

# Assessing the Impact of Graphic Design and Art Works on Environmental Aesthetic; a Case Study of Lokoja Town, Kogi State, Nigeria

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**Abstract:** Posting of advertisement graphical bills constitutes one of the biggest threats to man and his environment as it now appears and as we live in an age of growing sensitivity to environmental cleanliness. Pollution of the Nigerian cities through advertisement bills assumes the general term of outdoor advertising ranging from hand-printed signs, posters, painted bulletins and spectaculars. The concept of the urban and environmental graphics in the city aesthetic planning system has gained currency in many advanced countries. Nigerian signs and billboards can be referred to as environmental pollution because they create problems, and affect the urbanization planning in Nigerian cities. Also, the concepts equally see the objects in the streets as making up the city as figure and decorations not mere junks. As a result, urban and environmental graphics embraces city planning, which lacks care of all spheres - physical, aesthetics, transportation, waste disposal, erection of billboards, posters and other constructions that could enhance the beauty as well as harm the image of the city. The study area is Lokoja and its environs. Random sampling technique was adopted to ensure that each unit of the population is well represented in order to get the necessary information from the samples. The findings emphasize the importance of strict control and market regulations in posting of advertisement bill in built environment and eradication of pollution of the environment.

**Keywords:** Urban, Graphic, Design, Billboards, Visuals, Aesthetic, Urbanization, Beautification

## I. Introduction

The concept of urban graphics in modern times is closely linked to urbanization development. This relationship is evident in the rapid increase in young urban centers worldwide, particularly in developing countries (Durotoye, 1998). As cities and urban populations grow, the need for orderly visual guidance systems, organized using scientific environmental graphic rules, becomes increasingly important. Environmental graphics play a crucial role in shaping urban community images by providing visual aspects of way finding, communication, identity, and information. These elements significantly impact human interaction with their living environment, influencing how they meet their needs. In Nigeria, the rapid concentration of population in urban areas and the proliferation of urban activities, including physical construction and development, have put pressure on the natural environment, inevitably deteriorating its aesthetics. Concern for the environment has become a critical issue in Nigeria's urbanization and urban development in recent years. Environmental graphics, with their symbolic nature, encompass a wide range of visual components that represent concepts, information, and functions of each place and situation using efficient and dynamic expressive methods. These visual components facilitate human understanding of their surroundings, enabling them to achieve their objectives aesthetically and access intended situations efficiently (Rashvand, 2013).

Environmental graphics are essential in attracting audiences and play a significant role in advertising and business activities. To establish logical and rational relationships between individuals and their environment, strict organization and visual expression principles are necessary. Environmental graphics aim to create visually appealing and harmonious spaces. Ultimately, the purpose of graphic design for interior and exterior spaces is to create vibrant, healthy, and compelling environments. The use of environmental graphics in interior spaces is effective and essential for achieving desirable environmental structures (Iloukhani, 2009; Ostovar, 2013).

Nigerian public buildings have evolved into vibrant showcases of art and design, transcending the bleak utilitarianism of the early international style. Architects in Nigeria now incorporate sculptures, mural designs, and other art forms as integral elements of building design, rather than mere embellishments. This harmonious blend of art and architecture has become a hallmark of the Nigerian built environment. The role of art and design in Nigerian public buildings extends beyond aesthetics; it plays a vital function in enhancing the quality of life. Interior decorators, mosaic artists, muralists, painters, ceramists, sculptors, and graphic designers all contribute to the development and beautification of the environment. The natural surroundings and gardens of buildings are carefully planned and designed to reflect artistic creativity. Nigerian public architectural buildings are a testament to the fusion of art and design. The environment itself serves as a source of inspiration, as nature has long been a catalyst for creative activities. According to Fichner-Rathus (2002), art and design have been employed for centuries to create pleasing environments. Various art forms, including paintings, murals, mosaics, and sculptures, are used to decorate interiors and enhance the beauty of exteriors. Lawal (1982), emphasizes the significance of art in enriching Nigerian aesthetic consciousness. He notes that art and design not only provide basic necessities like shelter, utensils, and clothing but also make the environment more visually appealing. The impact of art and design on Nigerian public buildings is rooted in universal principles of truth and beauty.

