the South Atlantic or Gulf of Guinea basin. The River Niger is the largest in West

Africa and it also consist of so many rapids and waterfalls, but the Benue is not stopped by either of the two and is navigable throughout its length except during the dry season. Temperature across the country is relatively high with a very narrow variation in seasonal and ranges (22oC – 36oC). There is two basic seasons, wet season, which lasts from April to October; and the dry season, which lasts from November through March. The dry season commences with harmattan, a dry chilly spell that lasts till February and is associated with lower temperatures, a dusty and hazy atmosphere brought about by the North-Easterly winds blowing from the Arabian peninsula across the Sahara; the second half of the dry season, February – March, is the hottest period of the year when temperatures range from 33oC to 38oC. The extremes of the wet season are felt on the south-eastern coast where annual rainfall might reach a height of 330cm; while the extremes of the dry season, in aridity and high temperatures, are felt in the north, a third of the land mass (Workmall.com, 2002).

2.2 TRADITIONAL ARCHITECTURE IN NIGERIA

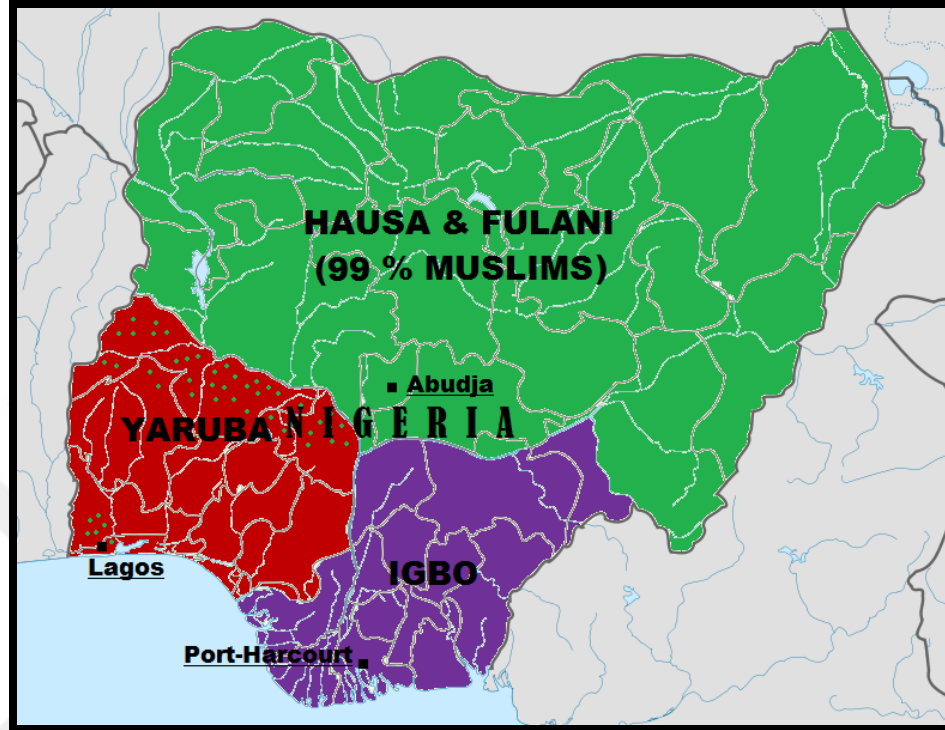
With so many ethnic groups which have a lot of differences among them, the traditional architecture in Nigeria is the same in most of these tribes because of the availability of materials, and these materials that are common are mud and grass. In most of the tribes, there are cultural and religious differences. As mentioned earlier that Nigeria has a very high temperature, so the people tend to use the available materials in order to make a shelter for themselves which will at the same time relate to the climatic condition of the region. The traditional building can be traced to the late Stone Age when the hunters move around in search of food; they tend to make a shelter for themselves by building a temporary structure. Human shelter appeared to be simple but it just lasts for months or sometimes few days (Prussin et al., 1975). People don't stay in one place, in that case, they tend to make tents as a shelter for them to stay within a small period of time before they move to another place. Tents are also used as permanent buildings in Nigeria long ago. Gradually, the temporary structures started transforming to a highly durable form. Continuously after the emergence of agriculture, the people started staying for a longer period of time in a particular location and more durable and permanent structures started appearing. However, the shelter started expanding from functioning as simple homes, to serving other important events like festivals, food storage,

religious ceremony, and so on. As the society started growing bigger, the structures started having symbols and other functional values. From the usage of early building materials like leaves, sticks, and reeds, the people develop to the idea of using stronger and long lasting materials like stone, timber, and so on (Ejiga, Obi Paul and Cordelia, 2012).

The traditional houses were built in Nigeria so as to meet their basic survival, religious, social, and cultural needs. Materials which are available and mostly used for the traditional houses in Nigeria include mud, stone, grass, wood, and palm. Thus, people tend to make use of these materials and make a shelter for themselves even though the construction of permanent buildings was not fully introduced. Because of the diversity in culture and religion and difference in climatic condition, the traditional housing form is different in Nigeria. This differences start with different religious belief especially Islam, Brazil, and colonization (Gardi, 1974). The common difference of Nigeria's traditional architecture can be found between the North (mostly Hausa-Fulani) and South which is sub-divided to south-west (mostly Yoruba) and south-east (mostly Igbo) (see Figure 2.2), and this is best marked by the style and housing form in that region. Over time, however, the traditional housing form started changing after the introductions of Islam to the Hausa-Fulani land (Northern Nigeria), the return of the former slaves of the Americans (most specifically the Brazil), and also colonization (Carroll, 1992). There are three different regions of traditional architecture in Nigeria and this include:

- a) Northern Nigeria (Hausa traditional architecture)
- b) Southwestern Nigeria (Yoruba traditional architecture)
- c) Southeastern Nigeria (Igbo traditional architecture)

Figure 2.2: Ethnic map of Nigeria



Source: <http://www.poverties.org/poverty-in-nigeria.html>

2.3 NORTHERN NIGERIA

Northern Nigeria was an independent division in Nigeria, precisely different from the southern part. Even though there are other ethnic groups in northern Nigeria like Berom, Nupe, Gwari, Jukun, Fulani, and so on, Hausa is the most powerful and well known in that region. A discussion is going to be made on Hausa by first making a general discussion on Hausa as a tribe, the language, religious belief and way of living (Parris, 1996).

2.3.1 Hausa

Hausa is the largest cultural group in the northern part of Nigeria. Traditionally, they are characterized by large social gatherings (as evidenced by such cities as Zaria and Kano), and are arable farmers (growing cotton, groundnuts, and food crops), and also trading in agricultural produce, textiles, leatherwork and basketry as traders. They are mostly Muslims, with religious laws educating mode of dressing, social interactions, and even affecting structural regulation in their traditional architecture (Agboola and S M, 2014).

Agriculture in the range is administered by two primary seasons; serious cultivating is carried on in the short rainy season which endures from May to September; amid the dry season building, weaving, preparing and different artworks are carried on. This as well is the time for clearing of the bush, hunting and marriage festivals. Groundnuts, cotton, conceal (hides) and skins are the main cash crops (money products) while Guinea corn, millet, rice and cassava are developed in different parts of Hausa land as food crops (Koslow, 1995). As per tradition, Islam was presented into Hausa land in the fifteenth century by traders from Mali, yet it made moderate progress at first in the Hausa states and was not completely acknowledged until the Fulani triumph (1804 to 1807) (Moughtin, 1964).

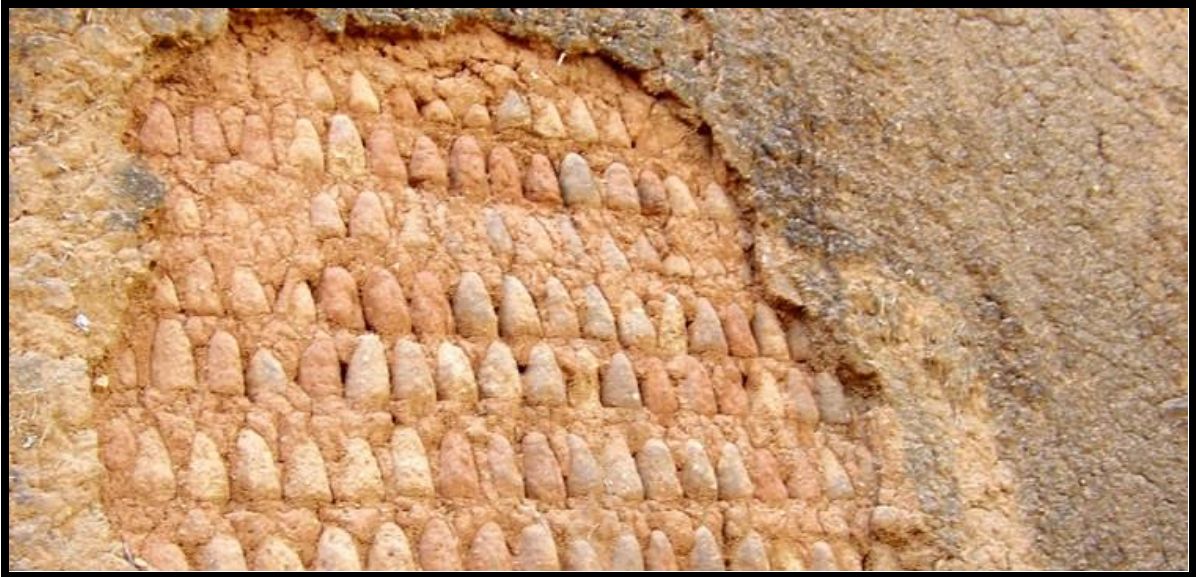
2.3.1.1 Hausa Traditional Architecture

In Northern Nigeria, there are two types of housing and this include:

- a) Hausa housing which is more dominant in northern Nigeria, and
- b) The Fulani migrant housing which can also be referred to as a tent. The Fulani people use the tent as their house and also as food storage. Most of them don't stay in one place for a long period of them, so in that case, they build a tent as a temporary house.

