

PHILOSOPHICAL REFLECTIONS ON THE FATE OF OUR HUMANITY IN SCIENTIFIC RESEARCH

*¹ E. O. Akintona, ²U. S. Odozor, and ³V. O. Adefarasin

¹ Philosophy and Leadership Studies Unit (FUNAAB)

² Philosophy and Leadership Studies Unit (FUNAAB)

³ Department of Philosophy (OOU)

Corresponding author: akintonaeo@funaab.edu.ng

Abstract:

The goal of research is to enhance human development by adding value to the environment. Against this backdrop, any scientific research that irredeemably lacks human face is a worthless exertion that is fit only to be cast aside, regardless of its novelty and innovativeness. The purpose of most research in the sciences is to investigate real-life phenomena, to understand their problems, and to proffer possible solutions therein. However, recent breakthroughs in science and technology in the 21st century, particularly in the areas of social media and artificial intelligence, have been impactful on human social life and development. Climate change and dissipation of life expectancy cannot be divorced outright from the scientific and technological breakthroughs of the recent past. If calculated steps are not taken now to re-inject some human face into scientific research and breakthroughs, human civilization may be heading towards a definite end or self-destruction. Considering the long-term traumas of the atomic bomb on Hiroshima and Nagasaki, the horrific Nazi experiments performed on imprisoned Jews in concentration camps between 1942 and 1945, and the 40 years Tuskegee syphilis study between 1932 and 1972, there is need to reopen the channels of interplay between the natural sciences and the humanities cannot be overemphasized. This paper employs the philosophical methods of conceptual and critical analysis to interrogate the relevance of human face in contemporary innovative research in the pure sciences, and argues for the indispensability of the humanities in establishing possible solutions. The paper analyses the implications of some groundbreaking scientific research that are detrimental to human development. By being critical, the paper does not play down the benefits that accrue from these scientific breakthroughs, but brainstorms on ways of guiding subsequent scientific innovations to enable them accomplish their set objective of reducing human misery. The paper concludes that innovative research in the sciences must take cognisance the fact that human development does not consist merely in physical development, but also involves the mental and the spiritual. It therefore recommends that every scientific research, no matter how innovative they are, should be accompanied by ethics and human values in order to improve and add value to the human condition.

Keywords: innovative-research, human development, ethics and human well-being, science.

Introduction:

Scientific research is either to create or rediscover knowledge in order to improve nature or human well-being. In the past two decades, innovative research was discovered to have ushered into the internet and other digital technologies in the global world social media, artificial intelligence, smartphones and cloud-computing among others, plummeting human social, psychological and physical relationship. These new research innovations affect almost all facets of human development such as communication, business, government, travel, fundraising, and even agriculture. Modern digital technology is however reshaping and remodeling our perception of the world; the way we interact with ourselves and even the way children brains develop. A large number of people now spend more time on the internet and

mobile technology rather than engaging in natural and physical relations. New scientific innovations have redefined human relations and relatively rendered our physical and mental relationship passive and unattended to. Humans, globally, now give more attention to the internet, artificial intelligence, mobile phones and inadvertently become scientific citizens of their different nations.

Digitalisation has great influence on human inquiry to the extent that Arts and humanities are gradually losing their relevance and importance. For example, the pioneer socio-biologist, Wilson (1975: 562) posits; “the time has come for ethics to be removed ... from the hands of the philosophers and biologized”. The primatologist, Waal (1996: 218) proposes that science should “wrest morality from the hands of philosophers”. The British biologist, Dawkins (2006: 1) claims that “it is better to ignore completely *all* foregoing inquiry on the question of human nature prior to Charles Darwin because they are “worthless”. In the *New York Times* bestseller, Hawking and Mlodinow (2010: 1) aver that “Philosophy is dead [because it] has not kept up with modern developments in science, especially physics. Scientists thus became the torch-bearer of discovery in our quest for knowledge!

