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Sack-Based Sculpture for Waste Management in Nigeria

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ABSTRACT

It is postulated that effective solid waste management is connected to good economic management and together they are imperative in ensuring environmental cleanliness and safety in a society. This is so because economic waste which is related to corruption and miss-appropriation in acquisition of property is connected to solid waste generation and people's unconcerned attitudes toward its control. Ignorantly, a lot of mechanisms and resources have been devoted by governments and organizations in Nigeria into managing solid waste but the results have often been unsatisfactory because appreciation of the cause and effect of a problem is prerequisite to finding a lasting solution to it; thus it has continued to be a major source of health hazard and disaster in this country. Its consequences have been frequent epidemics and disasters like flooding and fire outbreak resulting to deaths, displacement and migration of people in large scale. Researchers blame the deplorable state of the environment in Nigeria on lack of effective means of waste management including its primary collection and enhanced large scale disposal as well as awareness of its generation and consequences in most places and suggest the use of art and people-oriented technologies in it. In the light of this, this paper surveys available information and proposes adaptation of sack-based sculpture into an instrument of war against solid waste in many forms of its ramifications especially in creating awareness of its cause and luring its producers into its management. In its practical exercise, sacks were aesthetically placed in some households in Samaru, Zaria and occupants used them to develop habit of picking up solid waste; and sculpture pieces developed from waste-stalked-sacks evoked sense of self re-examination on their observers. Sack-based sculpture is, therefore, recommended for art practices in Nigeria for managing waste better and bringing sculpture closer to the people.

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Introduction

Research findings have shown that solid waste management in Nigeria has defiled formal and scientific approaches and has continued to expand despite the huge resources annually devoted to its control in the country hence the need for alternative ways. Busari and Olaleye (2007:245) note that the volume and quantity of waste generated in most cities of Nigeria have overwhelmed urban administrators' capacity to plan for their collection and disposal. Similarly, Oyediran (in Nwachukwu 2009:182) points out that the visible feature of most urban centres in Nigeria today is the refuse 'mountains' which emit foul odours as well as constitute a breeding ground for pathogenic agents. Okpoechi (2007:127) notes that Nigerian cities are today considered the dirtiest in the world, where health hazards result from careless handling and a failure to organize proper collection schemes for waste as there is widespread of uncontrolled disposal of domestic waste in most cities of the country. It also blocks drainage and causes flooding currently devastating towns and villages in Nigeria. Asoegwu (2009:27) reflects different rules and laws promulgated to guide waste management in Nigeria, including the War against Indiscipline (WAI) and constitution of Environmental Sanitation Agency at all the three tiers of government and points out that all failed at the point of implementation. Solid waste is a source of disaster in Nigeria and requires urgent attention.

What really is the usual approach adopted in managing waste which is failing thus in Nigeria? According to Busari and Olaleye (2007:243), the widely favoured, Scientific and effective approach to waste management is adoption of "three 'Rs' – reduce, reuse and recycle, arranged in the hierarchical order of effectiveness". Why then is management of waste failing in Nigeria? It is either the principles of reduction in waste generation, reusing materials for a long time, and recycling of waste materials are not appropriately applied or there is still a missing link. Perhaps it is in realization of this error that many environmental experts are calling for art based approach in managing waste in Nigeria. Okeke (2009:66) states that an unclean urban environment is not defined by the littering of solid waste only; rather, urban un-cleanliness is a symptom of structural problems associated with the urban system complicated because they are consequent upon poor management of the impact of major socio-economic and political transformations; and recommends a long term process of changing the socio-economic order through educational and business management options including timely intervention in a rather innovative and appealing (artistic) manner to regulate and eliminate the indicators of waste attitude because "it takes more of management instead of technology to achieve social change and institutional goals." Nwachukwu (2009:188) recommends among other things that the use of closable and aesthetically enhanced (artistically made) containers

and incinerators should be introduced and encouraged to complement dump disposal in management of solid waste in Nigeria. In this light, Okpoechi (2007:129) adds another 'R' – recovery – in the waste management strategy informing that material recovery is different from recycling in that it implies

that the material to be recycled is extracted from unsorted mixed waste rather than from source-separated waste. Through this means, the whole of waste in a dump can be collected and used at a time instead of selecting a few for recycling.



