
TRADITIONAL *BANTU* AFRICA WASTE GENERATION AND MANAGEMENT: INSIGHTS FOR CONSERVATION OF THE ECOSYSTEM

Emmanuel Iniobong Archibong *Ph.D.*

Department of Philosophy

University of Uyo, Uyo. Akwa Ibom State

E-mail: emmaiarchibong@uniuyo.edu.ng

Tel: +2348032325087

and

Darty Emmanuel Darty *Ph.D.*

Department of Philosophy

University of Uyo, Uyo. Akwa Ibom State

E-mail: dartydarty@uniuyo.edu.ng

Tel: +2349022066538

Abstract

Waste generation and management poses a big challenge in the world today especially in Africa and this is occasioned by a huge population and a new cultural lifestyle. Apart from biodegradable waste, there are toxic wastes that are harmful both to humans and the ecosystem generated from man's industrial activities. These hazardous wastes contaminate land, air and water. These wastes are chemicals and municipal solid waste, landfills with methane emissions which is one of the several non-Co₂ gases that contribute to global climate change. In Bantu traditional Africa, hazardous wastes generation was nonexistent because there were no industrial activities that produce such wide scale wastes and emissions. Besides, there is the ontological belief that the environment has vital force and is an extension of man.. Arising from the above, this paper adopts the method of critical analysis and argued that traditional Bantu Africa holds some valuable basic beliefs that can lead to a theoretical framework of “worldview balancing” necessary to deepen man's engagement with the environment. As a corollary, wastes generation requires a policy direction drawn from the Bantu

traditional African worldview of "co-existence" with the environment which will further encourage and advanced the idea and practices of cleanvital energy. As a recommendation, since biodegradable and non-biodegradable wastes produced by man's activity can be managed in a manner that ensures a cleaner and greener environment, every culture of the world can make contributions necessary for the conservation of the ecosystem for the overall good of mankind.

Keywords: Ecosystem, Waste, Management, Conservation, Culture, Worldview

Introduction

Waste has been a major problem for humanity because it affects the air, land, and water and has devastating consequences on climate change. Some wastes are very toxic and has the capacity to inflict harm on the health of thousands if not millions of people. In many cities in Africa, it is normal to experience the disposal of waste without regulation or even consequences. There are various classifications of wastes and one of these is offered by Romina Cayumil *et al*(2021:2) who states that “due to the wide variation in waste composition and characteristics, different types of solid wastes can be classified as: Municipal Solid Waste (MSW), Industrial Waste (IW),Agricultural Waste (AW), Construction and Demolition Waste (C&DW), Hazardous Waste, Medical Waste and Electronic Waste (e-waste)”. Alabi Okunola *et al*(2019:9) writing on plastic wastes and on the need of reclassification avers that “this type of reclassification might also stimulate research into new and harmless alternatives, which will improve our plastic wastes management, and hinder continuous buildup of plastic wastes in the environment.

Aside biodegradable wastes which can easily be broken down by water or oxygen, there are many other wastes that can disastrously affect the environment and leave indelible marks of illnesses that can affect a wide range of people and can even lead to death. Some of the other wastes are toxic chemicals and gases that are generated by industries which end up contaminating land, seas, and the air.

In pre-colonial Bantu Africa, when industries were not present and where concerns for the environment was still at its peak, the presence of clean air and an environment void of wastes was guaranteed. With the coming of industries, mechanized transportation, and chemical-supported farming which are all “worldviews”, much of these have changed. However, the key to a revolution in wastes management can be traced to the ontological belief held by Bantu Africans which prioritizes the idea that there exists a vital force in all things. In this case, the environment is similar to man and man to the environment. This has great implications to the conversation of climate change which has taken centre stage in the discourse on conserving the environment. The idea of “worldview balancing” is informed by the need to create a balance from the many competing worldviews of man in order to be able to create policies by international and regional bodies that will assist in the conservation of the ecosystem.

Because of the problem of global warming occasioned by the burning of fossil fuel, toxic wastes generation, plastic pollution, and its negative impact on the environment, traditional Bantu African worldview of vital life force is necessary for global efforts aimed at managing wastes and tackling the issue of climate change. This is because this worldview, amidst others such as capitalism and socialism, promotes the idea of a co-existence between man and the

environment. This understanding we believe can engender a positive attitude towards the environment especially when attitudinal change is achieved. People everywhere may learn to capitalize on the idea of vital force or vital energy to see the possibility that waste is not just waste, but as having a potential energy that is cleaner and better for man's physical existence.

