

# Logical and Theoretical Foundations of African Environmental Ethics

by

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## Abstract [English]

The paper observed that the various ethics that constitute the system of African environmental ethics are not based on or linked to any known African ontology and formal logic. It argued that the contextualisation of African environmental ethics on African ontology and African logic is essential since Western ontology and logic do not serve to adequately explain and provide proper meanings to the various concepts and propositions employed in the African environmental ethics. Therefore, the paper aimed to, and indeed, link and establishes African environmental ethics on a definite and sound African ontology and formal logic based on Ibuanyidanda complementary ontology and Ezumezu integrativist logic.

**Key Words:** African environmental ethics, Ibuanyidanda, Ezumezu, logic, ontology. [English]

## Edoñ Ikọ [Annang]

Nwed nduño ami akondo ada akud ate k' idem mme ido ukpeme nkan-ñkuk ke Africa ada nsan nsan ye ɔntology ye lojik Africa. Nnwed ami abenne awód ate ke ɔntology ye lojik mfia agwo iwamma ke adinam awańa mme nsio nsio akpọ-ikọ, adaha ikọ, mme usem, ye mme edu ake 'adọhoke ke mme ido ukpeme nkan-ñkuk ke Africa. Ntak ade anam ukpep mkpọ ami anwana ndiben ido ukpeme nkan-ñkuk Africa ñka ñke kọoñ ke ɔntology ye lojik afonno nte itiat ikaba, ade anam anye asańa 'ke kem ye Ibuanyidanda Ontology ye Ezumezu Logic.

**ÑKek Ikọ:** ɔntology, lojik, Ezumezu, Ibuanyidanda, Ido ukama nkan-ñkuk Africa. [Annang]

## Introduction

A discourse on logical and theoretical foundations of African environmental ethics is important following recent efforts at developing an environmental ethics that bore African spirit or identity. Indeed, the framing of African environmental ethics is timely for three reasons. One, a firm foundation has now been laid for African Philosophy and its contingent disciplines.<sup>1</sup>Hence, excited by this, the revolutionary African philosopher, Jonathan Chimakonam (2015b), announces that the time has come for African philosophy to engage the world. Two, the alarming state of ecological crisis in the continent and the cultural biasness of Western environmental ethics makes it imperative to develop an indigenous environmental ethics for Africa. Three, although ecological crisis is a global phenomenon the causes seems to bear cultural markings, in other words, the attitude of man towards the environment seems to vary from culture to culture. This makes it necessary to develop context-relevant ethics to engage the problem.

Recognizing these facts, African Scholars began developing culturally relevant environmental ethics to deal with the problem in the context of Africa. No doubt their efforts are welcome development. However, there is need to rest the feet of African environmental ethics on sound logical and firmly established theoretical premises.

## Definition of Concepts

**African Environmental Ethics:** In this study, I adopted the definition provided by Chigbo Ekwealor (2012) that “African environmental ethics deals with the fundamental principle that govern the relationship between man and the environment based on African worldview” by analyzing the basic concepts such as man, environment, spirit, et cetera and examines the approaches by which they are known (p.91). In other words, the main thrust of African environmental ethics is to understand the ontology of man within the context of an environment he shares with non-humans (including spirits) and reveal the relational order that (ought to) govern being-in-the-world.

**Anthropocentrism:** The view that humans are the only or primary holders of moral standing. It is the belief that considers humans beings to be the most significant entities in the universe and interprets the reality in terms of human values. Anthropocentrism holds that every non-human entity is designed to serve human interests exclusively.

**Biocentrism:** The view that life is central to being, reality and the cosmos, point of view that places the greatest importance on individual living beings or biological components of the environment rather than on the geological elements. It does not consider non-living things or abiotic aspects of the environment as important as living beings.

**Ecocentrism:** The nature-centred perspective that places intrinsic values on all living and non-living components of the environment. It attributes equal importance to biological and geological aspects of the environment. Unlike biocentrism that concerns with individual living members of the environment, ecocentrism focuses on the ecosystems as a holistic whole.

**Pentecostalism:** The Christian movement that believe in spiritual giftedness, divine healing, demonic possession of beings and deliverance.

**Charismaticism:** The Christian movement that emphasizes talents held to be conferred by holyspirit, such talents as speaking in tongues and miraculous healing. They also believe in deliverance from demonic possession of beings.

## **Causes of Ecological Crisis in Africa**

The phenomenon of environmental crisis in Africa can be traced to three broad dimensions – economic, social and political. From the economic dimension, poverty can be identified as the cause of ecological crisis in Africa; from the social dimension, religious bigotry and ignorance can be identified; and from the political dimension, dysfunctional leadership or bad governance can be identified.