For the purpose of investment and its returns, scientists are beginning to enjoy a great deal of funding from the government, and from large corporations. Recently, there have been rumours that Elon Musk is about to usher in a new era of reproductive robotics, capable of carrying human babies, with the announcement to commence large-scale production by 2026 (Menendez-Roche, 2024). If this is true, scientific research would become a business enterprise. As the saying goes, “he who plays the piper, dictates the tone”. If science becomes an investment, all kinds of things happen. By default, even the most casual of scientific breakthroughs comes with great dividends in terms of reputation and fame for the researcher, who becomes a demi-god and a veritable source of envy to his or her faculty colleagues (Kagan, 2009). This heightens the temptation for the falsification of data and other kinds of unethical practices in research (Tran, 2023). Science becomes ideologised when those who fund it are ultimately interested in gaining control of international politics and economy. All these factors are of tremendous interest to ethics. Moreover, Plato hinges unethical behaviour on ignorance (Smith, 2012) and claims that “the good” is born of knowledge and “evil” is born of lack of knowledge. He is of the opinion that ethics and wisdom are quite mutually exclusive hence if a person truly knows what is good, he will choose what is good by the simple rule of reason, ethics prevails.

This paper therefore concludes that in view of ethical challenges associated with innovative scientific breakthroughs, modern society should brace up and move forward with technological developments, journeying on without any break, except to take ethical stock, to avoid a lacuna, because nature entertains no vacuum. That innovative research in the sciences must take cognisance the fact that human development does not consist merely in physical development, but also involves the mental and the spiritual. And that every scientific research, no matter the degree of innovativeness, should be accompanied by the principles of ethics and human values, in order to truly improve and add value to the human condition.

The Nature of Science:

The word, ‘science’, is derived from the Latin, *scientia*, which basically means knowledge. It is “the systematic description or explanation of natural phenomena along with the habits of mind that make that possible—typically logic and mathematics” (Harrison, 200:779). Natural science is organized, procedural study of the universe of human experience, its features, and

its internal operations, with the sole aim of using the knowledge acquired in the process to overcome ignorance and advance human wellbeing (*The International Journal of Technologies in Learning*, 2014). From the outset, ethical considerations and metaphysical assumptions readily enter the fray in what can be meaningfully understood about natural science. The ethical considerations consist in the three phrases “knowing better”; “living well/better”; and “advancing human wellbeing.” This is where the idea of technology comes in. Technology is the practical application of scientific knowledge to solve (human) problems. To meet human needs, knowledge garnered from science culminates in the development of relevant technology. Human needs can be categorized into: physical (technology); intellectual (knowledge; intellectual curiosity; predictive power) and spiritual (psychological wellbeing). Again, even technology itself essentially speaks to human wellbeing, because humans are at the center of technology as producers, dealers and end users thereof.

Science is not merely a philosophy of life, or a worldview, because it is not dogmatic, but is always open to recalcitrant experience, by readily modifying and adapting itself to accommodate changes and new eventualities. Human knowledge is not static, but rather in a state of flux; it is gradual, incremental, and tends to develop over time. However, new knowledge is stumbled upon from time to time; hence, there is no such thing as one-fell-swoop knowledge in natural science. Due to its dynamic nature, science is not a closed enterprise, rather, it is open-ended in the sense that it is ever making progress as an on-going enterprise, whose truth substantively depends on new developments and further discoveries. As such, we can say that scientific findings are largely tentative, and there is nothing absolute about them in the same way that religious or cultural knowledge or truths are taken to be closed and absolute within and by a given human community. Scientific ideas and knowledge are open to revision and modification, or even outright rejection, in the light of new developments.

Since natural science is exclusively riveted to the physical order, it lacks the wherewithal for making definitive judgments and pronouncements on human spirituality and morality by default. The role of natural science is to tell us what is there. In other words, it furnishes us with information about the world, which will then be interpreted in certain ways to help us deal with the social, cultural, spiritual and temporal aspects of daily life. Human knowledge in natural science is essentially limited and confined to the physical realm; hence, it makes no sense to draw conclusions about the nonphysical aspects of life based merely on the physical that has been examined.

Science cannot get off the ground without making a number of assumptions. First, it is based on the assumption that there is a reality, nature, physical world of experience out there, rather than nothing. Second, it assumes that the reality out there is structured in a certain way which only needs to be discovered and demystified. Third, scientific endeavour is based on the assumption that the reality out there is totally intelligible and apprehensible to the human mind.

Innovative Scientific Research:

A research is innovative if it produces a new easy way of problem-solving and/or improvement on human well-being. It involves deploying new technologies, improving the existing ones and/or combining technologies in novel ways to solving human problems (Bhandari, 2024:2). A research is novel if new ideas and knowledge leads to changes in treatments, policies or care. No doubt, the world cannot advance without creativity and innovation because it allows for exploring new possibilities and creation of new things. Creativity or innovativeness is not just about making new things but solving problems in a new way. Without research, it would have been very difficult for human beings to survive nature or advance in knowledge. Scientists have

so much struggled to either conquer or ameliorate human challenges, yet there are many insurmountable mysteries around the world like some incurable diseases, the Unidentified Flying Object (UFO), the Bermuda triangle and many more. Nonetheless, our concern in this paper is the need to apply human face to research. No matter how novel or innovative a research work is, if it does not protect man, generate moral and economic values fit for continued human existence and development, it should be discouraged and rejected.

