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Technological and Environmental Impacts of COVID-19 in Nigeria: A Philosophical Appraisal

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ABSTRACT
Pandemics impact the entire ecosystem and challenge human ingenuity to provide technological innovations; to assist humans in overcoming them. This paper aims to resolve the following questions that bring out the impacts of Corona Virus pandemics on Nigerian society. The study specifically focuses on providing answers to these questions: What are the impacts of COVID 19 on the technological environment of Nigeria? Specifically, how did COVID 19 impact health technology? What are the impacts of COVID 19 on the Nigerian environment? This paper adopts the philosophical method of research. Accordingly, facts are presented, analysed, critically examined, justified and commended. The thrust of this paper hinges on the backlash of doctored underdevelopment in the face of global pandemic challenges. The researcher believes that the negative impacts of COVID 19 on technology and the environment in Nigeria can be a saving grace for the nation's redemption from technological underdevelopment and total environmental disaster.

KEYWORDS: Technology, Environment, Impact, COVID-19, Philosophy

INTRODUCTION
A philosophical appraisal of the technological and environmental impacts of the COVID 19 pandemic in Nigeria promises a good insight into understanding the place of technology and environment in Nigeria's development index vis-à-vis the state of public health. Renewable energy technology and a clean environment are two essential indicators of high life expectancy, reduction of high mortality rate and control of epidemics. The slight worry is that Nigerian society is still steeped in the use of non-renewable sources of energy. They include dams, carbon monoxide emitting generators, high carbon dioxide emitting cars and vehicles, gas flaring, oil spillage, and destruction of aquatic habitats.

The net effect of non-renewable energy sources weighs down on the environment. It can be felt in air population, water population, river population and destruction of all aquatic life. Other effects include physical environmental pollution of land that make land infertile, bush burning and forest clearing that inaugurates desertification and displaces animals, insects, birds, and other organic microorganisms that form part of the ecosystem. These negative impacts of industrial technology on the environment also foster epidemic outbreaks that can become viral and mutate into a pandemic. The displacement of birds and other organisms has been implicated in some studies as being the cause of the Avian Flu pandemic. It is not out of place to also hold that bats have been implicated as carriers of coronavirus.

The displacement of bats through bush clearing and urbanisation results in bats relocating to build its nests in the ceilings of human homes and trees around them. It poses a potential threat to the transfer of coronavirus to the human species. The ecosystem is a chain connection of all organisms according to their hierarchy of existence. One level of species depends on the lower level of species for their food and survival. An epidemic outbreak occurs when there is a jump in the order of hierarchy in the food chain. If, for example, termites are healthy carriers of a virus, birds with enzymes that kill such viruses in termites can eat the termites without any health hazards. However, humans, not having the enzymes in birds,

cannot eat termites without contacting the virus.

The point is that any form of disruption of the environment is a disruption of the ecosystem food supply chain that threatens epidemic and subsequent pandemic outbreak. The case of Nigeria is serious because Nigeria is still at the level of industrial technology. The transition to digital technology is slow and painfully unpredictable. Thus, the possibility of Nigerian society breaking away from the negative correlation between technology, environment and pandemics is not insight. There is hope that technological and environmental challenges from pandemics such as COVID-19 or other crises. It becomes a wake-up call to global standards and best practices in public health delivery and caution to abet unwholesome practices and policies that endanger the Nigerian environment and promote non-renewable energy sources and technologically based pollution.

CONCEPTUAL FRAMEWORK

The concept of technology drives by two words: *Techne* and *logos.* Techne means skill and tools for making crafts (Lindell and Scott, 1968, p.1785). Logy is a suffix that means the study of a thing. Etymologically considered, the concept of technology means the study of skill, craft and tools of making craft. Plato conceives *of techne* as art (Plato, 1999, pBk.1, P.9). Aristotle believes that *techne* is episteme, knowledge for praxis distinct from theoretical or scientific knowledge (Wolff, 2008, p.341). Plato and Aristotle's conception of *techne* appears to have some disparity. *Techne* as art is a special gift of creativity to some people, but it can also be learnt since it applies almost every aspect of work.

