

Managing Waste in Nigeria: The Approach of the Production of Upcycled Sculptures

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Abstract

The tremendous increase in population in Nigeria has brought about great solid waste deposits in every nook and cranny of the country thereby posing health challenges to the country and to human race in general. This development has led to exploration of various avenues of waste management. However with the advent of the use of waste material for visual expression in contemporary arts, there has been a remarkable advancement in the process and meaning of waste management. Waste as art material goes beyond recycling but also connects with both the artist and the viewer by giving them the opportunity to reflect on their lifestyle. In view of this problem, this study centred on using discarded tyres, rubber tubes and metal drink containers as a medium for sculptural production, a campaign against environmental degradation. The study employed an explorative method of research. Data were collected through both primary and secondary sources, also visited Anambra State Waste Management Agency (ANSWAMA). Since the study is a practice-led research, various exploration was carried out in the studio, using discarded tyres, rubber tubes and metal drink containers. A qualitative method of evaluation was employed in the project. The study observes that artists especially sculptors, have been experimenting and tapping into the riches of solid waste materials and incorporating them into their sculpture production. This work therefore encourages sculptors and artists in Nigeria to experiment more on discarded materials so as to meet up with the contemporaries in other parts of the world.

Key words: Managing waste, Upcycle, Sculptures, Production, Nigeria.

Introduction

Wastes are common within every human environment. They may be defined as materials that people may no longer have any use for which they either intend to get rid of or they had already discarded (European Topic Centre, 2009). Waste can be classified into two major types. They are biodegradable and the non-biodegradable waste. Wastes that can disintegrate naturally in the environment within a relatively short period of time are referred to as biodegradable while those that cannot are the non-biodegradable. Non-biodegradable wastes have the ability to last up to 10 years or more before breaking down. As a result, most of them have posed health challenges to the human environment.

The former Director General of the Standard Organization of Nigeria (SON), Joseph Odumodu, explained that within two years, his organization seized over five

million tyres across the country and they are faced with the challenge of disposing them because it can neither burn the tyres nor throw them into the sea for fear of pollution, considering the fact that Nigeria is used as a “dumping ground” for “dead objects” which quickly become wastes, it is common to see them litter street corners, homes and even block water drainage systems.

Several artists have sought ways to reuse wastes as materials for creative expression through assemblage and installation. Installation art is a style of art that allows the artists to incorporate a broad range of materials that are originally not related with the traditional art style such as painting, ceramics, sculpture, graphics and the rest. Installation art can be temporary or permanent and can be displayed anywhere. Installation artists in Nigeria include, El Anatsui, Dilomprizulike (Junk Man), Raqib Bashorun, Eva Obodo, Uche Onyishi, Adeola Balogun and many others.

Sullivan (2006), in his report on environmental pollution states that inhaling the black smoke emitted by burning tyres and tubes can increase susceptibility to respiratory problems such as cough, wheezing and physical discomfort and can even aggravate existing respiratory diseases such as asthma and chronic bronchitis.

The risk posed by wrong method of tyre disposal in Nigeria informed this studio exploration with discarded tyres. The project aimed at addressing waste disposal in Nigeria, mainly by burning which brings about pollution. Exploring discarded tyres for visual imageries, however, provokes the fundamental questions of what processes and techniques could be effective for transforming this non-biodegradable wastes into an expressive art form. This study therefore reports on studio attempts at upcycling waste materials particularly tyres and drink cans for visual narratives that addresses some of the global issues that has put the existence of the human environment into questioning.

Aim of the Study

The study is aimed at the production of upcycled sculpture as a means of waste management. It is intended to explore alternative upcycling of waste tyres, tubes and metal drink cans and use them as material for sculpture, with a view to reduce the growth and hazards associated with the waste in the society.

Objectives of the Study

Considering the high level of danger the environment is facing due to poor waste management, this research is set out to:

- Explore the possibilities of using certain non-biodegradable waste creatively as sculptural medium;
- To determine the extent waste tyres and other materials can be conceptually explored and be used as commentaries for addressing social and environmental concerns in the society.
- To create awareness and enlighten the audience on the need for proper waste management.
- Determine and overcome the possible challenges that artists could face in their reuse of non-biodegradable waste as art materials.

