

The Social Effects of the Built Environment: A Case Study of Selected Buildings in Benin City, Nigeria

Kingsley O. Dimuna

*Department of Architecture, Ambrose Alli University, P.M.B 14, Ekpoma,
Edo State, Nigeria*

GSM: +2348033588987; E-mail: kodimuna@yahoo.com

KEYWORDS Relationships. Consequences. Planning. Architecture

ABSTRACT This paper examines the impact of the built environment on the pattern of social life of the home dweller. Housing and planning rest on the premise that by the manipulation of the physical environment we can control social patterns. In general, it is said that architecture controls the environment in order to make interaction and collaboration possible. The paper attempts to assess this premise. In the context of architecture and city design, the physical environment is generally known as the built environment. The built environment simply refers to the buildings and spaces between them. The purpose of architecture is to give order to certain aspects of our environment. This implies that architecture controls or regulates the relations between man and his environment. It, therefore, participates in creating a meaningful frame for the activities of man. The paper posits that if housing exerts an independent influence on how we live, then the creation of certain housing conditions can change social relationship. We can affect the choice of friends, family adjustment, and generally how people spend their time. Different housing decisions may have different social consequences. This paper examines the various ways the manipulation of the environment could result to a better sustainable and environmentally conscious architecture. The paper recommends that architecture, as a human product should be used to order and improve our relations with the environments.

INTRODUCTION

The purpose of architecture is to give order to certain aspects of our environment. This implies that architecture controls or regulates the relations between man and his environment. It, therefore, participates in creating a meaningful frame for the activities of man. In the context of architecture and city design, the physical environment is generally known as the built environment. The built environment simply refers to the buildings and spaces between them.

The physical environment is considered as the most important component of the environment because it is that aspect with which the organism, individual, community or population is in direct contact and whose effects are mostly directly visible and tangible. The major elements of the physical environment include: the home, its structural stability, amenity, architecture, and location characteristics relative to the homes.

Physically, architecture constitutes one of the most important aspects of the environment, and if we also take the semi-architectural elements into consideration, such as roads, squares, and gardens, we have a 'network' of interrelated components which are connected

with practically all human activities by forming a practical frame, an adequate psychological background, and by expressing that what takes place is important to the community.

Architecture happens within a broad social, environmental, behavioural and economic context. The design solution should respond to that context. But unfortunately, this has not always been the case. Therefore, we need a conscious clarification of our problems, that is, the definitions of our building tasks and the means to their solutions.

This paper examines the various ways the manipulation of the environment could result to a better sustainable and environmentally conscious architecture.

Literature Review

The built environment can be understood in the context of human settlement. This global understanding of the built environment as "Human Settlement" is based on the (United Nations Conference on Human Settlement, UNCHS 2001). This understanding led the international community to commit itself to the ideals of Habitat II and subsequently, the global human settlements agreement enshrined in the Habitat Agenda was developed and accepted internationally.

According to United Nations Centre for Human Settlement (UNCHS 1996), this is an embodiment of what constitutes cities, towns, and villages including their surrounds, infrastructures, services, communication and transport, shelter (adequate and affordable housing), governance and management, resources and technology, human settlement development, etc. and people in them.

The present Nigerian built environment has been described as chaotic (Federal Government of Nigeria, FGN 1996, 1997; United Nations Centre for Human Settlement, UNCHS 1996; Nigeria Institute for Social Research, NISER 2001; Federal Ministry of Works and Housing, FMW and H 2002; Alkali 2003). Many factors have contributed to the state of the built environment. Kabiru (2005) posits that continuous development is brought about by factors of population growth, enhanced economic activities etc., and are characteristic of Nigerian built environment.

Every human activity on the earth's surface certainly has some impact on the immediate environment. Such impact may either be positive or negative, depending on the type of scale of the activity. To ensure that the built environment has positive effects on the inhabitants, it should be sustainable. Sustainability in the built environment is closely linked to the concept of human existence. The World Commission on Environment and Development Report (1987) defined sustainable development as meeting the needs of the present generation without compromising the needs of the future.

