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Transcendence, as a Theme
in Theology and Technology

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Transcendence, as a Theme
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University of Tartu, Faculty of Arts and Humanities, School of Theology and Religious Studies

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INTRODUCTION

A. Statement of the Problem

Humans have demonstrated a strong desire to transcend their biological roots in many ways. The longing to go beyond the human limit is often expressed through the construction of theories, works of art, musical compositions, storytelling, films and innovations. Because of humans' innate aspiration to go beyond their biological limits, religions often emerge through the construction of theories that provide paths leading to transcendence and eternity. Indeed, religious experience is commonly perceived as rooted in transcendence (Lee 2017, 10). However, such transcendence narratives are almost always vertical and require a flight from the physical body. Thus humans are perceived in terms of disembodied rationality in many transcendence accounts. Besides religion, the tendency to see the human person as a disembodied being can also be identified within some modern secular philosophies, such as transhumanism. According to Philip Hefner the vertical form of transcendence is predicated on the widely held socio-religious concept that the "self" (soul/spirit/mind) is superior to the physical body (Hefner, et al., 2015, 3–4). Such notions form the basis of what this study refers to as the "vertical transcendence." Vertical transcendence notions have fostered a negative attitude toward the body and have contributed to gender-based discriminations, which sustains disembodied notions in contemporary societies. Furthermore, disembodied ideas nurture negative stereotypes towards many mundane activities, such as sex and often extended to technology (Cooper 2009, 32).

The pursuit of humanity's goals to transcend their limits is often intertwined with inquiries into "human nature" and strategies for overcoming the constraints commonly associated with *Homo sapiens*. Discussions on the nature of humans have produced notions such as "dualism," "physicalism", and "trichotomism." Physicalism, also known as materialism, postulates that humans are purely physical. Consequently, there are no incorporeal qualities or components, because they are made up of a single substance. In contrast, dualism understands humans as composed of body and soul or body and mind. The terms "mind" and "soul" were once interchangeable, but religion prioritises the term "soul" while transhumanism prefers the use of "mind." Finally, trichotomism assumes that humans are composed of three parts; body, soul, and spirit (Murphy 2006, 1–2).

Religious transcendence is often based on the dualistic assumption that the body is a temporal part of the human, but the soul/spirit is eternal. Dualism has dominated the dream to transcend limits because the belief in separate realities has long characterised the aspirations of transcendence. However, dualism is defined broadly beyond the fundamental assumption that a human being comprises a body (physical/material/matter) and a spirit or soul (mind/immaterial). There are many elucidative forms of dualism, one of which is called "dualistic holism." This dualism conveys existential oneness while acknowledging a temporary separation between the body and soul. "Substance dualism," contends

that the soul and the body are two distinct aspects that, when brought together, make up a complete human being. These ideas imply that the possibility of humanity's transformation is conceivable via metaphysical or technological mediations that generate "improved" post-biological creatures such as ghosts, saints, spirits, superintelligence and "posthuman" through separation, thereby diminishing the significance of the body (Cooper 2009, 32). While dualism contributes to understanding the human nature, the concept becomes destructive when propounded to discredit the body and facilitate divisions.

Nonetheless, technology challenges the assumption that the body has a comparatively lower status than an abstract component of a person's identity. Technology reinforces humanity's embodiment while serving as a medium that facilitates human relationships. Technology serves as the medium for fulfilling dreams to transcend while simultaneously invoking fear and suspicion. Furthermore, it expresses human's desire for an intimate relationship with the "nonhuman other" through plastics, prosthetics, silicon, implants, xenotransplantation[1] etc. Thus technology recognises human embodiment, pointing to horizontal transcendence rather than vertical. The phrases "horizontal transcendence" and "vertical transcendence" are coined in this study to describe two ideas associated with transcendence. Horizontal, among other things, involves enhancing humans to mitigate their flaws while deconstructing dichotomies. Vertical transcendence however involves separations; of humans, in terms of body and mind/soul, male and female, thus disseminating the culture of otherness. The culture of otherness divides in terms of humans, technology, plants, animals etc. It accords humanity a privileged status and incites fear in the "technological other." However, technology represents unity, facilitating human-nonhuman relationships through enhancers such as contact lenses, prostheses, and pacemakers. The relationship often enhances humans and points to strength in unity.

Ironically, the most prominent proponents of technology are transhumanists, who espouse vertical transcendence notions similar to religions by advocating escape from the body through mind (or soul) uploads. Therefore, the aspirations to transcend may be found in both religious and secular contexts. Nonetheless, the pursuit of these dreams is similar and vertically perceived. Unfortunately, the two contexts have given rise to destructive notions that promote bigotry, segregation, and dematerialisation.

People in the current technoculture live in an intimate relationship with the "nonhuman other" and are nurtured in technology but are influenced by religious notions. Theology is thus confronted with the task of communicating effectively to this generation to understand the importance of the body within which God was incarnated. I problematise the philosophical expressions of tran-

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[1]   Xenotransplantation is a procedure used in the implantation, transplantation or infusion into a human recipient's live organ, tissues, cells or body fluids, either from an animal source or human. It includes using objects with ex vivo contact with live animal cells, tissues or organs.

scendence vertically in recognition of humanity's embodied nature. This is based on the premise that humans' identity hinges on the body and depends on it for survival. Furthermore, humans are equal in value irrespective of their gender, race and status.

B. Method and Methodologies

Uttkarsha Bhosalen (2012) defines methods as strategies, tools, and techniques for finding solutions to research problems, while methodology consists of a systematic and theoretical analysis of the research methods. In the research context, the methodology refers to a theoretical and systematic data gathering and assessment strategy. It facilitates research rigour in acquiring new information (Bhosalen 2012). While this research does not require a rigorous method, methodological clarity is vital. A typical characteristic of inter-disciplinary study like this is exploration. Thus while employing exploratory methodology, analogical thinking/imagination is employed and organised in a storytelling manner. The study explores different spheres of knowledge to analyse theories linked with the human aspiration to transcend through diverse published sources. Exploratory methodology, also referred to as grounded approach, then becomes inevitable because the approach is usually used for studies that are not clearly defined to answer the "why," "what", and "how" question. It is flexible and characterised by interpretations with the ability to investigate problems that have not been thoroughly investigated or are entirely new. Exploratory research is typically used to facilitate new insight and a better understanding of a problem rather than producing a conclusive result. It facilitates fact-to-fact, feature-to-feature comparison approaches (Nilsen et al, 2019).

The exploratory approach links contradictory and unrelated concepts through analogies and concept clarifications. One characteristic of explorative approach is the ability to integrate other methodologies and methods. Besides analogical thinking approach, exploratory approach is used along with the concept clarification methodology. "Concept clarification involves the creation of multiple meanings through: (1) formulating purposes, (2) choosing, examining, and integrating data sources, and (3) representing a final conceptualisation that can also be examined for adequacy" (Kramer 1993, 406). Within each process, assumptions are identified and challenged, bringing out the importance of context in creating meaning, alternative interpretations are imagined and explored, and reflective scepticism is cultivated (Kramer 1993, 406–407). The approach is evident in the treatment of both religious and secular theories and aspirations. They are analysed in relationship with current realities with the notion that dreams about the future should have a strong relationship with current sociological realities. The study explores the contemporary meanings of transcendence, the meaning of "human" and the imagined "posthuman" through contextualisation, interpretation and understandings that reflect the perspectives of different scholarships (Denzin & Lincoln 2005, 26).

The analogical thinking is one of the most effective approaches to generating novel concepts in academic fields. It serves as a platform to cultivate new ideas by transferring data from well-known spheres into a novel domain. Eunyoung Kim and Hideyuki Horii, therefore, describe analogical thinking as "the cognitive process of transferring information or meaning from a particular subject (the source) to another one (the target)" (Kim & Horii 2016, 202). They stress that several studies have established the dominant roles played by analogical thinking in imaginative concept generation by fostering insights into new domains through analogies (Kim & Horii 2016, 202). Hans Welling defines analogical thinking as implying "the transposition of a conceptual structure from one habitual context to another innovative context," where "the abstract relationship between the elements of one situation is similar to those found in the innovative context" (Welling 2007, 168). Welling sees creativity as a result of four mental operations: application, analogy, combination, and abstraction. This study's application of analogical thinking focuses on a comparative abstract relationship between technological/scientific and theological/philosophical sources. It involves the coupling of apparent diverse well-known notions through abstractions into a novel context. Abstraction identifies essential information while ignoring irrelevant details. Therefore, it makes analysing problems or systems easier (Tauno & Margus 2020, 144). Thus while the fields being explored under the study are well-known, the abstraction of their philosophies and doctrines are novel.

Technology is discussed as a critical concept, a premise for human transcendence, too critical to be left to transhumanism. That theology has a significant stake in the technological discussions, given that transhumanism has to depend so much on theological concepts to develop its transcendence notions. The transhumanists' aspirations can be classed into two main aspirations. The first is transformation through technology which involves maintaining the biological body but transforming it through technological mediations to eliminate senescence and flaws (De Grey 2007, 9). The second involves uploading the human into a cyber environment (Moravec 1988, 109). The approach invoves highlighting similarities in concepts since analogies are more of similarities than differences. Daniel C. Krawczyk (2018, 227) states,

> Analogies represent a category of similar items that is abstract, as they are based on relations among items that need not be visible perceptually. When we see objects as similar, this can be based on lower-order features, such as having similar visual properties, colors, or shapes. Situations that occur over time may be seen as similar on the basis of the relationships among items, objects etc., that share common relational properties.

He sees analogical reasoning as an everyday life process that serves a variety of functions, such as providing an occasion to create new inductive inferences about a unique condition. "Analogies can also be used to help, convince, clarify, or to inform us. We frequently use analogical correspondences to make speech

more memorable, colorful, and interesting. Furthermore, analogies come in many forms and regularly rise to the level of making national news or being included in political speeches" (Krawczyk 2018, 227). In this study, it is predominantly used in terms of conceptions and imagination similarities between faith and technology, including eschatologies and secular theories.

Analogical thinking is seen as prone to bias as the other side (difference) is ignored. The problem is aggravated when using noted shared features to project possible future expectations in generalised ways. This problem has been minimised by supplementing the approach with fact to fact, feature to feature comparison approaches (Anus 2019, 34). Such supplementation can be identified in David Tracy's work, *The Analogical Imagination: Christian Theology and the Culture of Pluralism*. While analogical imaginations focus on similarities, Tracy employs the methodology to appreciate uniqueness and appraisal of pluralism in culture and Christianity. Tracy applies analogical imagination as a tool to reduce chaos and controversies in theology, focusing instead on mutually enriching conversations. He describes authentic systematic theology as the work of an analogical imagination constituting symbols that emphasise the event of Jesus Christ as a religious classic. He stresses that, though theologians may have a different form of encounter with Christ, Christian imaginations and symbols are essential for formulating theological discourses (Tracy, 1981, 407).

According to Tracy, an encounter with the Christ event gives rise to two main conceptual languages in theology; analogical language and dialectical language. Analogical language is an interpretation of real-similarities-in-real-difference that concentrates on a primary meaning or display of analogue and seeks to articulate the harmony of meaning in the Christ event. The process relates to the complete reality and precise relation to God, the world, other selves, and self. The harmony in such reflection is unity-in-difference, where negating any claim to total adequacy is vital (Tracy, 1981, 408–413).

Dialectical language stresses the need for radical negation in theological language. The theological language of dialectics thus involves negating any human efforts to save, which exposes the nonidentity of human reason with God's word (Tracy, 1981, 414–417). Tracy is thus able to explore and appreciate the diversity of theological understanding that reflects cultural pluralism and human inadequacy. Similarly, this study identifies the uniqueness of religious doctrines and their relationship with secular theories while focusing on their conceptual similarities in recognition that human understanding and projections are devoid of perfection. Analogical thinking is helpful to this study because imaginations characterise transcendence in both theological narratives and that of technology. Transcendence is expressed in two main ways; a) vertical transcendence and b) horizontal transcendence. Transcendence is classified as vertical when it is otherworldly, ignoring scientific data and scriptural tenets by creating dichotomies and segregations. In contrast, transcendence is horizontal when it emphasises embodiment, unity, and egalitarianism. Analogical thinking is employed in the effort to let every single voice in the "posthuman," debate be heard in a balanced way. The application of analogical thinking involves multi-

ple coupling within religions and secular philosophies to establish unity in pluralism. Like an unfolding story, the "transcendence" is the "setting" that unites the two major "characters" theology/religion and technology/science.

C. Hypotheses

Humans' desire to transcend is associated with several theories, which often relate to the question of the human constitution. There have been efforts to define what should be called "human" over the centuries with little success. The effort has been further challenged by the discovery that human nature is fluid and subject to technological mediations and manipulations. Religions often recognise humans in dualistic terms such as body and soul, material and immaterial, permanent and temporal. Transhumanism sees humans as the mind in the body. Both religion and transhumanism often see the body as temporal while projecting a conceptual soul/mind as immortal and superior. There is the question of whether humans are constituted by two things, with their bodies serving as a temporal shell, or they should be recognised in terms of physicalism. Within this framework, this research starts with the following hypotheses:

❖ Humans exhibit strong desire to transcend their prevailing limitations. Indeed, there are various efforts to extend the human limits. Although there have been remarkable successes in the effort to transcend horizontally through technological means, the ultimate desire to transcend vertically seems to be a significant focus of both religions and transhumanism.

❖ Both technology and religion may serve as mediums for transcending humans' limits, and though they have conceptual similarities, they differ in several ways. Transhumanists are technology advocates but propound religion-like vertical transcendence and further inculcate religious apocalypse into their theories. It suggests that technology and religion are related because, besides transhumanist incursions, technology has served as a significant platform to transcend human limits and fulfil religious dreams. Along with cultural creations, technology points to its religious ground, to the ultimate meaning in being, an expression of meaning and value.

❖ The body is usually portrayed as a major obstacle to humans' dream to transcend, thus transhumanism and many religions attach inferiority and temporality to the body. Moreover, transcending notions usually contrast the body with the soul/mind. The process renders bodily activities such as eating, excretions and sexual expressions suspicious and often attracts negative stereotypes in many religions. However, while some religions, including Christian denominations, aspire to exclude the body in their transcending hopes, Islam sees the

body as eternal and bodily activities such as food, drinks and sex as an interminable reward to the Islamic faithfuls. Islam acknowledges that the body is intrinsic to humans and a significant part of the "posthuman" nature.

❖ The quest to transcend vertically is associated with many socio-religious challenges such as segregation, gender based discriminations, and ideological biases that lack scientific illuminations and reliable religious data. Vertical transcendence breeds homophobia, technophobia, genophobia, gynophobia, and sexism but technology represents the deconstruction of dichotomies such as that of the sacred and profane, the "defiled" and the "holy," human and nonhuman. It points to divinity in humanity while exhibiting humans' belonging to nature.

D. Objective of the Study

The primary objective is to explore the contemporary meanings of transcendence, starting from what can be called "human" and possible "posthuman" nature. The effort includes analysing the implications of transcendence notions in religion and technology. For this purpose, the study proceeds with discussions of transcendence in relationship with the meaning of the human being through analysis of Philip Hefner's theological anthropology which identifies the human being as (God's) created co-creator. Thus, humans' technology and aspirations are analysed by exploring the identity of the human being and their purpose.

The study identifies the main theories of transcendence while evaluating "posthuman" concepts in transhumanism, posthumanism and religion.The process involves mapping the strengths and flaws of the various theories linked with transcendence, eschatological and posthuman future. The research further analysis how technology facilitates religious aspirations to transcend and the relationship between religious and transhumanists future visions which marks technology as a unifying culture. Aspects of religious eschatological vision are compared with technological innovations as inventions become analogies of religious aspirations. It indicates that analogies of technology pervade religion in general. Finally, the study makes an effort to highlight various disembodied notions that discriminate based on gender and sexual expressions linked with transcendence concepts.

E. Relevance of the Study

This study is relevant given the new terrain it charts and filling multiple lacunae in scholarship while opening new research areas. There are countless works on technology and theology, such as Hefner's *Technology and Human Becoming* (2003). Hefner calls for reinterpretations of religious notions to reflect the cur-

rent dynamic technological momentum. Hefner posits that religion has always utilised technology to facilitate its activities. He explains that true spirituality and technology have common imaginations, therefore, science is not opposed to faith. Instead, it is scientific data that enhances religious understanding.

There are also a growing number of theological works on transhumanists'/ posthumanists' aspirations, such as Philip M. Thompson's, *Returning to Reality; Thomas Merton's Wisdom for a Technological Age* (2012). The book talks about Thomas Merton's ideas on how best to relate to technology. Transhumanist notions are contrasted with Christianity's, which reveals the challenge of becoming immortal in a mortal realm. However, there is a lack of theological research that explores humans' relationships with technology and covers aspects of posthumanism, transhumanism and sexuality under the theme of transcendence, which this research covers/aims.

This research is close to Scott Midson's (2018) *Cyborg Theology, Humans, Technology and God* and Jeanine Thweatt-Bates *(2012), Cyborg Selves, A Theological Anthropology of the Posthuman*. Thweatt-Bates is focused on religion and science, technology and biotechnology, gender and embodiment. Her *Cyborg Selves* is on "posthuman" discourses and theology, which scripts a view of what it means to be human in a relationship with God. She divides the narratives into two broad topics. While one part of the narratives discusses the cyborg that reflects the theories of posthumanism, the other part focuses on transhumanists idea of the "upload". Her work, however, unlike this research, neither involves religious eschatology nor focuses on the notions of transcendence.

Midson writes on the impact of developing technologies on the lives of humans, bringing out the philosophical questions about the meaning of the term "human" in a technoculture of hybrid beings and fluid boundaries. He employs the cyborg concept to explore the coupling relationships between humans and machines, including the fluid boundaries that posthumanists frequently utilise to challenge the privileged position accorded the *Homo sapiens*. He sees his work as theological cyborgology, a theological investigation of the "cyborg." This work and that of the two scholars employ similar sources. Furthermore, they are all exploring the meaning of the human relationship with technology. They also discuss the "posthuman" discourses in theology, but my work is distinguished with its focus on transcendence that compares "posthuman" notions with eschatology and criticises disembodied notions.

Despite the many emerging works that explore humanity's relationship with technology in theology, the authour has not yet come across a study on transcendence in technology and theology that explores aspects of the future hopes in Islam, Christianity, transhumanism and posthumanism, which this research covers. Furthermore, there is a lack of a study that analyses Hefner's created cocreator concept in relationship with posthumanism and transhumanism. This work possesses the potential to induce discussions about the interphase between religious aspirations and technological innovations, including inter-faith "posthuman" imaginations. The study thus represents a reassessment of the idea of the human being and their desire to transcend.

F. Delineating the Field of Research

This research is located within the religion and science dialogue. However, its overarching objective is to connect a diverse range of academic fields to assess the human capacity for technological and religious transcendence. First, however, there is a need to conceptualise and clarify the boundaries. Both transhumanism and posthumanism are expansive, unique study topics that are different from one another and are normally separated from theology. Islamic and Christian eschatologies are also within entirely different fields of study, and Hefner's concept of created co-creator is located in science and religion. However, it has been discussed broadly by scholars from different scientific fields who are active in science and religion. In addition, there are components of sexual theology, gender studies, and philosophy, all of which are expansive discourses that need to be considered.

The work is complicated further by the varying strands of both transhumanism and posthumanism with their unique characteristics. This adds an additional layer of complexity to the effort already involved. Even within a single kind of religion, there may be many different denominations and sects. Christianity, for instance, is considered to be a religion; nonetheless, there are many different denominations that constitute Christianity. However, a few core doctrines are shared by all Christian denominations, such as the concept that Jesus took on human form. The study focuses on such core doctrines in Christianity in particular and religion in general. Discussions on posthumanism and transhumanism tend to centre on the overarching concepts that underlie both movements. However, references are occasionally made to particular ideologies within the groups.

G. Theoretical Framework

The research investigates concepts of transcendence that are found in both religion and technology. The view that, despite the apparent conflict between religion and science, there are analogies that deconstruct such notions is expressed. The study begins with an introduction and discussions of the keywords. An analysis of the concept of the human in the framework of Hefner follows. Philip Hefner's work looks at the doctrine of creation in the context of evolutionary theory. It evaluates humans' origin in relation to human purpose, which points to their nature and identity by exploring various scientific and religious notions. The concept unites science and religion, making it possible to produce scientific and theological data suitable for this work.

The study identifies transhumanism as a major advocate of transcendence related to religious notions. The transhumanists' vision of the "posthuman" is a primary focus due to the similarities with theological ideas of transcendence. Furthermore, they are ideologically focused on technology. Their idea of the afterlife, the notion of human sexuality and their overly technological optimism

to the point of setting technology up as a saviour makes the ideology a fertile area to explore. To analyse transcendence in theology and technology, analogies of the "posthuman" are drawn in an effort to identify similar themes in the seeming opposing fields. Posthumanism is discussed as an alternative philosophy to transhumanism to enhance understanding of the "posthuman" concept in general. The coupling with posthumanism is essential given their engagements with related questions, their engagement of the "human" idea and what should be expected beyond the human. Both groups discuss the idea of the human in relationship with humanism and reconsider what it means to be human in a technoculture.

The criteria in Hefner's concept, such as kinship, dependency, wholesomeness, freedom, and imagination, serve as the primary criteria for analysing "posthuman" theories, including enhancement, technology and meaning of transcendence. The work discusses the potential to evolve technologically and the implications of the innovations that serve as analogies of religious visions. Technology is positioned as a uniting concept that bridges the gap between the religious and secular. This study considers innovations as part of technology and not a separate topic. The theoretical implications of "posthuman" notions in transhumanism and posthumanism in relation to religious doctrines constitute the theoretical boundary of this study. The two ideas of transcending, which include mind uploading/downloading, known as Whole Brain Emulation (WBE), and enhancement; anti-ageing concepts and longevity, are treated under the umbrella of transhumanism. In this regard, futurism is treated under transhumanism because futurists often engage in enhancement and WBE theories. The first proposed idea to transcend limits, WBE, involves scanning a brain's physical structure accurately enough to create an emulation of the mental state, similar to genetic cloning. The data is then transferred and uploaded to a computer in a digital form. The implication is that the *Homo sapiens* is transferred from biological into a digital substrate. The second idea involves a vastly extended lifespan through gene therapy and other biological measures that could inhibit ageing.

Transcendence in posthumanism is expressed in terms of identifying the human essence within the other. The idea, in a sense, indicates that humans see themselves in other humans and nonhumans that place the human at ease within the environment. Therefore, the anxiety of running away from death is abated since death does not end the human presence in the universe. This idea requires humanity to place a premium on the "otherself" principles discussed in this chapter.

The research approach religion in general as a crucial element in humans' existential history that remains a vital aspect of every generation. Every form of religion can contribute in one way or the other to human wellbeing and the social building processes. The major world religions possess viable data capable of building a better society if the data is interpreted to reflect the realities of scientific findings. Several findings indicate that humans are part of nature and are equal in value irrespective of gender, race, status, physiology or sexual orienta-

tion. Under the conviction that every religion possesses useful data, this research interacts with the ideas of other religious communities though it is conducted within the ambit of Christian theology. In the spirit of ecumenism, aspects of religious notions in all the major world religions are employed to identify notions of transcendence in the universal faith community. The notions that, there are fundamentals that unite all religions despite the diverse ideologies are projected in this study. When it comes to the Abrahamic community, there are much more commonalities that unite them and set the platform for trilogues and dialogues. Examples of such fundamentals can be identified in their eschatological notions, attitude towards the body, communal organisations, and monotheistic postures. I engage three more religions besides Christianity to drive home the point that transcendence can be identified in almost all religions.

Religious notions are critiqued with the conviction that religion, like human nature, is not perfect, they have strengths and weaknesses, but there is the potential to minimise such weakness. Such efforts could attract more people to participate in religious activities and benefit from its nurturing. This work critiques explicitly gender-based segregations and poor attitudes towards the body which affect sexual expressions. Unfortunately, such negative attitutes are institutionalised in some religions, including Christianity. Ironically, gender based segregations and dualistic notions in religion that taint the beauty of faith lack scriptural support and scientific illuminations. The view is expressed that eradicating these doctrines that promote gender-based segregation and poor attitudes towards the body, including sex, does not constitute apostasy or syncretism. Rather, the process would eradicate the requirement for blind faith, making religion an arbiter of unity, reflecting God who is no respecter of persons, and loves unconditionally.

The study traces dualism in transhumanism and theology to ancient Greek thoughts such as Gnosticism and Manichaeism, which were parallels to Christianity. Regarding Christianity, various cultural influences and factors seem to eclipse biblical tenets. The dualistic understanding of the human in the Graeco-Roman societies that perceives the body as a hindrance to transcendence seems to overshadow the significance of the body in Christian theology. Technological enhancement is discussed under the idea that it is different from transhumanism and in tune with biblical tenets. That enhancement becomes transhumanism when it is expected to facilitate various levels of transcendence that result in post-human/posthuman. Thus when ideological aspirations join technological progress, enhancement may cease to be an everyday process.

In the context of the afterlife, notions such as ghosts, saints, spirits, and souls are often used in many religious traditions; yet, the communities of believers seldom connect these ideas to the posthuman concepts. However, this research establishes a connection between the notions of the afterlife in religious doctrines and the posthuman narratives. The research draws from a wide range of scientific disciplines, including religion, social sciences, philosophy of technology, and gender studies. The idea that miracles and good deeds in

Christianity are unabated is articulated together with the view that technology is a potent medium for miracles in the current age.

H. Difficulty and Limits

This research is explorative, it links notions of technology and transcendence, with gender and sexuality studies, in a theological context. To follow proposed hypothesis, pieces of literature from individual fields have to be synthesised into one whole. Another limitation may be located in the fact that the researcher is a Christian whose faith is grounded in the biblical narratives, thus his background is likely to affect the research in a limited way. He, however, strives for objectivity so that the work becomes a valuable resource for both believers and nonbelievers alike.

CHAPTER 1. Mapping the Research

1.1. Outline

A charge to keep I have, a God to glorify,
a never-dying soul to save and fit it for the sky
(The Hymn Society 2022).

The above hymn by Charles Wesley, summarises the aspirations and resolve of many Christian denominations. The need to hold on to the faith in Jesus Christ and lead a life worthy of emulation while worshipping God in truth and Spirit is articulated. Such a lifestyle possesses the hope of attaining eternal life, a transformed soul able to traverse the sky into Heaven. The expressed vision can be identified in many religious aspirations and more recently, in the philosophical ambition of transhumanism. In transhumanism, the object of faith is technology, but the aspiration is similar to that of the narratives above. However, the desire to transcend the current human nature surpasses ideologies and is seen as part of being human (Hefner 2003, 45).

The human species have been identified with the desire to transcend aspects of their biological constitutions. The experience of suffering, diseases, disabilities, inabilities, loss of loved ones and other vulnerabilities common to human nature seem to buffet humans' sense of supremacy in the biosphere. It is difficult to accommodate the pain, suffering, inabilities and the power of death to terminate humans' life arbitrarily. Thus the existence of forces in nature superior to humans seems to produce what Ronald Cole-Turner describes as a deep human yearning for transcendence. Cole-Turner, like Hefter, sees the yearning to go beyond what is given and enter into what humans are destined to become as an inevitable desire (Cole-Turner 2011, 15). Freedom from diseases, ageing and the hope for immortality are the major transcending aspirations shaping social and religious thoughts. Humans are looking for a dispensation without limitations and frailties when death is no more, and pleasure is at its crescendo.

Human aspiration to transcend has been part of many religions and serves as a coping mechanism, a tool of hope in adverse circumstances, even in the face of death. Some religious traditions, such as Buddhism and Sufism, stress the importance of cultivating transcendence as a significant aspect of religious practice (Gorelik and Shackelford 2017, 361). Besides the two, almost all religions provide a conceptual path towards transcending. For example, the Judeo-Christian tradition expects a future transcendence; when human limitations are removed through transformation of the biological body. The human is expected to aquire a metaphysical body through the transformation, making it possible to travel through space into heavenly bliss. Islam yearns for "Paradise" which came from the Old Persian language and meant the enclosed garden. The image is shared by both Islam and Christianity. In Islam, it is an aesthetic transcendental state *al-Jannah* (Arabic), a perfect eschatological enclosed luxuriant garden with foliage and tall trees as shelter. Here all goodies that humans need

and desire for are in abundance (Harty 2005, 189). Religious eschatology talks about transformation in human nature and shares parallels with nonreligious "posthuman" narratives. While religious eschatology aspires for divine means of transcendence, secular ones are often about future human nature as a result of technological progress.

