



**AFRICAN RELIGIO-CULTURAL LANDSCAPES AND THE QUESTION OF
TECHNOLOGICAL DEVELOPMENT: REASSESSING INDIGENOUS
INNOVATIONS AND THEIR DISJUNCTION WITH MODERN
TECHNOLOGICAL TRAJECTORIES**

Dr. John Clerk Koko

Department of Religious and Cultural Studies
Faculty of Humanities
Rivers State University, Port-Harcourt.
john.koko@ust.edu.ng; johnclerk1@yahoo.com
Tel: (+234) 08037101793

and

Dr. Kenoye O. I. Uwom

Department of Religious and Cultural Studies
Faculty of Humanities
Rivers State University, Port-Harcourt.
kenoye,uwom@ust.edu.ng
(+234) 08064525982

Abstract

The question of underdevelopment of the African continent especially in this age of modern technological advancement has remained an intractable challenge to contemporary scholars. While some are of the view that the continent can only develop if it is allowed to do so within her rich cultural context; others think that the transfer of technology from the West is the only viable alternative to its development. This study takes a mid-way position by critically examining the interconnectedness and disconnectedness of African culture and modern technological advancement. As a philosophical research, the paper adopts the discursive and analytical approach in analyzing extant scholarly views on this subject matter. The entire discussion is pitched against the backdrop of cultural liberalism or cultural revivalism theory. The study argues that while modern technologies are undoubtedly useful tools for development of the African continent, some technologies have the potentials to negatively impact on African culture / values. The paper also unraveled some issues that serve as major impediments to technological development in Africa. The paper concludes that the call for development of Africa outside of its cultural context is not only counterproductive but destructive and therefore recommends the development of Africa within its cultural milieu as the most viable alternative. It also calls on policy makers in Africa to have a retrospect of the lost traditional African technologies and formulate policies that could promote rather than undermine them.

Key Words: Africa, African culture, African values, technology and development



Introduction

The question of technological development in Africa has been a matter of serious concern among scholars of different fields of human endeavours. Apparently, this is because Africa is one of the continents with the highest number of people living below poverty line. In buttressing this fact, Galal (2024) records that in 2019 Sub-Saharan Africa had the highest number of extremely poor people living below 2.5 U.S. dollars per day with a share of 35.1 percent. Also, out of the 20 countries with the most considerable income inequality worldwide, more than half of them were in Africa. According to *Outreach International*, Africa's extreme poverty rate was recently estimated to be about 35.5 percent using the poverty line of 1.90 U.S. dollar per day. Comparably, this rate is 6.8 times higher than the average for the rest of the world. Against this backdrop, some have argued that the only narrow exit for the African continent is by technological transfer which in this case the transfer of technology from the West to Africa. Those who subscribe to this view have the impression that countries in Africa lack the requisite technology and expertise to launch the continent into full scale development, be it social, economic, industrial, political, and agricultural unless there are deliberate efforts towards transfer of technology from the West to the continent without any reference to culture.

On the contrary, there are also those who hold strongly to the view that the pathway to Africa's technological development lies within her cultural context and not outside of it. Those in favour of this position believe that culture plays significant role in the lives of any people, nation, or continent, hence should not be relegated to the background in matters of technological development. While these contrasting views persist, this paper is hinged on the argument that African technological development lies within the richness of its religio-cultural context and not on technological transfer from the West. It underscores that technological development was not alien to Africa prior to western influences. And there are three main reasons for this proposition. The first is that technological development does not occur in a vacuum; instead, it occurs within a well-defined cultural context. In fact, it is practically impossible for any nation to develop in whichever form outside of its cultural context. For example, it is on record that technologically advanced nations such as the U.S., U.K., Netherlands, Germany, China, Japan, etc., have only done so within their religio-cultural contexts. Moreover, the culture of a people as Idang (2015) observes is what marks them out distinctively from other human societies. Hence, it is the religio-cultural landscape of Africans that gives them their unique sense of identity, personality, history and beliefs as Africans and differentiates them from other human societies. In this light, it is only reasonable to seek to develop Africa by using homegrown tools and expertise available within Africa's religio-cultural context. Third, the question of values as Kanu (2018) notes is akin to human society and activities. In fact, every society has set of values, covering every aspect of human endeavour for which Africa is not an exception (Koko & Oko, 2024; Koko, 2020). Like the West, Africa has its own cultural values. These values apparently play significant role in the kind of technology Africa needs. Therefore, efforts towards



understanding the interconnection of values, technology and development in African society are not only vital but appropriate and relevant.

