

# POSITIVISM IS SELF-DEFEATING: AN ENVIRONMENTALIST SCORE-SHEET OF SCIENTIFIC AND TECHNOLOGICAL BREAKTHROUGHS

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## ABSTRACT

Positivism (and, causally, neo-positivism) is a human ideology promoting a scientific and technological mindset. It took its birth in the nineteenth century in Germany and spread like the weird wind across European and American countries until it attained its equilibrium in the 20th century. Masterminding science and technology, its manifesto promised to wipe away all human tears in all spheres, including material, epistemic and spiritual sufferings. It is high time positivism is assessed to see how far it has gone in fulfilling its promises to humanity. Hence, it becomes exposed that positivism, through advancement in science and technology, brought about innovations, from agricultural and food production to drugs and medical advancement, from transportation and information advancement to building and construction technological advancement, just to mention a few. Of course, it is unreasonably disputable that it has brought about significant growth when we assess it from these lenses. Glory be to positivism on this ground! However, an assessment beyond this surface exposes that the changes are just unilateral growths devoid of development in the real sense. Lives are saved in 'retail' through advanced medical care but maimed in 'wholesale' in war with weapons of massive destruction. People get to their destination easier and faster, but an untimely journey into heaven in masses through a plane crash occasionally results. Through information technology, habits, including corrupt ones, spread like epidemic viruses without necessarily going to places. Almighty Dollars are being worshiped and glorified in the love for material things at the expense of Almighty God. In a word, rather than eliminating the suffering of humanity as earlier promised, what it does is culminating to it. With this scoresheet at the back of our mind, this paper submits that positivism, as an ideology, is a failure for reducing reality to its "physical" component while neglecting its complementary counterpart, "metaphysical" ones as contained in the Holy Scriptures.

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Science and technology have always been part of human history. This is an undeniable fact of human nature; being curious to know and being restless to bring about a positive change to the natural routine of events. This is to bring about ease and efficiency as part of human nature. Recourse to human history vis-a-vis the historical development of science across different human cultures would bear witness to this fact. From Ancient Egyptians to Ancient Greeks, from Mesopotamian culture to Arabic culture, and from Chinese to Medieval era down to the Industrial era, all have significant scientific and technological history. Human technological developments that metamorphose the wanderer stage to the rudimentary agrarian era, from the Stone Age to the Iron Age, cannot be underestimated in scientific and technological history.

What marks out positivism, and later neo-positivism, in the history of scientific development is the ideological underpinning that birthed it. It brought about a revolution in the history of science and developed to become a global movement that dominated the Nineteenth and Twentieth Centuries. The onus of this paper is to make a general assessment and establish an up-to-date transcript of the ideological movement with the aim of showing whether it is progressive, regressive, or fluctuating. This paper shall present a history of positivism and neo-positivism, otherwise called logical positivism. After that, a general assessment of human scientific and technological development and the troubles attached to each one of them will be presented. The paper shall, nevertheless, conclude that although it is an undeniable fact that the positivist spirit has brought about significant changes in the historical development of humanity, it is still a far cry compared with their corresponding harms. More so, as spelled out in its manifesto, its pledges to humanity remain a chimera.

## I. CLASSICAL POSITIVISM AND NEO-POSITIVISM IN HISTORY

The two major schools of thought that made strenuous efforts to formalize what Alan Chalmers called the commonsense view of science are the empiricists and the positivists, who both believe “that scientific knowledge is derived from the fact.”<sup>1</sup> British empiricism, with its members including John Locke, George Berkeley, and David Hume, are of the view

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1 Alan Chalmers, *What Is This Thing Called Science?*, 3rd ed. (Indianapolis: Hackett Publishing Company, Inc., 1999).

“that all knowledge should be derived from ideas implanted in the mind by way of sense perception.”<sup>2</sup> Sharing the same view with the empiricists that knowledge is derived from the facts of experience, the less psychological and broader positivist view is understandable from its coinage by Claude Henri de Rouvroy, Comte de Saint-Simon (1760-1825 CE) and its formalization by the French sociologist and philosopher, Auguste Comte (1798-1857 CE). He was the Father of the Positivist Movement, whose positivist articulation in three stages of the theological, metaphysical and scientific<sup>3</sup> was continued in the programme of logical empiricism or neo-positivism of the Logical Positivists headed by Moritz Schlick (1882-1936 CE).

Drawing a line of continuum with empiricism and pragmatism in a wider sense of the term, positivism is defined as a philosophical school that has science and culture as its deal. Historically speaking, the expression that anticipates the spirit of positivism in the history of philosophy can rightly be founded in the writing of David Hume. In his *An Enquiry Concerning Human Understanding*, Hume argues that:

When we run over libraries, persuaded of these principles, what havoc must we make? If we take in our hand any volume of divinity or school metaphysics, for instance, let us ask, “Does it contain any abstract reasoning concerning quantity or number?” No. “Does it contain any experimental reasoning concerning matter of fact and existence?” No. Commit it then to the flames. For it can contain nothing but sophistry and illusion.<sup>4</sup>

The coinage of the term “Positivism” was credited to Saint Simon. However, the inventor of the term sociology, the French sociologist cum philosopher Comte, was dubbed the father of positivism. He merited the status on the grounds of his popularization of the term like never before. At least, as far as Comte’s formula is concerned, positivism sets to present an evolutionary history of human thought along three “natural” but successive routes: theological, metaphysical, and scientific, or simply put, positivism. The first phase is characterized by the supremacy of mythological narrations and superstitions. The second stage is transitional. It is dominated by

2 Ibid, 3.

3 Mario Marsonet, “Positivism,” *Interdisciplinary Encyclopedia of Religion and Science*, (2002): 1, accessed January 9, 2020, edited by G. Tanzella-Nitti, I. Colagé and A. Strumia, (<http://www.inters.org> DOI: 10.17421/2037-2329-2002-MM-1).

