

The Church and the Fourth Industrial Revolution in Nigeria: An Engagement of Faith and Technology

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Abstract

The relationship between the church and science is a widely debated issue over the years. One of the major teachings of the church is that faith and science are not contradictory to each other and that science came out of theological cosmology and even works well together, in spite of the conflict model of science and religion. The last four years 2019 – 2023 have been particularly significant in revealing the close relationship between Religion and Science. The entire human race experienced the global covid 19 pandemic and national or international lockdown that resulted from it, with the antecedent shift to digital ways of living, working and worship. Much scholastic works have been done on the indebted relationship between Christianity and Science, the trajectory of which involves the beauty and the ugly. However, the engagement and interface between Christian faith and science in Nigeria requires a closer attention, understanding and engagement, particularly now that the world has advanced into the Fourth Industrial Revolution (4IR). The paper adopted the hermeneutic and historical methods premised on Draper and White's "conflict thesis" as theoretical framework which is the series of myths the duo spread about science and religion as irreconcilable enemies. This paper reveals that science and faith are intertwined complex social and cultural endeavours with fundamentally separate forms of knowledge on different aspects of life, therefore it encourages the Church to leverage on the opportunities provided by the current Industrial Revolution and improve on the interconnectivity in addressing the contemporary social challenges rather than being antagonistic as it were in the case of Galileo an Italian Christian and scientist found guilty of heresy and sentenced to life imprisonment in 1633 by the Roman Catholic Inquisition after confirming the veracity of heliocentric theory of Copernicus and reporting the telescopic observations of the mountains on the moon, the moons of Jupiter, the phases of Venus, and the rings of Saturn.

Keywords: Church, Faith, Science, Technology, Fourth Industrial Revolution (4IR), Nigeria

Introduction:

The relationship between the church and science is a widely debated issue over the years. The engagement and interface between Christian faith and science in Nigeria requires a closer attention, understanding and engagement, particularly now that the world has advanced into the Fourth Industrial Revolution (4IR). The 4IR or "Industry 4.0" refers to our current period of rapid technological advancement in the 21st century, which is fundamentally changing the way we live. Religious matters are centered on faith rather than logic. Nevertheless, with the advancement of science and technology in the contemporary age, can the world turn to religion to answer some pressing questions?

- Can religion answer the troubling question about who we are if our brains can be augmented?

- Can it answer if we still have free will, if technology can nudge man to act in a particular way?
- Can religion answer why human beings will still be in existence if machines (robotics and Artificial Intelligence- AI) can do most of the tasks that humans are destined to perform?

According to Marwala, some religious institutions have started addressing these questions, for instance, in February 2023; the Roman Catholic Church collaborated with Microsoft and IBM to develop artificial intelligence (AI) ethics. This is an example of science and religion working together to address challenging problems confronting man and the society on moral and value system. In spite of the encumbrances of some Christian dogmatic principles, religion and science (progressive revelations) have long been intertwined. Therefore, as long as religious people exist they should leverage on the opportunities given by scientific developments without losing their faith. A practical example was the situation during the first Industrial Revolution, while many struggled with their belief systems and reconciled theological understandings with the fundamental shifts in society, there also came up the “Great Awakenings” throughout Europe and North America characterized by personal religious experience to make sense of rational secularism that was changing the society (Marwala, 1971).

The current 4IR should not be considered different. As science and technology advances, people will continue to look up to religion to make sense of the world. The Fourth Industrial Revolution draws on a multitude of advanced technologies, the phase in the digitization of the manufacturing sector, driven by disruptive trends including the rise of data and connectivity, analytics, human-machine interaction, and improvement in robotics. In the first three industrial revolutions, steam engines propelled the first industrial revolution; electricity powered the second industrial revolution; the third was engineered by preliminary automation and machinery; while cyber-physical systems shaped the Fourth Industrial Revolution (Mckinsey, n. d.).

One of the major teachings of the church is that faith and science are not contradictory to each other and that science came out of theological cosmology and even works well together. Thomas Aquinas described theology as the queen of science in his great work *Summa Theologiae* written between 1265 and 1267. Furthermore, he says, according to a traditional metaphor, philosophy is the servant of theology (*ancilla theologiae*) the “handmaid” of theology (William, n.d.). Nevertheless, the conflict model of science and religion says that scientific inquiry and religious faith (especially Catholicism) have been intractably opposed to each other throughout history. According to it, there is no possibility of harmony between science and faith, because of their rival ways of explaining the universe, with the proponents of each fighting each other in a zero-sum game (Baglow, 2020). Interestingly, this deeply rooted assumption in the minds of many people is incongruous with the contemporary milieu. The last four years (2019 to 2023) have been particularly significant in revealing the close relationship between Religion and Science. The entire human race experienced the global covid 19 pandemic and the national or international lockdown that resulted from it, with the antecedent shift to digital ways of living, working, and worship. Religious services switched online without causing any wavering in faith. Christians like most other religious organizations had their services, Bible, and religious teachings from their homes through the internet and other social media platforms. Furthermore, a better understanding of man and his environment became one of the major discussions on various Christian religious and social platforms.