Waste, Generation and Management

Ebikapade Amasuomo and Jim Baird (2016:88)note that, “waste is the useless by product of human activities which physically contains the same substance that are available in the useful product”. As man make use of nature, there seems to be materials he has no need of and these transform into waste. Since waste contain the same substance that is in the useful product, waste can be useful in a way. Asan Doron and Robin Jeffery (2018:172) holds that “humans have buried, burned, or washed away unwanted materials since prehistoric times, but modern population densities and production capacities pose unprecedented problems” (172). It is likely that wastes have no end as long as human activities continue which calls for a proper management not only as an end, but as a means towards generating utility from wastes.

Wastes exist in solid, liquid, and gaseous forms and can be classified as biodegradable, non-biodegradable, and municipal wastes. Biodegradable wastes are obtained from fruits, vegetables, water, animals, papers, and so on. Non-biodegradable wastes are wastes that take very long to decompose or do not decompose at all. A good example is plastics, batteries, and glass. Municipal wastes are a lot broader as they include everyday materials that are generated by individuals and households. Wastes can further be classified into

hazardous and non-hazardous wastes. Hazardous wastes can be very harmful to man and animal health and include harmful substances such as iron fillings, biological wastes, nuclear disposals, batteries and paints. While in the case of non-hazardous wastes, they do not have severe or significant implications for human and animal health in that they are neither corrosive, toxic, and radioactive which are characteristics of hazardous wastes.

It does not seem to be possible, at least for the moment, to be able of totally rid society of wastes. Wastes are a reality with humankind in an industrial age and until relevant technologies are available to rid society of wastes, the best option for humanity is to manage this phenomenon. However, while it is looked into ways in which wastes can best be managed, it is equally important to have a clear view of how different kinds of wastes are generated.

Vhuthu Ndou and Isaac Tebogo Rampedi (2022:1) avers that “globally, the generation of municipal solid waste (MSW) is on the rise as a result of rapid population growth, increased economic development and industrialization, urbanization, and growing consumerism in society”. Jan Albers (2014:15) views waste management as “an umbrella term to describe the entirety of all policies, research, tasks and measures related to the prevention, reduction, recovery and disposal of waste. The choice of the method used in a given case depends on various factors, like the amount of the particular wastes stream, the availability of specialized disposal facilities, financial resources and the existing laws”. This explains clearly that the method of managing waste depends on a whole lot of worldview variables.

Waste management therefore is the suitable ways of collecting and transporting wastes as well as recycling and proper disposal of waste products in society. Waste management is the way through which society can properly rid itself of harmful toxins and other materials that may cause severe health problems. Since wastes are said to contain the same substance that are in the useful product, it is necessary to recycle wastes particularly in respect to harmful gases which are usually released into the atmosphere.

In properly managing wastes, Adetola O.O *et al*(2021:177) avers that “sustainable disposal of any product requires that its wastes return to the earth and are able to biodegrade. Nature biodegrades everything taking it back into basic building blocks, so that new living things can be made from the old. Every resource made by nature returns into biodegradable form. Raw crude oil will degrade when exposed to water, air and the necessary salts”. However, this is one way in which nature manages wastes in its own way. Andre Van Amstel (2012:5) notes that “methane is an odourless gas with a concentration in the troposphere of 1.8 ppm” which is capable of causing severe respiratory damage. On the other hand, methane can be sourced into hydrogen which is cleaner and can be used in the movement of vehicles and machines. This is one way in which gases or chemicals can be managed. They can be transformed into cleaner gases. Also, municipal wastes such as plastics can be recycled into further use as this will rid the environment of littered wastes and rivers of materials that are capable of making rivers uninhabitable for aquatic life.

Waste Generation, Management and Climate Change

The effects of waste generation and management have been

overwhelming everywhere in the world. Aliyu Baba Nabegu (2012:4) notes that “current management of waste in Nigeria is predominantly in unmanaged landfills where anaerobic degradation of organic material occur causing CH₄ emissions. When organic waste is sent to open dumps as is the case in all Nigerian cities, it is buried under layers of dirt. Eventually, all oxygen is consumed and organic matter decomposes in anaerobic conditions. Anaerobic decomposition generates methane, a greenhouse gas that is 20 times more potent than CO₂ in trapping the sun's heat”. This scenario has caused the continuous overheating of the environment cumulatively which has seen to the loss of most of our flora and fauna.