4 David Hume. *An Enquiry Concerning Human Understanding* 123. (Oxford: Oxford University Press, 2000).

abstract thought, while the third phase, which, according to him, is the only true human knowledge, is dominated by concrete reason that manifests as science. Comte succinctly puts it this way:

All of our speculations, whatever they may be, are inevitably subject, either as far as the individual is concerned or the species, to passing through three different theoretical states: theological, metaphysical and positivist. Although in the first place, it is indispensable, under all the aspects, the first state is to be understood from now on as being strictly provisional and preparatory; the second, which in reality, is nothing more than a slight modification of the first, carries out a transition role, gradually leading to the third; this one being the only fully normal one, to establish, in every way, the definitive regime of human reason.<sup>5</sup>

By this, considering himself as the “High Priest,” Comte launched a “religion of humanity” or “scientology” so to speak, as a substitute for the “religion of God.” According to Comte, This historical dialectic theory applies to both individuals and humankind in general. In intellectual development, individuals, according to him, generally pass through these stages. The Father of Psychoanalysis, Sigmund Freud, seems to support this theory of Comte. According to Freud, the religion is a ‘childhood neurosis. The adults who still practice religion, in Freud’s view, are suffering from a reminiscence of this ‘childhood neurosis’ and need to be cured of it by intellectual sophistication.<sup>6</sup> The individual, as well as humankind, unavoidably passes through these three successive intellectual stages, of which the last one is the positive stage, which is the end, while the first two are the preparatory and transitory stages, whose importance only lies in attaining the final and desired positive stage.

In the first religious stage, every event is interpreted with a religious worldview and speculations. Playing a preparatory role, this, according to Comte, is the early or primitive stage of the development of humankind. God and gods are invented by humankind at this stage to explain anything that comes to his/her experience. This early stage paves the way for the second, yet superior to the previous stage. Playing a transitory role, this stage, according to Comte, is the metaphysical stage that is dominated by abstract and metaphysical

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5 Augustine Comte. *A Discourse on the Positive Spirit* (London: Reeves, 1903).

6 Sigmund Freud, *Massenpsychologie und Ich-Analyse. Die Zukunft einer Illusion* [Group Psychology and the Analysis of the Ego: The Future of an Illusion (Vienna: International Psychoanalytic Publishing House, 1921).

explanations of reality. Becoming more intellectually sophisticated would unavoidably open the way for the third and final stage. According to him, this is the true human stage, labeled the “positive stage.” At this stage, the scientific worldview successfully replaces the religious and metaphysical stages. Hence, the human mind is confined to what is empirically verifiable and explainable. He opines that scientific knowledge furnished by this positive mind is the only genuine and positive human knowledge.

Classical Positivism later grew into Neo-Positivism, otherwise known as Logical Positivism. Logical Positivism is the Twentieth Century development of Comte’s Classical Positivism. It depicts and draws a line of continuum with Comte’s ideology. This ideology began in Vienna and was championed by Moritz Schlick following his seminar under the name of the ‘Vienna Circle.’ This Circle was populated by philosopher converts from scientific orientations. Some other advocates of Logical Positivism include the most famous of them, the German philosophers Rudolf Carnap (1891-1970 CE),<sup>7</sup> Hans Reichenbach (1891-1953 CE) and Carl Gustav Hempel (1905-197 CE), the British philosopher who introduced Logical Positivism into the English-speaking world (and who prefers to call the school *Logical Empiricism*), Alfred Jules Ayer (1910-1989 CE) and the Austrian philosophers, Otto Neurath (1882-1945 CE), Hans Hahn (1879-1934 CE) and Kurt Gödel (1906-1978 CE).<sup>8</sup> Drawing from their antecedent ideology, this School had extreme confidence in science, making them maintain a rigorous attitude towards science. Hence, according to them, genuine knowledge about the world can be attained if, and only if, scientific methods are employed. On this ground, they condemned both theological and metaphysical speculations, just like classical positivism.

Although not a member of Vienna Circle, Ludwig Wittgenstein’s idea in his book entitled *Tractatus Logico-Philosophicus*, where he argues that there is correspondence between language and facts,<sup>9</sup> greatly influenced the Logical Positivists. The Vienna Circle bases positivism doctrine on Wittgenstein’s ideas whereby they saw in them a good weapon to launch an attack on metaphysics and theology. Hence, they reduced philosophy to a conceptual clarification arena. In this view, metaphysics and normative ethics cease to be part of philosophical domains. The Logical Positivists, hence, adopt the principle of verification, which reads that the meaning of a proposition is the method by which it is verified.

Paralleling with Vienna Circle is another Circle in German named Circle of Berlin and a

7 Rudolf Carnap, *Philosophy and Logical Syntax*, (Bristol, UK: Thoemmes Press, 1935).

8 Marsonet, “Positivism”, op. cit., 2-4.

9 Ludwig Wittgenstein. *Tractatus Logico-Philosophicus*, translated by Frank P. Ramsey and Charles K. Ogden (London: Kegan Paul, Trench, Trubner & co., Ltd., 2021).

