

INDIGENOUS KNOWLEDGE AND AFRICA'S QUEST FOR SUSTAINABLE DEVELOPMENT

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***Abstract:** In Africa's quest for sustainable development, it is important to consider the various factors that make African societies unique and different from others. As a people with special interests, beliefs, and social and political organizations which are culturally transient, Africa cannot develop outside the scope of its cultural ties. Since the gap between indigenous or cultural knowledge and sustainable development is so closely knitted, no society can progress by neglecting its values and bonds. Every development comes with the need to improve the existing condition, and where there is an absolute lack of knowledge of the existing condition of things, every effort directed toward the development of such a society will inevitably fail because the system will only be working on a trial-and-error basis. Hence, Africa's sustainable development must be construed within the ambience of African society taking cognizance of her communal way of life. In this paper, therefore, we shall argue that the major problem for the technological, economic, social, and political backwardness of Africa lies in her attempt to attain sustainable development without recourse to its rich cultural knowledge. The paper adopts both the speculative and analytic methods of philosophical investigation to affirm the position that Africa must look inward in her quest to attain sustainable development.*

Key Words: Development, Indigenous Knowledge, Sustainable Development.

Introduction

Every philosophy depicts its socio-cultural origin and is therefore culturally biased. For instance, the postulation of Thales that water is the ultimate substance of the universe was an influence on his coastal environment. So also, the rise of German idealism, American Pragmatism and China's socialist ideology are pointers that philosophers often bring to the fore their indigenous, cultural, and ideological sentiments. In attempting to formulate a good philosophy of sustainable development for Africa, therefore, there is a need to bring into cognizance, the unique socio-cultural knowledge of the African people. An attempt to envisage that there is a universal development index is

merely a neo-colonial mentality which assumes that the standard of development of one society should constitute the paradigm for measuring another; however, there is evidence that such paradigms have failed to produce any meaningful result in Africa's quest for sustainable development.¹

The importance of indigenous knowledge to sustainable development cannot be under-emphasized. Accordingly, Kok points out that our "knowledge systems generally are systems through which people make sense and attach meaning to the world in which they live."² These views and perceptions originate within a specific community or culture and are handed down from generation to generation, resulting in personal experiences and wisdom being transferred to younger people.³ This same sentiment is shared by Bray and Els in their submission that these knowledge systems "reflect the dynamic way in which residents of a community come to understand themselves concerning their natural environment, and how they organize that knowledge of flora, fauna, cultural beliefs and history to enhance their lives."⁴

Africa is considered a failed continent characterized by underdevelopment and poverty. Often than necessary, most political and economic analysts of African extraction have always attributed this fate to colonialism. But the big question yet unanswered is the continued lack of developmental will after many years of liberation from colonization. Independent Africa still suffers from colonialism because of the copious implementation of western paradigms in pursuit of Africa's development and emancipation. However, these western paradigms have failed to set Africa on the right development track because its ideologies are alien to her unique socio-cultural worldview.

The people's worldview constitutes the first raw material for their development; and sustainable development is only possible when these

¹ S.O. Opafole, *The Idea of Development: A Philosophical Analysis* (Lagos: Samtech publications, 1997), 41-42.

² J. Kok, "Can Models for Knowledge Management be Successfully Implemented to Manage the Diversity of Indigenous Knowledge?" *South African Journal of Information Management* 7, no. 42 (2005): 84.

³ F. Ewane and S. Ajagbe "Indigenous Knowledge and the Development Debate in Africa," *International Journal of African Development* 5, no. 1 (2018), 98.

⁴ R. Bray and G. Els, "Unpacking 'Ethno-Finance.' An Introduction to Indigenous Financial Knowledge Systems," *South African Journal of Information Management* 9, no. 1 (2007), 67.

bodies of knowledge become the binoculars through which such society views its advancement be it in science, technology, politics, economy, arts and humanities. This is necessary because no society can grow above its worldview which often catalyzes her developmental ideology. Consequently, this paper advocates that Africa's quest for sustainable development depends, to a larger extent, on the integration of indigenous knowledge in her pursuit of sustainable development goals. It further defends the thesis that Africa's indigenous knowledge could as well serve as a model for the emergence of African modernity.

