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## Research Article

### An African Epistemological Framework for Environmental Philosophy through Complementarity Epistemic Reflection (CER)

#### Afrykańskie ramy epistemologiczne dla filozofii środowiskowej w perspektywie komplementarnej refleksji epistemicznej (CER)

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#### Abstract

This paper argues for an environmental philosophy grounded in African epistemology and a holistic ontology that integrates human and natural environments. It critiques the tendency of environmental philosophy to rely predominantly on ethical frameworks and proposes an epistemic approach as a necessary complement. Using a qualitative and conceptual method, the article examines Yoruba and Igbo thought in order to reconstruct forms of ontological and relational holism present in Indigenous African societies. Particular attention is given to the idea of Complementarity Epistemic Reflection (CER), developed from the philosophies of Sophie Oluwole and Innocent Asouzu, as a framework for understanding the interdependence of humans, nature, and knowledge. The paper argues that African epistemology offers important resources for rethinking environmental philosophy in the Anthropocene by challenging dualism, strengthening human–nature relatedness, and supporting a more comprehensive and pragmatic approach to environmental crises.

#### Keywords

African epistemology, environmental philosophy, Complementarity Epistemic Reflection, Yoruba, Igbo, Anthropocene, holism, human-nature relationship

#### Streszczenie

Artykuł ten przedstawia argumentację na rzecz filozofii środowiskowej zakorzenionej w afrykańskiej epistemologii oraz holistycznej ontologii integrującej środowisko ludzkie i naturalne. Autor krytycznie odnosi się do tendencji w filozofii środowiskowej polegającej na opieraniu się przede wszystkim na ramach etycznych i proponuje, jako niezbędne uzupełnienie, podejście epistemiczne. Wykorzystując metodę

jakościową i analizę konceptualną, artykuł bada myśl Jorubów i Igbo w celu rekonstrukcji form holizmu ontologicznego i relacyjnego obecnych w rdzennych społeczeństwach afrykańskich. Szczególną uwagę poświęcono koncepcji komplementarnej refleksji epistemicznej (Complementarity Epistemic Reflection, CER), rozwiniętej na podstawie filozofii Sophie Oluwole i Innocenta Asouzu i służącej zrozumieniu współzależności między człowiekiem, naturą i wiedzą. W artykule argumentuje się, że ujęcie filozofii środowiskowej przez pryzmat afrykańskiej epistemologii pozwala na jej ponowne przemyślenie poprzez kwestionowanie dualizmu, wzmacnianie relacyjności człowieka i natury oraz wspieranie bardziej całościowego i pragmatycznego podejścia do kryzysów środowiskowych.

### **Słowa kluczowe**

Afrykańska epistemologia, filozofia środowiska, komplementarna refleksja epistemiczna, Joruba, Igbo, antropocen, holizm, relacja człowiek-natura

### **Introduction**

In contemporary Africa, according to Munyaradzi Maware (2014, xiv), the discussion of the environmental crisis is high on the agenda. This development is indeed due to the unpleasant results of climate change; therefore, many nations are embarking on a “new green economy” (Jackson and Victor 2013)—an economy where environmental value forms the ideological core. It suffices to emphasise that Africa, a region disproportionately affected by environmental hazards, urgently needs to find sustainable solutions to have a stronger voice in combating the ongoing environmental crisis (Kelbessa 2014, 4).

This paper acknowledges the quest for an African orientation in environmental philosophy in light of the intellectual task raised by Philomena Ojomo (2010) and (2011). Ojomo argues that the intellectual task for contemporary African scholars is to construct an adequate environmental philosophy of African origin. Ojomo noted that the “construction of an environmental (philosophy)” that is African is “most fundamental to contemporary African philosophers because of the African environmental experiences (Ojomo 2010, 62). Thus, this paper locates the construction of an African environmental philosophy that will be adequate for contemporary environmental needs within the purview of African epistemology.