Inherent in this definition is the aim of the concept which is to satisfy social, environmental and economic goals of providing adequate shelter and sustainable human settlements characterized by safety, health, efficient and productive life that is in harmony with nature (UNCHS 1996; FGN 1996). The purpose of architecture is to shelter and enhance man's life on earth and to fulfill his belief in the nobility of his existence.

Aims and Objectives of the Study

The broad goal of this study is to examine the impact of the built environment on the social life of city dweller, using a neighbourhood in Benin City as a case study. The specific objectives of the study are:

- (a) To review existing developmental problems arising from non-compliance with building bye laws and regulations in Benin City .

- (b) To identify and investigate the urban built development challenges in Benin City .
- (c) Suggest a suitable built environment agenda that could offer solutions to these built environment problems.

Justification of the Study

The need to carry out this study arose as a result of perceived and observed non-compliance with building By-Laws and Regulations which has resulted in chaotic development in some areas of Benin City. Presently in some Nigerian urban centre and Benin City inclusive, various state governments have and are embarking on urban regeneration programmes which have left many buildings demolished. This is as result of road expansion projects which have affected buildings that did not observe the standard set back. Also, in most blocks of flats it has been observed that many landlords who prefer profit to human comfort build their houses with little consideration for parking and recreational facilities for their tenants. Unfortunately most of these buildings were approved by the Town Planning Authorities. The study is, therefore, to draw attention to social responsibility we all have to our community in the development of safe, secure, healthy and pleasant built environment for sustainable development.

METHODOLOGY

This study is based on census of some selected blocks of six flats (two storey building) in (5) selected streets in Benin City Nigeria. The number of flats visited were 20 in all and 84 respondents were interviewed. The indices used in describing these buildings included building location, the impression of the tenants on the built environment, conveniences of the tenants, the adequacy or otherwise of parking spaces provided in ratio to the number of flats, as shown in Table 1. The data gathered was analyzed using descriptive and inferential statistics.

RESULT AND DISCUSSION

Table 1 shows the social conditions in 20 houses of six flats visited during the field survey.

The summary of the survey is as reflected in Table 1 revealed the following:

1. *Central Road:* The data gathered in Table 1 are used in investigating the objectives of the

Table 1: Social conditions in block of six flats visited

Serial number	Selected streets in Benin City – Nigeria visited	Number of blocks of six flats visited	Number of tenants interviewed	Number of unhappy tenants	Number of tenants that prefer to park outside the compound during the day	Number of tenants that have felt disturbed	Number of tenants that had minor quarrels associated with parking	Number of tenants that would prefer more parking space	Number of bordered about the situation
1.	Central Road	4	16	11	8	10	8	16	0
2.	Reuben Agho Street	4	18	13	9	12	9	18	1
3.	Capiona Avenue	4	16	12	7	10	8	16	0
4.	Obahi Avenue	4	16	11	8	12	9	16	1
5.	Etete Road	4	18	12	7	10	10	18	0
Total Number		5	20	84	59	39	54	44	84
Percentage				70.2	46.4	64.4	52.4	100	2.3

Source: Fieldwork October 2005

study. It can be seen from the table that of the 16 respondents at the Central Road area, 11 persons are not happy with the condition of the built environment, 8 respondents would prefer to park their cars on the street instead of parking in the compound during the day in order to avoid disturbances from neighbours who may wish to go out. 10 of the respondents agreed that they have been disturbed by neighbours and 8 of the respondents admitted having minor skirmishes when their siesta was interrupted by co-tenants who wanted them to move out their cars. Almost all the tenants wished that the owner of the building and the architect had made provision for adequate parking space.

2. *Reuben Agho Street*: In this street 18 persons responded to the questionnaire. 13 of the tenants are not happy with the congestion of the built environment; and wondered why a two storey (6 flats) should be built in a plot of land measuring 35 metres by 15 metres. 9 of the tenants preferred to park their cars on the roadside during the day. All the respondents would prefer more parking space but 1 tenant accepted to live with the situation.