School in Poland named School of Leopoli-Varsavia. It can be inferred from the *International Encyclopedia of Unified Science* (1882-1960 CE)<sup>10</sup> and a *Journal of Unified Science* directed by Otto Neurath,<sup>11</sup> and Ayer's *Language, Truth and Logic*<sup>12</sup> that the Logical Positivists believe in a rigorous scientific philosophy that pays attention to Mathematics, Physics, Formal Logic, and Epistemology. They accept only scientific claims and reject all metaphysical claims, which, for them, are meaningless. Only scientific statements and the propositions of Logic and Mathematics are meaningful. Buttressing this view, the Manifesto of the Vienna Circle of Logical Positivism states:

If someone asserts that there is a God, the primary basis of the world is the unconscious, there is an entelechy which is the leading principle in the living organism, we do not say to him: what you say is false; but we ask him: what do you mean by these statements? Then it appears that there is a sharp boundary between two kinds of statements. To one belongs statements as they are made by empirical science; their meaning can be determined by logical analysis or, more precisely through reduction to the simplest statements about the empirically given. The other statements, to which belong those cited above, reveal themselves as empty of meaning if one takes them in the way that metaphysicians intend.<sup>13</sup>

These 19<sup>th</sup> and 20<sup>th</sup> century ideologies are united in singing the praise of science and its brother, technology. Science and technology are human attempts to tame nature to their best advantage. With this ideological mindset, many scientists of the 19th and 20th centuries spurred onto the field as never before with the mindset to solve human problems in their entirety. There are two major problems with the empiricist/positivist assumptions; one is epistemological, while the other one is pragmatic. From the pragmatic point of view, following the positivist spirit to the letter, it was the case that several unprecedented growths were experienced in the field of science and technology. Sadly, this growth brought with it, terrible problems. In the next session, some of the problems shall be critically assessed.

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10 Otto Neurath. *An International Encyclopaedia of Unified Science 1882-1960 CE* (Boston: D. Reidel, 1936).

11 *Erkenntnis*, Journal of Unified Science.

12 Alfred J. Ayer. *Language, Truth, and Logic* (Harmondsworth: Penguin Books, 1936).

13 Marsonet, "Positivism", op. cit.

## II. TOWARDS AN ASSESSMENT OF THE SCIENTIFIC AND TECHNOLOGICAL IMPACT OF POSITIVISM

Here, we are going to examine some of the human impacts aided by scientific and technological development while suspending both the positive and negative effects of each contribution on a balance to see which of the two outweighs the other.

### 2.1. Healthcare Versus Warfare

There is no reasonable doubt that science and technology have led to a significant advancement in healthcare facilities.<sup>14</sup> From medical diagnostic techniques to pharmaceutical techniques, from emergency health care facilities to the development of life support machines, from an extensive knowledge of human biochemical make-ups down to the development of artificial/synthetic human organs. All these have gone to a very large extent to give supposedly dead humans chances to extend their lives, and it is a logical possibility, especially with AI being introduced into the practice, that a day may come when scientists will be reviving the dead wholesale.<sup>15</sup> However, this stance should not be over-celebrated. The reason is that many a time, medics administer their measures to save a life, and the measure incurs so many adverse effects that people would never remain the same as they were originally. It is a matter of time-buying such that some people only leave more time but with little or no functioning and enjoyment of life as it originally was.<sup>16</sup> Consider an athlete who undergoes a heart transplantation; could he continue his athletic activities as he was? I believe he would be advised to reduce the stress. Many people were warned, medically, against taking their favorite activities, including food, in the name of buying more times. Of what meaning is life when it is devoid of one's purpose and happiness?

Culminating to this is the fact that this safety of life is done in 'retail' compared to the killing of life that is executed in 'wholesale' at warfare.<sup>17</sup> Although very unfortunate, it is undeniable that war has always been part of human history from antiquity as recourse can be

14 Lakshmi M. Aggarwal. "Advancement in Medical Technology and its Impact on Health Care in Developing Countries," *International Journal of Radiation Therapy* 1: 2 (Feb. 2017), 1-2.

15 M. Vatandoost, and S. Litkouhi. "The Future of Healthcare Facility: How Technology and Medical Advances May Shape Hospitals of the Future," *Hospital Practices and Research*, 4: 1 (2019), 1-11.

16 L. C. Lopez, M. Botero, J. Pino, J. H. Ramirez and M. Palacios. "Adverse Drug Reactions in Internal Medicine Units at a University Hospital: A Descriptive Pilot Study," *Colombia Medica*, 41: 1 (2010), 45-51.

17 W. S. Carus. "Defining Weapons of Mass Destruction," *Centre for the Study of Weapons of Mass Destruction Occasional Paper*, 8 (Washington, D.C.: National Defense University Press, 2012), 36.



made to the Biblical history of Abel and Cain,<sup>18</sup> but how sophisticated were the means through which it was done? It was barely a form of physical combat. It must have been very rudimentary during the Stone Age, at least compared to the Iron Age. Warfare became worsened in human history immediately when humanity developed guns as weapons against one another. This escalates accordingly as humanity becomes sophisticated in weaponry. From catapult to sword, arrow, and spear, from powder gun of one loader to machine guns of multiple loaders, from simple bomb to atomic bomb, all have gone to a very large extent in wiping human lives on the board wholesale.<sup>19</sup> As if that was not enough, the development of nuclear energy as an outcome of Albert Einstein-led research took the war hazard to an unfortunate level in human history as it was first released in Hiroshima and Nagasaki in Japan during World War II.<sup>20</sup> This unfortunate situation was followed by the cold world war, where many powerful countries were competing in the nuclear weaponry race. It is rumored that COVID-19, as epidemic as it was, resulted from a biological weapon devised by China for economic reasons.<sup>21</sup> In a word, while scientific efforts are still a far cry from saving the whole world through healthcare facilities, they have already devised weapons that can bring about the annihilation of the globe altogether.

