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## Wall mouldings and motifs in contemporary Nigerian architecture: Case study of residential buildings in lagos

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#### **Abstract**

Vernacular architecture in Lagos, Nigeria crystallized from the fusion of traditional architecture and the Brazilian influence and is characterized by ornate walls, mouldings and motifs. The adoption of the international style architecture with its subsequent variants relegated the Brazilian influence to the background. However, through the eclectic approach currently being applied to architectural design, ornaments, mouldings and motifs are returning to the façade of many buildings in Lagos, Nigeria. This paper examines the resurgence of wall mouldings in contemporary Nigerian residential architecture using Lagos, Nigeria as a case study. The paper seeks to answer questions relating to types of materials and techniques used for the mouldings and motifs, as well as the craftsmanship associated with the work. Observations of on-going and completed buildings within selected medium- and low-density residential areas in Lagos. Content analysis was used to analyse the data. The results of the study shows that the mouldings, which often incorporated stone veneer finish include edge mouldings, mouldings around openings, horizontal and vertical wall mouldings, as well as eaves mouldings. The use of decorative columns is also evident. It was also found that architects' involvement in the design of mouldings is limited. The implications of the above for façade composition by architects are emphasized.

Keywords: contemporary architecture, design implications, residential buildings, wall mouldings.

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#### 1. Introduction

Architecture is a discipline that draws extensively from such other disciplines as the arts, humanities and sciences. The bond between architecture and the arts especially the visual arts has largely remained strong all through recorded architectural history (Yucesan, 2004). However, the bond was somewhat weakened with the advent of the industrial revolution as a result of which machine aesthetics gained ascendancy. Such movements as the arts and crafts movement as well as the art nouveau were responses of the creative arts community aimed at constructing an appropriate relationship between art and architecture within the context of the industrial age (Stankiewcz, 1992). Art is at the centre of human existence because it is linked to external signs of inner feelings and the attendant pleasurable experience it generates (Reber, Schwarz & Winkielman, 2004; Society for Art of Imagination, 2010).

Art is an expression of culture which reflects the totality of life of a people. The concept of architecture as a social art with strong root in the cultural aspirations of people has ensured that art has remained a vital force in cultural expression of which architecture is a prominent part (Oladele, 2009; Kashim, Ogunduyiile & Adelabu, 2011). Modern architecture and more appropriately, the international style, sought a universal language for architecture thereby playing down the cultural roots of architecture. However, with the ascendancy of postmodern architecture which considered modern architecture as bland, there appears to be a resurgence of the strong bond between the visual arts and architecture. The postmodern predilection for "complexities and contradictions" as exemplified in the eclectic and pluralistic approaches being adopted for designs which include recall of historic and symbolic forms has provided a lifeline for the revival of art in architecture as one of the strands of postmodern approach (Enwerekowe, 2011; Prucna-Ogunsote, 2001).

One aspect of art in architecture is the use of ornamentation which may take the form of integral ornamentation or applied ornamentation. Ornament in architecture has been described in many ways which tend to portray ornament as the essence of architecture because it gives architecture its meaning within particular time and place contexts. According to Saglam (2014), ornamentation has evolved with architecture to the extent that it is no longer considered an element added to architecture but an integral architectural element. Notwithstanding, ornament was relegated to the background by modern architecture because of the widespread adoption of the argument of Adolf Loos to the effect that ornament is crime. At about the same period, Louis Sullivan's aphorism that "form follows function" was relied upon by proponents of modern architecture to eliminate any form of ornament from architecture (Keller, 2009). The criminalization of ornament therefore gained impetus during the international style which eventually trickled down from Europe and America to other parts of the world including Africa.

In Nigeria, the international style was facilitated by European interaction as well as through the return of European trained Nigerian architects who returned to practice after undergoing training in the prevailing European style (Prucna-Ogunsote, 2001). While the international style succeeded as both a technological and cultural bridge, it turned out to be a cultural disaster in Nigeria as it ignored the cultural and even the environmental context in which it is domiciled (Prucnal-Ogunsote, 2002). Incidentally, the international style in Nigeria was preceded by the "Brazilian" influence which, in interaction with traditional architecture, had crystallized to the prevailing vernacular style (Prucna-Ogunsote, 2001; Osasona, 2007). The resultant Brazilian style was characterized by ornate walls, motifs and mouldings and it became a predominant aesthetic language in domestic architecture especially in Lagos and the western part of Nigeria.

The postmodern approach in Nigeria has drawn attention once again to ornamentation in Nigerian architecture. This is in line with ongoing efforts at decriminalizing and repositioning ornaments in architecture (Twemlow, 2005). There is a resurgence of wall mouldings and other forms of ornamentation in residential buildings. This paper examines the prevalence of external wall decorations in residential buildings in Lagos with particular reference to residential buildings built by

individuals for their use where it is expected that individual preferences would be at play. This is because according to Osasona (2007), genuine architecture of a people is clearly discernible only through the buildings that the people choose to build for themselves. Public and social housing are therefore not considered in this study as their tendency towards mass production negates the above position.