**Statement of Research Problem.**

The posting of advertisement bills in the built environment has severe negative consequences, affecting not only individual community members but also Nigerian society as a whole. The quality of the built environment significantly impacts an individual's life, influencing their well-being positively or negatively depending on its design. The deplorable state of Nigeria's environment, coupled with its potential consequences, creates an environment conducive to the spread of disease-causing vectors, posing a significant threat to contemporary society (Falade, 2005). Research highlights that individuals strive to live in a healthy environment, yet often neglect environmental maintenance. In Nigerian urban centers, the proliferation of graphics advertisement bills has become a major source of pollution, leading to information overload, visual over-stimulation, and severe psychological effects on humans. Furthermore, the waste generated from advertisement materials, including paper, vinyl, synthetic materials, wood, and metal, has detrimental effects on both the built environment and human well-being (Oladumiye, 2013).

The improper placement of billboards in Nigerian cities has led to visual pollution, undermining the potential of graphic communication to enhance environmental beautification. While ecologists and environmentalists focus on global issues like climate change, deforestation, and pollution, Nigerian designers and artists should prioritize addressing visual pollution in their environment (Emeji, 2002). Graphics visuals, particularly billboards, are a prominent feature of Nigerian urban centers. However, in many cities, signs are misplaced, obstructing roads, blocking pedestrians' views, and disrupting traffic flow. According to Ogunduyile (2000), the concept of urban graphics and city planning is not new to Nigeria, dating back to the pre-independence era. Prior to independence, Nigerian cities exhibited well-planned urban structures, adorned with sculptures, beautifully designed billboards, and well-manicured gardens. Streetlights and harmonious neon lights illuminated the cityscape at night. However, the current state of neglect and lack of maintenance has led to a decline in urban aesthetics. Today, urban beautification signs are often obscured by refuse dumps and neglect. This research aims to investigate urban aesthetics in the placement of graphics signs, examining the problems and impact on the environment.

**Study objectives.**

The main purpose of this study is to investigate aesthetic components of environmental graphics of Lokoja and environs. Specifically, the study is set to achieve the following objectives:

1. To examine the causes of wrongful placement of graphic signages and adverts on the environment.
2. To examines the impact of graphics design and placement of adverts on the environmental aesthetics of Lokoja and environs.
3. To assess the role of graphic design on environmental aesthetics of Lokoja and environs.
4. To proffer solutions on enhancing the aesthetic value Lokoja and environs through graphic arts.

**Research questions.**

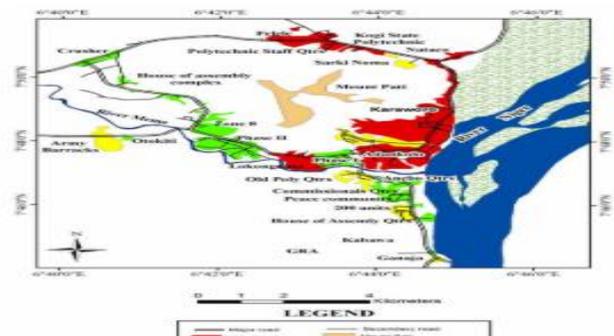
1. What features of environmental graphics affect the aesthetic value of Lokoja and environs?
2. What role can environmental graphics play on enhancing the aesthetic value of Lokoja environment?
3. What role can individuals play to avoid wrongful placement of graphic adverts?

**Study area.**

Lokoja, the study area, is situated between latitude 7° 48' North and longitude 6° 44' East (Figure 1). The town has a mean elevation of 41 meters (265 feet) above mean sea level (Ojo, 1985). Lokoja's climate is tropical, characterized by two distinct seasons: a wet season from March to October, and a dry season from November to February. The town experiences high humidity throughout the year due to its location in the river valley. Temperature fluctuations are minimal, with a mean temperature of 27°C (Ojo, 1985). The local economy is driven by various activities, including trading, fishing, farming, and mining. Fishing occurs year-round along the Benue and Niger rivers. The area is rich in minerals such as marble, limestone, iron ore, granite, sand, and gravel. Lokoja's large market attracts thousands of traders, and the town boasts a significant service sector.



**Figure 1:** Map of Nigeria showing location of Lokoja in Kogi State.



**Figure 2:** A sketch map of the study area.

### **The Conceptual Framework/review of literature**

This study views graphic design as a methodology for visual communication and problem-solving, utilizing type, space, and images. As a subset of visual communication and communication design, graphic design plays a crucial role in advertising products through mediums like billboards, handbills, and posters. Outdoor advertising, also known as bill posting, is an effective way to reach a mobile audience, offering the lowest cost per exposure of any major advertising medium. It produces a significant impact due to its size, color, and prominence. According to Wilmshurst (1985), outdoor advertising encompasses various formats, including posters, painted bulletins, signs, and spectaculars. Street graphics design products, such as signs, billboards, banners, and store fronts, facilitate communication along streets and highways. These visual elements are designed to capture attention and convey messages effectively.