This is not to say that there are no benefits attached to scientific innovative research. We actually need them because without them, we can hardly develop or advance. One of the most significant benefits of innovation is that it contributes to the growth and success of the economy. Corroborating Kasongo and Makamu (2024), it was argued that innovation positively and significantly impacts economic growth among African countries and that this necessarily leads to the creation of new jobs and opportunities for society. In other words, economic growth is a significant sustainability factor for African countries. It helps in understanding the human condition and allows us to gain in-depth insight into the physical, cognitive, emotional and social aspects of human beings. This knowledge helps us better understand the complexities of the human experience and how people grow, learn, and thrive.

Critique of Innovative Research Works:

Although, science and technology struggled tremendously to satisfy human practical needs, to make life easier and the environment comfortable for our survival, they have some disastrous consequences on humankind, such as nuclear warfare and weaponry, Hitler's Holocaust, environmental pollution, and other man-made disasters. Copi (1994) asserts that, "science has made it possible for human beings to live more meaningfully to an extent that life would have been impossible in the absence of science" but the long-term traumas of the atomic bomb on Hiroshima and Nagasaki, the horrific Nazi experiments performed on imprisoned Jews in concentration camps between 1942 and 1945, and the 40 years Tuskegee syphilis study between 1932 and 1972 were misadventure for scientific breakthrough.

Industrial development sometimes surreptitiously displaces people from their properties and homes particularly when residential estates are converted to industrial estates and people are sometimes forced by circumstance to revert to a subhuman way of life in order to survive just as we have in the case of Marange in Zimbabwe where the entire human communities, villages, and suburbs lost their homes and properties to giant corporations and business interests (Centre for Natural Resource Governance, 2015; Chiketo, 2018; Odozor et al., 2019; Titilola, 2024). In some cases, people were displaced with no alternative arrangements and families permanently separated from one another.

Research also showed that robots that are social in disposition tend to make buyers feel at home, and more prone to using it (Etemad-Sajadi, 2022). This need not be surprising at all, because humans are social animals by default. Across technologically developed world, jobs and livelihoods have been lost at the introduction of robots to replace human beings in some big organizations (Khan and Fadziso, 2020; Etemad-Sajadi, 2022). However, manufacturers must pay close attention to bringing forth products that meet this social need, and provide human-like services that meet prospective customers' specifications. There must be clear term to state who will be responsible for the action of the robot and its consequences on human development. The introduction of technological machines (robots) does not directly mean job loss. This fear is not new; it was probably first expressed at the Industrial Revolution, following

the invention of individual machines that performed quickly and more efficiently jobs that used to require hundreds of people and much longer time.

The impact of Artificial intelligence (AI) on human healthcare in the 21st century is undeniable, yet, it is ethically questionable. AI now diagnoses disease, predict risk, develop personalised treatment plans, monitor patients remotely, or automate triage but still poses significant threats to patient safety and trustworthiness in the healthcare sector generally. AI are now used to scam, clone human voices, do Photoshop, perform almost all human activities that stand as threat to displacing human from his socio-political and economic responsibilities. A large number of people now spend more time on the internet and mobile technology rather than engaging in natural and physical relations. New scientific innovations have redefined human relations and relatively rendered our physical and mental relationship passive and unattended to. Human now give more attention to the internet, artificial intelligence and mobile phones. Privacy, safety and trust are also potential issues raised from the use of technological devices, such as Internet, mobile devices, and even robots. Is personal privacy and autonomy of the user assured and protected? What about their personal data? Is the user safe, even when the inherent dangers in the use of technology are well known? Can these gadgets be relatively trusted?

With the new technologies in place, there is the tendency to reject one's own culture, traditions, norms and values, and embrace a totally foreign one, all in the name of embracing modernity and its technology, or moving with the times. This is very common among the youth populations, who wrongly reinterpret development and technological advancement in terms of imbibing of Western liberal culture. This wrong influence comes from television screens, the media, the Internet, and mobile phones. The influence of some innovative scientific research has destroyed many family ties, love and care. A person can spend the whole day watching movies, engaging robots, surfing the web, or simply playing computer games, completely oblivious of what the other members of their immediate family are doing or suffering. Children are also whisked away to day-care centers almost immediately after birth, and so lose the appropriate tie that should exist between them and their family.