### **Economic Cause:**

Poverty is perhaps the most endemic problem in Africa. The World Bank and International Monetary Fund (IMF) jointly reported in 2015 that sub-Saharan Africa records the highest incidence of poverty in the world with a staggering 46.8%. Food and Agriculture Organisation of the United Nations reported in 2015 that a vast majority of households in Africa are unable to feed themselves. There are a number of reports that hunger kills 12 people every minute in Africa, representing the highest in the world.<sup>2</sup> Poverty simply means the inability of an individual to afford the basic needs of life – nutritious food, good shelter, minimal healthcare and clothing. Poverty can lead to hunger, disease and death. Poverty-stricken person is unable to afford descent living, by standard means, in terms of the basic needs for survival. When the poverty-stricken individual is unable to afford descent living by standard means he turns to non-standard alternative means of meeting his/her needs. Most of the times, these non-standard alternatives are debasing and unethical, tending towards the destabilization and dis-equilibration of social and ecological communities. For example, in desperate attempts to meet their needs, the poor may, and do, engage in illegal lumbering and hunting of protected species of fauna and flora. A clear example of this incident is reported in a study which revealed that poor communities adjoining National Parks were poaching protected species in the parks as well as felling trees for fuel (Ijeomah et al, 2013).

In the Niger Delta, the United Nations environmental survey of Ogoni land reported that oil spillage has destroyed the top and sub soils to the depth of five meters (UNEP, 2011). It is important to note that oil spillage is not incidented by International Oil Companies (IOCs) alone, even though the IOCs contribute a massive percentage to it; oil spillage in the Niger Delta which destroys land and water bodies is also incidented by oil bunkers, some of them the poor, who supply the stolen crude to illegal refineries and international criminal syndicates. Recently, one of the oil bunkers confessed that he became an oil bunker, and was not likely to stop it, because it was the only means by which he raised funds to finance his family's needs (Utebor, 2014). All these show that poverty can, and has, pressured the poor to engage in unwholesome practices for survival, which ostensibly impacts on the environment in negative ways. There is a saying in Annang that: *utu k' eyen abia ibok akpa yak mfañ akweñe k' ikot*, instead of the child of herbalist to die let all the leaves in the bush finish. Self-preservation is an irrevocable law of nature. There is nothing he cannot do, a man whose life is threatened by poverty, he can even take down the environment if he believes that by so doing his life would be saved from hunger and disease.

### **Social Cause:**

Another cause of ecological crisis in Africa is social and cultural beliefs system. Recently, social and cultural beliefs in Africa have taken the worst dimension in widespread bigotry in religious superstitions. From time immemorial Africa has maintained the image of the most religious continent. In his book, *African Religions and Philosophy*, following wide-ranging sociological and anthropological studies in East and Central Africa, J. S. Mbiti (1970) reported that an average African carries religious rituals and symbolisms into all his activities – in school, market, office, civil service, sports, military and paramilitary, arts, politics, and medicine. The findings of Mbiti have been confirmed by Placid Temples (1969), Edward Evans-Pritchard (1976) and Harrie Leyten (2015). Indeed, most of us who were born, brought up and still live in Africa can attest that the observations of Mbiti are not only valid for today but that there is exponential increase in the tendency towards extreme bigotry in religious beliefs and superstitions. The widespread and increasing growth of Pentecostalism and charismaticism seems to liquidate human reasoning in Africa at a very fast rate. People just believe any piece of information, however absurd, because a pastor commanded them to believe. There is a certain fallacy having field day in Africa, that if a pastor or imam says a thing, it cannot be faulted; for they speak the mind of God (whoever and whatever that God may be). So an average modern African, however highly educated in the sciences, can carry out any command by a Pastor or Imam. A clear example of this malady of religious bigotry in our continent was made manifest by the Ebola crisis. A vast majority of Nigerians bathed and drank hot salted water because it was rumoured that certain revered pastors recommended the bathing and drinking of hot salt water as prevention against Ebola epidemic (Ndeokwelu & Ofobike, 2014).

The impact of this sort of debasing bigotry in religious beliefs and superstitions on environment is vast and alarming. In most parts of Africa, particularly southern Nigeria and southern Cameroon, the belief in witchcraft is widespread. In a study<sup>3</sup> I undertook recently I observe that this belief, though cultural, is reinforced by Pentecostalism and charismaticism which has taken deep roots in the continent. From the study I could observe that today, in our continent, Pentecostalism and charismaticism are instigating ecological crisis by naming plants and animals as witches and wizards. Some pastors are telling their congregations that every animal is a candidate of witchcraft embodiment and that every plant is a possible abode of witches and wizards. In many communities forests and wilderness have been set ablaze, sometimes with the aid of pastors (Also see Una, 2009). The pastors have gone to the extent of naming cats, dogs, owls, spiders, Gecko, rats, snakes as possessors of demons; and they have equally named trees like obeche, iroko, and mahogany as the homestead of evil spirits. As a consequence of this, in most communities in West and Central Africa, these animals and plants are hunted and axed by individuals, groups and communities in an effort to set the community free from evil spirits. Consequently, in most communities in Africa, these species of plants and animals are marked as candidates for destruction. These sorts of unfriendly environmental beliefs can be traced to Judaism, whereby priests usually made certain animals scape-goat to bear the sins of man (Lev. 16:5-10, 21-22). This belief can also be traced to the practice of *ukpuho ukpong* (soul transplantation), of which human souls were belief to inhere in plants and animals (Ojong, 1995; Francis, 2016). Evans-Pritchard (1976) also notes from his studies that in some African communities the young ones were admonished, during initiatic ceremonies, that their kin and relatives were transfigured into animals at night. Therefore, when Pentecostal pastors brought the belief that some animals were witches and wizards, the Africans quickly bought into it because it was always part of their belief system. The modern African seems ready to go to any length to obliterate any forest and phase out any specie of plant or animal accused of aiding and abetting witchcraft. The impact of this kind of attitude towards other existents in nature cannot be overstated.

