



# Built Environment in Transition: The Significances of Postmodern Residential Designs in Cultural Sustainability

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**Abstract:** In a contemporary context, the potential needs and desires for people's betterment keep persisting, especially during the transition period. However, metropolitan cities, districts, and entire regions began to experience designs that resulted in cultural tensions. These kinds of cultural conflicts follow the form of design ideas, such as the modern culture of no compromise for cultural expressions. Although, the advent of postmodern architecture creates avenues for settlements to resuscitate their declining culture or any sort of design that will reinstate the original cultural meaning of the historic built environments. Moreover, culture is, and will always be, a tangible asset; it must be sustained at all levels of development—from spiritual to physical and from social to economic issues. This paper highlights and discusses the significances of single-family postmodern residential buildings in cultural sustainability. The study further explores the importance of cultural sustainability and the impacts of cultural development within the context of Northern Nigerian built environments in transition. In accordance with the scope of the paper, critical observations of the architectural plan schemes, physical characteristics of the selected cases and theoretical survey are the methods employed to create a base for the theoretical analysis and evaluations. This paper asks: How does postmodern architecture rescue cultural expressions in residential designs? What are the built elements and features that support culture in Northern Nigerian postmodern residential designs? How do we support this? These questions form the basis of this paper.

**Keywords:** Postmodern Residential Designs, Northeast and Northwest Regions, Cultural Sustainability

## 1. Introduction

Built environments in transition can be characterized as specific, identifiable cases of general, progressing processes of "transition," and they may express or even be described in details the nature of the series of actions related to any particular period (Dingsdale 1999). The transition in the environment of most communities, cities, and districts as well as entire regions can be expressed as the relationship between the built form of valid society and the settlement characteristics of the targeted societal group, which include cultural, political, traditional, social, educational, and economical events. Consequently, in much of the work of postmodernists within the realm of "sustainable architecture," have focused on the technological aspect of the "built environment" and left the complicated relationship between the place, modernity, and cultural aspirations uninterrupted (Tyrrell 2003). Besides culture is, and will always be, a tangible and fixed asset; it must be sustained at all levels of development—from spiritual to physical and

from social to economic issues. Moreover, culture usually manifests itself in terms of "art, literature, costumes, architecture, customs and language, religion, and religious rituals" (Rapoport 1969).

In Nigeria, the onset of the oil boom in the late 1970s and early 1980s that coincided with the advent of "postmodern architecture" resulted in striking constructions of contemporary residential buildings. The designs, of the buildings were however, ultimately yielded with the collaborative effort of the revivalists, who could not be described as modernists (Qurix 2007). However, as time goes on toward the northern part of the country, the emergence of postmodern architecture in the late '80s expressed much concern for traditional settings as well as comfort and culture (Prucnal-Ogunsote 2001). In the late 1990s, the Northern region witnessed rapid development in the construction of residential buildings due to political, social, and economic changes. These developments in the

urban settings coincided with the increase in knowledge and the idea of embracing culture and popular indigenous built elements in contemporary designs. Accordingly, because of this shift in the environmental quality of the northern built context (Northeast and Northwest regions) that is related to the ideology of materials, concepts, and indigenous styles, our present-day residential designs embraced the regional culture and appeared in splendid and elegant manner. These traits or peculiarities are those that characterized the postmodern residential architecture.

This research used some selective cases of single-family postmodern residential designs in two of the geopolitical regions (Northeast and Northwest) of Northern Nigerian's built environment in transition and discussed the impacts of postmodern architecture that is related to cultural sustainability. However, the study further aims to explore the significances of cultural sustainability and legitimate understanding of cultural developments within the realm of single-family postmodern residential designs. In order to succeed, postmodern residential designs were selected within the two northern regions (Northeast and Northwest). Based on the selected cases, sites survey/consultation of architectural firms and personal observations of the architectural plans with survey of the related literature were the methods applied to generate data for analysis and evaluations. Due to the vastness of the research context, it is necessary to narrow and focus on single-family postmodern residential designs, not the commercial apartment type. The paper bases its scope on architectural characteristics with emphasis on plan schemes, such as spatial organization, that are associated with cultural attitudes. While analyzing the plan schemes of some selected cases, the discussion includes a proper understanding of the physical and cultural characteristics of the other cases related to the regional traditional built qualities. Accordingly, façade decoration and compositional built-elements of the buildings will further explore the role of postmodern residential designs in cultural sustainability.