Recommendations:

There is need to synergise natural sciences and humanities. Innovative research should be well guided in order to give contents with human face so that the society and particularly school children do not grow up to become detached from the real world around them in schizophrenic self-destruction inherent in soul-less scientific endeavour that does not have human wellbeing at its center. Innovative research in science must be cognisant of the fact that human development does not consist merely in physical development, but also involves the mental and the spiritual. Therefore, every scientific research, no matter how innovative it is, should be accompanied by ethics and human values, in order to truly improve and add value to the human condition

The current explosion of technological advancement today calls for all-inclusive normative ethical inquiry needed for the progress and wellbeing of the human society (Johnson, 1989; Rachels, 2003). There is need for surveillance team, backed up by the relevant legislation, monitoring technological deployment in nearly all areas of human endeavour with the responsibility to shut down "unwholesome" technological products that constitute danger to human happiness and flourishing, especially where children are concerned, because there will always be such incursions in a free, public market circumstance.

Caution should also be put in place to ensure that children and young people are not exposed to "bad" technology, as bad impressions stay in human memory for a long time. Focus should

be on the end user ensuing technology, not on personal ambition of the scientist, or the self-seeking aspirations of greedy large corporations. Scientist should not be in the business to promote themselves or their personality, but to advance the corporate wellbeing of humanity. Personal ambition and profit making of big-tech corporations should not be allowed to override human interest; else, the entire scientific enterprise would have failed in its mission.

Conclusion:

Technology has always been a part of human reality. All humanity need is adapting to the change and survive. Robotics and all other areas of technological advancement have not only come to stay, they are indeed, the elephant in the room to solving human problems. To ignore this explosion would be at our own peril, and anyone who does so will only be left behind. The question is, how do we harness the good in postmodern technology and channel it appropriately for human wellbeing and progress. If possible, a SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis may be required on the research tool to determine its strengths, weaknesses, and opportunities it presents and the threats it poses. Nature abhors vacuum; if children and young people of the next generation are not taught the right use of technology, undesirable elements may capture their inexperienced minds, take the space and teach them all the wrongs that may destroy the entire human civilization. Hence, current educational curriculum simply has to be reviewed by ensuring that the arts and humanities reserve a prominent role, as integral part of innovative research.

Therefore, modern society should embrace technological developments but with every sense of ethical stock because nature is not only about physical development but spiritual and mental as well. No doubt, going back to the Stone Age is not an option. As in all past historical experience, technological breakthrough must be accorded its rightful place and to the exact right extent, even as it cannot and must not replace the traditional, interpersonal physical engagement of human beings, such as real-time verbal conversations and attention at the family level. The human ethical issues and concerns having been duly addressed and resolved, one can only expect a smooth, hitch-free enjoyment of all the technology human knowledge can develop and money can buy.

References:

- American Psychological Association. (2019). *Publication manual of the American Psychological Association*. 7th Edition. New York: The American Psychological Association.
- Armstrong, D.M. (2007). "The Nature of Mind." *Introduction to Philosophy: Classical and Contemporary Readings*. J. Perry, et al. Eds. New York: Oxford University Press. 295-302.
- Bhandari Pritha (2024) Ethical Consideration in Research/Types & Examples, retrieved October 2024 <https://www.scribbr.com/author/pritha/>
- Centre for Natural Resource Governance (CNRG). (2015). "Communities, Companies and Conflict." Retrieved September 12, 2017, from <http://www.yestolifenotomining.org/wp-content/uploads/2015/11/Communities-Mining-Companies-Conflicts.pdf>.