Indigenous Knowledge

Indigenous knowledge, also called traditional or local knowledge, is descriptive of the mass of knowledge skills that have been developed outside the formal educational society.⁵ However, indigenous knowledge has multifarious meanings and these meanings, as observed by Jimo vary because of factors such as differences in academic disciplines, social anthropology, and studies in sustainable development that investigate the knowledge practices which are often characterized as indigenous.⁶ This position is ascertained by the World Bank when the body noted that there is "no all-encompassing definition of indigenous knowledge systems."⁷ Konadu defines indigenous knowledge as the collective body of knowledge of how people respond to reality.⁸ Nevertheless, from a purely western perspective, indigenous knowledge is derogatorily associated with primitivity, wildness and naturalness.⁹ But Flavier believes that indigenous knowledge is the information base for a society, which facilitates

⁵ Indigenous Peoples and Sustainable Development, "Roundtable Discussion Paper," The Twenty-Fifth Anniversary Session of IFAD's Governing Council 2003, 126; <https://www.askecdev.ca/directory/roundtable-discussion-paper-twenty-fifth-anniversary-session-ifad's-governing-council>

⁶ A. Jimoh, "Reconstructing a Fractured Indigenous Knowledge System," *Synthesis Philosophica* 68, no. 1 (2018), 5-22.

⁷ World Bank, *Indigenous Knowledge for Development: A Framework for Action* (Washington, D. C.: The World Bank, 1998).

⁸ K. Konadu, *Indigenous Medicine and Knowledge and Technique* (New York: Routledge, 2007), 109.

⁹ G. J. Dei, "Reflections on African Development: Situating Indigeneity and Indigenous Knowledge's," in *Indigenous Discourses on Knowledge and Development in Africa*, ed. E. Shiza and A. A. Abdi (London: Routledge, 2014), 15-30.

communication and decision-making. He describes these information systems as dynamic and as continually influenced by internal creativity and experimentation as well as by contact with external systems.¹⁰

Development

The concept of development has been variously defined by scholars. However, Rabie thinks that development is an economic concept that has positive connotations; it involves the application of certain economic and technical measures to utilize available resources to instigate economic growth and improve people's quality of life. In this paper, we shall employ the term in a contemporary sense.¹¹ According to this contemporary sense, "development is a process whose output aims to improve the quality of life and increase the self-sufficient capacity of economies that are technically more complex and depend on global integration."¹² Development could also be defined as "an evolutionary process in which the human capacity increases in terms of initiating new structures, coping with problems, adapting to continuous change, and strive purposefully and creatively to attain new goals."¹³ According to Reyes, development is understood as a social condition within a nation, in which the needs of its population are satisfied by the rational and sustainable use of natural resources and systems.¹⁴ The fundamental purpose of this process, as identified by Tangi, is the creation of a stimulating environment in which people will enjoy and have a long, healthy and creative life.¹⁵

Sustainable Development

Contextually, we shall simply adopt the meaning of sustainable development as "development that can be continued either indefinitely

¹⁰ J. M. Flavier, "The Regional Program for the Promotion of Indigenous Knowledge in Asia," in *The Cultural Dimension of Development: Indigenous Knowledge Systems*, ed. L. J. Slikkerveer, D. M. Warren, D. Brokensha, and W. Dechering (London: Intermediate Technology Publication 1995), 497-487.

¹¹ M. Rabie, *A Theory of Sustainable Sociocultural and Economic Development* (New York: Palgrave Macmillan, 2006), 78.

¹² J. Remenyi, "What is Development?" In *Key Issues in Development*, ed. D. Kingsbury, J. Remenyi, J. McKay and J. Hunt (New York: Palgrave Macmillan, 2004), 22-44.

¹³ R. Peet, *Theories of Development* (New York: Guilford Press, 1999), 83.

¹⁴ G. Reyes, "Four Main Theories of Development: Modernization, Dependency, World-System, and Globalization," *Nómadas* 4, no. 2 (2001), 1-12.