## 2. Cultural Specificity in Traditional Residential Buildings of the Northeast and Northwest Regions

The Northeast and Northwest are two geopolitical regions of Northern Nigeria. The people in the two regions are largely Muslim, although there are few Christians, and most of them are "Hausa/Fulani in language" and have things in common with other associate minority tribes such as Kanuri, Kataf, Marghi, Tangale, Nupe, Karakare, and Babur (Toyin 1999). However, the term "Hausa of Northern Nigeria" (Northeast and Northwest) is a linguistic designation referring to the people of Northern Nigeria, and it has come to be accepted as a term of common identity for the entire people of the Northern region (Sa'ad 1981; Aliyu 2013). This single, collective designation (Hausa) is perhaps a phenomenon since no such common term seems to have been in existence by the time Leo Africanus visited the Western Sudan (Sa'ad 1981).

Even now, many Hausa derive their identity from residence in a city or its immediate hinterland, possibly a hangover from the epoch of the city states (Sa'ad 1981). As stated earlier, the regions (Northeast and Northwest) are comprised of people of various tribes and languages (Dmochwski 1990). The predominant Hausa/Fulani people influenced the minority tribes in both tradition and cultural expressions. Consequently, the basic characteristics of "Hausa traditional architecture" (fig. 1 and 2) largely dominate the architecture of the minority tribes in both and cultural attitudes. This phenomenon of cultural assimilation is very characteristic of the urban/rural settlements of the regions. Fage (1972) and Sa'ad (1981) due to the influence of Hausa cultural expressions in domestic architecture, a number of local languages that are associated with Hausa culture are facing threats of as a result of semantic pressure of the mega Hausa architecture.

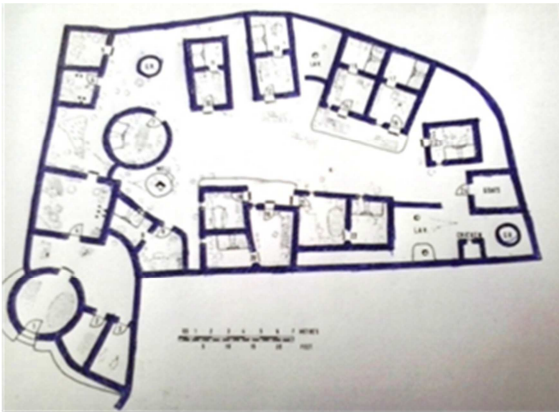


*Figure 1. Traditional building with pinnacle. Source: Aliyu 2013.*

The culture expressed in "traditional residential buildings" of the two regions (Northeast and Northwest) is determined by two factors: natural conditions of the area and religious values. The first can be translated into climatic condition available building materials, which influences the "construction technology" (Dmochwski 1990; Rikko and

Gwatau 2011). The second, however, has enormous influence considering the Islamic subjugation of the predominant Hausa, whose "architectural style" (figs. 1 and 3) dominates the general expressions in the region (Dmochwski 1990). Consequently, if an architectural style a manifestation of a culture as a whole representing the

crystallization of a number of cultural dimensions—not those of environment and technology, but also those of cultural, political, and economic spheres (Ahianba 2009), then Islamic culture has had enormous effects on the architecture of the two regions (Northeast and Northwest). The character (Islamic) has developed a sociocultural in traditional residential designs that resulted in a transition process of cultural values (Ekhaese, Taiwo, Izobo-Martins and Adewale 2015). The culture added more value to the development of privacy within plan schemes and the flat buildings that were established by the non-Islamized Dogo, Samo, and Bobo (Sa'ad 1983).



**Figure 2.** Schwerdtfeger's sketch of the shapeless form of a traditional residential compound of Northern Nigeria. Source: Danby 1993.

Moreover, Hausa indigenous residential architecture is well known for its cultural expressions, such as flat and shallow domed roofs, wall decorations, ribbed vaulting, and external pointed pinnacles in the parapet walls. The houses traditionally comprised of rectilinear and circular spatial units connected by wall segments forming distinct closure (Luqman 2014). The buildings usually composed of individual units of adobe, shapeless in form (fig. 2), and are plastered externally with earth in a geometric pattern and symbol (northern symbol fig. 3) that displays a monolithic character in physical appearance (Dmochowski 1990; Osasona 2002). The traditional built forms in the two regions not only represent the level of economic, political, and social attitudes of the households, but they are usually “expressing the aspects of existing cultural practices of the people and the prevailing climatic conditions” (Chokor 2005). However, the symbolic values of the continuity in the built form of the traditional residential buildings have been a special factor due to the sociocultural and religious understanding. Consequently, the organization of space within dwellings, arrangement of residential units, and entrances to the houses and places of social activities are largely influenced by religious culture (Danby 1993). This social system of the residential arrangement from pre-colonial resulted to increase in sociocultural activities within the homes, especially buildings that accommodate large extended families (Kazimee, et al 2002; Ekhaese and Bayo, 2014). This cultural phenomenon also introduced numbers of cultural

developments ranging from the flexibility in plan scheme to the orientation of the buildings as a whole, which also added more channels to the needed privacy. In fact these developments each represent, in turn, a cultural pattern, “varying with the process of acculturation to Islam” (Prussin 1968; Sa'ad 1981).