Chapter one outlines the significant concepts in the study, including explanations of key notions to locate the study within theological anthropology. Chapter two explores the notion of the human. In the effort to explore the future "posthuman" concepts, the concept of the "human" is discussed using theologian Philip Hefner's interpretation of the human being as "created co-creator." The concept explores humans' purposes through reinterpretations of theories such as evolution, creation, and *imago Dei*. Chapter three looks at the relationship between religion, technology and enhancements. Analogies of transcendence in religious practices and technological innovations are discussed under the view that there are strong relationships between religion, transcendence and technology. Enhancement is discussed in terms of medical interventions and encounters with technology that corroborates humans' kinship and relatedness with the rest of nature. Chapter four examines the possible results of enhancement of the *Homo sapiens* ushering in discussions of "posthuman" theories. Concepts within posthumanism are discussed in relationship with theology and transhumanism. Chapter five constitutes an analysis of transhumanism and its aspirations. The discussions include their notion of humans and means of transcending into a posthuman future. Chapter six constitutes "eschatological" analogies in Christianity and transhumanism. The chapter includes problems associated with vertical transcending notions in Christian theology that breed sexism, discrimination and other ills. The chapter explores various religious and transhumanist concepts and identifies disembodied elements that counter human embodied nature in the universe. The chapter concludes that while there are notions in Christian doctrines that correspond to vertical transcendence, they lack scriptural and scientific illuminations. The seventh chapter embodies findings and conclusions.

1.2. Transcending through the Arts

The desire to go beyond limits associated with the human has been expressed throughout history. Arts are believed to be among the early expressions of the longing for transcendence. It is believed that arts as a medium of expressing the desire to transcend likely date beyond the Bhimbetka petroglyphs; a set of cupules, and an engraving found at Bhimbetka in central India, dating from at least 290,000 BC. Cupules are the earliest known prehistoric art. They are found in almost all continents except Antarctica. Some scholars believe it might be as old as 700,000 BC (Bednarik 1993, 33–35). Arts and technology are intertwined, for example, the design of cupules requires using tools such as stones, bones, a piece of rocks etc. Tool use has continually enhanced human activities,

including the arts of communication. They both involve imagination and a strong desire to go beyond human limits (Lavin 1996). In this regard, the images from the art inspire the inventions of tools that facilitate the illustration and embossment of the expressions. Mieke Bal and Norman Bryson state that the use of images and arts has been part of humans from the early stages of civilisation. They explain that human culture comprises signs and arts developed from constructing such signs (Bal & Bryson 2014, 4). Arts shape technology, an expression of human "culture, encoded with their dreams, purposes, environment, insights, and limitations" (Pursell 1983, 304).

Arts and technology are considered two vital signs of civilisation, though their developments are considered distinctly. The two fields have evolved and shaped each other over the ages, with cupules developing into more vivid illustrations such as sculpturing. Through technological progress, the visual aspect, the principal significance of arts, has become possible to convert into digitalised images (Sapsed & Tschang 2014, 127). Arts appear to have developed early in human evolution from symbolic depressions on and in caves. There are considerably advanced artistic works with cave paintings, carvings and engravings on bone and ivory, petroglyphs, woodworks, sculptures and decorations in the Late Palaeolithic[2] to Early Mesolithic[3] (Terbergera, et al. 2020, 14). David F. Noble links the contemporary technology that defines the mark of modernity to medieval arts and inventions (Noble, 1999, 9).

While arts emphasise symbols rather than instrumental value, the application of technology is solution-focused; aimed at solving problems, decreasing costs, substituting for rare resources, etc. Arts represent the transcending of human expressions, while technology has been the tool for such expressions. The creative impulse is about creating for more visceral reasons but ultimately influences technological development. For example, the invention of the pinhole camera in 1816, which evolved into digital artistry in the late twentieth and early twenty-first centuries, represents art-driven technological progress and, at the same time, technology's influence on art that has become pervasive (Sapsed & Tschang 2014, 128). Jonathan Sapsed and Feichin Ted Tschang explain that the generation of artistic content in industries such as print media, film animation, videogames, and the evolving applications of the internet point to technology facilitating creative work for professional artists while increasing participation in arts. Software and hardware tools have transformed artistic content while automating much of the programming skills that had been an entry barrier (Sapsed & Tschang 2014, 129). However, there is a dramatic shift in art and technology from communicating and expressing imagination to manifesting the imagination. Art and technology focus on humans' ultimate desire, not just communication but transcending human nature.

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[2] Late Palaeolithic also known as Late Stone Age is the third and last subdivision of the Old Stone Age, dating between 50,000 and 12,000 years ago.
[3] Mesolithic, also called Middle Stone Age, ancient cultural stage often estimated between 14, 000 and 15,000 years ago.

Noble explains that the shift in the social focus of the arts was embedded in a conceptual invention which refocused arts with significance beyond expressions. Technology identified with transcendence is thus connected with the Christian idea of redemption. The worldly means of communication and survival are now redirected toward the otherworldly idea of salvation (Noble, 1999, 9). He believes that the advent of Western technology as a significant force and the rise of the "religion of technology "were two sides of the same phenomenon. The otherworldly roots of the religion of technology were distinctly Christian. For Christianity alone blurred the distinction and bridged the divide between the human and the divine. Only here did salvation signify the restoration of mankind to its original God-likeness" (Noble, 1999, 9).

Noble thus identifies technological transcendence, including its otherworldly flavour, with Christianity. The arts can be said to have redirected technology into its religio-cultural root as the inner human desire to be free from various constraining limits. However, the desire to transcend technologically challenges the religious notion of stability of human essence because science and technology demonstrate that human nature is unstable, evolving and likely to transform. The meaning of technology is redefined in terms of religion, unity and strength. This study begins with the discussions of the concept of humans to examine "posthuman" theories of the future of transformed humans. Are humans destined to become robots, cyber beings, cyborgs, clones, spirits, ghosts, or angels? Popular themes, such as human nature and "posthuman" nature, including aspired genders, are discussed in relationship with notions in posthumanism, transhumanism and theology.

1.3. Contextualising Theology within Contemporary Culture

Theology has been viewed over the years in a relationship with religion, though attempting a definition of what can be termed theology is difficult, it is possible to delineate the term. David F. Ford (1999, 3) describes theology as dealing with questions raised by and about religions. He explains that religions need to deal with all sorts of questions and that recent questions are often related to the use or impact of technologies. The theologian Paul Tillich (1991, 54) suggests that theology should be described as a normative branch of knowledge concerned with religion on the same level as normative ethics, aesthetics and others to avoid the challenge which has seen theology on the defensive for over two hundred years. He believes that religion is the substance of culture and culture in the form of religion. For Tillich culture and religion are on equal ground because they both originated from God.

Philip Hefner, whose proposal is similar to that of Tillich, describes theology "as the work that marks all Christian existence: giving contemporary expression to the power and presence of God that is known in the person of Jesus Christ, the incarnate word of God" (Hefner 2011, 2). By the contemporary expression

of God's power and presence, Hefner emphasises God's involvement in every age. That includes the contemporary technological age that recognises diverse sexual orientations and expressions. All activities in this age could be seen as human expressions of God's power and presence in the life of human beings who are God's created co-creators.

Theology represents humanity's readiness to fulfil the original divine mandate in Genesis 1:27-28,[4] which keeps evolving. Hefner expresses that view in this way, "because this is God's world, and God is present in it, working out divine will. God works out this will in inscrutable ways, mirroring the mystery of God's own being" (Hefner 2011, 3). The perspective of older theologies might indicate that this age is located outside God's reach, but understanding theology in terms of culture makes it easy to include all aspects of life, such as sexuality and technology, as part of God's plan. The word of God should not be apathetic to the prevailing culture. God continues to be present and interested in humans in this age, just like in previous ages. Because humans are sexual beings, we can safely deduce that God is interested in both their sexuality and their worship. God is the owner of the cosmos and all ages, including this sex craze age. "The dynamic of this world, which grounds the incalculable changes that we witness, is God's work" (Hefner 2011, 3).

Historically speaking, bringing topics such as sexuality, religion, and technology together can be seen as odd and out of place. However, separatist perception of the three themes is only apparent because they are deeply related. Marcella Althaus-Reid even sees theology as a sexual ideology, she argues that "sexuality must be included in theological considerations because theology is a sexual ideology performed in a sacralising pattern: it is a sexual divinised orthodoxy (right sexual dogma) and orthopraxy (right sexual behaviour), thus theology is a sexual act. Althaus-Reid sees theologians as nothing more than sexual performers who must take many ethical and sometimes partisan decisions when reflecting on God and humanity because theology is never innocuous or sexually innocent (Althaus-Reid, 2004, 6).

Scholars such as Paul Tillich and Philip Hefner have called for a new approach to theology that reflects contemporary socio-cultural trends. Paul Tillich believes that religion and culture are united because both have the same source (Tillich 1991, 62). Thus theology should not be separated from culture but focus on things that are important to society because religions that lose touch with culture are likely to go extinct. Technology and sexual expressions are two crucial aspects of contemporary culture needing religious illumination. Furthermore, the sociological aspect of religion is much more accepted and people find it easy to relate with. Moreover, there are attempts being made to socialise the religious aspects of transcendence. For examples religious transcendence concepts such as yoga, telepathy, and meditations has become social products (Radhakrishnan 1940, 36). This demonstrates that information on religious practises

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[4] All quotations and references from the Bible are from the English Standard Version 2016 (ESV).

is essential to the development of society. The role of theology has become much more crucial as a result of the growing need for interpretations and contextualization of religious data.

1.4. Explanation of Key Concepts and Terms

This section lays out the major discursive elements in the research while simultaneously explaining the key concepts. However, the definitions and elaborations are on selected key concepts such as "Religion," which is used interchangeably with "Theology." Other concepts explained are "Transcendence," "Heaven and Space," "Nature," "Transhumanism," and "Posthumanism." The terms "Embodiment, and "Disembodiment" are explained in relationship with "Transcendence." Other terms are explained within the main text as they come up to enhance the flow of reading.

1.4.1. What is religion?

If one wants to discuss transcendence in its many forms and meanings, a working definition of religion is inevitable. The transcending notions from four religions are discussed, two from the Abrahamic religions and two from Eastern religions. Although references are made to animism and Judaism in the study, discussions of religion focus on notions of transcendence in Christianity, Islam, Hinduism and Buddhism. Furthermore, the ideas of transcendence in religion are based mainly on those relatable to technological solutions. This means that only limited examples of Eastern religious practices are engaged. Thus this section explores what religion means in the context of this study. The term "religion" inspires different ideas shaped by the individual's worldviews and exposures. Everyone indeed knows what religion is, while at the same time, there is a considerable disagreement about what should be called religion. The term attracts varied reactions, ranging from suspicion, acceptance, rejection, paranoia and other responses. Sometimes it is dismissed with notions such as the postmodern view that "religion" is a Western category used in understanding other cultures, thus is a colonialist tool. It is also seen as the practice of the various university disciplines studying religion to define it in their discipline reductively leaving out other perspectives (Neville 2018, xi). It is often associated with wars, ignorance, oppression and other harmful human tendencies. In this context, Sigmund Freud, who employed psychoanalysis to argue that religion is entirely an illusion comes to mind. Freud claims that, humanity creates the "god" idea and invests it with a threefold task; to do away with the terrors of nature and encourage humans to accept cruelties in life as their fate while compensating for their need for a father figure (Freud 1961, 22). Freud, who treated religion with contempt, nevertheless, highlights two fundamental elements of religion that are helpful to this study. The first is to transcend human condi-

tioning, and the second is to build social groups that encourage members to face the realities of life. These are the basic ideas that the discussions of religion in this work suggest.

Religion generates endless meanings even among religious adherents. It is seen as a spiritual path, a community of practice and belief that help adherents to follow a particular spiritual path. Other renditions include a set of beliefs about ultimate things or transcendency. It can also mean a belief in supernatural beings, whether or not they are ultimate. For some people, religion represents a tradition of beliefs with a unique vocabulary and a history of development and definition against other traditions. It is also seen as a rich evolving culture with images and institutions that invoke music, dance, art, literature and architecture (Neville 2018, xi). Several other ways of identifying religion can directly or tentatively link with the desire to transcend and social and community building. This section discusses the meaning of religion in terms of transcendence, which is the acknowledgement of the spiritual on one part and sociological formulation on another. It should, however, be noted that religion is often recognised in terms of symbols as well.

A section of scholars see the core issues of religion as relating to transcendence and the divine (Henriksen 2010, 153). Others point to sociological meanings, religion as a product of social norms (Luckmann 1967, 53) and as a symbolic system (Geertz 1966, 2). According to Luckmann, in his book, *The Invisible Religion*, "religion is a basic feature of the *conditio humana*." He stresses that religion fulfils a crucial anthropological function in transformation. Basically religion exists to transform the *Homo sapiens* into actors in history and enhance the social order (Luckmann 1990, 131). The transformation results from the human ability to transcend, marking transcendence as the basis of religion. "It is in keeping with an elementary sense of the concept of religion to call the transcendence of biological nature by the human organism a religious phenomenon" (Luckmann 1967, 49).

While it is impossible to identify when religion began, it has often been tied with the evolution of the mind that provided the complexity necessary to create abstract symbolism. It is estimated that religion emerged between 100,000 and 45,000 years ago when a universal reorganisation of the early human brain made it possible to create belief symbols, such as artwork on caves, rocks, or artefacts worn as jewellery. Religion is also traced to the belief in the afterlife, as archaeological discovery about burials of the early humans reveals (Rebay-Salisbury 2012, 15–18). Nonetheless, the concept of the afterlife is complex even among the world religions; there are considerable conceptual differences between Heaven, Hell, reincarnation, and Nirvana.

1.4.2. Common Notions of Religion

This section discusses the idea of religion as expressed in three main ways, a) in symbolic terms; as a system of symbols, b) sociological; social building and c) transcendence; going beyond limits. The word "religion" is believed to be

derived from the Latin *religio* commonly seen as coming from *re-lego*, where *lego* meant considering and *relego* considering over again. "Lactantius, a third-century Christian writer, followed by Augustine, thought it came from *re-ligo*, where *ligo* meant binding together. Its main meaning in the ancient Roman world was the scrupulous, conscientious strict observance of the services owed to the gods or to God" (Neville 2018, 6–7). The understanding involves taking the cults and their observance seriously. It produces a sense of bonding; humans bonding with the gods through the cults. Robert Cummings Neville, an American philosopher and theologian, posits that the study of religion in the Roman context might be the study of the nature of cults worshipping or serving the gods and the commitment required of the worshipper. He compares the term's application to Thomas Aquinas's rendition of *religio* as the duty owed to God. Aquinas posits that all people possess a natural knowledge of God and an impulse to worship and love God, making religion universal. Thus, everyone ought to "bind" themselves with the service to God (Neville 2018, 7). In this context, transcendence is a symbol, and its use provides a grip on understanding a given society. Examples of scholars who advanced religion in terms of symbols are Clifford Geertz (1926–2006), Hubert Knoblauch and Paul Tillich.

Geertz was an American cultural anthropologist who significantly advanced the study of symbols in religion and culture. He identified religion as a system of symbols that portrays powerful, pervasive, and long-lasting moods and motivations in humans. This becomes possible by formulating the concept of the general order of existence, including clothing and moral standards that serve as the group's identity (Geertz 1966, 2). According to Geertz, symbols can convey meanings that evoke feeling and action, thus having the dual function of modelling reality. On the one hand, they capture the current state of affairs and, on the other hand, demonstrate how the world should be. Symbols function as a means of preservation while trying to create something new. He explains that symbols become alive through ritual action conveying their whole meaning. This is because rituals enact the full reality and simultaneously communicate the meaning of reality to humans. According to Geertz, religion is inherently social due to communicating reality through symbols and ritual actions. Therefore, religion facilitates group interactions and interpretations of symbols. Through ritual actions the notion of transcendence of individual religions are promoted (Geertz 1966, 8). Geertz's definition, however, reduces religion to a set of evocative structural symbols and broadens religion to include non-theistic systems. Thus almost every group and movement, such as Naziism and sports fanaticism, can be classified as a religion.

Hubert Knoblauch, a German sociologist, describes symbols as "social constructions of knowledge within history which depend on the objectivation and sedimentation of a specific meaning. They are best exemplified by the 'conceptual machineries' of mythology, i.e. the conception of reality that posits the ongoing penetration of the world of everyday life by sacred forces" (Knoblauch 1999, 87). Thereby religion serves as a "system of symbols." Some theologians

agree to this view. For example, Paul Tillich posits that "everything religion has to say about God ... has a symbolic character" (Tillich 1957, 9).

Tillich is of the view that religious expressions such as "reincarnation," "life after death," "eternity," and "immortality" are not literal, but they are to be understood symbolically. Similarly, terms such as heaven and hell are not an immediate reference to a place but symbolic, including the word "God." Tillich explains that symbols can be "deciphered" only metaphorically. Therefore, he tried to develop a "negative metaphorical language" full of contradictions and paradoxical propositions (Tillich 1957, 63). Thus, Tillich described transcendence in religion as a symbolic social building tool. The symbols and rituals point to something beyond, but at the same time, they represent a community. In terms of community, an adherent praying the rosary points to the Catholic faith and can be differentiated from Tibetan Buddhists using *malas* to pray. Thus the sociological and transcending religious elements manifest within symbolic meanings, facilitated by rituals.

Examples of scholars who perceive religion in sociological terms include David Émile Durkheim (1858–1917), a French sociologist, Robert John Wuthnow and an American sociologist Lewis Wolpert (1929–2021). Durkheim, seen by some scholars as the "father of modern sociology," expresses his view of religion similar to that of Geertz's. Durkheim employs his research data on aboriginal practices to understand the state of modern religion. He uses suicide cases to conclude that society influences individuals' behaviour and values and that the world must be understood as a societal structure. He posits that social norms are developed by society to form the individual, therefore, society precedes the individual, and is, for practical purposes, a god. Durkheim defines religion simply as a universal sociocultural phenomenon (Durkheim 1961, 22). He often sees religion as immanent in every society (O'Dea 1966, 1). Durkheim thereby reduces God to society, believing that the sense of transcendence in humans is a social product. Since members in a group see the community as something more significant than they are when they come together, society becomes transcendency. Thus, Durkheim would assert that the religious traditions and images of God are social creations, and as such, they are not self-existent (Strenski 2009, 295). Several scholars follow Durkheim's notion that religion is the most ubiquitous of social institutions (Durkheim 1965, 3, 262). Robert Wuthnow (1988, 473), sees religion as the oldest unifying force that creates societies and keeps them together.

Wolpert, who claims that religion is all about causal beliefs, posits that religion results from early humans' explorations of the causes of events that affected their lives. Humans have a fundamental need to construct beliefs that account for important events in their lives, and religion serves as a rich source of explanations associated with life. He opines that, this cognitive imperative evolved into religion since it had an evolutionary advantage for human survival to have causal beliefs. Like Geertz, he stresses the capacity of religion to communicate through rituals, symbols and doctrines, mostly from abstract conception into reality. Furthermore, he links religion with tool use, indicating

that the causal belief led to tool making (Wolpert 2008, 73). Finally, Wolper links religion with culture, making it a sociological mark of civilisation. His idea of the nature of religion places religion at par with the construction of theories, philosophies and the arts but stresses its social effects.

Nerville and Edward Burnett Tylor are, however, among scholars who express religion in terms of human interactions with the unseen world. Neville defines "religion as human engagement of ultimacy expressed in cognitive articulations, existential responses to ultimacy that give ultimate definition to the individual and patterns of life and ritual in the face of ultimacy" (Neville 2018, 19). He emphasises the relationship between humans and the divine that characterises many religious narratives. This definition of religion focuses on human engagement with ultimacy, divine, and transcendence which relates to the belief in life after death culminating in various rituals for the dead. For Neville, the engagement with the ultimacy fuels the desire to transcend the biological with the sense that an upgraded status from natural to the supernatural is possible. It is often associated with acquiring some of the ultimate qualities through rituals. Indeed human history, culture and mythologies are saturated with narratives about human-divine engagements. Humans have always strived to identify with the divine and to acquire divine qualities. For instance, the legend of Gilgamesh, the king of the Mesopotamian city-state Uruk (Erech) was part human, part god, a son of a goddess, and a human king. He represented both divinity and humanity, and thus mortality and immortality. Becoming aware of his mortality, Gilgamesh engages the divine and embarks on a dangerous and futile adventure to overcome his mortality (Manzocco 2019, vii). The narrative points to the desire for transcendence, through divinisation that deletes mortality.

The story of the Titan Prometheus is also credited with enlightening humans and equipping them by taking from what is the preserve of the divine to humans (Manzocco 2019, viii). Thus divinity possesses knowledge, wisdom and abilities that humans lack. A humble recognition of this fact and reverence engagements through worship and obedience is believed to incite benevolence in the divine. Humans who devote themselves to the divine may be bestowed with some supernatural endowments that offer protection, healing, fertility and long life. However, the gods have placed the stake of immortality so high that humans are found wanting when it comes to getting a grasp of it. Even a demigod like Gilgamesh could not obtain independence from the cold grasp of death despite his remarkable superhuman exploits.

Divine-human exchange is, therefore, a crucial aspect of religion. Humanity provides worship, sacrifices and obedience while the divine provides protection, fortification, fertility, wealth and other conditions favourable to human welfare. The story is told of Johann Geog Faust (1480–1540), who exchanged his soul for superhuman knowledge and divine qualities to the devil (Manzocco 2019, x). The use of the devil represents an unfriendly entity that intends to hurt rather than help the human species. Exchanging the soul represents a dangerous transaction likely to produce harmful results to the human involved. Transcended life and enhanced knowledge are ubiquitous in religious imaginations. Luckmann

explains that transcendence of the biological is the elementary sense of religion. However, religious phenomenon rests upon the functional relation of self and society (Luckmann 1967, 49).

Both social and transcendence motifs thus characterise religion. It is differentiated from the construction of theories, philosophies and the arts by recognition of ultimacy. Despite the sociological nature, religion is characterised by the desire to relate to the metaphysical. Luckman explains that transcendence is a general feature of human experience (Luckmann 1967, 49). However, transcendence is shaped by cultural knowledge, making it a social phenomenon. Schutz also identifies a strong relationship between transcendence and social norms, pointing out that most of the transcending experiences of individuals are "socially derived" from the social stock of knowledge. The allusion can be made to subjective "altered states of consciousness," which often turn out to be influenced by cultural traditions, affecting even hallucinations. Typically, Hindus will perceive their gods in a near-death experience, Roman Catholics will perceive Virgin Mary, and Protestants will have near-death experiences with Jesus Christ (Schutz 1962–1966, 401). Thus transcending human experience is within sociocultural experiences.

Neville's definition of religion is close to that of Edward Burnett Tylor, the cultural anthropologist who defines religion as belief in spiritual beings. While Neville uses ultimacy, Tylor renders the same idea as spiritual beings. He stresses that religion involves extending belief in the human soul, which is seen as a source that animates a living body, in two conceptual directions. The first is the notion that what animates humans can live outside the body and outlive it. Secondly, there is the notion that other entities are soul-like in the world. If an individual believes that spirits have powers over aspects of the world, worshipping becomes a natural human response to the spirits. According to Tylor, just as humans make efforts to placate people with power over their interests, similarly, they utilise worship to attract such favours from the spirits. Thus, religion emerges from belief, and the practice attracts other individuals, eventually creating a community of believers (Tylor 1874, 424). Tylor explains that religious beliefs seldom rest on single spiritual ultimacy. Even within monotheistic religions such as Judaism, many Jews believe in YHWH and the existence of golems, creatures made of animated mud. Christians traditionally believe in one God but are conscious of the existence of demons, angels and sometimes ghosts and saints. Orthodox Moslems believe in Allah and the existence of *jinn*, *heuris*, angels and other celestial figures (Tylor 1874, 426). The features discussed about religion such as, symbols, sociology and transcendence can be said to be universal characteristics of religion. Sarvepalli Radhakrishnan (1888–1975) rightly states, "when we enter the world of ideas, the differences among religions become negligible and agreement striking" (Radhakrishnan 1940, 36). Therefore, a discussion of transcendence in Christian theology and other religions constitutes an effort to deconstruct the nagging dualisms between the faith communities by focusing on commonalities. There is the acknowledgement of creedal diversity often created by the differences in sociocultural formations.

This research articulates religion in a manner comparable to that of Luckmann, who considers it to be inherent to humans as well as an important component of human nature (Luckmann 1990, 171). I define "religion" as a fundamental component of human nature, serving as the medium of social constructs, it molds people's relationships with one another, with the environment, with the world, and with themselves while nurturing the yearning for transcendence. Religion is simultaneously sociological and transcendence, with symbolic systems. This is because, religion and sociocultural formations are reciprocal. Religion influences sociological formations and provides motivations for transcendence through symbols. Sociocultural realities in turns modify the possible repertoire for transcendence. Transcendence here includes everything perceived to possess supernatural endowments such as the ability to protect, heal, immortality, fertility, etc. Transcendence and transcendency represent the supernatural but include nature as well. Transcendence is a sociological product thus, social elements and awareness of the beyond are needed to provide a view of religion. It is through sociological diversity that varieties in beliefs are identified. Descriptive terms such as animism, "the belief that inside ordinary visible, tangible bodies there is normally invisible, normally intangible being: the soul . . . each culture [having] its own distinctive animistic beings and its own specific elaboration of the soul concept" (Harris 1983:186). Furthermore, polytheism, pantheism (Ferrero 2021, 79) and monotheism (Hurtado 1999, 3–4) are all perceived sociologically.

1.4.3. Eastern Religions

The phrase "Eastern religions" refers to religions of East, South, and Southeast Asian origin. They usually share certain common concepts that are not found in the belief systems of the Western, Iranian, and African faiths. Examples of such concepts are "Karma" and "samsara" (Basham 1989, 42). The well-known Eastern religions include Indian religions such as Hinduism, Buddhism, Sikhism and Jainism, while the East Asian are Confucianism, Taoism, Shintoism, Sindoism, Chinese folk religion, Vietnamese folk religion, animism and other indigenous religions. Although there might be varying forms of transcendence in all religions, the two most dominant faiths in the Eastern religions, Hinduism and Buddhism, are chosen for this study in respect to the East. In the same way as Christianity and Islam do, these religions provide paths to transcend human limits, place a strong emphasis on being saved by good deeds and have a strong belief in the metaphysical. This section is intended to serve as a concise introduction to the religions of the East. Because a component of their religious practice (telepathy) is utilised as an analogy with technology in the third chapter of this study.

Hinduism is a unique religion that cannot be classified under polytheism or monotheism. It involves the belief in Brahman, the universal spirit, which makes room for believing in a pantheon of divinities while remaining devoted to one deity. Thus Hinduism is seen as a henotheistic religion. Henotheism indi-

cates acceptance of the existence of many deities besides the one being worshipped (Thrane 2010, 337–342). Unlike Buddhism, Hinduism is not based on the teachings of a founder but developed from diverse traditions enriched by over 3000 years of history. The term "Hindu" was derived from the original inhabitants of the Indus River but came to represent people living in India by the thirteenth century DC. The term Hindu in the eighteenth century then became the name of the Indic religion (Shattuck 2002, 16).

Buddhism is seen as a path of practice towards spiritual enhancement that produces the right knowledge about the true nature of reality. Buddhist practices facilitate the transformation that inculcates consciousness, benevolence, and wisdom as essential qualities of the individuals providing unique access for each individual to pursue a path that ultimately climaxes in Enlightenment (Thrane 2010, 337). The Karma concept is the central tenet of the ethical path in Buddhism. Buddhism is a religion often referred to as trans-polytheism, accepting multiple long-lived gods, but the focus is placed on the ultimate reality, Nirvana which is beyond every deity (Akhavan 2015, 11). The teachings are summarised as; (1) there is no fixed or permanent thing, (2) there are consequences to every action (3) change is possible. Buddhism "teaches practical methods which enable people to realise and use its teachings in order to transform their experience, to be fully responsible for their lives" (Faure 2009, 40–43).

Hinduism and Buddhism share many concepts, but each has a specific understanding of each of those concepts. They both practice telepathy which is discussed as analogy of technological transcendence in this study. They believe in an almost endless cycle of births and rebirths termed samsara from which a release is sought. However, while the atman (soul) in Hinduism is eternal and in the business of reincarnation, more-or-less intact from birth to birth, Buddhist believe in anatta; a soul as a collection of feelings, perceptions, senses and other immaterial matters which constitutes all living things. Thus there is nothing like a constant soul in Buddhism. Salvation (moksha) in Hinduism involves spiritual exercises and good deeds which help a release from reincarnation. The Karmic effect therefore ends so that the individual can be united with Brahman (God). Karma, a belief in both Buddhism and Hinduism, stipulates that past actions affect the condition of present and future states of life. A king who commits evil can be reborn as an enslaved person or a frog. People who are living with afflictions such as poverty and diseases are seen as paying for the effects of previous life Karma (Brockington 1981, 5).

In Buddhism, the Karmic effects end when adherents who have attained enlightenment reach the state of Nirvana, where suffering is extinguished (Faure 2009, 46). The ultimate goal in Buddhism is, however, more of an abstract and seeks not to unite but to obliterate. Nirvana in Buddhism cannot be equated with Heaven or Paradise but ending suffering and the fire of desire (Kilesa), thus Nirvana is sometimes translated as "cool." The "cool" rendition indicates far away from the fire, peace from the cycle of misunderstanding. It is a stepping stone to complete enlightenment. Other meaning of Nirvana includes "blowing

out" negative emotions entirely and forever. Nirvana is not the end of life but a point of preparation for becoming a fully Enlightened Being (Loy 1983, 355).