The housing structure and form has been affected by climatic, religious and sociocultural components of the environment. The Hausa traditional house form is based on the available materials which are used for construction. These materials include timber, stone, reed plant, earth, and these materials were not manufactured by a company or even fabricated. The people tend to utilize the useful materials like soil and vegetation which were available at that period of time. However, the soil in Hausa land was loose and less plastic, so they add up some materials like manure, locust bean gum, and grass to the soil before molding in order for the mud to improve its plasticity (Dmochowski, 1990). As per Friedrich (1982), Islam had doubtlessly some impact on the building organization especially in the urban regions of Hausa land.

Figure 2.3: Wall made of adobe and plastered with earth



Source: <https://afrimod.com/stylebooks/silence-of-adobe/>

Hausa traditional building design is famous for its ribbed vaulting, dome and etched and painted outer wall decoration. It is constructed with red laterite soil found around the neighborhood, which is then molded into a shape of a pear and dried under the sun. After it has been skillfully molded, the red laterite soil makes it a very good material for building roof and wall because it contains high fiber (Osasona, 2007). The egg-shaped units of adobe plastered with earth are then put together in creating a building which gives it a massive form (see Figure 2.3).

The roof structure is then constructed with a small door opening and a very little window or sometimes, no window so as to take out the dry, dusty and hot air out of the building. The opening also helps in bringing in bright daylight and also helps in cooling the building at night when the cool air comes in. The roof structure openings also help in reducing dust in the building and also the attack of flies. The mud roof is constructed with the palm frond pieces and palm frond beams attached together in a herringbone way and then both sides plastered with mud, which makes it strong and hard. Plaster of wall is done with mud which contains mixing potash or locust bean juice. The use of vaulted and flat roofs without thatch in the traditional architecture of the Hausa land is a method of preventing the fire from happening; therefore, a policy is created on prohibiting the use of thatched roofs around the urban areas

(Agboola and S M, 2014). The difference between the rural and urban architecture in the Hausa land started to appear after the creation of this policy. Therefore, the structures in the urban areas changed to a mud roof and rectangular wall, while in the rural areas they remained as they were before, usage of thatch roofs continued. However, the use of mud roofs respond to the temperature difference between day and night better because, it helps in maintaining the temperature of a room and it is a semiconductor (see Figure 2.4) (Urquhart, 1977).

Figure 2.4: Hausa traditional building in a village in Katsina



Source: Author's fieldwork

2.4 SOUTHEASTERN NIGERIA

2.4.1 Yoruba

The second region is south-eastern Nigeria and it is mostly occupied by Yoruba people who are called Yoruba and also speak the Yoruba language. The Yoruba constitute one of the three popular ethnic groups in Nigeria and they adequately involve the entire of Ogun State, Ondo

State, Oyo State, Ekiti State, Lagos State and some part of Kwara State (Atanda, 1980). Apart from Nigeria, Yoruba can also be found in some parts of African countries like a South-eastern piece of the Republic of Benin, Togo and Dahomey in West Africa, the West-India and South Africa (Balogun, 2007). There is likewise a flourishing Yoruba culture in South America and the Caribbean, particularly Brazil and Cuba where the relatives of the foreigners to the new world have possessed the capacity to keep their identities and protect their social legacy (Gbadegesin, 1984).

The rural Yoruba (in southwest Nigeria) have traditionally lived in the large social grouping. They are famous for their art – particularly bronze-casting, terracotta and wood sculpting. Traditionally, they have largely embraced Christianity; however, there are also few people who practice traditional religion such as idol worshippers and Islam (Laitin, 1986). Since the southern parts of Nigeria were readily penetrated by the British colonialists, Yoruba land gained western imports such as formal education, architectural style, and trade in cash crops.

2.4.1.1 Yoruba Traditional Architecture

Yoruba traditional architecture had passed from generation to generation. The most important element in Yoruba traditional building is the compound where the members of the house gather for a family meeting and also where visitors are kept. In Yoruba land, the materials used in building construction are the same as the ones used in the Hausa land and also Igbo land, these include earth, timber, reed, and stone. The housing structure is affected by the climatic conditions, religion, and socio-cultural components of the environment just as mentioned in the Hausa traditional architecture (Adeyemi, 2008). The Yoruba traditional building is also constructed with available materials found in the region like laterite soil unlike in the present day whereby bricks are used. The laterite soil in Yoruba land is sticky and strong unlike the one in the Hausa land which is loose and less plastic (Adedokun, 2014).

Figure 2.5: Sun dried mud brick

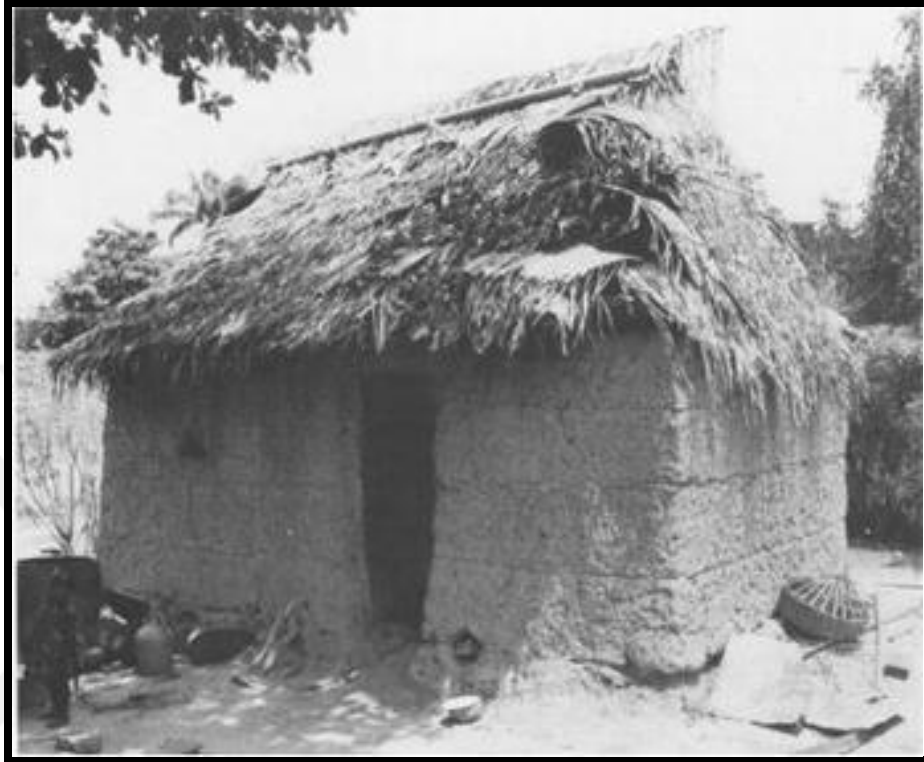


Source: <http://buildinglocal.files.wordpress.com/2011/10/adobe-2.jpg>

When forming a mud brick as shown in for the construction of building in south-west Nigeria as shown in Figure 2.5, an area of land is set and the laterite soil is dug up. This was normally done in the rainy season so as to have enough water on the laterite for feet treading process. The laterite is then mixed with water and trodden with feet. This is done repeatedly for several times so as to have a fine and soft laterite soil texture. In order to prevent the laterite soil from hardening, it is then put on the site and covered with large banana or plantain leaves (Umoru-Oke, 2010). So they do not add up any other material when mixing the laterite soil because it is fresh and sticky. The mud bricks are then put together in creating a building which gives it a strong form.