However, excessive advertising, including billboards and graffiti, contributes to visual pollution. Graffiti, in particular, adds to clutter, disturbs the view, and can have a negative influence on younger audiences. Similarly, billboards have been criticized for being a distraction to drivers, promoting excessive consumption, and cluttering the landscape (Robin, 2015; Morozaan, Enache, & Purice, 2013). The built environment encompasses various structures, such as market stalls, shopping malls, hospitals, schools, and infrastructure like roads and dams. According to Falade (2005), these structures reflect humanity's efforts to create habitable, comfortable, and healthy surroundings.

From another perspective, the built environment can be seen as a product of evolution, balancing natural and constructed elements to create a beautiful and fulfilling environment that caters to human well-being in various aspects, including spiritual, physical, social, cultural, economic, and psychological (Osuntogun, 2005). Based on the above context, the built environment can be described as a space that incorporates materials, technology, and elements such as urban design, visual arts, greenery, and decorative landscaping. The Nigerian built environment aligns with these characteristics. The influence and consequences of bill posting in Nigeria's urban areas are evaluated through factors like urban planning, architectural quality, cleanliness, public visuals, and artistic expression. The impact of posting bills on our social environment cannot be overlooked, as posters of various sizes, shapes, and types are used to raise public awareness about numerous products and services. Soon, almost every available wall is covered with posters, a practice known as "Bill Sticking." A key factor in posting a bill is choosing a visible location, which often leads to the defacement of public buildings. One of the negative aspects of bill posting is how the medium affects the message. In fact, many people associate outdoor advertising with clutter, believing it detracts from and spoils the natural beauty of the environment (Makanju, (2005).

In the study conducted by Ogunduyile (Ogunduyile, 2000), Emeji (Emeji, (2002) and Oladumiye (Oladumiye, (2013), attention was drawn to the bill pollution in Nigerian built environment, the study criticized the indiscriminate and proliferate of pasting low quality of outdoor posters that inform, and warn. Also, it identifies corporate goods and services of medium and, large plus small poster system of individual traders and professionals with little or no consideration for human, psychological and environmental factors, coupled with juxtaposition of incompatible elements cause's visual disorders in built environment. Nigerian built environment has been a conflux of diverse things, the individual messages and their untidiness are incomprehensible to the people, for example, weak posters and bills are removed by wind and rain, some are torn into pieces; the peeling of the bills constitute visual environmental pollution. Some of these bills are not replaced for many years, and months, thereby polluting the built environment. They have failed to deliver the message meant for the people due to lack of application of the basic elements of design. They therefore project visual disorder and visual clutter perpetuating visual pollution, visual chaos and visual obstruction which tend to diminish aesthetic sensibility and visual literacy in Nigerian cities. Environmental pollution of bills is assuming global magnitude and its frontiers are no more confined to any particular part of the planet. Nigeria as a country is not left out of this point because they share the biggest intimidation of unkempt built environment (Oladumiye, 2013).

### **The nature of advertising in Nigerian cities**

Outdoor advertisement in Nigeria is an evolving marketing strategy that according to Sinclair (2006) forms part of everyday culture, often adding colour to the streets, a good indicator of business and valuable source of information viewed by many as a form of entertainment and information. This is executed by graphic design products like posters, bills, billboards, handbills among others. The Outdoor Advertising Agency of Nigeria (2005) as cited in Okosun and Jiburum (2015) observed that outdoor advertisement billboards and posters are designed to catch a person's attention and create memorable impression very quickly. Agukoronye (2004) also observed that well-regulated outdoor advertisements create a positive image of a city which enhances confidence, sense of security, safety, goodwill and consequently attract more loyalty. Kayode (2015) observed that evidences abound that outdoor advertisement designs in whatever functions or capacities add glamour to the environment, especially when they are properly placed and maintained. On the issue of environmental relevance, William (2005) opined that outdoor advertising has an appealing option due to its ability to target its audience from various geographical locations, and it is extensively low in cost per person reached. It was also observed that signposts, road traffic symbols, picture montages, banners, multi-coloured buntings and structural paintings are components that characterize a beautiful urban environment. From the foregoing however, it is obvious, apart from the marketing function of outdoor advertising, that when aesthetically placed they contribute to the beauty of the Nigerian urban environment. Despite the issues raised above, it has been observed that indiscriminate installation and display of outdoor advertisement billboards and posters cause visual intrusion and disorderliness of