### **Political Cause**

Dysfunctional leadership or bad governance in Africa has asserted a lot of pressure on the quality of the environment. Studies have already indicated that more than half of African problems are due to dysfunctional leadership (Okoye, 2013; Kanu, 2010; Folarin, 2010). African leaders and their cohorts are so corrupt and ill-tempered that it would be a hallucination to expect anything good to come out of them. Apart from the fact they are over-ambitiously greedy, most of them know next to nothing about governance. Therefore coupled with their moral bankruptcy and obvious administrative incompetence, African leaders have failed to provide governance to the environment in general. In fact, if they could not make and enforce appropriate laws to protect human beings how can they be expected to legislate and enforce laws and policies that protect non-human beings.

Although some countries in eastern and southern Africa like Kenya and Mozambique have implemented laws and enforcement regimes that protect endangered species, many other countries like Nigeria have left environmental laws and policies mostly unenforced (Traffic International, 2012). This kind of attitude simply means that animals and plants are unimportant because they are not voters. After all, applying the Muhammadu Buhari governance ratio of 95:5 (government of the voters by the voters and for the voters), the plants and animals should expect nothing from the government because they did not vote for the government in power. It is either because there is no legal regime protecting the environment or that the enforcement regime is weak; which have given individual and corporations leeway to vent their greed on the environment, in terms of exploiting it mindlessly and with impunity.

It is important to note that many African countries, in effort to attract foreign investors, have relaxed their scrutiny regarding the impacts of foreign projects on their environment. An immediate example is Nigeria in which the federal government had since 1969 continuously shifted deadline for the ending of gas flaring, in a bid to keep IOCs from going to Angolan oil fields (Asu, 2014). Similar political economic expediencies also happened in Kenya. Segun Ogungbemi (quoting Okidi) notes that despite the 1971 warning by East Africa Medical Research Institute that measures should be taken against pollution of Lake Victoria by industries, government took no action many years after (Ogungbemi, 1994). This scenario may be linked to lack of political will, by African governments, towards doing the right thing to save the environment. It is also possible that the governments are either ignorant about its responsibilities towards the environment and posterity or it is deliberately abdicating responsibilities for the sake of political expediency.

## **Ontological Root of Ecological Crisis**

Generally, human attitude towards the environment is unfriendly. Lynn White (1994) notes that “we are not, in our hearts, parts of the natural process. We are superior to nature, contemptuous of it, willing to use it for our slightest whim” (p.13). We are increasingly disrupting the environment through science and technology, which are designed for the purpose of subduing and exploiting nature. Scholars have sought explanations, for ecological crisis, in science and religion. But ecological crisis cannot be fully understood scientifically in isolation from the attitudes and orientations toward the environment which are deeply rooted in the axioms of Western metaphysics. The ecological crisis we experience in the world today is deeply rooted in the successions of metaphysics which have conditioned our attitudes to the environment. Diana-Abasi Ibanga (2014) has carried out a survey of Western philosophy and arrived at the conclusion that Western philosophy has always encouraged attitudes which are injurious to the environment. His analysis reveals that the whole enterprise of Western philosophy is focused on improving the human condition rather than the environmental condition.

Philosophy generally seeks to either extricate man from nature or arm him with *techné* to subdue and dominate nature. Philosophy is predominantly a humanized and anthropocentric enterprise. The universe of philosophy revolves round man. Indeed, we live in this Western axiomatic system which places man at the centre of nature thereby causing the whole environment to revolve round him and relegating every other specie to the contingency of his interests. It is important to note that in recent times philosophers have developed various systems of ethics for the environment. But the systems of ethics cannot significantly change our environmental attitudes apart from the structure of our consciousness which give rise to our attitudinal orientation. No system of ethics can survive on false foundation. That is why Ibang (2014) argues that there is need for total overthrow of Western ontology. In Africa, the radicalisation of our unfriendly environmental orientations has already started with the ushering in of complementary ontology – an ontological orientation which is not based on anthropocentric hierachization of beings. This study suggests clearly that unless environmental ethics are built on new ontology it will not go far in reforming and changing our attitudes to the environment.

## **The Concept and Nature of African Environmental Ethics**

There is balance of opinions and views among scholars of African environmental ethics regarding what should be the nature of ethics towards the environment. An analysis of literatures by African scholars reveals a pattern of normative rendering of African environmental ethics as that which seek to promote attitude of accommodation of non-human existents in our affairs. The pattern also reveals that African environmental ethics tilt more towards biocentrism than it does towards ecocentrism. African ethics for the environment begins with the analysis of man and his relationship with the environment. This approach reflects more distinctively in the definition provided by Chigbo Ekwealo. According to him:

African environmental ethics deals with the fundamental principle that govern the relationship between man and the environment based on African worldview (Ekwealo, 2012, p.91).

He notes further that it begins by analyzing the basic concepts such as man, environment, spirit, et cetera and examines the approaches by which they are known. In other words, the main thrust of African environmental ethics is to understand the ontology of man within the context of an environment he shares with non-humans and reveal the relational order that (ought to) govern being-in-the-world. This clearly maps out the concept, scope, method and goal of African environmental ethics, but it does not tell us much about the nature of the ethic.