Conceptual Theories of the Relationship between Religion and Science

Lorma Salzman an American environmental activist postulated that religion and science are indeed incompatible. Religion and science both offer explanations for why life and the universe exist. Science relies on testable empirical evidence and observation. Religion relies on subjective belief in a creator. Only one explanation is correct. The other must be discarded. Explanations require evidence. None exists for a creator outside the human mind, whereas the evidence for evolution and the origins of life mounts every day. In the face of this uncontradicted evidence, religious belief in a divinity is no more viable than belief in the now-proverbial Flying Spaghetti Monster (Salma, 1980). Like Salma, Stephen Hawking a physicist also said, there is a fundamental difference between religion, which is based on authority, and science, which is based on observation and reason. Science will win because it works. I believe the universe is governed by the laws of science. The laws may have been decreed by God, but God does not intervene to break the laws. When you look at the vast size of the universe, and how insignificant and accidental human life is in it, the existence of a God seems most implausible (Hawking, n. d.). These assertions gave the impression of non-allied relationship between religion and science, however, this paper reviews the opinions of other people with contrary review.

William H. Bragg a British physicist, chemist and mathematician opines that from religion comes a man's purpose in life; and from science, his power to achieve it. Sometimes people ask if religion and science are not opposed to each other. Bragg says they are in the sense that the thumb and fingers of the hands are opposed to one another. However, it is an opposition by means of which anything can be grasped with the thumb and the fingers. This position agrees with Albert Einstein's believe that science without religion was lame, and religion without science was blind. But the debate over whether science and religion can co-exist has been going on since the dawn of mankind and continues to divide opinion even today as revealed in this paper.

Francisco Ayala a biologist postulated that evolution and religious beliefs need not be in contradiction, if science and religion are properly understood, they cannot be in contradiction because they are concerned with different matters. Science and religion are like two different windows for looking at the world. The two windows look at the same world, but they show different aspects of that world. Science is concerned with the processes that account for the natural world: how planets move, the composition of matter and the atmosphere, the origin and adaptations of organisms. Religion is concerned with the meaning and purpose of the world and of human life, the proper relation of people to the Creator and to each other, the moral values that inspire and govern people's lives (Ayala, 2007). This position shows that apparent contradictions only emerge when either the science or the beliefs, or often both, trespass their own boundaries and wrongfully encroach upon one another's subject matter.

Guy Consolmagnò opines that religion and science are like oil and water. They might co-exist, but they can never mix to produce a homogeneous medium. Religion and science are fundamentally incompatible. They disagree profoundly on how we obtain knowledge of the world. Science is based on observation and reasoning from observation. Religion assumes that human beings can access a deeper level of information that is not available by either observation or reason. The scientific method is proven by its success. The religious method is refuted by its failure. However, Irvine observes that science and religion "do" coexist. The first scientists were clergymen. He further observes that religious institutions from universities to the Vatican Observatory supported professional science. And the proportion of scientists who are themselves believers mirrors the fraction in the general population. Science is based

on the religious assertion that Creation is orderly, free from the interference of nature gods, and worthy of study (Hawking, n. d.).

Grant Kennedy an astrophysicist from the University of Cambridge postulated that science and religion are not at odds. Grant says, science is simply too young to understand. Whether or not you believe in God, you must believe this: when we as a species abandon our trust in a power greater than us, we abandon our sense of accountability. Faiths, all faiths, are admonitions that there is something we cannot understand, something to which we are accountable. With faith we are accountable to each other, to ourselves, and to a higher truth. Religion is flawed, but only because man is flawed. Science tells one that God must exist. My mind tells me I will never understand God. And my heart tells me I am not meant to (Kennedy, n. d.).