The principles and practices of the two religions have become common in the modern world. The word Karma is used by diverse people who are not subscribing to any Eastern Religion. Hindu practices such as yoga are common exercises globally. Radhakrishnan writes, "We hear nowadays a good deal about yoga even in the West. It means the process, as well as the result, of balancing the different sides of our nature, body, mind, and spirit, the objective and the subjective, the individual and the social, the finite and the infinite" (Radhakrishnan 1940, 36). The practical benefit associated with Eastern religion, such as breathing exercises, mental concentrations, mindfulness and meditation, is becoming a part of modern health delivery.

Mindfulness is a mental training that helps maintain a moment-by-moment consciousness of bodily sensations, thoughts, feelings, and the surrounding environment, through a gentle, nurturing. It is practised with meditation to enable the individual to accept their thought, feelings and sensations (Wilson 2014, 18–31). The practice has been a dimension of Buddhist spirituality "apparently seamless transition from the Buddhist monasteries of Asia to the living rooms, clinics, and television studios of the West" (Wynne 2018, 49). Another Eastern religious practice that has attracted modern interest is telepathy which is discussed in detail in this study (see page 104).

1.4.4. Abrahamic Religions

The "Abrahamic religion" sometimes referred to as Abrahamism, is a group of monotheistic religions that worship the "God of Abraham." Abrahamic religions claim lineage with Semitic-originated religious communities. Abraham, the patriarch, is a significant Old Testament (OT) figure recognised by Jews, Christians, Muslims, Bahá'í Faith, Samaritanism, the Druze and others. The term, however, often refers to the first three dominant religions, though sometimes adjectives such as dominant are used to delineate the first three from the others (Senel 2018, 1997). The term Abrahamic religion is used in this study in reference to Judaism, Christianity and Islam due to their claim of affiliation to the historical figure, Abraham. However, the use of the Abrahamic religion as an umbrella term to describe the above institutions has been challenged by some scholars such as Professor of Judaic Studies Alan L. Berger and professor of religious studies Aaron W. Hughes. While there are "commonalities," between the religions grouped under Abraham, Berger argues that there are essential differences between the traditions theologically and even historically. Furthermore, the individual faith understands the role of Abraham in different ways and has uneven relationships besides ideological and demographic diversity (Berger 2012, xiii).

Hughes sees the use of Abrahamic religions as an example of "abuses of history." He posits that combining the Jewish, Christian, and Muslim religions into one category might encourage interfaith trialogue, but it is an ahistorical

category (Hughes 2012, 17). Jon Douglas Levenson, an American Hebrew Bible scholar, points to the fact that the variation between the three faiths is so deep that it is difficult to relate the Abraham projected in the individual Abrahamic religions. First, he posits that Abraham did not teach any doctrine, and secondly, the Abrahams of rabbinic Judaism, Pauline Christianity, and Islam differ. Furthermore, the respective deviations from the historic Abraham himself of the Ancient Near East challenge modern attempts to create a trans-confessional and unifying "Abrahamic religion" according to Levenson. He avers that the effort becomes more problematic when scriptural authority is invoked (Levenson 2012, 122).

Despite the intense criticism of the above scholars, they all acknowledge the ecumenical potential associated with categorising the three religions under the umbrella of the Abrahamic figure. Moreover, given the violent history of these faiths towards each other and the need to enhance inter-religious dialogue, the Abrahamic figure, which is mute in scriptures, possesses a potent magnetising image that can foster peace and cooperation between the religions. Furthermore, the Abrahamic figure has become fruitful and commonplace in interfaith discussions as a common reference point for Jews, Christians and Muslims (Goshen-Gottstein 2002, 161).

It is factual that the common recognition of Abraham is insignificant to the three religions as compared to their respective appeals to Moses, Jesus and Mohammed in terms of their self-identity. The description of the three major religions as "Abrahamic" should not be viewed in terms of ideology but as an ecumenical appeal (Goshen-Gottstein 2002, 173). Specific grounds validate the reference to Abraham as a common symbol that unites Judaism, Christianity and Islam, such as the use of inspired scriptures, belief in one God, the God of Abraham; the creator, and their unanimous rejection of pantheism as idolatry. Moreover, Abrahamic religion seems much more descriptive to the three than referring to them as monotheistic religions. It avoids suggesting that the three are the only monotheistic religions (Goshen-Gottstein 2002, 173). While acknowledging the challenges associated with relating the three to the Abraham icons, some features bind the three faiths together. They all hold the tradition that God revealed Himself to the patriarch Abraham and conceive God as a transcendent Creator and the source of moral law and life.

Judaism, the oldest among the three religions, emerged in the ancient Hebrew community. The faith is characterised by belief in one transcendent God who revealed Himself to the patriarchs; Abraham, Moses, and the Hebrew prophets. Scriptures and rabbinic traditions govern community life. Judaism has gone through different phases and become a complex system posing challenges to distinguishing the vast number of atheistic Jews from the religious community. Contemporary Judaism descended from Rabbinic Judaism. Rabbinic Judaism is the form that emerged after the destruction of the second temple by the Romans in 70 AD. This form of Judaism was centered on the Torah and the synagogue instead of the temple. As secularisation progressed, the dynamic interpretations of scriptures were developed to guide the interplay between faith and

secular engagements. Over time, the differences resulted in the four main branches of Judaism today; Orthodox Judaism, Reform Judaism, Conservative Judaism, and Reconstructionist Judaism (Lupovitch 2010, 49-50).

One of Judaism's primary texts is the *Tanakh*. The name is an acronym for the three sections of the scripture; *Torah* (Law), *Nevi'im* (Prophets), and *Kethuvim* (Writings). It contains the account of the Israelites' relationship with God from their earliest history until the building of the Second Temple (BC 535). Abraham is the first Hebrew and the father of the Jewish people. One of his great-grandsons was Judah, from whom the religion ultimately derives its name. The Israelites were initially a tribe that lived in the Kingdom of Israel and the Kingdom of Judah. *Tanakh* is used along with the *Talmud* authored from the 2nd to the 6th centuries (Lupovitch 2010, 5–8). Prior to the exile of the Jews from Israel, Judaism was a national religion, with the sacred commandment serving as both religious and civil laws. The first schism from Judaism appears to be the result of the ministry of Jesus Christ and His disciples. Christianity was initially perceived as a branch of Judaism. Apostle Paul's preaching about the "nullification" of the law emphasising faith is believed to be a significant departure from Judaism. Judaism as a national religion could not expand beyond Israel, while Christianity proclaimed Jewish monotheism and ethics among those referred to as Gentiles (Herbst 2016, 576).

Christianity began in the first century as a sect within Judaism led by Jesus, regarded as the Messiah. Many Christians see Him beyond the Messianic mission because He was seen as God incarnate after His death and resurrection. He is expected to return to the Earth just as He ascended into the heavens. His second coming will mark the end of time. He will be ending the reign of evil and judge the living and the dead. Jesus will then create the eternal Kingdom of God where there will be no pains, sickness, sorrows, senescence and death. Although Christian teachings depend on the Jewish Old Testament and the New Testament, they split from Judaism as a new movement spread across the Roman world. The early Christian preaching focused on the heavenly kingdom for the righteous where there is no more death, sickness and sorrow (Ehrman 1999, 233).

Islam is based on the teachings of the Holy Qur'an, which contains a revelation from *Allah* (Arabic for "God"), the God of Abraham. Muhammad is considered to be the seal "of the prophets." According to the tenet of the faith, every prophet before Muhammad preached Islam because it means submission to God, the central message of the past Abrahamic prophets. Muslims believe the Qur'an's teachings to be Allah's direct and final revelation and words. Islam is the second-largest religion, and like Christianity, it is a universal religion and adherents are called Muslims. Islam shares a strictly unitary conception of God with Judaism and thus subscribes to strict monotheism (Ridgeon & Houston 2003, 14–20). The term religion is generally used in this study to indicate theism, while Abrahamic religion is used when the issue under discussion can be identified within the three monotheistic religions. Otherwise, each religious persuasion is referred to by its respective name. Under the Abrahamic religion's

ecumenical umbrella, images in both Christian and Islamic eschatology are employed to represent religious eschatology, which allows striking analogies with technology. This elicits a brief ecumenical comparison between Islamic eschatology and that of Christianity.

1.4.5. Transcendence in Islamic and Christian Eschatologies

There has been the interest in interfaith discussions between Islam and Christianity for several decades (Johnson 2020, 1). Alfred Guillaume (1888–1965), British Christian/Arabist, and scholar of the Hebrew Bible, bemoans the fact that so much work has been concentrated on the differences rather than the similarities between Islam and Christianity (Guillaume 1950, 40). This concern is due to the possibility of creating persistent separation among members of the two persuasions and making it difficult for healthy social engagements. Indeed John Renard (2011) sees the promotion of similar themes in Christianity and Islam as the right way to foster unity and social cohesion. Christian leaders such as Pope Francis and Hans Kung, one of the prominent twentieth-century Roman Catholic thinkers and many others have expressed the need for promoting the uniting aspects of Christian and Islam doctrines to foster unity (Johnson 2020, 1). I subscribe to the idea that, despite the diverse notions between the two persuasions, there are striking similarities that unite them. Christian theologians should thus be encouraged to inculcate diverse Islamic doctrines into their work when the need arrives. Therefore, the discussions of eschatology in this study focus more on similarities than differences. One of such similarities is that both Christian and Islamic eschatologies share many characteristics with secular "posthuman" narratives. Both eschatology and "posthuman" narratives discuss humans' future possibilities of eternal life in a realm beyond the biological. Thus eschatology contributes to the effort to discuss transcendence in theology and technology. Furthermore, eschatological doctrines act as a magnifying glass that brings the fundamental relationship between the two creeds to the foreground. It unearths the half-hidden interfaith potentials in the mythological languages and narrative forms.

Besides Christianity and Islam being members of the Abrahamic family, some general characteristics unite all religions, such as doctrines of the afterlife, faith and consciousness of ultimacy (Radhakrishnan 1940, 36). Furthermore, the two faiths seem to be saying the same thing but the accounts are shaped by socio-cultural diversity. For instance, their narratives are exclusive; only faithful Muslims can enter into *al-Jannah*, and Heaven is for Christians with a strong relationship with Jesus. Nevertheless, beyond their Paradise is Hell, full of torture, a complete opposite condition to the realm for the favoured faithfuls. Religious eschatology provides future narratives of post-biological humans, in terms of enhanced human, transformed beyond what could be described today as human. In Islam, they are devoid of senescence, mortality, and ageing and endowed with supernatural abilities in transcended realms (Jarrar 2017, 27–29). Similarly, in Christian thoughts, humans are to become transcendent, perfect

and flawless, a transformation that results in the *Homo sapiens* attaining a full image and likeness of God (Méndez 2018, 176). Therefore, the two eschatologies can be used in this study as part of the religious dreams to transcend biological limits.

Islam, like Christianity, is not static, it is shaped by adaptations due to the influence of diverse ethnic populations, the cultural contexts in which the religion took root and individual leadership. Therefore, the eschatological narrative is not monolithic since contextual variations are inevitable (Cusack & Upal 2021, 1). This study focuses on the basic tenets of eschatology common to most Islamic communities. Mostly from modern scholarly reviews of the Qur'an, Hadith and Eschatological manual. Islamic eschatology is of particular interest to this study, besides having many similarities with Christianity, it is comparatively much more elaborate. Indeed Islam is seen as a religion of eschatology, it scripts vivid elaborations on the expected end-time events (Günther 2017, 181). In Christianity and Islam, eschatology entails the anticipated events at the end of the age, although different scholars render it differently. Richard Bauckham describes eschatology as the "direction of Christian theology; the Christological basis of eschatology; eschatology in cultural contexts; holistic eschatology; eschatological language; the parousia; the last judgement and the question of universal salvation; and the kingdom of God, the vision of God, and eternal participation in God" (Bauckham 2007). Hans Schwarz (2000) posits that it involves the future, human destiny, Heaven, and Hell. This study expresses eschatology as the future end-time events expected in Christian and Islamic doctrines that involve the total transformation of human nature and the universe through divine action.

The belief in the resurrection of the body is an integral part of Islam and Christianity. They anticipate human immortality that involves transcended body, similar to the "posthuman" vision in transhumanism (Moravec 1988, 117). In Islam and Christianity, the dead transcend biological limits and are entitled to either eternal torture in Hell or absolute pleasure in Paradise. Paradise is an aesthetic, "posthuman" state referred to in the Qur'an and Hadith as *al-Jannah*. Hell (*Jahannam*) represents torture and pain in the post-biological state for the unrighteous. Qur'an 88:8–16 brings out the contrasting environmental conditions to which the two categories of "posthuman" are entitled (Lange 2016, 6–12). Hell's population is subject to severe forms of torture, in contrast, those in Paradise enjoy extreme pleasures that satisfy the soul, where there are only kind words in an elevated garden. "Within it is a flowing spring Within it are couches raised high and cups put in place and cushions lined up and carpets spread around" (Qur'an 88:16). While there are suggestions that Hell might be temporal, there is a strong argument that Hell will exist as long as Paradise does (Lange 2016, 12). There is a school of thought that sinners who passed away with at least an iota of *īmān* (faith) in their hearts may one day be saved from Hell due to their little faith (though such a notion has been contested). Those who rejected faith and refused to mend their ways before death will never be relieved of the torments of Hell. This idea is based on the belief that salvation is

by having faith in Allah, living a righteous life, asking for forgiveness and producing good actions. They will escape Hell and enter Paradise, described in the Qur'an as "gardens of pleasure" (Qur'an 31:8) (Khalil 2016, 165).

Common attributes associated with Islamic "posthuman" and Christianity includes the hope to ascend into Heaven through divine means. For example, Jesus ascended into Heaven after the resurrection, and Mohammad ascended into the heavens many times before dying (Lange 2016, 12). A significant feature of both Christian and Islamic eschatology is the expectation that the dead will be raised and their deeds judged with corresponding rewards and punishments. Constant admonitions characterise the qur'anic discourse about *al-sāʿa*, (the Hour), similar to the Christian rapture idea. Both narratives lack a concise period, calling for the need to watch and pray. Additionally, Islamic and Christian eschatology raise the question of the interim condition of the dead before judgement day (Tesei 2016, 31). Besides the different eschatological themes, one of the conceptual differences that mark diversity is that Christian "posthuman" is gender-neutral (Elliott 2012, 12). However, Islamic Paradise is gendered and masculine-focused (Jarrar 2017, 28). The Islamic "posthuman" in contrast to that of Christians, dwells in a celestial garden since it does not need mansions. However, castles are available as part of the inheritance of Paradise (Harty 2005, 189).

The open garden represents a limitless state and absolute freedom. Each "posthuman" (saint) is linked with the other in a communal unity, including even those in Hell, which is populated by a "posthuman" community who rejected Islam and lived faithlessly while in the human state. Islam believes in the corporeality of the resurrected "posthuman," similar to the resurrected Christ. The new corporal body is connected to the old human desire, thus the pleasure of Paradise delights and nourishes the "posthuman" in a similar way it would the human (Jarrar 2017, 277). However, the delight of the Christian "posthuman" is the eternal union with God, their new status, which is angel-like, is devoid of biological desires (Elliott 2012, 12). Nonetheless, the statement of Christ does not indicate that there will be no genitalia and no sexual encounters. In the Jewish context, it might imply so, but in the current social context, where sexual activities outside marriage are possible, the message invokes a different understanding. The church father, Tertullian of Carthage (155/160–220) proposes that the "posthuman" saint will have complete genitals. However, it will not reproduce (Staunton 2019, 14), similar to the Islamic vision of the "posthuman".

Like Christians' expectations, salvation in Islam depends very much on faith. "Indeed, those who have believed and done righteous deeds–their Lord will guide them because of their faith. Beneath them rivers will flow in the Gardens of Pleasure" (Qur'an 10:9-10). The "Gardens of Pleasure" signifies the systematic images of pleasure, the extraordinary life awaiting the believer. Unlike the Christian Heaven, Islamic Heaven is hierarchical, it has seven levels of goodness. Each of the seven levels of Heaven in Islam has a degree or grade according to which each soul is allotted a place. The righteousness of one's

deeds decides the level of Heaven where one will reside after death (Ayoub 2021). These metanarratives are synonymous with transhumanism/posthumanism techno-scientific narratives but with a different genre.

1.5. Transcendence

The term has varied meanings because it is discipline-specific and contextually relative. Therefore an effort is made to provide enough elaboration on how it should be understood in this work. Like many other terms, transcendence generally defies accurate, precise and concise definitions. Even contextual definitions will not ensure a consensus rendition. Nonetheless, it is possible to define the term because it has a root, which is primarily religious. It is commonly associated with a joyful or ecstatic experience related to encountering the divine who is "transcendent" or "transcendency." In Buddhism, transcendence is usually synonymous with *annata*, or "non-self," a mental state necessary for attaining *nirvana,* the state of non-existence (Gorelik & Shackelford, 2017, 361, 362).

The term is usually paired with "immanence, "indicating God's presence and involvement in the material world. Lawrence W. Fagg (2003) writes that immanence involves a feeling of inner or inherent immediacy, a rich indwelling that is pervasive here on earth and in the universe. The pairing might be to mitigate the perception of "transcendence" as indicating "unreachable beyond." Thus transcendence and immanence engender a sense of encompassing, omnipresent being. The two conceptions are seen as mutually endowing each other with a sense of richness and completion than either alone would have. The two aspects indicate God as transcendent above all human frailties and limitations yet present in the affairs of humans, abiding incoherent communication in a consistent union (Fagg 2003, 560, 567).

There are attempts to relate *kataphatic* language with immanence and *apophatic* with the transcendence of God. Rolphy Pinto (2018, 69), for example, posits that due to the transcendence of God, humans may approach Him with *apophatic* language to indicate the lack of human language to address Him. Pinto avers that each individual communicates with God in one way or the other in a unique way. However, individuals may fumble when it comes to the language to use in communication. *Apophatic* theology, which is regarded as negative theology, is a form of theological thinking and religious practice that approaches the divine through negation. The theologian Thomas "Aquinas insisted, we cannot know what God is, only what God is not" (Brown 1997, 243). Indeed several theologians have expressed similar views about knowledge of God and the need for apophatic insight, which involves speaking only what may not be said of the perfect goodness of God (Brown 1997, 243). On the other hand, *Kataphatic* theology approaches God or the divine by affirmations or positive statements about God's nature, confirming His imminence (Harrison 1995, 318–321). *Therefore, Kataphatic language* identifies God with humans,

representing horizontal transcendence. *Apophatic* theology and language represent vertical transcendence due to the tendency to cultivate divisions and entrench hierarchies.

Fagg and Pinto reflect the sense of general perception of many mystics and theologians on the meaning of transcendence. Furthermore, they apply the two terms in the context of religious thinking. However, "transcendence," from Latin *transcendens*, is a participle that can equally and correctly translate as "transcending," not in terms of relation but an occurrence. Hence, transcendence is not wholly captured by the simple notion of the beyond because what is beyond my reach does not necessarily transcend me. Moral duty can be seen to transcend racial and national boundaries. Furthermore, Apostle Paul speaks of the Christian peace that "transcends understanding" (Phil. 4:7).[5] In each instance, the latter is controlled by the former (Archambault 2017, 651).

To transcend is to cross over, hence, besides the transcending itself, transcendence connotes what is crossed and what crosses. Originating from Latin *transcendentem* indicating "surmounting, rising above," the term points to a state of being free from the constraints associated with the material world. This basic meaning is common to both religious transcendence and technological transcendence, but they differ in some aspects. In religion, God is transcendent because He is beyond the frailties and constraints of the material world. Transcendence can therefore connote a state of infallibility, harmonising or overcoming biological processes and possibly controlling them (Archambault 2017, 650, 651). Many mystics and holy people have records of encounters with the divine that brought about the experience of transcendence, such as Ignatius. Apostle Paul talks about transcending into the third heavens while Prophet Elijah, in the cave of Mount Horeb, narrates transcending experiences (Pinto 2018, 69).

The application of the term transcendence as a verb in a religious sense represents a replication of the supernatural, acquiring characteristics of the divine and exhibiting nonhuman qualities. When applied in the same context in sociological terms, it indicates attaining a status within a group that is beyond that of other members. Religious transcendence can be contrasted with technological transcendence in the sense that, historically, there have been reciprocal exchanges of ideas (Noble 1999, 4). In sociological terms, besides the encounter with the transcendent, people who assumed leadership roles in the ancient world, such as Rome, Caanan, Assyria and Babylonia, became transcendent, and most of them assumed divinity status (Smith 1922, 32).

In the Old Testament records, while Israeli Kings did not accord themselves such elevated status, three positions elevated humans to a kind of transcendental status. They were kings, priests and prophets who were anointed to show their transcending status. For example, the Bible records David refusing to retaliate Saul's attack on him, citing the fact that Saul was anointed and could not

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[5]   "And the peace of God, which transcends all understanding, will guard your hearts and your minds in Christ Jesus."

be treated like any other person (Smith 1922, 35). Even in contemporary Christianity, the sense of transcendence is still attributed to church leadership. Priests and pastors are seen as places closer to divinity, serving as a kind of mediator and speaking the mind of the transcendency.

Regarding technological transcendence, my first reference is using the tool as a medium of human extension to support and enhance humans' abilities. The tool here can be physical or chemical. Transhumanists use the term "transcendence" to describe the state of humans after "techno-evolution" when the human species will live without biological limitations as "posthumans," through technological mediations. Such visions of the future relationship with technology are revealed in Wally Pfister's 2014 movie, the *Transcendence*. The various transhumanist concepts like biohacking,[6] technogaianism,[7] singuliatarianism came into play. Johnny Depp, acting as Dr. Will Caster, described the harnessing of biotechnology, nanotechnology, cybernetics and other technologies to overcome human limits as "transcendence." The movie brings out the similarities between religious transcendence and transhumanist vision that captures religious notions such as body-soul dualism, miracles, healing, life-after-death, etc. A major difference between the two notions of transcendence is that religious transcendence is related to the supernatural and social, while technological transcendence is related to tools and technique.

Transcendence is used in this research to represent an act and status that accord privileged positions in religious communities, elevating leadership above members such as in the ancient world kings, priests and prophets, now applicable to religious leaderships. It is also used to represent a new state of human nature beyond the biological and acts that extend the human self, such as through enhancements. This work describes the potential transformation of the human through science and technology or on the instance of the divine as horizontal transcendence. It should be noted that human efforts to transcend through technology and science are godly and do not contradict God's pre-determinations but constitute predisposed actions to fulfil divine purposes. However, the dream to transcend through the separation of body and mind/soul, technologically or religiously, is called vertical transcendence. Therefore, transcendence is applied to both religious and non-religious ideas of exalted, enhanced, extended humans and future ontological states without the current human flaws. By implication, the utility of various technological aids such as communicating with

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[6] Biohacking is also called "do-it-yourself (DIY) biology" because it is a lifestyle-changing procedure practised by the individual. It involves making small, incremental diet or lifestyle changes to improve health and wellbeing. Biohacking typically includes activities that promote quick weight loss, enhancing brain function etc. Biohackers usually rely on technologies such as apps, gadgets, infrared light, saunas and supplements to facilitate improvement and optimal lifestyle.

[7] This idea is an environmentalist concept that advocates for research, development, and emerging technologies to help restore the earth's environment. According to the American Sociologist James Hughes (1987), technogaianism is applied to environmental management in ecological reconciliation.

people far and near, the use of prostheses to help the disabled walk "supernaturally," and a transportation system that enables humans to move from one location to another constitute transcendence. The term "techno-transcendence" emphasises technology as the means of transcendence. I employ the term vertical transcendence to describe notions of transcendence that segregate and discriminate and contrast them with transcending ideas that are inclusive as horizontal. Posthumanism see the need to decentre the human, suggesting that humans should see themselves as part of nature. The decentering process may help humans identify with everything in nature. This notion constitutes a sense of transcendence invoking the idea of omnipresence (see page 142).

1.5.1. Transcendence Discourses in Theological Anthropology

This study is located in theological anthropology within Christian theology. Therefore this section discusses how the term transcendence which is a keyword in the study, has been rendered by scholars within the field and related disciplines such as sociology. Theological anthropology is an effort to analyse the meaning of the human relationship with God. It involves the understanding that human nature is vital in analysing and addressing sensitive issues facing theism in general and Christianity in particular. Traditional Christian understanding of nature, limits and possibilities associated with humans seems to be under threat due to the rapid development of natural science and technology. Some theologians believe that the present dispensation deviates from God's original intentions for creation (Burns 1981, 1).

Traditionally, theological anthropology emphasises understanding the human beings in relationship with God as creatures but not merely as a product of matter, motion, time, and chance. The common understanding associated with the field is that humans can only be understood efficiently with the knowledge of God. Therefore, theological anthropology places anthropology discussions after God's doctrine and prevailing social experience. The core principle of theological anthropology is relatedness with God. The field is thus oriented toward human-divine relationships (Biggins 2019, 192). However, understanding theological anthropology solely in relationship with God is problematic because it projects a vertical transcendence idea that invokes disembodiment. This is because of my conviction that humans as members of the natural world are better understood in relation to their activities, kinship, social structure and their relationship the nonhuman other (Midson 2018, 20–22). Humans' creativity and technological activities that are harmful together with those that engender wholesomeness reveal their identity (Hefner 1984, 39, 331). Theological anthropology should be seen as involving humans' activities and relationships with nature that correspond to their co-creating responsibilities, reflecting God's primordial purpose of creation and their desire to transcend their limits. Indeed, transcendence has been a major driving force that characterises human relationships with God and nature.

Transcendence has been interpreted differently by theologians in theological anthropology including sociologists such as Karl Barl, Karl Rahner, Immanuel Kant, Thomas Luckmann and Alfred Schutz. This engagement with the selected scholars is an effort to facilitate understanding of transcendence in general while making it easier to locate the idea of horizontal and vertical transcendence expressed in this study. The discussions begin with the Swiss Protestant theologian Karl Barl (1886–1968), who expresses the term in relationship with the doctrine of the Trinity (Barth 1967, 96). He discusses transcendence together with immanence in terms of "wholly otherness of God." His theology of transcendence and immanence became explicit when he reacted to the Catholic theologian Erich Przywara's (1889–1972) *analogia entis*. Barth expressed the view that God has an intimate relationship with humans however, God's transcendence is unique and cannot be understood through that of humans. *Analogia entis* (analogy of being) is an epistemological method of knowing God through creation. The theory postulates that the *imago Dei* and *vestigium trinitatis*[8] are embedded in humans and creation (Oh 2006, 180). The *analogia entis* idea beautifully identifies transcendence and immanence with humans as a reflection of the Creator.

Barth argues that the absolute deprivation of human nature makes it faulty to build a theology based on *analogia entis*, which would lead to an anthropological infiltration into theology. He, therefore, proposes the use of *analogia fidei* (analogy of faith) and *analogia relationis* (analogy of relationship) that is experienced through the Trinity (Barth 1967, 95). Barth's *analogia relationis* posits an analogy between the internal and external relations of God (Father and Son) that is, the internal relation between the Father and the Son is analogous to the external relation between God and the human person (Barth 1967, 220). Barth, therefore, projects transcendence in terms of otherworldliness that separates humanity from divinity, but the two are related in different realms.

Barth's notion of transcendence is a mixture of vertical and horizontal transcendence. Vertical because it is expressed in terms of otherness; God is separated from humanity, establishing a dichotomy between humanity and divinity. However, the idea of *analogia relationis* introduces some form of horizontality into the notion, albeit loosely. Barth's notion contrasts with most theologians in theological anthropology, such as Karl Rahner (1904–1984), a German Jesuit priest. For Rahner, the human being is transcendental, which manifests through knowledge and experience.

> What is meant more precisely by the subjectivity which man experiences become clearer when we say that man is a transcendent being. In spite of the finiteness of his system man is always present to himself in his entirety. He can place everything in question. In his openness to everything and anything, whatever can come to expression can be at least a question for him. In the fact that

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8   The general idea of vestigium trinitatis is that there is a kind of trinitarian disposition within creation. Creation in itself is ordered to represent the Trinity. Standard examples include faculties of the human person such as willing, remembering and understanding.

he affirms the possibility of a merely finite horizon of questioning, this possibility is already surpassed, and man shows himself to be a being with an infinite horizon. In the fact that he experiences his finiteness radically, he reaches beyond this finiteness and experiences himself as a transcendent being, as spirit. The infinite horizon of human questioning is experienced as an horizon which recedes further and further the more answers man can discover (Rahner 1993, 31–32).

The human being is a person and subject with an infinite horizon, with no limits or boundaries in time and space. Humans can transcend their systems by acting as subjects "when he explains himself, analyses himself, reduces himself back to the plurality of his origins, he is affirming himself as the subject who is doing this, and in so doing he experiences himself as something necessarily prior to and more original than this plurality" (Rahner 1993, 31). Humans are persons, according to Rahner, because of their self-possession and ability to relate to themselves and their experiences. However, they can become their subject when they focus on analysing the human (Rahner 1993, 31). What transcends humans is their experience which is based on knowledge.