By using the term “African epistemology”, the paper relies on the method in which essential thoughts are abstracted from Africans’ everyday practices to articulate concepts and ideas. Therefore, identifying any view, idea, or concept as “African” relies on the common strands of thought found across many diverse cultures on the African continent (Metz 2012, 389). This implies that the term “African” can be used generically because of commonalities found among various African cultures that are not seen elsewhere. This method also enables the identification of African epistemic worldviews common to most African cultures and

informed by a strand of intellectual thought common to the African cultural heritage. However, an objection could be raised against homogenising a concept or practice for Africa through observable facts from some sections of the continent as insufficient for characterising the entire continent. To such a query, it should be noted that geographical labels, be they Asian, Western, or African, are “not exclusive to, exhaustive of, or fixed in the relevant *locale*” (Metz 2015, 1176). Applying a term to a geographical location is a means of identifying features that persist over an extended period and are recurrent in a locale, such that these features are less prevalent elsewhere. Thus, using the term “African” as a prefix—[African (prefix) Epistemology (suffix)]—to any concept in this paper, despite the limitation of examining all cultures or segments on the continent, serves as an identification function conventional to studies involving geographical labels or classifications.

This paper presents African Epistemology (AE) as an alternative epistemic framework that can enhance environmental understanding and inform attitudes, methods of usage, and valuation of the environment. The epistemological approach, as shown below, appears conducive to establishing a contemporary African environmental philosophy that is consistent with known African intellectual heritage. AE provides a foundation for a mentality, relationship, and ethics that do not endanger nature but view it and the entire environment—including human beings—as harmonious parts of the organism called “Earth”. This paper aims to highlight that an African environmental approach, rooted in the normative and descriptive aspects of Indigenous African knowledge systems, offers a more viable reconstruction of environmental philosophy that aligns with the concept of “African ontology” (Tangwa 2004). In addition, this paper shows that an explication of the Indigenous African epistemic worldview could provide grounds for the knowledge needed to entrench reason, experience, and will for the practicability of the idea of [an] ethic of nature relatedness” (Ogungbemi 2001, 268). However, the author does not claim that the epistemic approach is a complete framework for environmental philosophy. Rather, the epistemic framework calls for further engagement and enrichment of the African orientation in environmental philosophy.

To achieve this objective, this paper explores the African orientation in environmental philosophy and the related intellectual postulations that arise from various philosophical engagements with the ongoing challenges of the environmental crisis. The paper then raises the question of overreliance on ethics as the essential framework for engaging with environmentalism scholarship. The query of over-reliance on ethics is pivotal to this study, as it underscores the call for an alternative framework to address the ensuing

environmental challenges emanating from the human-nature relationship. Thereafter, the paper enunciates the theoretical *cum* practical relevance of epistemology for environmentalism. The aim is to indicate how the complementarity framework for epistemic thought processes fits readily with engagement with the epochal challenge of an environmental crisis. In the final section, the paper attempts to address some hypothetical dealings with probable questions about the complementarity reflections of African environmental philosophy and its epistemic orientation. The epistemic orientation in environmental philosophy is argued for and anchored on both Innocent Asouzu's complementary reflection and Sophie Oluwole's binary complementarity. The term "complementarity epistemic reflection" (CER) is introduced to represent these two ideas.

### **1. The Environmental Crisis and the African Perspective on its Resolution**

African Environmental Philosophy (AEP) is an intellectual exploration of the relationship between African philosophy and environmentalism. It applies the fundamental principles and theories of philosophy to the human-nature relationship based on African worldviews. Yes, environmental problems, ranging from resource depletion, increasing desertification, soil erosion, ozone layer depletion, declining biodiversity in terrestrial and aquatic spaces, and global warming, are of global concern, as they affect everyone, regardless of place and time. However, as noted by Chigbo Joseph Ekwealo, "responses, reactions, and attitudes [to ecological problems] are affected or influenced by people's special ideologies, philosophies, and worldviews" (2011, 8). Despite the universal nature of the environmental crisis, some specificities cause it to feel more particular in some parts of the world than in others. For instance, Bunyan Bryant (2011) expressed the view that the global environmental crisis has a disproportionate impact on countries of colour and low income, especially in Africa and Asia.

Bryant's view explains the peculiarities of the African environmental crisis. The peculiarity clause in existential encounters with environmental crises from different parts of the world calls for philosophical diversities that are cognisant of the environmental challenges' peculiarity inherent in each culture (Ifeakor 2019, 180). This further justifies the pursuit of a solution that acknowledges the distinctive perspectives of African ideologies and philosophies on these matters. The emphasis on African environmental philosophy is not only because of Africa's integration into the global community, but primarily because Africa possesses indigenous worldviews which hold relevance when addressing the environmental crisis. Thus, it becomes

clear that African philosophers must employ all their intellectual tools in a bid to combat ignorance and poverty and critically deal with the survival and conservation problem, even in the battle against the twin challenges of environmental crisis and poverty (Chimakonam 2018).