The roof in Yoruba land has a peak top and it is mostly gable roof or hipped roof and is constructed from the collection of palm leaves and palm frond beams which are arranged and attached to each other in a suitable way so as to make it hard and prevent water from penetrating as shown in Figure 2.6. Due to a very long period of time, people stay in a house without renovating or moving to another one, the Yoruba people take very good care of their houses in terms of material use and construction so the tradition continues (Osasona, 2007).

Figure 2.6: A roof made from the collection of palm leaves in a traditional Yoruba building



Source: <http://ant3145yoruba.wikispaces.com/Architecture>

The Yoruba house is known for its rectangular arrangements of spaces around a courtyard which act as the main point of the house and a place where all the members of the family come together. The open courtyard also serves as a means of moderating the temperature of the building. Leading to the courtyard is the entrance verandah. It is an area where visitors are received or kept without entering into the house and it also serves as a point where the family members get together for discussion and other family matters (Jiboye and Ogunshakin, 2010). Around the courtyard is the verandah, which provides easy access to the rooms. Some rooms in Yoruba traditional building don't have windows. While in other units of the building, windows are constructed in a very small size. The rooms are usually the combination of bedroom and parlor, and they also serve as a workshop or food storage. However, the room tends to be very large and in that case, they divide it into two using a mat or cloth and one of it will be the room and the other one will be the workshop. The main entrance of the house leads to a central courtyard. In the Yoruba traditional architecture, there can be more than one

courtyard in a house and this depends on the head of the house and social status of it. The roof in traditional Yoruba land is mostly a saddle-shaped roof which covers the verandah inside the house. They also create a space in the ceiling for storage (Vlach, 1984).

2.5 SOUTHEASTERN NIGERIA

2.5.1 Igbo

The third region is southeastern Nigeria, and it is mostly occupied by Igbo people and that is why it is also called the Igbo land. The local language in this region is Igbo. Other ethnic groups in this region include Ijo, Ibibio, and Efik (Ekwunife, 1990).

Igbo is one of the three well-known ethnic groups in Nigeria. Regarding area, the Igbo occupy the most of the South-eastern parts of Nigeria. It is generally said that while Hausa and Yoruba occupy different nations in Africa, the Igbo are found as an indigenous populace in no other place other than Nigerian. Igbo elders have kept up that the Igbo are indigenous to their present area in Nigeria and had not moved from their area to another place. The Igbo have a typical border with some tribes like the Igala and the Idoma on the Northern piece of Nigeria, the Ijaw and Ogoni on the South, the Yako and Ibibio on the East and the Bini and Warri on the West. The majority of the population lives east of Niger, Okigwe, Orlu, Owerri, Onitsha, and Awka cities. The other piece of the Igbo gathering lives in the west of the Niger (Nwoye, 2011).

Igbo land has a tropical atmosphere. The normal yearly temperature is around 27°C, with a yearly scope of somewhere around 5 and 10°. There are two apparent seasons of the year in the Igbo land and they are dry season and rainy season. The dry season begins in October and ends in April while the rainy season begins in April and ends in October with. However, in the south-east of Nigeria, the Igbo are acclaimed for their industry, and also for being ambitious in the field of business and trade. In terms of construction techniques and material, the architecture of Igbo and Yoruba is closely related. Yet, they have a different culture, the symbols attached, designed and or decorated differ from each other.

2.5.1.1 Igbo Traditional Architecture

The Igbo traditional architecture can be described as the architecture that has been specifically identified with the Igbo, which has been passed on from one generation to another. The culture of the Igbo has a very strong influence on their traditional architecture because all the traditional building functions relate to the culture and lifestyle of Igbo. In every Igbo traditional building, there is a meeting room where the heads of the family gather for family discussion or for guest (see Figure 2.7).

Figure 2.7: Igbo traditional meeting room



Source: <http://www.nairaland.com/1005808/igbo-architecture-ulo-ome-nigbo/4>

In Igbo land, soil is very important because mud is one of the major materials for Igbo traditional building. It is used for vegetation from which cord, timber, grass, and bamboo are acquired for building construction. The traditional buildings were mostly built in the dry season because building materials like grass, timber, and bamboo are collected in this season. All types of building materials depend on the vegetation growth. Although the soil in Igbo land has a good clay content which makes it suitable for traditional mud building, a limitation is set on using mud for building in the urban areas of the Igbo region (Rikko and Gwatau, 2011).

Construction of traditional building in Igbo land is more of a social activity. Traditional buildings were built by the men, women, and their children whereby the men engage in doing the hard work of preparing the materials and constructing the house while the women and children engage in fetching water, helping the man in preparing the materials and sometimes do the wall finishing. The structural system used in the Igbo land includes the load-bearing wall, solid mud wall structure, the skeletal or timber framed structure, and the composite structure (Adedokun, 2014).

The form of the building could be circular, square, oval, rectangular or a combination of any. The compound wall is built in a way that the main entrance of the building will face the pathway. The solid mud wall includes using preformed lumps of sun-dried mud which is also popular for Hausa traditional building in the Hausa land. In this method, the walls do not show many cracks, but it takes a long period of time for the lumps of mud to get dry in the sun. The openings (doors and windows) are left open in the process of wall construction. The Igbo use timber for lintels. The nature of the roof structure is determined by the roof form. People use different kinds of roof form which include gable, hipped, conical and pyramid, which determine the building form (see Figure 2.8). For example, building with circular form goes with the pyramid, conical roof, or sometimes gable or hipped can be used as well (Aniakor and Dmochowski, 1994).

Figure 2.8: A traditional Igbo building showing the roof and openings



Source: <http://www.nairaland.com/1005808/igbo-architecture-ulo-ome-nigbo>

2.6 EVALUATION

A traditional house in the northern part of Nigeria consists of a rectangular and circular space units connected together by the division of walls making a border wall. And the roof consists of connecting domes and vaults. While in southwestern Nigeria, the people live socially in a large group. In this case, they build in a large compound with each room surrounding a courtyard which includes a big veranda used for environmental control and other social activities. This makes the form of the traditional building rectangular, and the roof of the building is normally sharp hipped top and it consist of thatch which makes it totally different from the traditional building in northern Nigeria. In southwestern Nigeria, the traditional architecture is similar to the one in southwestern Nigeria in terms of building materials and the technique they use in building.

With the distinction of religion and society, individuals in the northern Nigeria have their own style of Architecture. They generally utilize the Islamic style of design which is gotten after Islam is brought to the north. Islam had a very strong influence on traditional architecture in northern Nigeria because of the use of geometrical shapes for the building and space arrangement for privacy. It had an effect on the building's proportion, form, art in terms of decoration, and scale. The dome roof made of mud became very popular in the north and the symbol decoration on the interior and exterior walls of the building which was adopted in mosque ceiling decoration (Shafiq, 2014). The clay walls began to change to a painted decoration finished in the paint and sometimes after carving of the wall surface of patterns, it is then painted in different colors.

While in the South, where the individuals there are basically Christians, they utilize the Brazilian style of design which started when so many slaves were freed from Brazil and then returned to West Africa. At the same time, the individuals utilize the same material in development in light of the fact that they need to utilize the main material they have around them (Gutkind, 1953).

After the slaves were freed, they started reconstructing their houses to the Brazilian style of buildings using the available materials and from then, the name Brazilian style appeared in Nigeria. The style of the building turned out to be different from the one in northern Nigeria in terms of form and space organization. So, the people in the south began to change the

buildings to Brazilian style. Two-storey houses were built in cement and also decorated with heavy ornamental pillars. The walls of a traditional building in the south part of Nigeria are ornamented using paint color after plaster. The patterns used are mostly figures of living things like animals or human figure because the people in the south use those figures for ritual in shrines, and they maintained their tradition by making these kind of figures on the surface of their house walls, so it stayed part of their culture. While in the north part of Nigeria the pattern used on the surface wall are mostly geometric shapes and objects which were used for war by the traditional rulers. One of the objects that is mostly used for ornamentation in the north part of Nigeria is sword. People in the north part of Nigeria do not use figures of human and animals as a pattern of ornamentation because this kind it is not allowed in the people's religion, which is Islam. The method used for ornamentation of traditional buildings in the north part of Nigeria is mostly carving of the wall surface after plaster which gives it a three dimensional look and in the south; they mostly paint the wall surface in patterns and figures making it two dimensional. Thus the people in the south also use sculptures as a form of ornamentation.

3. ORNAMENTATION IN TRADITIONAL NIGERIAN ARCHITECTURE

3.1 INTRODUCTION

Buildings provide not only forms and structures, but also the context, text, and signification to cultural and social life. When it comes to architecture, the existence of symbolism is at various levels. Nevertheless, we aim to link it generally to the religious and historical structures as the representation come out to be very specific and intellectual in them (Herrle and Erik, 2008). Symbols are used on plans and also on buildings just as it is used on some ancient buildings and other religious buildings in order to represent the identity in terms of culture in an environment. Symbols have then been used on buildings in order to give a meaning to that building as well as what the building stands for. So symbolism can also be defined as the use of symbols or images in an orderly way in order to create an additional level of meaning. It is the applied use of any iconic or historic representations which carry specific meaning. Symbols also give meaning to plant, animal, or an object (Rainer and Rivera, 2006).