## 2.2. Transportation and Its Consequences

One of the characteristics of living things is movement, which is simply partial motion in plants. In animals, it involves the movement of the body, as a whole, for transportation purposes. Naturally, one human means of transportation was by trekking. Taming of animals makes humans make use of animals for the transportation of self and goods from one place to another. To cross a river, swimming is resorted to, and later, a canoe was devised. In all these, few and fewer fatal accidents barely did occur. Compared to what is obtainable nowadays, these means of transportation were rudimentary and relatively slow. With the adoption of bicycles, motorcycles, vehicles, aircraft, trains, ships, and speed boats, all of which were engendered by advancements in science and technology, humans could transport their goods

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18 *The Holy Bible*. King James Version (Oxford: Oxford University Press, n.d.), Genesis 4: 9-10.

19 . Ene, "Negative Effects of Science and Technology", <https://wallyben.com/negative-effects-of-science-and-technology/> date of access: 21. 09. 2024.

20 Masao Tomonaga. "The Atomic Bombings of Hiroshima and Nagasaki: A Summary of the Human Consequences, 1945-2018, and Lessons or *Homo sapiens* to End the Nuclear Weapon Age," *Journal for Peace and Nuclear Disarmament*, 2019. <https://doi.org/10.1080/2575164.2019.1681226>

21 A. A. Dehghani and G. R. Masoumi. "Could SARS\_CoV-2 or COVID-19 Be a Biological Weapon?", *Iran Journal of Public Health*, 49, no. 1 (Oct. 2020): 143-144.



and themselves in masses within a relatively short time. Space rockets also take humans to other planets. Glory be to science and technology! However, attached to this development are unprecedented fatal accidents and crashes, which not only maim but also leave many people with unprecedented casualties and deformities.<sup>22</sup> Assessing it generally, it can be pressed that science and technology aid humanity faster to their destination, even premature death. It promises to relieve humans of stresses in transportation, but eventually, deformity and loss of lives and properties result. Body exercise, which is one of the natural physiotherapeutic needs of humans, is provided by trekking and animal means of transportation. This is essentially lacking in machine-aided transportation.

### 2.3. Materiality Versus Immateriality Conundrum

There is no reasonable doubt that with science and technology coming onboard in full fledge, humanity has recorded an unprecedented increase in material resources. These include luxuries of lucrative value, transportation devices, communication gadgets, and building and construction materials, just to mention but few. Of which, humans by their very nature, are insatiable. Their wants are always limitless compared to the available resources to acquire them. The tremendous increase in material resources as engendered by science has created unnecessary tension for humans in the name of greediness to acquire more. These, they responded to, often, in desperate means of acquiring more wealth, even including illegitimate ways, leaving many of their counterparts at the expense of their aspirations. Hence, people would aspire to have several mighty buildings even when they cannot fully occupy a bed space. An individual would care for hundreds of luxurious cars and even private jets when travelling in commercial ones could suffice. These also include a demand for expensive clothing, shoes, wristwatches, and communication gadgets, all of which are of great demand in nature in terms of their manufactures and usage. By scientific and technological approaches to life, humans are left, to borrow a concept from *Oliver Twist*, “wanting more...”<sup>23</sup> and there will always be more. Almighty Dollars are worshipped at all costs, neglecting the Almighty God! Money becomes the end and justifies every means. The wealthy ones are uncharitable and callous to the poor who also responded with benedictory, frauds and kidnapping with ransom options in the name of hijacking money from the rich.

22 A. Mohammed, K. Ambak, A. M. Mosa and D. A. Syamsunur. “Review of the Traffic Accidents and Related Practices Worldwide”, *The Open Transportation Journal*, 13, no. 1 (June 2019), 65-83.

23 Charles Dickens. “*Oliver Twist*” (England: Richard Bentley, 1838).

Sadly, assessed individually or collectively, the reality of life is that; materiality is inversely proportional to immateriality such that an increase in one would, automatically, translate to a decrease in the other, accordingly.<sup>24</sup> Human values, morality, religion, and spirituality are considered immaterial components of human nature. They are prices paid for the increase in human materiality. In the name of wanting more, wealth is, dubiously, siphoned from the masses to concentrate at the hands of the greedy and desperate privileged few, resulting in two economic classes of a wide gap; the proletariat and the bourgeois.<sup>25</sup> Austerity and an ascetic way of life have given way to the love of luxuries. Humanity becomes empty. The consequence of this attitude is that humanity loses its spirituality in material quests.<sup>26</sup> In the end, their insatiability makes them to remain unhappy all the time. Spiritual development becomes the sacrificial lamb for physical development when only a balanced blend of the two would guarantee holistic development. Meanwhile, when the available material resources were relatively, limited, humans did live a more fulfilling life.