3. *Capiona Avenue*: Here 16 persons responded. 12 were not happy with the situation, seven admitted to the habit of parking on the roadside during the day. 10 persons acknowledged getting disturbed, while 8 admitted to having felt angry with their co-tenants as a result of parking problems.

4. *Obahi Avenue*: The condition is almost simi-

lar to that of Capiona Avenue (Serial Number 3) except that 1 tenant had accepted to live with the situation that he could not change to avoid stress related problems.

5. *Etete Road*: Out of 18 respondents, 12 felt unhappy. 7 preferred to park outside the compound during the day. Ten tenants have felt disturbed and had quarreled as a result of parking challenges. All would prefer more parking spaces. It has been observed from the above results that:

1. Seventy percent of the occupants were not happy with the situation; but just try to cope with it.

2. Forty-six percent prefer to leave their cars outside their compound (along the road side) and only park at night to avoid being disturbed.

3. About sixty percent agreed that they really felt disturbed whenever their co-tenants ask them to move out cars for them.

4. Fifty-two percent accepted that they have had minor misunderstandings with co-tenants because their 'quiet time' or siesta was interrupted.

5. All the tenants liked the block of flats but wished that more parking facilities were provided.

Conclusively, these types of accommodation neither promote friendship among the occupants nor respond to users' requirements.

The major concerns from the foregoing are the roles of professional consultants such as the architects, town planners and the staff of development control department. The roles of these

professionals in the design of these buildings are questionable because architecture which (McGinty and Gatzke 1977) defined as: "The enhancement of human activity, both by giving it definition and shelter primarily through the designed arrangement of external and internal environmental elements like walls, temperature controls, acoustic, etc., and by relating it to more general context of human affairs" is concerned with the satisfactory ordering of the environment and creating comfort for mankind.

There has also been increasing concern with the physical and social environment and its effects on man. Congestion, pollution, and undisciplined spread of cities, for example, are becoming major influences on human feeling, social interactions, the ability to work and general physical and psychological well-being. There has also been an increasing concern about the effects of architecture and interior design on individual and social behavior in normal population.

It is expected that in any housing design and planning, consideration should be given to the following factors and parameters that must be considered to fulfill the expectation and living modes of the users. These are: (i) Livability of dwelling; (ii) Sense of community; (iii) Aesthetics; (iv) Responsiveness to context and flexibility; (v) Maintenance; (vi) Child supervision; and (vii) Security,

(i) *Livability of the Dwellings*: Livability simply means the provision for individual privacy in the dwellings, for alternate views, and cross-ventilation. The factor of livability is the most instrumental aspect of design and is most commonly related to the individual dwelling units. It refers to the utilitarian organization of space and facilities, which best accommodates the needs of the occupants and minimizes frictions and frustrations from factors of layout and design. According to Riemer (1951), a sociologist of housing:

"Modern architecture does its best to accommodate in the most utilitarian manner the informal aspects of private family living... Room arrangements (are favoured) that serves the everyday life of the family and reduces household chores to a minimum... Relaxation and informality in the relation between different family members are promoted".

Livability thus becomes an expression of the "functional" goals of modern architecture and design, and its norms are efficiency. It implies a

careful adaptation of design to use, and frequently specific features or spaces are designed for specific purposes.

In the private dwellings, for example, a study space is commonly provided in the "children's bedroom" where, the younger generation can do their lessons in privacy. This normally removes them from the distractions of family communication without imposing undue restraint on the rest of the family.

While in mass housing, livability of the domicile necessarily takes on a more restricted meaning than the ideals represent by modern architecture. Cost limitations and family pattern which vary in time, in stage of the family circle, and from one group to another, forbid detailed attention to individual preferences and force standardization of design.