So, symbols, patterns, geometrical shapes, and alphabets are expressed not just on architectural elements like windows, furniture, doors, finishes, roofs, fenestrations, etc., but also on gowns, and other objects in Nigerian culture. In the early times, the walls of caves and rocks, as well as those of mud huts, have presented an attractive surface for decoration (Moughtin, Oc and Tiesdell, 1995). But indeed the two-dimensional art that still exists till today was first carried out on rock walls, because they were the only flat surface available. In order for the color pattern to be confined to greys and whites, blacks and browns, dark red and yellow, the rock walls were painted in earth colors composed of soot and also vegetable dyes. The point of need for regular pattern was not advanced, and even today most of the cave and wall paintings exist without any treatment for the decoration (Trowell, 2003).

In a nutshell, with above general discussion on ornamentation and symbolism, this chapter aims at examining ornamentation in selected group of Nigeria and finding out the changes made from traditional to contemporary architecture. Different types of ornamentation will be discussed with respect to the materials used, its location on building and type of pattern used. This will be of help in making a table analysis which will include different types of

ornamentation used by the three regions in Nigeria from traditional to contemporary architecture. Therefore, ornamentation in traditional architecture will be examined first, then followed by the contemporary one.

Ornamentation plays an important role in Nigerian traditional architecture. Traditional buildings in Nigeria can be identified with the use of ornamentation on the surface of architectural elements of a building (Rikko and Gwatau, 2011). Ornamentation in traditional Nigerian architecture can be a traditional art that is visually expressed on the surfaces of exterior and interior parts of a building, which also defines the social function and symbol of a building in terms of the visual symbol of culture and identity, authority and power. This ornamentation is normally found mostly on façade of a traditional building that is made of mud and Laso (that is local cement). Ornamentation in Nigerian traditional architecture can be classified in different ways like materials used, ornamentation to reflect social status, symbolic meaning, the location of ornamentation and region depending on the style and form. This means that the style used in the northern Nigeria by Hausa people is different from the style used in the southeastern Nigeria by Igbo people, as well as that of southwestern Nigeria by Yoruba people and vice versa, but it mostly depend on the owner of the house and the tribe he or she is in (Moughtin, 1985).

So, the explanation and description of different forms and patterns of ornamentation will be discussed in this text according to the regions as well as tribes in Nigeria and they include:

- a) Ornamentation in northern Nigeria (Hausa ornamentation)
- b) Ornamentation in southeastern Nigeria (Igbo ornamentation)
- c) Ornamentation in southwestern Nigeria (Yoruba ornamentation)

3.2 ORNAMENTATION IN NORTHERN NIGERIA (HAUSA ORNAMENTATION)

For the Hausa people settled in the northern part of Nigeria, the traditional architecture is an advanced urban technique, Sudanese technique, that is well known for its structural and architectural systems like, flat and domed roofs, ribbed vaulting, as well as complex wall decoration, that is formalized, avoiding the use of living forms in order to keep with Islamic tradition (Chokor, 2005).

3.2.1 Materials and Patterns

Plaster is a building material used for coating of wall surfaces and other building elements for protection and decoration of the building elements. It can be used in form of two dimensional or three dimensional by carving the wall surface. The plaster types used in the Hausa traditional architecture are categorized according to the content of their material, which includes:

- a) **Makuba plaster:** It takes the name from the fluid deriving from the skin of a locust bean tree that is called “Parkia Filicoider”. This type of plaster helps in improving the impermeability of water and also helps in protecting it from termites. It has plasticity and it allows itself in preparing molded design on the surface wall (Rainer and Rivera, 2006).
- b) **Laso plaster:** It is also known as the local cement. It is regarded to have the same properties as cement. This kind of decoration is a relief one, which is made from mud and also protected from rain by locally made cement called Laso. It is usually used on building that requires a high level of impermeability of water such as on surfaces of wall parapets, flat or domed roofs (Hussaini, 1999). The relief type of decoration is carried out by the craftsmen who more often work for the royal family as royal builders, whereby their work is conducted by a master builder (Moughtin, 1964).
- c) **Chafe plaster:** It is made when a viscous fluid that is retrieved from either a locust bean pod (locally known as Makuba) or Acacia tree (locally known as Bagaruwa), is added to black earth. The mixture is then covered on the wall surface, and the plaster is left for a short time to be partly dry. Therefore, a flat tool is used in pressing sieved gravel gently on the partly dried surface wall. After a wall surface is covered with this plaster, the surface can then be decorated in geometric patterns before it completely hardens (Rainer and Rivera, 2006).

All types of plasters are done traditionally with the availability of the materials. The traditional wall decoration in the northern region of Nigeria is carried out in the dry season after harvesting. Ornamentation in northern part of Nigeria, the Hausa traditional ornamentation done by plaster and paint or without paint can be classified into different patterns and they include:

- a) Scroll pattern ornamentation,
- b) Interlocking and interior angle symbol pattern (Kirk-Greene and Crowder, 1963).

3.2.1.1 Scroll Pattern Ornamentation

Depending on the idea of the master builder as well as the owner of the house, the architectural patterns used on the earth wall as ornamentation are mostly leaf pattern, triangular shapes, rectangular shapes, and also circular motifs (see Figure 3.1) and this kind of pattern is also known as scroll pattern ornamentation. The prevailing colors used for this kind of ornamentation are categorized between white and grey colors. The scroll pattern ornamentation can be found mostly on the façade of a house, and it is usually spread around the doorway and may extend towards the upper part of the wall (Kirk-Greene and Crowder, 1963).

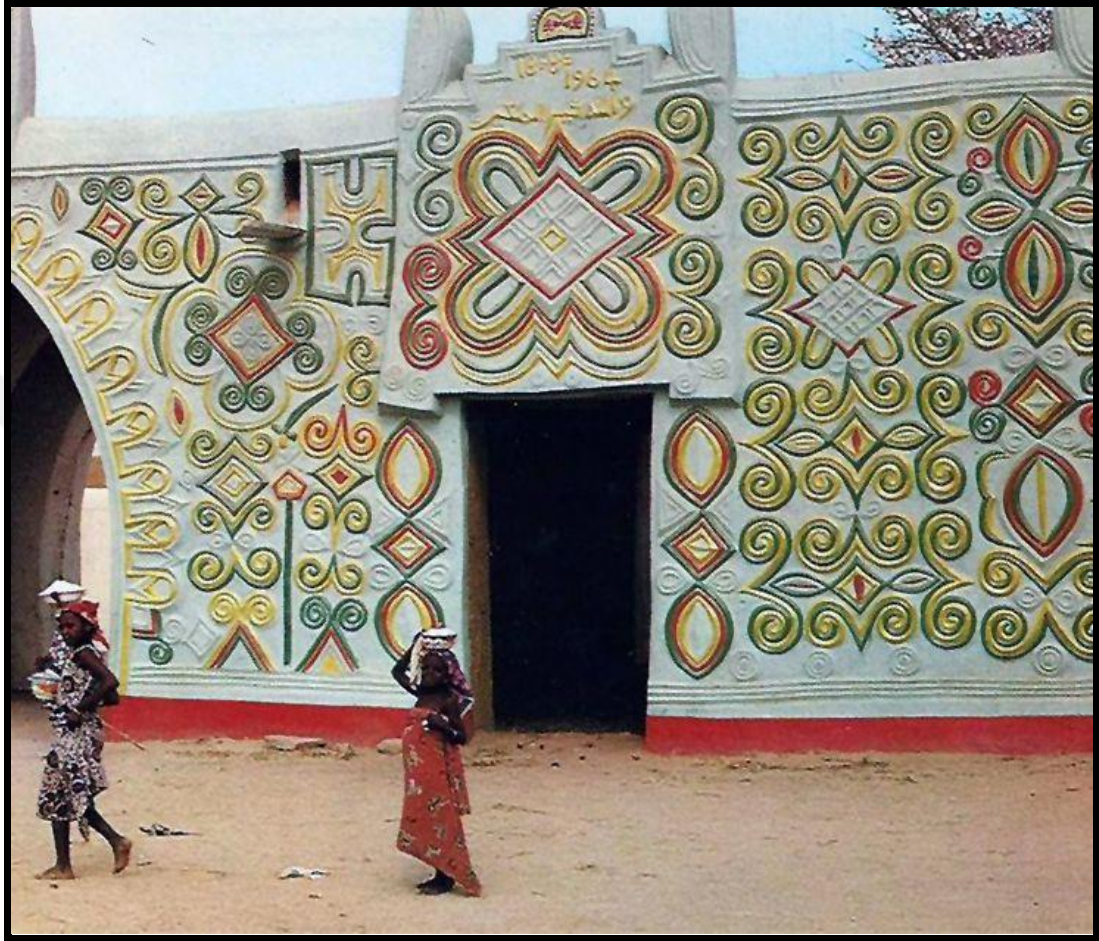
Figure 3.1: Making of some patterns on wall surface