There is *techne* for speech, for writing, for music, for sports and even for research. It means that *whosoever* can learn the art of techne wants to learn. Aristotle believes that *techne* is a special kind of practical knowledge. He believes that this knowledge is reserved for those with the right reason (*logos*), proper disposition (*hexis*), and exemplary virtue (*Arete*). The application of virtue ethics in technical productions is paramount for Aristotle, such that the technician produces the image in his soul (*eidos*) in truth (*Alethia*). In Aristotle, technology that is not in the service of virtue, health, and life is false technology. Bunge conceives technology in these words:

> Technology is the branch of knowledge concerned with designing artefacts and processes and normalising and planning human action. Traditional technology is based on technics or craftsmanship. It was based on trial and error: while modern technology is based on research (Bunge, 2003, p.289).

The understanding of technology establishes foundations for the application of technology to resolve human problems. The technology produces artefacts and processes for planning human action. Human action can be channelled towards resolving health issues like fighting pandemics, developing vaccines, and handling the dead bodies of COVID 19 victims. Others include handling goods and services in a lockdown, diagnostics processes, contact tracing, support systems and technological environment for other social essential services such as food delivery, education, and information decimation. This concept of technology is pro-technology in terms of handling pandemics.

Hickman defines technology as, "the invention, development of tools and other artefacts, brought to bear on raw materials and intermediate stock parts with a view to the resolution of perceived problems"(Hickman, 2001, p.12). The position of Hickman underlines the fact that technology itself is environmentally dependent. It is the raw materials available within an environment, the peculiarities of the region's problems, and technological environments such as energy, water, support systems, security, and policies that guarantee the development of any technology. Thus, the technology needed to fight COVID 19 pandemic need not be borrowed or imported. There are essential imperatives that determine the functionality of a piece of technology within an environment. Hickman's view raises a serious challenge to Nigeria and the African technological environment as a sine-qua-non for the evolvement of any technology to combat pandemics such as COVID 19 and future exigencies.

Nichols sees technology as "the branch of knowledge that deals with the creation and use of technical means and their interrelation with life, society and the environment" (Nichols, 2001, p.1950). Nichols's conception of technology stresses the dimension of inter-connectivity of technology products, environment and life. No piece of technology stands in isolation. There are chains of relationships inherent in technology products. These chains of relationships make it possible to develop the Internet of Things (IoT) technology. It is believed that the technology of the Internet of Things is the technology within it. The Internet of Things supports, to a large extent, all the other technologies involved in combatting COVID 19 Pandemics across the globe. Its deficiency in Nigeria or underutilisation exposed the most technological backwardness of Nigeria.

A second concept that demands to be conceptualised within the framework of this paper is the word, 'environment'. It is from the French word: *environ* and means surrounding. It is akin to the words: Habitat, ecosystem or conditions under which a living organism is found. It can also be used to designate a region of the globe, a nation, a geographical entity, a physical state, a psychological state or a social construct. World Health Organization (W.H.O.) defines the environment in these terms: "the environment is all the physical, chemical and biological factors external to the human host and all related behaviours, excluding the natural environment that cannot reasonably be modified" (www.who.int>publication.>preventingdisease).

Here, WHO makes a distinction in the understanding environment: Physical, biological, psychological and social environment. There are modifiable and non-modifiable environments. WHO further defines a modifiable environment as "that environment by which the environmental impact on health can be measured. These include air, soil, water, and pollution with chemicals or biological agents" (www.who.int>methods.>modifenv).

The worry is that environmental pollution in Nigeria is very high and has been compromising the health of citizens for so long. The use of non-renewable sources of energy and non-adherent government policies by oil companies put the Nigerian environment at risk. Thus, the polluted environment is a ready-made receptor for epidemics and pandemics like COVID 19.

COVID 19 pandemic is a concept that needs to be explained as well. First, COVID 19 is the outbreak of an epidemic that surfaced in 2019 in the Chinese city of Wuhan. COVID 19 is an abridged nomenclature. The virus is from Corona (crown) head types of viruses like SARS and EBOLA. It is called New Corona Virus 2. This highly dreaded virus can bind within the human blood tissue and reproduce itself. This power of self-generation within human blood tissue makes it invincible for easy eradication.