- To document the outcome of the research in a written project form and exhibit the practical projects for the view of the University community and gather their views on the works which will in turn be used in validating some of the claims in the research.

Significance of the Study

The research explored waste tyres and its related materials in ways that provoke a new perception of how our environment could be managed. The ideas generated by the study will be a reference material for other researchers embarking on similar research work. The research will also be useful to environmental activists, art students and policy makers on issues of environmental protection.

Research Questions

The following research questions were formulated to guide the researcher through the study.

- What are the possibilities of using certain non-bio-degradable waste creatively as sculptural medium?
- To what extent can waste tyres and other waste materials be conceptually explored and used as commentaries for addressing social and environmental concerns in the society?
- Can this project be used as a vehicle for creating awareness for proper waste management?
- To what extent can this effort determine and overcome the possible challenges that artists could face in the up-cycling of bio-degradable waste as art material?
- Can the written documentations of this project be used as thesis and the practical project works be exhibited to confirm the researcher's claims?

Review of related literature

This study reviews various literatures related to the study. It consists a conceptual frame work, related theory, empirical studies and a summary of the review.

Conceptual Framework

The conceptual framework is going to represent the researcher's synthesis of literature on how to explain a phenomenon. It is going to map out the actions required in the course of the study given the previous knowledge of other researchers' point of view and the observations on the subject of research.

Theoretical framework

This part of the work is going to elucidate the theory that backed up the researcher's work or study. The theoretical framework is the structure that can hold or support a theory of a research study. The theoretical framework introduces and describes the theory that explains why the research problem under study exists.

Theories of sustainability attempts to prioritize and integrate social responses to environmental and cultural problems.

Empirical Studies

Today, installation art is still considered first, when it comes to tackling social values and environmental challenges such as pollution, global warming, flooding, among others. An example of installation artist in Nigeria is Dil Humphrey-Umezulike, also known as Junkman from Africa. He always questioned the activities of the government and her citizens on social values through his installations, which he creates with found objects from dump sites. An example of such works is *Wear and Tear*. The work portrays the problem of underdevelopment, leadership and class struggle which he sees as a result of imposed civilization on Africans by the Westerners. The state of bewilderment has put the continent in a shameful circumstance of finding it difficult to go back to her ravaged way of life. Junkman, in another work entitled *Nigeria*, created a visual metaphor that reference the problem facing the Nigerian public transport users by exploring a scrap Mazda car heavily loaded with all sorts of junk material that are supposedly portraying passengers and their belongings in a condition the late Fela Kuti refers to as “suffering and smiling”.

Lamie Atuonye (2014) in his project work: *A Studio Exploration with Tyres and Tubes*, explore tyres and tubes in creating figures that are generally realistic and sometimes surrealistic in nature with the aim of passing his message across to the public. His works comment on the irregularities that are facing the human environment as a result of the industrial and environmental pollution and artificial mutation that modern science has involved itself with. Though his works looks amazing and dreadful, nevertheless that does not change the fact that these transformed creatures are still endangered by the present environmental condition they find themselves in. While Atonye is concerned by the implication of the technological modified creatures such as animals and plant in the nearest future.

Eva Obodo is another artist that has experimented with diverse waste materials such as wood, tin, can, charcoal, jute and fabric. Today, He is known for his use of charcoal and brilliant colour fabric combined with jute in addressing fundamental issues that are becoming nightmare to every sphere of human life. Obodo who sees art to be a very potent tool for liberation, development, nation building and coexistence, once again challenged the Nigerian government with two critical questions that arise from the neglect of other sources of national sustenance in the country using the coal mines in Enugu State as a reference point. He appears to ask: Do we not need the coal anymore? or has Nigeria been developed to the level that it does not need the benefits of coal anymore? (Agwu, 2015). These questions may never get an answered as long as corrupt individuals remain on seat of governance, not only in Nigeria but also in other countries of the world.