the Nigerian urban environment. According to Bankole (2013), although the placement of outdoor billboards in Nigerian cities are essential to the understanding of the increasing complexity in the Nigerian built environment, they are seen as indiscriminate and proliferous erection of sign-systems with little or no consideration for human, psychological and environmental factors, coupled with juxtaposition of incompatible elements that cause visual disorder, overload of visual information, and obstruction to motorists and pedestrians. Oshigha (1975) observed that the inability to communicate in some cases is very often complicated by the mingling of designs that are contradictory; perpetuating visual disorder and chaos. Olusola (2010) observed that uncontrolled outdoor advertisements cause visual intrusion and block important traffic signs from motorists and pedestrians, thus causing avoidable accidents. Okosun and Jiburum (2015) in their study of Enugu observed that the continued presence of time related billboards, signage posters and banners long after the advertised events, reduce the quality of the environment. Political and religious posters pasted on bus stands have defaced all the bus stands along Enugu City major roads. In a nutshell, these outdoor advertisement billboards and posters, no doubt, are vital factors in the business world, but their placements and characters have been greatly abused by those in the business environment. This posture experienced in almost, if not all our urban environments has created unattractive sights and aesthetically unpleasant urban scene.

### Trends of Posting Bills in Built Environments

The origin of posting bills in Nigeria's built environment dates back to the 1390s, when merchants were required to label their premises, wares, and products with signs and identifications. This practice gained widespread acceptance in the 16th century, with signs becoming a crucial aspect of business identification. By the 19th century, printing techniques like screen and lithographic printing increased the production of posters and handbills. This led to a surge in demand for bill posting spaces, resulting in the proliferation of posters and handbills on street walls, fences, and available spaces (Oladumiye, 2011). The growing demand for outdoor advertising in Nigeria has led to innovations in various forms of outdoor media, catering to the needs of practitioners and clients. However, this has resulted in the saturation of public spaces in built environments with posters, billboards, banners, and logos, contributing to growing pollution. In Lokoja, the trend of posting advertisement bills outdoors has become a significant contributor to solid waste and visual pollution in built environments (Oladumiye, 2011).

Nigeria's rapidly growing population, projected to reach 402.4 million by 2050 (World Population Data Sheet, 2012), has led to increased rural-urban migration and development of built environments. This growth has resulted in a surge in consumer products, driving retailers to seek advertising spaces. Nigeria, being the largest market for consumer products in Africa, has led to a proliferation of advertisements, promoting new products, rebranding, and offering promotions. This has resulted in the employment of various advertising media, contributing to environmental pollution. Advertisement bills are produced in various mediums, including paper, vinyl, metal sheets, and synthetic materials. They are often pasted on walls, shop doors, glasses, public amenities, and even trees. Flyers, pamphlets, and posters are also distributed to the public, while booths, kiosks, pylons, poles, and gantries are used to display advertisements. The indiscriminate posting of bills on government properties, electricity poles, bridges, and bus stops in major parts of Lokoja and its environs has become a significant concern (Author's Collection, 2024).



Figure3&4: New trends in posting bills and its effects on the environment

### Political Campaign and Social Trends

Nigeria's political and social trends have led to pollution in built-up areas due to the careless posting of advertisement bills. Politics and religion are big users of outdoor advertising in Nigeria. As a result, streets in Nigerian cities are filled with colorful posters, flyers, and pamphlets promoting politicians, religious events, social gatherings, and meetings. These materials contribute to pollution in Nigerian cities. The easiest method for political candidates to get themselves known is to put up posters and advertisement bills featuring their faces and these graphics materials are pasted on all available spaces. Example is figure 3&4. When the entire country is preparing for elections, politicians, political parties, and their campaigners vehemently post bills

everywhere, polluting the environment in the process. In their frenzy, they cover both rural and urban landscapes with political bills, ranging from tiny scraps of paper to giant banners that stretch from rooftops down to basements. These bills are mostly posted by touts and party supporters, contributing to environmental degradation. As a result, many victims whose walls and signposts have been defaced are afraid to protest for fear of harassment (Etsename, 2007; Adewakun, 2011).