¹⁵ S. Tangi, *Introduction to Development Studies* (2005), 23; https://www.academia.edu/1743723/Introduction_to_Development_Studies

or for the given period.¹⁶ The concept is a combination of two key-words, sustainability, and development. As pointed out by Klarin, sustainable development is based on the concept of development (socio-economic development in line with ecological constraints), the concept of needs (redistribution of resources to ensure the quality of life for all) and the concept of future generations (the possibility of long-term usage of resources to ensure the necessary quality of life for future generations).¹⁷ As a visionary and forward-looking development paradigm, sustainable development emphasizes a positive transformation trajectory anchored essentially on social, economic and environmental factors.¹⁸

Africa's Indigenous Knowledge and Sustainable Development

One misconception held by most African development experts is the imagination that indigenous knowledge cannot act as a catalyst for Sustainable development, therefore, development can only be possible through the adoption of western knowledge. The distinction between western knowledge systems and indigenous knowledge systems of development has resulted in a binary debate of knowledge which aims at debasing one to the detriment of the other. Consequently, whereas western knowledge systems are part of the whole notion of modernity, indigenous knowledge is conceived as part of a residual, traditional and backward way of life, a view which may be reinforced by the concentration of work on indigenous knowledge on people in low- and middle-income countries.¹⁹ From this distinction, Escobar notes with disappointment that “development has relied exclusively on one knowledge system, namely, the modern Western one.”²⁰ He further adds that “The dominance of this knowledge system has dictated the marginalization and disqualification of non-Western knowledge systems.”²¹ Echoing their disappointment with this trend

¹⁶ J. Mensah, “Sustainable Development: Meaning, History, Principles, Pillars, and Implications for Human Action: Literature Review,” *Cogent Social Sciences* 5 (2019), 52.

¹⁷ T. Klarin, “The Concept of Sustainable Development: From its Beginning to the Contemporary Issues,” *Zagreb International Review of Economics & Business* 21, no. 1 (2018): 67-94.

¹⁸ Mensah, “Sustainable Development,” 13.

¹⁹ J. Briggs, “The Use of Indigenous Knowledge in Development: Problems and Challenges,” *Progress in Development Studies* 5, no. 2 (2005): 99-144.

²⁰ A. Escobar, *Encountering Development: The Making and Unmaking of the Third World* (Princeton NJ: Princeton University Press, 1995), 45.

²¹ Escobar, *Encountering Development*, 45.

of events where indigenous knowledge is completely overlooked in the formulation of development policies, the Brundtland Commission (WCED) states:

Some traditional lifestyles are threatened with virtual extinction by insensitive development over which the indigenous people have no participation. Their traditional rights should be recognized, and they should be given a more decisive voice in formulating policies about resource development in their areas.²²

From the above observation by both Briggs, Escobar and even the Brundtland Commission submission, Ellen and Harris point out that the term ‘indigenous’ almost invites an oppositional ‘us and them’ scenario between the two knowledge systems.²³ However, The World Bank identifies three roles of indigenous knowledge which may be observed within the process of sustainable development: first is the local community level, where the bearers of such knowledge live and work; second is the various development agents such as governments, donors, local leaders and private sector initiatives.²⁴ These agents recognize indigenous knowledge, value it and appreciate it in their interaction with the local communities.²⁵ The third is the global knowledge claim which seeks to ensure that indigenous knowledge is integrated fully into the global system of knowledge because of its contextual value and relevance.²⁶ Accordingly, indigenous knowledge can be conserved, transferred, or adopted and adapted elsewhere.²⁷ Despite the vast development in knowledge as a result of westernization, “the survival of a group is dependent on its knowledge about the

²² WCED, “Our Common Future, » Brundtland Commission Report of the World Commission on Environmental and Development, 1987, 72; <https://www.are.admin.ch/are/en/home/media/publications/sustainable-development/brundtland-report.html>

²³ R. Ellen and H. Harris, “Introduction,” in *Indigenous Environmental Knowledge and its Transformations*, in ed. R. Ellen, P. Parkes and A. Bicker (Amsterdam: Harwood Academic Publishers, 2000), 1-33.

²⁴ The World Bank, *Indigenous Knowledge for Development: A Framework for Action* (Washington, D. C.: The World Bank, 1998), 67.

²⁵ F. Ewane and S. Ajagbe, “Indigenous Knowledge and the Development Debate in Africa,” *International Journal of African Development* 5, no. 1 (2018), 57.

²⁶ The World Bank, *Indigenous Knowledge for Development*, 99.