Although Rahner uses the term "transcendence" sparingly, he discusses the nature of a transcendental method that derives meaning from Immanuel Kant's notion of transcendence. However, Kant's rendition of transcendental is devoid of the common notion associated with the term. He refers to knowledge and experience as transcendental and often employs transcendental in place of transcendental experiences (Kilby 2004, 34). Kant uses transcendental as an investigation where one studies unknown things, not something which might be beyond what we know, but rather prior to what we know (Rahner 1963, 31). Kantian transcendental is precisely a description of a specific type of inward-looking philosophical investigation. Kant also transfers the term to the product of such an investigation which he calls "the priori conditions of the possibility of experience" (Kant 1965, 25).

Rahner develops his transcendental idea in harmony with Kant's but occasionally diverges. According to Rahner, an experience is transcendental if it agrees with what Kant can call transcendental and comprises the transcending of something. Thus, Rahner formally employs the term transcendental to refer to the conditions of the possibility of experience, knowledge, action, and the kinds of investigation that uncovers such conditions (Rahner 1993, 21). "This experience is called transcendental experience because it belongs to the necessary and inalienable structures of the knowing subject itself, and because it consists precisely in the transcendence beyond any particular group of possible objects or of categories" (Rahner 1993, 21). He also uses the term in a material sense about a movement or openness in creation that goes beyond what is finite. According to Rahner, the two transcendental notions link because the first procedure leads to discovering the material transcendence, making it unnecessary to distinguish the two (Rahner 1993, 20–22).

A primary thesis of Rahner is that human history is the event of transcendence. This is to say that through the supernatural ontology, it occurs within or is mediated by everyday history within which human beings experience their transcendentality. This transcendentality is universal and culminates in the concept of "anonymous Christians." The concept stipulates that the universal nature of God's salvation should make it possible for everyone to be saved through Christ Jesus (Rahner 1993, 55).

Rahner explains that "supernatural existential," should be the condition for all persons in their transcendentality to receive God's grace and "universal-transcendental revelation," which could become God's self-communication to all people as transcendent beings. Rahner consequently posits that people who do not confess Jesus Christ explicitly and do not become members of the Catholic Church "must have the possibility of a genuine saving relationship with God" and therefore, they are called "anonymous Christians" (Rahner 1993, 54). This notion has rich ecumenical potential, providing avenues for religious dialogues that reduce the Abrahamic faiths' exclusive outlook. Rahner's transcendental notion is radically different from Barth's, but it is close to Thomas Luckmann's invisible religion concept, which talks of "universal subconscious" participation of religion.

The concept of the "Invisible Religion" (1967) stipulates that religion is still an essential feature of modern society in which everyone often participates subconsciously. Thus religion does not entail membership in a religious body but social participation. Luckmann (1927–2016), an American-Austrian sociologist of German and Slovene origin, asserts that religion involves the creation of meaning, which becomes objective in culture and transcends immediate experience. According to Luckmann, the worldview as an "objective and historical social reality performs an essentially religious function and can be defined as an elementary form of religion" (Luckmann 1967, 53). He also posits that "religion" can be defined as a worldview with social, objective, and historical reality. Religion reveals itself in certain social institutions that are the results of the expression of a sacred cosmos within the worldview, which is made up of a system of symbols that point "to a domain of reality that is set apart from the world of everyday life" (Luckmann 1967, 61). According to this perspective, religious representations constitute a sacred universe definable as a specific and historical form of religion.

Luckmann thereby sees the term *transcendent* and *immanent* as having meaning within sociological realities as much as in religion. He distinguishes transcendence from *religion*, which he primarily portrays as the whole human experience made visible and localised in symbols, holy places, holy temples, adherents and activities concerned with them. It includes various faith institutions whose primary function is to transform the human species into actors who belong to a specific historical and social order. Similarly, Luckmann believes all components of social reality needed for accomplishing this purpose can be called *religious*, irrespective of whether it refers to the supernatural or not (Luckmann 1967, 53). Luckmann's transcendence is thus in relationship with

social construction as the giver of meaning to the term, which he expresses as a symbolic process because "it is true that a genuinely isolated subjective process is inconceivable" (Luckmann 1967, 45). Luckmann also explains the terms *religion* and *religious*, pointing to them as intrinsic modalities to transcend the self. He asserts that the terms relate to the world's symbolic-cognitive aspects of the human species. The process then presents a twofold modality, the first is when an organism becomes a self when dedicating itself with others to constructing a universe of objective and moral significance. The second is the transcendence of biological nature, a universal phenomenon of humankind. He sees the formation of consciousness and conscience as "the universal yet specific anthropological condition of religion" (Luckmann 1967, 49).

Luckmann refers to Alfred Schutz's (1899–1959) notion of transcendence, specifically those dealing with the concepts of "appresentation," and "symbol." Schutz is an Austrian philosopher and social phenomenologist whose work is often seen as bridging sociological and phenomenological traditions. He posits that humans can understand the aspect of an object that is hidden (appresents) if they can perceive the apparent part, marking humans' transcendence (Schulz 1962–1966, 326). Schutz's idea of "appresentation" is an example of vertical transcendence. It is similar to humans' relationship with the otherworld and ultimacy through faith. He asserts that everything around the *Homo sapiens*, such as the cosmos, transcends their direct experience of time and space. Human society refers to a horizon of potential social conditions, similar to the infinity of objects beyond human control, which humans can only relate to them "appresentative" in terms of transcendence. Such objects and ideas are represented in symbols. According to Schulz, "a symbol can be defined in first approximation as an appresentational object, fact, or event within the reality of our everyday life, whereas the other appresented member of the pair refers to an idea which transcends our experience of everyday life" (Schulz 1962–1966, 331).

Transcendence, according to Schutz, is located in the representative relationship between two realities. It is a part of everyday life, and idea transcends and represents reality beyond human activities. In order words, transcendence is located beyond the contingent of everyday life, such as transhumanists' dream of living in the clouds with virtual bodies. Muslims strive to relate with Alla, who is beyond and dreams of living in Paradise beyond the natural universe. Christians hope for a new body, new Heaven and new Earth that is beyond the current life. These are within Schutz's notion of appresentation and relate to this study's idea of vertical transcendence. Schutz posits that transcendence marks the limits of movement of human beings, enabling people to construct a sophisticated net of socially approved points between meanings and symbols. The symbol is human construction serving as a link between two poles. Appresentation is not a physical object but could be a recollection, a fantasy or a dream. Transcendence then relates to experience, which is not identical to the act of experiencing itself (Schutz 1962–1966, 296). According to Schutz, the experience of transcendence is distinguishable on three levels. Firstly *small transcendences* involve transcending the actual, direct experiences of space and

time. *Small transcendences* are characterised by the possibility of experiencing them directly in the future, just by moving our bodies (Schutz 1962–1966, 296).

Intermediate transcendences refer to what can be experienced through the body or expressions of another self. They are understood as things that cannot be experienced directly, such as the inner life, the consciousness, and the experiences of the otherself. *Finally, great transcendences* point to something that cannot be experienced directly and are not part of the ordinary reality of everyday life, such as religion (Schutz 1962–1966, 299).

Luckmann compiled Schutz's notes into a book (Schutz and Luckmann 1983) and later developed Schutz's idea of multiple levels of transcendence. While acknowledging the secularisation of society, he argues that religion is not disappearing from the modern world. He posits that, the span of transcendence is rather shrinking from the great to the intermediate and small levels. Whereas Luckmann, a student of Schutz, integrates Schutz's ideas of transcendence, he also diverges from him by establishing the *great transcendence* sociologically (Luckmann 1967, 45). Schutz distinguishes between the reality of everyday life and religious experience and locates religious experience in the category of the *great transcendences*. Luckmann explains that Schutz defines religion exclusively as the experience of *great transcendences*, meaning religion exceeds everyday life's reality. However, *great transcendences* cannot be identified exclusively with religion. Luckmann observes that though some interpretations can lead to Schutz's idea (Luckmann 1967), there are some provinces of meaning "that transcend the finite province of meaning of everyday life" (Luckmann 1967, 333). Schutz's notion of religion as a province of meaning is based on symbolisation that views experience intuitively as representing something else. Luckmann notes that essential aspects of modern consciousness have been shaped by collective representations originating in social constructions of *intermediate transcendences* such as nation, race, and classlessness. He avers that, in recent decades, the concern with small or minimal transcendences symbolised by ideas such as self-fulfilment has become widespread, making it impossible to separate religion from everyday life (Luckmann 1990, 176).

In summary, there are alternatives to Karl Barth's otherworldliness and emphasis on vertical transcendence. Barth locates transcendence more of the otherworldly, expounding on the humanity-divinity dichotomy with a lose relationality. Karl Rahner claims that human history is an event transcendental. This is to say that through the supernatural existential, it occurs within or is mediated by everyday history within which human beings experience their transcendentality. Kant's use of transcendental could be described as the opposite of the standard meaning of moving beyond. It is located within a prior knowledge, investigation or findings. Luckmann sees *transcendent* experience in terms of horizontal transcendence. The experience is beyond religious meaning and possesses sociological realities; thus, he locates transcendence within social milieu. Schutz, however, predominantly defines transcendence outside the human person though his idea of *small* and *intermediate transcendences* are within humans' reach, the third category is outside humans' reality.

1.5.2. Vertical and Horizontal Transcendence

This study describes the effort to transcend human limits in recognition of humans' embeddedness in nature as horizontal as opposed to vertical. Horizontal transcendence corresponds to reaching out to the embodied other, while disembodiments correspond to vertical transcendence. Literally speaking, vertical is identified with the upright, pointing straight up that projects an angle of 90° to a horizontal surface. Horizontal, however, is parallel to the plane of the horizon. Therefore, upwards jumps such as high jumps are considered vertical, while skating and sprinting are considered horizontal (Meylan et al. 2010, 545). Horizontal represents a relationship with the other and points to universal kinships, facilitating the sense of belonging to nature, forward-looking and thus progress and improvement. Vertical represents otherworldly, hierarchical divisions and dichotomies. Horizontal transcendence, in theory, represents moving beyond the self into the other, in recognition of the "otherself." I use "otherself" to indicate the individual seeing him/her essence in other humans and the nonhuman other, which nurtures a strong sense of belonging and thus respect for the other "as myself." Horizontal transcendence recognises humans' hybridity and fusion that characterises the cyborg concept, demonstrating that human nature is unstable. This is because, besides possible factors such as accidents and diseases, environmental conditions can cause mutations in organisms, including humans and render them ambiguous through speciations (Rundle & Nosil 2005, 336–342; Corballis 2003, 137–1 38).

Furthermore, genetic manipulations can change human's nature entirely. Gender, which is a source of various forms of discrimination, is fluid. Sex change technologies keep progressing with increased accessibility by the day. Thus transcendence should recognise human nature as fluid and focus on a relationship with the other (Namaste 2011). If humans recognise their unstable nature, it should facilitate an increased sense of belonging to nature. Therefore, it should heighten the obligation to enhance the relationship with the other; the environment, other species and neighbours. Horizontal transcendence recognises technology and religion as part of nature. Indeed religion and technology express human nature (Clark 2003, 7). These expressions must be channelled towards wholesomeness for the entire commonwealth of nature devoid of discrimination. Discrimination against the other becomes discrimination against the self, and devaluing the other corresponds to degrading the self. Horizontal transcendence sees the self in the other and relates to the other as self, which is "otherself." Since it is impossible to relate to the self hierarchically, team spirit is embraced while hierarchical systems are rejected.

Ursula Goodenough (2021) explains that many religious traditions see the need for the universe to be structured hierarchically. It indicates a composition of at least several levels, commonly seen as moving from lower to higher. It commonly begins with the inanimate to the living, the sentient and the self-aware, all under the sovereignty of God. This is a typical leadership model, where the one at the top leads through decrees and gives orders to be obeyed by

subordinates. Müller et al. (2018, 84) describe vertical leadership as focusing on the individual leader instead of team-centred leadership. Vertical leadership is hierarchical, with influential minorities controlling the majority considered "surbodinates." Thus, team members compete among themselves to rise to the level of leadership to assume control and exercise more power. They aspire to migrate from their "inferior" status to a "superior" and more dignifying one. The idea of migrating into space by abandoning the body and nature is vertical. For example, transhumanists talk about uploading the mind and abandoning the body (Moravec 1988, 117) that projects the body as a useless outer shell. Many religions downplay the importance of the body in favour of a soul or mind which facilitates the entrenchment of vertical transcendence in the faith communities. Furthermore, vertical transcending visions nurture disembodied doctrines which vilify the body and encourage separations (Cronin & Hansen, 2005).

The theologian Karl Barth used strong words to contest *Analogia entis* (Oh 2006, 180) due to the disembodied idea associated with his notion of the body. He points to vertical transcendence that separates divinity hierarchically in relation to humanity. In contrast, *Analogia entis* represents conceptual unity of the divine and human, sacred and profane, religion and secular, which is a reality in Christ. Dietrich Bonhoeffer (1906–1945), the German anti-Nazi Lutheran pastor and theologian, points out that Christ Jesus represents the end of these dichotomies. Because in Christ, God became human and took on "this-worldly" existence, making it vivid that the world may no longer need a transcendent God since the Immanuel (immanence) Christ is among humans. Bonhoeffer believes that God ceased to be transcendent by getting involved in the fabric of the secular life of humans thus God has reconciled the world and its secular status to the divine. The world then is no longer secular, and humans are no longer profane (Altizer & Hamilton, 1966, 90–91). Bonhoeffer's embodied notion upholds horizontal transcendence, a theology of reconciliation which agrees with Rahner, who locates transcendence within everyday history. Although Bonhoeffer implies the cessation of the transcended God, God's presence relocates transcendence through immanence within human history that corresponds with horizontal transcendence in this study. Horizontal transcendence can also be associated with Kant's idea of transcendental located within prior knowledge, investigation or findings. This is because it is still reachable and inspires humans into research that may provide data for enhanced knowledge.

Similarly, Luckmann locating transcendence within sociological realities is horizontal however, Schutz, his mentor, projects both horizontal and vertical transcendences. Schutz's small and intermediate transcendences are within human reach and can be described as horizontal transcendence, but his great transcendence corresponds to Barth's notion of transcendence which Luckmann diverge from. They are described as vertical transcendence due to their divisive and hierarchical nature with the tendency to treat the human body in particular and nature in general with gnostic contempt.

Although Barth's notion of transcendence involves a relationship between humanity and divinity through faith and grace, his transcendent notion is primarily vertical. Barth's transcendence identifies with hierarchies and dichotomies between sacred and secular, divinity and humanity where humans are polluted, unworthy, impure and cannot be compared to the divine. Barth's idea is comparable to transcendence visions, which segregate humans into mind, soul, spirit, body, material, and immaterial and vilifies the physical body. Such notions are characterised by escape from nature and a desire to migrate to the advanced realm thus is otherworldly focused. This notion facilitates the desire to abandon the depraved body and enclothe in divinity. In contrast, horizontal transcendence reflects human embodiment focusing on enhancing the human person as a whole thus it represents a human state of tranquillity and harmony with nature, while vertical aspires to overcome nature. Furthermore, horizontal involves a relationship with the nonhuman other; the organic, inorganic, machines, virtual beings, animals etc. This notion is common with posthumanism, a significant theme in Haraway's cyborg.

Another way of understanding vertical and horizontal transcendence is through technological progress as a means of transcendence on one part and the Christian hope of future transformation on the other. Lutheran theologian Ted Peters describes Christian eschatological visions and transhumanists' technological progress aspirations in terms of *adventus* and *futurum*. The Latin term *futurum*, indicates growth, development, maturation, or fruition. Thus it entails foreseeing the future as growth involving actualising potentials within the present and the foundation of the past. Futurologists such as transhumanists project developments based upon *futurum*, which requires historical data for a successful prediction. The Latin term *adventus*, in contrast, indicates the emergence of something entirely new that cannot be linked with the present and past (Peters 2011, 74). It is eschatological thus it cannot be planned for. In other words, whereas *futurum* contains traces of future possibilities due to historical trends, *adventus* provides a future vision that depends on divine action (Moltmann 1995, 25). The *adventus* is being applied here in terms of the *eschaton*, the coming of the Lord.

Regarding Christian hope, Rahner described the *eschaton* as a "mystery," a coming reality beyond rational human control. The Christian hope is based on the promise of God revealed through scriptural prophecies. The incarnation and resurrection of Christ Jesus indicate that humans' physical bodies are sacred and not expected to be separated from their spiritual bodies. Rather, physical bodies shall be transformed in the likeness of the resurrected saviour who ascended on high in bodily form (Rahner, 1978, 458). The transformation mode cannot be planned because it is divinely instigated. Braaten explains that the distinction between futurology (*futurum*) and eschatology (*adventus*) has to do with the evolution of the world and the manifestation of the kingdom of God. "A crucial difference between secular futurology and Christian eschatology is this: The future in secular futurology is reached by a process of the world's becoming. The future in Christian eschatology arrives by the coming of God's kingdom.

The one is a becoming and the other a coming" (Braaten 1969, 28–30). The *futurum* can be planned in one way or another based on various indicators and forecasts, human participation is crucial here. However, *adventus* requires no planning but steadfast hope in Christ Jesus for the participation of what is to come. Technological development is, therefore, within *futurum*, it is possible to plan and execute and can be said to be within human control. It is embodied in nature and accessible to humans thus, it represents horizontal transcendence.

The major difference between religious eschatological vision (Islam/Christianity) and transhumanism is that religion trends on *adventus* while transhumanism is characterised by *futurum*. The two are close and overlap in several aspects but differ significantly. Peters even identifies transhumanists' hopes in *adventus* but explains that they are limited within *futurum*. "What transhumanists are hoping for is *adventus*, but they have only *futurum* to work with. A realistic element of provolutionary thinking is the expectation and hope for eschatological transformation" (Peters 2011, 82). It should be understood that the *futurum* is within *adventus*, therefore all the activities in the world, including humans' imagination and achievements, are part of God's plan (Rahner 1965, 221). This is not to say that transhumanism represents *futuruum*. They operate within and yet hope for *adventus*. Thus while *futuruum* corresponds to horizontal transcendence, transhumanism trends toward vertical transcendence.

Humans' activities must progress into the fullness of time before the *adventum* can be seen. Karl Paul Reinhold Niebuhr (1892–1971), an American Reformed theologian, explains that the modern idea of progress is a product and a trimmed version of biblical eschatology. The prophets and the apocalypticists of Scripture projected human history as dynamic, evolving from promise to fulfilment. Nevertheless, human progress is subject to divine judgment. This renders human activities, including technological progress, ambiguous. The need for the *adventus* is thus crucial to ensure sustainable transformation without ambiguity (Niebuhr 194, 79). Theology aspires to transcend the human conditioning that results in heaven-like bliss. While such conditions transcend the reach of humans, there is hope that future transformation will make it reachable. The transcended human may be able to venture into the heavenly realm alluding to otherworldly notions. Transhumanism aspires to transcend through technology and expand into space, including cyberspace, to enjoy a heaven-like bliss. The vision constitutes an attempt to supplant technological progress that leads to horizontal transcendence with a vertical one.

To sum up, dualistic notions that see the body as inferior to a hidden essence and separate humans from nature and God constitute vertical transcendence. Concepts and doctrines that promote the separation of one human from the other through gender, race, and political considerations, are disembodied notions that engender vertical transcendence. Similarly, doctrines that accord privileged position to one gender over others and those that stifle humans' natural inclinations, such as sexual expressions, counter the concept of embodiment. Embodiment finds human behaviour as traceable in other creatures in nature. For example, Roland Karo's (2009, 179) work on *Eros and Mysticism* described

the act of looking down on sex and an effort to suppress sexual drives through celibacy for mystical benefits in terms of disembodiment. Such doctrines do not recognise humans' quintessence in nature and point towards vertical transcendence. In this work, gender base segregation, celibacy as a qualification for the priesthood, the idea of eternal subjugation of the feminine figure are described as vertical transcendence. The notion of bodily resurrection and equality of all gender, including the biblical narratives of transcendence of transgressive women, are classified as horizontal transcendence. Technological progress, discerned in terms of *futuurum* represents horizontal transcendence.

Adventus, which is an otherworldly expectation, is vertical transcendence. Vertical transcendence involves divisions, segregations, assigning privileged positions, seeing the body as inferior to mind/soul and cultivating otherworldly interests. Christian eschatological hope is often vertical, but their doctrine of incarnation and resurrection represent horizontal transcendence (see page 154). Horizontal transcendence then involves the exegetical and contextual application of Scripture that reflects current scientific data and recognises humans' embodiment. It includes the practical application of the otherself principles. Horizontal transcendence points to abolishing all forms of discrimination and hierarchies. It signifies overcoming human limits by improving relationships with the other.

1.5.3. Embodiments & Disembodiments

Embodiment in this study goes beyond understanding the body as a container of human identity, feelings, personality, and thought, an outer shell that serves as the vehicle and means of actions and relationships (Johnson, 2015). Instead, it represents the body as part of a holistic human. By implication, humans lose their identity without their physical bodies, contrary to common ancient religious notions such as Plato's soul and body dualism theories that see the mind and the body as two different and separate entities. For example, Plato provided a fascinating picture of the afterlife in his Phaedo dialogue that argues for the soul's immortality after bodily death. The Phaedo discourse provides an account of a condemned man named Socrates facing imminent execution. The condemned man is unperturbed by his impending death, which he calls a pilgrimage from mortality into immortality. According to the dialogue, the body's dissolution through poisoning could free a person from the mortal state and qualify them to participate in divinity. In the realm where the soul is immune to the problems of the mortal world, thus the body serves as the trapping medium that hinders a person from attaining freedom and immortality (Sedley 2018, 210).

Plato's idea of a soul has influenced many philosophers, such as the seventeenth-century French mathematician René Descartes, whose body and mind theory sparked a challenge from many philosophers of his time. Descartes ascribes controlling roles and immortality to the mind and mortality to the body (Westphal 2016, 16). However, the notion presented some irreconcilable contradictions. For example, the body and mind are different, so their interaction is

impossible because it involves a spatial body and a non-spatial mind (Westphal 2019).

An immortal soul that transmigrates from one bodily incarnation to another is common in many doctrines such as Gnosticism, neo-Platonic groups, and Hinduism (Mercer & Trothen 2021, 27) and often manifests in monotheistic doctrines. Calvin Mercer & Tracy Trothen (2021, 26) note that many Protestant Christians use the biblical language of resurrection. However, their ideas about the afterlife are much grounded in a dualistic framework derived from sources outside the Bible. Biblically, resurrection points to the psychosomatic unity of body and soul/mind. It involves the unity of material and immaterial, empha-sising embodiment rather than disembodiment (Mercer & Trothen 2021, 27). Thus, embodiment speaks of human kinship and embeddedness in nature. The unseen aspect could be understood as mind, soul, intellect, psychic, or immate-rial, but any rendition is valid as far as the body remains animated.

Therefore while humans' embodiment is perceived in terms of the constitu-tion by various streams of physical and nonphysical information that belong to nature, disembodiment sees the body as just an outer shell of the real person. Disembodiment thus seeks to migrate from the body into a better realm. In this respect, notions about human nature such as dualism and trichotomy are per-ceived as disembodied notions. In contrast, physicalism, also known as materi-alism and psychosomatic unity of humans, can be classified as embodiment no-tions. This study, therefore, refers to an embodiment in relationship with the concept of physicalism and the psychosomatic unity of humans that acknow-ledge the universal kinship of all creatures. Furthermore, an embodiment includes equality for all humans irrespective of gender, social status or race (Mensch 2009, 9). This idea, therefore, locates horizontal transcendence within theories of enhancements that transcend the complete human being through technology or divine action.

1.6. Heaven and Space

The desire to transcend biological limits has been expressed in two dynamic ways: enhancing human nature and expanding into the other world, Heaven for theology and space for science. In transhumanism, the fancy to colonise the physical space is extended into cyberspace. The efforts to create cyberspace for humans' habitation is to make it possible for humans to live in their own clouds, not the one attributed to the evolutionary process or theistic God. The effort is to bring human status at par with God, who lives in His own clouds. Heaven and space are often interchangeable, but the two terms are entirely different. Therefore, otherworldly transcendence involves three main realms, "spiritual space" (Heaven), physical space and cyberspace. In science, space refers to the expanding universe, an almost perfect vacuum, extremely low pressure and nearly void of matter (Howell 2022). However, space is not totally void, it contains bits of dust, gas, and other floating matters. There are also crowded

regions that host planets, stars and galaxies. It is the realm of the formation of subsequent generations of stars and planets and the chemodynamical evolution of galaxies (Garcia 2021, 889).

Transcending themes have often involved moving beyond the skies. Advocates for space colonisation often indicate that the best option for immortalising the human species is to migrate into space. It is based on the assumption that the cosmic story will likely change in the distant future, making the Earth no more conducive for biological life (Schwartz 2019, 56). Besides the existential concerns, there is the conviction that space exploration represents human utilisation of their rights to participate in the affair of the cosmos (Clynes and Kline 1960, 30–33). Space is often viewed to be 62 miles (100 kilometers) above sea level at what is described as the *Kármán line* when it comes to the Earth-bound perspective. This is an imaginary boundary at an altitude with no appreciable air to breathe or scatter light (Howell 2022).

When it comes to Heaven, I derive the meaning from the biblical perspective *shamayim* (*šāmayīm*), translated in the plural, heavens. In the context of the Old Testament, *shamayim* represent one component of the three-part biblical cosmology. The others are *erets* (the Earth) and *sheol* (the underworld). *Shamayim* (heavens) is used in the Bible in two distinct but interrelated ways, cosmological and theological. The term is used in the cosmological sense in relation to the visible sky, including space, and theological as God's dwelling place, venturing into the metaphysical. "*Shamayim* cosmologically refers to the the physical realms including the firmament, the location of the galaxy (Genesis 1: 9, 14–15). They include the space between the firmament and the Earth, as used in reference to meteorological phenomena and the realm of birds (Gen. 1:26, 2:19, 6:7, 7:3, etc.)" (Chambers 2019, 387–388).

It should, however, be noted that it is difficult to establish a relation between several, and sometimes conflicting, views of the representation of Heaven in the Bible (Stadelmann 1970, 43). Heaven is used in the context of *shamayim* in two different meanings in this study, first as equivalent to the English word "sky," with its equally varying senses; that is, everything beyond the Earth's surface, including space (Chambers 2019, 387). The second meaning is a spiritual realm, the dwelling place of the celestial beings. Both ideas have located Heaven upwards. In the New Testament, Apostle Paul spoke of his vision of a man being caught up in the third Heaven (2 Corinthians 12:2-4). John 3:13, declares, "No one has ascended into heaven except he who descended from heaven, the Son of Man."

Nevertheless, a unique attribute about Heaven is that it can be opened to specific people despite being beyond humans. For example, during the execution of one of the early disciples named St. Stephen, he lifted his eyes and declared, "Behold, I see the heavens opened, and the Son of Man standing at the right hand of God" (Acts 7:55). The statement evoked a scene of Jesus' baptism in Luke 3:21 where there was a record of opened heavens. Furthermore, St. Luke recorded how the resurrected Christ ascended into the clouds into the heavens. Heaven, therefore, has both physical and metaphysical dimensions and

can be said to encompass space. Bernard McGinn explains that Heaven can appear at the instance of God (McGinn 2005, 230). Therefore, God causing it to appear indicates that it may lack a particular location.

1.7. The Meaning of the Term "Nature"

The term "nature" comes with a baggage of different notions, and although almost everything is associated with nature, it is sometimes rendered distinct and separated from everything. The term easily comes to mind in relation to "natural environment" or wilderness, including forests, rocks, wild animals, beaches, and areas that have not been substantially altered by human activities (Ducarme & Couvet 2020).

"Nature" as a noun is used broadly in reference to the physical universe. It describes the phenomena of the corporeal universe, including life in general. The adjective natural describes agents seen as located within "nature." The word nature is often rendered as opposed to culture, human activities, the artefact. Artificial intelligence threatens nature in many religious thoughts, but the metaphysical notion produces a sense of beauty that an artefact fails to kindle. The challenging aspect of this notion is the sense of "otherness" attributed to nature.

In Christian theology, human beings were created perfectly with a stronger relationship with the divine, but disobedience reduced their nature to a fallen state (Yun 2020, 170–172). The result is human nature with limits and frailties buffeted by senescence and decay. There is redemption through Jesus Christ, the Lord who will restore humanity to its exalted place in harmony with nature and divinity (Augustine 2009, 79). Although humans are considered natural creatures, their synthetic activities are often seen as contrary to nature.

The categorisation of the eco-theologian Peter Scott, who identifies nature in three different categories, can be helpful. Scott sees common notions about nature as coming under "nature as other to the human," "nature as inclusive of the human," and "nature as the essence of a thing" (Scott 2010, 1). The idea of "nature as the essence of a thing" presents everything as having nature, whether artefacts or biological creatures. There are phrases such as human nature, technological nature, divine nature, spiritual nature, and physical nature. Such phrases invoke the sense that everything in existence, whether physical, spiritual, cybernetic, technological, intellectual, or conceptual, possesses its unique natural essence. Thus there is a lack of relationality and a sense of unity between humans and their immediate environments. Everything may be viewed as having a unique nature with unique qualifications, rendering the term ambiguous. This notion can be identified with transhumanist ideologies, such as the "Singularity" concept, which talks of migration from the biological substrate into that of digital (see pages 171–173).