Various scholars have advanced ideas regarding the philosophical discourse on the environmental crisis from an African perspective. This attempt was pioneered by Odera Oruka and Calestous Juma's "Ecophilosophy and the Parental Earth Ethics: On the Complex Web of Being" 1994; Kwasi Wiredu's "Philosophy, Humankind and the Environment" (1994); Segun Ogungbemi in his "An African Perspective on the Environmental Crisis" (2001); and Godfrey Tangwa's "Some African Reflections on Biomedical and Environmental Ethics" (2004). Others in the field include Workineh Kelbessa (2005, 17-34; 2014, 31-61; 2018), Munyaradzi Murove (2004, 195-215), Thaddeus Metz (2010; 2013; 2017b), Philomena Ojomo (2010, 43-63; 2011), Kevin Behrens (2010, 465-84; 2014, 63-82), Chigbo Joseph Ekwealo (2011), Munamoto Chemhuru (2016, 41-51; 2017b), Roland Olufemi Badru (2018), and Olusegun Steven Samuel and Ademola Kazeem Fayemi (2019; 2020), to mention but a few. In this study, their ideas are explored and advanced; their overreliance on ethics<sup>1</sup> is argued, showing their neglect or under-exploration of the African epistemic process in environmental worldviews.

A common trend in most scholars' contributions to environmental philosophy from an African perspective is that their ideas are mainly anchored in Africans' ethical reflections. Those who do not employ ethics directly explicate the ontological understanding of African society, especially the idea of the interrelations of all beings prevalent in African metaphysics. Such an approach either examines the nature of African society and its impact on human-nature relationships or explores the ontological foundations of this African communalistic worldview. There is a part-whole conceptual relationship between environmental ethics and environmental philosophy (Oyekunle 2021). Environmental philosophy as a field of study can be sub-divided into radical ecophilosophy, environmental ethics, and anthropocentric reformism (Zimmerman

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<sup>1</sup> To over rely on ethics in the discourse of environmentalism is to undermine the magnitude and even recalcitrant nature of the environmental crisis challenges in our contemporary world. As noted by Michael Zimmermann, the idea by some scholars to equate environmental philosophy to environmental ethics is (conceptually) misleading (1998; 1968, viii-ix). The pitfalls of an environmentalism that over-rely on ethics could also be viewed in the words of Mark Colyvan. He notes that the central focus of environmental ethics ought to be that of how to implement ethical environmental strategies in the face of uncertainty — uncertainty about how the world is and about the relevant values. But the proper representation of the uncertainties in question is the business of epistemology, and the proper framework for making the decisions in question is the business of decision theory (Colyvan 2006, 98).

1998). As such, environmental ethics is one component of environmental philosophy, and the latter exerts influence on a large range of disciplines, including environmental law, environmental sociology, eco-theology, ecological economics, ecology, and environmental geography (Callicott 1984). This indicates that a vast array of issues to address with philosophical tools in environmentalism, although bordering on the ethical purview, extends beyond merely using ethics as a framework. Therefore, this paper argues that an overreliance on ethics in various philosophical orientations within environmentalism (both in African studies and beyond) is inadequate for addressing environmental problems. In other words, although ethics may be necessary for discussions in environmental philosophy, it may not be sufficient on its own to address the needs of environmentalism.

In addition, employing the African ontological view in some studies in African orientation in environmental philosophy, particularly in the works of Behrens (2010; 2012; 2014) and Chemhuru (2016; 2017a; 2017b, and 2019b) shows either a misrepresentation or undermining of the intellectual utility of African ontology. This is because these studies overlook the fact that a comprehensive understanding of African ontological viewpoints necessitates the appropriation of the African epistemic process (Ramosé 2002). Thus, not exploring the African epistemic process in their ontological-based account of AEP reveals an intellectual gap that demands urgent attention. To investigate the African understanding of the contemporary environmental crisis, researchers should focus on reconstructing the African orientation in environmental philosophy from an epistemological perspective.