²⁷ Ewane and Agbaje, “Indigenous Knowledge,” 50.

environment and its ability to deal with the different challenges that confront it.”²⁸

As against the claim by western sympathizers that development is dependent on western knowledge alone, James D. Wolfensohn, the World Bank President, believes instead that “indigenous knowledge is an integral part of the culture and history of a local community.” He argues further that “We need to learn from local communities to enrich the development process.”²⁹ This observation is very instructive for every society in its pursuit of development as it points out the need to look within the rich culture and history of the community while attempting to situate development and development practice in Africa. While some may argue that indigenous knowledge is a static and romanticized form of knowledge incapable of ushering in any long-term development, we should take note of the fact that most of these indigenous practices could serve as a model for Africa in her search for scientific and technological advancement.

According to Lalonde, an understanding of indigenous knowledge and customs can help the development planner to establish a more flexible position to suggest project alternatives or innovative mitigative measures, to avoid inadvertent damage to the ecosystem or culture.³⁰ Going further, he argues also that indigenous technologies that are implemented in partnership with development agencies and indigenous societies can be duplicated and adapted to help solve problems faced by another society in a similar agro-ecosystem located elsewhere in both developing and developed countries.³¹ Lalonde's position shows that it is possible to transfer indigenous technology within and outside Africa provided the practice can provide the needed result.

²⁸ S. Gyamfi and K. Anderson, “Indigenous Medicine and Traditional Healing in Africa: A Systematic Synthesis of the Literature,” *Philosophy, Social and Human Disciplines* 1 (2019), 69-100.

²⁹ L. Gope, S. K. Behera and R. Roy, “Identification of Indigenous Knowledge Components for Sustainable Development Among the Santhal Community,” *American Journal of Educational Research* 5, no. 8 (2017): 887-893.

³⁰ A. Lalonde, “African Indigenous Knowledge and Its Relevance to Environment and Development Activities,” *Common Property Conference*, The Second Biennial Conference of the International Association for the Study of Common Property (Winnipeg, Manitoba; September 26-29, 1991).

³¹ Lalonde, “African, Indigenous Knowledge.”

This is what we could also refer to as indigenous technology transfer.

In what serves as their major critique of indigenous knowledge, Ewane and Ajagbe are of the view that the call for the inclusion of indigenous knowledge in development practice is based on the claim that Western knowledge dominated the scientific path for development in non-Western societies which has failed in its bid to achieve its claim of the capability to deliver these countries from their development problems.³² From this observation, they posit a critique that the persistence of an “indigenous knowledge system itself can also be a reflection of its capacity in holistically resisting modernity.”³³ However, the question posed by this criticism is “does modernity only implies Western modernity such that its scrutiny amounts to the denial of modernity?” A major implication of over-dependence on Western knowledge with absolute renunciation of indigenous knowledge is the neo-colonialism effect.

The Role of Indigenous Medicine in Sustainable Health Care Delivery

Health constitutes a major concern of the people from ancient society to the modern one. There is never a time in the history of man that he downplays the importance of healthy living. And because of this, every society has had to develop its healing methods and health systems to ensure healthy living long before the emergence of modern medicine. Traditional medicine, therefore, has been a key health system practised to some certain degree in all cultures. According to the World Health Organization (WHO), traditional medicine is the total knowledge, skills and practices of holistic healthcare, which is organized and accepted by the community for its role in the maintenance of health and the treatment of diseases.³⁴

The Organization further notes that traditional medicine based on the theory, beliefs and experiences indigenous to different cultures, was developed and handed down from generation to generation. This form of medicine is based on a belief that health is a state of balance

³² Ewane and Ajagbe, “Indigenous Knowledge,” 65.

³³ Ewane and Ajagbe, “Indigenous Knowledge,” 65.

³⁴ World Health Organization, “Traditional and Modern Medicine: Harmonizing the Two Approaches,” A Report of the Consultation Meeting on Traditional and Modern Medicine (Beijing, 2000), 98.

between several opposing aspects of the human body; illness occurs when an individual falls out of balance, physically or mentally and that the causes of imbalance could be a change of weather, intake of certain food; external factors, such as magical or supernatural powers; mental stimulation and societal reasons.³⁵ Hence, traditional medicine employs different therapies in its attempt to restore balance.

