

Reviving Vernacular Architecture – A Panacea to Issues in Contemporary Residential Buildings in Yoruba Context

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Abstract:- Vernacular Architecture is a style that has been influenced by another culture. This style of Architecture was introduced into Nigeria by returnee slaves. This paper advocates for the revival of Vernacular Architecture philosophies or principles. It has been discovered and studied that, generally, modern contemporary edifices have strongly deviated from some relevant design prerequisites and frameworks. These design considerations are present in Vernacular Architecture, and if adopted, will serve as effective tools in solving contemporary issues affecting Contemporary Architecture in modern milieu. This study unrepentantly yearns for a link between the past and the present, even the future. This paper succinctly explains influencing factors that birthed Vernacular Architecture such as the need for change, colonial influence, Afro-Brazillians impact. In the course of soliciting the resuscitation of Vernacular Architecture, it has been discovered to suffer astronomical negligence, as a result of this, complicating some issues faced in contemporary buildings. This paper specifically discusses four Vernacular Architecture frameworks that proffer proactive solutions to contemporary issues. This is an initiative for stakeholders of Contemporary Architecture to understand and incorporate these frameworks into their designs. This paper concludes that Vernacular Architecture principles should keep undergoing the process of maintenance, conservations, preservation and revival in our community.

Keywords:- Vernacular Architecture, Contemporary Architecture, Residential Buildings, Frameworks, Revival.

I. INTRODUCTION

Vernacular buildings focus on the pressing and hammering demand of people for housing. This necessitates the construction of domestic shelters, which suit both culture and tradition of a particular group. When a building satisfies these needs without considering high workmanship, skilled expertise and professionals, but designed to contain the general needs of a particular culture, it is regarded and can be said to be vernacular. Brunskill (2000) has viewed vernacular architecture as: "...a building designed by an amateur without any training in design, the building will have been guided by a series of conventions built up in his locality, paying little attention to what may be fashionable. The function of the building would be dominant factor, aesthetic considerations, though present to some small degree, being quite minimal. Local materials would be used as a matter of

course, other materials being chosen and imported quite exceptionally". Also, Rudofsky calls it "architecture without architects". (Rudofsky, 1964). It is an architecture that exhibits a spontaneous response to the need for shelter; lacking the involvement of professionals, skilled and schooled architects but majored on the design skills and tradition of crude and local builders.

According to Amole (2000), it is "post-traditional" – what comes after the traditional (or what the traditional progresses to be). Vernacular architecture is a progress and an improvement of traditional architecture i.e there is still a sense of diversity in the treatment of some architectural features which includes the way façades are being treated and some essential design considerations put into place holistically. Vernacular buildings have displayed attributes which embodies climatic comfort and protection, socio-cultural values and historical values. In the contemporary world, the advent of modernity, post modernity and other high-falutin architectures have brought about a holistic change in design approach which is far complex than vernacularism.

II. VERNACULAR ARCHITECTURE IN YORUBA CONTEXT

As other tribes that have given space for Vernacular Architecture, the yorubas have their own distinct way of expressing their culture in myriads of ways. They hold their culture in high esteem as such promote their cultural beliefs in which they expressly exhibit in their domestic vernacular edifices. Nevertheless, the idea of progress was not taken with levity hand, the great evolution of what used to be the traditional architecture to vernacular architecture was embraced by the Yoruba. Basically, the emergence of vernacular architecture can be traced to:

- a) The need for change from traditional architecture to vernacular architecture.
- b) The influence of colonial architecture.
- c) The introduction of Brazilian architecture.

➤ *The need for change from traditional architecture to vernacular architecture*

The essentially agrarian Yoruba, in the southwest, have traditionally lived in urban social groupings, even before colonization (Ferguson, 1970; Eades, 1980; Laitin, 1986). Pursuant to the Lacuna and shortcomings of traditional Architecture, the need for transformations and modifications became quintessential. The Yoruba traditional buildings have experienced more technical archetypes, which have