In light of the above, the paper seeks to examine the interconnections and disconnections between African religio-cultural landscape and technological development. The relevance of this research extends beyond mere academic rhetoric to a more pragmatic approach. This is important because as Alsaleh (2024) observes diverse societies are grappling with the accelerating pace of technological change, and understanding its cultural implications is crucial for policymakers, educators and technologists. The paper is also significant because by seeking to unravel the interplay between religion, culture and technology in Africa, it offers valuable insights into the challenges and opportunities of a homegrown technology that is not alien to the people of Africans. Also, the theoretical relevance of this work is that it adds to existing literature in the area of cultural revivalism.

Africa in Theoretical and Geographical Conception

It is difficult to discuss the interconnections and disconnections of African religio-cultural context and technological development without a prior knowledge of what Africa represents in terms of its geography, history and culture. This position is in tandem with Ogungbemi (2007), who argues that “to know Africa is to have some knowledge of its geography and as well interact with its people and the environment.”

By geography, Africa has a land area of approximately twelve (12) million square miles and this makes it the second-largest continent in the world, covering 23 percent of the world’s total landmass and containing about 15 percent of the world’s population (Ukanah, 2011). It is bounded by the Mediterranean Sea on the north, Atlantic Ocean on the west, Indian Ocean and the Red Sea on the east and both the Atlantic and Indian Oceans in the south. At the northeastern corner of the continent, it is connected with Asia by the Sinai Peninsula. There are 54 countries in Africa. The largest country in terms of landmass is Algeria while the most populous country is Nigeria with Lagos State as the largest city in Africa, while Seychelles and Madagascar are the smallest and biggest Island countries, respectively. The Nile which covers a distance of 6,852km or 4,258 miles and stretches through eleven countries is the longest river in the world. It has two sources: the White Nile flowing from Lake Victoria in Tanzania and the Blue Nile coming from Lake Tana in Ethiopia. The River mouth is in Egypt and has its confluence in Sudan. The highest mountain in Africa is Mount Kilimanjaro in Tanzania while the biggest lake is Lake Victoria bordering Uganda, Tanzania, and Kenya, and is the world’s second largest freshwater. The continent is also known for housing the Sahara desert in the north, which is the largest hot desert in the world. It is important to note that the countries north of the Sahara make up the region of North Africa, while the region south of the desert is known as sub-Sahara Africa. For purpose of clarity, it is imperative to represents the regions and their respective countries as follows:

1. North Africa region consists of Algeria, Egypt, Libya, Morocco, Sudan and Tunisia.



2. Sub-Sahara Africa is generally divided into the regions of West Africa, East Africa, Central Africa, and Southern Africa.
 - i. West Africa includes countries as Benin, Burkina Faso, Cameroun, Chad, Cote d'Ivoire, Ghana, Guinea, Guinea Bissau, Liberia, Mali, Mauritania, Niger, Nigeria, Senegal, Sierra Leone, the Gambia and Togo.
 - ii. East African nations are Burundi, Djibouti, Eritrea, Ethiopia, Kenya, Malawi, Mozambique, Rwanda, Somalia, Tanzania and Uganda.
 - iii. Central African countries include Angola, Central African Republic, Democratic Republic of Congo, Equatorial Guinea, Gabon, Republic of the Congo and Zambia.
 - iv. Southern Africa consists of Botswana, Lesotho, Namibia, South Africa, Swaziland and Zimbabwe.
 - v. Island nations on the coast of Africa are Cape Verde, Sao Tome and Principe on the Atlantic Ocean and Comoros, Madagascar, Mauritius and Seychelles on the Indian Ocean.

Suffice it to state given the above statistics that Africa is geographically compact and in terms of natural resources, it is potentially the richest continent in the world as Ogungbemi (2007) observes.