Traditional Medicine has a wide range of advantages. Senanayake notes that while the western medical system mainly concentrates on only one issue at a time, the indigenous healing system (Aurvedic medicine) follows a holistic approach. First, it is interdisciplinary and combines knowledge of botany, toxicology, chemical physics, biochemistry and psychology. Second, indigenous medical practitioners tackle prevention as well as therapy, perceiving illness and healing holistically; therapies often enhance healing by treating the whole being rather than targeting specific symptoms and tracing diseases to the context of the person's life, rather than a bacteria or virus.³⁶

When considering the medical system of a given society, it is also necessary to take into consideration, the ecological factors of that society because some of those factors influence the psychology of sicknesses and healing. In Africa, for instance, the dualistic conception of any reality makes the law of cause and effect a prominent doctrine that does not exclude the health care system. While modern (western) medicine may trace the possible causes of diseases to certain pathogens, indigenous medicine, on the other hand, may attribute it to forces also as a factor. However, the process of healing is sometimes affected by an individual's beliefs and perceptions. This creates a disparity between the efficacy of treatments in both traditional and western medicine. Hence, in Africa, certain illnesses are believed to defy western medications because such illnesses are believed to have a spiritual undertone and tackling such illnesses requires the use of traditional medicine.

However, the question we may ask is if these beliefs and treatments employed as a result of such beliefs have ever proven effective for Africans. The answer is yes. Traditional medicine has been proven to

³⁵ WHO, "Traditional and Modern Medicine," 73.

³⁶ S. Senanayake, "Indigenous Knowledge as a Key to Sustainable Development," *Journal of Agricultural Sciences* 2, no. 1 (2006), 75.

be effective in handling the three perspectives of human health vis a vis physical, mental and spiritual and is even believed to be the major health provider to over 80 per cent of the total African population. It is this factor, therefore, that has championed the call for complementary medicine in Africa over the years. Surrounding the development and use of traditional and modern medical systems are different philosophies of culturally different backgrounds, with a different understanding of health, diseases as well as different perceptions about causes of diseases. From these differences, there will always be different perspectives and alternatives to diseases and treatment. Nevertheless, one central point is that both systems have one common goal which is human health.

The World Health Organization (WHO) has repeatedly called for the need for harmonization of traditional and modern medicine. It is believed that this harmonization will promote respectful co-existence. The three possible understanding of this integrative idea, according to the Organization, are; first, it means the incorporation of traditional medicine into the general health service system; second, it may mean the integration of traditional and modern medicine with that of modern medicine and lastly, it may also mean the integration of traditional and modern medicine as two branches of medical science.³⁷

The Organization further maintains that within the model of harmonization, there is the requirement to develop and hold a good understanding of the other approaches to health care. Modern medicine practitioners and researchers are required to achieve adequate education and awareness of the practice, principles and contexts of traditional medicine. Similarly, traditional medicine practitioners need to be significantly more aware of the nature of practice and the strengths of modern medical approaches. The purpose of this broader education base, the Organization emphasizes, is not simply to yield a better understanding of differing practices, but primarily to promote the best care for patients by intelligently selecting the most facilitating route to health and wellness.³⁸

Innovation in traditional medicine could drive effective health care service delivery in Africa. To achieve this, there is a need to develop

³⁷ WHO, "Traditional and Modern Medicine," 78.

³⁸ WHO, "Traditional and Modern Medicine," 65.

a health care system that integrates traditional medicine by ensuring the quality of herbal medicines, preserving the knowledge of traditional healers and the ecosystem, and education in hygiene and health as well as standards and quality certification of traditional drugs.³⁹ There is also a need for extensive research, testing methodology for both illnesses and medicine, and documentation of African traditional medical practices to encourage further discovery and development in health care delivery. The establishment and implementation of a decentralized health system that adequately caters for the health needs of both the urban and non-urban populations and the innovation in traditional medicine in line with modern practices is the key to Africa's sustainable health care development.

African Indigenous Technology and Sustainable Development

The term “Technology” is derived from the Greek word “*technologia*” which implies the systematic treatment of an art or craft. Technology comes from the root word “*Techne*” which refers to a technique, “involving both a knowledge of the relevant principles and an ability to achieve the appropriate results.”⁴⁰ *Techne* as technique “involves the practical skills or arts of knowing and doing.”⁴¹ Herschbach further emphasizes that technological knowledge arises from, and is embedded in human activity. Similarly, Landies also observes that though the technological process is itself intellectual, the process itself has to do basically with “the acquisition and application of a corpus of knowledge concerning technique, which in a more general sense involves a way of doing things.”⁴²

The development of a particular technology, to a greater extent, is usually influenced by the activities of the people within that society. One of the most enlightened definitions of technology is that offered in *Society and Technological Change*.⁴³ Here, technology is defined

³⁹ T. Rasamiravaka, et al., “Traditional African Medicine: From Ancestral Knowledge to a Modern Integrated Future,” *Science* 350, no. 6262 (2015): S61-S63.