COVID 19 is a disease. Every disease can be described as an epidemic when restricted to a particular area or region. It becomes a pandemic (pan—all and demic- disease) when it spreads across the North and South of the globe. World Health Organization describes COVID 19 as a pandemic. What are the intrinsic constituents of a disease that can make it to be qualified as a pandemic? Pandemic refers to an epidemic occurring over an extensive area, crossing international boundaries, and usually affecting several people (Porta, 2014). Porta's definition focuses on the spread area as the bases for a disease to be described as a pandemic. The word affecting several people is ambiguous because it can affect people without causing death. Hence, this definition has some pinch of salt.

Pandemics are determined by the geographical coverage area rather than by the high mortality rate occasioned by the disease outbreak. Pandemics for better understanding are contrasted with endemic diseases. The latter refers to the diseases commonly found within some communities or regions of the globe, and such diseases have been largely contained by the population's immune system (Madhav, Oppenheim, Gallivan, Malembakam, Rabin, and Wolfe, 2005).

World Health Organization rendered the classical definition of the Influenza pandemic in 2009: A pandemic is an epidemic occurring

worldwide or over a vast area, crossing international boundaries and usually affecting many people. (WHO, 2011). A disease can be classified into three steps: 1. Epidemic 2. Endemic 3. Pandemic. The point of debate is that the World Health Organization's classical definition of a pandemic is lame. It focuses worldwide and says nothing about severity, morbidity and high mortality rate. This shortfall is partly the reason behind the director of WHO, Tedrous Gbebreyesus, delay in calling novel coronavirus a pandemic. This scenario calls attention to the need to review the classical definition of a pandemic. Philosophically considered, a classical definition must have three elements:

1. Genus: Family of words
2. Differentia: Individuation character of the concept being defined
3. Telos: The end, goal or purpose of the concept being defined

Accordingly, a pandemic is an epidemic that spreads across the Northern and Southern hemispheres of the globe, causing simultaneous severe impacts on all facets of society, severe morbidity and high mortality toll on the population. The catchy words of impact are severe, morbidity and mortality. Worthy of note is that pandemics like COVID 19 impacted not just the human population but the environment, other species, and visible and invisible beings. The need to classify the disease as a pandemic states that, it cannot be defeated without global cooperation. The implication is that there is a need to share intelligence, research and technology if the world aims at overcoming COVID 19 pandemic.

TECHNOLOGY, ENVIRONMENT, AND COVID 19 PANDEMIC IN NIGERIA

Nigeria, as a developing nation, has not successfully transitioned from the third tool-based industrial revolution to the fourth industrial revolution of cutting edge digital technology. The primary source of energy generation is still largely non-renewable, anti-environment, and health-compromising. The automobiles in use are still used cars and trucks from Europe and America that do not comply with international best practices of carbon level emission. Non-renewable and unsustainable technology in Nigeria is part of the problem of causes of health crises. It predisposes the Nigerian population to disease infection by compromising the immune system. Technology is still part of the solution in the fight against the COVID 19 Pandemic. The emphasis should be on appropriate technology.

VIneis, Khan, Vlaadeven, and Vermaelen were tight to hold that environment is most probably the origin of pandemics. This truth resonates in Nigeria's environment. Gas flaring in oil fields and oil spillage still poisons aquatic life. Some multinational oil companies denigrate ethical best practices of responsibility to the environment and health of their host communities. Swamps and slums abound across Nigeria and serve as breeding grounds for mosquitoes and other bacteria.

Soma Shah's position that human infiltration into the space of animals and other species is the cause of pandemic outbreaks among humans is worthy of commendation. Bushing burning is still an accepted practice for bushing clearing during the farming season. The practice destroys the natural habitat of most species and endangers the species' existence, as each species has an ontological reason for existence. Furthermore, it plays an irreplaceable role in the ecosystem. Animal hunting for food is still widely practised. Thus, the disappearance of species and transfer of microbes to humans is expected. The picture being painted is that there is a negative correlation between technology and the environment in COVID 19 pandemic in Nigeria.