Again, Eduardo Garcia (2022:11) observes that “research cited by the United Nations shows that households are responsible for two-thirds of greenhouse gas emissions, which makes sense when you consider that there are 7.7 billion people on Earth-and by 2050 we will be nearly 10 billion”. When we look at this also from the point of solid and liquid wastes, we are sure to get excellent results showing the contribution of household in waste generation. In this case, if individual households work more also in waste management, then climate change issues will slowly become insignificant. Regarding nuclear wastes, Lloyd E. McIlveen (2016:14) makes the point that “nuclear power is becoming and will be a necessary alternative source and way of life of the future for running the industry of power. The production of nuclear bombs, notwithstanding their potency, isn't near the ongoing threat as climate change and will only be elaborated on as a source of nuclear waste to be dealt with”.

Waste in Bantu Traditional Africa

Like other parts of the world, Africans have traditional ways in

which waste is generated and managed. As such, it is important that the belief system of Africans, culminating into a worldview, are clearly understood. This is because “it is in this belief that what they considered important is shaped as well as their choices and preferences about life” (Archibong and Ogbenika, 2020:53). Traditional African communities are known for burying wastes in the same way they bury a dead human being. Traditional African wastes are highly biodegradable in that they decompose easily. In pre-colonial Bantu Africa, wastes were basically littered leaves which usually crowded footpaths and roads. In response to managing these, Africans usually sweep these leaves into farms and it decomposes and adds further value to crops.

The traditional African believes that God, who is the author of life force, gives life to all things. According to Placide Tempels (1957), this view of life force is present in all things and describes the relationships that man can have with his environment. The relationship between traditional Africa and the environment is the relationship between ontological equals. Humans see objects in the environment as containing life force which never dies out but can only transform from one form to another. However, with the coming of urbanization and industrialization (Western worldview), changes began to take place in our natural habitats. Claire Kumar *et al* (2022:3) giving insight into a modern town in Gambia notes that:

Kanifing Municipal Council (KMC) also faces significant waste management challenges. The council's biggest concern is the old open dumpsite, which is hugely overburdened with waste. As a result of its central location, this presents a major public health and environmental hazard to the

densely populated surrounding communities. The city has also faced problems as a consequence of widespread illegal dumping, particularly in riverine areas, and the lack of waste management infrastructure is notable. The city has no transfer stations, and there are no official systems or facilities for waste separation and recycling.

The modern means of managing wastes has generated lots of environmental problems, not only for humans but also for other organisms in the ecosystem. This practice is still in place in big cities with ultimately no concern for the effects of such methods of disposing wastes but with an aim to do away with waste as much as possible. Darty and Uwemedimo (2020:174) opine that, “the contemporary world is one of interdependency between individuals and nations. It is a world where relations among people transcend traditional boundaries of geography, language, nationality and so on. It is shared interests that define the relations between persons in our contemporary world as barriers of geographical distance, space and time and so on appear to have been conquered with technology”.

As a corollary, since modern Africa is very much different from traditional Africa, it is expected that waste generation will be on a daily increase because of population size and lifestyle in the face of industrial revolution. It becomes germane then to be able to put uptheoretical frameworks that will ensure that as wastes are rapidly generated, they are also effectively managed. This is where principles, ideas and beliefs from traditionally Africa can meet practice.

Waste in Modern Africa

In modern Africa, there exists a slight difference especially in the collection of wastes to begin with. Ibrahim Bello *et al*(2016:3) explain that there are “three major phases of wastes collection in Africa. These are the informal phase, primary and secondary phases. The informal and primary phases are basically the ones from household to community collection points...” Wastes are usually transported from community transfer points to landfills or final disposal sites. Private operators have also been utilized in waste collection. They collect waste directly from households by door to door approach. However, the community market and hospitals still rely on collection arrangements made by the urban council which is a public parastatal. Another way of collecting wastes common but not exclusive to modern African countries is the “summon to bring” system. In this system, the collection truck already has a specific time it comes around on specific days of the week. When it arrives, it hoots its horn to summon the people to bring their waste for disposal. This seems to be the new normal but it does not totally solve the issues of wastes but has only served as a change of the means of collecting and disposing wastes.