Livability problems can be essentially reduced to factors of space, which afford the room for group activities and for privacy. In the arrangement of space the designer can make ingenious decisions, which minimizes frictions. But this is most true in relatively expensive residential housing. In middle and low-income dwellings, the cost limitations severely restrict the amount of space available.

The effect of the space variable on livability is not simply in crowding (whether persons per room or use crowding) or space for social activities. Usually, there is enough room for those activities in which the family engages together, although larger social affairs such as parties, may suffer in small dwellings. The basic problem boils then to privacy. Privacy is defined as "the selective control of access to self, achieved through both physical and social boundary control mechanisms (which can be environmental, verbal, non-verbal of cultural practices). Privacy is needed for thinking, reflection, reading and study and for aesthetic enjoyment and contemplation. Intrusion on the fulfillment of personal needs is to be shut off.

To some extent, it is possible to isolate part of the dwelling by clever design; such careful solutions of circulation, sound insulation, etc. But real privacy requires room for comfortable retirement; and unless this space is provided, the lack of privacy may become a source of friction and frustration.

(ii) *Sense of Community*: Sense of community refers to organization of dwellings and spaces to promote social integration. Through their ef-

forts on social interaction, physical settings promote the growth of individuals or groups. Characteristics of setting that affect this process include the amount of contact the setting allows, the visibility of people to one another, and the messages the setting sends about possible new patterns of contact.

Researchers have shown that physical settings can facilitate or inhibit interpersonal contact. It is also generally acknowledged that the quality of interaction has a major influence on security, task performance, pleasure and growth. Researchers have also shown that spatial arrangement of persons, as dictated by the environment, affects affiliations. In other words, what is the significance of the design and architecture of microenvironment in determining social interactions patterns? Hall (1959, 1963, 1966), Osmond (1957, 1959, 1969), and Sommer (1969) most clearly denoted the importance of the spatial arrangements of persons on their affiliations. Osmond's concept of socio-fugal and socio-petal spaces of 1969, distinguished areas of buildings that tended to segregate people from those that brought people together respectively.

The effect of spatial arrangement on liking and the consequent affiliative behaviours can be described best in terms of a two-sided relation between immediacy and liking. Findings have consistently shown that when people like each other, or when they are basically more friendly or affiliative, they chose to be more immediate. When together, they sit closer, orient more directly, lean towards each other touch, have more eye contact, and converse more. Sommer's (1969) review also showed that when a variety of seating arrangements were made available to two persons, the actual arrangement selected by the pair was a function of the type of friendly or unfriendly activity in which they were engaged.

The following comments of Festinger (1951) are based on a study of developing friendships in a new housing project, where few residents had previously known each other.

"It is a fair summary to say that the two major factors affecting friendship which were developed were (1) sheer distance between houses and (2) the direction in which a house faced. Friendships developed more frequently between next-door neighbours, less frequently between people whose houses were separated by another house, and so on. As the distance between houses increased, the number of friendships fell

off so rapidly that it was rare to find a friendship between persons who lived in houses that were separated by more than four or five other house.

There were instances in which the site plan of the project had more profound effects than merely to determine with whom one associated. Indeed, on occasions the arrangements of the houses severely limited the social life of their occupants.

In order to have the street appear "lived on", ten of the houses near the street had been turned so that they faced the street rather than the court areas as did the other houses. This apparently small change in the direction in which a house faced had a considerable effect on the lives of the people who by accident, happened to occupy these end houses. They had less than half as many friends in the project as did those whose houses faced court areas. The consistency of this finding left no doubt that the turning of these houses toward the street had made involuntary social isolates of the person who lived in them.

It is evident that the architecture determined by accidental arrangements of persons can have dramatic effects on their relationships.

(iii) *Aesthetics and Beautification*: Architecture of the environment can satisfy some of the psychological needs of the people, in a community. Visual pleasure relaxes a troublesome heart and aids longevity. The psychological impact of pleasant surroundings is of considerable help in fostering a spirit of community belonging, civic pride, integration and enjoyment.