Numerous studies on African perspectives in environmental philosophy have noted the need for epistemological considerations. Ekwealo (2011) implicitly stated the need for an epistemological dimension. He argued that the viability of AEP requires a coherent ethical framework, mostly accomplished through the consideration of environmental philosophy rooted in the ontology of complementary dualism. Furthermore, Badru (2018, 198-202) remarked that epistemological perspectives on AEP offer a coherent framework to advance sustainable environmental democracy. Arguing for the development of a functional environmental policy in Africa, Kelbessa (2018) calls for the imperative to pay attention to the epistemological dimensions of African intellectual thought to grasp attitudes, values, and emergent environmental concerns. However, these studies did not commit to exploring the epistemic outlook for environmentalism, thus creating an intellectual lacuna in African environmental philosophy. This author opines that the radical paradigm needed for a proper AEP is an environmental ethic borne out of the indigenous epistemic process of the Africans.

This paper argues, in accordance with Bryant (2011, 7), that “epistemology is a value-laden social construct” and asserts that epistemology provides the foundation for a culture’s worldview, which in turn determines the mental constructs people use to understand reality. This means that a culture’s epistemic orientation provides the foundation for its experience and understanding of reality. Epistemology is a theory about the how and what of human existential realities. It includes what it means to know, the justification of knowledge claims, the hows of knowledge acquisition, the determinants of the validity of knowledge, and the dissemination of knowledge claims. As such, African epistemology encapsulates the ideas that Africans envisioned regarding knowledge theory within their cultural context. African epistemology thus includes African conceptions about nature and knowledge theory, interrogating the process of knowledge acquisition, the justification of knowledge claims, and illuminating the socio-cultural utility of knowledge existence and the sustainability of social order.

However, this paper is not oblivious to other epistemic knowledge acquisition systems and justifying indigenous communities and cultural orientations outside Africa. Such recognition is based on the understanding that “there are different approaches and perspectives that cultures employ to understand the world around [them]” (Jimoh and Thomas 2015, 117). As argued by Jimoh (2018), an indigenous epistemic process is an appraisal of the rationality sense by which people make meaning of reality and foster harmonious interaction among themselves. This suggests that an indigenous epistemological system is a unique knowing process for a particular society. In the same vein, this study focuses on the indigenously African epistemic system and explicates the African epistemic process as an alternative framework for further developing an African orientation in environmental philosophy.

The African epistemic approach to the perennial challenge of environmentalism<sup>2</sup>, as will be explained below, serves dual purposes. On the one hand, the epistemic approach is a quest for theoretical and pragmatic decoloniality in Africa, highlighting the epistemic worldviews of Indigenous Africa that “were subverted and relegated by European imperialists” (Mawere 2014, ix). This represents a call for intellectual awareness for African scholars to do away with the “epistemicides” of the African knowledge system (Santos 2014). Conversely, the epistemic approach contributes to the existing literature in the underexplored area of African

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<sup>2</sup> By environmentalism we mean a logical concern for the state of the natural world in which all forms of life — including flora and fauna, inanimate objects and humans — exist and are interdependent (Oyekunle 2021). Thus, environmentalism is the intellectual foundation on which environmental concerns, problems, challenges, ideas, movements and discourse are developed.

orientation in environmental discourse, albeit from the perspective of African epistemology.

## 2. Beyond the Ethical Perspectives for Environmental Discourse

The environmental epistemological approach underscores a philosophical concern that goes beyond the normative ethical stance. This perspective rests on the argument that environmental philosophy encompasses a vast range of studies, with ethics being only one part of it. This aligns with Michael Zimmerman and J. Baird Callicott's argument that environmental ethics is one among various applied philosophies addressing environmental issues (1984). Thus, the part-whole relationship between environmental ethics and environmental philosophy highlights the problem of overreliance on ethics in the field. The argument here is that although ethics is necessary for environmental discourse, it lacks the sufficiency to address all concerns in environmental philosophy. To hold otherwise is to commit a "dangerous category mistake" (Colyvan 2006, 103). This paper does not argue for the removal or undermining of ethics in environmental philosophy. In contrast, this study expands the discussion on the philosophical orientation of environmentalism by advocating for an epistemic approach.

While environmental scholars such as Freya Mathews (2004; 2011) have argued for a metaphysical approach, others (Naess (1973); Fox (1989a; 1989b; 2006), affirming the "*beyond the ethical perspective*", have advocated a psychological or phenomenological stance on philosophical concerns for the environment. Other scholars along the "beyond the ethical perspective" line also opine for an epistemological approach to the environmental crisis question. These scholars include Cheney and Weston (1999), Preston (2003), Scarfe (2008), Kawall (2010), Oyekunle (2011; 2021), Bryant (2011) and Gordon, David and Krech III (2012). They submitted that philosophical concerns in environmentalism surpass the mere application of ethical theories and moral principles to environmental issues. They argue that while not divorcing ethics from environmental concerns, philosophical orientation in environmentalism requires the normative stance of epistemology.