The nature of African environmental ethics is its normative aspect. It is arrived at by understanding the African worldview and the logical structure of the worldview. It is this African worldview that defines the methodology of the study and shapes its findings and postulates. I shall analyze the ontological structure of African worldview as we go on. Meanwhile, let us consider the normative aspect of African environmental ethics which defines its nature.

Segun Ogungbemi postulates an ethic called 'ethic of nature-relatedness'. According to him, ethics of nature-relatedness is "an ethic that leads human beings to seek to co-exist peacefully with nature and treat it with some reasonable concern for its worth, survival and sustainability" (Ogungbemi, 1994, p.209). It is an ethic that asserts that human beings need nature more than how nature needs them. Hence, it is in man's interest to live cooperatively with non-human elements in nature. It calls on human beings to be circumspect in their attitude towards the environment since they got everything to loss; because other elements in nature got nothing to loss since, according to him, they are neither rational nor spiritual. Ogungbemi's ethics of nature-relatedness is materialistic and anthropocentric but nonetheless it urges attitude of consideration and peaceful disposition towards nature for the purpose of survival and sustainability of the environment itself.

Another African ethic which urges or promotes attitude of accommodation and peaceful disposition towards nature is Ubuntu. It is a communitarian ethic and it affirms: I am because you are. In other words, my existence is sustained by the harmony and stability of the community and vice versa. It promotes cooperation and mutuality of beings within the community. It suggests that I am incomplete without the community because my beingness is sustained by the beingness of others. If they die, I die; if they survive, I survive. Mark Ikeke (2011) notes that Ubuntu gives priority to the wellbeing of the community. Although Ubuntu comes from Zulu and Xhosa languages which means "humanity towards others" and seems to focus on human solidarity, Edwin Etieyibo (2011) has shown that Ubuntu is equally ecological concept since it considers the wellbeing of others on the basis that they possess spiritual essence whereas for Ubuntu humans and non-humans possess this essence. On the basis of this, Ubuntu indirectly urges attitude of accommodation to include non-human existents since our wellbeing also depends on their wellbeing.

One other African ethics that urges and promotes attitude of accommodation and peaceful disposition towards nature is ethic of live-and-let-live. This ethics was first developed by Chigbo Ekwealo. It is derived from the Igbo saying "Ndu Mmili Ndu Azu", the life of water is the life of fish. Ekwealo (2012) asserts that the ethic of live-and-let-live "simply recognize and establishes the right of all entities to existence and living, and exhort everyone to respect this fundamental right and assist to enhance his wellbeing" (p.92).



He notes further that it is the ethic of responsibility, equity, justice, and harmony with a moral charge that non-observation of the ethic will lead to destabilisation, disharmony and pains in the world. Ethic of live-and-let-live recognizes the rationality and spirituality of all existents which accordingly accords it intrinsic worth. It makes man a plain member of the environment. In other words, the environment is sacred which accounts for the respect and positive attention given it. In a nutshell, *ndummilinduazo*, the ethic of live-and-let-live is an ethic of accommodation and mutuality in which “man and nature are joined together in a necessary relation whereby the wellbeing of one is directly tied to the wellbeing of the other” (Ekwealo, 2012, p.90). Every being is from the same source and owe its wellbeing to the wellbeing of all others.

The lesson here is that we should evaluate our values as it relate to other entities in the environment... If our values and habits are founded on the principle of *ndummilinduazo*, live and let live, our approach to the environment would be that of friendship and brotherliness (Ibanga, 2014, p.188)

## **The Relationship Between Humans and Non-Humans**

The relationship between humans and non-humans has been widely studied. Both science and philosophy have asserted boldly and clearly that humans and non-humans share the environment in common, and that their lives are mutually interconnected and interdependent. Inferences have been drawn, and studies have supported, that our survival as a world greatly depends on the mutuality and complementarity of our actions and inactions. I have undertaken to give a brief description of the interspecies relationship from the scientific and non-scientific perspectives.

From the scientific perspective, the interspecies relationship has been broadly detailed in evolution science. For example, ecological science uses the bio-pyramid to show how different varieties of plants and animals in their diversities are interdependent on one another for food and energy (Leopold, 1949). This invariably means that disruption of the food chain or energy circuit can instigate serious environmental crisis of unprecedented scale.

From the non-scientific perspective, the interspecies relationship has been described in the theory of force. The theory of force use the concept of *Ntu* to show how different entities in nature – human and non-human, biotic and abiotic, physical and non-physical – are interconnected and linked together by a spiritual force called *Ntu* (Unah, 2002). It asserts that any aggressive or non-harmonious behaviour within the spiritual chain would result in undesirable consequences for the whole system until the abnormality is corrected or the injured party assuaged.

There are other ways in which it has been shown the mutual interdependence of species in the environment. All these indicate that no specie in nature, whether human or non-human, no matter how developed the intellect, can survive on its own without the contribution of other species to its wellbeing and sustainability. It is for this reason the Igbo often say *egbe bere ugo bere nke si ibe ya ebena nku kwa ya*, let the kite perch let the eagle perch whichever denies the other the same rights let its wing break. This implies the inevitable interdependency of every existent for resource and development. It also calls for restraint on the part of everyone in the environment regarding the use of resources. It emphasizes attitude of accommodation toward other beings of different species.