The religious and cultural significances regarding visual privacy in the two regions of the Northeast and Northwest have tended to produce inward-looking plans (fig. 2) with external walls that have no openings to allow outsiders to look at the family members (Danby 1993). This cultural attitude regarding privacy, however, results in a division of the dwelling space into two zones, notably nonfamily male and family members, as displayed in Figure 2 above. This idea of separation is mainly related to gender differences, family members, and relatives (Danby 1993; Rikko and Gwatau 2011). The male zone, usually called sieve or filter spaces, constitutes a reception hall or foyer (zaure in Hausa) and also has accommodations for male guests. The family zone is mainly used by women and men of the family (Sa'ad 1981; Danby 1993; Osasona 2002). This cultural phenomenon is the most frequent method used to achieve the extent of privacy needed in residential buildings. Another conspicuous aspect that affects the house form and increases the level of privacy in traditional Hausa homes is the courtyard system. The idea of a courtyard has had a striking influence that contributed immensely to the total lack of shape, size, and meaning of the built form. However, the plans of the traditional houses are big in size because of the need to accommodate family members, relatives, and guests who frequently come to form the so-called extended family.

With regard to the wall decorations and decorative patterns, “traditional architecture of the Northern region in Nigeria is like any other historic architectural style of other places; it consists of different varieties to embody places of magnificence like palaces, religion places, and residential buildings” (Ahianba 2009). Surface decorations in the regions of the Northeast and Northwest are central to traditional Hausa architectural aesthetics. In fact, no ceiling can be described as splendid and no façade can be called elegant if it is not richly embellished with proper decoration (Sa'ad 1983). Furthermore, the traditional wall decorators are considered to be the greatest in professional occupations and have more prestige in society than ordinary builders. Regarding the motifs used in traditional architectural decorations as in figure 3, many of the symbols or representatives are cultural issues. The decorative patterns are “drawn from a common cultural pool available to all craftsmen in the decorative arts of leather workers, garment embroiderers, hat makers, calabash carvers, as well as mason's creativities” (Sa'ad 1983). The places for the decorations are usually external and internal in both public and residential buildings (Chokor 2005). The external decorations are normally around the buttresses, parapets, and window openings, but those who can afford it often have the entire façade of their house embellished lavishly with decorations. Internally, the decorations are not as thick as the

ones outside; the lines are thin but usually create a splendid appearance. Similarly, the areas around the doors and

window openings as well as the surface between these openings and the inner ceilings all give some pleasing outfits.



Figure 3. Hausa decorative patterns and built elements on traditional residential buildings. Photo by author.

### 3. Northeast and Northwest Built Environment in the Context of Transition

Northern Nigeria (fig. 4) is a “geographical region of Nigeria” that occupies about two-thirds of the total “land mass of Nigeria” (Toyin 1999). The region has nineteen states (out of thirty-six states), which consist of Borno, Bauchi, Kogi, Gombe, Kaduna, Kwara, Kano, Katsina, Jos, Adamawa, Benue, Yobe, Jigawa, Nassarawa, Sokoto, Zankara, Taraba, Kebbi, and Jigawa State. These states are further divided into three geopolitical regions, which are the Northeast, Northwest and North-central (fig. 4). However, for the purpose of this study as stated earlier, the paper concentrates on two northern geopolitical regions, the Northeast and Northwest. The Northeast region has six states, while the Northwest region has seven states.

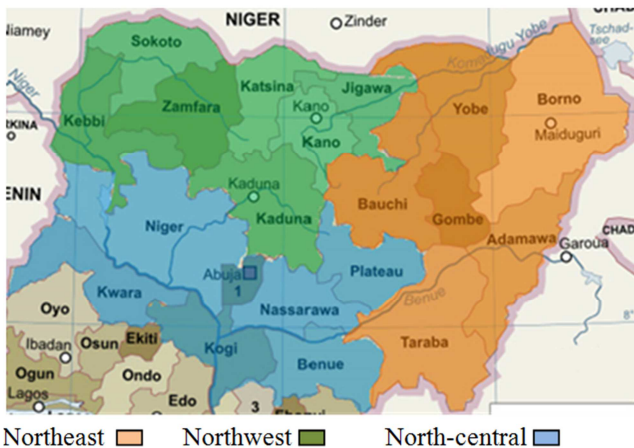


Figure 4. Map of Nigeria showing the three northern geopolitical regions, Source: Ikejofor 1998, edited by author.