Promoting upcycle waste in terms of technique is adored by some chemical material scientists, the most typical case is American scientist’s upcycling of chicken feathers. In 2005, the Agricultural Research and Service Lab of United States Agriculture Department secured a new patent for the production of textile fiber cloth, vessel, plastic film, plastic wraps and other plastic items out of chicken feather

powder based on the theory is to rearrange the molecular structure of keratin the main element of chicken feathers, in order to produce scrim with different length and width and plastic films with kinds of shapes. It was reported that this new material was strong, light and biodegradable, as well add no pollution to the environment. Moreover, the research of using chicken feathers to produce bioplastics has had new breakthroughs in recent years.

Research methodology

Research methodology described the procedure to be followed in realizing the goals and objectives of a research work. It is concerned with the gathering, analyzing, measurement and use of aptness of the research method employed in the collection of data determines to a large success of any research study.

Research Design

The researcher employed both explorative and experimental designs. The research also comprises two areas: The practical and the written/literary aspects. The practical aspects include production of sculpture using various exploratory methods while the outcome of the works produced will be documented in a written project format.

Source of Data

Data for the study was gathered through both primary and secondary sources. The primary sources were mainly by administering questionnaires and oral interviews. A total of fifty-two questionnaires were administered and retrieved from both staff and students of the University, while twenty persons were interviewed which include, sculptors, art historians and environmentalists. The gender ratio of the people interviewed is 1:3 – one female to three males. Non participant observations were employed, where selected studio of sculptors residing around Anambra State was visited by the researcher and the sculptors were observed while working in order to understand their working techniques. The secondary sources include written materials such as: projects, magazines, newspapers, books, thesis, bulletins and electronic publications.

Method of Data Analysis

A qualitative method of evaluation was employed in analysing the data for the research. Although, data was received through both primary and secondary sources, the points where there could be conflict of information from both sources, sources from primary sources supersedes because some information might be lost while transferring information to written mode. Written sources here provide complimentary evidence.

Area of the Study

The research is conducted in Anambra State, South-east of Nigeria. The state capital is Awka. Anambra State has some major commercial areas which include; Onitsha, Nnewi, Ekwulobia, Igbo-ukwu and Umuze. The population of Anambra

State is 4,182,032. Perhaps, Nigeria has 923,768 Square kilometre of land mass and with over 170 million population, (United Nations Population Division 2018). Hence, Nigeria is the most populous nation in Africa and the 17th most populous in the world. It is nearly four times larger than the United Kingdom. The country is bordered by Benin Republic to the West, Niger Republic to the North, Chad and Cameroon Republic to the East and the Gulf of Guinea to the South. The people of Nigeria are extremely diverse, with over 250 ethnic groups speaking over 500 languages in which Hausa, Yoruba and Igbo are the predominant within its environ.

Research Instruments

Studio Procedure

The studio project involves different stages and approaches of execution. After gathering of the materials, different techniques such as: cutting, puncturing, tying, piling, gluing, riveting and nailing, were explored in carrying out the project. Every work commenced by gathering and washing of the tyres and drinks containers, followed by cutting and sorting of the cut out pieces and subsequently ended up with the finishing stage.

Stage 1: Collection

Stage 2: Washing and sorting

Stage 3: Conception

Stage 4: Sketches

Stage 5: Cutting

Stage 6: Drilling

Stage 7: Assembling

Stage 8: Colouring

Stage 9: Finishing

Washing

The materials for this project were collected from dump sites and vulcanizers' workshops, little or no care was taken to these waste, the artist collected these materials in a very dirty condition; hence they were washed with water and detergent to remove some amount of dirt and contaminants before being used for the project.

Sketch Making

Series of sketches were made with pen, chalk, and charcoal on paper. This was to enable the artist have some direction in his work.