The second idea includes humans and their artefacts as part of nature. Philosophers who follow the second notion see humans and their activities as natu-

ral. Therefore, technological activities are natural expressions, reflecting God's creative act (Hefner 1993, 19). Andy Clark posits that human technological activities are inborn, and technology is a natural expression of the human, thus nature and technology are united (Clark 2003, 7). Humans' technological explorations are thus to ensure nature's sovereignty. This notion resonates with posthumanism, which identifies close affinity of humans with nature and espouses universal kinship (Wilson 2019, 27).

The first idea of "nature as other to the human" identifies humans and their technology outside nature. Although sometimes humans are seen as part of nature, their technology is opposed to nature (Lamont 1997, 10). Humanism often subscribes to this idea and projects humans above nature, encouraging exploitation of the environment towards anthropocentric ends. Frédéric Ducarme & Denis Couvet aver that nature as a notion is at the very core of science, seen as its flagship and linked with human societies. They explain that preserving natural resources is a primary social concern, however, the otherness mindset is a significant challenge to such endeavour (Ducarme & Couvet 2020, 1). Jing Liu worries that the prevalent idea about nature is in terms of nature as a resource to fulfil humans' needs. Thus nature is the object that science and technology regulate, which environmental research hopes to protect. He posits that in that sense, alternative sources are explored when a particular source is depleted, however, the deep connectivity with humans is ignored. For Liu, the depletion of natural resources constitutes the depletion of human essence due to the strong connections among creatures (Liu 2016, 266).

Ruth Wilson (2019, 26), referring to the statement of a child who complains that she has never been in nature, bemoans the sense of otherness attributed to nature. The child's idea of nature reduces it to a retreat or diversion location rather than a system in which humans are involved. The separatists' mindset is not born out of immaturity because human adults are noted for defining nature in terms of the other. The otherness view is opposed to civilisation. For example, David Thurfjell et al. (2019) studied people's experience with nature in Denmark, Estonia, and Sweden. The study reports experiences of transcendence among secular respondents who had to separate from civilisation in order to "immerse with nature" (Thurfjell et al. 2019, 191). The research concludes that religious experience has moved into the "nature experience." "Nature" is defined here as separated from culture and human activities. Technology is perceived as a detraction from transcendence, and the notion of wilderness as a sacred experience is perceived. The "nature," perceived by the respondents as the location of spiritual presence, is not the actual nature of our everyday experience but where human culture is lacking. Nature as the other that separates humans and their activity and the wilderness pose a challenge to horizontal transcendence. The separatist notion facilitates apathy towards what is seen as "nature," indicating that such resources should be exploited for anthropocentric ends (Wilson 2019, 26). Human culture and technology are seen as pollutants that persistently desecrate nature's sanctity.

While Scott's three categories of nature are discussed in this work, the second notion of nature that includes humans and technology as part of nature can be identified with this study. Humans should be seen as natural because they are part of nature. Furthermore, they survive and evolve in nature. Therefore, their culture, civilisation, artefacts, technology and religions are natural. Just as technologies of nonhumans such as the spider's cobweb, the bird's nest and honeycomb are considered natural because they are products of natural organisms, humans are also natural organisms, and their technology should be considered part of nature. Transcendence is, therefore, possible in the wilderness, within culture and technology. Indeed, technology and culture are significant arbiters of transcendence.

1.8. Transhumanism

Transhumanism is the philosophy based on the idea that the current form of *Homo sapiens* is in an early stage of evolution and subject to technological modifications. Transhumanists believe that human beings can be enhanced through the synergy of technologies to overcome prevailing biological limitations leading to "posthuman" (Fuller 2017, 163). James Hughes sees transhumanism as a contemporary expression of ancient transcultural ambitions to radically transform human nature bodily and socially. He explains that prior to the Enlightenment, such aspirations were part of magical medicine, religious millennialism, and other spiritual practices. The Enlightenment, which employed reasons to revolutionise society utilised such aspirations but employed science and technology as the means to improve health, human abilities and longevity (Hughes 2012, 757).

Hughes thereby links transhumanism with the religious notion of transcendence which is in two folds; enhanced physical and spiritual life. The physical involves health, peace, and long life, while the spiritual involves otherworldly existence. According to Hughes's narrative, transhumanism can be located between religious and technological transcendence. Transhumanists' theories about possible human transcendence into posthuman/post-human through technological progress similar to religious eschatology make them of interest to this study. Exploration of their narratives is fruitful with the potential to make meaning of the philosophies that touch on vital themes such as health, well-being, immortality and humans' engagement with technology, including the implication of technological progress.

Julian Huxley coined the term "transhumanism" in the 1950s to capture his brand of "evolutionary humanism," which converted a biological accident into a moral imperative. He considered transhumanism a "key concept" of a different scholarly context. He employed terms like "a new ideology," a "new system of ideas appropriate to human's new situation" (Huxley 1957, 255) to describe his concept. The term is seen as having a Christian root due to the rendition by Italian poet Dante (1265–1321). He described the transformation associated

with the Christian eschaton in terms of transhuman (Mercer & Trothen 2012, 19).

In Huxley's opinion, transhumanism is a "new attitude of mind" that possesses the potential to solve humans' crises through science and art to create a better world. Huxley advocated similar ideas to Abraham Maslow, the psychologist. The latter believed that "the human species will be on the threshold of a new kind of existence, different from the current situation which will be consciously fulfilling its real destiny" (Maslow 1971, 274). Transhumanism is a loosely defined ideological group that has evolved over the past two decades. It promotes an interdisciplinary method to evaluate the prospects for enhancing the human condition through technological mediations (Bostrom 2005a, 3).

Transhumanism can be traced to the Enlightenment humanist tradition, which began with the eighteenth-century blossoming of human reason and scientific progress. Humanist thinkers such as Rene Descartes, Isaac Newton, Immanuel Kant and Auguste Comte were some of the prominent architects of this era's newfound trust in the capacities of reason and science to create a better world. They propelled society into a significant secularisation process, as scientific hopes began supplanting the centuries of religiously grounded eschatological and millennialism vision for a better future. Transhumanism offers perhaps the most dramatic scenario for transcending the boundaries of human nature into a "posthuman" state (Childs 2015, 10).

The term "humanist" and "humanism" emerged in the early sixteenth century and were used in reference to scholars of the European Renaissance and philosophy that expresses the position that humans are the only conscious and intentional species, so they should be recognised as unique and the dominant source of agency in the universe. Humanists see humans as autonomous from nature because of the intellectual faculties that control their bodies, and they can reason and bear speech. They are exceptional animals and are superior to other creatures. Humanist philosophy supports nature-culture dualism; human culture is seen as distinct from nature. They also see humans' wellbeing as superior, so reason, science, democracy, and love should be used to ensure human happiness. Strong atheistic themes in humanists' philosophy countered the otherworldly religious views in the sixteenth century (Lamont 1997, 10–12). Transhumanism is so much indebted to humanism because it serves as the foundation of their philosophies. Indeed notable transhumanists such as philosopher Nick Bostrom, a professor at the University of Oxford link transhumanism's roots to humanism (Huxley 1957, 17). Many humanist thinkers, such as Abraham Maslow and Carl Rogers, who focused on the growth potential of healthy individuals and Julian Huxley, were forbearers of transhumanist philosophies (Wolfe 2010, xi).

In transhumanism, the "posthuman" species can hypothetically live forever through the synergy of biotechnology, nanotechnology, computer science and Artificial Intelligence (Cole-Turner, 2011, 14). It represents a change of consciousness, while "transhumans" indicate a change of biology through technology (Kurzweil 2006). The change involves radical technological modification

to the brain and body. Bostrom (2005a) explains that the changes expected from technology are so great that the consequences cannot be predicted. Literarily, "posthumans" are a continuation of the self-governing individual, but "transhuman" individuals are set free of anything biological that interferes with freedom.

1.9. Posthumanism

The term "posthumanism" was first coined at the Josiah Macy Foundation conferences on cybernetics in New York (Pepperell 2003, 171). Leading scientists during the conference were searching for a new theoretical ideal for communication that removed *Homo sapiens* from any position of honour in relation to matter, cognition, information and meaning. The aim of coining the term was to help imagine a "post-biological" "post-Darwinian" stage of human development that will include not only genetics but also "all the paraphernalia of cultural and technological existence" (Wolfe 2010, xi).

Both posthumanism and transhumanism draw from Darwin's theory of evolution by natural selection. Steve Fuller explains that both groups draw from evolutionary models, such as Lamarck's concept, which included a conception of life's purposefulness. According to Darwin's theory, life is a chance-based process that does not acquire an all-encompassing direction over time. Furthermore, all life forms are equally subject to nature's forces, without any particular species' advantage being local and temporary in the grand scheme of things. These two features are interrelated, but Lamarck thinks one feature could receive greater emphasis. Posthumanism subscribes to Darwin's theory with its presumption of species egalitarianism that highlights species co-dependency and demonstrates a symbiotic ecological vision (Fuller 2017, 163).

Posthumanism is identified with the effort to reduce the human species to supporting actors in evolution. In contrast, transhumanism links with the first feature of Darwin's theory by elevating the chance occurrence of the emergence of *Homo sapiens* to a unique prospect for giving evolution a direction it had lacked. The posthumanist movements stress the need for the human species to acknowledge their indebtedness to nature. Posthumanist philosophies on moral concern for extending human control over nature are linked with the post-Enlightenment period. The Industrial revolution recorded a crucial expansion in writing that focuses on the relationship between humans and nonhuman entities, mainly the machine (Tirosh-Samuelson 2012, 711). The phrase "the nonhuman other" is used in this work interchangeably with "the other" in reference to all nonhuman entities such as technological gadgets, plants, microbes, animals etc.

During the post-Enlightenment years, the use of machines became more pronounced in everyday life, which appeared to blur the dichotomy between non-living and humans. Posthumanists amplify the relationship between humans and machines, bringing out the porous nature of the dichotomy between the two. Thus only a part of the posthumanists' ideas seems connected to humans'

endeavours with technology. Therefore, the history of posthumanism is only partially connected to the history of transhumanism (Miah 2008, 87, 88, 91).

Because posthumanism and transhumanism overlap in this area, it is easy to mistake one for the other. Haraway, for example, has been quoted in the literature of both philosophies; her Cyborg Manifesto generally leans towards posthumanism. Her cyborg, interrogates the human rather than celebrating the prospects of human enhancement. Haraway's cyborg narrative is not based on an enhancement else, it would be transhumanism. In contrast, the narrative intends to upset uniform notions about the definition of the term "human," including the political and social privileges. The cyborg emerges as a myth/in myth where the boundary between human and animal, living and non-living, physical and non-physical is transgressed. "Far from signalling a walling off of people from other living beings, cyborgs signal disturbingly and pleasurably tight coupling. Bestiality has a new status in this cycle of marriage exchange" (Haraway 2000, 274).

Posthumanism talks about posthuman, which often invokes a sense of "post of the human," pointing to a possible product of transcendence. However, posthumanism represents a post to the concept of humanism, and their "posthuman" notion is basically focused on human embeddedness in nature. However, human identification with nature represents transcendence. The desire to transcend the human condition has produced numerous notions that seek to understand the nature of the human being, a unique phenomenon in evolution yet tricky to distinguish from other creatures in the universe. Humans share significant traits with other species, yet they possess much developed brains, speech and desire to transcend, which are lacking in other species.

The humanists see humans as superior to nature and all creatures. All other creatures exist for the utility and satisfaction of the human species (Lamont 1997, 10). Posthumanism challenges such perception, pointing to the fact that humans are of the same level as all other organisms in nature and that the evolutionary process bestows their specific attributes for its purpose (Wolfe 2010, xi). Thus, humans may possess features unique to their nature, just as all species have what defines their nature, but such features do not represent a higher value. Transhumanism places *Homo sapiens* at the threshold of extraordinary evolution that promises transcendence of biological constraints. The modifiability of human nature provides the avenue to do away with their dual nature by disposing off the body that is the source of human frailty and mortality.

1.10. Conclusion

❖ The desire to transcend is part of human nature and expressed in various levels of social interactions. Therefore themes of transcendence are found in religion which was the premier driving force of civilisation and also technology. While ideas of transcendence are helpful, they can become harmful if propagated vertically in certain ways that ignore scientific data. While vertical transcendence is not bad, it constitutes ideas that potentially segregate, discriminate and breed harmful attitudes. It may include the tendency to create oppression, hatred and other social ills. Horizontal transcendence, in contrast, is predisposed to unite and enhance both the human and the non-human other. Thus technologies that harm any organism to the benefit of another are vertical because they are discriminative, hierarchical crude work, needing refinement.

❖ The "human being" is a complex idea and requires diverse concept analysis to appreciate. Therefore, it is evident that the post would be even more complicated as the future is not easy to anticipate. Furthermore, humans' relationship with technology and the divine are equally dynamic and amorphous. In order to anticipate the possible nature of humans and possible evolved human species, all available conceptual frameworks which involve science and religion should be engaged. Furthermore, transcendence is expressed broadly in religion, ranging from representation of God to religious leadership, including an encounter with the luminous. It also indicates acquiring status that humans perceive as qualities of God and going beyond physical realms. Thus people who ascended into Heaven, such as Elijah and those who entered through death and resurrection, are seen as transcended. This is because they are perceived in terms of post-biological. In science, transcendence could apply to extending human nature through technological aid. In transhumanism, transcendence involves an evolution from human into transhuman, providing the platform for further transformation into a post-human state.

❖ Religion is made up of sociological and transcendence components. The transcendence vision of religion is often metaphysical. Technology has, however, served as an effective medium for experiencing the metaphysical within the physical. Religious transcendence represents going beyond the physical limitations by spiritual means. Technological transcendence extends the human limit through empirical means. Transcendence, therefore, is commonly viewed as overcoming/extending limits associated with biological nature.

❖ Religion is rich in diversity, nonetheless, there are equally uniting themes that characterise religions, such as "faith." In contrast, science is reason-based and devoid of faith elements. The diversity between religion and science has promoted the idea that they oppose each other. The multiplicity, however, provides alternative data beneficial for human wellbeing. Their differences should be recognised in terms of their diverse contributions to hu-

man civilisation, progress and survival. There is the need for science and theology to relate in recognition that *Homo sapiens* are complex creatures, a product of several million years of evolution. Therefore neither science nor religion is solely enough to appreciate their nature and future. The need for both disciplines is evident in the technological narratives of transhumanism and posthumanism. Religion continues to be relevant even in the current technoculture contributing immensely towards wellbeing and health delivery. Therefore, theology should be formulated in the light of current scientific and social understanding so that the current generation can identify with God's purpose. God's expression to the world today can be better understood when theology is formulated in relation to prevailing scientific data.

❖ Religion is shaped by sociocultural dynamics but based fundamentally on faith and action (work). These two elements are predominant in all religions. The significant difference between the Abrahamic communities and Eastern religions is that, while the Abrahamic faiths emphasise faith, the Eastern religions stress actions.

The first chapter provided a comprehensive outline of what is expected in this study. The subsequent chapter deliberates on Hefner's theory that discusses human beings and their cosmological purpose in the quest to transcend.

CHAPTER TWO. Human Becoming, the Created Co-Creator Theory

2.1. Introduction

This chapter discusses scientific, philosophical and theological notions of the "human" and their purpose within the biosphere. The effort is within the conviction that to appreciate the transcending visions, exploring the ideas about the nature of humans, their roles and purpose in the cosmos is essential. Are humans servants, stewards or rulers? And can their purpose and roles relate to the desire to transcend? These questions are discussed in relationship with Hefner's[9] theory of human beings as created co-creators which analyses the origin of human beings and their cosmological purpose through the philosophy of science and theological anthropology. The central themes of Hefner's theory, creation and evolution, kinship, human beings, freedom, humans' roles, responsibilities and roles of myths, are covered. These themes are discussed in relationship with transhumanism and posthumanism. Hefner posits that the concept of human beings as God's created co-creators helps to interpret human nature in the context of the Christian theological tradition. The theory is elaborated within a nexus of theological ideas that includes the doctrines of creation, *imago Dei*, sin and grace, and final fulfilment or consummation (Hefner 2009, 163).

Hefner begins his book, *The Human Factor, Evolution, Culture and Religion*, with the question, "just who are we human beings and what are we here for?" (Hefner 1993, 4). He identifies the questions as the fundamental issue at the heart of world religions, and how it is answered influences every aspect of life. Hefner believes that answers to these basic questions should be conceived universally and "particularistically" to enable an adequate and wholesome future for the Earth. He explains that the answer should be life-giving to all regions of the planet and all humans irrespective of their gender, race and social status, including its nonhuman sector within the universe" (Hefner 1993, 5). Hefner's hypothesis for theological anthropology and the doctrine of creation is religious but takes the state–of–the–art science completely seriously. Another unique attribute is using the scientific method in theological anthropology to recognise the dominance of technology as the major social driver.

Hefner posits that understanding the human being as created co-creator is central to adequate anthropology that is both scientifically responsible and theologically coherent. He projects "created co-creator" as a theory and a metaphor.

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[9] Philip Hefner is a Professor, Emeritus of Systematic Theology, Lutheran School of Theology at Chicago. He was born on December 10, 1932, at Denver, Colorado, U.S.A. an ordained minister of the Evangelical Lutheran Church. Hefner was a major player in realising Ralph Wendell Burhoe's vision of establishing the Chicago Center for Religion and Science, now the Zygon Center for Religion and Science. He replaced Burhoe as editor-in-chief of Zygon: Journal of Religion and Science. He is credited with seven books and over 125 scholarly articles.

As a theory, it affirms that *Homo sapiens* belong to nature and are from nature, but the species represents the Creator in creativity that enables the schemes of nature to participate in God's divine purposes in freedom. As a metaphor, it describes the meaning of biocultural evolution and contributes to understanding nature as a whole. The meaning of nature is expressed as "the appearance of *Homo sapiens* as created co-creators, signifies that nature's course is to participate in transcendence and freedom, and thereby nature is to interpret its own essential nature and take responsibility for acting accordingly" (Hefner 1998, 174). Although theologically, the created co-creator is God's creation, the result is that the interpretation of human nature is conditioned by the very character of God (Hefner 1998, 174).

2.2. Created Co-creator Concept; a Bridge between Religion and Science

Hefner's major contribution to religion, science, and theological anthropology is his concept of human beings as God's created co-creator. He built the theory on the notion that religion should provide data that comply with scientific stand-ards. In this way, religion provides alternative interpretations for social experi-ence through science. It creates the avenue for the faith community to state that the extension of the Christian concept relates to the experience and knowledge of God to a broader human experience beyond the community of faith (Hefner 1993, 8, 256). He refers to both social and scientific experiences as sources of human liberation. There is the clue that liberation is perceived when religious tradition matches social and scientific experiences. Thus, Hefner stresses the importance of liberation in the quest for meaning (Kwakye 2020b, 288).

In his book, *The Human Factor: Evolution, Culture and Religion*, Hefner articulates that metaphysical and religious data are needed to answer the question of humans' identity and purpose. However, such data become relevant when they measure up to social experience and scientific standards. He posits that science is the most successful human method of acquiring knowledge, and knowledge acquisition has been transformed with technology. Nonetheless, science stands to benefit from religion because, despite scientific progress, there is much more to learn from other data. Furthermore, he believes science can raise questions that scientific reasoning cannot solve (Hefner 2006, 130). For example, science has provided facts about human nature. But, scientific data lack information on the human social, personal, national and religious views of the purpose and meaning of human existence (Hefner 2006, 130; 1993, 8, 12, 13).

Moreover, the world stands to benefit from religious knowledge if secularists and adherents accommodate each other. Because on the one hand, many reli-gious adherents view science as a deconstructive force that undermines faith, but on the other hand, some atheists see religious knowledge as a problem that must be placed aside to give way to progress. Hefner posits that there is a need

for both sides to recognise that we live in a three-cornered situation that under-girds and encourages the attempt to relate science and religion for several reasons. First, scientific knowledge has opened up a better understanding of the world, which provides the resource for religion to understand the world. Similarly, although science and technology are the premise of humans' continuous existence than ever before, signs are nonetheless everywhere that people are dissatisfied with the notion that religion and metaphysics are vestiges of human infancy that will be displaced by science (Hefner 1993, 10).

Hefner builds his theology on this premise within physical and natural science (Hefner 1993, 16). He explains that theology has the task of engaging the possibilities offered by science to articulate the Christian insight intelligibly and cogently. In doing so, these insights will appeal to the modern human whose mind has been nurtured in science and lives closely with technology (Hefner 1993, 17). Because technology has become an inseparable part of human life, theology should reflect the new pattern to maintain relevance. Furthermore, theology should recognise that technology is the source of both human survival and pleasure. Humans are thus tasked with making choices that are theologically coherent and technologically responsible (Hefner 1993; 2003).

2.3. Co-creator and Optimistic view of technology

Hefner is one of the few theologians who express qualified appreciation toward transhumanism. He posits that it is natural for humans to imagine beyond their problems and work towards eliminating them because "we were created to be expressions, embedded in the creation, of the purposes of God" (Hefner 2009, 164). He further stresses that "to be co-creator, is to be able to imagine a human nature that is transhuman and to possess the where-withal to bring it into actuality—this is not sin, this is good creation" (Hefner 2009, 165). He also notes that the idea of the created co-creator depends on a great deal of creative imagining; therefore, it fits into the category of "an idea," "a metaphor", or "symbol," similar to Haraway's cyborg (Hefner 2004, 2). Due to Hefner's expressions of optimism toward science and technology in his works, there have been critiques that he expresses transhumanists' faith in his theology. However, prominent theologians such as the late Pope John Paul II have found the created co-creator a valuable tool for communicating contemporary human situations. In his Catechetical lectures on theology of the body, the Pope emphasised the vital role Hefner's concept plays in the discourse between theology, technology and science, including ecology, social justice, incarnation and the evolution theory (Cooper 2011, 52).

However, in his lectures, the late pontiff cautioned that emphasis on the "co-creator" aspect favours an optimistic view of technology that transhumanists use as the basis of their argument. They insist that humans are called into a vocation of agency in a world that is inherently good. Therefore all technological activities will ultimately work towards the greater good in the world. However,

the concept of created co-creator is devoid of the transhumanists' quest to transcend and dominate nature. Although both the Created co-creator concept and transhumanism emphasise creative imagining, Hefner sketches a clear philosophy for harmonisation with nature instead of dominating nature. Hefner believes that human identity depends on what they become through relationships with each other; inter-human relationships, human relationships with nature and technology, and ultimately human's relationships with God (Hefner et al, 2015, 62).

Therefore, I have argued elsewhere that the created co-creator concept travels in different wavelengths with the technological eschatologists (transhumanists). They desire to transcend the material world because their salvation is found in human ability. Transhumanists quest for longevity, artificial intelligence, hybridity and virtual reality fall short of the created co-creator concept, which portrays humans as natural creatures of God (Kwakye 2020b, 302). Transhumanists reject the theological anthropology that God is the source of the created order, including the evolutionary process. However, the created co-creator concept is characterised by the notion that God is the source of creation and that evolution is God's process. Thus, the concept projects almost equal emphasis on the created nature of humans and their co-creator obligations.

2.4. Hefner's Engagement with Philosophy of Science

Hefner's theory of created co-creator is theology with the scientific method in line with his conviction that theology is dead unless it learns to incorporate within itself elements of scientific understandings that undergird explanation for the time in history. Accordingly, he inculcated science into his theology by employing a scientific method of argumentation developed by a Hungarian philosopher of science, Imre Lakatos (1922–1974). Hefner is, however, neither the only theologian to employ the scientific method in theology in general nor the use of the Lakatosian method in particular.

Nancey Murphy is the first philosopher to prove that "theological research programs have the same structural characteristics as scientific research programs," drawing on the work of Lakatos, suggested an approach to theology that considers recent advances in philosophy of science. She used the Lakatos method to write her doctoral dissertation on *Theology in the Age of Probable Reasoning*, which became her first book with the title, *Theology in the Age of Scientific Reasoning*. In her book, she attempts to dispel various scepticisms that assail the Christian faith by providing an original characterisation of theological data while exploring the meaning of such characterisation for theology and philosophy of religion (Murphy 1990, 304; 2006, 304).

Murphy's application of Lakatosian theory is on the premise that the experiences and practices of Christian believers living in a community provide the primary empirical data for theological reflection. She thus redefines theology as the task of reflecting upon the information provided by religious experience to

modify auxiliary hypotheses to confirm those hypotheses to the 'core' (Murphy 1990). Hefner owes most of the interpretations of Lakatosian theory in his work to Murphy's work (Hefner 1993, 23). Hefner's theory is a product of an extensive history of interaction with natural scientists and an interest in fostering dialogue between science and theology. The created co-created concept demonstrates his commitment to be accountable to the criteria of validity demanded by the sciences. A Lakatosian research program articulates a set of methodological rules, the negative heuristic points to a path of research to avoid while the positive heuristic points to the right tracks to follow (Lakatos 1978, 47–48). The "hard core" refers to the basic idea, a conspicuous component in the Lakatosian research programme (Hefner 1993, 56).

The nature of the claims in the hard core indicates that it cannot be directly falsified or verified that is, it is "irrefutable" by the methodological decision of its proponents. The claims adopt a flexible form of hypotheses regarding observed anomalies; they rather can be adjusted in response to counter-instances in service to the hard core. Hefner, following the Lakatosian method, presents a series of hypotheses which he tests for falsifiability. He lays out what each hypothesis affirms and negates, drawing from a broad spectrum of knowledge such as theology, social science and mainstream science to build his hypotheses (Hefner 1993, 26). However, he places all this within a theological framework and articulates three theological arguments to constitute the theory's core. Hefner using the Lakatosian framework provides a beautiful summary statement of the "created co-creator" as the hard core of the proposal. The main statement of the theory is as follows;

> Human beings are God's created co-creators whose purpose is to be the agency, acting in freedom, to birth the future that is most wholesome for the nature that has birthed us – the nature that is not only our own genetic heritage but also the entire human community and the evolutionary and ecological reality in which and to which we belong. Exercising this agency is said to be God's will for humans (Hefner 1993, 27).

Hefner compares his method to that of his grandmother's recipe, which defiled what can be described as conventional, rather an eccentric mixture of innovation. She had tagged her recipe as a joke but has consistently achieved results. Hefner likewise mixes different kinds of thinking to arrive at a result (Hefner 1993, xiii). Other theologians who employ the Lakatos framework in their theological constructions include Robert Russell, Karl Peters, Philip Clayton and Gregory Peterson (Lorrimar 2012, 743, 744). The approach has its strengths, weaknesses and opportunities, which are discussed below.

2.5. The Hard Core and Hypotheses in the Created Co-creator Concept

The first "hard core" of the concept is made up of the first sentence of the main statement; "*The human being is created by God to be a co-creator in the creation that God has brought into being and for which God has purposes*" (Hefner 1993, 35). Four elucidating hypotheses for elaboration and testing are attached to this hard core.

Hypothesis #1: "Integral to *Homo sapiens* and its evolutionary history are certain structures and processes, the requirements for whose functioning may be said to constitute, at least in a tentative way, goals and purposes for human life" (Hefner 1993, 40).

Hefner anticipates challenges to this hypothesis based on the naturalistic misconception. Nevertheless, he believes that the teleonomic axiom is fluid, expressed in tentative ways of both the possibility and the necessity to make such moves. He believes this hypothesis is testable in the same way that all descriptions of structures and processes can be evaluated for their accuracy and adequacy. Hefner argues that the meaning and purpose of creatures must be continuous with the equipment they are endowed with. Humans are equipped with "self-awareness, decision-making, and self-assessment based on the reception of complex feedbacks," (Hefner 1993, 58–59) which are adaptation features for the created co-creator.

Hypothesis #2: "The meaning and purpose of human beings are conceived in terms of their placement within natural processes and their contributions to those same processes" (Hefner 1993, 41).

According to this hypothesis, nature serves as the "progenitor" of the human species and thus gives understanding into human purpose. The ultimate purpose of the human species is to serve the whole creation, which will support human flourishing. Therefore, human's contribution to the natural process is paramount because it is the purpose of humans in nature. Thus the hypothesis can be tested on the assumption that nature can offer hints to the purpose and the character of humans when the consequences of specific human behaviours toward the rest of nature are considered (Hefner 1993, 41, 73).

Hefner sees a difficult boundary line between anthropocentrism, on the one hand, and human beings as a key to understanding the rest of nature, on the other. He expresses anthropocentrism as the notion that human beings are in some sense the 'centre' of all reality and, therefore, also the purpose of natural progressions. Such a position suggests that because human beings are the telos of nature, the entire nature is crafted in the image of humans. Hefner, however, sees human beings as part of intentionality or telos of nature. Consequently, understanding any aspect of nature is to gain insight into humans because they are disposed to exhibit nature's intentionality more clearly and complexly than other forms of nature. Thus, humans offer a convenient window through which nature can be understood and interpreted. However, this should not be understood to mean that nature's intentionality is equivalent to human intentionality,

rather the human species can serve as a metaphor for the meaning of nature and its intentionality (Hefner 1998, 182, 183).

Hypothesis #3: "A concept of wholesomeness is both unavoidable and useful as criterion governing the behaviour of human beings within their natural ambience, as they consider what their contribution to nature should be" (Hefner 1993, 42).