According to Dan Brown the author of *Angels and Demons*, science is not only compatible with spirituality; it is a profound source of spirituality. When we recognise our place in an immensity of light-years and in the passage of ages, when we grasp the intricacy, beauty, and subtlety of life, then that soaring feeling, that sense of elation and humility combined, is surely spiritual. So are our emotions in the presence of great art or music or literature, or acts of exemplary selfless courage such as those of Mohandas Gandhi or Martin Luther King, Jr. (Brown, n.d.). The notion that science and spirituality are somehow mutually exclusive does a disservice to both. However as postulated by Bragg from religion comes a man's purpose; from science, his power to achieve it. Sometimes people ask if religion and science are not opposed to one another. They are: in the sense that the thumb and fingers of my hands are opposed to one another. It is an opposition by means of which anything can be grasped.

The Conflict Thesis

The conflict thesis is a historiographical approach in the history of science, which originated in the 19th century with John W. Draper and Andrew D. White. It maintains that there is an intrinsic intellectual conflict between religion and science and that it inevitably leads to hostility (Draper, 1881). John W. Draper was a successful American chemist and photographer. He published his book in 1876 entitled – *history of conflict between Religion and Science*. In it he made generalised judgement, saying:

The history of science is not a mere record of isolated discoveries; it is a narrative of the conflict of two contending powers, the expansive force of the human intellect on one side, and the compression arising from (traditional). faith. He qualifies this statement by proclaiming the innocence of Protestants and Eastern Orthodox Christians, whom he claims have never opposed the advancement of knowledge and have always, had a reverential attitude to truth, irrespective of its source. Furthermore, he proclaimed that Protestantism is the “twin-sister” of science and the true religious enemy of science is the Roman Catholic Church, which he indicts for rejecting science and using violent means to maintain power over her members with the long-term goal of gaining total political supremacy over all peoples (Draper, 1881).

White published 27 articles in 27 years as “lessons” delivered to his opponents which he finally assembled in 1896 and titled *History of the Warfare of Science with Theology in Christendom*. In his book he praised Draper for his work of great ability and then goes on to repeat many of the errors committed by Draper. He claims that until Christopher Columbus' time the majority of Christian thinkers had insisted on biblical grounds that the earth was flat, and that a flat earth was practically a dogma of the church. In reality, only two Christian writer

of record, Lactantius and the 6th century Greek traveller and monk Cosmas Indicopleustes, had ever argued that the earth is flat (Draper, 1881).

The consensus among historians of science is that the thesis has long been discredited, which explains the rejection of the thesis by contemporary scholars (Brooke, 1991). At the turn of the 21st century, historians of science widely accept a complexity thesis (Ferngren, 2002). This thesis by scientists and the general public shows that the conflict perspective is not prevalent (Ecklund, 2019).

In the late Victorian period, it was common to write about the 'warfare between science and religion' and to presume that the two bodies of culture must always have been in conflict. However, it is a very long time since these attitudes have been held by historians of science. The conflict thesis, at least in its simple form, is now widely perceived as a wholly inadequate intellectual framework within which to construct a sensible and realistic historiography of Western science (Shapin, 1996).

The series of myths that Draper and White spread about science and religion are known today in the literature as the conflict thesis. Thanks to the dedicated and committed research of a band of specialists operating since the 1980s at least, the conflict thesis has now been thoroughly debunked. One by one, the tales spun out in Conflict and Warfare have been shown to be either entirely false, horribly misunderstood, or deliberately misrepresented... There is a clear, evidence-based consensus among this group: the conflict thesis is utter bunk (Hutchings & Ungureanu, 2021). While historians of science have long ago abandoned this simplistic narrative, the "conflict myth" has proven to be remarkably resistant to their demythologizing efforts and remains a central feature of common understandings of the identity of modern science" (Harrison, 2015).

The Church and the Fourth Industrial Revolution

Over the years, the church has been a patron of sciences; committed in the establishment and funding of schools, universities, innovative institutions, technical colleges and hospitals. Many clergy have been active in the evolution and promotion of scientific developments. Some science historians like Pierre Duhem claimed that medieval Catholic mathematicians and philosophers such as John Buridan, Nicole Oresme and Roger Bacon are the founders of modern science (Lindberge, 1990). Duhem was the founder of "the mechanics and physics, of which modern times are justifiably proud, to proceed by an uninterrupted series of scarcely perceptible improvements from doctrines professed in the heart of the medieval schools" (Wallace, 1986). John Heilbron, one of the foremost American historians of science says that, "The Roman Catholic Church gave more financial and social support to the study of astronomy for over six centuries, from the recovery of ancient learning during the late Middle Ages into the Enlightenment, than any other, and probably all, other Institutions" (Heilbron, 1990). The Church has, since ancient times, been heavily involved in the study and provision of medicine. Early Christians were noted for tending the sick and infirm, and priests were often also physicians. Religion and science are grossly interconnected in the scientific study of religion; which can be traced to the 17th century natural histories of religion (Harris, 2013).

