

THE RISING PROFILE OF FENCE ARCHITECTURE IN NIGERIAN HOUSING ENVIRONMENT

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ABSTRACT

Fence wall has become an almost integral part of modern residential architecture in Nigeria. This development is symptomatic of the growing insecurity of lives and properties arising from the wave of violent crimes in residential suburbs of the city. In fact, fence walls have turned many houses in the city into maximum-security prison yards, and have equally turned the entire housing suburbs in the country into regimented and constrained environment because of high incidence of violent crimes. Yet, these fence walls have not been able to stem the tide of criminal activities committed inside them. In most instances, these walls have tended to conceal these activities from being detected outside of them. While the high incidence of violent crimes is indicative of the inadequacy of the fence walls to protect and secure lives and properties, their negative impact on the visual character of residential areas of the city is quite obvious.

This paper reviews the rising profile of fence architecture in residential buildings, which is mainly undertaken as a defensive device while ignoring its other important aesthetic functions, and suggests an elegant development and coordination of design elements and details that would contribute positively to urban aesthetic of the city while at the same time securing the protection of lives and properties.

KEY WORDS: Character, fence-wall, landscape, urban poverty, urban violence

INTRODUCTION

Problems facing Nigerian cities since the turn of last quarter of last century seem to acquire an added urgency by impacts of two global trends. First is the alarming, uncontrolled rate of urbanization. Thirty years ago, some 25million Nigerians were living in cities. This figure doubled to 50million by the year 2000, and at an average annual growth rate of 4.5 percent, it is expected to reach some 60million by the year 2015 (UNCHS, 1996). This accelerated growth of urban population in the country has had serious implications for the functioning of urban environment, notably in the areas of sustained infrastructure and service provisions, which are vital to the well being of the city dwellers.

Today, we have indisputable evidence of crisis in our cities because of this uncontrolled urban growth, which has occurred over the last four decades. For the urban poor dwellers, the inadequate public amenities, apart from unemployment, have significantly added to the hassle of urban living. According to Mabogunje (2002 p. 2) 'whether one thinks of water supply, sewage, sanitation, roads, electricity, drainage, one is confronted with neglect and poor maintenance'.

The second, which is an outflow of the first, is the rise of urban violence. The oil boom, which began in the early 1970s, has not adequately addressed the country's economic and social problems; rather it has introduced a growing disparity in wealth distribution, leading to tremendous social deprivation in two major directions.

Firstly, the imbalance in physical development between urban and rural areas in terms of infrastructural provisions is unwittingly widening in favour of the former, stifling the later of their economic, demographic and social strength. The consequence of this imbalance in development is the massive rural-urban drift. Many of these migrants who came to the cities in search of better life resort to criminal behaviour when their expectations of economic improvement and social mobility are dashed (Danmole, 2002, p. 180). Secondly, there is economic gap between the rich and poor

with a direct negative consequence on their living standards in the country (Ayeni, 1978; Dwyer, 1978; Mabogunje, 2002; Achi, 2004). Indeed, urban poverty in the country seems to have grown in recent years not only as a result of the growth in urban population but also as a consequence of the worsening employment situation. What is most disturbing is that urban poverty in the country is increasing phenomenally. According to the 1996 Nigerian Human Development Report (UNDP, 1997, p.34) "in the entire 1985-96 period, real government expenditure on programmes, which were of immediate relevance to the poor declined, both in real terms and as a share of total government expenditure. For example, the percentage share of total expenditure going to the social sector declined from 13.1 percent in 1985 to 9.3 percent in 1992". According to Mabogunje (2002, p.2) a recent study by the Federal Office of Statistics indicated that close to 70 percent of the estimated national population of 124 million Nigerians earn less than N100 a day, and many of these are to be found in the urban areas of the country.

This dichotomy in wealth distribution in the country has had great physical and social impacts on the urban landscape. Physically, it has been linked to residential locations between the two economic groups in the city. While the "nouveaux- riches" have taken over the choicest areas of the city, characterized by skyline of magnificent buildings with privately acquired amenities for a modicum of comfortable living, the urban poor have been condemned to live in the slum areas or what Dwyer (1978, p. 52) referred to as "cities built substantially by the poor for the poor", and where falling standards of living abound. Already, a correlation has been established between the physical structure of the city and social class of the people (Onokerhoraye, 1994, p.161). This development has long been identified with the radical disruption of the layout of the city (UNESCO, 1977).