#### 2.4. Food and Agricultural Production

Malthusian theorists have proposed a danger in the human population that is growing at an exponential rate against food production. Thomas Malthus predicted that famine would unavoidably arrest humanity of its ever-growing population.<sup>27</sup> As a reaction to this, scientists took actions facilitated by research into advanced species of seeds, farm mechanization, fertilizer production, modern storage measures, pesticides, weedicides, disease and rodent control measures, as well as synthetic foods. By these interventions from science and technology, Malthusian theories were being proven wrong because of the abundant availability of food. However, the present predicaments that bedevil humanity show that the interventions were not well negotiated. While foods were made available abundantly, foods are not truly natural; hence, they have a residue of agrochemicals that make them dangerous to human health on consumption.<sup>28</sup> Many strange but chronic diseases are ravaging humanity now such

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24 T. F. Stillman, F. D. Fincham, K. Vohs, N. M. Lambert and C. A. Philips. "The Material and Immaterial in Conflict: Spirituality Reduces Conspicuous Consumption," *Journal of Economic Psychology*, 33: 1 (Feb. 2012).

25 Karl Marx and Friedrich Engels. *The Communist Manifesto: A Modern Edition* (United Kingdom: Verso, 2012).

26 S. M. Schneiders. "Religion Versus Spirituality: A Contemporary Conundrum," *Spiritus* 3: (Fall 2003), 168-185. Rept. St. Augustine Papers 9, no. 1 (2008), 23-53. <http://muse.jhu.edu/article/48004>

27 Thomas R. Malthus. *An Essay on the Principle of Population* (London: J.M. Dent, 14th ed. 1803, 1826), 1-24.

28 N. Kumar, A. S. Pathera, P. Saini, and M. Kumar. "Harmful Effects of Pesticides on Human Health," *Annals of Agri Bio Research*, 17: 2 (Dec. 2012), 165-168.

that curative measures for them are still a matter of research.<sup>29</sup> Outstanding among them is the cancer of different forms. Environmental problems that result, too, cannot be overlooked.

Bhaktivedanta Swami Prabhupāda argues, and rightly, that agriculturists could affirm, with the aid of clear research, the fact that environmental problems do not result from the inability of nature to cater to the ever-increasing number of its inhabitants if the law of nature is truly understood and conserved. However, according to his doctrinal stance, there is a problem of insufficiency for human needs, on the one hand, as is evidenced in hunger and extreme poverty that is still experienced by a good proportion of the human population, and, on the other hand, the ill-health of the environment resulting from over-exploitation and misuse of the earth for cash crops and capital-oriented activities rather than food production. Both are because humans misunderstand the laws of nature from the point of view of the Supreme Lord.<sup>30</sup> Commenting on how scientific intervention has brought about adverse effects, he argues thus:

The internal combustion engine gets us where we're going faster, but also results in choking air pollution, the greenhouse effect, and a dangerous dependence on oil. Harnessing that atom gives us cheap energy, but also leads to weapons of mass destruction, Chornobyl, and a rising tide of dangerous radioactive waste. Modern agribusiness produces a dizzying variety and abundance of food at the supermarket, but also results in the death of the family farm, the pollution of groundwater, the loss of precious topsoil, and many other problems.<sup>31</sup>

These are nothing but pointers to the fact that science and her twin sister, technology, seem to have benefited humanity by helping it solve humanity's problems but rather all it does is solve the problems it creates for humanity and, at times, culminates to it.

## 2.5. Science and Human Epistemic Quest

Humans, by their very nature, are curious. They always quest to know. They have come to

29 S. Banerjee, S. Mitra, V. Milind, V. Desmukh, and B. Ghosh. "Impact of Agrochemicals on the Environment and Human Health: The Concerns and Remedies," International Academic Publishing House 26 (Dec. 2021), 125-140. <https://doi.org/10.52756/ijerr.2021.v26.010>

30 Bhaktivedanta S. Prabhupāda, A. C. 1991. *The Laws of Nature: An Infallible Justice* (India: The Bhaktivedanta Rept. 1991; 2007), x.

31 Ibid, ix.

terms with this through different means. When reality cannot be captured totally by physical explanation, they fall on metaphysical explanations. Is this not rightly considered mythological? Fortunately or unfortunately, this becomes the point of criticism for the scientific-minded positivists who becomes pronounced in the historical dialectic of the founding father, Comte, where he posits that humans go theological, metaphysical, and scientific, which are preparatory, transitional, and positive means, accordingly in their quest for knowledge.<sup>32</sup> He declared that the only 'positive' means of coming to terms with knowledge is science. Hence, their manifestoes promise to furnish humans with all their epistemic needs in totality through science. With the aid of an electron microscope, substances become seen, far distances are speculated with the aid of a telescope, and, in a word, many previously supposed myths were unravelled and explained by scientists. That is interesting!

However, experiences have shown that the more scientists attempt to unravel a myth, the more myths they are caught in. We may need to argue this by exploring some instances. Scientists claim to have discovered that every complex living organism is made up of cells which are also the aggregates of organelles that have some specific enzymes to perform specific functions. This discovery has become so useful in many scientific fields including, biomedical, and genetic engineering, among others. They also hold that every component of the cosmos is an aggregate of simple organic matter that has formed over time. The ultimate goal of these findings is to eliminate God from the scene as the creator of the universe as a widely held myth. This is why they probe further that cells also take their sources from simple inorganic matter.<sup>33</sup> This is pretty interesting, too! Nevertheless, where did these matters take their sources? Meanwhile, as propounded by the French Chemist Lavoisier, the scientific law of matter states that matter cannot be created nor destroyed but can only be transformed from one form to another. As a result, the question of who created the universe is not eliminated. Still, it only becomes transformed or substituted with the question of who created the matters that formed the universe. This is why Anyanwu, citing Houndtonji, says that "man cannot live without myths" because an attempt to unravel a myth always leads man to come face-to-face with a multiplicity of myths of life.<sup>34</sup>

For instance, when a materialist is told that spirits exist, the question that will come out of their materialistic mentality is 'Where are they?' Meanwhile, materialists believe that waves,

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32 Comte, *A Discourse*, op. cit., 1903.