COVID 19 impacted much on nutrition as an environmental factor in Nigeria. There has been a consistent shift from the traditional diet of organic food to eating of process food. This change in nutrition has also ushered in a high outbreak of diseases such as cancer, stroke, and diabetes. These pre-conditions predispose patients to infection during pandemic outbreaks. That is why a more significant population of Nigerians are at risk of the COVID 19 pandemic outbreak.

According to Price-Smith, War and ecological change act as disease amplifiers. Nigerians have been at war with Boko Haram, Herdsmen and Bandits insurgence. The stress

and trauma of displaced populations who live as internally displaced persons (IDP) predispose the population to COVID 19 infection. The inhalation of chemicals from firearms and other ammunition can compromise their immune system. Worthy of note is the erosion menace ravaging most parts of Nigeria and other ecological change as desertification, river and land pollution. These can act as a catalyst to fuel the spread of new coronavirus.

The prevalent condition of technological backwardness and environmental degradation allude to the fact that there is a negative correlation concerning prevention, control, treatment and management of the COVID 19 pandemic in Nigeria. The implication is that with the reduction of the immune system due to environmental crises in Nigeria, it can be rightly predicted that COVID 19 pandemic infections will be high. The open-market environment, crowded, no social distance, and money exchange endanger infection of the Nigerian population. Experience has shown that with the imposition of lockdown across the Nigerian nation, there was a slowdown of human activity and human impact on the environment. There was a reduction in mosquito breeding in the urban areas. Air population and physical pollution of the environment reduced drastically.

The technological impact of COVID 19 in Nigeria is high. There is little or no technological environment. It refers to the imperatives that make the operations of any piece of technology possible. The technological environment involves undisrupted power supply, technological artefacts and devices, homogenous technology objects, support systems and experts. Without a technological environment, it is challenging to develop or adopt any piece of technology to find a cure for COVD 19 and manage or control its spread. Without a doubt, National Center for Disease Control (NCDC) made use of mobile phones for contact tracing and tracking to trace calls and know where a COVID 19 patient has been and who has been with the patient. Other developed nations mainly donated ventilators used. Nigeria does have tech companies and does not produce ventilators. In the same vein, test kits were donated from outside of Nigeria. Moreover, some were bought by states that needed them. Nigeria does not produce Corona Virus text kids. The line of drugs for managing the New Corona Virus are also products of international pharmaceutical companies in Nigeria. These drugs include Chloroquine, Azithromycin, pain reliever, and Vitamin C 1000 mg. This line of drugs soon became out of stock leading to the importation of the said drugs. Surgical masks and overall dress for health workers, masks and hand sanitisers mainly were imported, though some masks and local hand sanitisers were produced.

The impact of technology is felt concerning social media. With the lockdown and restriction of movements, people relied on social media to communicate. With the population demand for the use of social media simultaneously, the quality of network services declined in most areas. Most health institutions are not registered with Google and do not subscribe to web and I.P.O. The lack of such provisions makes it hard for the professionals to access information on best practices for managing COVID 19 pandemic. The technological impact of COVID 19 in Nigeria is felt in the lack of production and provision of personal protective equipment (P.P.E.). Nigeria lost many medical professionals to COVID 19 due to technological backwardness. In many technologically developed nations, the technology of Artificial Intelligence (A.I.) and Robotic Technology (R.T.) as drones were deployed in the supply chain service to make much-needed goods available to areas in short supply of basic requirements for effective response to COVID 19. Instead, people on essential services broke the policies on lockdown, facemask and social distancing to make up for deficits in the supply chain.

The technological deficits of the Nigerian nation were exposed concerning Information Technology (I.T.). With the lockdown occasioned by COVID 19 pandemic, there was increased dependence on Information Technology. Mobile service providers, Internet APP developers, social media providers, and bloggers enjoyed increased product demand. Unfortunately, the large population of Nigeria forms more consumers than inventors and producers. Thus average low-income earners

spend more to service communication demands of the pandemic, while the multinational digital companies gain. In addition, the quality of the network does not cover all parts of the Nigerian nation. The portion of Nigerian citizens that travelled to the villages were out of network zones. They cannot make calls or participate in online meetings, lectures, and conferences. In this case, the technological divide between urban and rural dwellers is widespread and significantly impacted during COVID 19 pandemic.