Before the arrival or the advent of colonial rule (before 1960), every household on Nigeria’s shores incorporated an architectural practice that was culturally or traditionally significant (Qurix 2007). Domestic structures were constructed and organized according to the user’s needs, requirements, and

preferences (Denyer 1978). The act of learning, practicing, and perfecting a craft, however, was transferred from generation to generation, which also created an avenue for the preservation of indigenous buildings in the regions. Consequently, the traditional buildings in the areas represent the result of the regions’ perfection of architecture in relation to their philosophy, culture, attitude, manners, social organization, and the characteristic features of the geographical location (Aliyu 2013).

The developments in contemporary designs of public and residential buildings in the urban context of the two regions were influenced by the oil boom of the postcolonial era (Adeyemi 2000). During this period, the large size of the regions certainly ensured that there were significant regional impacts in architectural designs. Urbanization certainly occurred and the size of the cities changed in characteristics, functions, and physical outfits. In the two regions around ’60s and early ’70s, especially in the Northwest, the dominant contemporary architectural style was the elementarist form of modern architecture, as evident in the state house of Kaduna in the Northwest (Qurix 2002). This design attitude flowed very well in most of the cities of the two regions in the late ’70s. The best quality of the design was residential architecture, but the style usually revealed some developmental challenges as well as opportunities for the progressive creation of new ideas. Since religious culture is the most significant issue in the region, residential spaces were still organized with the same functional features. Furthermore, Qurix (2002) acknowledged that the style was transformed into a profusion of styles in which imported styles were freely applied—often without a clear understanding of their principles—but the outward appearances displayed postmodern architecture with clear effects of revivalism and regionalism.

The transition in the built environment of the metropolitan areas (state capitals) of the two regions, notably Maiduguri, Kano, Gusau, Birnin-Kebbi, Jalingo, Katsina, Kaduna, Gombe, Bauchi, Sokoto, Damaturu, Yola, and Dutse, lies within the context of community sociocultural norms and values. The characteristics of the constructed buildings within the urban context and the extent of the developed area of the cities were perhaps in line with the sociocultural manners of the dwellers.

Ekhaese and Bayo, (2014) pointed out that the “cultural significances of transition in spaces of the metropolitan areas is determined by the progress in technological development, socioeconomic changes, and sociopolitical characteristics of the residents”. At the stages of transition from traditional to modern designs, new and fashionable finished work began to appear in houses, and layout settings were environmentally friendly. However, in many cities, public buildings wore similar outfits in physical appearances, while residential buildings generally varied in sizes and characteristics with trade-regional qualities (Qurix 2007).

During the transition between the 1980s and early 1990s, several general, progressing activities have been clearly identified as the most important factors in the development of the regions. There are increasing concerns about the conditions of urbanization as well as the associated ecological and demographic factors (Daramola 2004). These factors play important roles in building design and spatial arrangement within the urban cities. Different forms and styles of buildings are rather volatile or fast; architects adjust their designs against the general backdrop of architectural revivalism and traditionalism (Qurix 2002). This adjustment in design characteristics reveals the sensitivity with which architects respond to cultural and environmental factors (Qurix 2007). Approaching the late 1990s, certain paradoxes among recent designers can be seen in the effects of the settings of the historic built environment on contemporary designs. There are no effective considerations of the existing traditional built features in some of the new designs. The design attitudes are “more reminiscent of European housing styles, and the design criteria, was from western culture inhabited by powerful interests, including high-ranking administrators, professionals and business tycoons or the wealthier class with more emphasis on aesthetics” (Chokor 2005). This misconception, however, remains a strong and effective idea for some designers in making buildings more expensive and also desirable to some clients.