Source: <https://www.pinterest.com/pin/356910339192715745/>

Additionally, scroll ornamentation is usually found in the house of the rich, and the royal houses which help in characterizing the political status and excellence of the house owner. Other people as well decorate just the external part of the building, most especially the façade, or window opening, parapet, buttresses. And this ornamentation can tell how wealthy the owner of the house is in terms of how it is well expressed on the surface of the walls. This means that the idea of decoration do not simply define the visual aspect or attraction of a building but also it is socially symbolic in terms of the visual symbol of culture and identity, authority and power (Kirk-Greene and Crowder, 1963). It also helps in providing a beautiful living environment that is visually satisfying as well as protecting the outer surface of the wall from rain as mentioned earlier. An example of this type of pattern can be found in Zaria city on the wall surface of the emir of Zaria's palace as shown in Figure 3.2. This type of ornamentation is mostly found in the historical places in northern Nigeria that are occupied by the Hausa people and they include cities like, Zaria, Kano, Katsina, Bauchi, and Sokoto (Schwerdtfeger, 1982).

Figure 3.2: A scroll patterns ornamentation found in front of the emir of Zaria's palace in Zaria city

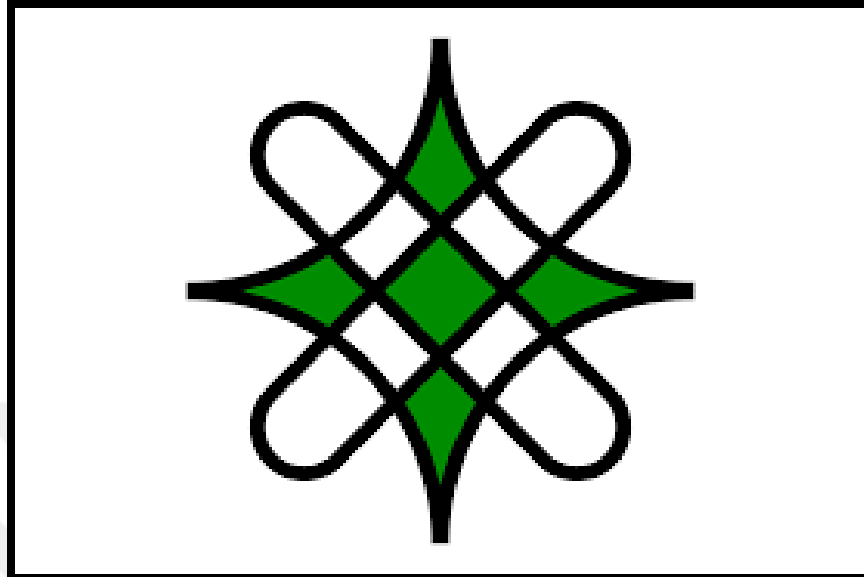


Source: <https://www.pinterest.com/pin/145522631683953127/>

3.2.1.2 Interlocking and Interior Angle Symbol Pattern

This type of pattern also uses plaster as the main material and then paint of different colors depending on the owner or decorator. In this type of pattern, two parallel lines are cut across at the center, laid over a rectangle with pointed shape, which results in a star shape as a symbolic indicator of Hausa identity (see Figure 3.3). It is a three-dimensional pattern that consists of carved interlocking lines that join at each of the four end points in a semicircular shape. Ornamentation of this type symbolizes authority, power, and wealth. Additionally, it beautifies, represent, and exalt the important image of the emir as the ruler with power and authority in the Hausa society.

Figure 3.3: Traditional symbolic indicator of Hausa identity



Source: https://en.wikipedia.org/wiki/Hausa_people

In some cases, the interlocking pattern ornamentation can be designed on a wide wall surface (see Figure 3.4). However, depending on how rich the owner of the house is, the size and final appearance of a house ornamentation changes. This pattern is found not only on building elements, but also on traditional dresses or gowns of the Hausa, most especially the traditional political leaders (Emirs), and other political executives of the Hausa. In order to achieve the productive aesthetic function of beautifying the environment, the ornamentation protects the exterior of houses from rain (Schwerdtfeger, 2007).

Figure 3.4: A contemporary building with interlocking symbol pattern ornamentation found in Kano emirate council in Kano city



Source: http://www.tripadvisor.com/Attraction_Review-g317072-d479545-Reviews-Emir_s_Palace-Kano_Kano_State.html

3.3 ORNAMENTATION IN SOUTHWESTERN NIGERIA (YORUBA ORNAMENTATION)

Ornamentation in the south-west part of Nigeria is common for its figurative and an abstract painting on the surface of a building element expressed as a two-dimensional form of ornamentation (Jānī, 2011). Sculptures are used as columns as a three-dimensional form of ornamentation and this has been a significant component of Yoruba religion, culture, and tradition (see Figure 3.5). The three-dimensional form of ornamentation like the use of human and animal figures on surfaces of building elements can be found in the sanctuaries and place of worship while the two-dimensional form of ornamentation like painting is expressed on architectural elements like doors, door posts, and wall surfaces of sanctuaries. These architectural elements are ornamented with symbols, patterns, images etc., whereas these forms are considered to be the images of living creatures of either human, animals, or the use of both on a wall surface (Parrinder, 1970). The ornamentation was used as a form of ritual art

in the late 18th century. In Yoruba perspective, ‘Obatala’ is considered to be the first artist as well as a pioneer of painting in shrines. He does not acknowledge realistic images of man and animal, but an abstract and linear form of expression of an image like painting in the ritual art of the Yoruba people (Aremu et al., 2012).

Figure 3.5: Sculptures used as a support for a column



Source: <http://www.susannewenger-aot.org/projects/restoration-of-iledi-ontotoo/>

3.3.1 Materials and Patterns

Normally in the south-west part of Nigeria, ornamentation like painting is done on the surface of the wall after plaster with materials like brush, chalk, crayon, felt pen etc. The designers who are mostly old women are able to create patterns, geometric shapes, and shapes of other living creatures. Most of the ornamentations are typified by colors, patterns, and symbolic forms.

The designer establishes a soul-inspiring work of divine creativity by combining colors, geometric shapes and abstract form of living creatures in a single ornamentation, and this can

be found mostly on the wall surface of the shrine (see Figure 3.6). In the process of making the ornamentation attractive, animals such as tortoise, lizards, birds, snake shapes, etc. and diagrammatic lines of various thicknesses are used. Both animal and color patterns used have meanings which also help in defining the building that is ornamented. The use of symbols like geometric shapes, sun, chevrons, the moon, and conventionalized pattern on architectural elements can also be found in the south-west part of Nigeria (Mbiti, 1991). Ornamentation of images, patterns, and symbols are also inspired by religious ideas and these forms help in communicating and strengthening the religious ideas.

Figure 3.6: Shrine wall painting created by K.Kenny



Source: <http://www.susannewenger-aot.org/projects/restoration-of-iledi-ontotoo/>

The color used for ornamentation in the south-west part of Nigeria includes white, yellow, red, and black. In order for the colors to last long and stick onto the surface of the element, animal fats were added to the colors to make it thick and pasty like paint which was coated onto the surface of building elements. Generally, these materials of ornamentation are composed of the natural and immediate environment (Thompson, 1968).

3.4 ORNAMENTATION IN SOUTHEASTERN NIGERIA (IGBO ORNAMENTATION)

Ornamentation in the south-east part of Nigeria mostly occupied by Igbo can be traced when people in the region started to express features of their culture and tradition with symbols and signs. These symbols and signs were expressed on rock surfaces, and caves in the form of painting, as it is a tradition of man for a long time (Rapoport, 1969). So the Igbo people went further by expressing these traditional and cultural symbols and signs on the surface of their building elements.

Ornamentation in the south-east part of Nigeria is carried out in a two-dimensional form mostly by the women. Annually, they decorate the wall surface of their compound with regard to the use of forms varying from natural to animal and conceptual objects for an attractive ornamentation.

However, as a result of lack of documented, written, and taped history on the culture and tradition of the south-east part of Nigeria most especially the Igbos, no one can tell when exactly traditional ornamentation started. But a statement can be made that traditional architecture is not complete without some patterns and designs, and just as traditional architecture has been used for centuries by the Igbo people, then ornamentation in this region can be said to have played a huge role in the past (Okpara, 2012). Moreover, in order to achieve the aim of this text, ornamentation in the south-east part of Nigeria will be described according to the use of materials and patterns.