THEORETICAL FRAMEWORK

This aspect of this research is to review theoretical efforts made by researchers to resolve the problems concerning the impact of technology, environment and pandemics generally and to tailor it down to the COVID 19 pandemic impact on Nigeria. It is important because the impact of COVID 19 on Nigeria cannot be discussed in isolation since pandemics require global cooperation.

What is the origin of Pandemics? Soma Shah, Pandemics, (2017) theorises that "the paradigm of invasion or microbial xenophobia" often fails to explain why a microbe that's existed for ages turns into a pandemic-causing pathogen. The crux of her argument is that the idea that pathogens are attacking humans from animals may be a reversed invasion paradigm, in which case humans are the ones invading animal space. Human activities towards the natural and physical environment like deforestation, housing crises, hunting of animals for food and economic reasons are possible causes of pandemics. Soma Shah calls for a paradigm in the mode of thinking about pandemics. Environmental degradation as physical pollution turns the environment into a breeding ground for bacteria and transfer of bacteria through human-slum interaction.

Humans renegade environmental and animal rights, creating room for the transfer of pandemic causing pathogens. Animals do not ask to be adopted as pets. Humans invade animal rights for freedom and adopt animals for pets. It is humans who break the sexual gap installed in the hierarchy of beings. Humans sexually abuse animals without the consent of animals in the process and contact with pathogens that can cause pandemics. Human domineering attitude towards the natural environment is behind the origin of pandemics.

In his book, *The Question Concerning Technology* (1977), Heidegger puts forward a metaphysical theory of technology. The question of what is technology does not give a proper answer. Technology is not the human product as the production of a thing. It is merely an anthropological conception of technology. Technology is not just the application of the technique to resolve human problems. It is a merely instrumental concept of technology. The totality of technological devices is not technology. The search to understand the technology needs to reframe the question of the essence of technology?

The path to resolving this question brings out Heidegger's metaphysics of technology. Heidegger discusses the thinking modes that underlay human domination of the natural environment through technology. With modern technology, humans relate with the environment in the mode of thinking of *challenging-Forth, Standing-Reserve and Enframing*. In the way of thinking of challenging-Forth, humans relate to the natural environment with an attitude of stretching out energy from the environment.

Heidegger uses the example of a dam. The river's natural flow is obstructed when humans build dams as an energy source. It can endanger aquatic habitats, increase water levels, erosion, and flooding. Dams are non-sustainable sources of energy capable of endangering the transfer of pathogens from their natural environment to human beings, causing epidemics and possible pandemics. In the mode of challenging –forth, nature is forced to yield its resources even when they are not for immediate use. Modern technology maximally exploits nature to yield maximum energy at minimum expenses (Heidegger, 1977, p.15). *Standing-Reserve* is a mode of thinking about nature humans harness energy for immediate and future use. Thus energy will have to be held in reserve outside of its natural habitat, which constitutes a possible danger to humans, other beings and the environment.

Heidegger captures the impact of technology on the environment in the word *Enframing (Gestell*). In his words: "enframing means that way of revealing what holds sway in the essence of modern technology and which is itself nothing technological" (Heidegger, 1977, p.20). Enframing is a mode of thinking in which technology, in its totalitarian character, conditions humans, other beings and society at large. This dangerous power of technology reduces humans to be like every other object of nature. Heidegger believes that Enframing is the essence of technology. Enframing is behind the new binary conception of the world as technology and other beings with humans as part of other beings. Enframing is all about enslaving humans such that humans are short-changed for objects.

In an interview with Signal Samuel, Sonia discussed the impact of technology and the environment on pandemics. The exploitation of new habitats by humans causes pandemics. Human developmental activities like road construction, new cities, mining, large scale farming, and oil exploration have displaced wild animals' natural habitat. It has caused wildlife extinction and forced other animals and birds to seek shelter in the ceiling of human houses and around the human physical environment. In such a shared environment, microbes can quickly transfer, even accidentally and unintentionally.