## 2. Literature Review

Ornamentation has been defined as the" elaboration of functionally complete objects for the sake of visual pleasure or cultural significance" (Miller, 2011). Ornamentation in architecture has undergone quite an interesting trajectory in architectural development. The history of western architecture is replete with examples of various types and interpretations of ornamentation (Rasdi, 2006). In architecture, ornamentation has remained a highly debated subject since the industrial revolution which culminated in it being labelled as crime by Adolf Loos in the early 20th century (Gibson, 1997). A proper understanding of ornamentation in architecture is hinged on its appropriate definition, its usefulness as well as its expressive content and meaning. Often, meaning is considered as the link between ornamentation and architecture. Up until the build - up to the international style the place of ornamentation in architecture was fairly well understood (Rasdi, 2006). However, architects' understanding and approaches to ornamentation began to change with the onset of the industrial revolution and its attendant fallouts. Ornamentation in architecture can either be integral or applied.

The traditional conception of ornament in architecture is that it is something added to an otherwise complete building to make it look pleasing. It is therefore instructive that the criticism of architectural ornamentation relates more to applied ornamentation than integral ornamentation. In applied ornamentation, ornaments are applied; hence ornament is distinct and separate from structure, implying a somewhat unnecessary addition to a building structure. Integral ornamentation refers to ornament that is part of a building structure. Integral ornamentation is at the core of Ruskin's concept of "material truth" (Serra, Llopis & Irisarri, 2010). As originally articulated by John Ruskin in the nineteenth century, the concept of material truth implies a desire to bring out the intrinsic nature of materials by revealing the construction of the designed object. Integral ornamentation in the form of patterns involves the use of construction materials to form patterns that are aesthetically pleasing. In this sense, patterns also extend to areas such as glazing, wall relief, tiles and cladding materials (Gibberd & Hill, 2013).

Another dimension to the understanding of ornament in architecture is to examine the function of ornament. While acknowledging that ornament is making its way gradually back into the architectural mainstream, Levit (2008) in reference to Moussavi and Kubo (2006) posits that for ornament to be reintegrated fully back into architecture, it must abandon that which made it notorious in the past – its openly symbolic nature devoid of any apparent utilitarian value. Moussavi and Kubo (2006) expand the definition of function to include performance of sensorial roles. Hence the function of ornament is aesthetic and cultural rather than technical and ornament is both unique and integral to each built form (Miller, 2011; Moussavi & Kubo, 2006). The application of decorative elements on a building to associate it with an existing artistic and cultural realm is therefore considered an inappropriate way of approaching architectural ornamentation (Moussavi & Kubo, 2006).

It is perhaps in the expressive content of ornament that its profound effect on architecture lies. Ornament is culturally and socially constructed and interpreted. Irrespective of whether ornament is applied or integral, it conveys definite meanings to different people. Ornament is a universal nonverbal means of communication within a cultural context (Nikolenko, 2013). According to Moussavi and Kubo (2006), ornament has always been part of architecture and it could be captured in whole building form as well as in building elements and surfaces. However, architects' treatment of it has tended to relegate it to the background by regarding it as distinct from building function. The highly expressive character of works of Frank Lloyd Wright and Eero Sarrineen as well as the later works of Le

Corbusier indicate that architecture based on symbolic form existed alongside the plain buildings of the international style, thus lending credence to the position of Moussavi and Kubo (2006). It is in traditional, vernacular and folk architecture that ornament is used as a medium to express different cultural meanings (Siwalatri, Prijotomo & Setijanti, 2012). Hence for many traditional and vernacular buildings, ornament is not only for beautification but carries direct or allegorical cultural meanings. In the sphere of cultural psychology, ornament has been found to be useful in locating and identifying, communicating and organizing human action (Glaveanu, 2014).

In the Nigerian context, architectural ornaments are part of an artistic heritage which is still evolving but founded on naturalism and abstractions from it (Irivwieri, 2010). However, the examples of existing architectural ornaments are found mostly in vernacular buildings, which evolved from the interaction of tradition and external influence. The best example of vernacular building in Lagos, Nigeria is the Brazilian style architecture (Osasona, 2007; Vlach, 1984). Mostly prevalent in domestic buildings, the features of the Brazilian style include wall mouldings and mouldings around doors and windows which were well received and disseminated. The Brazilian style did not diminish the search for a truly Nigerian aesthetics in domestic architecture. The works of Nigerian artist and architect Demas Nwoko in expressing the" new culture" concept reflected Nigerian aesthetics through carved and molded columns, wall mouldings, carved doors and other aesthetic embellishments that are derived contextually (Okwumabua, 2007). Contemporary application of ornament as embellishments in residential buildings in Lagos, Nigeria mimics both the Brazilian style and the new culture concept of Demas Nwoko. This paper therefore examines aspects of external ornaments being applied on contemporary buildings in Lagos, Nigeria.

## 3. Research Method

Lagos is a rapidly growing mega-city with many public and private housing programmes aimed at meeting the housing needs of the people at various stages of completion and occupation. The buildings are mostly located in newly developing areas of the city. On-going and newly completed privately built residential buildings were studied with a view to identifying types and methods of application of external mouldings on the facades of the buildings. Specifically, residential buildings were observed at such areas as Amuwo- Odofin, Okota, Idimu, Ikotun, Agidingbi, Magodo and Shangisha. The study was limited to visual analysis and work study of the artisans involved in production and placement of the mouldings.