⁴⁰ P. Wheelwright, *The Presocratics* (New York: The Odyssey Press, 1966), 54.

⁴¹ D. Herschbach, “Technology as Key: Implications for Instruction,” *Journal of Technology Education* 7, no. 1 (1995), 31-41.

⁴² D. Landies, “The Creation of Knowledge and Technique: Today’s Task and Yesterday’s Experience,” *Daedalus* 109, no. 1 (1980), 110-120.

⁴³ R. Volti, *Society and Technological Change*, 7th ed. (New York: Worth Publishers, 2009), 54.

as “a system created by humans that uses knowledge and organization to produce objects and techniques for the attainment of specific goals.”⁴⁴ Technology drives industries which is an important yardstick in measuring the development of any society. According to Skolimowski, the purpose of technological knowledge is praxiological, that is, to efficiently control or manipulate the physical world, to do things.⁴⁵ Similarly, Layton adds that technology seeks to use knowledge to create a physical and organizational reality according to human design.⁴⁶

As noted elsewhere in this paper, every society has its unique challenges and the technique for handling these challenges vary. Before the emergence of western technology, Africans had their ways of tapping certain resources around them as they were considered useful to them, especially in areas like farming, mining, transportation, construction and refining, though these technologies may not have been very sophisticated. Richard captures the true position of the pre-colonial African society in its struggle to make sense of his existence in his following expressions:

Without counting on the semantic differences of who the African is, it is obvious that Africa has through his creative capabilities been satisfying his needs for ages. No one taught the African to produce food, light fire and cook meals. Equally, Africans did not need instructors to conquer their environment by building and decorating their houses. Blacksmiths manufactured agricultural equipment like hoes and knives, boats were built to ease transportation in coastal and inland water ways and made guns to protect themselves. The use of indigenous technologies presupposes indigenous knowledge that was handed down from generation to generation.⁴⁷

From the foregoing, it is no longer debatable that before the emergence of western technology, Africans were already technology inclined. The major advantages of indigenous technology are affordability, accessibility and familiarity. As against western technology, indigenous technology is cheap and easy to acquire, especially by the

⁴⁴ Volti, R. *Society and Technological Change*, 32.

⁴⁵ H. Skolimowski, “The Structure of Thinking in Technology,” in *Philosophy and Technology: Readings in the Philosophical Problems of Technology*, ed. C. Mitcham and R. Mackey (New York: Free Press, 1972), 42-49.

⁴⁶ E. Layton, “Technology as Knowledge,” *Technology and Culture* 15, no. 1 (1974), 31-41.

⁴⁷ A. E. Richard, “African Indigenous Knowledge: The Challenges of Industrialization,” *International Journal of Humanities, Social Science and Education* 4, no. 5 (2017), 76-84.

rural masses who are always in high demand of them. Being cheap, it becomes easy to be accessed by a larger member of the society and the fact that it is a familiar system makes it easier for all classes of people in the society to adopt. However, these African techniques have been abandoned following the emergence of modern western technology. The denigration of African technological practices has affected Africa's quest for sustainable development, especially in the area of industrialization. However, most of these small-scale industries are mostly found in rural areas. The industrial revolution of Japan and China has taught us the numerous advantages of small-scale industries to the growth of the economy. Africa's sustainable development policies have neglected the role of the rural communities by failing to take into consideration, the relevance of these rural communities in the development strategy of the continent. This is because most of the much glamoured-western technology cannot serve the needs of the rural people due to factors such as cost, availability and illiteracy.

African indigenous technologies could serve as a model for African technology experts to develop more advanced and rigorous technologies that contest globally with the western ones. The major problem with African technology is not the availability of technological sense per se, but lack of innovation. According to Vaughan, at the heart of innovation is an idea or concept fulfilled; the end result is an effective change meant to make something - or introduce something - better, where better could mean more efficient, more enjoyable, more appealing, more useful etc.⁴⁸ Let us take, for instance, the African distillation method used by local palm wine tappers. The idea which is based on the method of separating two soluble substances (alcohol and water), is the African version of the distillation process. The method, which is also very creative, has proven to be a dependable source of refining for Africans over time.