In the case of local government areas in the two regions, the gradual transitions in individual planning and whole community developments are also something correspond to huge significant changes in the impact that inhabitants have on the built environment. Residential land-use patterns in the local areas and the traditional essential parts of some cities are the same, and are often characterized by low-density indigenous settings (Ikejiofor 1998). Although, the initial functions of the traditional concepts of the residential buildings was reapplied to the contemporary designs. During the transition, the diverse material culture of the local communities and the organizational pattern, both the tangible and intangible, are channeled in a way that sociocultural, political, and environmental characteristics of the communities required. In the local districts, the use of modern building materials adversely influence traditional architecture, and changes in the traditional built environment are introduced by new design concepts and friendly layouts. This indeed signifies the degree of probability regarding progress toward the implementation of appropriate sustainable communities (Aliyu 2013). Apart from

sociocultural and political issues of the two regions, there are more quantifiable and obvious legacies dotting the region’s visual scenery. These include “physical infrastructures on both planning and architectural scale, as well as various important organizations” (Osasona 2002). During the transition period, the planning and development of the districts, with much concern for the formation of an ideal environment, are managed by development control agencies.

While, planning and development within the regions is done by the three tiers of government: the federal, state, and local government. These three tiers of government are assertive and empowered to copartner in the provision of infrastructure and to some extent social amenities (Ahmed, Garba, and Abdulkarim 2010). The two major tiers of government (federal and state) administer and coordinate the technical aspect, investigate the adequacy of the space, and control the image of buildings in relation to the built environments. These processes have resulted in adequate planning in most of the cities, though with seemingly self-contradictory qualities. The organization of the built environment plus spatial growth and development of local district areas are principally shared between the state government and the local government council. Ahmed, Garba, and Abdulkarim (2010) say that state government normally uses the urban planning and development agency for planning and control of the physical environment in all designated urban cities. The agency usually produces planning schemes for different parts of the urban areas with effective policy and good control measures.

#### **4. Cultural Sustainability Within the Realm of Postmodern Residential Designs of the Northeast and Northwest Regions**

The majority of styles or tendencies in the history of architectural development are customarily introduced due to progress in technology, responses to environmental factors, and social needs (Aliyu 2013). Modernism is no exception in material expressions, while postmodernism was to soar high on the wings of cultural, traditional, and historical resurgence. Architecture as a whole is to have a face with meaning or individual character with or without local or regional identity (Jameson 1988; Qurix 2007).

The disappointment caused by the “modern architectural solutions,” as stated by Lawrence and Low in 1990, made a number of contemporary architects and construction researchers to find design principles that are culturally sound for the so-called ideal communities. However, in recent years, the issue of understanding culture in contemporary designs has played a major role in the creation of architecture that is meaningful to the users with local/regional characteristics (Nguyen 2007). Moreover, culture emerges out of the scope of social sustainability and is “being understood as a separate, distinct, and integral role in sustainable developments” (Duxbury and Gillette 2007). Accordingly, within the context of community development, culture is characterized as being

the entire complex of distinctive thoughts, beliefs, materials, and religious and emotional qualities that represent communities or social forums (UNESCO 1995; Duxbury and Gillette 2007). However, the showcase of postmodern residential designs in Northern Nigeria (Northeast and Northwest) usually deal with traditional characteristics of inherited Islamic culture, skipping the unfavorable qualities and signaling the favorable ones. Cultural events in recent architectural practices in the regions present us with a notion of elaborate and colorful processions toward cultural sustainability.



Figure 5. Postmodern residential plan showing cultural sustainability issues with regard to zoning and privacy aspect. Designed by Zailani and Sa'ad Raji, Source: Delammed Interprise 2010.