One point underlying the various epistemological approaches to environmental discourse is the argument that the idea, attitude, or culture of using and misusing nature, often referred to as the "frontier mentality" (Mumford 2009), is built upon Western traditional epistemology. Thus, Oyekunle (2011, 23–48), agreeing with Scarfe (2008) that "epistemology is both descriptive and prescriptive", examines the foundation of the human-centred use of nature. It was argued therein that Western traditional epistemology provides the framework through which humans can experience reality as an independent existence concerning an

inconsequential, mechanistic world.

The plausibility of adopting an epistemological perspective on environmental crises lies in the need to examine and redefine the foundational beliefs and attitudes that support a human-centred approach to using nature. This is in accord with Bryant (2011), who argues that epistemology as a value-laden social construct informs our pedagogy, scientific enquiry, and truth; and, by implication, our ethics, morality, and modality for adjudging right and wrong. Thus, discussing an African orientation in environmental philosophy entails possessing a conceptual understanding of the Indigenous epistemic order of the African system to engage with nature. This will enable us to arrive at a framework for an environmental philosophy that is both African in the making and global in practice. Hence, this paper's position is that African epistemology, in its configuration, is conducive to environmentalism discourse.

### **3. African Epistemology and its Potency for Environmentalism**

In this study, African epistemology is the study of the knowing process from an African perspective. This study examines how Africans come to know or claim to know that something is the case or not (Kaphagawani and Malherbe 2003). African epistemology is ontologically driven. At the root of the epistemic process of indigenous African thought is the unitary ontological conception of reality (Nkulu-N'Sengha 2005; Oluwole 2015). African ontology can be considered unitary because of the interconnectedness of the forces of existence as a single functional web (Tempels 1969). This basic assumption of a unified reality forms the operational framework for conceptualising African epistemology. Therefore, it is more effective to understand African epistemology in conjunction with African ontology than to separate them. Mogobe Ramose supports this point by suggesting that we should understand African ontology and epistemology as two facets of the same reality (2002).

Sophie Oluwole (2015, 131-145) also echoed this view in her comparative analysis of Socrates and Orunmila as two patrons of Classical Philosophy. She argued for the "binary complementarity"<sup>3</sup> (BC) conceptual framework as a viable ontological scheme that undergirds the Yorubas of the Western part of Nigeria in West Africa and, ditto, other Africans' intellectual thought processes. Such thought understands

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<sup>3</sup> Sophie Oluwole uses the term "Binary Complementarity" framework to explain predominant worldview in thought and philosophy of several African sub-cultures which understands reality as containing fundamental elements and principles, which sustains the universe are presented as pairs of interplaying complementary opposites (Oluwole 2015).

reality as containing unified fundamental elements and principles that are functional as pairs of interplaying, complementary parts. The Yoruba conception of reality is structured on the intuitive fundamental assumption that (1) it acknowledges the existence of two distinctive features of reality (i.e. matter/idea, physical/non-physical, material/immaterial, corporeal/incorporeal); (2) the two distinctive features of reality are inseparably interdependent; and (3) the two features of reality function in a complementary mode and not in opposition to one another. The complementarity stance of this intellectual thought posits an interrelated functionality, as well as an interdependency of various distinctive reality features. It could thus be deduced from the Yoruba intellectual thought processes that everything—living and non-living, human and more-than-human—however apparently independent, depends upon something or somebody else. In this context, interdependency operates as reciprocity, sustaining life within the framework of binary complementarity theory.

Enunciating the process formation of the Yoruba epistemic system, Oluwole argues that the BC is the logical and viable ontological scheme with which the Yoruba “formulate rational epistemic paradigms for understanding reality and give the explanatory stance for African epistemic worldviews as a rational and scientific system of thoughts” (2015, 146). For instance, the rational and explanatory perspective of the African epistemic system is evaluated based on how well it aligns with people’s fundamental assumptions about reality. It is grounded in the fundamental belief that reality is one and that everything is interconnected in a web of relationships. Thus, the process of justifying epistemic claims and their acquisition and dissemination requires complementary interconnectivity between the epistemic subject and object. This view resonates with Nkulu-N’Sengha (2005), who states that to understand African epistemology is to grasp the fundamental interconnectivity and complementarity between the varying elements and beings of existence. Indeed, to know is to grasp the interconnectedness of all things.