Socially, these poor living conditions have given rise to the problems of poverty and want, public security and safety, all providing a breeding ground for urban violence

(Agbola, 2004 p. 5). Criminal activities in Nigerian cities are now pervasive and are on daily increase. What is most disturbing is the fact that the nature of these crimes becomes increasingly sophisticated in style and viciousness, and the Police are incapable of meeting the burgeoning challenges in the cities (Mabogunje, 2002, p. 3).

Top on the list of these violent crimes are fraud, burglary, assault and rape, acts of terrorism, hired assassinations and ethnic and religious violence (Danmole, 2002 p. 184). Armed robbery incidences and assassinations in private homes of the *nouveaux-riches* have made them to respond to these real and perceived threats to lives and properties by resorting to building high fence walls. What has now become an obvious element of modern realm in residential building in Nigerian cities is almost architecture of fence wall, with serious visual impact on the urban physical character.

The objective of this paper is to review the rising profile of fence architecture in residential buildings, which is mainly undertaken as a defensive device while ignoring its other important aesthetic functions. It is also to suggest ways in which its design elements and details can be developed to make it contribute positively to visual image of the city while at the same time serving the protective function of securing lives and properties. The method of study employs field survey and an adequacy analysis procedure (AAP), which is adapted from a similar study used by the USAF Centre for Environmental Excellence (2002).

This paper is presented in four sections. Following this introduction, the second segment looks at the beginning of fence architecture in Nigerian cities while the third section discusses the primary function of fence wall in the landscape. In the fourth section, the role of fence wall in crime prevention is examined, and the last section contains the conclusion.

THE RISE OF FENCE ARCHITECTURE IN NIGERIAN CITIES

Not that fence architecture is modern invention by any means as a device, it had, of course, been in earliest days of the country's civilization. City walls, which used to mark the limit of most indigenous cities in the country, were a defensive device to meet the contingency of external aggression. They were very common in the indigenous cities of western and northern Nigeria. After the city wall was an elaborate wall around the emir or oba's palace and wall decoration was an important aspect of such fence architecture, and their existence is well documented (Ojo, 1996; Mabogunje 1968). Internal fence wall around individual building was not a common feature as it is today except in the southeastern part of the country where many individual buildings had fence walls, made of bamboo poles, raffia palm ribs and fronds. In most cases, the fence wall was built to secure the backyard and sideyard of the house, while the front yard was planted with hedges and flowerbeds.

The colonial and early part of post-colonial periods witnessed attention to happy acceptance of display of modern architectural form of individual buildings and their detailed landscape treatment in the new cities. High fence wall in the front yard of the house was not a common feature, except dwarf poles and wire mesh to demarcate property lines (Achi, 2004, p. 100). The dwarf wall was adorned with masonry or burnt bricks, marble and glazed tiles of different sizes, colours and designs to beautify it. Building facades, terraces and balconies were visually connected to the fence wall to make the house and the fence appear as a totally integrated environment.

The most dramatic influence of fence architecture came about as a result of the rising urban violence and

increasing insecurity of lives and property. The polarization of city dwellers along economic divide has turned the city into environment of exclusion where conflict and violence are played out. The sudden wealth by few privileged groups, sandwiched by surrounding poverty, prompted the building of high fence walls to create seclusion. Today, the fence walls are made of solid walls of more than three meters in height with electrified wire or broken bottles and sharp iron pieces cemented to the top (Figure 1). In addition, steel gates, heavy metal doors, concrete fins on windows, use of mobile security and guards have turned many houses in the city into maximum security prison yards, and have equally turned the entire housing estates in urban areas into regimented and constrained environment (Danmole, 2002, p. 181). Yet these high fence walls have not been able to stem the wave of violent crimes in Nigerian cities. In most instances, the high fence walls have instead concealed criminal activities being detected from outside. In a field investigation carried out by this author on Ewet Housing Estate, Uyo the capital of Akwa Ibom State, it was found that more than 80% of the houses in the estate have high fence walls, and yet the number of reported cases of violent crimes has not abated in the last ten years (see Table 1)



Figure 1: A solid fence wall in one of the housing estates with electrified barbed wire.

However, one disturbing fact is that these fence walls have little or no design that makes them part of designed landscape. Rather, they tend to make an impression as brutal barriers that not only prevent the beauty of the houses so fenced off to be appreciated from outside but they also turn their back on the street and the housing environment. The vistas of many residential suburbs are but a corridor of continuous high fence walls fronting the street. Often, neither the height of many of these fence walls and their skylines are considered nor the building line respected. Indeed, not even the color scheme and texture are given any serious thought. According to Achi (2004, p. 100) achievement of good blend is by sheer coincidence.