Housing problems occasioned by low socioeconomic status contribute to the environmental impact of pandemics. Housing problems in developing nations like Africa and Nigeria contribute to the origin and spread of pandemics as humans are forced to live in slums, under bridges and in parks. These exposures create room for the transfer of microbes to humans. Attention has been drawn to nutritional problems as environmental factors that impact on origin and spread of pandemics. Unhygienic animal rearing habits, meat production, abattoir, food production, and food supply chain make bacteria infection of humans easy and possible pandemic inevitable.

Price-Smith (2001), in his work on *The Health of the Nations: Infectious Diseases, Environmental Change, and Their Effects on National Security and Development,* argues that environmental energy generation underlies massive climatic change, which in turn affects human health security and creates economic and political crises and states and nations. He suggests that funds and structures should be implemented to coordinate a healthier and more equitable form of development. In addition, he recommends that a course on the Political Economy of diseases should be introduced in higher education as part of the Political Science Course.

Price-Smith (2009), in another work titled: *Contagion and Chaos: Disease, Ecology, and National Security in the Eve of Globalization,* postulates that infectious disease poses a danger to national security. The impacts depend on lethal, spread, fear, and economic crises. He added that warfare and ecological change determine the spread of diseases and act as *disease amplifiers*. Price-Smith posits that globalisation and ecology change accelerate the spread of diseases but not initiate them. The position differs from Shah, who holds that ecology change is the underlying cause of diseases and pandemics.

Tilma and Clark, in their work on *Global Diets, Link Environment Sustainability, and Human Health,* argue that income and urbanisation cause a shift in diet paradigm from organic diets to inorganic diets such as refined sugar, refined fats, and oils and meats. The production of these inorganic foods causes an increase in emission of greenhouse gas, leads to the clearing of bushes and causes the extinction of species. In addition, the production of inorganic or processed diets leads to health crises such as diabetes II, coronary heart diseases, and chronic non-communicable disease. The way out is to revert to the traditional diet paradigm.

It must be noted that processed food is a product of technology and reduces the human immune system to fight diseases. Vineis, Khan, Vlaaderen, and Vermeulen (2009), in their work on *New Research Technologies, Environment and Causes of Diseases*, postulate that chronic diseases are likely to have an environmental origin. Environmental risks have been elusive in epidemiological studies. They maintain that genetic and environmental exposures cause diseases and

attribute genetic exposures to new research technologies.

Elavarasan and Pugazhendhi (2020), in work titled: *Restructured Society and Environment: A Review on Potential Technological Strategies to Control the COVID 19 Pandemic,* The central focus of the study was to uncover the hidden roles of technologies that helped in the control of pandemics. The researchers noted the following technologies: Information Computer Technology, Artificial Intelligence technologies, sensors, remotes, testing kits, diagnostic machines and treatments, and bridging supply chain problems. These technologies help in the control of the spread of COVID 19 pandemics. Other technologies that help support society work from home technology systems such as e-learning, tracking technologies, robotic technologies and drone technologies.

DISCUSSIONS AND ISSUES

The first problem to be addressed is the impact of COVID 19 on technology in Nigeria? The technological demands needed to cope with the challenges of COVID 19 raise serious questions about the place of technology in the Nigerian project. What are the technological products of Nigeria? It is worrisome that a nation with more than six universities of technology ministry of science and technology both at federal and state levels, after sixty years of its existence, cannot boost technological products to solve her local problems and export in order to increase its gross domestic products (G.D.P.). The situation becomes more disheartening in the face of the annual budget for the science and technology ministry and universities. It could have been expected that during COVID 19, Nigeria should have handed out locally produced laptops to teachers and students across education levels to ease the cost-effectiveness of working from home and online education.