progressed into a vernacular style, a progress ushered by the Afro Brazilians; the emancipados and the saros who repatriated from slave trade in the south American country, to be precise Brazil. This evolution has transformed the local ideas and philosophy of the traditional Yoruba architecture into a technical and better style as such buildings provides more privacies creating good habitation experience of the Yoruba. Vernacular Architecture provided more private spaces to buildings, which the traditional could not offer. In the words of Rapoport, it is “more closely related to the culture of the majority, and life as it is really lived, than is the grand design tradition” (Rapoport, 1969). Additionally, it “shows an instinctive command of particular materials” (Hitchcock, 1963). The Yoruba also make use of the wattle and daub method of construction; they also make use of mud, earth for construction in their traditional buildings. The Yoruba builders make use of the locally available materials for construction of buildings. The choice of materials used in the construction of houses are not only key criterion but also its functionality and how it has fitted into the built environment is considered. This infers that, the typology of houses is not dependent on the method of construction, the mode of construction or the creative skills displayed on the building, despite the varied materials on it, but also recline on its form in the space, the order, the spatial quality and the physical environment itself.

➤ *The influence of Colonial Architecture*

The evolution of the Yoruba architecture is anchored by the British colonialists, bringing a great change to its architectural forms and started the elevation of buildings from the ground linking the buildings to the ground with steps; this is based on the misconception about the cause of malaria (Osasona and Hyland, 2006). This change brought the idea of verandas and porches, which enabled the socialization of people for the purpose of recreation. Moreover, building construction became ameliorated – the construction of two-storey building was possible, this birthed the first epitome in Badagry in 1852. New materials were introduced massively during the colonial period such as metal roofing sheets, slate roofing sheets, cement, to mention some.

➤ *The introduction of Brazilian Architecture*

Who are the Afro Brazilians? – These are the Yoruba people who were enslaved by the south Americans but later repatriated back to Nigeria, having learnt some of the foreign architectural design of the foreigners, which they adopted and implemented in Nigerian context. Pierre Verger commented on this Afro-Brazilians’ repatriation that as early as 1836, some of these made their way back to Dahomey, a neighbouring country to Nigeria (Verger, 1976). At the arrival of the repatriated Yoruba, they began to work and practise as carpenters and masons in places like Lagos. This was made possible for them because they had acquired great building skills during their slavery days. Under the administration of the Brazilians, the Afro Brazilians worked in the building construction department in which they were chanced to acquire a more stylish and bulky architecture better off the primitive pieces they left behind. The bothering deficiencies of its house type warrants a great reformation that was offered by the borrowed architecture of the South

Americans. This has bridged the wallowing gap between the past and the present. The Yoruba were forced to make a great alteration in their planning and style at the arrival of this imported design; this established a change and shift from what seems to be old to an entirely new form.

III. PHYSICAL CHARACTERISTICS OF VERNACULAR HOUSE TYPES

➤ *Wall and wall finishing*

The wall is usually built with mud block. The mud block is usually reinforced with timber or coconut for reinforcement. The mud blocks are laid in place and in courses, which dries up on setting. The wall finish used is mortar, which is applied on the wall by plastering using the mixture of sand and smooth cement and water.

➤ *Roofing*

The building roof is usually high-pitched roof with a slope of about 20° to 30° to withstand the heavy rainfall. The eaves of the roof extends 500mm or above from the wall surface with fascia boards that may be scalloped (See plate 3 in the appendix). The roof material is usually corrugated iron roofing sheets.

➤ *Entrance*

The entrance to building is usually well celebrated with and entrance porch decorative motifs lavished on the walls; this is common in high-class vernacular Architecture (See plates 1 and 7 in the appendix). Before the entrance is a filter space which is camped by a dwarf fence and a metallic goat gate to separate the building from the main road. (See plate 10 in the appendix)

➤ *Door and Window*

Door is made up of decorative timber panel door with decorative mouldings around it (see plate 5 in the appendix). The exterior windows are majorly of three type; a combination of louvers and casement wooden window, louver glass with overhead light panels and casement windows with light panels. The front windows are shielded from weather conditions by the hoods. (see plate 6 in the appendix).

➤ *Staircase and Suspended floor*

Buildings that are not bungalow but storey usually have staircase that may be 1200mm wide of concrete base but the remainder of the flight can be constructed of seasoned timber (see plate 11, figures 1 and 2 in the appendix). The suspended floor is constructed of seasoned timber with 50 x 150mm joists placed at 450mm centres and 300x25mm floor boards. (see plate 11 in the appendix). The seasoned timber is used in place of modern concrete slab, the seasoned timber floor serves as the ceiling and it is not protected against vibration imposed by first floor occupants.