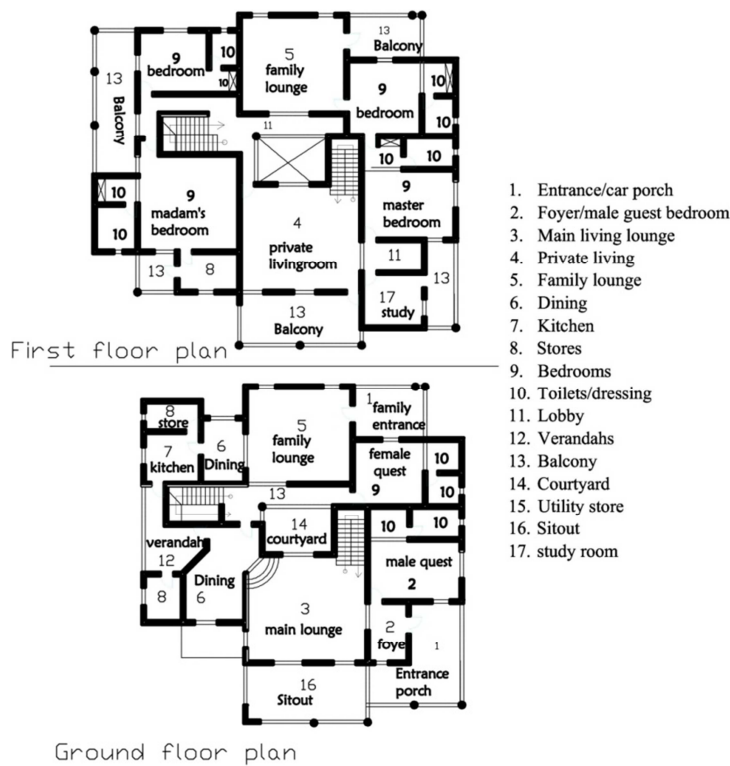


Figure 6. Postmodern residential plan showing zoning approach of Hausa culture with respect to gender. Designed by Abdulkareem Mahmud located in a new layout along the house of assembly quarters in the Katsina Northwest region. Source: Avm & Associates 2011.

Duxbury and Gillette (2007) cited the Sustainable Development Research Institute (1998) and acknowledged cultural sustainability as the ability to “retain cultural identity and to allow change to be guided in ways that are consistent with the cultural values of people.” In postmodern residential designs of Northern Nigeria (Northeast and Northwest), the way buildings are designed and their spatial arrangements reflect the characteristics of individual financial status, family capacity, and responses to sociocultural norms and values. Similarly, the postmodern residential plan in Figure 5 was designed in 2010 by Zailani and Sa'ad Raji of Delammed enterprise and is located in Jimeta Yola along a barrack road in the Northeast region. The design displays the

inherited Islamic cultural attitudes of Hausa traditional buildings. The organization of spaces in the design is “evolutionary not revolutionary” (Jenck 1991); it contains modernist qualities, particularly the connectivity and linkages between the private and semi-private areas.

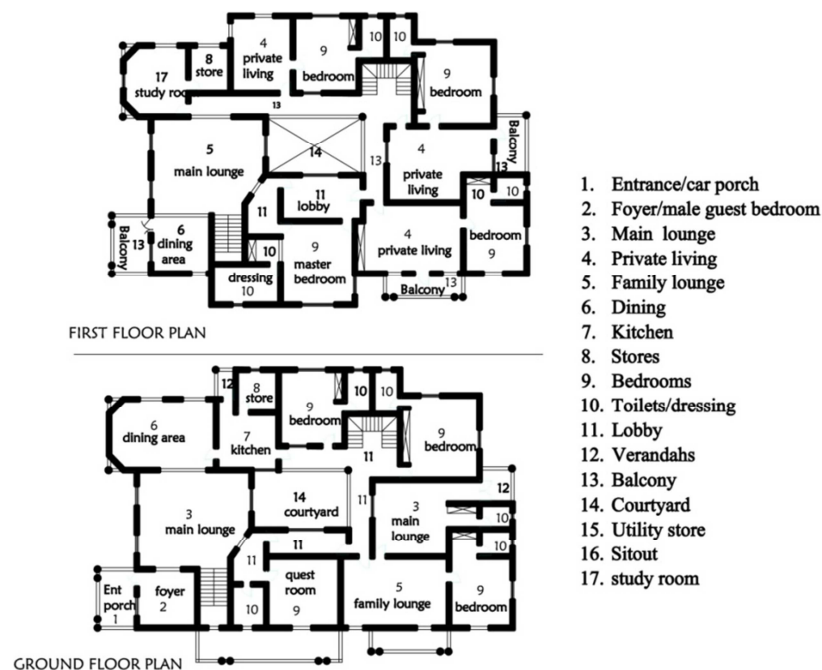
The plan of the building is complex, functional, and practical; it has many spaces in the design that can be used for privacy. The internal partition walls are used to a great extent for privacy, which often responds to the religious, cultural, and social imperatives of the user (Tyrrell 2003). The culturally related issues of traditional domestic buildings can be seen clearly in the design. The design utilizes the cultural/religious idea of zoning in relation to gender; the

spaces were organized in such a way that nonmembers of the family or visitors will not have access to the family zone. Similarly, within the design, the family entrances are separate; it is designed in such a way that women friends and relatives of the family can access the living room without being observed by the male visitors. Thus, the cultural sustainability aspect regarding zoning is given high priority in most of the postmodern residential designs of the Northeast and Northwest regions.

The cultural emphasis on male guest accommodations in response to religious issues is also reintroduced into most postmodern residential designs and is clearly evident in Figures 5 and 6. The designers positioned the guest room adjacent to the foyer (reception hall) such that the male guests can have the attention of the household and conduct business whenever the need arises. Access to the guest room is through the foyer, which is also linked to the lobby to allow an indirect view of the interior space as culturally and religiously desired (Danby 1993). The designers most have been inspired by the organized traditional reception hall (Zaure) and the position of the guest room in a traditional plan, shown in Figure 2 above. However, in some cases where there is more than one floor, the zoning is usually vertical (figs. 6 and 7) with separate entrances and staircases for family and another for men and their visitors (Danby 1993). The rooms on the ground floor are usually occupied by male guests/relatives, frequent business associates, and male children so as to avoid views and interactions with wife/wives of the households or women in general. This approach emphasizes serious concern toward cultural

sustainability in the two regions of the north.