Figure 5&6: Negative effects of bill boards postings

**II. Methodology**

This study employed a mixed-methods approach, utilizing both primary and secondary data sources. Primary data was collected through a structured questionnaire, which gathered information on various aspects of poster usage, including sources, display areas, removal practices, motivations, effectiveness, and public perception. Secondary data was obtained from relevant articles in journals, newspapers, and books. The study focused on six urban areas, purposively selected due to their central role in socio-economic and political activities within their respective Local Areas. Consequently, these areas exhibited more pronounced issues of visual pollution. Within each selected area, streets were randomly chosen, and a total of 400 respondents were sampled to participate in the questionnaire survey. Additionally, maps of the study area and photographs of posters displayed in various parts of the town were used to support the research.

**Data Collection Instrument**

In this study, data were collected by means of a structured questionnaire. Four hundred questionnaires (400) were randomly distributed at various locations in Lokoja town. The questionnaire was divided into four equal numbers per location

**Data Analysis and Discussions**

Appropriate methods of data analysis were used to accurately process the data collected from field survey, and data analysis, where necessary. As a result, descriptive analysis was used to facilitate the easy communication of the results while, at the same time ensure validity. Based on this assertion, frequency and percentage distribution were used to analyse the background information of the respondents and issues raised in the questionnaire.

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**Sex Distribution of Respondents**

From table 1, age group 15 - 24 has 20%, age group 25 - 34 has 19%, age group 35 - 44 has 11.5%, age group 45 - 54 has 17%, and age group 55 - 64 has 17.5% and age group 65 and above has 15%. Figure 2 shows that age group 15 - 24 has the highest percentage of respondents. It implies that these are the age groups of those who used to past posters and bills indiscriminately.

Table 1: Sex distribution of respondents

Age group	Male	Percentage	Female	Percentage
15 - 24	40	20	40	20
25 - 34	38	19	35	17.5

35 - 44	23	11.5	34	17
45 - 54	34	17	29	14.5
55 - 64	35	17.5	35	17.5
65 and above	30	15	27	13.5
Total	200	100%	200	100%

**Recent innovations in Science and Technology**

Table 1 shows that 29.5% of respondents from Adankolo junction believe advances in science and technology contribute to environmental pollution from graphic bills. Similarly, 24.5% from Ganaja junction and 18.7% from Nataco share this view. However, 22% disagree, and 30% strongly disagree in Ganaja Village. The negative opinion from these locations stems from the belief that lack of regulatory agencies and their ineffectiveness are more significant factors in environmental pollution, rather than advances in science and technology. The data suggests that advances in science and technology have enabled outdoor spaces to contribute to environmental pollution through the posting of bills in built environments. Large format printing machines, for instance, allow advertisers to produce oversized banners and bills that are pasted in strategic locations without proper maintenance. These findings highlight the need for effective regulation and responsible advertising practices to mitigate the environmental impact of outdoor advertising in Nigeria.

Table 2: Innovations in Science and Technology

Study Area		Frequency	Percentage
Adankolo	Strongly agree	92	23
	Agree	118	29.5
	Disagree	100	25
	Indifference	90	22.5
	Total	400	100
Ganaja junction	Strongly agree	115	28.8
	Agree	98	24.5
	Disagree	102	25.5
	Indifference	85	21.2
	Total	400	100
Nataco	Strongly agree	65	16.3
	Agree	75	18.7
	Disagree	108	27
	Indifference	152	38
	Total	400	100
Ganaja Village	Strongly agree	112	28
	Agree	98	24.5
	Disagree	88	22
	Indifference	122	30.5
	Total	400	100

Table 3 reveals that the towns lack settlement master plans, leading to a disorderly occupation of usable spaces. Even in areas with some semblance of planning, properties and spaces are often converted for uses that conflict with built environment regulations. The consequences of these issues include the indiscriminate posting of outdoor bills without restrictions, as long as the target audience is reached. The lack of proper settlement delineation in city centers, particularly in commercial, residential, and reserve areas, has led to the proliferation of posters and bills. Respondents from the four research areas overwhelmingly agree that the absence of a master plan is a primary cause of environmental pollution. Specifically, 35% of respondents from Adankolo junction, 27% from Ganaja junction, 24.3% from Nataco, and 40.5% from Ganaja Village strongly support this notion. Therefore, it is essential to develop master plans for cities, considering the allocation of space for bills and mitigating environmental pollution.