➤ *Decoration (Ornamentation)*

Wall decorations in vernacular buildings seems to be flamboyant in character. Different wall decorations done on these vernacular buildings includes:

- Geometric motif: this consists simple rectangles, squares, trapezia and the combination of all of these.
- Animal motif: the four footed reptiles and birds are dominantly used
- Floral motif: representation of flowers in a stylish manner.
- Hybrid motif: this is the combination of geometric, animal and floral as such takes the longest time of completion. (See plates 8 and 9 in the appendix)

IV. RESIDENTIAL CONTEMPORARY ARCHITECTURE – DEVIATION FROM VERNACULAR ARCHITECTURE

Contemporary Architecture can't be said to be a single style; but it merges different ideas from different architectural styles, which include modern, postmodernism and high-tech architecture etc., with little or no attention to vernacular Architecture. The advent of new technology, new design, new materials and construction technique, to mention some, contributed enormously to its existence. Presently in Nigeria, residential buildings are embodiment of contemporary Architecture, the use of new materials like claddings; new roof materials etc. have become dominant. The issue of class in the society have also informed and contributed to the insatiable demands of Contemporary Architecture. Reflecting on the characteristics of Vernacular Architecture, it should be noted that the present-day society is producing buildings that are entirely new without taking cognizant of any historical and cultural implication that could arise from this change.

In present time, vernacular buildings are claimed to be archaic and obsolete in style, whereby professionals and clients have refused to celebrate and embrace the ageless beauty of vernacular in the context of culture and history. Most of these buildings have been excavated and evacuated; subsequently replaced by contemporary buildings in which the essence and value of the former have been massacred. Pursuant to this change, there has been a lot of issues, voids and lacunas faced by contemporary Architecture in areas like climate responsiveness of buildings, costs of materials, preservations of artefacts, to mention some. Preventive measures of these contemporary issues are embodied in the ignored Vernacular Architecture.

V. THE STUDY AREA

Ilesha is a town located in the Osun State, south west Nigeria; It is also the name of a historic majestic kingdom (also known as Ijesha or Ijesha) centred on that city. Ilesha lies between longitude 4° 75' east of the Greenwich and 70° 31' north of the equator according to Jeje (1988) and its distance from the capital city of Osun state (osogbo) is 25km, about 100km from Ibadan, the capital of Oyo state and 75km away from Akure capital of Ondo state. It has a total area of 63km² and a population of 103,555 at the 2006 census. The town is ruled by a monarch bearing the title of Owa Obokun Adimula of Ijesaland. The state of Ilesha consisted of Ilesha itself and surrounding cities. This historic town is one of the oldest settlements in Yorubaland with many high class and low class vernacular buildings influenced by the Afro-Brazillians.

VI. RESEARCH METHOD

The approach to this study was historical survey, which is a systematic method of documenting historic resources through research. Primarily, visual observation and appreciation supported with photographs and written descriptions were adopted in the research. General characteristics of vernacular buildings were studied and classified into frameworks analytically.

VII. MAIN DISCUSSION: THE FRAMEWORKS

This section deals with categorization and discussion of the findings into four frameworks.

➤ *Culture preservation*

Culture is a total way of life of a particular group of people. In the vernacular era, people used their buildings as a means exhibiting their culture. The need for symbolism and identity posited great deal of culture appreciation by the people. Yoruba have their culture as well as other tribes like the Hausas, Higgis, Buaras, Rukubas, Tarohs, to mention some – individual building of these tribes were embodiments of their culture ranging from palaces, residences etc.

The culture of a people exercises an over-riding influence on the type and form of the house evolved by the people (Olotuah, 1997). This posits that to every culture, there is a style attached to their house form inspiration; this is influenced by series of beliefs that champion their architectural intuitiveness. Vernacular Architecture did not entirely change specific cultural attributes of traditional Architecture. Unlike Contemporary Architecture that dives away from Vernacular Architecture by misrepresenting culture and making it a difficult task to categorize. This is why Aradeon (1981) suggested that there is a gap that exists in architectural education in Nigeria, which needs to be filled by teaching 'cultural significance' to architecture students.