Figure 1: Waste Heap in Nigeria

Unfortunately, the way artists in Nigeria have responded to the calls for involving art in waste management is recycling approach. They simply peep through a waste dump and select only the items that are suitable to their concepts. As such, less than one percent of waste generated in Nigeria is utilized in art. So if art should make any significant impact in waste management in Nigeria, a more encompassing approach should be adopted in it. It is in an attempt to employ art thus better in management of waste in Nigeria that sack-based sculpture is conceived. Its main objective is producing sculpture forms using sack and solid waste in a manner capable of

diverting or disposing large quantity at a time as well as making the people develop change of attitude towards its generation. The basic questions to guide this research are: How has economic waste affected solid waste generation in Nigeria and in what way/s has such incident informed sculpture? By what means can solid waste and sack, be connected to and from the people's cultural practice? In what way/s can bagged waste be organized to enhance refuse collection, discourage wastage inclinations and at the same time facilitate appreciation of sculpture? Sack-based sculpture has advantage over recycling approach in managing solid

waste because it is recovery and collaborative in dimension. This paper, therefore, presents sack-based sculpture for management of solid waste including its root causes in Nigeria.

Issues in Managing Solid Waste in Nigerian

Environmental scientists seem to have relative agreement on the meaning of solid waste, especially as captured in articles of the United Nations. The United Nations Environmental Programme, according to Okpoechi (2007:126) defines solid waste as all domestic refuse and non-hazardous waste such as commercial and institutional waste, street sweeping and construction debris or anything that the owner has discarded because it is no longer useful to him. The author notes that waste is an inevitable by-product of human activity which also has some good advantage in that it accurately reflects material resources and economic prosperity, and has long provided archaeologists with a window into the social values, dietary habits, and community organization of ancient and modern cultures but problem occurs when it is not managed well.

With the rapid increase in population and the growing desires of people to live clustered in a particular area (urbanization), it is becoming clearer that one of the biggest problems confronting mankind in this 21st century is management of waste. Waste problem is not just springing up now. It has persistently remained with us for some times now. Koepfel (1991:3) notes that

“coping with the deterioration of the urban environment, balancing rural and urban ecological needs, and attending to local problems of sanitation, waste disposal, and air and water pollution are key goals in the Bank’s 1990-93 urban development program.”

How then has waste been coped with or managed thus far in local communities? Vanerschueren, Wegelin, and Wekwete (1996:23) note that in almost all the municipalities around the world, solid waste management is a major municipal function, which is insufficiently and unreliably performed, with major problems in collection as well as in the availability and conditions of final disposal sites. According to Stare (2005:7), the uncontrolled urban sprawl is one reason for the difficulties in providing people with sufficient waste service. Earlier, Austin (1987:1) puts it clear that waste management is a costly service to provide, “typically absorbing 30 to 50 percent of a municipal operating budget, yet service is frequently inadequate, with large parts of the city getting no regular attention;” and predicts that future demands are certain to increase, as a city’s residential, commercial, and industrial sectors expand and the economy develops.

It is obvious that increase in human population naturally means increase in human activities – production, processing, consumption and communication and increase in these human activities means increase in the quantity of waste in the environment. Thus, people of many nations are confronted with enormous quantity of

waste in their domains and as such, responsible governments and people have shown serious concerns in devising effective means of managing it. Friedman (2003:7) informs that in San Francisco (USA), solid waste planners set the nation's most radical waste-reduction goal known as 'zero waste' in which they hoped to divert 75 percent of the city's waste by 2010 and 100 percent by 2020; noting further that this goal is notable even in California, where a 1989 law requires every city and county in the state to divert 50 percent of its waste or to face fines up to \$10,000 a day.

The fact about Nigerian is that although dustbins are provided in some locations for collecting and keeping refuse out of sight, most people do not use them. In many other cases, public dustbins themselves are dirty, poorly shaped and constitute eyesore too; whereas in most cases, dustbins are not provided at all for people to use (Stare 2005:7). Again most

Nigerians are not even conscious of their waste generation inclination and its consequences to the general well-being of the people in the society. People simply dump refuse anywhere and it is rocking havoc on the country to the extent that Abuja-Lokoja Highway, the major road linking North and South, was closed to motorists; 25 million persons were living in danger, 38,228 displaced, 160 confirmed dead, and 59 communities sacked in September 2012 following flooding in Nigeria and waste disposal mechanism contributed to the disaster; as a result, "the National Environmental Standards and Regulations Enforcement Agency (NESREA) urged Nigerians to ensure proper disposal of wastes in order to check flooding during the rainy season" (Usman 2012, and Ige et al 2012 in Nigerian Tribune and The Leadership Newspapers).