Historically, like other continents of the world, there are no empirical records to ascertain the exact date and time of existence of the African continent. However, some scholars believe that Africa is the cradle of human civilization. That is, the place where human beings originated. Several reasons abound why this proposition has gained wide acceptance among African scholars. First, biblical records available to us reveal that God created man from the dust of the earth according to Gen 2:7. Consequently, a careful observation of the colour of the earth reveals the dust of the earth is either black or brown. And if this is taken seriously then it could suggest that the first man God created was an African. Moreover, records from the Scripture also suggest that a country like Egypt in Africa was already sophisticated before the Exodus as far back as 1440 B.C.E. when the Israelites left Egypt to the Promised Land under the leadership of Moses (Beegle, 2025). For example, the pyramid of Egypt which defies the best architecture and engineering that the world has ever known was built before the Exodus. Additionally, the very fact that the science of embalmment of the dead originated in Africa, particularly in Egypt further strengthens this position. For example, the body of Joseph was embalmed in ancient Egypt according to biblical records available to us in Gen. 50:25-26. It should be stated in concrete terms that the science of mummies practiced in Egypt at that time was so sophisticated that no other country or kingdom of the world could match that level of advancement. Based on this therefore, it is justified to ascribe the status of the cradle of civilization to Africa. Finally, fossils found in Africa indicate that modern human evolved there about five to ten million years ago and spread across the continent. Hence, it is conjecturable that the continent called Africa was prior to the colonial invasion existed as a region housing different group of persons who lived and governed themselves independently in form of tribes, communities, clans, and



kingdoms. In fact, history has it that many of these kingdoms were very powerful during its early history and the middle Ages. For example, biblical records available to us indicate that as far back as 1500 B.C, the Kingdom of Egypt, ruled by the Pharaohs had become so powerful to the extent that the Israelites and other unnamed people were enslaved for over 430 years in Egypt (cf. Exo. 12:33-42) (Beegle, 2025). Whether this was an act of divine providence or not remains insignificant; one thing is however clear, the very fact that it required only the intervention of God to set the Israelites and others free from the hands of the Egyptians through the divine call of Moses. This proved that the Kingdom of Egypt was very sophisticated prior to the period of the Exodus. And this attest to the fact that humans could possibly have originated from Africa.

It is estimated that over 2000 different languages were spoken on the continent. There were also more than 3000 different groups of indigenous people living in pre-colonial Africa with each of these indigenous people practicing its own indigenous religion which scholars like Mbiti (1969) approvingly referred to as “African Traditional Religion” (ATR) or “African Indigenous Religion” (AIR). Kanu (2018) explains that this religion is so called because unlike Christianity and Islam which were imported to us, the ATR or AIT was born out of the culture of the African people. All these point to the fact that precolonial Africa was heavily diverse in terms of its people, culture, language, religion and values. However, by the time colonialism was over, Africa has lost much of its cultural values and heritages due to Western influences

Reasons for Western Colonization of Africa

It is difficult to pinpoint the exact date colonialism started in Africa. However, Iweriebor (2002) places the date of colonization of Africa between the 1870s and 1900, when the continent faced European imperialist aggression, diplomatic pressures, military invasions, and eventual colonization. He also identifies three main factors that motivated the colonization of the continent to include: political, economic and social. Politically, the colonization was fallout of the impact of inter-European power struggles and competition for supremacy. Countries like Britain, France, Germany, Belgium, Italy, Portugal and Spain were competing for power within European power politics. And one way to demonstrate this was through the acquisition of territories around the world for which Africa was a prime target. Economically, the colonization interest developed in the nineteenth century following the collapse of the profitability of the slave trade, its abolition and suppression as well as the European capitalist Industrial Revolution. The advent of capitalist industrialization created the need for assured sources of raw materials, guaranteed markets and profitable investment outlets. The aftermath of this was the European scramble and partitioning and the eventual conquest of Africa. Thus, the primary motivation for European colonization was economic. Socially, the rise of industrialization in Europe brought some major social problems: unemployment, poverty, homelessness, and social displacement from rural areas. One way to solve



this problem was to acquire colonies for which Africa became a victim. The European imperialists' designs and pressures of the late nineteenth century provoked African political and diplomatic responses and eventually military resistance but this was too late and the African societies eventually lost out. By the time the Europeans were done Africa had lost a great deal of its cultural values due to some modern forces of change like Western education, Christianity, Islam, modernity, globalization and technological advancement.