Communication and network issues could have been resolved by inviting national tech companies to consider reducing tariffs and boosting network and other services for efficient and effective service delivery. Local production of mobile phones could have reduced the prices and increased the population of citizens with mobile phones for communion and communication during the total lockdown. Most Nigerian citizens, for reasons of low income, cannot buy or maintain a mobile phone. The luxury of imploring advanced technology of Artificial Intelligence as robots and drones for service delivery in the face of bane on the flight was not applicable in Nigeria. The problem is not that Nigerian intellectuals lack technology sense but the failure of leadership to give technology a pride of place in the problem-solving leadership model. With the confiscation of autonomy of universities, limitations and control of self-governance of institutions, cancellation of research grants, poor infrastructure, unequipped laboratories and analogue libraries, Nigeria is very far from technological advancement to face the challenges of COVID 19.

In addition, government policies and the business environment make it difficult for Multinational Tech Companies to invest in Nigeria. The net result is that Multinational Tech Companies just open customer service outlets to support the percentage of Nigerian citizens using their products. It is another way of confirming that Africa and Nigeria, in particular, form a market. Nigeria is a foreign market. She is a market and benefits only Value Added Tax (V.A.T.) and import duty for foreign goods coming into the country, while foreign tech companies make their gains in abundance.

The second problem is how did COVID 19 impacts health technology? COVID 19 impacted Nigeria's Biotechnology departments, Health delivery, Pharmaceutical technology and medical laboratory technology. The impact of COVID 19 on health technology is a corollary of real impacts on technology as a whole. This problem is interconnected. Poor health technology predicts low-quality drugs, faulty medical laboratory results and poor medical outcomes. The sorry situation of Nigeria is the sight of a vast facility tagged medical centre but empty of required cutting edge medical technology devices and in some instances lack of support personnel. The situation of health centres is more pathetic. Some have dilapidated buildings with little or no equipment for caring for patients. With this background, COVID 19 overwhelmed medical personnel, medical technology,

medical laboratories and drug production companies. The available medical personnel could not match the number of infected people. Thus, much medical personnel were stressed and stretched beyond their stress threshold.

The reason was a lack of supporting effective technologies to complement human medical personnel. In the case of technologically advanced nations, robots were developed to help in checking the temperature of patients and screening patience for COVID 19 infection. Nigeria does not have the technology to produce test kits that can provide data on the infected population to aid in planning quarantine, drugs, food, ventilators, and the possibility of managing death rates. The race to develop a vaccine to treat COVID 19 eluded Nigeria. There are no quarantine centres built even after the experience of Ebola and Serious Acute respiratory syndrome (SARS). Nigeria does not have pharmaceutical companies or technology for drug production. Pharmaceutical companies are privately owned or jointly owned by individuals and foreign companies. These pharmaceutical companies detect for the market.

Nigeria further imports drugs and faces massive importation of adulterated drugs. The reason behind Nigeria's backwardness in medical technology is not far-fetched. The religious divide between Christianity and Islam is a factor of reckon. Adherents of Islam and indeed Arabs do not believe in Western education. Thus, developing Western education to the point of training technologies and pharmaceutical tech companies is an illusion. In addition, Muslims do not trust Western drugs unless produced by Arab nations. On the contrary, Christians believe in Western education and use Western drugs. More often than not, drugs allowed into the country have the imprint of Arabic writings and symbols.

The third question is: What are the impacts of COVID 19 on the Nigerian environment? The relationship between COVID 19 and the environment seems to be an open secret. It is assumed that Corona Virus does not survive in a high-temperature environment. What has not been resolved is the relationship between the New Corona Virus and the environment's temperature. The New Corona Virus defiles high Nigerian temperatures. The significant impacts of COVID 19 on Nigeria's environment are in the areas of reduction of environmental pollution and reduction of pressure on the physical environment due to human activity. With the total lockdown, there was silence and the elimination of noise.