➤ *Historical Relevance*

Many works of vernacular Architecture are not just mere buildings but they speak big volumes about history, or better still a repository of history of individual, household, or the society. Buildings are good pieces of history as they tell us facts about the past. As Aradeon (1998) also specified in his inaugural lecture that idea of identity and continuity should be looked into in the architecture of Nigeria. What this means for us is that the relevance of history is embedded in continuity and identity; it gives us a guide in approaching architecture historically.

A building like Oba Ajimoko building in Ilesha, Osun State (see plate 1 in the appendix), provides us with mammoth historical information about kingship history in Ilesha – not only palatial building does this, but also residential edifices educate us about historical biography of building owners and sometimes history of building itself such as engravings of date of construction - as a result of this we never lose contact with the past. The issue of historical negligence cannot be exaggerated or overemphasized; it must

be revived in the contemporary world for posterity to be linked to history.

➤ *Climatic Consideration*

Climate can be defined as the weather in some location averaged over some long period of time. Weather conditions have effects on the elements of building such as wall, windows and so on. Weather conditions must be considered to achieve thermal comfort in building. Thermal comfort, according to ASHRAE (2004) can be defined as that condition of mind which expresses satisfaction with the thermal environment defined as that condition of mind which expresses satisfaction with the thermal environment. Therefore, certain measures were observed in vernacular Architecture to ensure that buildings were not exposed directly to weather conditions. Buildings usually had a high pitched hipped with a projected gable with a slope of about 20° to 30° to withstand the heavy rainfall. Roofs had eaves, which were projected beyond the wall around 600mm or even more (see plate 3 in the appendix). Roofs were usually covered by corrugated iron roofing sheets with roof fascia board, which could be scalloped or not scalloped. Contemporary buildings possess roofing system with intricate issues, some buildings have slabbed roofs, which have high cost of maintenance and usually leak when ineffectively attended to, this may be due to design errors or excessive impact of weather conditions. The use of fascia concrete that is not cost efficient is also dominant in contemporary buildings with building elements open to rain and direct sunlight (see plate 2 in the appendix), this poses great discomfort cum dissatisfaction to users of buildings, as it exposes them to weather. Gofwen et al (2018) highlighted that the disadvantages of the use of concrete parapets notwithstanding, Nigerian architects often 'bow to client driven pressures' to conform to the vogue in the face of the real issue of this style as a result of the effect of globalisation, suggesting decadence rather than evolution of design.; this trend leaves little room for innovation in thermal comfort, building maintenance and sustainability.

In terms of ventilation into building, the exterior windows were majorly of three type; a combination of louvers and casement wooden window, louver glass with overhead light panels and casement windows with light panels (see plates 4 and 6 in the appendix). Windows were usually shielded from weather conditions by the hoods and roof eaves. The use of sliding window is the order of the day in Contemporary Architecture – more reason there is more dependency on artificial ventilation than the natural one. The amount of air into indoor space when sliding windows are being used is very low compared to casement and louvered windows – this is another astronomical issue faced by contemporary Architecture.

➤ *Material Consideration*

The predominant material used for construction in vernacular Architecture was mud. The mud blocks were usually laid in place and in courses, which dried up on setting. The wall finish used was mortar, which was applied on the wall by plastering using the mixture of sand and smooth cement. Mud is readily available and inexpensive. It also

flows with the environment. It has high thermal resistance / low thermal conductivity, minimal manufacturing process, low demand for skilled labour and so on. Today, there are many materials for construction due to increased technology. Some of these new materials do not possess the characteristics of mud bricks as highlighted above – therefore, this lacuna has incurred extra expenses on insulation of material to enhance thermal resistance for cooling effect. It is paramount that sustainable material as mud should be encouraged in this contemporary idiom, as such, mitigate its bothering issues.

VIII. CONCLUSION

Continuity sabotages extinction. Vernacular Architecture is a continuation of traditional Architecture in a modified way – this is because time brings newness. Exchange of design ideas and philosophies between old and new, suggests a continuity that cannot be compromised. Vernacular architecture is the bedrock of change which began as a transformation from traditional Architecture. Its influences need to cascade into the contemporary world whereby the conceived idea of the past will be intertwined and married to give us the present architecture phenomena. We must not lose contact with the past all in the name of aesthetics but we should keep on merging and bridging the gap. Therefore, it is quintessential for us to maintain, conserve, restore, preserve and revive vernacular architecture by considering and working with the discussed frameworks in this contemporary era, as this proffers panaceas to contemporary issues.