The interconnectedness and interrelatedness of all entities in nature – animate and inanimate – is expressed thus in the Annang prayer: *ase ade 'dia mkpọ enọ isoñ sá adehe isoñ ade ayaka agwo*, we share our food with the land since we are extension of the land. The land, in this prayer, does not just refer to merely the soil but all entities whose existences are connected thereto. There is another Annang saying that holds: *ase ade agwo akọt inuen akọt*, humans and non-humans share the same food chain. This indicates the interconnectedness, interrelatedness and interdependency of humans and non-humans on the same food chain. The Annang also have another saying: *agwo aduk ukpọñ unam*, humans share the same being with animals. This also indicates the interrelationship of man and animal on the same life's essence. It is obviously for this reason the Azande would declare during initiatic ceremony wherein the young ones are reminded:

Your relatives are animals, your father is an elephant, your father's elder brother is the red pig, your wives are cane-rats, your mother is a bush-buck, your maternal uncles are the duickers, your grandfather is a rhinoceros. (Evans-Pritchard, 1976, p.1)

Here the humans are reminded of their interrelationship with the non-humans, the other animals in particular. The initiates into adulthood are charged in kin-related terms to drive home the point that they are to treat other animals in the same cordial manner they treat their kin and kindred.

## **Ontological Configuration of the Environment**

I have argued that African environmental ethics can only be fully understood within the context of African ontology. This is important because a correct notion of being is essential to understanding the fundamental principle governing the relationship between man and other existents in the environment. Over the years African scholars have attempted to systematize African ontology with theories such as communalism, negritude, ubuntu, ujamaa, ntu (or vital force).

However, one of the most comprehensive, refined, distinctive, careful mapping and systematization of African ontology is that called Ibuanyidanda. Ibuanyidanda was developed by Innocent Asouzu as a philosophy of essences and theory of being. Ibuanyidanda is a complementary ontology which tell us “what it means to be” based on distinctive African worldview.

What is being and beingness? That is, what does it mean to say something exist and how does it exist? In attempting to identify what exist and how it exists, many theories of being have been developed. The various theories have argued that what exist is either the sensible or non-sensible or both. Apart from Gorgias and other sceptics who argued that nothing exists, all other philosophies (represented as either materialism or idealism) affirm at least that something exist. That is to say, there are at least humans and non-humans existents in the environment. The focus of this study is not on being or what is, because all the known theories of environmental ethics are agreeable that there is at least humans and non-humans existents in the environment; the focus of our study (which of course defines most studies in environmental ethics) is the beingness of the being, how does the “what is” is? If there are at least humans and non-humans in the environment, how do they exist – is it independently or interdependently, egocentrically or altruistically? In relation to this question a number of theories of being have been developed.

The Parmenidian thesis, upon which Greek ontology, and to a large extent Western philosophy, is based, approach the question of being from the perspective of duality – being and non-being – of which non-being must give way to being. In the context of this study, if being is interpreted as humans (as dogmatic humanism would readily affirm) non-humans would be relegated to the status of non-being – which according to Parmenidian ontology, must be made to give way to beings (humans) to affirm their beingness.

The modern Western ontology, definitely mapped out in the works of Martin Heidegger, does not liquidate the duality of Greek ontology rather it de-regularizes it from dichotomic to synthetic relation. Heidegger does this by asserting that being arose from non-being and must seek its essence in non-being through the Dasein (human being) – for only through Dasein can Being be discovered. In the context of this study, the Heideggerian ontology can be interpreted thus: humans came from non-humans and must seek their essence in nature but only through anthropocentrism.

In Africa, Ujamaa philosophy had been developed by Julius Nyerere. Ujamaa is an ontological system emphasizes the doctrine of communalism based on kin relationship. It asserts that the familial interrelation of humanity imposes ethic of cooperation on each and all – that each individuals should work for the good of all and for the overall health of the community as a whole. The Ubuntu philosophy also takes a similar view as Ujamaa. Ubuntu is an ontological system developed from the thoughts of Zulu and Xhosa, and emphasizes the doctrine of communitarianism based on common humanity.

The Ubuntu maxim – “I am because you are” – uphold the indispensability of the other. It is like saying being is because non-being is or that the beingness of the human being is affirmed by the beingness of the non-human being; therefore a liquidation of non-human (non-being) would invariably lead to the liquidation of the human race (being). To that extent, the oughtness in that type of relationship is that of cooperation. Ubuntu affirms the attitude of cooperation – live and let live – between the different entities, since the survival of one is tied to the survival of the other.

Both Ujamaa and Ubuntu are promoting the same thing which is cooperation; yet the difference between them would be that while the former promotes cooperation based on kin relationship, the later promotes cooperation based on human genetic code. It is important to note that despite the fact that both Ubuntu and Ujamaa recognize the spiritual essence of all existents (humans and non-humans alike) they, like the Western ontology, lack essential structural orientation which can support either biocentric or ecocentric ethics; that is to say, their ontological orientations can only support anthropocentrism.