Cars and utility vehicles were on the road. There was no emission of carbon monoxide, no blaring of horns, and no sirens from police and government entourage. The atmosphere for meditation and deep thinking was restored, and exploitation of the environment was reduced. Every work in construction and building was suspended. Forest clearing and displacement of animals in their natural habitat were put on hold. Urinating along the streets and defecting in some instances that increased the breeding of mosquitoes came to a temporary halt as many people travelled back to the rural communities. With the fear that the Corona Virus came from eating animals or bush meat, the hunting of animals for food and business stopped. Nigeria is an oil-producing nation. The Southern part of Nigeria suffers untold environmental pollution, especially the Niger Delta areas. In these areas, there is water pollution, destruction of aquatic habitat, gas flaring that pollutes the air, destruction of land fertility, and reduction of quality of life and life expectancy of the people. COVID 19 prompted the suspension of crude extraction and many other activities.

There is a correlation between environmental pollution and epidemic outbreak. Pope Francis (2015: 26) captured this correlation in these words:

> The earth's resources are also being plundered because of short-sighted approaches to the economy, commerce and production. The loss of forests and woodlands entails the loss of species which may constitute significant resources in the future, not only for food but also for curing disease and other uses. Different species contain genes that could be essential for meeting human needs and regulating environmental problems.

The rural population accounts for up to sixty per cent of the Nigerian population. Moreover, this number of people depends on firewood for cooking. It means deforestation for purposes of energy generation for cooking. The implication is the displacement of species that use the forest for habitat. The plants could serve as shields for land against the heat of the sun and the force of the rains. The plants could also serve as windbreakers and purify the environment by purifying the oxygen humans inhale. The displacement of species can lead to their extinction. COVID 19 impact on Nigeria is a call to preserve the environment.

Apart from deforestation, Oil spillage destroys land fertility and food production, forcing people to depend more for nutrition on processed food that lacks enough nutrients to build a robust immune system. Exposing a deficient immune system to any bacteria is an invitation to infection.

COVID 19 poses a challenge to caring for the environment. Power generation in Nigeria is mainly through gasoline or diesel generators and plants. These generate noise and carbon monoxide. Carbon monoxide is a killer gas on inhalation, among reports of families dying because of carbon monoxide produced by their generator. The challenge is to evolve renewable sources of energy like generation power from air, solar energy and waste burning. Building dams across flowing waters is counter-productive. It obstructs the flow of a river, destroys aquatic life, causes overflowing of riverbanks and challenges nature to standing-reserve in the language of Martin Heidegger. Overflowing of riverbanks leads to further environmental degradation as an erosion menace.

CONCLUSION

The technological and environmental impacts of COVID 19 in Nigeria are challenging forth on Nigeria to update in technological advancement that cares for the environment. It is a clarion call for individuals, private sector and public sector, government and policymakers to co-operate and work together with multinational oil companies operating in Nigeria to address environmental problems and technological solutions to Nigerian problems. These challenges demand a change of mode of thinking. Nigerians in general and the Nigerian government in particular need to harken to Martin Heidegger's voice on the need to overcome *challenging-forth* attitudes to nature, hoarding nature's resources as *standing-reserve* and *enframing*. Nature is to be cared for and to be wrestled with in order to exhaust her resources. Challenging nature to yield her resources for hoarding and selfish purposes is why there is technological backwardness and environmental degradation. Nigerians need to overcome enframing. Technology enframes whatever it lays hold on.

Nigerians have been enframed into a marketplace and consumerist for technology companies. This grid hold encapsulates the thought process. Nigeria's government and citizens are satisfied with buying brands of other nations: phones, television, machines, pins, electric generators, fuel, cars, and computers. Here lies the enframing that a nation cannot think outside the box to develop its brands in line with its environment and for the common good of its citizens. This inability for self-evaluation is why Nigeria depended on charity from other nations to control and manage COVID 19 pandemic.

RECOMMENDATIONS

To achieve this and surmount the challenges, there is a need to address the question of the source of energy, from unsustainable and non-renewable sources to sustainable and renewable sources. It is when Nigeria has an uninterrupted power supply that overcomes technological and environmental crises in the face of future pandemics. It can be possible. There is a need to phase out the use of generators and plants for power generation. Nigeria should set up and empower policy enforcers to drive foreign and local oil producing companies to be faithful to the memorandum of understanding between the companies. Moreover, host communities to clear oil spillage and rebuild and provide host communities with necessities of life such as light, water and shelter.

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