33 P. Rose. Materialism: The Myth Exposed. (2018): 11-12.

34 K. Anyanwu, "The Idea of Art in African Thought", *Contemporary Philosophy: A New Survey*, edited by Floistad (Dordrecht: Martins Nyhoff Pub., 1987), 241.

electric currents, subatomic substances exist, *et cetera* even though they cannot see them with any of the five senses. When they are asked how they believe in the existence of subatomic substances, they will easily allude to the fact that they conclude from the manifestation of the effects of these substances. If we are to limit our cognition to what we can perceive by our senses, the limitation of human knowledge will be too high than we can imagine. Meanwhile, when a sense is lacking, the corresponding idea would be lacking. A born-blind person can never have an idea of colour. This fact is pointed out by Rose as follows:

If we judged the world around us entirely upon sight — our perception — we would almost unanimously agree that it is concrete and solid. However, according to extensive research done in quantum physics, the appearance of solidity is mostly an illusion because matter is made up of 99.9% empty space — this includes metal, rocks, and diamonds — and if you break it down further you come to a world of vibratory energy patterns of activity within fields. If you base your faith on only what you can see, then you won't believe in 94% of the universe because 94% of the universe cannot be seen — it cannot be observed. Only 6% of the universe is actual material matter, the other 94% is dark energy and dark matter. Given that we were created from a reality unseen, it should not surprise us too much that when matter is reduced to the subatomic level, we get closer to something immaterial.<sup>35</sup>

## 2.6. Machination and Computerization and the Challenge for Humanity

Like every other natural thing, humans cohabitate with nature and are, essentially, to do, produce and transform nature. This makes the essence of the ecosystem; plants manufacture complex organic substances from simple inorganic substances. Animals take it as food to continue the flow and transformation of energy in the food web and other associated functions. Humans are not exempted. This mechanistic posture should not be considered as anything but the plane reality that cannot be reasonably escaped, otherwise it becomes useless and condemned to death. However, out of their potential energy of transformation, humans, the natural machines, were able to produce artificial machines across their histories to make their work easier, faster, and more efficient. This starts with simple machines of various types and functions. The rise in science and technology brought about a flood of complex industrial machines to aid humans. With the aid of these, a man can do in a day, with more convenience, what one hundred people

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<sup>35</sup> Rose, ebook, see the bibliography, 12.

might not be able to complete in a day despite their serious commitments. Hence, humans' exploitation of nature increases significantly. This is considered a plus in human history. Apart from machine accidents and environmental degradation that resulted in the practical killing of humans due to their inability to meet their natural requirements of burning exhaustively, the energies they take from nature in the form of food cannot be underestimated. Hence, it leads to an accumulation of unnecessary junk in the body system. In addition, many able bodies lose their jobs to machines and become unemployed. This is yet another clause resulting from the invention and adoption of machines engendered by positivism.

Furthermore, humans invent and adopt computers. As a result, communication, assessment, storage, processing, and retrieval of information are aided significantly. This is remarked as a positive contribution of science and technology as sponsored by a positivist spirit. However, apart from e-waste that results from electromagnetic emissions, which pose a danger to humans and the entire ecosystem's health, the computer also reduces the level of human employment significantly as a person, with the aid of a computer, can do enormous work with more ease. As if that was not enough, the development in the invention of computers promoted robotic artificial intelligence, AI.<sup>36</sup> By this, humans could produce duplicates that can compete with them in all spheres. From provision of security to attendance to customers, from space exploration assignments to carrying out medical operations, these are just but a few of the areas where robots compete with humans in doing tasks. These, nevertheless, come with a dangerous ethical challenge for humanity and citizenship as well and spousal status and substance have also been extended to robots, which began in the religious acclaimed Saudi Arabia.<sup>37</sup> One should not be considered too pessimistic if one imagines the big threat this can pose to humanity.<sup>38</sup>

## 2.7. Environmental Degradation and Pollution

It is, indeed, an exaggeration to allege humans for all the environmental problems as there are naturally occurring ones.<sup>39</sup> V. I. Vernadsky also corroborates this view.<sup>40</sup> However,

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36 Y. A. Zhang, Historical Interaction between Artificial Intelligence and Philosophy.

37 J. Retto, "Sophia, First Citizen Robot of the World", 2017. <https://researchgate.net/publication/321319964>

38 Adeola S. Olaniyan, "igidi-Osanyin and Artificial Intelligence in Conversation: Towards a Technological Decolonisation." In the International Inter-Disciplinary Conference in Honour of Prof. Toyin Falola. Kenyatta University International Language and Culture Centre, Nairobi, Kenya. Theme: Post-Colonial Africa: Historical and Contemporary Realities. May 10-12, 2023.