The Western philosophy that was coming close to radically replace human-centred ontology with biocentric ontology is utilitarianism, first developed by Jeremy Bentham and John Stuart Mill and later redeveloped by Peter Singer. Environmental utilitarianism (for which much of the credits should go to Singer) affirms a relationship of mutual respect between human and non-humans based on sentience. On the other hand, the African philosophy that was coming close to revolutionarily replace human-centred ethics with ecocentricism is “Ndu Nmili Ndu Azu”, first developed by Chigbo Ekwealo and further developed by Diana-Abasi Ibanga as “Ndumilinduazo” (but it is to Ekwealo much of the credit must go). Ndu Mmili Ndu Azu (or Ndumilinduazo) affirms a relationship of mutual accommodation between human and non-humans based on our common heritage in evolution. I have already identified Ibuanyidanda as the most comprehensive and complete African ontology – which is neither humanistic nor animalistic – which its structural orientation provides a strong theoretical basis for the kind of environmental ethics African scholars are developing.

Ibuanyidanda is an ontological concept which seeks the unity of all entities and existents by defining phenomena as “fragments” and “missing links” of reality. Asouzu avers that:

All experience, modes of existence and expression of being in history are missing links, which uphold their being and existence the moment they can be conceived as aspects of being in complementary relationship, as to help make evident the character of this relationship that is service in complementarity (Asouzu, 2007a, p.267).

This means that phenomena, existents or entities in nature, whether called humans or non-humans, are merely missing links and fragments of the whole (nature) and are never complete independently in themselves. In the context of Ibuanyidanda ontological framework, “to be is to be in mutual complementary relationship (ka so mu adina) and its negation is to be alone (ka so mu di)... In this sense... anything that exists serves a missing link of reality” (Asouzu, 2011, p.42). Beingness or existence is relational, mutual and complementary – because beings present themselves as fragments, missing links and essential aspects of the whole towards the joy of being. This means that “no missing links can uphold its being solely on its own. It can do this only with reference to the whole and in complementary harmony with other missing links” (Asouzu, 2007a, p.268). Within the context of the missing link humans and non-human entities can only attain harmony and bliss when they exist in mutual complementation to one another. This intimate striving towards otherness, the multidimensionality for the service of all missing links of reality leads to the joy of being (jide k’ iji). The striving to otherness brings about state of harmony (eziokwu) for the individual and the community of beings. Asouzu notes that at that moment personal and social faculty of harmonisation and equilibration (obi/mmuo eziokwu) is fully in action, the minds and energies in the positive exploration of reality in its richness and multidimensionality find expression in concrete forms, including that of good neighbourliness, good governance, social cooperation towards making the world a better place for all (Asouzu, 2007a). Ibuanyidanda is a fundamental principle of integration and transformation which impresses on all humans to gear towards the joy of being (i.e. harmonisation). Ibuanyidanda emphasizes mutual interdependence of all missing links in complementary interrelatedness. It does not superintend the human existence over that of the non-human; rather it sees both human and non-human as phenomena that complement each other in the overall interest of both.

It is important to note that the ontological framework of Ibuanyidanda is not anthropocentric. For Asouzu, anthropocentric ontology is a setback in the striving towards the joy of being. In agreement with Coreth, he argues that “an ontology that places the human person at the centre has all the weakness of a metaphysics that forecloses inroad to the notion of being;” and as such has all it takes to distort reality by misleading the human to believe that he is over and above every other reality or phenomenon (Asouzu, 2015, p.45). This is the moment Ibuanyidanda climbs into ecocentric, being-centred, nature-centred relations – in which neither human nor non-human, neither biotic nor abiotic entity is the centre of essence; rather Ibuanyidanda transforms the entities to merely aspects of the whole and upholds the whole which is the mutual complementary relation of the aspects as a whole. Asouzu is very emphatic on the rejection of anthropocentrism.

Since for Heidegger the concealment of being is disclosed in Dasein (human being), this type of disclosure has all it takes to conceal being all the more (Asouzu, 2015, p.45)

Within the framework of Ibuanyidanda, the human person is just one of many expressions of being hence he cannot absolutize his existence as that which other entities must subject and serve. This definitely put man as a plain member of the environment. His obligation therefore is to work in service of the environment by mutual complementation. It is evident by concept of being as *ka sọ mụ adina*, that man is a being-with-others in the universe of beings – otherness in this sense is not limited to fellow humans but includes all non-humans, animate and inanimate, to the least possibility of its expression. By that fact, the human person is under obligation to work towards the betterment of the whole being (nature) by accommodating and considering the non-human entities as significant parties to the whole.

As I argued, a correct notion of being is essential to understanding the relationship between man and the environment. Ibuanyidanda reveals a notion of being as *ka sọ mụ adina*.

Hence, to be entails all the processes needed to be in mutual complementary relationship, failing which we cannot say that a person exist... Where he claims to exist but does not take the measures to secure his existence in the sense of defining himself within the framework of all missing links, his action is bound to boomerang ... A typical example is when a person claims to exist but always seek his interests at the exclusion of the interest of others. Naturally, this person would not get his interests, unless he sees the need to recognize the interests of others whose existence enter into the definition of his own. (Asouzu, 2007b, p.229-230)

Already, I have analyzed and articulated how the existence of non-humans enters into the definition of the human person. If human beings fail to significantly consider the mutual complementary mode of his being in relation to non-human beings, their failure to do so will boomerang and consume their interests. In recognition of this fact, African environmental ethics urges the attitude of accommodation, cooperation, mutual complementarity and otherness in relation to the non-human entities in the environment.