A definition of wholesomeness, which appears to be an ambiguous criterion, can be arrived at via consensus. This hypothesis is pragmatic in the milieu of an ecosystem, human species that act as co-creator should act altruistically towards other species and ensure that their actions toward nature are wholesome (Hefner 1993, 42, 73).

Hypothesis #4: "Nature is the medium through which the world, including human beings, receives knowledge, as well as grace. If God is brought into the discussion, then nature is the medium of divine knowledge and grace" (Hefner 1993, 42).

Hefner proposes that God is the source of grace and knowledge, but nature serves as the medium of God's divine grace. He appears to be distinguishing knowledge and grace from divine knowledge and grace. However, a closer look indicates that the qualifying clause 'divine' serves merely as an indicator of the source. God provides divine grace and knowledge through nature. Nature, in turn, mediates the grace and knowledge for easier accessibility by humans and other species. The grace aspect is shrouded in ambiguity, but it is closely knit with knowledge, thus the burden of proof is placed on testability. Hefner builds this hypothesis as a truism, therefore its testability is determined by the plausibility of statements about knowledge or grace derived from nature in light of the understandings of human nature (Hefner 1993, 42, 61, 74).

The second part of the "hard core" is expounded by hypotheses 5 and 6 as followed;

"The conditioning matrix that has produced the human being – the evolutionary process – is God's process of bringing into being a creature who represents the creation's zone of a new stage of freedom and who therefore is crucial for the emergence of a free creation" (Hefner 1993, 42).

Hypothesis #5: "freedom characterises human existence as the condition in which humans have no choice but to act and to construct the narratives and symbols that contextualise that action. Such contextualisation provides justification, explanation, and norms for guiding and assessing the action. This condition is intrinsic to the evolutionary processes at the level of *Homo sapiens"* (Hefner 1993, 102).

The meaning of "freedom," which is a significant aspect of the concept and how it fits within the processes of evolution, seems to go beyond science. Although such an understanding may be commensurate with scientific knowledge, it challenges the falsifiability of the notion of freedom in the created co-creator concept.

Hypothesis #6: "*Homo sapiens* is a two-natured creature, a symbiosis of genes and culture" (Hefner 1993, 102).

The hypothesis portrays human beings as the product of genetic and cultural evolution. The human is therefore a two–natured character who emerged from natural processes. The process allowed genetic and cultural heritage to merge, producing free agents capable of shaping a future evolution.

The final "hard core" has hypotheses 7, 8 and 9 as elucidating mechanisms;

"The freedom that marks the created co-creator and its culture is an instrumentality of God for enabling the creation (consisting of the evolutionary past of genetic and cultural inheritance as well as the contemporary ecosystem) to participate in the intentional fulfilment of God's purposes" (Hefner 1993, 45).

Hypothesis #7: "The challenge that culture poses to human being can be stated thus: Culture is a system of information that humans must construct so as to adequately serve the three tasks of interpreting the world in which humans live, guiding human behaviour, and interfacing with the *physico-biogenetic* cultural systems that constitute the environment in which we live" (Hefner 1993, 148).

According to the seventh hypothesis, the *Homo sapiens* is a nodal point wherein two streams of information come together and coexist. One stream is cultural information, the other is inherited genetic information. Both of these streams come together in the central nervous system. To avoid dualistic tendency, Hefner insists that because the two streams have co-evolved and co-adapted together, they are one reality, not two (Hefner 1993, 29).

Hypothesis #8: "We now live in a condition that may be termed technological civilisation. This condition is characterised by the fact that human decision has conditioned virtually all of the planetary *physico-biogenetic* systems, so that human decision is the critical factor in the continued functioning of the planet's systems" (Hefner 1993, 152).

Hefner sees that all natural systems are now affected by the human culture so overlay that there are no longer any locations utterly untouched by human decision. Again, human freedom is emphasised in this hypothesis. The "created co-creator" is the agent in a technological civilisation, recognising it to be the form of the natural world "commensurate with their particular epoch in evolutionary history" (Hefner 1993, 153, 155).

Humans have the role and the ability to construct meanings capable of producing wholesomeness. The concept acknowledges the challenge in this era as to how to construct meanings to fashion out a viable system of cultural information that will produce a wholesome behaviour to fulfil the teleonomy of the basic human nature in order to serve human teleology (Hefner 1993, 20).

Hypothesis #9: "Myth and ritual are critical components of the cultural system of information and guidance. They are marked in linguistic form by declarative or imperative discourse, and their concepts are vastly underdetermined by the data of evidence. In light of human evolutionary history, these marks were necessary if culture was to serve its evolutionary function" (Hefner 1993, 156).

Hefner elaborates on the role of myth and ritual, suggesting that they are the chief carriers of cultural information that both motivates and interprets human behaviour beyond the purely physiological. He affirms the intrinsic meaning of

myth and ritual by describing their relation to each other and praxis: "myth portrays reality, ritual presents symbolically the action that reality requires, while praxis translates the ritual into ordinary, everyday living" (Hefner 1993, 149, 156).

Hefner suggests that this last hypothesis is highly speculative and has little possibility of testing it scientifically, however, it may be scrutinised for blatant scientific errors. He thus recognises that there is no conclusive evidence regarding the evolutionary origins of ritual or myth, due to a lack of reliable data. Hefner points out that this hypothesis rejects the possibility that humans could have survived this long without the information provided by myth and ritual (Hefner 1993, 49, 159, 202, 267).

The non-scientific nature of this hypothesis does not invalidate its potential fruitfulness, but it does not comply with Hefner's stated aim of articulating falsifiable hypotheses. Hefner's method constitutes one of the strengths of his theory as a whole, but it comes with its challenges. Expressing theology in scientific terms, as if they are homogenous can be problematic, and the effort could be a disservice to theology. However, theology will be relegated to the background in this technoculture if it does not match up to scientific criteria. Hefner's effort is a demonstration that theology can provide alternative data to supplement scientific information.

Victoria Lorrimar (2012, 743), who evaluated Hefner's work, observed that most of the hypotheses needed a reconfiguration to be scientifically valid, which was impossible due to their theological nature. She singles out hypotheses 6, 7 and 8 as those that could be considered falsifiable by scientific data, explaining that the remaining hypotheses make claims that extend beyond science. She indicates that the three hypotheses formulated sufficiently to be scientifically falsifiable appear to be supported by current scientific knowledge, but they hardly constitute a successful Lakatosian research programme. Lorrimar makes a valid point because scientific research demands repeatability and should also be empirical, thus inaccessible to issues of faith but theology is faith-driven. However, faith is not built in a vacuum and must be related to social context to be accessible to everyone. It means communicating within reliable data of science.

Lorrimar nonetheless acknowledges the importance of Hefner's effort with the statement that the "created co-creator" model is mainly compatible with the findings of contemporary science. She explains that such a synthesis of scientific and theological content provides far more convincing responses than an account derived from either solely scientific sources or traditional theology. Although theology leaving its comfort zone involves concessions, it increases its value and relevance and can speak to the contemporary social experience, compared to being in its own corner. The effort thus holds an opportunity to dialogue with the scientific community and extend beyond the faith community (Lorrimar 2012, 743, 744).

2.6. Understanding Creation in the Era of Science

The belief that the universe originated from a divine Creator is one of the fundamental doctrines of the Abrahamic religions. The early Church articulated the creation tradition within two distinct models; *creatio ex nihilo* and *creatio continua*. *Creatio ex nihilo* affirms that God alone is the source of everything in existence, and God's creative activity is free and unconditioned (Bunnin & Yu 2008, 149). The notion of *creatio continua* demonstrates God's continuing involvement in the world. God relates to creation and every moment, and God's fundamental relation is as the Creator. The advent of cosmological concepts such as the Big Bang and theory of the evolution including the age of scientific discovery in general have challenged the understanding of the Christian doctrine of creation. This is because, the discoveries appear to contradict the Christian account of how creation unfolded (Yecla 2019, 9).

Creation and evolution apparently sit in tension with each other due to the ambivalent perception that creationism represents a rejection of the Darwinian synthesis on one hand. On the other hand, Darwinism supposedly represents a rejection of the concept of a causal God as the source of life. But Hefner outlines the need for unity and flexibility between scientists and theologian to enhance understanding of possible origin of creation (Hefner 1993; Haag 2010, 8). The tension between creation and evolution is fuelled by the opposition of promoters of a theological view known as creationism and evolutionary scientists. On one hand, some evolutionists see religious knowledge as a problem that must be shoved off to give way to progress, but on the other hand, many religious adherents see evolutionary science as a deconstructive force that threatens faith. According to some creationists, the creation account in Genesis and other biblical statements about the natural world is a factual account (Hefner 1993, 10). They insist that God is communicating history through scripture;

> Evolution based views of the world origins and processes are antithetical to a belief in God and the Bible. A ''theistic evolution is unacceptable because it is a contradiction in terms. Thirdly, the essence of the Biblical position on creation is belief in God's special creation involving catastrophic interventions at times, belief that God has created everything with a purpose and that the purposiveness continues up until the present and belief that God's continuing creation is efficacious today. Fourth, evolutionary theory is not able to explain all that science has discovered about the world. The scientific establishment imposes evolutionary theory ideologically until it has attained the status of de facto religious belief-system (Klotz 1968, 49).

Based on some Old Testament texts, such as Deuteronomy 13:14; "precious fruit brought forth by the sun," which shows the sun's role in plant food synthesis that agrees with science, creationists see the Bible as authority superior to science (Howe 1972, 62).

They are thus motivated to place Bible texts above scientific discoveries. Hefner considers creationists' arguments as suggesting that science aims to re-

inforce ancient myths and rituals which is unfruitful. He bemoans creationists' inability or unwillingness to relate the biblical affirmation to contemporary science and human contemporary social experience. According to him, they rather relate the contemporary scientific understanding to the world that prevailed in biblical times. In his view, creationists misuse biblical literature by setting it over against scientific treatises, as if there were a one-to-one correlation between them. He explains that studies show that the Old Testament combines a good deal of different literature. They include poems, symbols, often believed to be borrowed from other cultures while most of them are doxological in one way or the other, and not intended as "science" or "history" in the current sense of those terms. Hefner posits that both evolution and creation are valid and valuable in understanding the human origin, and they relate to each other (Hefner 1984, 314, 315). Thus God could have created the universe through evolutionary processes.

On the one hand, creationism can preserve the biblical tenet in its original forms and reduce syncretism and adulteration of the faith and tradition. Thus, it can be said that creationism may possess the opportunity to preserve the Judeo-Christian tradition in the primordial form to the next generations. However, on the other hand, the threat of rendering the tradition obsolete and forgotten is very high (Hefner 1993, 195). A significant challenge is that some theologians understand God's act of creation in terms of the human sense of creating with the mind and body, such as the potter, artisans, musicians, writers. However, God does not create like humans, rather humans strive to create like God. An aspect of God's creative act can be deduced from the Ezekiel chapter 37 in the Old Testament, where dried bones were recreated into humans without the physical presence of God. Creationists, therefore, need to apply the the Bible message hermeneutically to the contemporary technoculture so that the texts can be accessible to everyone.

2.7. Creation Myths and God's Intentionality in Nature

The quest for meaning has produced several accounts as to the possible beginning of life. Before the advent of evolution theory and Big Bang notions, there existed creation stories about the origin. Almost every culture has its myths about how life began. Christian theology derives its creation story from the Hebrew narratives, which evolutionary scientists see as one of the many unsubstantiated fables. Hefner, however, posits that the doctrine of creation is a vital aspect of the Christian faith because the community asserts that there is a relationship between God and the world, consequently it is a declaration of faith. In the concept of created co-creator, the creation of humans constitutes the first statement of the "hard core", which also indicates that the universe is God's work and *Homo sapiens* are not in the world by accident but for a purpose. Hefner explains that the Christian faith is a message to the whole world, thus there is the monumental challenge for theologians to relate all experience to God in a

modern period that is committed to demonstrating that religion is obsolete. Furthermore, religion is seen as lacking empiricism and a high portion of its sources being mythical. An example is the creation story which some scholars' link with other ancient myths (Hefner 1984, 261–271; Hefner 1993, 40).

Hefner sees Biblical account as a unique myth because, many myths place constrains on God's creative abilities. For example, "the Babylonian *enuma elish* postulates the necessity of a conquest of chaos before creation and the platonic *Timaeus* posits pre-existent chaos as a prior constraint upon God, an indication that God cannot create freely" (Hefner 1998, 183). However, God created in freedom according to the Bible records. God was free and did not need to compete with the pre-existing matter or other forces. As interpreted by later theology, the Biblical view speaks of creation that is not only the free act of God but which is conditioned ultimately by the character of God, including freedom, intentionality, and love. Thus the Bible account is a special kind of myth by which Christian expresses the faith that creation is grounded solely in God and that it is the creation that God freely desired and brought into being. By bringing the creation into unmediated relation with God, Christian theology correlates with the nature of God. Hefner posits that the creation account points to the fact that there is a relation between the universe and God and that God has an intention for a free creation (Hefner 1998, 183).

When it comes to intentionality, he explains that nature as creation is a realm of God's intentionality. Thus all nature, including humans, are within this larger realm of God's intentionality. Hefner is of the view that nature should include evolutionary processes because freedom and intentionality emerged from it. It is from this freedom and intentionality that the *Homo sapiens* have emerged possibly from a single cell organism through the primates to attain self-consciousness. Christian theology also illuminates the fact that human intentionality exists as an expression of the larger intentionality of God's creation but not only for the sake of humans. This fact can be correlated with the understanding of the biblical tradition of humans as created in the image of God. Humans are thus created in a certain way, to be an explicit representation and presence of God's will in nature. "Humans have the created calling to articulate within the natural world what God's intentionality might be" (Hefner 1998, 184).

God's intentionality for creation is also expressed in the Ancient Greek creation story; humans were created from natural resources such as rocks, ants, trees of the earth etc. Like the account from the Hebrew story, the man was created first, then the woman. These two traditions influenced the Christian text because the Bible's New Testament was authored under Greek culture, whiles Hebrew culture forms the primary setting of the Old Testament. According to the Greek tradition, after the creation of man, Hephaestus, a deity, later fashions the woman, Pandora, with earth and water on the orders of Zeus, who is the king of the gods. He also orders Athena, the goddess per excellence, to teach her how to weave, marking the beginning of human's technology. Both Greek and Hebrew traditions attribute the human origin to nature: ants, rocks, trees, soil, water, etc.

They emphasise that humans are kin to every creature, and their call is technological (Bremmer 2000, 19).

In the Hebrews scriptures, God formed the man from the dust of the earth and later the woman, pointing to universal kinship and the embodied nature of humans with the rest of creation. Genesis 3:7 recounts the technological endeavour of the first humans; they sewed fig leaves into garments similar to the Greek account. The creator, seeing the poor outcome of their initial creative product, makes a warmer and more enduring garment of skin for the couple, which set forth the pace for better synthesis of what is natural (Genesis 3:21). We can deduce theologically from the two accounts that technology started as a joint venture between divinity and humanity within the milieu of nature and with nature, which establishes the unity between the divine and humans in technology. Hefner indicates that his concept aims to break barriers and unite two seemingly conflicting ideas, such as bringing humans and God together (Hefner 2004, 3).

These two narratives bring out three important aspects of the created co-creator concept, kinship, dependency and creative work. First, the human being is embodied in nature and shares elements and genes with every other creature in nature, living and non-living, dead and alive, which must inform their actions that harming any member of the commonwealth of nature harms humanity. Furthermore, there is an aspect of dependency, the human was a product of the divine, and they did not exist by themselves (Hefner 1993, 5). They are part of nature and depend on it within which lies their call into technological work, which is discussed in detail below.

2.8. Understanding Creation in terms of kinship

Many creation stories and evolutionary theories speak of universal kinship, pointing to humans' embodiment and embeddedness in nature. The Bible records express kinship with the suggestion that God is the sole creator of every creature pointing at one source. Regarding evolutionary theory, kinship is expressed as constructed by a common history, gene, shared emotions, etc., (Midson 2018, 137). The concept of creation in Hefner's theory is theological but is in tune with evolutionary science thus, it trends on the same wavelength as posthumanism and transhumanism, which draw from Darwin's evolutionary theory. In Darwinism, humans are evolved animals; what essentially distinguishes them is that humans have a developed sense of morality, religion and conscience. It implies that humans' transcendence is horizontal because their evolutionary history is embodied in nature (Miah 2008, 87–88). Hefner's concept thus sees humans' kinship in both religion and science. This narrative presents an account considered a myth but illuminated with contemporary science, thus, it can serve as a relevant resource that can be useful to the current culture (Bolters 2016).

Hefner's concept recognises humans as natural beings constituted by natural evolutionary processes and bearing an indelible mark of the processes. The element of the Earth that constitutes all creatures, such as the galaxies, reptiles, primates, also forms the building blocks of the *Homo sapiens* (Hefner 1993, 64–65). The view is in tune with the scientific studies that suggest that life may have begun as self-replicating RNA molecules. Hefner observes that besides genetics and the results of nucleotides sequence comparisons, there is observable empirical evidence that suggests that humans are closely related to each other and other creatures. He emphasises the human kinship and interrelationships with all creatures to stress that humans are natural and cannot exist outside nature, thus, there is the need to relate with nonhuman members in nature as kin. Scientifically, humans' kinship with other creatures is expressed genetically DNA information that separates the human species from other primates is so little. For example, it is estimated that the genes of humans are between 95 and 98%, the same as chimpanzees. Nonetheless, it must be noted that small DNA changes can significantly affect an organism and might even result in speciation. Moreover, all the various organisms in nature have similar genetic information (Creegan 2011, 57).

Alasdair Chalmers MacIntyre, a Scottish philosopher and theologian, does not even see corporal differences between animals and humans. He sees the human body as just an animal body. MacIntyre explains that human identity is just animal identity, consequently calling for a better relationship between the human species and other organisms. He, however, admits that there are partial transformations of human nature from the primary animal nature while insisting that humans remain animal selves with animal identities (MacIntyre 2001, 40, 49). Humans' kinship and similarities with nonhuman animals are not limited to genetics and behaviour. It has been established that humans and animals exhibit similar emotions. Through functional magnetic resonance imaging, it has become possible to assess and ascertain that the six basic human emotions, anger, disgust, fear, joy, sadness, and surprise, are shared within all mammals and many lesser animals (Taylor 2013, 85).

Thus, universal kinship indicates that we are all related and participate in the same process. Humans are, however, particularly adept at initiating their own creative projects, which eventually change the face of the Earth. Hefner inferring to the human's biogenetically programmed links that connect behaviours with other animals points to the fact that humans are not moving through nature because they are also natural creatures representing a discrete station on nature's way. Humans are not sovereign over nature but an occasion within nature's sovereignty because human history, including the sacred history, transpired within the matrix of natural history. This assertion is in tune with the scientific story that stipulates that the history of life, like cuneiform on clay tablets, is imprinted on minerals and in the genetic code. The minerals are fossils of past organisms, while the code is the DNA information shared by all organisms, revealing the family tree of life (Lenski 2012, 9). Therefore, Hefner reveals that the creation stories attest to this evolutionary science by linking humans with

nature, dust, plant, and insects as a symbol of genetic overlapping with the rest of nature. Thus the concept of created co-creator reveals that evolutionary science has more in common with the doctrine of creation than differences (Hefner 1993, 161, 56).

Hefner emphasising the importance of the Christian creation story, also alludes to Charles Darwin's *Origin of Species* (1859, 1968), which expounds on interrelatedness and kinships among all creations despite virtual diversities. According to Darwin, "the observable properties of an organism are the result of the interaction between two forces: the process of natural selection, which favours specific genotypes, and the influence of the organism's environment, which modifies the expression of an individual's genes to create certain outwardly visible properties, collectively referred to as the phenotype" (Stauffer 1960, 238). Therefore, Hefner sees organisms' adaptabilities to environmental conditions as God's instrument for the creation of the *Homo sapiens*. It is the evolutionary process that bestowed humans with the image of God, indicating that a unique relationship exists between God and the natural world (Hefner 1993, 239). Therefore, relationality and kinship in evolution are expressed in the created co-creator towards all creation as a community of God's creatures. Furthermore, it implies that humans' transcendence is horizontal because it depends on enhancing the relationship with nature through creativity and technological activities.

2.9. Creation as Dependency

Besides kinship, Hefner reinterprets the concept of creation as a dependency. That is dependency on antecedent factors, such as environment, biology, culture, and contemporary sources. This proposal is one of the strengths of Hefner's concept because the dependability of humans and even the cosmos on various factors cannot be disputed (Hefner 1993, 237). Similarly, Barbour has argued that the central theological affirmations of Genesis and other biblical passages about creation should be understood as the world's dependence on God and God's sovereignty. Thus, he posits that the passages in the Bible do not represent a claim about cosmic beginnings capable of either tallying or clashing with scientific findings (Barbour 1993, 202).

Hefner explains that human beings emerged out of the conditioning matrix of genetics and culture that gave birth to them when it comes to human creation. Humans, therefore, depend on these factors, and the factors depend on God. The theory also refers to the component of the two-natured creatures underscoring the fact that neither the human individual nor group has control over their genetic compositions. The genotype, which is the source of their being and freedom, reaches its efficacious form in human culture, but the environment moulds the culture. Culture is the basis for conditioning tradition and is tradition that shapes each new generation. Human created origin is a cursor that they neither design their nature nor cosmic roles, but they are a product of evolutionary pro-

cesses. The evolutionary process is God's own process of creating the universe and all things, including humans. The word "created" in the theory signifies the "conditionedness" of human beings. Humans are located within an ecosystem, and they do not choose their genetic nature, but it is bestowed on the individual. Humans do not exist by themselves but were created and placed within an ecosystem in an intimate relationship with an environment that expressively shapes humans and their culture (Hefner 1993, 36, 41, 42).

Hefner posits that due to human dependence on various factors, they are not self-existent, self-sufficient and independent. They serve the evolutionary process, which is the source of their existence. This is in tune with post-humanists and transhumanists, understanding of human evolutionary origin. However, their notions reject the suggestion that there is a divine cause behind the evolutionary process. Thus while creation is theological, it is expressed scientifically by Hefner to unite the concept of creation and the theory of evolution. Hefner's rendition makes a strong case that there should be no antagonism between creation and evolutionary science because they have more common grounds and many things that unite than divide them (Hefner 1993, 36). The concept thus opens up possibilities for dialogue.

2.10. Notions of the "Human" in Christian Theology

Giving a concise definition of a "human" has been a challenge over the ages. However, understanding who "humans" are constitutes a vital step toward defining their roles, limitations, freedom and their possible future. There have been efforts at defining the human, but such attempts over the ages have been fraught with challenges. What is a human being? The Greek philosopher Diogenes of Sinope is said to have plucked a chicken and presented it to the assembly of the Academy with the words, "this is Plato's man," when Plato defined man (human) as a two-footed, featherless animal. Such challenges associated with the endeavour indicate that humans can be understood in a particular context rather than in general terms (Eede 2015, 150).

Scott Midson (2018, 20–22) provides an excellent direction to consider in the effort to understand humans. He posits that understanding the meaning of humans starts with identifying the nonhuman elements in the environment and examining human activities. Thus, both negative and positive human activities such as destruction of the ecosystem, investing in fossil fuels, genetic modifications, patenting new hybrid animals, planting trees, protecting water bodies, including augmentations with prostheses provide ideas to the meaning of the human.

The Christian perception of the human can be traced back to its roots in Hebrew thought, from where the *imago Dei* concept is derived. The common notion, *imago Dei* sees humans as unique by being the only species created in the image of God with the right to dominate other members of the cosmos. The composition of the human then becomes the next question. The Bible itself is

saturated with both embodied and disembodied notions of the human. Thus it is easy to suggest that the Bible sees the human in dualistic terms with passages that dichotomise the body from the soul. For instance, the parable of the Rich man and Lazarus, recorded in Luke 16:19–31, narrates how dead and buried individuals were in "posthuman" states in different realms of existence (Knight 1997, 277–279). Apparently, the rich man's essence (soul/mind) was expressing discomfort in Hell, and the other was at peace in Paradise while their bodies were decomposing in tombs in the physical realms (Szopa 2021, 198).

Such narratives provoke a disembodied and dualistic understanding of humans as separable from the body. Other passages apparently reinforce such dualistic notions, such as Matthew 16: 26 (ESV), "For what will it profit a man if he gains the whole world and forfeits his soul? Or what shall a man give in return for his soul?" A closer look, however, brings out a different meaning. The passage is more inclined towards pointing to the dichotomies between the human and the breath of life, which according to the Genesis story, animated the first humans rather than a dualistic postulation. Thus the Lord might be pointing to the need to safeguard life which is priceless because once lost, it cannot be restored through any means on earth. Jesus also utilised parables as a tool in His ministry to communicate to different groups of people. Thus, parables are not taken on the face of their literal meaning. The story of the Rich man and Lazarus could be an illustration that represents the present period and the eschaton. Lazarus, who was poor as human, lived a pampered, wealthy life in "posthuman" state. A message of hope to the poor masses that, at the eschaton, they will be comforted and what they are deprived of in the present life shall be restored. Generally, Christianity should be seen as projecting the human in terms of physicalism because of four main reasons.

First, although Christianity and Judaism entertain the concept of soul and body, they emphasise the psychosomatic unity of body and soul (Mercer, & Trothen 2021, 26). Second, the body and soul are often used interchangeably in Bible passages. For example, it is recorded in Ezekiel 18:4, "Behold, all souls are mine; the soul of the father as well as the soul of the son is mine: the soul who sins shall die." In the various notions of souls, they are immortal, thus the passage alluding mortality to the soul points to the body, which is seen as perishable (Szopa 2021, 198). This means the body could be referred to as the soul.

Third, the apostle's creed, which is considered a summary of the Christian belief system, speaks of "resurrection of the body", indicating that the body is essential for salvation and the human being does not exist beyond the body (EWTN 2021). The Bible, therefore, recognises the soul in relation to the body and does not expect a disembodied soul/mind of the human to subsist.

Finally, the Church has always stressed the unity of the human person from its inception. For example, the fifteenth Ecumenical Council that met between 1311 and 1312 declared, "We define that anyone who presumes henceforth to assert defend or hold stubbornly that the rational or intellectual soul is not the form of the human body of itself and essentially, is to be considered a heretic" (Tanner, et al. 1990, 361). This approach to the human soul denotes that God

creates each soul of a particular human being integral to the body. According to the Genesis story, God breathing life into the created body rendered it "a living soul," which implies that the body can be referred to as a soul. Thus without the breath of life, humans were non-living souls, by implication, dead bodies are dead souls. This brings the Christian notion of the human closer to physicalism rather than dualism. The Christian notion of the human can be described as psychosomatic unity centring on the embodiment.

2.11. Dualism vs Biocultural Evolution

To facilitate the embodied understanding of the human, theologians in the field of theological anthropology often appeal to the biocultural model rather than dualistic ideas. However, dualism persists in some Christian doctrines. This section looks at how the two notions inform the construction of the idea of the human in Christian theology. I proceed with dualism before looking at the biocultural model. The root of dualism in Christianity is often attributed to the influences of Gnosticism and Manichaeism (Cornwall 2013, 8).

Gnosticism and Manichaeism claimed that humans are made up of soul and body. The body is evil, while the soul trapped in the evil body is good. They are suspicious of the body because they see it as constituted by matter, and the matter is a principle of evil. Gnostic dualistic understanding of humans and Cartesian nature pervades both religions and transhumanism (Beck 2008, 304). Indeed the dualistic notion of the human has served as a source of understanding some complexities associated with humans. Expressing humans in dualistic terms has been used to explain many mysteries about human nature, including conscious and subconscious experiences such as dreams, visions, mental pictures, future hopes etc. However, the notion has been used to vilify the body. Furthermore, it serves as a source of divisions, which invokes apathy in the faith communities towards social issues as they strive to shed the body to enter into a new realm of bliss. Therefore, dualism can serve as a source of division and facilitate apathy toward social issues (Hefner et al., 2015).

Over the centuries, many philosophical groups such as Cartesians, Gnostics, Manichaeism, and Christian theologians have used various forms of dualism and disembodied notions. Many thinkers of the 20th century criticise some forms of dualism, and various forms of dualism have been perennial temptations for Christian thinkers. James M. Childs Jr (2015, 14) explains that while anthropology has not succumbed to dualism in the history of Christian thought, the notion has affected several aspects of Christian doctrines. The tendency to look down on the embodied life to elevate the soul/spirit over the body is high. For example, a Catholic priest and theologian, Nicanor Austriaco (2015), who is a theistic evolutionist, describes the human in terms of soul and body with Gnostic colouring;

> "First, because human beings are composite creatures of both spirit—which is inherently incorruptible because spirit is radically simple—and matter—which is inherently corruptible because matter, understood here not as primary but as a secondary matter, is composed of more basic parts—they are inherently corruptible and therefore mortal" (Austriaco 2015, 654).