Figure II: Flood Disaster in some Nigerian Cities
Source: Tribune Newspaper, 2012

So, as dustbins or appreciable containers for collecting waste are largely unavailable and people are not aware of the degree of their involvement in its

generation, developing and placing aesthetically enhanced forms (containers) for collecting and evoking waste consciousness and its

consequences in Nigeria is imperative as to save the environment and the people from the resultant dangers. .

There is, however, a kind of confusion in the operation of this object - solid waste –especially with regards to its generation and management, which needs clarification before any solution to its problem works in Nigeria. From the international state of solid waste, especially as seen in the case of the United States of America (USA) and Nigeria, the following questions need to be answered: is Nigeria generating too much waste? Is there a relationship between waste and economy especially in terms of generation and management? Is waste generation an indicator of economic acquisition or is waste management an indicator of economic advancement? Or how can one explain the fact that world economic powers like Europe and the USA generate more waste and at the same time have more efficient managerial mechanisms than the rest of the nations of the world? And if it so works, why is it that the economic giant of Africa - Nigeria - is more engulfed in solid waste than her neighbouring countries? It may be true that production and other economic activities that can generate waste are more in Nigeria than those other neighbouring countries but if there is no missing link, she also has more resources to manage waste better than them.

With Nigeria ranking very high in the corruption index of the Transparency International (Ameh 2009:9), it is possible, however, that her economic miss-management is contributing to the

state of her environmental degradation. So, could it be that waste management ability is an indicator of the economic management level of a person or country? If answers to the above questions are positive, then, the implication or the tendency is that people who do not know the worth of things they have, probably due to misappropriation, irregularity or corruption in the manner of their acquisition, are less likely to take adequate care of them; thus, such people generate waste more and controlling it is not likely to receive good attention so long as its root-cause – corruption – is not addressed. As Ameh (2009:9) notes, corruption has been one of the major problems bedeviling Nigeria which accounts for the rot and decay in all facet of her political, and socio-economic life; and “it is equally responsible for the retardation in our developmental strides”. So, economic waste (corruption) may have something to do with solid waste generation and un-control.

The following instances can show us the danger of free acquisition (*awufu*) and how it leads to wastage: (1). Presently, polythene (leather) bag is given free to cover any item one buys in the market in almost every part of Nigeria and as such, a simple glance will show that the quantity of discarded polythene bag contained in solid waste generated in this country is higher now than early 1990s and late 80s when it was not free. (2). in similar way, the quantity of liquor bottle in the solid waste generated in Nigeria is less now compared to early 1980s and

late 70s when it was not accounted for in liquor business transaction. The implication of these instances is that in a corrupt society where wealth is skewed in its distribution, wastage may thrive because its generation and burden are not even. This illustration will also help us to appropriately decide where to pinch our tent in the on-going debate on the removal of 'Oil' Subsidy in this country; whether on the side for or that of against it, bearing in mind that both sides are said to be defending the interest of the poor masses. Which side really is on the side of the masses?

Before being derailed by the swiftness of this question, we should remember that the main issue here is that for success to be achieved in any plan on how to keep our environment clean, the entire system, according to Okonjo-Iweala (The Nation 2012:6), requires thorough clean up to free it from the huge economic wastages that is holding it back from achieving the desired development. The big question here, therefore, is how has economic waste affected solid waste generation in Nigeria? Providing answers to the questions and postulates above, both in text and form, is essential for waste appreciation which is prerequisite for its effective management; because as Mike Sowe (in Atabo 2009:3) observes, 'there can be no real victory in the fight against corruption unless there is a change in attitude' and achievement of change in attitude requires a combination of law enforcement with prevention, facilitated by education and public enlightenment. As to the way of doing this, Bannon (2011:416) notes that there is consensus

among environmentalists that aesthetics (art) has some role to play in motivating the changes necessary to environmental preservation and that an aesthetic encounter is a way to approach environmental education by helping to cultivate feelings of care and responsibility for the earth.