The situation is not helped by the non-provision of building guidelines by the planning authorities on what is desirable as the desired character of housing on one hand. On the other hand, many homeowners themselves do not bother about the design of their fence walls or make any attempt to ensure an integration of architecture of their houses with visual character of the neighbourhood.

Table 1: Number of Reported Cases of Break and Entry and Armed Robbery at Ewet Housing Estate, Uyo between 1995-2003.

Year	Reported Incidence
1995	5
1996	12
1997	14
1998	11
1999	15
2000	20
2001	15
2002	21
2003	25
2004	23
Total	161

Source: Akwa Ibom State Police Command, Uyo

FENCE WALL AND THE LANDSCAPE

Functions

The primary function of a fence wall in strict architectural sense is to give spatial edge to the third dimension of a property. Two types of fence wall, namely retaining wall and free-standing wall are often used to achieve this. While the retaining wall is considered as a visual and functional part of the ground plane with its location and function directly linked to the grading of the ground's surface, the free-standing wall is the element that stands by itself without any support of other structural elements (fig.2)

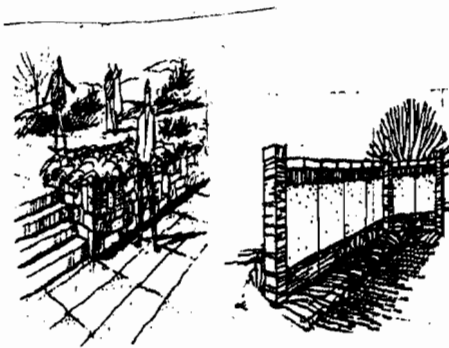


Figure 2: Retaining and Free-standing Walls (Source: Booth and Hiss, 1991)

Fence wall can serve other functions in the landscape, it can be used to screen and direct views, create privacy and direct movement through the landscape. It can be used to complement its architectural surrounding by extending the lines of the building out onto the landscape. It can also be used to dramatize selected views, form backdrops for specific settings or add interest to the otherwise featureless or monotonous landscape.

To fulfill these aesthetic functions, fence wall should be designed and detailed with attractive patterns of materials, colours and textures that delight the eye. As an important element of the built environment, the design of fence wall should respond to both functional and aesthetic qualities of the surrounding development and be able to link the house and

the surrounding areas as a unified environment (Booth and Hiss 1991, p. 325; Harris and Dines, 1998, p. 450-2). However, the type, size and material determine the nature of a fence wall, which itself is influenced by many considerations. Harris and Dines (1998, p. 450-3) have listed them as:

- Whether the fence wall is an aesthetic feature or a practical boundary or both
- Whether the fence wall provides privacy or security
- Whether the fence wall is solid or perforated to allow some degree of visual accessibility and
- Whether the fence wall is in harmony or in contrast with other features of the site development

Design objectives and design expression for a fence wall need to be carefully interpreted relative to the site development. Unfortunately in Nigeria, the second consideration above seems to override other factors in influencing fence architecture.

Design Expression

Poorly designed and improperly built fence walls seem to dominate fence architecture in the country, and are having a serious impact on the character of the city, particularly in the residential suburb. This has come about as a result of lack of a controlling scheme to guide its design and construction. A way to improve this ugly situation is to develop a successful design guideline that will involve a careful development and coordination of design elements and details. The design expression that should be consciously addressed include:

- **Compatibility:** The design of a fence wall should respond to its landscape context and adjacent architecture. Compatibility can be enhanced by using the same or similar materials, colours, texture, details and proportions of the house architecture or of nearby buildings as well as streetscape elements, and plant materials.
- **Scale:** High fence walls can be scaled by the use of textures and shadow lines, and by the articulation of individual elements such as posts, panels, rails, grills and caps to create visual interest.
- **Proportions:** The relationship of the height to the width of panels, post sizing etc. should be carefully scaled to respond to the established design expression of major horizontal or vertical elements nearby. Such scaling should consider fenestration, doorway proportions, building heights, walls or other architectural articulations of the house.
- **Rhythm:** The line created by a fence wall should be considered with other lines in the landscape. The rhythmic use of such elements as posts, slats or panels can affect the perceived size or scale of a fence wall through the use of textures, shadow lines and articulation of details.
- **Colour:** Color seduces the eye and evokes mood. As a powerful and unifying tool, colours have predictable effects and should be utilized in fence wall design. Painted walls appear neat and alluring while unpainted ones look dirty, ugly and unbecoming, reducing their aesthetic value. Lighter colours will call attention to the individual elements of the fence wall, while darker colours appear to unify appearance. The type of colours used should be able to blend individual elements of the wall together. Colours should be used to give illusion of textures, shapes and depth on walls.
- **Texture:** The type of materials used and the kind of finished selected will affect the texture of the fence wall and its aesthetic effect on the surrounding landscape.