In presenting the Igbo view, Asouzu (2007) averred that the complementary framework is essential to comprehensively understand and explain systematic and scientific reality. Innocent Asouzu encapsulates the concept of complementarity within the African philosophical understanding of reality, drawing on the Igbo traditional intellectual heritage known as *Ibuanyidanda*. *Ibuanyidanda* is a concept that is structured on the traditional Igbo system of thought, where reality is explainable via the mutual interrelations of entities (Asouzu 2007, 2011). Inherent in the basic assumption of Africans’ reality are the methods and principles for coalescing the subject and object, the essential and accidental, the absolute and relative, the consequential and inconsequential, as well as the physical and spiritual into a system of mutually complementing units. For

clarity on the concept of *Ibuanyidanda*, Asouzu argues:

The concept of *Ibuanyidanda* draws its inspiration from the teachings of traditional Igbo philosophers on the complementary system of thoughts... *Danda* are ants that have the capacity, in mutual dependence and interdependence, to carry loads that appear bigger and heavier than themselves. What this implies is that they can surmount exceedingly difficult challenges when they are mutually dependent on each other in the complementation of their efforts. Hence, traditional Igbo philosophers insist that: *ibu anyi danda* (no task is insurmountable for *danda*). It is from this synthetic idea of “*ibu anyi danda*” that served a heuristic, pre-scientific function within the context of traditional Igbo experience that the synthetic-analytic concept “*Ibuanyidanda*” is derived through abstraction (2007, 11).

The idea of *Ibuanyidanda* is an example of a conceptual framework that produces epistemic postulations from African perspectives. *Ibuanyidanda's* philosophy encapsulates the complementarity relations of mutual dependence between the subject and object of epistemic reality.

Oluwole further enunciates the pragmatic stance of complementarity reflections in engendering the interconnectedness within which African epistemic worldviews operate. She argues that “development based on the African worldview of BC is what most scholars now see as the solution to the various forms of intellectual and social upheavals across the world” (2015, 181), by extension, the epochal challenge in environmentalism. Oluwole’s view explains that the conceptual analysis of knowledge is meaningless outside the African people’s unitary ontological worldview. In this unitary, ontologised epistemic thought, there is a fusion of the epistemic subject and the epistemic object. As noted by Jimoh and Thomas:

The epistemic subject, which experiences the epistemic object, and the epistemic object which is experienced, are joined together, such that the epistemic subject experiences the epistemic object in a sensuous, emotive, intuitive, and abstractive understanding (2015, 120).

Noted in the above is the term “epistemic” being used for both the subject and the object, as both are agents of epistemic reality in the parlance of Indigenous African epistemic thought. This illustrates the complementary nature of the African epistemic process. Knowledge is not solely a function of the subject or knower; rather, the subject and the object of knowledge play complementary roles in knowledge-making processes. The research paper thus opines that an epistemological view, as enunciated above, is one that assists to “know-*in* nature rather than know-*of* nature” (Bryant 2011, 26). As an epistemology that aids knowing-*in* nature, the Indigenous African epistemic worldview underscores an enlightenment to respect and revere nature and its laws. It also serves as a framework to reflect on or work out a sustainable attitude or ethical principle in the quest for survival and understanding reality.

In the light of the epistemic embeddedness of the Africans, a position readily adapted for environmental concerns is arrived at as we rid ourselves of the traditional bias in seeing humans as apart from nature, and the idea of humans being a part of nature is affirmed. Thus, from this perspective of indigenous African epistemic thought processes, a motivation to preserve the environment naturally emerges. Furthermore, the environmentalist urge to reach out and protect the environment becomes another way of reaching out to a part of ourselves. The African epistemic system operational within the complementarity reflection framework is poised for an environmental understanding of the mutual dependency among the different beings in the ecosphere. The complementarity reflection enriches the idea of the intrinsic connectivity of everything in existence from the African worldview and makes African epistemic thought fit for environmentalism engagements.