The Concept of African Religio-Cultural Context

The term "culture" defies any universal definition. However, Edward B. Tylor is reputed as the scholar who first coined and defined the term in his work *Primitive Culture* (1871) which was reprinted in 1958. According to him, culture is "that complex whole which includes knowledge, belief, art, law, morals, custom, and any other capabilities and character habits acquired by man as a member of society". What Tylor's definition attempts to imply is that culture covers the whole spectrum of human life. In other words, culture is the patterned way of life shared by a particular group of people that claim to share a common origin or descent. This presupposes people cannot exist without culture (Idang, 2015). In essence, any attempt to divorce an individual or group from his or their culture is not only impossible but oppressive. This is because doing so would mean disentangling the individual from his or her sense of identity or being.

In the light of the above, it is safe to posit that African culture is a broad and diverse concept that encompasses the religious beliefs, customs, traditions, values, and practices of the numerous ethnic groups across the African continent. It includes language, religion, art, music, cuisine, social norms, and governance systems that have been passed down through generations. Despite variations among different regions and societies, African cultures generally emphasize communal living, respect for elders, spirituality, and an intrinsic connection between individuals and their communities (Mbiti, 1990). Language is a fundamental aspect of African culture, with thousands of indigenous languages spoken across the continent, each carrying its own worldview and philosophy (Mazrui & Mazrui, 1998). Traditional African societies also place significant importance on oral traditions, using storytelling, proverbs, and folklore to preserve history and moral teachings (Achebe, 1958). Religion and spirituality play a crucial role in African cultures, with a blend of indigenous belief systems, Islam, and Christianity shaping social structures and individual behaviors (Gyekye, 1997).

Furthermore, African cultural expressions manifest in various artistic forms such as dance, music, sculpture, technology, and textile production. These artistic expressions serve not only aesthetic purposes but also social, religious, and political functions. Music and dance, for example, are integral to ceremonies, rites of passage, and communal celebrations (Nketia, 1974). Despite the richness and resilience of African cultures, they have faced challenges due to historical events such as colonialism, globalization, and modernization, which have led to cultural erosion and the adoption of Western lifestyles. However, contemporary African societies continue to navigate the balance between preserving traditional cultural values and adapting to modern influences (Appiah, 1992). It should be noted that this cultural erosion caused by western modern forces affected African homegrown technologies which by far predated western technologies as we shall see from subsequent sections.



The Concept of Technological Development

For purpose of clarity, it is appropriate to provide a contextual understanding of the terms “technology” and “development.” This is because both terms may apply differently to different persons. Consequently, Schatzberg (2018) has identified three root words from which the term “technology” emerged. The first is from Indo-European *tek*, which refers to the building of wooding houses by weaving sticks together. In this usage, the word ‘textile’ and ‘technology’ become closely related and sound similar. The second is from the Greek *techne* which itself came from *tek* and initially meant skills of working with wood but later broadened to refer to specialized expertise, know-how, and knowledge of how to make things that would otherwise not exist. *Techne*, therefore, concerned the artificial. In the Nicomachean Ethics, Aristotle had identified three distinct knowledge namely: *techne* which was a form of knowledge (of how to make, an art); *phronesis* (moral knowledge, knowledge of how to act well); and *episteme* (knowledge of the eternal). The third root came from the German concept of *Technik* which gained prominence during the eighteenth-century German academic cameralism, and was used, for example by Johann Beckmann to describe a “discipline devoted to the systematic description of handcrafts and industrial arts (Agar, 2020:379). In this sense, *technologie* became a form of elite, systematic knowledge. After 1850, German engineers embraced the term *Technik* in a broad sense, not restricted to a means-to-ends rationality but coherent and culturally significant category covering the arts of material production. It is important to note that the broad concept decisively entered the English Language in the early 1900s, when Thorstein Veblen expanded the category of *Technik* to include an industrial arts but translated it as ‘technology’ (Agar, 2020:379).

However, an important twist in the history of the term ‘technology’ occurred in the first half of the twentieth century following the development that took place in the United States in which autonomous ‘technology became linked to a deterministic concept of material progress’. Following this development, technology as a driver of change therefore had to mean everything from applied science to broad industrial arts. Technology only became a common word in the second half of the twentieth century. By then a conceptual confusion was already imminent in the sense that the word could be used both in either broad or narrow senses. In the broad sense, it could be used to embrace cultural or social components while in the narrow sense it could mean mere tools or to means-to-ends rationality (Agar, 2020).