3.4.1 Materials and Patterns

Ornamentation in this region is expressed on building surfaces with colors, patterns, and techniques. Painting of walls and other architectural element is a form of ornamentation in the Igboland. The tools required for this kind of ornamentation are natural tools and they are not gotten from the market but made by the decorators themselves, and were derived from their environment. Most of the tools used are thrown away after use by the users because they are produced by them, and the materials used in producing the tools are available within the environment. These natural tools include smooth stone, coconut shell, clay pot, and local brush. Ornamentation of traditional building elements in Igboland starts up after plastering the

surface of the element with a reddish brown soil like clay, which is available within the environment. Gradually, the surface of the element is then smoothed by coconut shell and smooth stone, and the pattern is ornamented with paint color and local brush on the surface of the element. This process is also carried out together with the women as shown in Figure 3.7, who also make the ornamentation on architectural elements and their body for the medicinal purpose. The use of smooth stone for ornamentation in traditional architecture is for smoothing wall surfaces and other architectural elements. It is also used for crunching the paint materials ingredients such as leaves and charcoal. Coconut shell is used for smoothing wall surfaces and other architectural elements just before ornamentation material is applied to the surface.

Figure 3.7: A woman ornamenting some patterns on wall surface



Source: <http://grandmotherafrica.com/legendary-uli-women-nigeria-life-stories-signs-symbols-motif/>

The clay pot is used for storing paint and other liquid substances used for ornamentation. It is also used when mixing the ingredients for making color paint. And lastly, the local brush is used for the application of colors to the wall surface just after plaster (Aremu et al., 2012).

Patterns used in traditional ornamentation in the south-east part of Nigeria are mostly things that surround them within their environment, most especially things they get in contact with or things attached to them and their daily activities. They also use some conceptual geometric shapes like square, circle, spiral, and triangle (see Figure 3.8). Other abstract patterns used are obtained from plants, household materials like cooking equipment, and animals just like in Yoruba traditional ornamentation in the south-west part of Nigeria (Jefferson, 1973). The importance of this type of ornamentation on architectural elements in the south-east part of Nigeria is that it protects the surface from washing away most especially the plaster during rainy season and harmattan. It also helps in protecting the surface wall and thatch roofs from termites, similar to how it works on architectural elements in northern part of Nigeria.

Figure 3.8: Exterior wall surface ornamentation using geometric shapes



Source: http://www.onepageafrica.com/2013/03/uli-symbol-of-forward-to-past-by_16.html

3.5 EVALUATION

The similarities and differences of ornamentation in Nigerian architecture can be determined by its shape, pattern, and material use, which depends on the tribe and region it is situated as mentioned earlier in the text.

The similarities in the ornamentation of Hausa, Yoruba, and Igbo can be identified construction wise. The method of ornamenting the surface of building elements after plaster

is the same in the three regions. Another similarity include the use of the same material for ornamentation. As a result of availability of materials like mud in Nigeria, the Hausa, Yoruba, and Igbo people use the same materials for ornamentation. Other similarities in the ornamentation of the three tribes include the use of geometric shapes, as well as other patterns obtained from plants and other objects. The people ornament the surface of their walls, ceilings, columns, beams, and other building elements for the same purposes like to preserve the tradition of ornamenting the surface of their building elements for social and cultural aesthetics. The importance of ornamentation in Hausa, Yoruba, and Igbo architecture is its usage as a protecting surface of the wall from washing away. It also protects the surface wall and roofs from termites. Another importance of ornamentation in Nigerian architecture is that it helps in defining the visual aspect and social function as identity in terms of the visual symbol of culture, tradition, and social status.

Generally, the shapes and patterns used on the earth wall surface as paint or plaster in the north part of Nigeria as Hausa ornamentation are geometric shapes, plant patterns, and other abstract objects which are adopted from the religious buildings such as mosque of the Hausa people. The use of human figures and some other living creatures are not acknowledged in Hausa ornamentation because Islam played a huge role in traditional architecture and ornamentation and the majority of the people are Muslims. Thus, it is prohibited to use such figurative shapes. However, there are some particular animal forms that are used for the Hausa ornamentation which have also been used in the Islamic style of ornamentation, and these animals are the ones that are not prohibited to eat in the Islamic law such as camel, goat, snake, etc.

The shapes and patterns used in the south part of Nigeria by Igbo and Yoruba are similar as well as the technique and also materials used with differences in the use of human figure. The shapes and patterns that are dominantly used on wall surfaces and other architectural elements are living creature most especially human figures, and other abstract figure. This is so because the people living in the south east and south west part of Nigeria have the same religious belief, culture and tradition tend to be very much alike. They also have the same method of ornamentation which is a painting of the wall surfaces, while for the Hausa ornamentation includes carving of the wall surface. So, most of the patterns used in the south part of Nigeria

by Igbo and Yoruba are things that surround them, like things that are associated with them and their daily activities.

Most of this ornamentation in the south are generally done on the wall surfaces of shrines and other ritual and religious buildings, while in the north, the Hausa ornamentation can be found on most of the traditional residential buildings.



4. CONTEMPORARY NIGERIAN ARCHITECTURE

Contemporary architecture, in Nigeria is the architecture that is influenced by modern architecture which started to be observed in the early 20th century. It can also refer to the buildings which are constructed with the use of representative materials of modern architecture like glass, concrete, steel. Nigerian architecture experienced a transition from traditional to contemporary as a result of the British colonial administration. The advent of Europeans in Nigeria brought serious changes. The transition started when old forms and structural systems began to change from the use of common materials which are found in the environment such as mud, thatch, bamboo sticks which serves as a support for heavy and thick slabs, to the use of new materials like glass, metal iron, industrial cement, wood (Beuerlein, 2015).

The traditional way of ornamentation is by carving of wall surface with hand to form patterns of different varieties on the exterior and interior walls with different color types in the relation to building setting, whereas the Royal traditional ornamentation differs from that of a commoner's house and other social structures house owners. The interior plan/site plan organization of the traditional era was different from that of the modern era and it started to evolve with time. This means that the interior plan layout, site plan organization had changed. After the slow change from the Nigerian traditional style of architecture to the emergence of contemporary one, things began to become new to the eyes of the Nigerian community and their perspective towards the new style changed. Therefore, the traditional context influences the ornamentation and the contemporary ornamentation is different depending on the social status.

Figure 4.1: A building constructed by British colonial masters in Ibadan, Nigeria



Source: <http://www.nairaland.com/717823/nigeria-60s-70s-sights-sounds/3>

The impact of the Europeans in Nigeria started its influence, changing the culture and lifestyle of the Nigerians similar to the Europeans. Other influences of the Europeans in Nigeria include religion, education, and architecture (Ogunsote, 2001). This happened as a result of colonization by the British people. The British colonial masters started to adopt and construct new buildings after they designed the type of landscapes that are being constructed in the city areas of Lagos, Kaduna and places like Port Harcourt, in which the architecture was similar to the architecture in Britain (see Figure 4.1). The Nigerian architects started to adopt some of the building logics and design ideas of the international world, from the modern era to the postmodern architectural era of the international world. Settlements of the Northern and southern Nigeria changed physically as well as the materials which were used have changed too. From the use of local mud bricks which are dried under the sun in order for it to become hardened and strong to the use of a very thick walls made of industrial cement for the prevention of collapse, the trapping of heat through the walls in the winter and the storage of cool temperature during the summer, and avoid penetration through the walls. With British influence the use of corrugated iron sheeting and concrete as an essential material began to display its architectural aesthetical values and gave the architects and constructors an opportunity to make flexible buildings out of these materials. The combination of local and industrial materials was used in the construction of new buildings and they include mud and cement for construction of floors and walls, using industrial cement for plaster, and metal

sheets for roofing. The influence of locally called “Brazilian style” started as a result of the return of ex-slaves that were freed from Brazil (the Yoruba). After their return, they started to construct two storey buildings with the structure of heavy pillars as it was done in Brazil and other European countries. Use of new techniques inspired by the Brazilian, British and somewhat of the Sudanese architecture in the north and south part of Nigeria in late 20th century evolved to new forms and material usage. The architects started designing simple geometric shapes of buildings, making of concrete blocks to form external walls and all these techniques were inspired by the Nigerian architects who studied abroad. Part of the style the young architects took from the pure modern era was the use of exposed parapet walls and in which the whole style expresses the idea of simplicity and functionality. The plan organization of the contemporary era changed completely from that of the domestic family house, public administrative buildings, schools, and other public building. The houses started turning into single unit houses as a result of a reduction in family size which mostly affect the southern part of Nigeria. The wealthy people started renovating and changing houses using materials that are introduced by the Europeans and also changing the style and form of their houses. These materials include glass, a metal sheet for roofing, timber, concrete, and metal bars. While other people who could not afford the use of materials that are introduced by the Europeans maintained their traditional houses (Osasona, 2007).