FENCE WALL AND CRIME PREVENTION

For fence wall to be part of an effective means of preventing criminal activities within the residential neighbourhood and at the same time contribute to its aesthetic value, the design philosophy should focus on subtle but effective element of physical barriers that will enhance and promote informal surveillance and make it difficult for potential intruders to force their way into buildings.

The recently operationalized concept of crime prevention through environmental design (CPTED) developed by Gardner (1995) can be applied to fence architecture. The CPTED concept is posited on two assumptions:

1 Firstly, it links together the physical environment and criminal behaviour. Such link can be achieved through architectural manipulation (Gardner, 1995, p. 195; Newman, 1972, p. 148). According to the proponents, this can be possible if activity areas within an urban area are distinguished and surveillance mounted to check criminal behaviour. To do this, the area is divided into "defensible spaces", which according to Newman (1972, p. 150) are those spaces having some identical architectural elements or character. The spaces are:

a) **Public Zones**, which are freely accessed by the public and are least secured as surveillance may be difficult to carry out.

b) **Semi-public Zones**, which are the buffer areas between public and private zone, serving as common use spaces. They are accessible to the public but are set off from the public zone.

c) **Private Zones**, which are areas of restricted access. Entry is controlled and limited to specific individuals or groups. A private residence, which is the focus of this paper, is a typical example of the private zone.

Physical and symbolic barriers can be used to demarcate boundaries of these zones. While symbolic barriers are less tangible and can be anything provided they define the boundary lines between the zones, physical barriers can range from security doors and windows to fencing and landscape treatment of the zone.

2 The second assumption is that of territorial ownership, which can help to mitigate crime in residential areas. According to Newman (1975, p. 196) and Gardner (1995, p. 143), territoriality involves an individual's perception of and relationship with the environment. They both argued that a strong sense of territoriality could encourage an individual to take control of his environment and defend it against incursion or attack. This sense of territoriality, they noted, is motivated by identifiable elements of interest that portray a sense of belonging and can be reinforced when the area in question is easily identifiable with a sense of pride and territorial ownership. Ownership according to them does not necessarily mean actual legal ownership but refers to perceived ownership as a result of individual's relationship with that environment.

Fence Architecture as an Element of CPTED

In considering these two assumptions in the design of fence wall, a design philosophy can be developed that gives pride to an area and promotes symbolic identity to it as an exclusive domain of a particular individual or group. An attractive environment is known to generate this kind of pride and sense of ownership in community (Newman, 1975; Gardner 1995). A well designed fence wall with good lighting can provide such attractive environment and can foster the interest of an individual to want to protect that environment of delight.

The problem with the physical appearance of most fence walls in housing environment in the country lies in the fact that the design does not engender a sense of pride within the housing community. In many instances, the fence walls

have failed to make any connection between the houses and their surrounding areas and do not promote a totally integrated environment. Rather, these fence walls are seen as brutal barriers that not only prevent the beauty of the houses to be appreciated from outside but also turn their back on the street and the housing environment. Poorly styled or improperly built fence walls are known for their nuisance to neighbours by blocking views and not allowing intruded activities to be seen and detected by interested neighbours.

Opportunities, however, exist to design fence walls in housing environment that can appeal to informal or natural surveillance instinct. Fence design as part of CPTED should however, not create a false sense of impregnable fortress. The design objectives should be to complement the architecture of the house while also striving to discourage potential intruders and where necessary to make such illegal entry very difficult and time consuming. Degree of difficulty and length of delay should be the key factors in design to reduce the probability of criminal activities (Achi, 2004, p. 137).

CONCLUSION

Undoubtedly, fence architecture has become an important component of urban development in Nigeria. Design criteria for fence wall construction should establish the aesthetic, design expression, scale, proportion and compatibility. Above all, design that complements the house, minimizes visual obstacles and eliminates places of concealment for potential assailants and encourages a sense of territoriality as well as makes visual connection between the house and its surrounding area and promotes a totally integrated environment offers the most protection and amenity to the character of the housing environment.

The extent of privacy desired and its context should also greatly influence the design and materials to be used for fence walls. For instance, a transparent or semi-transparent wall will encourage visual access to and from the house. Formal surveillance methods such as closed-circuit television, cameras access, intrusion alarm, fixed guard post and organized security patrols and the new GSM services to alert the Police, can be added to complement fence architecture, which is a key factor in physical crime prevention.

It is when all these considerations are thought out that fence architecture can then play its prominent role in contributing positively to the housing environment and can make a strong visual statement in the character of the city.

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