Given the above, two possible approaches have emerged in the attempt to understanding the term ‘technology.’ One, is the ‘instrumentalist approach’ which sees technologies as means to ends, while on the other, is the ‘cultural approach’ which defines technology as a set of practices humans use to transform the material world, practices involved in creating and using material things. Accordingly, Agar (2020) defines technology as a designed, material means to an end. He also notes that one important feature of all technologies is the fact that they essentially intervene between scales. Kumar et. al (1999) sees technology as consisting of two primary components namely: physical component which comprises of items such as products, tooling, equipment, blueprints, techniques, and processes; and the informational component which consists of know-how in management, marketing, production, quality control, reliability, skilled labour and functional areas. Moreover, Lan & Young (1996), believe, technology is always connected with obtaining certain result, resolving certain problems, completing certain tasks using particular skills, employing



knowledge and exploiting assets. Other scholars like Tepstra & David (1985) suggest that technology is a cultural system concerned with the relationships between humans and their environment. In all we can conclude that though the term technology means different things to different scholars, one thing is however clear, the fact that it carries two basic components namely: knowledge or technique and doing things. In this context therefore, it encompasses both the instrumental and cultural aspects of it. Suffice it to add that the difference between science and technology is that science is the product of minds seeking to reveal the natural laws that govern the world in which we live and beyond it, the laws that govern the universe. Technology, on the other hand, seeks to find practical ways to use scientific discoveries profitably, ways of turning scientific knowledge into utilitarian process and devices. It is this deployment of technology in a profitable manner that results in development, which in this context refers to advancement, invention or progression of technology within the African cultural milieu.

Theoretical Conception of the Interconnections and Disconnections of Technology and Culture

There are many scholarly theories that describe the nexus between technology and culture. However, the three most applicable to this paper are functionalist, conflict and symbolic interactionism theories. Generally, Functionalism theory or structural functionalism as often referred to by scholars, acknowledges that there are many parts of culture that work together as a system to fulfill society's needs and to promote stability. In this light, functionalists understand society as a system in which all parts work together to create society as a whole. In this way, societies need culture to exist. Cultural norms function to support the fluid operation and continued stability of society, and cultural values guide people in making choices. The link between culture and technology in this regard is that the functionalists focus attention on how media and technology contribute to the smooth functioning of society. For example, media technology helps a society to function properly through the dissemination of information, entertainment, advertising, and so on (Nielsen, 2012). It also serves to socialize us, helping us pass along norms, values, and beliefs to the next generation. In fact, we are socialized and re-socialized by media throughout our lives. All forms of media teach us what is good and desirable, how we should speak, behave, and reacts to events. Though there is ongoing debate on the extent and impact of media socialization. Recent study by Krahe et. al. (2011) indicates that violent media content does have a desensitizing effect and is correlated with aggressive thoughts. Other scholars like Gentile, Mattieson & Crick (2011) reveal that among children, exposure to media violence led to an increase in both physical and relational aggression. The downside to this information flow is the near impossibility of disconnecting from technology, which in turn leads to an expectation of constant access to information and people (Lazerfield & Merton, 1948).

Unlike functionalism, conflict theory focuses attention on the existential inequalities of populations within a given culture due to power differentials related to issue like class, gender, race, and age. For example, women strive for equality in a male-dominated society. At the core of conflict theory is the effect of economic production and materialism; for example, dependence on technology and education in rich nations versus a lack of technology and accessible education in poor nations. For instance, powerful individuals and social institutions have a great deal of influence over which forms of technology are released, when and where they are released, and



what kind of media is available for consumption. Fox & Bailenson (2009) found that online female avatars conforming to gender stereotypes enhance negative attitudes toward women, and Brasted (2010) found that media promotes gender stereotypes.

The third theory is most concerned with face to face interactions between members of society. Interactionists conceive culture as being created and maintained by the ways people interact and in how individuals interpret each other's actions. Proponents of this theory conceptualize human interactions as a conscious process of deriving meaning from both objects in the environment and the action of others. This is where the term symbolism comes into play. Every object and action has a symbolic meaning, and language serves as a means for people to represent and communicate their interpretations of these meanings to others. Technology itself may act as a symbol for many. For example, the kind of computer you own, the kind of car you drive, your ability to afford the latest Apple Product may serve as social indicator of wealth and status.