Instead of using more than one housing unit for different uses, such as separating a room, toilet, living room, kitchen in different units as it was used in the traditional buildings, the house changed to a single housing unit in order to utilize space for other functions. The functions of the single housing unit include a sitting room where all the members of the family come together and interact with each other, individual rooms, toilets, and kitchen. For those that maintained their traditional houses made some renovations in other to keep up with the contemporary style in the late 20th century. Therefore, that was how the idea of incorporating traditional and modern architecture came to live in Nigeria (Uchegbu, 2007).

In the year 1960 after Nigeria got her independence, the culture, and lifestyle of the Europeans has already been integrated to Nigerians culture. This time, modern architecture has already been established and practiced through Europe and other countries around the world. With this, Nigerian architecture was affected again and the buildings started changing from colonial

style in the early 20th century to a contemporary one in late 20th century to the beginning of the 21st century. Additionally, new industrial materials for construction like glass, plastics, and metals were introduced, the form and concept of the buildings changed (Ogunsote, 2001). These materials are long lasting, but expensive to get and also advanced skill is needed in construction. The structure of the buildings changed too, from the use of local bamboo for construction of column/pillars and the use of thatch for construction of beams, to the use of reinforced concrete columns and beams. Moreover, the application of pitched roof mainly made from wood rafters and the finishing of aluminum zinc and clay plates for the covering of the rafters gave the Nigerian contemporary architecture a new identity as well as the use of louvred glass windows and other shading elements on the facades of the buildings gave it a different identity too. The plan layout has changed, more rooms are added such as two or more bedrooms and an inclusion of living room (parlor), kitchen, toilets, garden, dining space, parking space and an entrance with the main gate, all these started to emerge in the late 20th century. Lastly, the application of finishing and fixtures made the contemporary Nigerian architecture more beautiful and cherishing to the eyes of people because of the use modern materials such as plaster, tiles, paints, and even ornamentation on the face of the exterior and interior walls and other architectural elements. The use of these modern techniques, materials, geometries and structures define the ornamentation as well as the contemporary modern Nigerian architecture as a whole. Due to lack of security in the country, the residential buildings are mostly constructed with high fences, tall gates, and metallic doors which also make up another medium for ornamentation (see Figure 4.2).

Figure 4.2: Example of a modern building in Nigeria showing high fence and gate



Source: <http://www.sollineaeraeas.com/35660/modern-house-design-in-nigeria/35660>

4.1 ORNAMENTATION IN CONTEMPORARY NIGERIAN ARCHITECTURE

As discussed earlier in the text, ornamentation in traditional Nigerian architecture is expressed on the surface of exterior and interior part of a building like walls, doors, windows, parapet, buttresses, ceiling, and other architectural elements. As a result of industrialization in Nigeria, the ornamentation is now experiencing a transformation in terms of material use, technique, and form. Because of that, the ornamentation on traditional architecture is undergoing profound change, and that causes the traditional ornamentation to gradually disappear together with the craftsmen that practice it.

Buildings with traditional ornamentation are renovated using multifarious ornamentation, colors, materials, pattern, symbols, and also adding some forms to other architectural elements. The multifarious ornamentation is a type of ornamentation that refers to the use of multiple patterns, forms, and colors on a single architectural element and this makes it a contemporary ornamentation (Kirk-Greene and Crowder, 1963). These multiple forms include geometric shapes like triangle square, circle, and rectangle etc., animal forms like camel, birds, snakes, lions, insects; shapes of house, vehicles, bicycle, mosque, plants, and other objects

(Schwerdtfeger, 2007). Ornamentation is now used not just on wall surfaces of royal houses but also on the surface of public buildings, religious spaces, and houses (see Figure 4.3).

Figure 4.3: Contemporary wall ornamentation in the emir's palace in Kano city, Nigeria

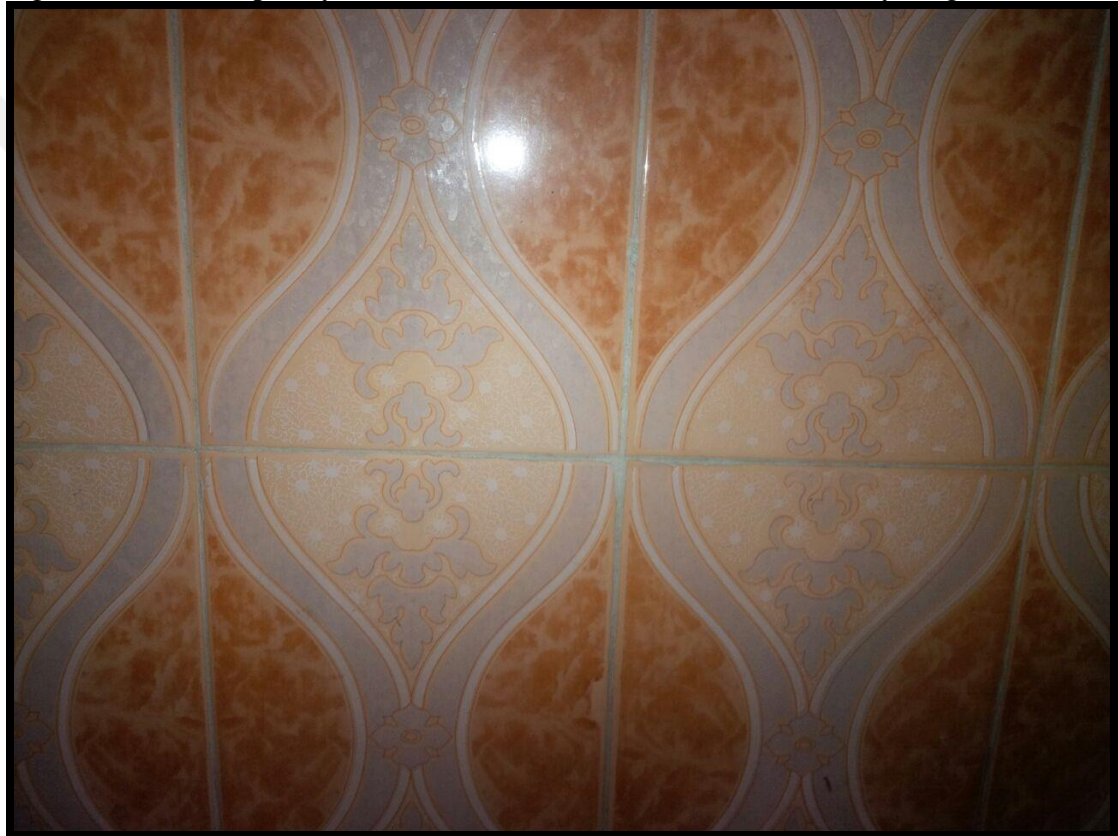


Source: <http://www.cbsnews.com/pictures/inside-the-emirate-of-kano/18/>

Instead of the patterns to be ornamented on the surface of architectural elements as it was done for traditional buildings in Nigeria, it then advanced to be used on other industrial materials like metal iron. The metal iron is fixed on the exterior wall of a house which is used for security purpose and ventilation and the people started using this type of material as a form of ornamentation. Another use for the metal iron is for the visual purpose. It is also well ornamented on window and door openings to be able to have a good performance of air flow in space and due to the weather condition in Nigeria. Most of the contemporary building in Nigeria, both in the north, south-east, and south-west parts of Nigeria are ornamented with these type of material and other new ones which are also used in contemporary buildings (Beuerlein, 2015). A distinct material that is used for ornamentation on the contemporary buildings is ceramic tile (see Figure 4.4). This material is shaped or carved in different patterns

from the industry, and it is then arranged in an order on the wall surface of a building forming a pattern. It is also readily ornamented with paint in the industry and later used on the wall surface of a building for visual and environmental purposes as it can be produced and found all over the world. The use of patterns on the iron rod and other factory produced materials like tiles can be found not in Nigeria but all over the world.

Figure 4.4: Contemporary wall ornamentation in a house in Kano city, Nigeria



Source: Author's field of work

4.2 EVALUATION

The evaluation of ornamentation in contemporary architecture in Nigerian architecture in this text can be evaluated via analysis table that indicates the classification of ornamentations in Nigeria in order to reveal the transformation of ornamentation in Nigerian architecture from traditional to contemporary. The traditional architecture is different in terms of some characteristics like construction, use of space, and building concept in the three regions in

Nigeria as explained earlier in the text. Whereas the transformation appears to be the same all over the country, because Nigeria was colonized by Britain and as a result of that the Europeans were able to stay in all the three regions. They were gradually changing the lifestyle of the people and constructing buildings of their own which have the same features as the type of buildings they have in their country in terms of building concept, utilizing of space for other uses, and space organization. However, the British people who were living in Nigeria were not using the same materials they use in their country because the materials were not available in Nigeria. As a result of that, they started using natural materials that were available in the region and later change to industrial ones.