#### 4. Results and Discussions

The buildings studied are storey buildings ranging from two floors to three floors. The buildings are constructed as reinforced concrete framed structure with sand-cement blocks used as the internal and external wall envelope. In line with prevailing client preferences, the roof designs are given prominence. In some cases, the high roof is exploited by utilizing the enclosed space as an attic floor often referred to in local parlance as a penthouse. The elements that highlight the external mouldings include: columns, walls and building eaves.

## 4.1. Columns

The studied buildings show various examples of use of decorative columns which play aesthetic roles more than structural roles. They often rise from the ground and go up to support part of the roof thus creating a lofty entrance porch. The columns take different forms including representations of the classical orders: Doric, Ionic and Corinthian. However, they are generally devoid of the

proportional rules of the classical orders. The columns have circular, rectangular and square cross-sections complete with a pedestal and capital. The moulds are precast mostly on site and subsequently fixed on the existing reinforced concrete column by use of ordinary portland cement as the primary binding material. The columns are sometimes finished with tiles or stone veneer (plate 1).

## 4.2. Walls

Wall mouldings are horizontal, vertical and patched relief. The mouldings are found at the wall corners as corner mouldings and at openings such as doors and windows as window and door mouldings. They are also found as horizontal and vertical mouldings. As horizontal moulding, they are used to demarcate one floor from another; as well as for differentiating types of wall finishes. In this respect the horizontal and vertical mouldings are used in conjunction with hard wearing wall finishes such as stone veneer finish. Window and door opening mouldings are the most prevalent wall moulding suggesting a smooth transition from the familiar in-situ concrete window hood that had been generally accepted. The moulds are precast on site using locally produced mould makers and fixed at the desired positions using cement and fasteners such as nails and binding wire. The ornamental mouldings are actually applied to the existing structural frame of the buildings. The mouldings are reflections of the Brazilian influence. They are embellishments on an otherwise plain surface to make it more pleasurable. The mouldings are usually painted with a different colour as a complement to the background colour of the building (Plate 2).

## 4.3. *Eaves*

The use of moulded eaves deign which eliminated the use of external ceiling for the roof overhang is very common and widespread. The eaves are mostly constructed in-situ in reinforced concrete placed in wooden and plywood formwork. The eaves moulding are thus integral with the building structure instead of the applied mouldings on walls and columns (plate 3).

## 4.4. Materials and Techniques

The main material for the mouldings is ordinary portland cement which is often mixed with fine aggregates in order to reduce the incidence of cracking during curing and placement. Other materials include hollow steel pipes and the pattern mould. Sharp sand is spread on a flat surface between steel moulds. A mixture of cement and sand formed into mortar is poured in between the steel pipes and the pattern mould is used to draw the pattern on the mortar to obtain the desired design. The movement of the mould is repeated several times until the surface of the design is smooth. Thereafter, the moulded pieces are cut according to their fixing details and then allowed to cure for about five days before fixing in position. Holes are also drilled in the design to accommodate the fastening nails.

## 4.5. The Artisans

The artisans are a mixture of Nigerians and Togolese nationals. Lagos has a very large number of Togolese artisans who are taking advantage of the large construction market. Incidentally they are generally preferred to their Nigerian counterparts because of the better programme of apprenticeship

and skill acquisition they undergo. Their cost is also lower in comparison. The artisans rely on foreign product catalogues for design of the mouldings. The major mode of transferring knowledge and skill from one generation of artisans to the other is by apprenticeship.

#### 4.6. Architects' Involvement

It was also found that architects involvement in the design and specification of the mouldings is limited. In most cases, the property owner identifies a preferred design from the catalogue or makes a choice from several examples built around the neighbourhood. Given that the architect is expected to provide full aesthetic direction to a particular building, his reduced involvement in the design and specification of wall mouldings has adverse effects on the building façade. It is therefore not uncommon to find badly proportioned moulding as well as improper fixing of the mouldings. It is also instructive that private property developers may not have the resources to engage architects for the entire duration of the construction.

## 5. Conclusions

Wall mouldings in the form of edge mouldings, horizontal mouldings, vertical mouldings as well as mouldings around openings and at the roof eaves were found to be most prevalent in the residential buildings under study. There is no clear philosophy underlying the aesthetic preference of the artisans and their patrons. It appears every house owner is interested in accommodating some kind of moulding or the other. Curiously, the mouldings do not appear to convey any specific cultural meaning beyond the embellishment of the façade. The limited involvement of architects in the design and specification of these mouldings may be responsible for the rather cosmetic application of the mouldings. Nevertheless, they do result in aesthetically distinguished buildings and their widespread adoption by private home builders is an indication of acceptance. However, in order that it is not treated as a fad that will shortly fade into insignificance, there is need for architects to leverage on this identified resurgence of applied ornamentation to develop architectural ornament that is truly integral and unique.

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