## **The Logical Foundation of the African Worldview**

As we have seen in this analysis an understanding of African environmental ethics is embedded in the African worldview. It is the African worldview that defines the methodology of African environmental ethics and shapes its findings and postulates. In fact, by definition, African environmental ethics is based on the African worldview. The African worldview is simply the logical wiring of the epistemic faculty of the African mind – or what Kant describes as “categories of the mind” – which organizes reality for intelligible comprehension. Uduma Uduma (2015) affirms that “human experiences are organized, analyzed and sustained by certain intrinsic constitutive element” (p.96).

However, contrary to Uduma (2015) who argues that “logic as a discipline is concern with the structures or principles of thought [and that] these structures of thought have no continental boundaries;” (p.92) I argue that categories of mind or thought are not exactly the same across the entire human race rather spatial proximity of other minds can play significant role in how reality is interpreted within an ecosystem.

Logic, in the formal sense, is a method for comprehending the underlying structure of reasoning; it a cognitive tool used for the purpose organizing reality and rendering it intelligible so that people can make sense of it. Logic also establishes the general laws governing concepts and conceptions, including the principle that governs the relationship between man and the environment. Logic is a methodological tool use to evaluate or test the coherency of a thought process, argument, system, method, science, theory, or study. Generally, logic is defined as a principle of correct reasoning; but logic goes beyond merely guiding us in the art of reasoning to establish concepts and affirm their facts. By this definition, logic cannot be seen as an exercise that is concern merely with correctness of argumentations, as Uduma wants us to believe, but also as a locomotion that is concerned with the nature of logic itself in terms of its exhaustibility and probability as a tool for organizing experience in their diversities.

It is important to note that formal logic is not a given ex nihilo rather it arose from informal logic, the worldview as it were, and refined in the “predicate ontology”.<sup>4</sup> Hence, Western logic always bears the ontological marking of Aristotelian and Parmenidian dichotomic/bifurcating metaphysics. Since logic is the offshoot of the predicate ontology, it cannot claim to be exhaustible in its application to alien ontologies. Chris Ijiomah (2005) notes that Western and African philosophies have opposing roots. It was the recognition of this fact that led African logicians to discover the non-exhaustibility logic, therefore inadequacy of Aristotelian-Western logic, in analyzing and discovering the meanings of African concepts. This understanding also explains why African environmental ethics, which is invariably based on African worldview and concepts, cannot be fully meaningful within the framework of Western logic which is laced with alien and contradicting predicate ontology. This is to say that African environmental ethics can only be fully understood, hence meaningful, within the context of African logic whose predicate ontology is mutual complementarity.

African logic has been developed over the years under different nomenclatures, including Affective Logic and Harmonious Monism. However, at present, one of the most comprehensive, distinctive, careful mapping and systematization of African logic is that called Ezumezu Logic. It was developed by Jonathan Chimakonam as intergrativist logic. Ezumezu logic is a methodology that tests the criterion by which beings and their beingness are known. It seeks to define and evaluate the coherency of an ontological system by which beings and their beingness are known. It does this by examining the correctness of the propositions employed to understand being and the validity of the inferences drawn from such propositions.

To achieve this, Ezumezu logic sets out certain principles and criteria available within the deductive system of African thought. In other words, Ezumezu logic does not trans-impose Western categories and axioms on the African philosophical system in order to draw out criteria and principles by which the coherency and truth-value of African concepts and conceptions are known. Ijiomah (2005) rightly observes that:

It is the logic of a people and their presupposition that guide their philosophy and practical life and therefore where two cultures have different logics and propositions, a raw imposition of either of the culture philosophy on the other may leads to complications and invariably to frustration (p.14).

But where the logic has to borrow a leaf from another system it has to do it in such a way that the borrowed concept is modified to adapt to and complement the opposing axiomatic system. Kwame Nkrumah (1964) avers that every philosophy must be understood within the context of its intellectual history and social milieu in which it was born. This is instructive because every philosophy is time-bound and culture specific, by implication its logic too is culture-bound. Chimakonam (2015a) argues that “the type of logic mechanized in any tradition eventually is a confirmation of the structure of thought system that inheres in that culture” (p.116). He later traced, using his theory of ontological quadrant, inspired by August Comte, the various stages logic evolved: from culture and worldview through metaphysics and pure ontology to formal logic.

Chimakonam (2015) has set five principles which serve to characterize Ezumezu logic as the defining foundation for African ontology and its extension in African environmental ethics. The first principle is “Trivalence” which serves as the tripod of African ontology as a three-valued system. The second principle is “Sub-Contrary Valuations” which treats the two standard values in logic as sub-contraries rather than as contradictories as it is conceptualized in Western logic. This principle does not admit two diametrically opposed system like either-or where one must be true rather the two standard sub-contraries provide a third value where both might hold. The second principle serves the principle of live-and-let-live, of which there is neither being nor non-being but only mutual valences.

The third principle is “The Modes” which serve to protect the two standard values of classical logic from being consumed by the emergence of the third value. To achieve this, the principle serves as a switch-board upon which concepts make different meanings, or by which the two standard values can both be true and false, without contradicting the three classical laws of thought. To account for this, Ezumezu logic creates two modes of understanding being, namely: contextual and complementary modes.