Another traditional aspect that suits Islamic culture and is frequently reflected in most postmodern residential designs in the North (Northeast and Northwest) is the courtyard designs. Courtyard plans are the most common space organization used in the region to achieve the degree of privacy needed (Danby 1993). The arrangement has been in existence prior to the advent of Islam in the country. It was discovered that the design suits the so-called extended family and also provides satisfactory response to the needed privacy, as well solves the problem of the regional hot weather. This approach is clearly demonstrated in Figures 5, 6, and 7. The position of the courtyards in the designs usually responds to the religious and cultural attitudes of the regions. The courtyards in the designs separate the male visitors and family areas, and pleasantly provide space for domestic activities, and encourage effective cross-ventilation. In certain circumstances, accessibility to the courtyard spaces in the postmodern residential designs of the Northeast and Northwest regions is usually through the women's zone. The concept provides a link to the women's areas such as the kitchens, and also creates easy access to the family staircase as in figures 6 and 7. This ideology is due to Islamic culture with regard to the privacy attitudes. Moreover, the prevailing approach of postmodern architectural practice has paved a way for designers to continue to produce building plans with focus on cultural sustainability and eventually act in a complementary manner to the so-called cultural and religious need for privacy.



**Figure 7.** Postmodern residential plan showing vertical zoning attitude with aspect to privacy. It was designed by Walga Alamen and is located in G. R. A. Maiduguri Northeast region. Source: Avm & Associates 2011.

Also in regenerating the past built features and settings, Nguyen (2007) says that human betterments do not only lie in the matter of dwelling or utility comfort, but they also lie

in an ideal cultural built environment, which often turns to the necessary requirements of today's living. Postmodern residential designs in Northern Nigeria (in the Northeast

and Northwest) are referred to as “consensus architecture” (Qurix 2007) and are usually flexible in plan schemes and physical appearances. The designs interpret the costumes, customs, and even the culture of the societies and the entire regions as a whole. However, in sustaining the cultural values and meaning of the traditional built elements, postmodern residential designs of the Northeast and Northwest regions excel very well, as exemplified in figures 8 and 9. The impression is usually to enhance the beauty of residential buildings and to signal their regional quality and also to define the local culture. The postmodern residential building in Figure 8 is located in the Kano metropolitan city of the Northwest region and was designed for former Kano State Governor Ibrahim Shekarau. The design of the building in its physical characteristics contributes immensely to the “development and enhancement of cultural identity” (Nguyen 2007). The designer seeks the appropriate way to demonstrate the local culture and

simultaneously combine the functional features of architecture with the essential needs of the user. Indeed, the residential design (fig. 8), in its cultural sustainable manner, illustrates and brings about the noticeable values of the region’s architecture, against that of “international styles.” The pinnacles, dome, flat roof, and the wall decorative patterns of the building displayed an “ancient typology” that is climatically, traditionally, and culturally appropriate to the Northern region. Consequently, one can argue that the physical language of the design is “born of culture, climate, and place” (Tyrrell 2003). The characteristics of such concepts as expressed in Figures 8 and 9 has been used to interpret the attitude of real cultural sustainability, notably the ability to adapt to the existing situation, expression of the qualities of the previous settings, representation of the past, and—above all—reproducing the same characteristic as before in a modified manner.



Figure 8. Pictorial view of postmodern building showing Hausa built elements as cultural identity in design. Photo by author.



Figure 9. Pictorial views of postmodern residential designs displaying northern cultural symbol popularly known as Arewa symbol. Photo by author.





(a)



(b)

**Figure 10.** Pictorial views of postmodern buildings showing dome on the entrance porch as culturally thought. Photo by author.