Table 3. Lack of master plans in Nigerian cities, cause indiscriminate environmental pollution

Study Area		Frequency	Percentage
Adankolo	Strongly agree	140	35
	Agree	115	28.8
	Disagree	95	23.7
	Indifference	50	12.5
	Total	400	100
Ganaja junction	Strongly agree	108	27
	Agree	96	24
	Disagree	90	22.5
	Indifference	106	26.5
	Total	400	100
Nataco	Strongly agree	97	24.3
	Agree	113	28.2
	Disagree	85	21.3
	Indifference	105	26.2
	Total	400	100
Ganaja Village	Strongly agree	162	40.5
	Agree	118	29.5
	Disagree	50	12.5
	Indifference	70	17.5
	Total	400	100

### Ineffective Regulatory Agencies

The results of this study clearly indicate that respondents agree, and strongly agree, that the failure of local authorities contributes to bill pollution in the city's built environment. According to Table 3, 31% of respondents from Nataco agreed with this point, 31.8% from Adankolo Junction, 26.8% from Ganaja Village, and 44.0% from Otokiti Village strongly agreed that environmental pollution caused by bill postings is due to ineffective regulatory agencies. In more advanced regions, the placement of bills is typically controlled by regulatory ordinances and legislation. These laws establish factors that govern and monitor the placement and posting of bills in the built environment.

In Lokoja, local authorities enact ordinances and regulations that reflect the community's general attitudes towards posting graphical bills and signs. However, these laws often fail to provide effective enforcement. While they outline simple, clear, and environmentally sensitive standards for various types of advertisement bills, their implementation remains ineffective.

In Nigeria, the local government is constitutionally mandated under Decree 21 of 1998 to regulate and collect levies on outdoor advertisements. However, local authorities often prioritize the revenue-generating aspects of this mandate, neglecting the aesthetic and environmental planning of the built environment. Moreover, the Nigerian government has promulgated various decrees to establish regulatory bodies for advertising practices, such as the Advertisers Association of Nigeria (ADVAN), the Advertising Practitioners Council of Nigeria (APCON), and the Outdoor Advertising Association of Nigeria (OAAAN). These bodies have formed the Advertising Standards Panel (ASP), tasked with monitoring the indiscriminate posting of graphical bills. However, there is little evidence to suggest that these agencies are effectively enforcing regulations in Nigeria's built environment.

Table 4: Failure of regulatory agencies

Study Area		Frequency	Percentage
Adankolo	Strongly agree	93	23.2
	Agree	127	31.8

	Disagree	100	25
	Indifference	80	20
	Total	400	100
Ganaja junction	Strongly agree	176	44
	Agree	144	36
	Disagree	47	11.7
	Indifference	33	8.3
	Total	400	100
Nataco	Strongly agree	106	26.6
	Agree	124	31
	Disagree	115	28.7
	Indifference	55	13.7
	Total	400	100
Ganaja Village	Strongly agree	120	30
	Agree	107	26.8
	Disagree	103	25.7
	Indifference	70	17.5
	Total	400	100

### **Environmental Pollutions and the Effects of Posting Bills in Built Environment**

There are several types of environmental pollution, each originating from different sources and having various effects on human health. Pollution can be defined as the contamination of the built environment due to human activities. The term primarily refers to the fouling of air, water, and land by waste materials. While pollution negatively impacts the natural world, it also has measurable effects on human health. In recent years, the concept has expanded to include a broader range of environmental disruptions. One growing source of pollution in Nigeria's built environment is outdoor advertising, which contributes significantly to solid waste and visual pollution, Fajuyigbe, (2006). It is common in Nigerian cities to see advertisement bills posted and mounted in almost any available space to capture public attention. This occurs despite some control measures being in place in urban areas. Examples are figures 6&7. These advertisement bills are intended for outdoor use, but they have significant impacts on the environment. For instance, solid waste is generated from the materials used to produce them. In built environments, where public spaces are often cluttered with these bills, visual pollution becomes a concern.



Figure 6 and Plate 7: Environmental Pollutions and the Effects in Built Environment

Billboards, open storage of trash, space debris, telephone towers, electric wires, buildings and automobiles are forms of visual pollution. An overcrowding of an area causes visual pollution. Visual pollution is defined as the whole of irregular formations, which are mostly found in natural and built environment. The greatest effects of exposure to visual pollution include: distraction, eye fatigue, decreases in opinion diversity, and loss of identity.

Table 5. Negative effect of posting bills, billboards, posters, handbills on human health.