African Culture and Technological Development

Though people usually see the West as the center of technological development following the presence sophisticated technologies; Africa has also grown technologically and there are proofs to support this view:

First, traditional Africa was known to be hunter-gatherers. For example, some groups such as the San of Southern Africa and the Pygmy of Central Africa, formed small, mobile groups of hunter-gatherers that rarely ever grew larger than a handful of families. Hunting and gathering, herding cattle and goats, and agriculture were the primary means of food production throughout pre-colonial Africa. Therefore, the earliest African societies like other societies elsewhere were hunter-gatherers. However, with advancements in technology, civilizations developed ways to domesticate both animals and crops and these advancements produced more regular food. Food surpluses were more common, larger populations could be better supported, and thus, agriculture and herding soon became the dominant means of food production. As arable land came at a premium, farming or herding societies often pushed hunter-gatherers off of their land. Consequently, hunter-gatherers lost out on the best land and such lifestyles became more difficult to maintain as time went on.

Second, the use of iron tools also marks another significant moment of African technological advancement. Iron tools enhanced weaponry, allowed groups to clear and manage dense forests, plow fields for farming, and basically better everyday lives. Ultimately, iron tools allowed Africans to flourish in every environment and thus they could live in larger communities which led to the formation of states and kingdoms. With state formation came the formation of modern civilizations with common languages, beliefs and value systems, art, religion, lifestyle and culture.

Third, the progression from oral tradition to formal writing is another milestone of African technological development. Unlike, most Euro-Asian civilizations, Traditional African societies favoured oral tradition. Stories and oral histories documented the past and were handed down from one generation to another. Unfortunately, many of these oral histories have either been forgotten or distorted after being retold by each passing generation. However, Ancient Egypt is usually credited as one of the earliest world societies to have developed a complex form of written language referred to as *hieroglyphics*- a form of writing that involved the use of symbols to express ideas and was mostly used by the Egyptians.

Apart from the introduction of written language, African technological development is also seen in the area of architecture. For example, as early as 4000



BCE, Egypt had already built massive pyramids that defy modern architecture. Similarly, there were other stone structures like the Walls of Berlin and the Temple of Lalibela that were built in Africa which demonstrated advancement of technology of the African people.

In the area of astrology, Africans were known to have had good understanding of the stars. In fact, in traditional African society, people could read the stars and interpret whether their signs are for good or evil. In some cases, the appearance of the stars was a sign of good fortune and success while in other cases they conveyed future evil. However, with their deep understanding of the stars, Africans were able to correctly interpret the stars. A clear example, were the Malians who practiced the science of astrology by recognizing the stars and ascribing native names to them. Similarly, in traditional Abua, the movement of the comet from north to south and vice versa was usually associated with mystical interpretations. This is so because traditional Africans had some reasonable knowledge of astrology.

Sixth, Traditional Africans were also good in the knowledge of medicine. For example, in the field of gynecology, traditional Africans could discern the sex of a baby still in the womb of the mother without the aid of a scanning machine. They were also able to monitor and take care of pregnancy and successfully deliver the pregnant mother without any difficulty. In the area of orthopedic medicine, traditional Africans had good knowledge of the human bones and could detect, fix and manage fractures, dislocations and other associated bone problems through the use of traditional medicine. Traditional Africans were so vast in the knowledge of medicine to the extent that gunshot's injuries were easily treated and the bullets successfully removed through traditional medicine without carrying out any form of physical surgery. It is not misleading therefore to state that there was scarcely no disease that traditional Africans could not cure with success. This simply shows that Africans had good knowledge of science and technology prior to modern invention.

In the area of handcraft, traditional Africans were known for their creativity through the use of wood or clay. These aesthetic products were either invented for domestic or community use. For example, in a traditional African society, the water-pot used for storing water, the chairs used for sitting, the plates used for eating, the cooking-pot used for cooking, the basket used for carrying farm produce, etc. were all produced by them. Some of these locally made items have attracted international attention in terms of their quality, technicality, and beauty and demonstrated how technologically advanced traditional Africans were.

In aesthetics, that is the science of art or beauty, traditional Africans had also demonstrated high level of technological competence in the way and manner they designed the things they used. For example, the local basket used in carrying farm produce was well-woven to demonstrate a high sense of beauty which traditional Africans had. This undoubtedly means that Africans were technologically advanced.

Finally, the very fact that the science of embalment of the dead was a practice that originated in Africa, particularly in Egypt further strengthens the fact that Africans were technologically developed prior to the advent of western technology. For example, it is on record that ancient Egypt practiced the science of embalment known as mummies. For example, the body of Joseph was embalmed in ancient Egypt according to biblical records available to us in Gen. 50:25-26. It should be stated in concrete terms that the science of mummies practiced in Egypt at that time was so sophisticated that no other country or kingdom of the world could match that level of advancement. Based on this therefore, it is justified to say that Africa was technologically advanced prior to Western invasion.