39 M. Ramli and F. Idris, Environmental pollution. (2005): 3.

40 Vladimir I. Vernadsky. "The transition from the biosphere to the noosphere", *Scientific Thought as a Planetary*

humans have left indelible imprints on nature in the course of their interaction with nature such that, as Vernadsky rightly puts it; “one can scarcely find a spot unmodified by Man and his activities.”<sup>41</sup> The negative imprint is referred to as pollution of different types. In the author’s previous work, pollution was conceptualized as:

...any undesirable alteration in chemical, physical and/or biological characteristics of any/or every sphere of environment, resulting from an introduction of substances or energy by human, other living and/or non-living components of the ecosystem in an amount that (or liable to) injure(s), or at least offence(s) the survival, wellbeing and flourishing of the whole or any part of the ecosystem.<sup>42</sup>

Land, air, water, and noise pollution are some of the manifestations. Land pollution results from road construction, deforestation, over logging and bush clearing for agricultural and industrial purposes.<sup>43</sup> Air pollution results mainly from the discharge of heavy industrial machines as well as the discharge of greenhouse gases.<sup>44</sup> Climatic change, ozone layer depletion, acidic rain, and global warming are some of the effects of air pollution.<sup>45</sup> Water pollution results from industrial chemical discharge into the water bodies. Minamata Disease that was caused by methyl mercury poisoning can be referred to here.<sup>46</sup> Besides, careless loading and offloading of petroleum, as well as fuel leakage from the sunken fuel tanks, are also of significant effects.<sup>47</sup> These are just some of the multiple effects of scientific and technological impacts. Behind all these human actions and/or inactions towards nature are human ill-formed ideologies or doctrines. Hence, there is an urgent need for efforts to readdress every human ideology that has a direct or indirect negative bearing on nature. From an eco-theological perspective, the author has taken an environmentalist reading of some

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*Phenomenon*, Trans. W. Jones. 18 (1938).

41 Ibid, 26.

42 Adeola Seleem Olaniyan, “Algazel’s Sufism as a Critique of Islamic Environmentalism,” Master’s thesis, University of Ibadan, Ibadan, 2021: 12.

43 Olaniyan, Adeola Seleem, “Cut a Tree, Cut a Man: Charcoal Production as a Bane to Green Economy in Nigeria.” *Social Lense* 1, x (2024): 1-7. DOI: <https://doi.org/10.69971/>

44 Ramli and Idris, 4.

45 J. G. Speth, “Environmental Pollution,” *Earth ’88: Changing Geographic Perspectives*. (1988): 265, (Washington: National Geographic Society).

46 M. Inaoka. *Environmental Pollution* (2005), 156.

47 Taiwo G. Aderogba, “Petrochemical Induced Groundwater Contamination Using GIS as a Mapping Tool: Ibarapa Central Local Government, Southwestern Nigeria.” Master’s thesis, University of Ibadan, Ibadan, 2016.



of these doctrines including the Qur'an,<sup>48</sup> the Bible<sup>49</sup> and one of the dominant philosophical movements of the 20th Century named existentialism.<sup>50</sup> This is why this paper is dedicated to reading positivism to expose the implicit and explicit effects on the environment.

Seyyed Hossein Nasr's criticism of modern science is basically the starting point of his concern for various ecological damage that threatens the continuity of life on Earth. According to him, the root cause of the problem is science and technology, and its application, which disarrays from its proper role, function, and application, resulting in a tremendous negative impact. Consequentially, physics divorces the parental role of metaphysics and destroys the value and spiritual nature of nature.<sup>51</sup>

### III. EVALUATION AND CONCLUSION

Both empiricists and positivists share the common denominator or have the common ground that scientific knowledge should be derived from facts of experience arrived at by observation, not mere speculation or our wildest fictional imaginings.<sup>52</sup> On epistemic grounds, Chalmers notes that there are two crucial issues with the empiricist and positivist belief in deriving knowledge from the facts of experience or what can also be called empirical facts. The first issue borders on the nature of empirical facts and how they can be assessed. The second is about how laws and theories are derived from empirical facts.<sup>53</sup> To answer the first question, Chalmers states three components of facts thus:

- i. Facts are directly given to careful, unprejudiced observers via the senses.
- ii. Facts are prior to and independent of theory.
- iii. Facts constitute a firm and reliable foundation for scientific knowledge.<sup>54</sup>

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48 Adeola Seleem Olaniyan and Parvin Lasker Shamima, "Theocentrism is not Anthropocentric: An Enlightened Environmentalist Reading of the Holy Qur'an," *Bangladesh Journal of Bioethics* 13, no. 1 (Mar. 2022): 70-79. (Bangladesh: BJBio), edited by Parvin Lasker Shamima. DOI: <https://doi.org/10.3329/bjbioe.v13i1.34>

49 Adeola Seleem Olaniyan, "Environmentalism is Godliness: A Critique of Anthropocentric Reading of the Bible," *Bangladesh Journal of Bioethics* 14, no. 3 (Sep. 2023): 39-47. (Bangladesh: BJBio), edited by Parvin Lasker Shamima. DOI: <http://doi.org/10.3329/bjbio.v14i2.59> ISSN: p2226-9231 e 2078-1458.

50 Adeola Seleem Olaniyan, "To Be Is to Exist: An Environmentalist Redefinition of Existentialism," *Nigeria Journal of Social Sciences*, 12 (2024), 53-68.