Such proliferation of dualistic notions in Christian theology has been attributed to the influence of Cartesianism, a philosophical view of French philosopher René Descartes (1596–1650) that identifies the person with soul/mind or consciousness and physical body. He asserts that only humans possess a soul/mind and that a person's soul is wholly separate from the corporeal body. He also posits that nonhuman animals do not have souls but are merely complex machines due to their inability to think. Thus the movements of their bodies can, in principle, be explained in purely mechanical terms (Ruler 2019). Something similar is found in Freudian theory, which speculates that human behaviour is determined by subliminal drives where personal and social problems boil down to the frustration of sexual desire (Watson 2020). These perceptions establish gaps between humans and animals, contrary to many findings that establish a close relationship (Szopa 2021). Theology is moving away from such a view, and many theologians ascribe to the psychosomatic notion of the human. Contemporary literary scholars, semioticians, and philosophers often favour the biocultural evolution model as ideal for understanding humans (Cooper 2012, 13).

Similarly, Hefner places the understanding of humans in terms of nature, culture and as the image of God. Unlike Plato, he neither defines the *Homo sapiens* physiologically nor in dualistic terms instead in the context of bioculture (Hefner 1993, 45). Hefner joins the attempts to overcome dualistic understanding of the human being because of the tendency to separate and discriminate. Besides separation in terms of gender, race, economic, political etc., dualism nurtures separation from the natural ecosystem and the evolutionary processes. He therefore ascribes to the biocultural model by emphasising that the human is conditioned by gene and culture (Hefner 1998, 45, 175).

The biocultural model is anthropological, theological, literary and cultural studies of humans as biological, social and cultural beings in relation to their environment. The approach assumes a dynamic relationship exists between humans' biology, encoded in genetic, neural evolution, and culture, but progressively projected centrifugally onto the environment, which is harnessed and transformed for humans' benefit. Therefore, there is a relationship between the model and the adaptability model that stipulates that to understand biological variations, the human-environmental interactions should be the focus. Many human traits have been studied through this model, which indicates that several independent mutations occurred in many human societies in the course of human adaptation to different environmental factors (Sharma 2012).

Robert Jurmain and his colleagues (2012) conducted a study on understanding the human species and its place in the biological world. They define biocultural evolution as "the mutual, interactive evolution of human biology and

culture. the concept suggests that biology makes culture possible and that developing culture further influences the direction of biological evolution; a basic concept in understanding the unique components of human evolution" (Jurmain et al. 2012: 7).

Therefore, biocultural evolution captures the fundamentals of humans' identity and place in the world. Because the terms efficiently point toward the simultaneous tension and intimate proximity between humans' inheritance and evolutionary origins on the one hand, and humans' symbolically organised, socially knotted, and technologically shaped lives, on the other. The phrase has its own challenges on what has been described as a conceptual imbalance between the biological and the cultural dimensions. While the evolutionary theory foundation for understanding biological change in populations possesses a solid academic history, with progressing scientific knowledge and healthy debates, culture and its connection to biology lack clarity and tend to be obscured by intellectual confusion and disagreements (Stutz 2013).

Hefner's appeals to the biocultural evolution model to define the human serves as one of the strengths of his concept. He describes biocultural evolution as the emergence, within the physical realm, of biological processes of evolution. The processes generate the phenomenon of culture by themselves and the unique, non-Darwinian, dynamic processes from which culture proceeds. Culture exists simultaneously in a relationship with symbiosis with the physical-biological progressions in which it emerged and continues to operate. The appearance of culture is directly correlated to the central nervous system, and the dramatic increase in the significance of culture in the human species is correlated with the equally dramatic development of the human brain. Culture is defined as learned and taught patterns of behaviour and the symbol systems that contextualise and interpret the behaviour. Hefner posits that the single most critical product of human culture today is technology (Hefner 1998, 174, 175).

Hefner's spin on the biocultural evolution concept adequately merges theological understanding of humans with science and technology, projecting human embodiment and embeddedness in nature. The concept aligns with theological knowledge of the human created with soil, *adama*; a dark brown soil rich in microbes and manure. Theologically, humans then assumed duties in the garden through which culture emerged. The farming culture evolved into a technological one, making tools that will not end, as the dreams and desires of humans will not cease. This is because every tool expresses humans' needs and desires (Kwakye 2020, 298).

Hefner, thus expresses the view that *Homo sapiens* should be understood as possessing two-natured characters because the human is a nodal point where two streams of information merge to coexist as one. One stream is inherited genetic information, and the other is cultural information. The biocultural understanding appears to give credence to the dualistic notions because it involves the dual (two streams); biological (gene) and cultural. However, Hefner explains that the two streams come together in a central nervous system as co-evolved into a co-adapted whole. In his view, since the two domains become one hu-

man, the dualistic qualities inherent in understanding human nature are lost. He links the unity and the confluence of these two streams of information in the human being to the discussions about "nature" and "nurture" as two building blocks of human life. Therefore, though we do not understand how these two dimensions of human life and its evolution are related, they eventually converge in the human central nervous system and brain. This position explains why humans should not be seen in dualistic terms like soul and body, mind and body, material and immaterial, genes and culture because the two streams, irrespective of their names, merge into one whole. The two streams mix sufficiently to differentiate humans from other forms of life. However, Hefner admits that the genetic stream (nature) and culture (nurture) are pretty different. They are of two different dimensions, flow from different channels, and proceed with different sets of dynamism and principles. However, they finally coexist and co-evolve (Hefner 1993, 29).

Hefner further admits that it is not easy to avoid dualism in the efforts to understand humans. Moreover, he utilises mainly a fusion of two things such as freedom and conditioning, animal and image of God and even human and technology in his analogies. However, Hefner "struggles" to avoid the human dualistic assertions because he sees them "as misleading as well as useful" (Hefner 1993, 29). Misleading because "(1) the idea of separation is at odds with our wider scientific and religious understandings, and (2) if carried forward in certain exaggerated ways, separation thinking can close off important experience and insights, and it can be very destructive" (Hefner et al. 2014, 3; Hefner 1993, 30–31).

2.12. *Homo Sapiens*, as the *Imago Dei*

Theologically, humans are distinguished from other creatures, they assume status as representatives of the Creator God. This is because humans are the *imago Dei*, they possess the image and likeness of God. The *imago Dei* concept is believed to possess a tendency to bind humans closer to God than the nonhuman other. Posthumanists suggest that *imago Dei* is a destructive concept that engenders excessive differentiation of humans and nonhumans, facilitating a false assumption of privileged species. They point to the many similarities between humans and other primates coupled with human beings seen as being the most destructive species in nature to challenge the notion (MacIntyre 2001, 40). However, the concept can benefit from scientific data that distinguish humans physiologically and cognitively from other species due to their unique evolution (MacIntyre 2001, 40).

Scientifically, *Homo sapiens* can be identified by several unique attributes such as anatomical qualities like erect posture and a large brain. Humans are the only vertebrate species with a bipedal gait and erect posture. While birds are also bipedal, their backbone stands horizontal instead of vertical. The brain size is generally proportional to body size; humans have the largest and most complex brain relative to body mass. The brains of chimpanzees and gorillas weigh

less than a pound each (Ayala 1998, 124). The human male adult brain is about three pounds. Regarding tool use, scientists have observed nonhuman species that employ tools in advanced forms. Animal species, such as mammals, crocodilians, birds, fish, cephalopods, and insects, are considered tool users (Dinets, Brueggen, & Brueggen 2015). Nevertheless, there is a noted cognitive gap between tool use by other species and nonhuman primates (Jacobs, Bayern, & Osvath, 2016). Comparatively, humans' tool use is seen as much more flexible and advanced. Thus scientifically, humans are unique species and are also cognitively advanced in their evolution (Drees 2009, 43).

Science and theology diverge and converge on the identity and distinctiveness of the human person. When it comes to the "posthuman" narratives, both theology and transhumanism see humans as unique and different from animals. Posthumanists see the human person as an animal with an empirical basis for the sense of belonging on the earth. In contrast, the transhumanist historical narrative is a process of human awakening and coming to terms with their unique identity that holds the potential for radical self-transformation, including an expansion into the cosmos (Fuller 2017, 163). While posthumanists believe in the enhancement potentials of the human being, they assert equally the possibility to enhance the nonhuman other. Transhumanism recognises humans' uniqueness within their unique evolution as species in the early stage of evolution, whose individuals can value their own existence. Hefner does not disagree with any of the two notions, he refers to the *Homo sapiens* as human-animal in recognition of the kinship that exists between humans and nonhuman entities. Furthermore, he emphasises the uniqueness of the human agent as co-creator, which is synonymous with the theological expression "*imago Dei*" (Hefner 1993, 28, 32).

It is factual that all mammals experience emotions such as fear and love, and psychologists suggest that the higher primates possess a sense of self-identity. Nevertheless, only humans possess the complex brain necessary to frame detailed plans and articulate ideas, which Hefner sees as a responsibility to create a more wholesome future for all creatures. He thus reinterprets the *imago Dei* notion as creative responsibility (Hefner 1993, 241).

Religions have asserted humans' uniqueness in many ways over the years. Christianity generally distinguishes human persons from animals by being made in the image of God (*imago Dei*). It, therefore, has an absolute value that is not relative to variations in their physical endowments (Loike & Tendier 2003, 4). The concept's strength lies in respecting the sanctity of every human life. Human personhood made in God's image encompasses the powerful, the weak, the helpless and the poor, all precious in God's sight, even if incapable of valuing their existence (Bentley 2017, 1). Humans are distinguished from other species, not in value but in characteristics that facilitate freedom. Hefner posits that the *Homo sapiens* is distinctive in terms of six crucial characteristics:
- consciousness
- self-consciousness
- the ability to make an assessment
- the ability to make decisions based on those assessments

- the ability to act freely on those decisions and
- the ability to take responsibility for such action

Scientists acknowledge these qualities, however, the recognition of humans as *imago Dei* falls short of science. This is likely due to the empirical nature of science, which limits it from accessing the metaphysical. Nonetheless, the qualities that underline the *imago Dei* are also recognised by evolutionary science. For example, Darwin recognised the ability of humans to exert selection and control evolution. To introduce his idea of natural selection, he referred to how humans had domesticated animals and plants by breeding those with desirable features (Lenski 2012, 10). The *imago Dei* concept thus speaks of human equality and unity, pointing to the need to recognise human dignity and sanctity of life. It further invokes responsibility to protect the nonhuman other. One of the strengths of Hefner's concept is the ability to provide theological concepts with scientific illuminations. The proceeding sections illustrate Hefner's work in such endeavours (Hefner, 1984, 331).

2.13. Human Roles and Purpose in the Universe

Humans' creation, considered in relation to God's original creation, serves as the starting point of Hefner's created co-creator concept. It forms the basis of Hefner's evaluation of technologies as human evolutionary becoming. God is the Creator, and humans represent God as co-creators therefore, they act like God through co-creation. It can be said that creating is the norm for God, while co-creating is the norm for humans. Hefner explains that it should be understood that *Homo sapiens* cannot equate their creating activities with that of God. Rather, human activity should be considered perverse if it does not finally qualify as participation in the extension of God's primordial will of creation. Like transhumanists' assumption, Hefner believes that humans' created status is eschatological, unleashing and not fully achieved, thus the need for myths, science, and technology to be harnessed towards its fulfilment. Humans were created for a purpose, in fact, "both the creation and the human being have purposes for their existence, and the two are intertwined within the larger notion of God's destiny for the entire creation" (Hefner 1984, 331). Moreover, the human's purpose includes technological activities to shape creation into a more wholesome future (Hefner 1984, 39, 331).

Both Hebrew and Greek creation stories indicate that the human was created to co-create after their Creator. "In Genesis creation account, humans' roles are identified in the two Hebrew words *avodah* and *mlakhah* which were first used in Genesis 2:15 to mean creativity and laborious activities. *Avodah* is translated into English as 'to work,' 'to serve,' 'to till, while *mlakhah* indicates 'to hedge about,' 'to guard,' 'to protect,' 'to attend'" (Kwakye 2020b, 302). I have argued that both words stipulate utilising available resources by applying skills and strengths. When used together, they spark the concept of creativity, including the creative power from learning to control. Hefner places the human ability to

create on grace and knowledge, which are gifts from God. Furthermore, the *imago Dei* status in the co-creator is bestowed by God for His purpose and will. In many cultural myths, various skills are bestowed by god/spirit. This is similar to the first technological work of Adam and Eve, who resorted to weaving right after the fall (Kwakye 2020b, 302; Bremmer 2000, 19).

The image of God corresponds to God's agency, which involves the responsibility to care for creation and its bio-diversity. It represents the obligation to care, protect, and respect everyone irrespective of gender, race, political, and economic status (Denis 2009, 4). Created co-creator concept defines true humanity in terms of a humble awareness of human dependency upon God and the evolution process. Thus for the secular scientists, the dependency is on evolution while the theistic recognise it as God. The dual meaning derived from Hefner's concept makes the notion stronger. Christianity, posthumanists and transhumanists can therefore identify with the idea of the created co-creator. Thus, the *imago Dei* is synonymous with co-creator, a human being enhanced with the knowledge to perpetuate *creatio continua* through technology. Human engagement with technology is thus natural for humans and suggests human nature. Technology is to serve as a natural medium for creativity, and innovation, to transform the world, congruent with God's plan for creation, that humans provide sustenance for all humans and nonhumans' existence through creativity (Hefner 1993, 19, 27).

2.14. Freedom and Creative Work

As discussed above, the *Homo sapiens* is a created co-creator, and the concept has both theological and scientific grounding. Theologically, humans are "created" by God, but scientists see them as products of an evolutionary process. Both ideas guarantee that humans are conditioned and are not the complete authors of themselves. The prefix "co" refers to interrelationship, pointing to the fact that humans cannot do anything alone. As creators (*imago Dei*), they are free to create and reconstruct and change themselves, their environment and societies. The created corresponds to conditioning, the need to recognise the interrelationship between all nature and a human kinship with all other creatures. Humans' created origin also demands that they act with a sense of belonging to nature. Thus, on the one hand, as created beings, humans are conditioned, dependent on antecedent factors, and the other hand, *imago Dei*. The latter are free to create and even alter the evolution process that created them (Hefner 1993, 30).

Freedom is an essential theme in the created co-creator concept, linked with the *imago Dei* notion and creativity. The term "co-creator" represents human freedom to imagine, explore and create. Freedom speaks of the extraordinary capabilities of the human creature and its unique place within the planetary ecosystem. The concept of created co-creator redefines freedom beyond liberty, which is the classical liberal and prevailing American view that the human be-

ing is *Homo faber*; human the tool-maker. It also goes beyond the ability to make and shape the world, which is the Marxist view. Instead, "freedom" refers to the conditions of existence in which humans unavoidably face the necessity of making choices and constructing the stories that contextualise and justify those choices. The notion of freedom integrates self-awareness, decision, action and responsibility in the concept of created co-creator (Hefner 1993, 39, 46).

This freedom entails the human skill to make choices and the capacity to justify those choices to produce wholesomeness in nature through dependency on various factors. Freedom is thus expressed paradoxically in relationship with dependency on nature and God. Freedom develops out of the deterministic process of evolution that forms a significant part of created co-creator concept. The notion of human freedom in the concept seems to dominate the restraining aspect, "conditionedness," though the two factors are intertwined. Hefner attributes the source of freedom to God. It serves as an instrument to bring forth a free creation. However, God could bring forth a free creation but decided to use evolutionary processes to bring forth a world that could choose to be free. Consequently, it is the will of God that all creation, including the co-creator, aspires to be free by themselves and to create in freedom through dependency (Hefner 1993, 27).

The freedom that characterises the created co-creator and its culture is God's instrumentality. The instrumentality makes it possible for creation itself to share in God's determinative purpose. This comprises the evolutionary past of genetic and cultural inheritance and the contemporary ecosystem. Thus, because freedom is within the prerogative of creation, creation is defined by what it is becoming but not according to its past or present. Therefore, the understanding of freedom is eschatological (Hefner 1993, 46).

2.15. Human Freedom in the Context of Technology

According to the created co-creator concept, freedom could be understood as a creative initiative and that humans as co-creators are synonymously God's co-workers. Therefore, humans are mandated to create as the Creator God's co-creators. Humans are expected to creatively utilise the created raw materials to improve lives through enhancing technologies. Enhancement is discussed in detail in the subsequent chapter, pointing to the fact that it is a natural part of humans. Created co-creator thus represents the human person disposed to use the freedom, knowledge, and grace bestowed by God through the evolutionary processes into technologies. Human value is thus recognised by creativity. Technologies should aim at human flourishing, a wholesome future for nature as a whole, which response to God's eschatological purposes for creation. Thus, technologies are to enhance the quality of human lives and improve nature rather than harming nature towards anthropocentric ends. This is because nature itself is a determining factor of human freedom, including creative freedom. Hefner, therefore, sees knowledge acquisition, research, creativity and techno-

logical activities as the primary human vocation within the cosmos. The created co-creator concept therefore espouses horizontal transcendence that improves human conditions and nature (Hefner 1993, 46, 19, 27).

Karl Rahner expresses such a notion and emphasises that humans might bring about the next stage of evolution, and that is where the importance of humans should be fathomed. He posits that "humans are valuable in this process not for what they are but for what they might create. Theologically, humans are valued as God's creatures because of what God is creating through us. As bearers of the Creator's image, we exist to mirror God's gracious creativity" (Cole-Turner 2015, 24). For Rahner, creativity is important because God is creating through humans. For Hefner, humans are creative agents who must think out both new creations and their justifications. Hefner, therefore, leaves humans considerably more freedom and responsibility.

To achieve wholesomeness, Hefner points to the need to accumulate knowledge in nature to fulfil humans' role because nature serves as the medium of divine knowledge and grace. This statement can be linked with the fact that humans' ability to interpret some aspects of nature has brought about advancements in science. For example, enhanced plant and animal species are reproduced through gene manipulations and cross-breeding due to accumulated data through research and applications of the right technologies (Hefner 1993, 42).

Many creation stories include some sort of technology, and important new technologies are often brought to humans by the gods or messengers of gods within humans' natural environment. Therefore, it implies that all culturally important technologies are given to humans by divine or semi-divine creatures. This notion is found in cultural narratives such as Prometheus and humans, Athena and Pandora, Adam and Yahweh etc., (Schemel & Borbely 2000, 287). This theological insight was articulated by Ignatius Theophorus, also known as Ignatius Nurono, an early Christian theologian and bishop of Antioch who called God *Deus Operatius*, translated "God the worker" to express relationship, humans duty and purpose (Yecla 2019, 9). Therefore, the human technological endeavour is deeply theological based on the notion of God's purpose and intention for creating the human.

2.16. Myths and Human Existential History

The importance of myths and storytelling is expressed in transhumanism and Hefner's created co-creator theory. Transhumanists usually use literary devices such as myths, metaphors and storytelling to explain their theories. They often link humans' historic effort for immortality in myths and their aspirations in the effort to contextualise their vision within history. They thus justify their aspirations as natural processes with stories such as "Gilgamesh Versus the Dragon," the Titan Prometheus, and the Dragon Tyrant (Manzocco 2019, vi-viii; Bostrom 2005b).

Hefner explains that myths and rituals are a vital part of humans' existential history, and they are helpful in the human technoculture both as data for existential reflection and tools for communication. He explains that myths and rituals provided the information that supported human life in survival-threatening conditions between 10000 and 20000 years ago. Although it is difficult to validate the role of myths and rituals in human history, the imprints of their use as a significant recourse to life-threatening conditions are evident in nearly every human society (Hefner 1993, 20, 21). For example, Mihaly Csikszentmihalyi provides an exciting myth of the Apulia people in southern Italy in his article, "Mythic Potential of Evolution." He records an experience in a dark cave on the Gargano peninsula, where he touched the depression in a flat boulder believed to have been made by the footprint of the archangel Michael when he came several hundred years ago to rid the countryside of a plague. All around the walls of the deep cavern, the local people had hung thousands of silver hearts, legs, and hands to thank the archangel Michael for healing them from the accidents and diseases (Csikszentmihalyi 2000, 25).

There are relics of such mythical narratives in almost every civilisation. The salvific intervention of the divine in such stories links with the existential history of the community and their distant relatives. Hefner alludes to myths with the view that religious and scientific data can function together to provide the information that will serve the natural order and humans within it as it struggles under survival-threatening conditions (Hefner 1993, 21). Myths and rituals might have contributed immensely to the survival of the human species. Although they cannot fit into a test tube and are neither universal nor testable, they are imminent in human evolutionary history. It must be noted that the relevance or strength of a myth does not lie in its being right or wrong but in explaining and making sense of particular situations. Myths cannot be interpreted scientifically; instead, they are adequately understood within the context of the culture from which they emerged (Marcelo 2005, 8).

2.17. Conclusion

❖ The created co-creator concept stipulates that God created humans through evolutionary processes, and they serve a distinguished agency as co-creators (*imago Dei*). Their purpose and responsibility are to bring forth a more wholesome future for all humans and the entire creation in fulfilling the purpose of creation. Therefore, the desire to transcend is part of an inner desire to go beyond limits and explore the beyond through technology or divine means.

❖ The Christian doctrine of creation is redefined in terms of kinship, dependency and creativity, where science merges with myths, and humans' uniqueness is identified in the context of their unique evolutionary history, the acquisition of knowledge and nurturing in nature. The cumulative knowledge renders humans co-creators who continue to evolve through technological

enhancements, by implication, human transcendence is possible within nature. Therefore, acquiring and applying knowledge through technology enables *Homo sapiens* to affect the evolutionary processes toward God's purposes for the universe. Because the co-creators are natural creatures, they should endeavour to create to enhance nature as a whole. Therefore, Christians should understand that technology is part of human nature. It is a gift from God, serving as a tool to fulfil the mandate of the *Homo sapiens* as God's co-creators. It is a physical means of transcendence, but just as human nature is not perfect, so is their technology.

❖ Hefner's created co-creator concept has weaknesses, strengths, and opportunities. One of the weaknesses is that, though science and theology can relate, employing a scientific method of argumentation in theology comes with challenges. First, scientific research requires repeatability and empirical evidence, but theology is shrouded in metanarratives, a realm where science is often defective. Therefore, most of Hefner's hypotheses were not falsifiable by Lakatosian standards. Secondly, there is the apparent projection of science as superior to religion. However, both parties are entreated to recognise the contributions of each other as partners to human development and wellbeing.

❖ The concept, however, has several strengths because theology with a scientific approach has the potential to attract a wider audience. It will thus go a long way to enhance the relevance of theology and minimise the tendency of religious data becoming obsolete. Furthermore, Hefner can demonstrate that religion and science are compatible and theologians should not be suspicious of science. Rather, science should be utilised to highlight religious truth.

❖ Another strength of the concept is the ability to relate the doctrine of creation with evolution science. The concept demonstrates that there are much more correlations between theology and science than contradictions. Thus the two can complement each other to enhance understanding of how the universe might have begun. For example, both are interested in the beginnings, the ends, the causation etc. Therefore, religion can benefit from scientific data to render a contemporary expression of ancient knowledge and tradition. It also serves as a theological basis to accept evolution science into the faith community by appealing to dynamic interpretations, facts and reasoning while simultaneously challenging evolutionary scientists to evaluate what theism is saying about creation and human nature.

❖ The created co-creator concept also reinterprets a possibly dualistic approach to understanding humans. *Homo sapiens* consist of the confluence of two streams of information which co-evolve and co-adapt into one whole, marking an end to duality. Human beings, whom God created through nature's evolution as *imago Dei*, are natural beings. They are refined and enhanced through culture to become co-creators. They can facilitate a more wholesome future through scientific knowledge and technological activities. This position diverges from transhumanism which aspires to separate and dispose off the biological aspect of humans. Hefner rather agrees with the post-

humanist understanding of humans as embodied beings, only to disagree with posthumanism on the *imago Dei* notion.

❖ The *imago Dei* doctrine receives scientific expressions in the created co-creator concept. Humans are simultaneously unique and similar to their non-human kin. Hefner reveals an apparent disparity between humans and the nonhuman other but points to the kinship that defines humans' responsibility towards the rest of nature. The concept demands respect for all creatures in recognition of human embodied nature. Hefner agrees with posthumanists' notion that humans are natural and constituted by the very element of the universe that forms all creatures. However, he reveals that humans have a unique evolutionary history that has bestowed on them peculiar characteristics as co-creators. Thus *imago Dei* represents a relationship between God and the world as well as humans' kinship with the nonhuman other. Humans are creatures of nature, but they are unique because of their unique evolution, culture, and the fact that they possess the duty to acquire knowledge in nature to co-create after God and thus affect the evolutionary process that produced them. The "co-creator" represents the freedom of the human being to research into nature, to replicate and manipulate aspects of nature, including even genes and genome, for wholesome ends.

❖ Hefner suggests that humans are creative by nature because creativity is natural to humans as a reflection of God's nature, making a point for humans' created origin. The implication is that scientists who recognise humans' creative abilities might recognise a possible source. The concept points to God as the author of the evolutionary process. Theologians who believe God is the Creator should not be afraid of technology because it reflects God's grace and humans' *imago Dei* status. The *imago Dei* is to create freely in creaturely ways.

❖ Freedom refers to the conditions of existence in which humans unavoidably face the necessity of making choices and constructing the stories that contextualise and justify those choices.

CHAPTER THREE. Points of Contact
of Religion and Technology

3.1. Introduction

According to the data from the discussions of created co-creator theory, the purpose of the human species in the evolutionary matrix is to acquire scientific knowledge and skills to produce a wholesome future through technology. According to Hefner, "humans as creatures serve the purposes of the Creator and all possibilities, activities, and achievements of the creature are to be referred to the created order and the purpose with which it has been endowed" (Hefner 1993, 36). The statement implies that God created human beings through evolutionary processes to facilitate the universe's evolution through technology. Technology, therefore, is a medium for human activity and transcendence. While divine transcendence tallies, technology remains a viable means of transcending limitations and striving for wholesomeness. The word "wholesomeness" according to the Merriam-Webster (2022) online English Dictionary, is derived from the adjective "wholesome" which connotes promoting health or wellbeing of mind or spirit. The term also indicates promoting body health, soundness in body, mind, or morals. Hefner's usage of the word is associated with the need to act altruistically towards other species and points to the quality of being valuable and generally moral (Hefner 1993, 42, 73). Wholesomeness is used in this study to imply favourable environments that support the flourishing of all organisms, including humans.

From the period of Enlightenment in the eighteenth century, the perception that scientific progress has made technology the main hope for wholesomeness and supplanted religious transcendence became common. In his book, From Human to Posthuman, the theologian Brent Waters (2006, 1) expresses the view that technology is one of the dominant forces shaping the emerging future society because the fabric of life depends on technology. He posits that religion has lost its dominance to science, and technology is currently the dominant driving force. There is a growing view that technological progress is likely to result in the demise of religion as a whole (Childs 2015, 10). Such projection arises from the view that, on the one hand, religion is often seen as belonging to the primitive, characterised by blind faith and superstition. On the other hand, science and technology come with rational rigours grounded in practical experience and material knowledge, thus belonging to the future. Contemporary religious apologists often argue that the resurgence of religious expression attests to the lack of spiritual qualities of technological rationality, which has seen the renewal of religious belief in the technological age (Noble 1999, 4).

However, scholars such as Alfred N. Whitehead (1997, 39) see religion as the foundation of technology, and George Pattison (2005, 1) identifies religion within technology, seeing it as providing the direction for technological progress. David F. Noble sees religion progressing in tandem with technology be-

cause humans approach technology in the same way they approach religion. This could imply that religion is being identified within technology. He explains that human activities with technology, such as the effort to create life through genetic engineering and the quest for technology-mediated immortality, identify religious ideas in technology (Noble 1999, 4). Elaine Graham notes that, besides transhumanists' desire to employ technology for self-actualisation, technology has been used to realise metaphysical aspirations (Graham 2021, 17). The position that there is a strong relationship between religion/theology and science/technology is expressed in this study, pointing to the fact that technology has strived on many religious aspirations, translating them into everyday reality in a carnal realm. Ironically, despite the complementary roles technology plays with religion and the enormous benefit of technology in religious activities, many religious people treat it with suspicion, similar to how they treat sex. Indeed, there are many similarities between the two regarding socio-religious acceptance. Moreover, technology was a significant vehicle of the sexual revolution and has been used to enhance sexual pleasure from time immemorial (Danaher 2017, 1). For example, a semblance of dildo use is identified in the Upper Palaeolithic era, and sex tools have been part of religious rituals in some cultures. Also, the history of pornography is linked to the history of technological progress (Migotti & Wyatt 2017, 15). Therefore, religion has a strong relationship with both technology and sex, including sex tools use. The analogy of sex robots and the *houris* points to the unity of sex, religion and technology.

This chapter discusses transcendence through the analogies between technology and religion, under the idea that the two dimensions have more that unites them than divides them. The analogy of technology and religion is employed with the idea that religion is technical and technology is religious, encouraging the faith community's recognition of technology and enhancement in this technocultural era. Therefore, technology and religion are merged into one culture, and technological activities should be considered religious. Indeed, the *Homo sapiens* should be understood as religious *Techno sapiens*. Technology, therefore, signifies the eradication of the dichotomy between religion and secular, humanity and divinity, holy and profane and humans and the nonhuman since each component can be identified in the other. I proceed by discussing how technology has been expressed in this work, followed by analogies of the idea of transcendence in religion and technology. The concept of enhancement follows under the argument that it is a natural process with a theological history, but transhumanism is a philosophy thus, the two differ.