On confronting the generated ones, one way of enhancing any mechanism for formal disposal of refuse or solid waste will have something to do with instant removal of pieces from the environment after generating them. Vanderschueren, Wegelin and Wekwete (1996:24) advise that without further investment in plant and equipment, municipalities can improve the management of solid waste through working at the community level to develop an enhanced (artistic) appreciation of the importance of environmental cleanliness and a reduction in the amount of waste produced as well as to pre-collect and organize local waste. Sandra Cointreau, a consultant in solid waste management, suggests (in Austin 1987:1) that measures of providing service at a lower cost include choosing collection equipment that gives the lowest cost per ton, linking performance to incentives and developing public cooperation. In an effort, perhaps, to heed this advice, cities in United States of America (USA) are searching out companies that can creatively (and I would again say artistically) market and reuse waste and promise a steady return of clean materials; and they are switching from taxes to bag-based fees as a way to fund trash pickup, creating incentives for

residents to reduce what they throw out (Friedman 2003:6). In what way/s can these noble techniques be adopted in Nigeria?

Use of Sculpture in Waste Management

Managing solid waste has attracted good attention in sculpture. Right from the twilight of the 20th century, artistic interest has shifted from market participation to public participation. Dantini (2008:153) notes that in the contemporary art scene, it has become important to stimulate the public to adopt aspect of living not simply based on consumerism. The need has grown for innovative cultural institutions and information on the most rapid processes of cultural, social, and political transformation. As such, according to the author, significant collaboration has been generated among artists, sociologists, anthropologists, city planners, and ecologists to re-launch hypotheses of 'modernity' on an ethical level. So, in 1965, Hans Haacke developed kinetic and installation sculptures in which waste objects were mainly used to question distortion of cultural issues by modern institutions. By 1969, Hans started collaborating with gardeners and landscape architects to design green areas in cities highlighting the effect of

waste in an environment. In 1970, he dedicated a sculpture piece – Monument to Beach Pollution – to draw public attention to encroachment of waste into special areas in the society.

Many other artists have since followed up in dedicating artworks to conscientize the people on waste inclinations in our individual and social lives. In 2006, British sculptor Anthony Gormley simply piled up discarded furniture junks into a standing figure - Waste Man - and set it ablaze to the amazement and provocation of the people in his community. Again, there is even an international organization of artists encouraging waste-to-art. The group's workshop, September, 2011, in Ahmadu Bello University, Zaria, provided a good opportunity to test the acceptability of sack-based sculpture plan in an international comity of artists. In the workshop, discarded sacks, stalked with unsorted solid waste (refuse), were used to design a group of figures, and it was among the works considered successful in the exercise. Many artists and art students in Nigeria are equally exploring solid waste but the main problem is that it has all been based on recycling approach which is selective and consumes only a little quantity of the waste.



Figure III: Monument to Beach Pollution, Solid Waste, 1970, Hans Haacke



Figure IV: Waste Man, Furniture Junks, 2006, Anthony Gormley

Although the use of things considered as solid waste in art production is not thus new, the uniqueness of the work proposed here is in the recovery or holistic approach and in the deliberate attempt to instill in the people the consciousness of picking up waste to a location and gauging or questioning the quantity they generate for possible attitudinal change. Without making people aware or accountable of things they do, may be unconsciously, change may not easily come to the derives that support such actions and most people, it

appears, seem to prefer indirect persuasion to confrontational attack in making attitudinal change. Again, there is no doubt that sometimes sack is used by professional cleaners in special areas like university in gathering up waste, but it is not aimed at making people conscious of what they do to their environment in order to think of change of attitude. So, people keep on throwing waste here and there and the cleaners continue to park them up. Although this approach may be working well for such small institutions in keeping their

environment clean, again, it is expensive and unsustainable in most places. In the light of the above analyses, it seems that greater success is more likely to be achieved if more people and indeed everybody are/is connected appealingly to the crusade against rubbish in its inclinations to occupy our living environment.

Developing Sack-based Sculpture

Work in this research proposal is conceived on the theory and belief that management of solid waste in a society is related in a way to economic management and can be more efficient and effective by adopting creatively enhanced and people-friendly technologies to instill in the people at grass-root level, the attitude or consciousness of its quick collection after generation and appreciation of its consequences for onward disposal and discouragement (Austin 1987:1 and Vanderschueren, Wegelin, and Wekwete 1996:24). The implication of this theory/postulation is that using widely acceptable and appreciable implement, which ensures proper accountability of amount generated, its relationship to economic life style and consequences to social life on a person or household, to motivate self interest in individuals to question wastefulness and quickly pick up actions against its generation and disposal can make any solid waste management mechanism effective.