In some cases within the Northeast and Northwest regions, the cultural sustainability issue in designs is preserved through the cultural symbol, as demonstrated in Figure 9. The building (fig. 9a) was designed by famous Architect Garbajo and is located in Jimeta Town in the Adamawa State of the Northeast region. The designer quickly noticed and displayed a cultural symbol that is popularly known as a northern symbol (Arewa symbol) to signal the local regional character of the buildings. The symbol represents an ideal Hausa residential building in its social and cultural imperatives. It shows that the user can poetically reside in an appropriately modified cultural built setting. It is again however acknowledged, that Hausa traditional architecture is known for a flat roof with shallow dome and pinnacles on external walls (Sa'ad 1983). The postmodern residential designs (figs. 10a and b) of the Northwest region adopt this attitude very well in a modernized characteristic, though the domes are positioned on the entrance porch to signal the beauty of the buildings. The projection of the pinnacles, the position of the domes, and the imitation of the traditional tie beams on the walls represent an ancient culture that is properly appropriate to the so-called regional (Hausa) architecture. This approach is an essential concept in referencing the significances of local culture, as well as defining the royalty status of man in society. Similarly, those built elements in the designs represent some valuable culture of understanding the period and region, and also make residential buildings more appropriate to the cultural built environment.

As discussed above, characters and responses of the postmodern residential designs with respect to cultural sustainability, the approaches have several numbers of unique advantages. Since culture and its development began from the societies, it can also be preserved within the so-called societies (Uzuegbunam 2012). Built environments of the two northern regions (Northeast and Northwest) changed due to economic reforms, social ideologies and progress in technological developments. Subsequently, cultural transformation in those residential designs above, such as transformation of traditional religious (Islamic) culture to

modern Islamic culture has led to the required qualities of sense of place and belonging. Another conspicuous advantage of the northern region's postmodern residential designs was the regeneration of the arts and crafts culture, conventionalization of the modern aesthetics, and above all defining its regional character among the country domestic buildings (Ekhaese 2011). As noted by Rapoport, 1969; Ekhaese 2011 basic needs, position of women, family capacity, privacy and social interaction are the factors that affect the house form. However, these factors are the defining character of Islamic culture and since two of the northern regions were Islamic based society, the postmodern residential designs above clearly demonstrated these characters and were adopted from Hausa precolonial tradition. This is an indication that northern Nigeria built environment undergoes transformation at the expense of expressing local regional culture in contemporary residential designs. In spite of all these advantages regarding physical appearances, the designs also serve their required purpose, such as functionality in spatial arrangement, as well as satisfying the contemporary needs. Another advantage of postmodern residential designs of northeast and northwest regions of Nigeria is the ability to express the qualities of the previous character in both physical and psychological attitudes. Considering factors such as the variation in norms and social comfort the designs responded effectively as needed.

## 5. Conclusion and Recommendations

In conformity with personal observations and the theoretical aspect of the findings, the paper concludes that there is always a need for appropriate designs and built context that are culturally sound to the users so as to have a continued "sense of place and belonging." The findings revealed that postmodern residential designs in the two geopolitical regions (Northeast and Northwest) have contributed a large portion to cultural sustainability. They took good positive approaches toward new identifiable built forms and space organizations that are culturally fit to the so-called extended family.

The plan schemes and spatial arrangements in the whole residential layout are supported by the inherited Islamic culture of the residents. The physical appearances of the postmodern residential designs reflect the local cultural characteristics of the people in the region. Accordingly, cultural sustainability of social development has been promoted by Nigerian postmodernists in residential designs. It is also clearly evident that the dual concept of postmodernism in architecture applies not only in the aspect of promoting the historic characteristics of the Northeast and Northwest regions but also in relation to other facts, such as cultural sustainability in spatial arrangements, reorganizing the contextual features of the physical built environment, protecting family cultural dimensions and religious values, and preserving the civil practices of communities regarding cultural issues.

However, in the region, postmodern residential designs integrate the characteristics of the built context and positively influence the local cultural identity of the area. The designs embrace the cultural and symbolic built elements and display them in a contemporary manner. With regard to visual continuity in architectural built elements, such as roof style and surface finishes, the designs usually portray common values, shared images of residents, and cultural meaning for their “place and belonging.”

It is therefore recommended that cultural sustainability of social development must be understood as an advancing issue at all levels of urban development stages with much analysis and effective consideration. Any new residential designs that will take place within the Northeast and Northwest regions should by all means express the characteristic features of the Hausa traditional residential culture in a modernized manner. The designs’ attitudes should incorporate both traditional and modern concepts in order to enjoy the benefits of modern technology.

Designers should always use the postmodern culture of “double-coding,” as acknowledged by the proponent Jenck (1991), in order for their designs to communicate and signal the local built character. Finally, good practice concerning cultural development and its sustainability can be achieved through a significant step such as the postmodern solution to architectural design. The challenge is always focused on how to promote the different knowledge of development that fosters sustainability in designs. Indeed, the spread of cultural sustainability in designs should be as significant as that of global economic development.

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