Cutting

Cutting out shapes was done depending on the idea or forms to be produced. Some of the tyres were cut out according to the patterns and desired sizes. The cutting of tyres, was followed by the drilling process, with some of the cut-out tyres punctured with both electric and improvised means.

Drilling

Drilling was one of the major procedures in this studio project. This was to enable the artist to make provision through which these materials could be connected to each other in some of the final studio project.

After the drilling process, the artist carefully sorted out the pieces of the tyre material as would be needed for the particular work at hand. This allowed him to decide on the materials to use, and which sizes, colours and patterns would be more appropriate. Because each of these tyres comes with different inscriptions written on them, as well as unique patterns engraved on them, it became necessary for the artist to take advantage of the patterns they provided, since they have stories to tell.

Sewing/Assembling

After the sorting process was done, the next step was the binding and tying of drilled pieces of tyres and drink cans together. This exercise was carried out in bits for easy handling. Each bit of tied pieces was added to the main body of the work through stapling process. While some works were produced through tying process, others were created using nailing, wrapping approach. However, there were others which were just accumulations of drink cans piled up. Colours were introduced into some of the works for the purpose of variety and deeper meanings.

Finishing

Most of the sculptural pieces produced as a result of this studio project are installations that have no definite finish pattern. The finishing of such works is subject to the site where they are to be exhibited (for they are meant to be site-specific). Most of the works produced were relief. On the other hand, either metal or wooden base were provided for some of the smaller works to be displayed on as free standing works, while provision for nail (for hanging) were made for the relief works on the wall.

Summary

It is imperative to recognize the key idea of this project which is reincarnation and how it applies to waste and its implication to the human environment. The word reincarnation was adapted to this work with the view of reminding man about the urgent necessity of giving life back to these waste materials that constitute threat to the human environment. The reuse of waste materials and products for art works however have been connected to the present issue of negative waste disposal and its effect on the environment. The issue of climate change has been one of the most discussed issues that have given the artists the opportunity to express themselves in the reuse of waste material to call for attitudinal change to both the government and individuals. The desire for self-satisfaction and dominance of the human race over nature has dramatically forced mankind to destroy the ecosystem to the point where man has to manage with whatever the environment throws back at him.

However the idea of reincarnation is based on the belief that the dead returns to the earth where they are made fresh all over again (Moja Afryka, n.d.). According to the belief in life after death, this project is focused on giving these materials a new

form of body and idea to reflect on the activities of man and the present ecosystem that his activities had led him into. Tyre, rubber tube and metal drink cans were chosen as the preferred materials to carry out this project work because they have lots of stories to tell about man and his present environment. The project was influenced by the idea of waste, its implication and the importance of reusing waste

Conclusion

Artists have been participating actively in the international debates on global warming. While several of these artists have addressed the issue of the environment with natural materials found around them, others have made their contributions using industrial products. In the studio project this paper reports on, I Specifically, used tyres, rubber tubes, and metal cans of liquor and other drinks which are all largely petrochemical products were employed in this project. The project used these materials to raise the issue of waste management which constitute one of the major environmental problems which every human environment is faced with. It generated a body of works that reference fear, death and hope for man who is already entangled in the mess of his over exploitative tendencies and vagrant abuse of nature. This project report describes the studio processes, stages by stage, showing how improvisation was made and how meanings were woven into the works. It also attempted to analyze some of the works produced in the exploration, situating them in their social contexts.

Recommendation

This project has in no small measure create awareness among the public and artists on how tyre, rubber tube and metal drink cans waste can be used to create and pass information much like other media in sculpture dose. The general public and art students will gain from the awareness created by this project. Therefore, the study recommends alternative use of tyres, rubber tubes and metal cans of liquor and other drinks waste to avert impending environmental disaster and encourage artist experimentation with waste materials to flow with post modern art mode. Based on the experience gathered in the course of this project, the study also recommends that students should be encouraged to explore new ideas on how best to conduct research on waste reuses, and engage in the varying available possibilities in the new frontier of experimental art. Furthermore, students should engage in upcycling and exploration of materials in general arts apart from sculpture.

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