Conclusion

This study has examined the interconnections and disconnections between the African religio-cultural landscape and technological development. It has shown that technological advancement is not culturally neutral but is deeply embedded within the values, beliefs, and historical experiences of a people. Contrary to the assumption that Africa's development depends solely on the transfer of Western technology, the analysis demonstrates that Africa possessed significant indigenous technological knowledge prior to colonial disruption. The erosion of these systems through colonialism and modern cultural displacements partly explains the continent's present technological challenges. Nevertheless, the study maintains that meaningful technological progress in Africa must emerge from a balanced engagement between modern innovations and indigenous cultural resources. Consequently, sustainable development in Africa requires a deliberate recovery, adaptation, and integration of traditional technological knowledge within contemporary frameworks. Such a culturally grounded approach will not only preserve African identity and values but also provide a more authentic and sustainable pathway for technological and socio-economic transformation on the continent.

References

- Achebe, C. (1958). *Things Fall Apart*. Heinemann.
- African Union. (2020). *Science, Technology and Innovation Strategy for Africa 2024 (STISA-2024)*. African Union Commission.
- Agar, J. (2020). What is Technology? *Annals of Science*, 77:3, 377-382.
- Appiah, K. A. (1992). *In My Father's House: Africa in the Philosophy of Culture*. Oxford University Press.
- Beegle, D.M. (2025). Moses the Hebrew Prophet *Encyclopaedia Britannica* <https://www.britannica.com/event/Exodus-Old-Testament>,
- Brynjolfsson, E., & McAfee, A. (2020). *The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies*. W.W. Norton & Company.
- Christensen, C.M. (1997). *The Innovator's Dilemma: When New Technologies Cause Great Firms to Fail*. Harvard Business Review Press.
- Ezeanya-Esiobu, C. (2019). *Indigenous Knowledge and Education in Africa*. Springer.
- Freeman, C., & Soete, L. (1997). *The Economics of Industrial Innovation*. Routledge.
- Gyekye, K. (1997). *Tradition and Modernity: Philosophical Reflections on the African Experience*. Oxford University Press.



- Jack, W., & Suri, T. (2016). The Long-run Poverty and Gender Impacts of Mobile Money. *Science*, 354(6317), 1288-1292.
- Kanu, I.A. (2018). African Traditional Religion and the Problem of Founders, *International Journal of Religion and Human Relations*, 10 (1), 172-185.
- Koko, J.C. and Oko, A.E (2024). Religious Values and Good Governance in Nigeria's Democratic Landscape, *Ohazurume: Unizik Journal of Culture and Civilization*, 3(2), Pp. 57-71.
- Koko, J.C. (2020). Politics, Security Challenges and Eroding African Values in Nigeria, *Research Journal of Social Sciences and Humanities*, 1(1), Pp. 10-16.
- Mazrui, A. A., & Mazrui, A. M. (1998). *The Power of Babel: Language and Governance in the African Experience*. University of Chicago Press.
- Mbiti, J. S. (1990). *African Religions & Philosophy*. Heinemann.
- Mbiti, J.S. (1961). *African Religions and Philosophy*. Nairobi: Heinemann.
- Mokyr, J. (2018). *A Culture of Growth: The Origins of the Modern Economy*. Princeton University Press.
- Nketia, J. H. K. (1974). *The Music of Africa*. W.W. Norton & Company.
- OECD. (2019). *Measuring Innovation in Education: A New Perspective*. OECD Publishing.
- Perez, C. (2002). *Technological Revolutions and Financial Capital: The Dynamics of Bubbles and Golden Ages*. Edward Elgar Publishing.
- Schatzberg, E.(2006). Technik Comes to America: Changing Meanings of Technology Before 1930', *Technology and Culture*, 47, 486-512
- Schatzberg, E. (2018). *Technology: Critical History of a Concept*. Chicago and London: University of Chicago Press.
- Schumpeter, J. A. (1942). *Capitalism, Socialism and Democracy*. Harper & Brothers.
- World Bank. (2021). *World Development Report 2021: Data for Better Lives*. World Bank Publications.