Good landscaping is a powerful tool to achieve a pleasant environment. Landscaping contributes to visual satisfaction, which has a profound effect on the psychological nature of man. Also, good architecture of a building is another source of visual satisfaction.

Apart from recreational spaces, good comfortable housing is perhaps the most important element in a settlement. The housing types should avoid depressing effects of monotony and drabness. To achieve this, density patterns, which encourage human contact and exchange and provide people with conditions in which they can feel territorially on their own ground, should be encouraged.

Open spaces are vital to the social and economic life of the city. In the past century of rapid expansion of our cities, neglect of open spaces and the amenities has been largely responsible for deterioration, blight and an increasingly de-

humanized urban environment. Open spaces have been to us simply vacuums, which should be filled up. This could be the reason the military regimes in Nigeria could not respect the Federal Capital Territory (FCT) Abuja master plan, because they do not appreciate the value of open spaces, rather they prefer buildings in such places.

But at this time of urban regeneration or renewal, we must adopt a fresh conception of the city as a basic network of open spaces which are formed and embellished by building masses in a relationship in which public and commercial buildings, new housing, even though they may be excellent from a structural point of view, can no longer be said to have architectural quality unless they relate to, define and enhance their environment.

In a design sense, the term "open space" refers to architectural affect of an out-of-door scale which is comparable to that sensed upon entering a well-proportioned room. Like beautifully proportioned rooms in a building these spaces have a quality, which is readily felt.

Open space in housing development is essential for admitting light and air to living quarters, for developing pleasing views, for providing a certain amount of privacy, and for accommodating essential sitting-out places and play spots for children. Therefore, developments should attempt to provide open spaces of a design quality to accompany such development.

Furthermore, it is generally known that architecture and civic design become great art when the internal and external spaces have both form and meaning, which is in harmony with the way of life of the people. It is often said that beauty is external. This maxim is no less true of the city for it is the beauty that is built into the city that gives the city permanence and continuity.

(iv) *Responsiveness to Context and Flexibility*: Is to acknowledge and respect the availability of local materials, availability of funds, cultural significance, environmental conditions, existing scale, light, views, etc.

(v) *Maintenance*: Is to minimize the undesigned interior public spaces.

(vi) *Child Supervision*: Entails that provision of visual and annual contact as well as easy access between play areas and dwelling units.

(vii) *Security*: Means to avoid unseen, and inactive areas.

Observed Problems Associated with the Built Environment in Selected Nigerian Cities

Basically there are some problems associated with the urban built environment in many Nigerian cities. The major problems include but are not limited to: non-respect for building density, non-adherence to adequate setback and haphazard development. All these problems have resulted in traffic congestions on some of our major roads, parking congestion in homes, which has led to family quarrels among co-tenants and "supposed friends", rage, tension and sometimes street fighting among commercial drivers. These factors would be examined further for better understanding of their social consequences.

Problem Associated with Density

Some developers especially in major centres of Lagos, Ibadan, Port Harcourt and Benin City etc. do not adhere to recommended densities in their development. The result has been overcrowding of houses especially as it relates to recommended density. The recommended site coverage for residential building in Nigeria is 50 per cent for high-density areas and 33 per cent for low-density areas. However, in most Nigeria cities, these are not complied with. In some high-density areas, some developers built as much as 70 per cent of the site. The consequences of this are overcrowding, lack of insufficient parking spaces or play areas and has invariably created some social problems for dwellers. Osuide and Dimuna (2005) attributed this to greed of some developers who would want to maximally utilize their land in an attempt to add more rooms or shops. These groups of developers do not bother about parking spaces, or need for ventilation as far as their original intention of having more rooms is feasible.

It is very common to build a block of three floors (two storey building) of six flats on a plot of 15 metres by 30 metres. If we assume that each family could have 2 cars, it is expected that about 12 cars should be accommodated in the compound. It, therefore, means that some occupants must park their cars behind someone's car. The consequence is that for an occupant to move out of the compound he or she is bound to disturb a fellow tenant; irrespective of what the co-tenant is doing at that particular time.