- Chiketo, B. (2018, March 15). "Families Flee Arda Transau." *Eastern Daily News*. Retrieved June 8, 2018, from <https://www.dailynews.co.zw/articles/2018/03/15/eastern-news-families-fleearda-transau>.
- Copi, I.M. & Cohen, C. (1994). *Introduction to Logic*. 9th ed.; New Jersey: Prentice Hall.
- Dawkins, R. (1976/2006). *The Selfish Gene*. Oxford: Oxford University Press.
- Waal, F. (1996). *Good Natured: The Origins of Right and Wrong in Humans and Other Animals*. London: Harvard University Press.
- Etemad-Sajadi, R. (2022). "6 Main Ethical Concerns of Service Robots and Human Interaction." <https://hospitalityinsights.ehl.edu/service-robots-and-ethics>.
- Harrison, P. (2003). "Science, Origins of." In J.W.V van Huyssteen (Ed.). *Encyclopedia of Science and Religion*. 779-782; New York: Macmillan.
- Hawking, S. and Mlodinow, L. (2010). *The Grand Design: New Answers to the Ultimate Questions of Life*. London: Bantam Press.
- Johnson, Oliver A. *Ethics: Selections from Classical and Contemporary Writers*, 6th edition; Chicago: Holt, Rinehart & Winston, 1989.
- Kasongo Atoko and Makamu Tiangelani (2024). "Innovation and Economic Growth: An Empirical Analysis for African Countries." *Journal of Science, Technology, Innovation and Development*, Issue 6, 751-760
- Kagan, J. (2009). *The Three Cultures: Natural Sciences, Social Sciences, and the Humanities in the 21st Century*. Cambridge University Press.
- Khan, W. and Fadziso, T. (2020). "Ethical Issues on Utilization of AI, Robotics and Automation Technologies." *Asian Journal of Humanity Art and Literature*. 7(2): 79-90. DOI: 10.18034/ajhal.v7i2.521.
- Mack, R.W. (1955). "How Scientific is Social Science?" *ETC: A Review of General Semantics*. 12(3): 201-208.
- Marc Menendez-Roche, M. (2024). "Pregnancy Robots: Elon Musk's Bold New Plan." <https://euroweeklynnews.com/2024/10/25/pregnancy-robots-elon-musks-bold-new-plan/>.
- Millikan, R.G. (1984). "Foreword" to: *Language, Thought and Other Biological Categories*. Cambridge: MIT Press.
- Myrdal, G. (1972). "How Scientific Are the Social Sciences?" *Journal of Social Sciences*. 28(4): 151-170. <https://doi.org/10.1111/j.1540-4560.1972.tb00052.x>. Originally delivered at the First Annual Gordon Allport Memorial Lecture, at Harvard University, on 4 November 1971.

- Odozor, U. S., Aduradola, R. R., Thompson, O. O. Akintona, E. O. (2019). “A Conceptual and Ethical Approach to Corporate Social Responsibility in Africa’s Development Crisis: The Marange Experience.” In S. Mugova and P. R. Sachs (Eds.). *Opportunities and Pitfalls of Corporate Social Responsibility: The Marange Diamond Mines Case Study*. Switzerland: Springer Nature. 197- 214. https://doi.org/10.1007/978-3-030-17102-5_13.
- Rachels, J. (2003). *Elements of Moral Philosophy*. 4th Ed. New York: McGraw-Hill.
- Ring, M. (2006). “Naturalism and Normativity.” Essay read at a conference on ‘Naturalism in Ethics’, held at Durham University. Retrieved January 17, 2008, from <http://faculty.fullerton.edu/mring/Naturalism.htm>.
- Ruse, M. and Wilson, E.O. (2006). “Moral Philosophy as Applied Science. *Conceptual Issues in Evolutionary Biology*. 3rd ed. E. Sober. Ed. Cambridge: MIT Press. 555-573.
- Smith, N.D. (2013) “Plato on the Power of Ignorance.” In Rachana Kamtekar (Ed.). *Virtue and Happiness: Essays in Honour of Julia Annas: Oxford Studies in Ancient Philosophy*. Online edition, Oxford Academic, accessed 18 Nov. 2024; <https://doi.org/10.1093/acprof:oso/9780199646043.003.0004>.
- Tancredi, L.R. (2005). *Hardwired Behavior: What Neuroscience Reveals about Morality*. New York: Cambridge University Press.
- The International Journal of Technologies in Learning*. (2014). Vol. 20; No.3. Illinois: Common Ground Publishing.
- Titilola, B. (September 21, 2024). “Displaced Lagos Families Allege Missing Children During Shanty Demolitions.” *Punch Online*. <https://punchng.com/displaced-lagos-families-allege-missing-children-during-shanty-demolitions/>.
- Tran, J. (2023). “How to Commit Scientific Fraud (Documentary).” *YouTube Video*: Available 15 November, 2024, @: <https://www.youtube.com/watch?v=yg39neEeybw>.
- Wilson, E.O. (1975). *Sociobiology: A New Synthesis*. Cambridge, Massachusetts: Harvard University Press.