On the contrary, an attempt to replace this indigenous system with western technology could harm production being that the local tapper who may be illiterate may not be able to adapt to the new and entirely alien technology. However, from this creative process, it is possible to develop a fractional distillation process which could help in

⁴⁸ J. Vaughan, *Technological Innovation: Perceptions and Definitions* (Chicago: ALA Tech Source, 2013), 110.

refining the abundant petroleum resources found in Africa. The same could also be done to other indigenous technologies. Two advantages could be deduced from such steps. First, people will easily understand how to effectively make use of such technology based on their previous knowledge of it. Through this, such technology will be easily appreciated and utilized. Also, the cost of importation will be reduced, thereby making such equipment affordable and also accessible. Secondly, it will also help in giving Africa her pride of place in global technological politics. In this case, Africa will be seen as a continent that is technologically advanced instead of just consumers of foreign technologies which is currently the case.

It should be noted that no continent could boast of being capable of meeting all its technological challenges, as there is always a need for the transfer of knowledge. Africa, therefore, cannot be an exception to this. This places a premium on the level of relationship the continent has with other technologically developed countries. However, though this is the case, the problem with Africa is that it lacks the will to even showcase its technological strength globally because of its perceived cultural inferiority including its knowledge systems, whereas the continent is blessed with skills capable of competing globally. Technological dependency is the highest form of neo-colonialism in modern society and a major factor that influences development in Africa. However, this is the case in Africa as the continent is blessed with abundant natural resources but still depends on the western world to detect how its resources are being utilized.

According to Richard, scientific resourcefulness and creativity are the panacea for a technological breakthrough, the sine qua non for industrialization.⁴⁹ The assumption, therefore, that the western world will freely hand over their scientific resourcefulness and creativity to Africa, without Africa developing it by herself, is a misconception, an illusion that will continue to plunge Africa into a deeper depth of subordination. Chinua Achebe expresses the same feeling when he states:

I know enough history to realize that civilization does not fall from the sky: it has always been the result of people's toil and sweat, the

⁴⁹ Richard, "African Indigenous Knowledge," 76-84.

fruit of their long search for order and justice under brave and enlightened leaders.⁵⁰

Achebe's position points to a lack of insight on the part of African leaders who seek Africa's sustainable development through western dependency. As evident today, the continent of Africa could still be described as a neo-colonial territory due to its over-dependence on foreign aid. Nevertheless, what we are fed with from these foreign initiatives is inadequate to tackle our numerous challenges. Sadly enough, the relegation of Africa as a result of racism further threatens the recognition of African indigenous knowledge as being capable of promoting any meaningful development.

Indigenous Knowledge and Good Governance

One major issue that Africa needs to arrest, as a matter of urgency in its quest for sustainable development is the problem of governance. Before the coming of western-style democracy as we have today, Africa had its political system. According to most African political historians, two major forms of political institutions existed which are the (a) consensus-based systems of the decentralized political system and (b) chieftaincy of the centralized political system.⁵¹ But one distinct fact about the adoption of any of these political systems by any given community was that such a system reflected their political philosophies. There is one unique point we could derive from here; when the political system practised in a given society does not reflect its philosophy, there is bound to be chaos, resulting in a lack of development plans for such a society. This is the reason Africans are yet to experience good governance.

Africa, to a larger extent, is a communal society where people have strong affinity with their community. These communities are further divided into smaller units, the family system, and in this system, decisions are made in such a way that the wish of all interest groups are given fair consideration. In other words, the pre-colonial political system was highly egalitarian, whether the power was centralized or

⁵⁰ C. Achebe, *The Trouble with Nigeria* (Enugu: Fourth Dimension Publishers, 1983), 65.

⁵¹ L. Boahene, "Issues and Prospects of African Indigenous Systems of Governance: Relevance and Implications for Global Understanding," in *Handbook of Indigenous Education*, ed. E. McKinley and L. Smith (Singapore: Springer Nature, 2017), 43.

decentralized because even in the centralized system, the chief had elders who acted as advisers and in some cases, his decisions were taken based on popular opinion. Again, to safeguard the excesses of one supreme power, communities were from time to time carved out from the larger ones. However, this is not to say that there were no tyrannical tendencies by some of these chiefs.