Study Area		Frequency	Percentage
Adankolo	Strongly agree	109	27.3
	Agree	111	27.7
	Disagree	105	26.3
	Indifference	75	18.7
	Total	400	100
Ganaja junction	Strongly agree	106	26.5
	Agree	94	23.5
	Disagree	110	27.5
	Indifference	90	22.5
	Total	400	100
Nataco	Strongly agree	130	32.5
	Agree	105	26.2
	Disagree	55	13.8
	Indifference	110	27.5
	Total	400	100
Ganaja Village	Strongly agree	99	24.8
	Agree	101	25.2
	Disagree	130	32.5
	Indifference	70	17.5
	Total	400	100

Table 5 reveals varying opinions on the impact of bill posting on health and environmental values. In Nataco, 26.2% agreed, while 13.8% disagreed. At Ganaja Junction, 26.5% strongly agreed, 23.5% agreed, and 27.5% strongly disagreed. In Ganaja Village, 25.2% agreed, whereas 32.5% disagreed. Overall, 27.3% strongly agreed, 27.7% agreed, and 26.3% disagreed. These results suggest that bill posting, including billboards, posters, and handbills, negatively affects human health, environmental values, well-being, and personal healthcare. The World Health Organization (WHO) emphasizes the interdependence of health and the environment. It defines health as a balanced relationship between the body and mind, along with complete adaptation to the external environment. WHO further defines environmental health as the aspects of human health and quality of life influenced by chemical, physical, biological, social, and psychosocial factors in the environment.

### III. Recommendations

1. Tasteful advertising on well designed, well cared for and well-placed structures of various types could add colour, light, interest and gaiety to what otherwise might be a rather drab and sterile urban scene.
2. In the cities, regulatory agencies must create free spaces for public notices and information to curb the indiscriminate defacing of public utilities by unregistered advertisers.
3. Installation of outdoor advertisement boards should be treated as part of the landscape planning proposals of the urban areas.
4. The use of banners, posters and billboards by politicians, educationists, churches, entertainment industries etc. may not require out-right stoppage. It is therefore pertinent to educate those using them to make provision for their immediate removal as soon as their intentions are fulfilled.

5. There should be a drastic change in the orientation of the public by embracing audio and visual modes of advertising and pay less emphasis on posters and banners. The radio and television as veritable alternative means of passing information should be encouraged. Paperless advertising activities should be embraced as a way of reducing paper waste in our cities.

#### IV. Conclusion

From this study, it is safe to conclude that environmental graphics is inseparable from man and his environment. The place of billboards and signs in built environment cannot be ignored for billboards, signs and visual designs, according to this paper, are signature of ancient civilization and the pivot on which beautiful environment rotates. In this technological age the modern man perceives billboard as having an aesthetic value, that enriches the quality of living and making life and communication more pleasant because it creates an awareness and educates people about product and services. Nigerian street is subjected to an uncared-for environment filled with substandard billboards, thus a city or ordinance that could help to control the size of billboards and signboards in street and road, irrelevant banners and posters should be prohibited. The existing signboards, posters and banners on the street should be cleared from their present positions. By doing all these and others not mentioned in this paper, urban environmental pollution of billboards placement would be eradicated in Nigerian cities.