Christian emphasis on practical charity gave rise to the development of systematic nursing and hospitals after the end of the persecution of the early church. Notable contributors to the medical sciences of those early centuries include Tertulian (born A.D. 160), Clement of Alexandria, Lactantius, and the learned Saint Isidore of Seville (d. 636). Saint Benedict of Nursia (480) emphasised medicine as an aid to the provision of hospitality. The naturalistic explanations for human behaviours and culture, including religion and morality were explored and given explanation to by natural historians. For instance, Bernard Le Bovier in 1724

proposed a causal account of belief in the supernatural. People often assert supernatural explanations when the bereft of understanding of the natural causes underlying extraordinary events (Barret, 2004).

However, the proponents of conflict thesis and other critiques emphasize the historical or contemporary conflict between the Church and Science, citing, in particular, the trial of Galileo as evidence. For its part, the Catholic Church teaches that science and the Christian faith are complementary, as can be seen from the Catechism of the Catholic Church, which states in regards to faith and science:

Though faith is above reason, there can never be any real discrepancy between faith and reason. Since the same God who reveals mysteries and infuses faith has bestowed the light of reason on the human mind, God cannot deny himself, nor can truth ever contradict truth. ... Consequently, methodical research in all branches of knowledge, provided it is carried out in a truly scientific manner and does not override moral laws, can never conflict with the faith, because the things of the world and the things of faith derive from the same God. The humble and persevering investigator of the secrets of nature is being led, as it were, by the hand of God despite himself, for it is God, the conserver of all things, who made them what they are (Borromeo, n. d.).

The Church in Nigeria and the Fourth Industrial Revolution

Nigeria is the most populous country in Africa with a population of over 225 million people as at 2022 (“Abuja City”, 2007). The country is home to some of the largest Christian and Muslim populations globally, nevertheless, recent statistics shows that a sizable number of her population belongs to the various local African traditional religious bodies such as those native to Yoruba, Igbo and Hausa ethnic groups.

Most Nigerian Christians are Protestants (broadly defined), though about a quarter are Roman Catholic (McKinnon, 2021). Officially, Nigeria is a secular state with no official state religion. Article 10 of the Constitution states that “The Government of the Federation or a State shall not adopt any religion as State Religion” (“Nigerian Constitution”). Historically, Christianity in Nigeria can be traced back to the 15th century, when the Portuguese came to Nigeria as the first Europeans to arrive on the shores of the region via the Atlantic. The Portuguese brought Roman Catholic missionaries with them but failed to successfully plant the seed of Christianity. It can be argued that the actual intent behind their voyage was more in the interest of slave business than it was for missionary goals and objectives. Most of the Portuguese slave traders took Nigerian slaves to be resold in the Americas and parts of Europe. Hence, they were not fully committed to missionary work. In the 17th century, attempts were again made to establish Christianity in the region through more Catholic missionaries.

Nigeria has the largest Christian population in Africa according to Pew Research Centre and it has the sixth largest Christian population in the world. According to a 2011 Pew report, over 80 million Nigerians are Christians. Among Christians, about a quarter is Roman Catholic, three quarters are Protestants, and about 750,000 belong to the various indigenous and new generational Christian denominations (“Christianity in Nigeria”). Nevertheless, the church in Nigeria has contributed immensely to the development and establishment of schools, hospitals and infrastructure. Most scientists and technologists in Nigeria are Christians both clergy and laity. To a very large extent, Nigerian Christians are deeply religious and superstitious; this is particularly found among Christians who belong to the New Generational Churches and the Indigenous Church denominations. The Aladura like several other African Indigenous Churches, stress healing and fulfilment of life goals for oneself and one's family through divine miracles. African beliefs that sorcery and witchcraft are

malevolent forces against which protection is required are accepted; rituals are warm and emotional, stressing personal involvement and acceptance of spirit possession. African Traditional Religion deals with their cosmology, ritual practices, symbols, arts, and society.

Fidelis Ozuawala a Nigerian bought a Venza car that kept igniting and starting by itself in the middle of the night, he became frustrated when the problem started. He took the car to his pastor for prayers and also to a native doctor looking for a solution. Many people, including his pastor and relatives said the car was under a spiritual spell, and he was advised to sell it immediately. Fidelis took his car to his pastor who offered prayers, but the situation did not stop. He took it to a native doctor who also bathed the car with herbal leaves and concoctions, but the problem persisted. The young man decided to look in another direction after failing to find a spiritual solution. Fidelis eventually found the solution to the problem of his car after researching online. "The issue was simple. Some foreign cars from very cold climate embed a thermostat that triggers the engine to start when the temperature of the engine falls below a level so when the engine comes on, it warms the engine to avoid clogging of important parts. Emenike Emmanuel said: "Ignorance breeds fear but knowledge is a defence. Once you are in the know, fear will disappear."