Problem Associated with Haphazard Development

Haphazard developments have created serious problems as a result of non-compliance with zoning regulations. The process of zoning was meant to separate land uses so that each parcel might reach its highest and best use without interference from adjacent use. The rationale behind public regulations of land use was to promote public health, safety, moral protection and welfare. Specifically, zoning prevented overcrowding, maintained property values and encouraged stable homogenous neighbourhoods, controlled traffic patterns and regulation of competing business.

In some of our urban centres this is not complied with. A study was carried out in a major traffic corridor in Benin City – Nigeria (Akpakpava Street) to investigate the social nuisances that result from this type of development. The study area is a mixture of offices, commercial and residential buildings and a daily market. Prominent among these are 15 major banks and a community bank, 8 petrol filling stations and rolls of shopping centers.

Most of these buildings lack parking spaces. Only one of the banks has a parking space for its numerous customers. Others only have parking spaces for bank officials. These have necessitated the banks customers to park on the side of the road and adjacent streets. Consequently, serious traffic hold up is created on daily basis. It was also observed that at least one car is reversing on this major and ever busy street every 10 minutes.

During acute fuel shortages which has become a regular occurrence in Nigeria, it is common to have vehicles queuing long distances from one petrol station to another. At times vehicles form double queues on both sides of the roads resulting to chaotic traffic congestions.

In addition to the aforementioned problems, it is also this major route that government officials use with their official police escorts, and siren blaring conveyors to intimidate and push 'ordinary' citizens out of the road. The social effects have been rage, abuses by drivers and some car owners and at times street fighting especially among commercial drivers. Traffic injuries especially among the commercial motorcyclists have become the other of the day.

Problems Associated with Setback

Most developers do not observe standard setback for their development. Unfortunately most buildings that contravene the standard setbacks are the new developments. In most major streets in Benin City – Nigeria, it is common to notice that while old developments observed adequate setback of between 15 metres to 18 metres to the right of way, the new developments (between 1990 – 2005) left about 6 metres to 9 metres to the right of way.

The question that would normally agitate the mind of any inquisitive researcher is why was it possible for old men of yesteryears to observe building regulations while their 'modern', more academically educated children decided to ignore these? Greed could be the only reason for this contradiction. It also reveals that being more academically empowered alone, does not necessary mean better education. Good spirit for the common good is very vital.

CONCLUSION

This paper is of the view that if the recommendations above are carried out by stakeholders which include the built environment professionals, government authorities responsible for housing and urban environment and the building owners, our urban centers will be better developed. Attempts should be made always to ensure that buildings which promote friendship and encourage social interactions among the occupants should be developed. Developers must develop their properties in compliance with extant building by-laws and regulations for a better orderly and harmonious environment.

RECOMMENDATIONS

This paper has been able to trace the impact of the built environment on the social life of the dwellers. From the foregoing, it is imperative that architects should be very concerned with humans and their behavioural responses to spaces and physical settings. The most fundamental function of man's immediate surrounding is to provide shelter and security from unpredictable, undesirable and of destructive variations in his surroundings.

These entail that our architecture should be an environmental conscious type. An environ-

mentally conscious architecture should anticipate how a community center could attract people, how a classroom can help a child to learn, articulate a hospital architecture that could aid quick recovery of patients, a school environment that would be congenial and conducive for learning; the kind of architecture that is likely to generate warm and friendly feelings among the occupants, and should respond to users' requirements.

Therefore, the built environment should be the interpretation of the traditions and the aspirations of the local people and should not attempt to impose the goals of foreign cultures. It should satisfy their physical, economic, social, visual, and cultural and their spiritual needs. Beautiful environment and community can be created only through a deliberate search for beauty, backed by a lively appreciation of the visual world by the people.

Consequently, as architecture forms an essential part of our environment it seems reasonable to request that "Architectural Appreciation" should be taught in the secondary school like the fine arts.

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