Indeed, the epistemic approach to African orientations in environmental philosophy offers a human reconceptualisation with the potential to significantly contribute to studies on human knowledge and the perceptual mode in the quest for a sound, harmonious, and symbiotic relationship between humans and the environment. Obtainable from this approach is the existence of a type of human-nature transaction thinking, which ensures that our understanding and perception of the world influences our relationships and interactions with nature. In other words, recognising ourselves as part of the entire nature-human system is directly related to how we interact with every other aspect of this system. When we see ourselves as eco-cognitive beings – beings who are cognitively grounded in the world wherein they are situated (Preston 2003) – the nature-human transaction becomes seamless, sustainable, and of high economic importance. With the African epistemic process operationality, the universe is perceived and conceived with a unitary lens that does not promote any form of dichotomisation and, as such, better enhances harmonious nature-human transactions.

### **3. Complementarity Epistemic Reflection (CER) for Environmentalism**

The idea of complementarity epistemic reflection stems from the works of Asouzu and Oluwole, specifically their theories of “complementary reflection” and “binary complementarity”, respectively<sup>4</sup>. Both

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<sup>4</sup> The idea of complementarity epistemic reflection (CER) is appropriated from the works of two revered scholars: Innocent Asouzu (2007; 2011) and Sophie Oluwole (2015). While acknowledging that a critical comparative analysis of these two scholars’ output is overdue, such intellectual engagement is not the focus of this study. The study however ideates Complementarity Epistemic Reflection (CER) via a process synthesis of both Asouzu and Oluwole’s ideas of Complementary reflection (2004; 2007; 2011) and Binary Complementarity (2015) respectively. It must be noted that the synthesis does not in any way suggest any form of inadequacy

scholars enunciated, with different terms, the veracity of the technicality of interconnected relations between various existing entities from an African worldview. Complementarity epistemic reflection (CER) is employed here to enunciate the process formation of the complementary relations that both Asouzu and Oluwole put forward. While not claiming to have engineered a new concept, CER is employed here to encapsulate the methods, systems, and thought processes of the complementary stance between various existential entities in the African grasp of reality, as argued by both Asouzu and Oluwole. CER is used to describe the state, quality, or level of the epistemic stance that ensues in the complementary process. As such, CER makes intelligible the perspective that the fusion of the subject and object of epistemic agencies could be done without distorting the existential status of each agent. The independent existence of the constituent entities of life is noticeable when considering their complementary positions as interrelated parts of a single web of reality. There is no possibility of detachment between the forces of existence. By extension, the epistemic subject integrates with the epistemic object and vice versa, implying that humans also integrate with nature.

Derivable from the above is the fact that the CER incorporates the idea of relationality, albeit from an epistemic perspective. Within this epistemic perspective, knowing is a relational act with universal phenomena. It is an act that encapsulates the connection between the subject of knowledge and the object of knowledge – the knower and the known. However, knowing is culture-dependent. Thus, within the African epistemological parlance, the epistemic relation carries an inclusionary stance. CER, thus, appears more plausible in dealing with the more-than-human part of nature in the relationality concern. This conclusion is because CER does not have or need the expansionary principles that are prevalent in other relationality perspectives in dealing with non-human nature within African intellectual thought (Behrens 2010; 2012; 2014; and Chemhuru 2016; 2017a; 2017b; 2019a). While the relationality framework fashioned after the Metzian Modal Relationalism (MR) (Metz 2007b; 2012; 2013; and 2017a) could be adjudged plausible in adjudicating communal relationships and interconnections among humans, the MR appears lacking as a viable framework for studies on the human-nature relationship (Samuel and Fayemi 2020). At best, the Metzian relationality framework appropriated for environmental discourse is best viewed as an expansionary principle, as it only permits, logically, the expansion of human ethical categories to the more-than-human nature (Oyekunle 2023).

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of either of Oluwole or Asouzu's theory. Rather it further strengthens the view that certain practices and ideas are common in the African ways of life (Behrens 2014; Metz 2007), thus enriching the idea of CER.

CER regards both the subject and object of epistemic experience as essential in the interconnectedness of the life web. The self or ego, engaged in theorising or experiencing reality, maintains an intimate connection to the world where the theory or experience unfolds. In other words, the unitary ontological worldview unites both the subject and the object. The epistemic implication of this is that knowledge claims justification in African wholistic and unified ontological thought presupposes the synergy between the subject and the object. In this epistemic order, neither the subject nor the object can singly be sufficient for the justification of knowledge claims.