#### References

1. Adeyemi, F. I. (2002) Billboard Innovation in environmental Design. Port-Harcourt Journal of Design History in Nigeria, 6, 78-83.
2. Adeagbo, D. (2004) Accessibility, Traffic and Parking Problems in Urban Markets. International Journal of Transportation Studies (1) (2). 29 – 39.
3. Adetunji, M. A.; Atomode, T. I & Isah, I. O. (2015). Assessment of Solid Waste Management in Lokoja, Nigeria. Jordan Journal of Earth and Environmental Sciences, Vol. 7, No. 2, Pp. 103 - 108.
4. Agukoronye, O. C. (2004). Arterial right of way, abuse and traffic flow in Enugu. Architectural Research Practice Journal, 2(1), 60 – 67.
5. Bankole, O. E. (2013). Urban environmental graphics: Impact, problems and visual pollution of signs and billboards in Nigerian Cities. International Journal of Education and Research, 1(6), 1-12.
6. Bai, Xuemi, 2003 the Process and Mechanism of Urban and Environmental Change, An Evolutionary View, International Journal of Environment and Pollution, Vol.19, PP.528-541.
7. Beck, W., van der Maeson, L. and Walker, A., 2001, theorizing Social Quality, P.346, The Hague, Kluwer Law International.
8. Berkman, L. and Glass, T. 2000, Social Integration and Social Networks, Social Networks, Social Supports and Health in Berkman and Kawachi, I., Social Epidemiology, New York, Oxford University Press.
9. Calori, Chris, and David Vanden Eynden. "Signage and Wayfinding Design: A Complete Guide to Creating Environmental" (June 30, 2015). Doi: 10.1002/9781119174615.
10. Egwu, S. & Augustine, A. P. (2014). Lokoja: A City of Filth. <http://leadership.ng/features/365620/lokoja-city-filth> (retrieved March 21, 2017).
11. Emeji, M. J. (2002), Integrating Visual Arts and Architecture as instrument of Culture and symbol systems for enhancing Visual and Aesthetic Environment. Port Harcourt Journal of Nigerian Design History, 6, 20-28'
12. Farrell, A., 2001. Electricity restructuring and ozone transport: the political Economy of inter-state public policy. In: Farrow, S., Fischbeck, P. (Eds.), Improving Regulation. RFF Press, Washington, DC.
13. Fajuyigbe, M.O. (2006) Humanities, Visuals Arts and National Development. 2nd International Conference on Africa: Rethinking Humanities, Ile-Ife, 13-16 June 2006, 27-56.
14. Harland, Robert. "Graphic Design in Urban Environments" (October 20, 2016). Doi: 10.5040/9781472597786.
15. Heath, Tim, Oc, Taner and Steve Tiesdell. "Public Places - Urban Spaces" (February 7, 2011). Doi: 10.4324/9781856179041.
16. Hens, L. (1992 June). The Rio Declaration on Environment and Development. [www.google.com](http://www.google.com)(retrieved March 21, 2017).
17. Kayode, F. (2015). Phenomenological enquiry into the public misconceptions of billboards design concepts in Lagos, Nigeria: The factor analysis approach. International Journal of Economic Behaviour and Organization, 3(3), 47-54.
18. Kelley, T., 2000. Appeals Court Upholds E.P.A. Rules to Reduce Smog in the Northeast. New York Times, March 4, p. A11.
19. Mohammad Taghi Sheykhi, "Impact of Graphic Design on Environment: A Socio-Artistic Appraisal", Journal of Fine Arts, 2(4), 2019, pp. 20-28
20. Onyebuagu, O. (1983) Advertising and the Nigerian Entrepreneur: Problems, Prospect and Challenges. Journal of The Association of Advertising Practitioners in Nigeria, 9, 45-55.
21. Okosun, A. E. and Jiburum, J. (2015). Environmental Implications of poor siting of outdoor advertisements in Enugu urban, Nigeria. The Journal of the Nigerian Institute of Town Planners, XXIII (2), 87 – 95.
22. Olusola, F. (2010). New Posters jostle for attention in Abuja. [www.thisdayonline.com](http://www.thisdayonline.com).

23. Oshiga, J. (1988). Continuity and change in graphic design: Nigeria Society for education through Art Bulletin (NSEA), 1(3), 45-55.
24. Okpara A.U. (2005). Design and Aesthetics in Built environmental the Phenomenon of Street Graphics. The Built environmental innovation Policy and Sustainable Development Conference Proceeding of the Covenant University Ota Nigeria, 89 -96.
25. Oladumiye, E.B. (2011). Effects of Graphic Design on Advertisement of Consumer Goods in Lagos Nigeria. Federal University of Technology Akure. Nigeria, 120- 128.
26. Oladumiye, E.B. (2010) Graphic Design. A Development Tool for eliciting Ethical Values and Human Rights. International Journal of Research and Capacity Building. (6)(7). 56-60.
27. Olabiyi, T. A. 2013. "Art and Design: Enriching Creative Intelligence Views and Impact of Public Arts to Oshogbo in Osun State, Nigeria 2013." 67-70,75-89,50-54,97-100.
28. Sur, Yeonwha. "A Study on the Characteristics of Visual Elements for Space Graphi Design." Integrated Design Research (Jun 2013): 45 to 56. doi:10.21195/jidr.2013.12.2.004.
29. Sartwell, C. (2017). Beauty. In E. Zalta (Ed.), The Stanford encyclopedi of philosophy. Retrieved from <https://plato.stanford.edu/archives/win2017/entries/beauty/>
30. Turner, B.S., et al., 2002, Penguin Dictionary of Sociology, P.373, London, Penguin Group.
31. Uberoi, N.K., 2003, Environmental Management, New Delhi, Excel Books.
32. Williams, R. H. (2003). Sales and marketing solutions for growing business. Newsletter Entrepreneur.com.
33. World Atlas (2015 October). Where is Lokoja, Nigeria? <http://www.worldatlas.com/af/ng/ko/where-is-lokoja.html> (Retrieved March 21, 2017).