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APPENDIX



Plate 1: Oba Ajimoko Castle: high-class vernacular building with high historical relevance.



Plate 2: Concrete fascia element of contemporary residential building; exposes the walls and windows to adverse weather conditions . Source: Spydercraft (2015)



Plate 3: A vernacular building with roof eave building projection to protect the building from weather conditions.



Plate 4: Casement window of Vernacular that allows for maximum ventilation compared to contemporary sliding windows.



Plate 5: Door with decorative motifs



Plate 6: Exterior window with hood



Plate 7: well celebrated entrance porch possessing decorative motifs on the wall with attic at the top



Plate 8: Different types of motifs on the wall – hybrid motif, comprising more than one motif



Plate 9: building façade lavished with motifs between the ground and first floor



Plate 10: filter space that camps the building entrance. It separates the building from the street.



Plate 11: the timber slab that supports the load from the first floor which is painted for aesthetics purpose

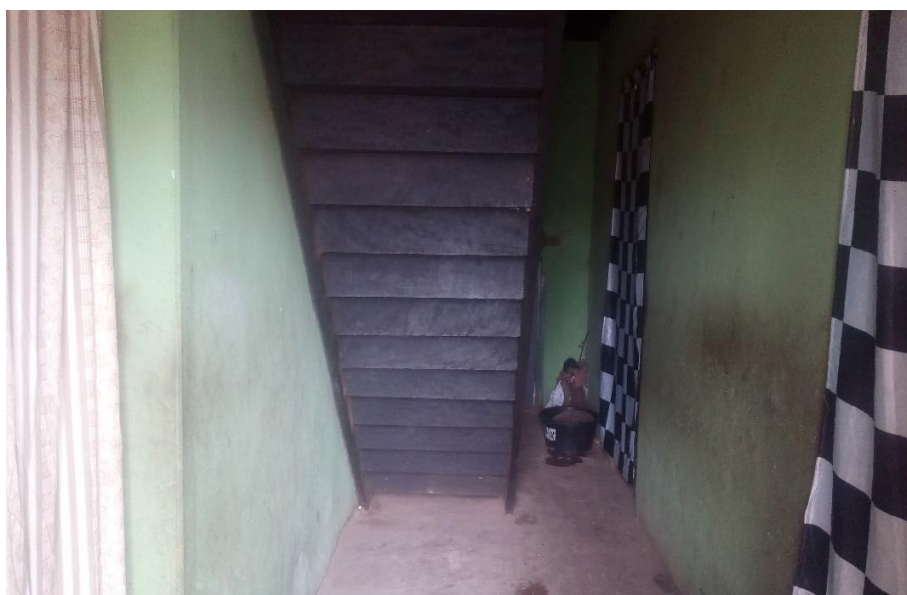


Plate 11: typical staircase in building for vertical movement. It links the ground floor to the first floor. Its constructed with treated ,seasoned timber.