It should be noted that, despite the apparent diversity of beings and entities in the universe, CER ensures the recognition of interrelationships and complementarities among them. Thus, human lives are perceived as inseparably bound to nature. Objectifying nature as an insignificant “other” is a fallacy according to the African epistemic perspective. Stated differently, AEP rejects the dichotomy of viewing nature solely for its instrumental value, as it does not support a mechanistic reality perception. This holistic recognition of matter and non-matter, physical and non-physical, body and mind, visible and invisible, is suitable for an eco-critical analysis of the human-nature relationship. The CER being argued for is suitable for the sustenance of harmonic relationships between the varying independent and yet interdependent beings/entities in society. This is because it allows each differing unit to hold on to its individuality – which is authenticated by its interrelationship with the others – and yet remain complementary to one another.

Regarding human-nature relationships, the CER enhances the ability and understanding of humans as one of the interrelating agents to be better positioned in making peace with nature. Living in peace with nature is essential to establishing a human-defining relationship with it. A human agent, who recognises the epistemic significance of “the other” parts of nature, of which he or she is just a part, will not ignore protecting nature but will see nature restoration as an essential action for solving the myriad of ecological crises of the world. Logically, the CER is also strengthened by the rational entailment of *logical subcontraries*<sup>5</sup> that the unitary ontological reality conception, and by extension, nature, carries. The complementarity reflection underlying the basic assumption to understand reality in African intellectual thought has been identified as analogous to logical subcontraries (Chimakonam 2019) and (Oyekunle 2021). The opinion here is that the logical theory of subcontraries explains the logical expression undergirding the epistemic process of Africans, as multiple

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<sup>5</sup> Subcontraries are logical relations, wherein two entities cannot both be false, although they may both be true (Copi 2014, 181).

features of reality are not seen as being in opposition. By a stance of application, the fusion of both the subject and object is required on the framework of CER to achieve knowledge. Thus, both the object and subject of knowledge are taken as essential for knowledge claims. By extension, the natural environment, which is the object of knowledge outside of the subject's (i.e., the human being's) internal faculties, is essential and necessary in the knowledge-making process.

Therefore, it can be argued that CER, as a viable framework, operationalises the African epistemic approach, transforming it into sustainable knowledge forms that address ongoing environmental challenges. The practicability crux of the African epistemic process regarding environmentalism is that individuals who possess knowledge about their environment are in a favourable position regarding the interaction between nature and humans. The epistemic embeddedness of their existential experiences would afford them the understanding and application of such knowledge towards the sustainable use of nature. The epistemic unification of object and subject, nature and humans, body and mind thus engenders a healthy concept of the human-nature relation.

Therefore, CER becomes apt for intergenerational ethical guidance and justice for interrogating the past, adjudicating and prescribing for future events and future generations. With the epistemic knowledge of one's place in society, humans are more equipped to live and act ethically in relational existence. This is because the African epistemic order provides a robust capturing of the human person as a part of the two features of reality, whose existence is authenticated and strengthened by its complementary relationship with other constituent members of the environment. Thus, a natural motivation to protect and live positively in a complementary manner with other independent members of the environment – humans, non-humans, and animate and inanimate objects – is sustained. Such motivation will not only enlarge the conservationist attitude but also engender practical and systematic policies to enhance environmental justice for the present and future generations of contemporary society.

## **Conclusion**

From the aforementioned, it was explained that it is less than adequate to treat environmental issues as predominantly ethical. As such, the main ethical approach not only undermines the enormity of the issue but also inhibits the realisation of desired results in the quest for a panacea to the perennial challenges of an environmental crisis. Even in its traditional attire, the African epistemological worldview supports

environmental discourse, as it does not assimilate the others (objects) or subsume them into the space or identity of the subject. This paper indeed holds that the CER for African orientation in environmental philosophy offers a reconceptualisation of humanity that has the potential to change human knowledge and modes of perception in the quest for a sound, harmonious and symbiotic interrelationship between humans and the environment. The applicability of the Indigenous African epistemic idea in the quest for environmental justice, ethics, and restoration becomes imperative. Thus, it provides a background for contemporary thinking on the dilemma of environmental challenges. Although one could argue that this epistemological perspective on the environment defies established traditional intellectual heritage, the present author is of the opinion that the world is ready and waiting for ideas to come along and encourage strong environmentalism as a way to protect something that is not only independent in its own right but also profoundly intermingled with us as humans – the environment. Indeed, African environmental epistemology is a step in such a direction.

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