In another story, a young lady who returned from United Kingdom slept and heard strange voices in her dreams. She sought pastoral counsel from her pastor who told her that members of her family are after her life and wealth and the solution to this is that she should sow her belongings as a seed to the church and travel back to UK without telling her relatives. It is quite unfortunate that many of such stories abound in our communities leading to so many irreparable damages and frustrations. The lady's problem emanated from her long air travel leading to jetlag – a temporary sleep disorder that can affect those who travel quickly across multiple time zones. More than ever before, Nigerian Christians should embrace the advancement in science and technology for a more fulfilling life and self-actualisation in all spheres of life, political, economic, social, infrastructural development, medicine, modernization and civilization.

The scientific inquiry and technological advancement that characterizes the Fourth Industrial Revolution is not alien to theology and the history of the church (Ani, 1994). The resultant debates that occurred during the enlightenment between science and the church brought about two approaches to understanding reality:

- i. A theistic world view with teleological acceptance of nature and intelligent design, and
- ii. The material reading of the world without the need for a transcendent deity (Mdingi, 2020).

As it appears, 4IR has no metaphysical inclination towards the nature of the world and human beings. Perhaps, the philosophical undertones and epistemology that drives towards the acceptance of materialism are accepted as the school of thought that defines reality today.

The current technological and scientific development of the 4IR signals great leaps in human intellect and creativity. Some religious organizations have started tackling these questions. The Roman Catholic Church for instance has collaborated with Microsoft and IBM to develop Artificial Intelligence (AI) ethics. This is an example of science and religion working together to tackle challenging problems confronting the society. However, in these days of significant changes in labour market, spiritual leader's role will become paramount at the least as counsellors who help people make sense of the world. As technology take over the political, economic and social spaces, it is important to mobilize all role players, including religious leaders, to chart the future happiness for people irrespective of their background, race creed, sex or status. The engagement between religion, technology and progress have

long been intertwined and it is expected that as long as humans still exist, they will continue to work together. The greatest challenge of the Fourth Industrial Revolution (also known as 4IR) is not its challenge against belief systems but it will make humans irrelevant, causing mass job losses, engaging data, advance artificial intelligence (AI), robotics, the internet of Things (IoT), 3D printing, genetic engineering, quantum computing and other technologies. Therefore, for religious and technological leaders to make sense of technological advancements and their impact on Christian faith, in forging a lieu way between religion and science, Carl Sagan theoretical framework will be employed- it states that “science is not only compatible with Spirituality; it is a profound source of spirituality”. Another scientist who battles with this relationship between religion and science is William H. Bragg who said, “from religion comes a man’s purpose; from science, his power to achieve it. This is in the same sense of the thumb and fingers of the hands been in opposition to one another. This is an opposition by which anything can be grasped by the hand.

Conclusion

This paper discovered that science and faith are intertwined complex social and cultural endeavours with fundamentally separate forms of knowledge on different aspects of life, therefore it encourages the Church to leverage on the opportunities provided by the current Industrial Revolution and improve on the interconnectivity in addressing the contemporary social challenges rather than being antagonistic as it were in the case of Galileo the Italian Christian and scientist found guilty of heresy and sentenced to life imprisonment in 1633 by the Roman Catholic Inquisition after confirming the veracity of heliocentric theory of Copernicus and reporting the telescopic observations of the mountains on the moon, the moons of Jupiter, the phases of Venus, and the rings of Saturn. Today, those discoveries are at the very heart of our existence as a modern civilization. Therefore, Christianity should appreciate the development power of science and technology in all spheres of life. Moreover, religious leaders in Nigeria should appropriate scientific presentations in their understanding of metaphysical issues that bother on human spirituality, health, environment and vicissitudes of life rather than blaming everything on spiritual attacks, with religious leaders taking advantage of the impoverished and gullible adherents of religious faiths.

Recommendations

The prevailing misconceptions about an inherent conflict between science and religion are precisely the misconception forged by the propagandists of the distant past, based on their prejudices and biased historiography. Nevertheless, it is also a challenge for the church today to adopt the humble, open dialogue and seek the relational unity between Science and Christian faith.

As technology invades our social, political, religious and economic spaces, all role players, including religious leaders, should be mobilized to sharp a future that brings more opportunities and awareness to people.

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