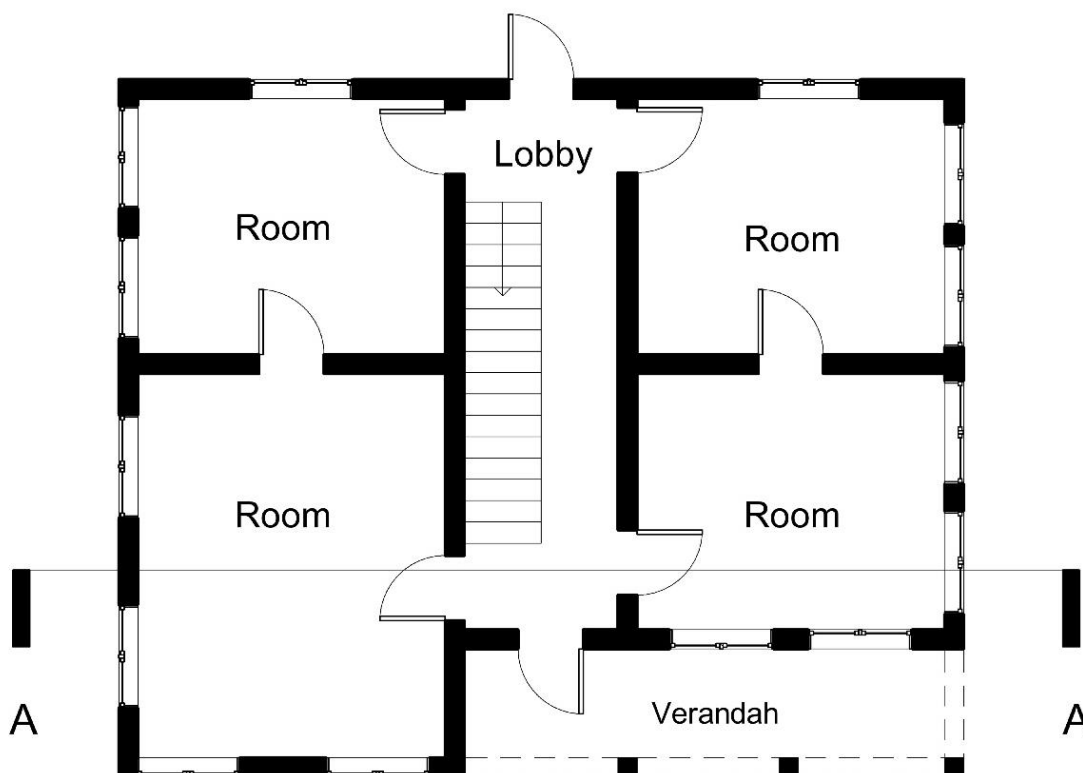


Fig 1: typical ground floor plan of vernacular building showing rooms and position of staircase for upper storey building. Without stairs on the plan, the plan is typical for bungalow buildings

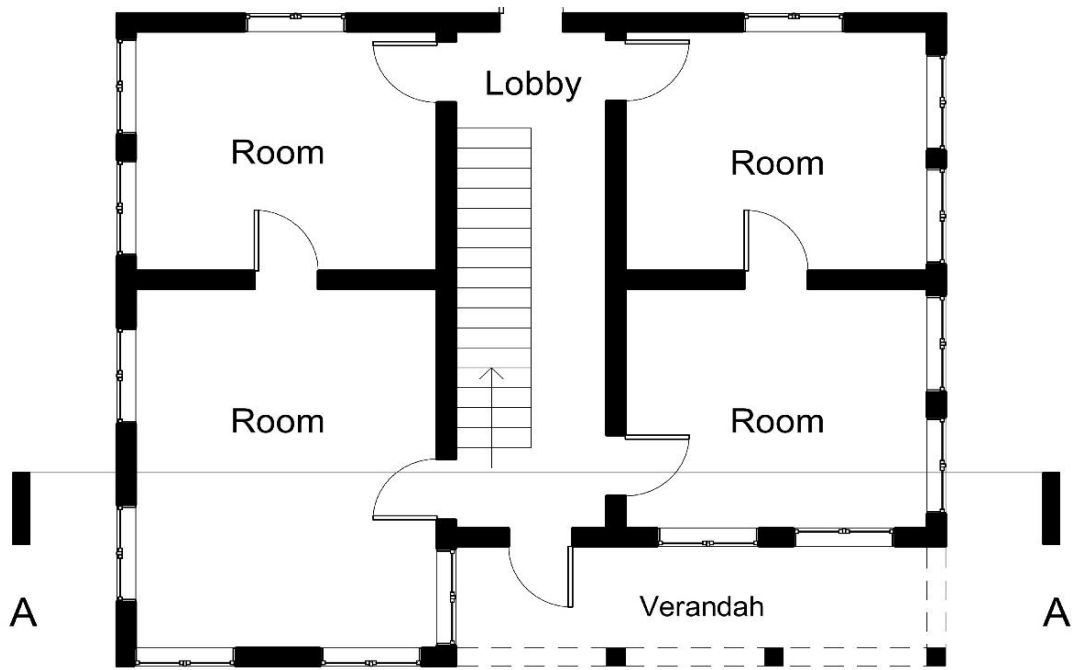


Fig 2: typical first floor plan of vernacular building showing rooms and position of staircase for upper storey building.