The right way in which waste can properly be managed is contained in African ontology of cleanliness and co-existence with nature. Humans must see waste as a potential utility that can be employed to produce a cleaner and healthier form of energy or items for reuse. Because life force is inherent in nature, humans must strive to treat the environment as they treat their own body. This position coheres with the belief of the Bantu about religion being a “prominent feature in human society that cannot be simply ignored” (Nkanta, 2019:2). Handling biodegradable wastes doesn't really pose so much of a

challenge especially if approached from the perspective of African ontology of the environment. Non-bio-degradable wastes can be recycled for reuse while the activity of dumping such wastes into the environment for erosions to sweep into rivers and destroy aquatic life is an attitude that must be changed. The way and manner in which wastes are generated and managed has great implications for the issues of climate change and Santosh Vani *et et al* (2017:168) holds that a “disintegrated approach of development and environment lead to imbalance in the ecosystem”.

Traditional African Strategy for Waste Generation and Management

The traditional African strategy for waste generation and management is closely intertwined with the concept of force in African ontology where the African views all matter as being composed of energy. Placide Tempels (1957:34) notes that “it consists in the Bantu's discernment of the nature of beings, of forces: true wisdom lies in ontological knowledge. The Sage "par excellence" is God, who knows every being, who comprehends the nature and the quality of the energy of each”. This energy exist in all of nature and the African has a better chance of using wastes as a means of generating energy for consumption, the form of which is called recycled energy. Collins O. Ugwu *et al*(2021:3-4) conceives some of these strategies as “reduce... reuse... recycle...” and “composting”. Ugwu also notes that “energy recovery from solid waste involves the application of different technologies including anaerobic digestion, combustion/ incineration, gasification and pyrolysis in the conversion of SW materials into other important and very useful forms. Some of these forms include electricity, useable heat and fuel. These processes are often referred to as “waste-to-

energy (WtE) technologies” (Ugwu, 2021:4).

The African view of being though a belief of great importance to reducing waste, reusing wastes, and recycling wastes for cleaner utilitarian good. This is so because insofar as being and force are not distinct in Bantu ontology, the environment as a being is composed of a vital force and finds equality with man, who is also composed of a life force. It becomes clearer that worldviews are crucial to wastes generation and managements as well as the fight against climate change. These differences in worldviews can form a theoretical framework of balance that can help in the reduction of hazardous wastes, and help man move towards making sense of wastes.

Evaluation and Conclusion

Africa is no doubt plagued by the effects of climate change which threatens the clean, green, and suitable environment that it once enjoyed. In modern Africa, it is almost impossible to breathe clean air because of pollution by man's industrial activities. The call for the practice of managing waste in ways that resonates with the metaphysics of the African mind and worldview is very crucial and urgent. This move is believed will preserve the environment and create employment opportunities for the teeming population through “waste to wealth initiative”.

The problem faced by Africa in regards to waste is synonymous to that faced by many other countries of the world. Man being a member of a society has a great role to play in mitigating the effects of climate change. Ekanem and Archibong (2012:224) argue that “due to the multiplicity of the others, of the individuals, the meaning of life is hidden within the dialectic of the collective or the

community”. Thus, if man reacts to the issue of climate change with the African ontological sense of reasoning, then the cause of climate change will slowly go into extinction. Inasmuch as human activities are the major causes of climate change, apart from other considerations in the climate change debate, a decline of climate issues is a possibility as long as man structures an attitude of complementarity with nature.

Waste generation is a huge existential problem as well as its management which if not tackled properly will see to the incurring of hazardous consequences for humans, animals, and plant life. This paper has been a modest effort towards contributing to enlarging the debate via building a theoretical framework on “worldview balance” from numerous beliefs system around the world such as capitalism, socialism, communism, communalism and so on. The paper also made prescriptions around the possibilities available to humans in making a positive change towards managing the ecosystem properly. In the course of the paper, Bantu traditional African conception of waste and the strategies for generating and managing waste was discussed with the finding that “being is complementary” (Darty and Ekefre, 2022:125).

As a recommendation, the right attitude towards waste management is crucial for mitigating climate change and its disastrous effect. The basic Bantu belief of “co-existence with nature” and “the ontology of cleanliness” can be worked out as a theoretical framework that can lead to “worldview balancing” which will be useful towards reducing, recycling, and reusing of wastes for the good of man and the ecosystem. It is also important for world government and regional blocs to enforce and implement

regulations that will check production, consumption, usage and eventual disposal of hazardous wastes with a renewed vigor. This can be achievable only when there is a political and moral will on the part of world government because the attendant 'benefit' that comes with industrial activities in a capitalist's oriented society cannot be jettison just like that. This is where the concept of "worldview balancing" can make a whole of difference if properly thought out and practically implemented with the conversations continuing.

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