51 S. H. Nasr. *The Encounter of Man and Nature* (London: George Allen & Unwin Ltd., 1968), 14.

52 Chalmers, 3.

53 Chalmers, 3.

54 Chalmers, 4.

There are problems attached to these assumptions; the senses can be deceiving due to one problem or the other. In addition, the methodology of positivist science is built on the verification principle of the Logical Positivists, wherein the sense of a proposition is in the method of its verification. This methodology is known by a variety of names, including the popular scientific method and the hypothetico-deductive method, which are not aimed at making isolated scientific statements but at discovering scientific laws.<sup>55</sup> The fallibility of observation statements and novel discoveries in science opened vistas of scientific developments through prisms of other scientific paradigms ranging from the Popperian<sup>56</sup> to the Kuhnian,<sup>57</sup> the Feyerabendian<sup>58</sup> to the Feminist Philosophy of science investigating how science can be viewed to produce scientific knowledge. It is an evaluation of the commonsense view of science as a quantum in the continuum of scientific discourses that our critical evaluation is essentially interested in. Besides, the fallibility of the scientific belief in causation has been faulted by occasionalists, among whom Algazel<sup>59</sup> and David Hume<sup>60</sup> are prominent.

Scientific laws are arrived at from a series of procedures starting from observation, followed by problem formation, hypothesis formation, experimentation, and conclusion. If it passes this stage, theory formulation before a scientific law finally results. The basic assumption about scientific laws is that the universe is a rule-governed, ordered, and uniform entity such that it strictly follows a rule of causation. This assumption further states that once the rules that underlie the causes of events are known, future occurrences can be reliably predicted. To do that, scientists have devised a particular method, believing that, when strictly followed to the letter, the mysteries of the universe can be unraveled. Scientists have been able to dwell on this ideology so much that they have discovered many theories and laws. These include Newton's Law of Universal Gravitation, Newton's Three Laws of Motion, Ohm's Law of Electricity, and Faraday's Law of Electrolysis, just to mention but a few.

Despite scientists' attempts to discover the laws that underlie the universe, it is said that the more physics you know, the more metaphysician you become. Newton's law of motion cannot account for the motion of any object whose speed is beyond the speed of light. This

55 R. Johnston. *Philosophy and Human Geography* (1983), 18-19.

56 Karl Popper. *The Logic of Scientific Discovery* (New York: Harper & Row, 1957).

57 Thomas Kuhn. *The Structure of Scientific Revolutions* (Chicago: University of Chicago Press, 2nd ed. 1970).

58 Paul. K. Feyerabend, "Explanation, Reduction and Empiricism," *Scientific Explanation, Space and Time* 3, (1962) 28-97. (Minneapolis: University of Minnesota Press).

59 N. Bano. *The Incoherence of the Philosophers (Tahafut al-falasifa)* a Parallel English-Arabic Text, edited and translated by M. E. Marmura (Provo, Utah: Brigham Young University Press, 2000a), 169-171.

60 Hume, 1777.

is nothing but a pointer to the fact that science might not be able to account for everything no matter how hard they try to achieve them. Although several things remain mysteries to scientists up till today, we should still appreciate that it has gone so far to uncover several mysteries. However, is it possible for scientists to come one day with answers to every myth, including the existence of God, in a physical account? Well, my answer to this question is pretty simple; it may be logically possible, but it is practically impossible, as logical possibility does not fully guarantee practical possibility.

Apart from the fact that positivism fails humanity on the epistemic ground, the beauty of scientific attempts is that most scientific discoveries have been applied to tame the universe not only for human flourishing but also for how humans can best harmonize themselves with and harness the gifts of nature. These become manifested in the form of technologies in all spheres of life, including communication, transportation, food production, educational advancement, health provision, and virtually everything you can think of. Scientists have also benefited the world so much that several things that were considered mysteries and wonders of life have been unraveled, so much so that a lot of things have been explained. For instance, it has been demystified that thunder and lightning are nothing but electron discharges in a vacuum. That is quite interesting! Glory be to the scientists for those achievements. However, experiences have revealed that scientific and technological inventions have brought about environmental pollution as we have explicated above.

Nasr argues that the paradigm of modern science has desacralized massively in the name of scientism, which is a new belief that is considered sacrosanct at the expense of other beliefs. For Nasr, science, with its method, is expected not to give up the basic view of nature by continuing to work through the umbrella of metaphysics so that the spiritual meaning of nature can be read.<sup>61</sup>

In conclusion, the empiricism/positivism spirit has not brought about true progress as their manifesto promises and as their output seems. Rather, its failure to humanity outweighs its positive contribution. Talking about the epistemic dimension, the verification principle was the sledgehammer with which they aimed to defeat religious and metaphysical claims. Unfortunately, the principle is self-defeating because the principle of verification itself is not verifiable since it does not fall into any of the two categories of meaningful propositions as suggested by positivism. In addition, the more science tries to make humans know, the more

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61 A. Sururi, A. Kuswanjono, and H. A. Utomo. "Ecological Sufism Concepts in the Thought of Seyyed Hossein Nasr," *Research, Society and Development*, 9: 10 (2020), 13.

humanity comes face-to-face with many other and more serious unknowns. In the area of technological advancement, it claims to solve human problems while, in reality, the best it does is to substitute the problem with yet another enormous, multiple, and fatal problem. It is high time the scientific enterprise, as masterminded by positivism, swallows its pride. That being said, positivists should come to realize that reality is not just one as it is multifaceted and multidimensional. Metaphysics is one of the significant areas of inquiry that investigates the components of reality that cannot be undermined. An attempt to relegate metaphysics, as positivism proposes, culminates, greatly, to its failure.

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