The colonization of Nigeria by Britain did not just change the architecture of Nigeria but also the ornamentation designed on the surfaces of architectural elements. The traditional ornamentation is different in Nigeria in terms of patterns, color, and technique because of the dissimilarity in culture, tradition, lifestyle, and architecture. But after it transforms to a contemporary ornamentation, people in Nigeria are now using the same type of ornamentation both in the north and south part of the country. This is so because all the newly materials like ceramic tiles, metal iron, wallpapers, etc. are all used by the three regions in Nigeria. The industrial productions like tiles are well ornamented with selected patterns of Hausa, Yoruba, and Igbo ornamentations. The contemporary ornamentation cannot be differentiated in terms of region or tribe because of the use of same industrial productions that are readily ornamented with the same patterns of different types of ornamentation. Thus, contemporary ornamentation consists of different types of patterns on a single surface that can be pasted on architectural elements of a building such as a wall, column, ceiling, etc. Some of the traditional building ornamentation are renovated using both local and industrial materials such as mud and industrial cement to make the wall surface stronger and protect it from cracking. Other materials that are used on traditional buildings for ornamentation is after using mud and industrial cement as a plaster, the industrial color paint is then ornamented on the wall surface. This paint protects the wall surface from rain and changes the appearance of the building in order to have the visual characteristic of a contemporary ornamentation of a building.

5. TRANSFORMATION OF ORNAMENTATION IN NIGERIAN

ARCHITECTURE

In order to arrive at a very comprehensive study on the transformation of ornamentation in Nigerian architecture, it is essential to analyze the traditional and contemporary buildings that are ornamented. In this part, table is made to highlight different types of ornamentation related to regions and transformation that took place. The ornamentation is classified according to the three regions in Nigeria which will help in perceiving different types and forms of ornamentation and also the use of construction method, technique, and materials use.

The analysis table of ornamentation in Nigerian architecture (see from Table 5.1 to Table 5.12) is explained in a systematic way. The table follow as palaces, museums, and houses, first for Hausa then Yoruba and Igbo and finally the contemporary examples. It is classified as the traditional ornamentation of the north-Hausa starting with palace to that of houses because, in the north part of Nigeria, different types of patterns are used for the palaces and houses. Traditionally in the Hausa society, different types of patterns are well ornamented all over palace buildings in order to differentiate the building from other houses. The ornamentation depends on the political status of a person and also how wealthy an owner of a house is. In some cases the ornamentation of the palace is renovated by adding patterns and paints while another palace is reconstructed with new materials and contemporary ornamentation in order to maintain the culture and tradition of the Hausa community. The table also reveals whether the ornamentation is original, renovated or completely new.

Additionally, the public buildings are analyzed after the palaces because these buildings are places where people of different tribes and nationality go to. So the buildings are also well ornamented using different types of ornamentation to attract people and also for historical purpose. The public buildings are also explained from traditional ornamentation of the buildings to contemporary ones because traditional ornamentation the patterns and forms were first applied on traditional building surfaces before the contemporary one. The next buildings that were analyzed after the public buildings are houses. The houses were also analyzed from the traditional ornamentation to the contemporary one. The traditional buildings were ornamented with different types of patterns depending on the owner of the house, and also

how rich the owner is. Thus, the patterns for houses were not ornamented as much as that of the palace and public buildings. And the contemporary buildings are ornamented with multifarious patterns and paint which also depend on the owner of the house. Yet, there are materials that are industrially ornamented with multifarious patterns and colors like wallpapers, metal sheets, and rods, etc. The analysis table was concluded with these materials. The patterns used on these materials are all the same and they are all used in the three regions in Nigeria.

The table is classified according to the three regions in Nigeria, and the buildings that are examined include:

- 1) Northern Nigeria (Hausa ornamentation)
 - a) Katsina emir's palace
 - b) Gidan Hausa building
 - c) Dutse emir's palace
 - d) Zaria emir's palace
 - e) Seven different houses
 - f) Gidan Makama museum
- 2) South-west part of Nigeria (Yoruba Ornamentation)
 - a) Iledi Ontotoo building
 - b) Two different shrines
 - c) A house
- 3) South-east part of Nigeria (Igbo Ornamentation)
 - a) Igbo compound in slavery museum
 - b) Three different houses
 - c) Iyi Azi shrine
- 4) Patterns and materials used in all the regions in Nigeria for contemporary ornamentation
 - a) Four different houses

The table reveals the versatility of ornamentation on different buildings, and also to achieve and understand the changes made from traditional to contemporary architecture in Nigeria. The classifications of ornamentation include factors like locations, region, tribe, pattern used,

type of form, and also materials used. Materials like color paint, mud, sand, and cement were attained from ornamentation in the three regions in Nigeria. These materials can be used on a single wall surface of a building and this is mostly done in the north part of Nigeria. However, the material that is mostly used for ornamentation in the south-east and south-west part of Nigeria is color paint. Another use of the analysis table is that it helps in making an easier comparison which will enable us to capture the differences and similarities of ornamentation on the three regions in Nigeria (see from Table 5.1 to Table 5.12)



6. FINDINGS AND CONCLUSION

This thesis has scrutinized through the historical development and the transition between the Nigerian traditional to contemporary architecture with regard to the ornamentation used on the surfaces of architectural elements of buildings. The study indicates that transition of ornamentation from traditional to contemporary architecture in Nigeria happened due to the introduction of contemporary building technology and advent of Europeans.

In this text, some regions in Nigeria were capitalized as a case study, in view of the three regions in the country which include north part occupied by Hausa, south-east part occupied by Igbo, and south-west part occupied by Yoruba. While alluding to the history and transformation of ornamentation from traditional style to today's contemporary style as far as the three regions are concerned, there tends to be a diversity of religious belief, tribe culture, and tradition in all the three regions. For these reasons, Nigeria results in having different styles of ornamentation and architecture depending on the region. However in some regions like south-east and south-west part, their style of ornamentation and architecture have similarities as a result of correspondence in religious belief, culture, and tradition.

In traditional buildings, people began to ornament the wall surface of their traditional houses. The materials used for ornamentation were extracted from trees, plants, woods, and other materials which are abundant within the region or environment. As a result, of the availability of materials, the patterns and styles of ornamentation used were simple geometric shapes, letters, and other things that surround them within their environment.

In contemporary buildings, materials like tiles, wallpapers, cement, metal iron, and other prefabricated materials produced in the industry are used for ornamentation. While some of the recent buildings ornamentation are constructed with the materials used on the traditional buildings. These materials are also used on many surface of building elements and they can be produced and found all over the world and the type of ornamentation is not local. In that case, the use of these patterns on wall surfaces and other architectural elements is maintained. Thus, the use of these newly materials brought a huge change on the ornamentation in Nigeria and some characteristics were lost. Then what about their symbolic meaning? The industrially well ornamented materials brought change to Nigerian ornamentation because they are well

ornamented with patterns of different types which have no meaning. As people started using these materials, Nigerian ornamentation started losing its symbolic meaning and the traditional ornamentation which has its symbolic meaning started vanishing.

In this study, twenty four buildings were analyzed from north to south part of Nigeria. The characteristics of these buildings depends on the materials used for ornamentation, and the types of patterns ornamented on the surface of the buildings elements. With the given tables of ornamentation in Nigeria in the three regions, some transformations of ornamentation of Hausa, Yoruba, and Igbo from traditional to contemporary will be pointed out.

- a) The use of materials is changed from mud to prefabricated materials.
- b) The technique used in designing the patterns is also changed from carving of mud wall surface to carving of industrial cement and sand plaster, painting on the wall surface, and use of a well ornamented ceramic tiles.
- c) They use a variety of colors on a single wall surface in the contemporary ornamentation.
- d) Multifarious patterns and colors on a single wall surface are capitalized.
- e) The combination of a variety of traditional and industrial materials in forming a newly ornamentation on a single wall surface and other architectural elements of a building.
- f) Materials that are industrially well ornamented are used for traditional and contemporary buildings depending on the capability of the owner of the house, instead of carving or painting directly on the wall surface as it was done before the introduction of contemporary building materials like metal sheets, metal rod, glass, etc.
- g) Different materials and patterns were used for traditional ornamentation depending on the tribe, region, diversity in religion, culture and tradition, same patterns and materials are used for the contemporary ornamentation in all the regions.

The ornamentation has become a pattern without indicating the symbolic meaning. In this study, the factors forming traditional ornamentation include context, availability of materials, cultural and social life of the people. Additionally, the factors affecting the transformation of ornamentation in Nigerian architecture include cultural and social influence, and industrialization. Thus, further study is needed to explore how concept of traditional ornamentation can be integrated to the contemporary ornamentation.

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