Individually, the two standard values, called Ezu (true) and Izu (false), are treated as fragments, missing links of the whole but joined together as *ezumezu* they become complementary. In the context of this work, the modes allow the human and the non-human individual identities at the contextual stage (i.e., social axiom) and to participate in the universal environment as co-members even though with different identities.

The fourth is the “Context Principle” which allow concepts to shed their meanings and acquire new ones from context to context. This principle does not allow a given concept – such as human or non-human, being or non-being – to become absolutized. The principle also justifies mode switching of different concepts. The fifth principle is “The Third Value” which allows two seemingly opposing concepts to converge and complement without tension or loss of individual meaning – like allowing humans and non-humans to converge and complement and be complemented without disequilibrium or loss of individual identities. In Igbo “the third value” is expressed as *egbe bere ugo bere nke si ibe ya ebena nku kwa ya*, let the kite perch let the eagle perch whichever denies the other the same rights let its wing break. This invariably empties Ezumezu logic into the doctrine of live and let live.

Let me summarize how Ezumezu logic dovetails into the complementary ontology of Ibuanyidanda vis-à-vis African environmental ethics. As I noted earlier, logic is simply a principle of intelligibility; a method of testing the coherency of a system of thought or worldview. Ezumezu logic operates on the criterion of complementarity based on mode switching. It recognizes the validity of entities on complementary mode. In other words, it provides for the soundness, correctness and validity of complementarity as an ontological system. Ezumezu logic defines the African worldview as complementary and conciliatory rather than oppositionary. It tells us that within the African worldview concepts and entities cannot be absolutized. It affirms that the African worldview is “both-and” rather than “either-or”. That is to say, “if one holds, the other might still hold hence two seemingly opposing variables [concepts] can both hold” (Chimakonam, 2015, p.117).

The doctrine of “both-and” in Ezumezu logic clearly dovetails into the Ibuanyidanda complementary ontology and the ethic of live-and-let-live. It summarizes the African worldview as accommodative, conciliatory and cooperative. Moreover, Ezumezu logic provides a framework that justifies the African worldview of complementarity and live-and-let-live that two seemingly oppositionary existential categories can converge and complement without tension or loss of individual identities. In a nutshell, Ezumezu logic does not only serve as the structure of African worldview but equally serves as the criteria by which the soundness, correctness and validity of African environmental ethics theories can be tested.

## Conclusion

In concluding this study, it is important to note that African environmental ethics is a developing field of discourse in the global system of environmental ethics. It is an ethical system that is based on African concept of being. African environmental ethics is defined as the study of the principle governing the relationship between man and the environment based on African worldview by analyzing the basic concepts of man and environment from African perspectives, and examining the approaches by which they are known. From this study, we have seen a definition of man, based on African ontology, as *ka sọ mụ adina*. By the fact of *ka sọ mụ adina* man invariably exist as being-with-others. By that relation as being-with-others, man attitude to “others” must be accommodative.

From the study, we have seen that the environment is an interconnected and interrelated system where every entity that constitutes it – human and non-human, biotic and abiotic – is merely missing links. The concept of missing links impresses upon every variety of existence that its being is complementary; hence, by that fact, the being of one is necessarily complemented in the other, which means that every existent is mutually indispensable in the environment. This viewpoint invariably dismisses the position of Ogungbemi (and others in his line of thought) that the being of man is redundant within the context of other beings in the environment (see Ogungbemi 1994).

In this study, I have also shown how the system of African logic provides a reference frame by which the African ontological conception of beings in the environment is tested for its logical soundness, correctness and validity. The Ezumezu logic indicates how humans can complement non-humans without tensions or loss of individual identities. It also provide the criterion which proves that it is possible for humans and non-humans to mutually complement, provided they share some traits in common. I have shown in this study, how humans and non-humans are mutually interconnected, interrelated and interdependent.

## Notes

1. With the development of well systematized African ontology as mapped out in the Ibanyidanda and Njikoka systems, and a deliberate development of formal African logic; it is now possible for applied African philosophy and African philosophy of other disciplines to emerge.
2. The international declaration that hunger kills 12 persons every minute in Africa has been controverted by some analysts. See and compare the following: Jay Naidoo (2013, May 28), “When will Africa be led by the needs of its people?”, *Daily Maverick*. <http://www.dailymaverick.co.za/opinionista/2013-05-28-when-will-africa-be-led-by-the-needs-of-its-people/#.VbffsfmarK-> Retrieved 28/07/15. Sintha Chiumia (2013, November 20), “Africa Check: Statistics on malnutrition, starvation and deaths from hunger in Africa exaggerated”, *Daily Maverick*. <http://www.dailymaverick.co.za/article/2013-11-20-africa-check-statistics-on-malnutrition-starvation-and-deaths-from-hunger-in-africa-exaggerated/#.VbfZivmarK->. Retrieved 28/07/15.
3. This study entitled “Pentecostalism and its Encounters with Nature in West and Central Africa” was originally accepted for presentation in June 2016 at Uppsala, Sweden, but I could not travel for the conference due to lack of funds. However, the paper has been scheduled for presentation at Uyo, Nigeria, between 21<sup>st</sup> and 24<sup>th</sup> November 2016 at African Environmental Ethics and Values Conference.
4. By “Predicate Ontology” I mean (relying on the theory of ontological quadrant) the cultural ontology from which formal logic evolves. In other words, the cultural history and social milieu from which philosophy is evolved.

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