In conceiving artwork that follows this theory, three main components or frames are required: the sack and waste as the chief medium, the artist as the

manipulator or designer, and the people as the providers of waste. So, the research design is experimental and action based or practice-led in nature. The artist manipulates waste and checks its effect on the sack because the shape the sack takes depends to a good extent on the waste used. The sequence here, therefore, is that the artist aesthetically and accessibly positions the sack at corners of workshops, offices and households in the neighbourhood for the occupants to put in solid waste; the people willingly (being attracted) put solid waste in the sack; and lastly, the artist organizes or reshapes the waste-stalked-sacks into sculpture forms integrating cultural elements that permitted them to emotional appreciation and provocation of the people or the community; and the cycle continues rotating in this triangular or tripod symbiotic interaction.

The method or technique of shaping sack into sculpture is by stitching, burning, tying, juxtaposing and casting directly onto skeletal frame of both abstract and biomorphic or naturalistic forms in relation to the cultural elements that informed the generation of its waste content. Skeletal frame is constructed by welding metal, nailing or tying wood and modeling clay and/or cement. Binding is facilitated with resin, starch, thread and glue; while finishing is achieved by incising motifs, applying colour and polishing with wax or vanishing with oil. Disposition (exhibition) of works can be by burning and installation.

Samples of Sack-based Sculpture Work and Process



Figure V: Aesthetic Placement of Sack as Waste-bin, 2011

Source: Author, (2014)



Figure VI: Waste-Stalked-Sack Shaped into Sculpture, 2011

Source: Author, (2014)

Discussion of Work

Many works were produced in the course of this research but the samples above

were considered more directly suitable for this paper. In the first part of the placement segment (Figure V), sack was

smearred with an adhesive (glue) and aesthetically folded and held with pins in that position for about 24 hours after which it assumed or retained the forms. It was then placed at a flat corner of a house where occupants threw waste into it. The other one was produced through the same process but it was suspended in an open space of a printer's workshop where light wastes were dropped in it. Each installation had perforations to ensure better accessibility and good drainage of water for avoidance of decomposition of the content. People willingly placed waste in the sacks and the content was evacuated or the entire sack replaced in different style from time to time and for the three months the exercise lasted, the vicinities of the places involved were free from solid waste.

In the first segment of shaping waste-stalked-sack into sculpture (Figure VI), typical assemblage of Nigerians, where wastage is portrayed in dressing, body size and disposition or level of dedication to duty, is reflected; whereas in its second part, waste-stalked-sack was shaped into a dead and decomposing figure installed by hanging to highlight the end-result or consequences of wastage culture, which is usually disaster. People who observed the works in Zaria, Nigeria, where they were executed, expressed delight on their power to evoke deep feelings of self re-examination, a key to attitudinal change, on them.

Conclusion

Sack is particularly targeted in this research basically due to its wide

acceptability and affordability nature to all the social segments of people in Nigeria and its envisaged adaptability to both art and craft and suitability to the bagging idea suggested earlier for solid waste management. It should, however, be noted that the research in this proposal is not a full study of solid waste, its management and all its implications to human life; rather, it is a deliberate consideration of only the possibilities of creating interest and consciousness in its generation, collection and disposal so as to instill in the people the habit of controlling and picking it up in their environment and appreciating sculpture in relation to a humanitarian function other than aesthetic appeal. Again, unlike the usual intentions to cheaply make treasure out of waste – waste to wealth – to the benefit of the artist, which underlines the motive of most users of waste in artistic production, including that of the Waste-to-Art movement, work here is propelled by an innate desire to tackle life-threatening problem head-on with art for the benefit of mankind and of course, art. So, immediate financial benefit, especially to the artist, is not given consideration in this plan.

As aesthetic appreciation of sculpture forms adapted to the norm or culture of any society by its people has not been in doubt, the outcome of this design will attract the people and thus help in changing their attitude towards waste and sculpture. If well cultivated, there are at least two particular ways in which the outcome will help in keeping an environment free of refuse: artists will be

assisted by the people in picking up refuse for use in their work and it will serve as means for people to gauge their waste and at the same time make reduction in generating and gathering of waste as a fruitful rather than a painful exercise. By doing so, consciousness in generation and quick removal if generated, into dustbin, which facilitates formal large scale disposal or management of refuse, will be in place and our environment will be clean and healthy for living. Again, the technique will further bring art closer to the people because it will be quite affordable both to design and access thereby making available an art that will help in changing the belief, at least among the present generation of Nigerians, that wealth aggrandizement is life and that art, particularly sculpture, has no humanitarian function outside aesthetic appeal and thus facilitate increase in their appreciation. So, artists in Nigeria, especially the students, should be encouraged to fight waste through recovery approach in their works as it is more effective in waste management and making art accessible.

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