According to Boahene, consensus-based systems include the lack of concentration of power in an institution or a person and preventing the development of a rigid structure. Furthermore, he maintains that even the settlement of conflicts in such consensual systems consisted of a narrowing of differences through negotiations rather than through confrontational processes that produce winners and losers.⁵² This system, he proceeded, was centred on respect for the rights and views of the individual, as individuals can veto the opinions of the majority. However, individuals are also expected to respect the wishes and interests of the community by accepting compromises, as they can face various forms of community censure, including social isolation if they fail to do so. This system of accommodation prevents conflicts between minority and majority segments of a community.⁵³

Another important aspect of this kind of system is that it prevents the existence of political and social gaps between the governed and those who govern, as all eligible members of the community participate in both the creation and enforcement of rules and regulations.⁵⁴ Among the well-known examples are the Ibo village assembly in eastern Nigeria, the Eritrean village baito (assembly), the gada (age-set) system of the Oromo in Ethiopia and Kenya, as well as the council of elders (kiama) of Kikuyu in Kenya, Tallensi of Northern Ghana, the Sukuma of Tanzania, and the Nuer of Southern Sudan, where decisions are largely based on consensus.⁵⁵ Hence, the African traditional institutions of governance involve the indigenous political system where leaders are appointed and installed in conformity with the prerequisites of their local laws and customs.⁵⁶ The traditional African

⁵² Boahene, "Issues and Prospects," 87.

⁵³ A. Legesse, *Gada: Three Approaches to the Study of African* (New York: Free Press, 1973), 60.

⁵⁴ Boahene, "Issues and Prospects," 24.

⁵⁵ G. W. Alport, "Personal Religious Orientation and Prejudice," *Journal of Personality and Social Psychology* (1967), 437.

⁵⁶ G. P. Murdock, *Ethnographic Atlas* (Pittsburg: University of Pittsburg Press, 1967), 56.

political system could be described as a form of egalitarian democracy. However, this is not to say that the African indigenous political system was problem-free. One of such problems was the subjugation of women as second citizens because the system in Africa is a patriarchal society. Another was the issue of hereditary rulership, among others.

However, with the emergence of the self-styled "western democracy," the political values of Africa, which were grounded on communal egalitarianism, were completely eroded that even after colonialism, the status quo remains unchanged. As the call for independence took centre stage, African nationalist leaders, took turns pursuing policies to Africanize the bureaucracy without indigenizing the institutions of governance. The new political elite, which increasingly grew self-serving and autocratic, also could not tolerate the existence of contending points of power.⁵⁷ The outcome is the politics of godfatherism in most African countries. The affairs of the state have suddenly become the wish of a few cabals to the detriment of the masses. Marginalization, poor economic policies, and underdevelopment have suddenly become the order of the day as those in power only serve the interest of the cabals that took them to power. This is, in fact, the origin of bad governance in Nigeria as the 'people' are now the few powerful men and women who call the shots at any time.

To ensure that there is a taste of good governance in Africa, there is a need to abolish the mostly centralized system of governance and gradually embrace decentralization. There are basic advantages that are accrued to this action: first, governance will get closer to the people who will from time to time be responsible for choosing leaders that are answerable to them. Again, using the societal moral paradigm, the political circle would be free from an unscrupulous element that seizes power for self-aggrandizement: secondly, Africa is a continent with multifaceted ethnic affiliations. With a decentralized political system, an ethnic group would be free to choose a political system that best suits its political philosophies. This should not, however, create an impression that there will be disorderliness in the polity as the central government will be vested with the power of Harmonizing these

⁵⁷ Economic Commission for Africa (ECA), *Relevance of African Traditional Institutions of Governance* (Addis Ababa: Economic Commission for Africa, 2007), 76.

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interests within the framework of checkmating; thirdly, every society will be responsible for formulating economic policies that best meet their challenges. In this regard, the development will start with the local community at the centre; and sustainable development is only possible when the interests of the minority and the rural dwellers are also taken into policies of governance.

Conclusion

The acceptance of African indigenous knowledge in development practice is an effort to find the most suitable approach to resolving Africa's enduring development challenges.⁵⁸ In this work, therefore, we have been able to outline three basic areas that could enhance sustainable development in Africa, through the innovative application of African indigenous knowledge as a model.

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⁵⁸ Ewane and Agbeje, "Indigenous Knowledge," 124.