3.2. Technology as a Means of Transcendence

The availability of scientific knowledge and recent technological progress inspire the idea that the quality of human life may be enhanced. As a result, human conditions can be enriched with good health, peace, security and even longevity, reminiscing the Edenic bliss of transcendence (DeGrey & Rae 2007,

22). The assumption is partly deduced from the observation that life expectancy in technological environments such as urban centres is higher than the rural communities where technology is minimal. Furthermore, it is estimated that life expectancy has doubled over the centuries due to the rise of science and technology (Kranzberg 1977).

Such realisations inform the ideology that technology has more to offer humans to achieve their utmost desires, including the aspiration to transcend the prevailing human frailties. Instances can be adduced from medical enhancement technologies that penetrate through sensitive organs to support lives. For example, the current cognitive tools are expected to combine artificial intelligence with interface technology to reduce human suffering and promote human welfare. Furthermore, several thousands of people are still living because of the availability of certain technologies. People are being sustained with plastic hearts, others with spikes in their brains, besides those with technological-induced movements. Finally, we can talk about those sustained by life support systems to ensure their survival. Besides the numerous milestones with technology, there is a bright prospect for genetic manipulation that may enhance human mental and physical capacities, cure diseases, and slow the process of ageing while controlling moods and mental states (Moore 2008, 71–89).

The benefits of technology to humans are not recent and are traced beyond the Enlightenment period. Even in elementary forms, technology has made life easier for humanity from time immemorial and is seen more today as a premise for human transcendence than ever before. This is because the effects of technology in the contemporary period have been intense, especially in communication and information delivery. Besides information flow, almost every aspect of human life depends on technology today; communications technologies, satellite systems, religious evangelism etc. Because of the prominence of technology in human endeavours, some scholars such as Hefner and Drees (2009) see technology as a central part of human culture. Drees insists that technology is part and parcel of human culture because technology and culture are intertwined, and the history of technology is better understood as cultural history rather than invention history (Drees 2009, 13).

Hefner explains that technology is a critical product of culture, serving as the contemporary dominant driver of human society. He defines culture as learned and taught behaviour patterns, together with the symbol systems that contextualise and interpret human behaviour. The appearance of culture is directly correlated to the central nervous system, and the dramatic increase in the significance of culture in the human species is correlated with the equally dramatic development of the human brain (Hefner 1998, 175). Technology as a product of culture can influence humans in the same way as using fire and tool making are tied up with the emergence of the human species and their social structures (Drees 2009, 13). Hefnerian theory stipulates that technology represents a vocation of the created co-creators (*Homo sapiens*), an endeavour that draws them to the cyborg figure (Hefner 2004). However, the meaning and definition of

technology have evolved over the years, with many scholars attempting a definition.

The ancient Greece philosophers saw technology as either art of imitating nature or a technique to complete what nature cannot accomplish. For example, weaving and house-building represented imitations of swallows building their nests and spiders building their webs (Freeman 1948, 154). Robert S. Merrill (1972) was among the earliest scholars who provided a general definition of technology. In 1968, he indicated that "technology connotes the practical arts, bodies of skills, knowledge, and procedures for making, using, and doing a useful thing" (Merrill 1972, 246). Thus, skills, knowledge, and procedural application were significant emphases in his work. Although he emphasised the practicality of knowledge to arrive at a good result, he referred to such results as applicable. The good here means a product that benefits humans and society with minimal adverse effects. His focus was on the effect of technology on cultural evolution as a general descriptive term for human history (Merrill 1972, 240).

Technology is always connected with obtaining a specific result, resolving certain problems, completing certain tasks, using particular skills, employing knowledge, and exploiting assets. Knowledge and its application are vital to understanding technology (Wahab, Rose, & Osman 2017, 61). The physicist-theologian Ian Barbour (1923–2013) sees technology as applying organised knowledge to practical tasks by ordered systems of people and machines. Thus, the availability of scientific knowledge is proportionate to technological progress, and knowledge is acquired through nature and its source being divine for the betterment of all creation (Barbour 1993, 3).

In the year 2002, Rhonda G. Philip (2002) brought out what I consider one of the most straightforward definitions of technology, "the process by which ideas and concepts move from the laboratory to the marketplace" (Philip 2002, 299). The focus is on technology transfer as a vehicle for economic growth. Therefore, economic growth and civil society depend on technology, strategic application, and dissemination. It is evident in almost all civilisations that technological advancements translate directly into economic advancements. It is observed that, more often, technological progress facilitates human freedom, democracy, and civil rights. It improved living standards, health, and longer life expectancy. Melvin Kranzberg (2017), a prominent historian of technology identifying technology with the urban industrial society, explains how more freedom exists in urban centres than in rural ones because of technology. He explains that the urban setting provides a superb choice of occupations, friends, activities, and lifestyles with reduced working days. However, the challenge with Philip's definition has to do with the creation of technologies from laboratories. It is well known that for thousands of years, people created technologies outside laboratories, and technologies predate laboratories.

Though the meaning of technology is subjective because people's needs and desires are different, the application of knowledge (science) to solve problems can be identified in most of the definitions. Thus, technology is defined in this study as the accumulation and application of scientific knowledge to achieve

results that respond to humans' problems and facilitate wholesomeness. The wholesomeness here reflects Hefner's allusion to the symbiotic relationship with the other and the obligation to ensure the welfare of all creatures in the commonwealth of nature. Thus technology should be regarded as "co-creator technology" when it is wholesome to all biological agents and devoid of adverse effects on creatures (organisms) and their environment. I distinguish crude technology from co-creator technology in that while some technologies are critical for survival, others threaten life. Some technologies may be potentially harmful to the environment or may possess the potential to devastate society, such as nuclear weapons, the conceived robotic arsenals, laser and chemical weapons, including other weapons of mass destruction. Co-creator technology facilitates human freedom, recognition of universal kinship, and the potential to produce wholesomeness for humans and the nonhuman other.

I also distinguish "co-creator technologies" from crude technologies under the conviction that every technology that harms organisms, be it human or non-human, and the environment, whether it engenders wholesomeness to a section of earth's inhabitants or not, is a "crude" technology. Even though they might serve a good purpose, they are below expectation and contrary to the created order and evolutionary processes. They are referred to as "crude" in this work because of the need to "refine" them through further research. This is because, despite the ease they might provide, technologies have been a source of various environmental hazards and significant threats to life on earth as various nations continue to stockpile nuclear weapons with the continuous production and advancement of Hitech military technologies. The recent Russia-Ukraine war is an example of how humans who feel they are in superior positions can use available technology for destructive purposes. The current conditions of cities in the Donbas region in Ukraine, such as Severodonetsk and Lysychansk, not forgetting Mariupol, show how technological advancement could devastate civilisation and destroy lives and the environment within a twinkle of an eye. Barbour often refers to Hiroshima and Nagasaki when writing on technological devastations. The two cities have indelible marks of atomic bombs disparaging their environment decades after World War II (Barbour 1993, 8). Thus technology and enhancements are not all about human happiness and safety but also enhancing the humans' ability to destroy, including potentially terminating life on earth entirely.

We can say that technology is indispensable to *Homo sapiens*, it provides practical hope to the desire to transcend limits, heal and enhance. However, it comes with its challenges to humans and the environment. For example, through co-creator technologies, the global eradication of once devastating diseases such as smallpox became possible and has served as a resource for curbing pandemics such as the Covid–19. Indeed the ability of technology to support humanity became even more glaring during the height of the pandemic period when various technologies were employed to curb the onslaught on people and the global economy. Nevertheless, there are various hazards associated with technology in its crude forms. For example, radioactive waste disposal is an

example of environmental pollution that directly affects humans and the environment. The U.S.A. Environmental Protection Agency (E.P.A.) continues to struggle with the effort to prevent radiation released from one nuclear waste depository from causing over 1000 deaths within its lifespan of around 10000 years. It is estimated that it takes 10000 years for a typical level of radiation in reactor waste to fall and return to the level of the ore from which it was extracted so that it loses the ability to harm (Barbour 1993, 126, 127).

Although pollution abetment technologies can treat many industry effluents, unexpected, indirect, or delayed consequences often occur. The effect of carcinogens and fatalities may appear 25 years or more after the disaster. For example, the increasing death rate among shipyard workers in the early 1940s was not detected until the late 1960s. Toxic waste can contaminate groundwater decades after burial and cause health-related problems to humans and exterminate various organisms. Scientists for centuries did not anticipate the effect of fossil fuels and chlorofluorocarbons on the ozone layer till the effects became obvious. The threat from the ozone layer depletion is still imminent to lives and health, a recipe for mass extinction and climate eruptions associated with global warming. Technology has been used to promote soil erosion and massive deforestation that threaten the biological resources essential for human life (Barbour 1993, 8).

Although much advancement has been achieved with technology, human technology is still far from reaching the point of adequacy. Therefore, Manuel G. Doncel suggests that the current generation must build meaningfully on what antecedent bequeathed to them. "We are dependent upon our culture and upon the programs, past generations conceived and transmitted to us. This should remind us of our reciprocal obligation to future generations" (Doncel 2004, 795). Therefore, this dispensation is responsible for accumulating enough scientific and technical knowledge for posterity to build and address the various existential threats to the biosphere without causing extra harm to nature (Ballor 2013, 48).

3.3. Relationship between Transcendence, Technology and Religion

The relationship between the concept of transcendence, religion and technology is well documented with growing academic interest (Alexander 2020, 115). There are stories such as "Hindu gods and tools with moral agency, Christian values and Victorian shipbuilding, space exploration and views of the cosmos, Amish agricultural and communication technologies, and computing technologies and their effect on beliefs in human uniqueness" (Alexander 2020, 116–117). Both technology and religion function to transform humans and enable them to transcend their limits. Transcendence, therefore, is a crucial aspect of both realms, indicating a strong relationship between them (Luckmann 1990, 171). Jennifer Karns Alexander explains that communications and media stud-

ies scholars have been particularly attracted to the intricate relationship between technology and religion, concerning the historical role of media in missionary activities, including colonialism (Alexander 2020, 115–117).

This section discusses the relationship between the three key terms in this study: religion, transcendence and technology. It identifies transcendence as the binding force between religion and technology. Religion often facilitates the desire to go beyond the human limit through constructions of meanings, knowledge dissemination and inculcating faith in transcendental realities, the ultimate, the metaphysical (Neville 2018, 7). Therefore, religion inculcates the desire to transcend the biological limits into adherents who often aspire to become like the conceived beings seen as the ultimate (Neville 2018, 19).

Technology has been the application of tools through scientific processes and innovations to solve problems and ensure humans' transcendence of the given. Technology, like religion, has been a critical platform for humans' imagination. However, technology has gone beyond imagination to actualise various human dreams to transcend diverse human endeavours such as transportation, communication, medical delivery and others (Moore 2008, 71–89). Therefore, religion and technology are platforms of human transcendence, but the technology goes beyond visions into actualisation that has diminished human limits considerably. There are religious aspirations, as discussed below, that are realised and converted to everyday experience through technology. Graham points out the strong relationship between religion and technology, which threatens to deconstruct the dichotomy between the two due to transcendence that serves as a uniting force. "Clearly, then even in a supposedly secular age, expressions of religion continue to fuel our technological ambitions and our visions of the ends to which advanced technologies might transport us" (Graham 2021, 17). Thus it can be metaphorically inferred that technology might be the medium of the *eschaton*, the means to *al-Jannah*.

The longing to transcend the biological limit itself transcends religion and technology, but they are the primary platforms where it has been expressed. The craving to transcend can be identified through diverse human activities such as arts, music, and poetry, including storytelling. Religious practices such as meditations, witchcraft, magic, telepathy, astral travel and prayers are examples of how humans express the desire to transcend. Several parallels can be drawn from religious practices to technological innovations that point to the sense of fulfilling human desires expressed through religion. For example, the symbols of " a witch/wizard with flying brooms," and "magic mats" depict the desire to fly, which is realised through the emergence of aircraft. Mobile phones also express the desire to extend the self through communication and relate to religious practices such as telepathy. In order to discuss the relationship between technology, transcendence and religion, analogies are employed to explain how transcendence relates to religion and technology, pointing to the idea that religion is technological (Noble 1999, 4).

Technology is a significant means of human transcendence, going beyond what is given. Regarding technological transcendence, communication is one of

the major areas where humans have been extremely successful. The internet, for instance, has removed physical distance, transcended national boundaries, and transformed human interactions into the flow of information that creates new artificial environments and artificial intelligence. The development offers outstanding prospects for freedom of information and communication, nurturing the construction of a universal medium of exchange and interchange (Graham 2002, 162). The milestone in communication cannot be ignored if a fruitful analogy is to be drawn between technology and religion. Therefore, it is a viable area to start from due to its fruitfulness in this study. Progress in communication technology is not achieved in a vacuum but developed on the foundation laid by religion. This is not to say religion precedes technology rather, the two have always existed together. Furthermore, the desire to transcend communication is innate to humans, which religion might have nurtured through rituals. The dream of going beyond what is common to humans in terms of self-expression and communication could be identified through many human expressions. Examples of such expressions are hooting, whistling, shouting, screaming, and the use of basic technology to amplify sounds. Indeed archaeological findings reveal that the human ancestors used amplification instruments according to the discovery of the Neanderthal flute (Fink 1997, 3).

The effort to transcend communication has been expressed in music, dances, arts, sound aids, smokes etc. Religion appears to have nurtured the longing and provided the needed direction through meaning-making in worship. Prayer, music, dances, meditation, chanting, telepathy, arts and symbols, images, and fire as means of worship were existing mediums of transcending self-expressions and communications innate to humans. Two main religious activities that represent mobile communication are prayer and telepathy. While prayer served as mobile and personal interaction with ultimacy, telepathy served more as an interpersonal communication tool. Prayer makes it possible to communicate with divinity and the inanimates, while telepathy facilitates interactions among faith community members. However, telepathic messages are circulated freely from person to person (Baesler 2003, 9). Prayer theoretically provides the avenue to communicate with entities that transcend the biological and thus move the boundary beyond the reach of humans, constituting vertical transcendental communication. Telepathy, however, represents mobile communication with other humans though they are believed to be used for communicating with the nonhuman other such as animals, plants, and water bodies as well (Braude 1978, 271–287). The focus nevertheless remains on interhuman communications in this study to enable the drawing of analogies with technological means of communication. The first analogy discussed is between the mobile phone as a technological product and telepathy as a religious practice. Reaching out to the other through psychic and psychological means transcends the human limits, similar to mobile phones and can be understood in terms of transcendence. Moreover, telepathy and mobile phone have similar purposes and have served as a revolution in human communications and represent transcendence in communication, making them relevant to this study.

The mobile phone is one of the critical technologies in human history though initially, it was limited to the capacity to text and call. It has progressed into a sophisticated but handy communication tool, often called a smartphone (Bang et al. 2007, 1078). "Surveys have shown that people would rather eat less than give up their mobile phones. People who forget their phones at home will return to retrieve it but would elect to move on without their wallet" (Harris & Cooper 2019). Due to the close relationship between users and their mobile/smartphones, the U.S. Supreme Court has ruled that mobile phones are an integral part of humans' personality serving as part of the person (Harris & Cooper 2019).

Undoubtedly, smartphones are essential communication tools for humanity, easy to use, and many people feel incomplete without their phone due to the plethora of information resources it places just within their palm. The confidence for self-expression on various platforms bridges the communication gap providing an avenue to contribute to various discussions, including social issues (Harris & Cooper 2019). Smartphones, like telepathy, can keep people together at all times, enhancing bonding with like minds and facilitating sharing virtual warmth and shoulders to cry on in times of sorrow. With a mobile phone, it is possible to remain in touch and monitor each other's welfare and activities of interest. Its impact is visible in all aspects of human activities, such as health, social life, business, religion and education.

The current communication technology can be linked with the foundation laid by religion, and communicating through mental concentrations, now called telepathy, is analogue to mobile communications. Before the Star Trek series in the 1960s that inspired Motorola's engineer, Martin Cooper, to develop the first hand-held phone and before the advent of military wireless communication systems, telepathy was practised as a medium of communication by the faiths community in almost every religion. Telepathy has been a communication method for centuries but was accessible to a few spiritual adepts. In polytheism and animism, it has been involved the interactions with the inanimates and the nonhuman others besides humans. In monotheism, such as the Abrahamic faiths, telepathy is often identified with prophetism. Cooper invented the mobile phone with the idea of humans staying connected anytime, anywhere (Sharma 2016, 1). However, Buddha, who lived over 2000 years earlier, is recorded to have communicated frequently through psychic means called *Parachiththa Vijānana Gnāna*, which involves communication through the mind with entities close and far (Sedlmeier & Srinivas 2016).

Parachiththa Vijānana Gnāna has been an essential part of the meditation approach of Tibetan Buddhism (Lutz et al. 2007) and that of Burmese Theravada Buddhists (Grabovac et al. 2011). However, before Buddha, Hindus are reported to have practised various psychic and psychological communications derived from their holy texts (Phillips 2009, 39). Thus mobile forms of communication in religion predate that of technology. With regard to technology, Alexander Graham Bell's telephone was invented in 1876. In 1900, the first research began for a portable communication device, leading to Reginald Fessen-

den successfully inventing the first wireless telephone (Maclaurin 1950, 90). Nevertheless, unlike telepathy, he did not just transmit coded or psychic messages but a human voice with complete information that every eligible human can decipher. The invention was a radical tangible manifestation version of telepathy made available and accessible with little training required. Telepathy, on the other hand, demands years of training under a religious teacher in Buddism. Peter Sedlmeier and Kunchapudi Srinivas suggest that Hinduism likely acquired the data in their texts through years of practice by their forebearers (Sedlmeier & Srinivas 2016).

In 1881, five children of one Reverend Creery in Buxton of Derbyshire, England, challenged the subjective notion associated with communication without the use of the five senses as they mystified several investigators with their ability to communicate with each other in different locations and transmitting instructions impeccably. Furthermore, their communication through psychic energy and the repeatability of their activities in diverse environments resulted in the conclusion that there were neither trickly nor collusions, and their activities exceeded chance. Though, such conclusions were disputed, the phenomenal performance of the five children led to the formation of the Society of Psychical Research (Luckhurst 2002, 56).

The study of the phenomenon associated with the children gave birth to the term "telepathy" in 1882 attributed to psychologist Frederic William Henry Myers (1811–1851), who took a particular interest in studying the Creery children. He wrote extensively on the topic, which was later published into a book, *Human personality and its survival of bodily death* in 1903. He defined "telepathy" as the communication of any kind from one mind to another, independently of the recognised channels of sense. It is the transference of thoughts or feelings between individuals without using the five senses. The word telepathy was derived from the Greek words *tele* (distant) and *pathe* (experience) (Meyer 1903, 62). Myers, therefore, classifies all forms of communications through psychic or psychological means as telepathy. Thereby, religious practices such as *Parachiththa Vijānana Gnāna* are a form of telepathy. Myers believes everyone communicates through telepathic messages, often involuntarily and subconsciously. He infers that when one receives a communication from someone he/she has thought of could mean there has been a transfer of telepathic message. He discusses telepathy under his idea of a "subliminal self" where the human exists and acts physically and spiritually simultaneously, expounding mostly on vertical transcending ideas and attempting to provide scientific bases for his claims (Myers 1903, 96–108). By 1901 the telepathy idea had generated numerous disputes among physical scientists, which contributed to data gathering for research into the unconscious mind. The practice of telepathy as a means of communication is considered a pseudoscience because it is shrouded metaphysis. The concept, however, attracted the attention of prominent scholars such as Sigmund Freud, Thomas Huxley, Henry and William James, Mary Kingsley, Andrew Lang, Vernon Lee, W. T. Stead, and Oscar Wild (Luckhurst 2002, 276)

The scholarly discussions generated several scientific studies showing telepathy's potential applications. Since the nineteenth century, researchers have attempted to establish the empirical basis for inter-psychic communications. There are a couple of studies that compile such researches, prominent among them include Targ R.H. Puthoff (1976), who outlines the history of scientific inquiry into telepathy under "paranormal perception." The study surveys parapsychological research in the United States and Europe. He elaborates on the nature of a series of experiments in the Electronics and Bioengineering Laboratory of Stanford Research Institute to verify the possibilities of telepathic communications. The perceptual modality most extensively investigated is the ability of experienced subjects and inexperienced volunteers to view, by innate mental processes, remote geographical or technical targets such as laboratory apparatus, roads, buildings and roads.

Theima Moss and J.A. Gengerelli, (1967) researched into enhancing communication between therapists and their patients. Their studies explored the possibility for psychologists and psychiatrists to transmit a non-verbal message to a patient at a distance. They established in their study that telepathy occurs between two people isolated from each other when the transmitter is emotionally aroused and the receiver is lying down. Thus an experienced caregiver can potentially transmit a message to a patient without the ability to use the senses. Recent studies associated with telepathy explore the possibility of improving the ways to communicate with people with impairments. Telepathy is seen as having the potential to facilitate human-to-human communications when other means of communication are impossible (Iozzio 2014). Some researchers see telepathy to possess enormous possibilities for human extension, an expansion that transcends the limits of the human person.

Besides the Eastern religions, the Abrahamic religions seem to cherish the ability to relate information telepathically. Historically, individuals with such skills are accorded special offices and designated as seers, prophets, and men/women of God. In the Old Testament, Elisha is recorded as having the ability to relate all the war strategies of the King of Aram (Syria) to the leader of Israel (2 Kings 6:8-23). He could know when his disciple Gehazi chased after and took the gift from Naaman, the commander of the army of the Assyrians (Rhee 2000, 183). In the New Testament, there are records of passages like Matthew 12:25, Matthew 22:18, and Mark 2:8, where Jesus Christ perceived people's thoughts and got to know what was discussed secretly (Grindel 1967, 110–114).

Mobile communications and telepathy have many things in common, both intended to facilitate and transcend human interactions in a smart way. They both transfer information beyond the human limit and expound horizontal transcendence by facilitating interhuman relationships, making them critical tools for social interactions and communal developments. They are both products of research; telepathy is often a result of extensive training with religious data, and phones result from extensive scientific research. Mobile phones need invisible network connectivity, while telepathy requires invisible connectivity with

nature or the divine. Through technology, the masses are demonstrating what was once seen as qualities of the divine and participating in activities that were exclusive to spiritual adepts and the "holy" such as astral (soul) travel and telepathy. Though many Hindus believe everyone can engage in telepathy and astral projections, the practice remains subjective (Dharma 2016). The Hindus dream of the masses experiencing transcendence in a form such as astral travel by consciously exploring the unknown and known spheres becomes a reality through technology. Through technological means, people can monitor their homes, kids and other interests while in their offices in a more feasible way than astral projections. However, the technologies that enable humans to be "omnipresent" in some ways have existed in human culture as an idea. The concept has been transmitted from religion into technology. Another technological product that has dramatically supported humans is the robot. Robots have been part of humans' imaginations from time immemorial and have carried out diverse tasks for humans (Stephens & Heffernan 2016). There are notions about robots in religious eschatology that predates contemporary robots. The subsequent subsection constitutes an analogy of robots in religious eschatology.

3.3.1. *Mukhalladūn* and *Ghilmān* as Analogies of Robots

Robotics is probably one of the most significant and conspicuous human endeavours that demonstrate the desire for transcendence. The earliest invention of a mechanical device built to carry out a specific task was recorded around 3000 B.C. in Egyptian. It was a water clock which used human figurines to strike the hour bells. In 400 B.C., Archytus of Taremtum, who invented the pulley and the screw, produced a wooden pigeon that could fly (Reti & Turriano 1967, 55). In a religious Hellenic Egypt, there were also hydraulically operated statues that could speak, make gestures, and engage in prophecy in the second century B.C (Ayres 2021, 146–148). Although, robots have historically been religious as well as technological, they were often built technically for religious purposes as a physical means to transcend human limits. Robots serve as a relevant topic for this study because they represent the manifestation of human imagination and transcendence of human limits (Lee 2017, 5).

The idea of robots or robot-like automata is often traced to medieval times when there were imaginations of mechanisms that could perform human-like tasks. The period has a history with human-like figure automata, run by hidden mechanisms to create the impression of self-motion. They were employed to impress peasant worshippers in the church into believing in God, implying a supernatural force behind the motion (Reti & Turriano 1967, 55). Thus, they were early examples of technologies created for religious purposes. These human-like robots also engaged in various tasks. For instance, Italian-Spanish clockmaker, engineer and mathematician Juanelo Torriani (1500-1585) created a wooden robot that could fetch the Emperor's daily bread from the store in 1557 (Reti & Turriano 1967, 55). Torriani's work includes an automaton in the form of a monk driven by a key-wound spring. The key-wound propels the

monk to walk "in a square, striking his chest with his right arm, raising and lowering a small wooden cross and rosary in his left hand, turning and nodding his head, rolling his eyes, and mouthing silent obsequies" (Ayres 2021, 146).

The 19th century saw a new form of robotic creations, such as a talking doll and a steam-powered robot. During the 20th century, there was a revolution in robotics. One fascinating product was the reprogrammable robots such as "Unimate," invented by George C. Devol from Louisville, Kentucky, in the early 1950s. Despite the lustre, it struggled to make sales. Finally, in the late 1960s, Joseph Engleberger, businessman/engineer, acquired the patent of Devol's robot and modified it into industrial-specific robots under a new company called "Unimation." His successful transformation of Devol's idea into industrial robots earned him the designation as the "Father of Robotics" (Hagis 2003, 3).

The robotic industries continue to develop, with the production of anthropomorphic robots that can dance, kick a ball, speak and have intimacy with humans in the 21st century. The progressive development of facial recognition and mind prediction technologies comes with the possibility of robots predicting the needs of humans correctly and future nanotech tools further possessing the potential to transform robots radically. There are projections that robots will experience improvement and be more human-like and intelligent partners of humans in many endeavours. Technology's progress is expected to make it far easier for DIY custom robots over the next decades, with the community becoming a human-robot shared one (Nourbakhsh 2013, 13, 17, 27). The quest for perfect and submissive companions in robotics could easily translate into the Islamic aspiration of humans having many human-like servants (Rustomji 2017, 297). Islam is renowned for its colourful and vivid eschatological illustrations, lacking in other religions, including Christianity (Günther & Lawson, 2017). This subsection discusses two categories of Islamic eschatological images; servants and wives. The characteristics and features of these images are compared with those of evolving robots, representing religious icons with technological equivalence.

According to Islamic texts, one "posthuman" (Islamic saint) is expected to have at least eighty thousand servants besides seventy-two wives. These servants are in two main categories, *Mukhalladoon* described by *Hadith* as immortal and everlasting youth and *ghilmān* described as slave boys. These entities are to ensure ultimate comfort by providing the needs and wants of the saints in Paradise. Their activities and duties are recorded in later eschatological manuals, qur'anic verses, and the *Hadīth*. They are simultaneously living entities and objects (Rustomji 2017, 297–299). Like objects, their bodily element is part of the landscape of Paradise. However, they are animate and have social functions, acting as servant corps, they offer food, pour drinks, and keep the garden conducive to inhabitants. Unlike the vocal *houris*, *mukhalladūn* and *ghilmān* are more conservatively described as objects. They are the silent servants who keep the garden running perfectly like advanced forms of robots. The duties of

Mukhalladūn and *ghilmān* involve running various errands to provide enough leisure to the inhabitants of Paradise (Rustomji 2017, 297).

Similarly, robots are designed to reduce humans' tasks and increase leisure and are seen as objects. The word "robot" is derived from Czech for "worker." Karel Čapek (1890–1938), a Czech playwright, introduced the term in reference to an intelligent, artificially created person, which he called a "robot" (Hagis 2003, 3). Therefore, it can be said that robots generally are workers for humans, while *Mukhalladūn* and *ghilmān* are workers for the posthuman in Islamic eschatology. *Mukhalladūn* and *ghilmān* ideas could, therefore, serve as inspiration for the evolving robotic industry. The evolution of robotic technology with ever-improving A.I. provides the hope that soon, automated robots can keep people's households running without human supervision. This desire and image have been recorded in religious vision since the 7th century A.D. Currently, roboticists are producing robots with lightweight arms together with high-end cognition. These will make it easy for robots to perform certain duties that only humans can do, such as identifying a table, analysing its contents, and manoeuvring their hands to pick up a desired object from the table without knocking over any other items (Nourbakhsh 2013, 41). It means robots serving human beings with accuracy and precision is likely to become the order of the day, just like mobile phone use today.

There are predictions that robots of different shapes and sizes will fly in mid-air, walk in the streets and run errands for humans in decades to come (Nourbakhsh 2013, 43). They will be assisting humans in every endeavour and doing what humans cannot do as well as those things that pamper and relax them. Technology is thus disposed to manifesting the conceptual metaphysical frameworks of religion into the physical. It can be expected that with convergent technology and science, religious concepts such as Paradise, Heaven, *al-Jannah,* angels, *houris*, *jinn, mukhalladūn* and *ghilmān* are becoming visible and available in the current dispensation. Robots have become so close to their makers that, just like the ancient times when the gods had intimacy with their creations, humans are having intimate relationships with robots and dolls. The act signifies transcendence just as the love affairs with divine entities such as the goddesses in ancient religion indicated. Similarly, the *houri* in Islamic vision represents a possibility of transcendence, a bridge between humans and divinity. The "wall of hostility" appears to be breached, uniting the sacred and profane, the inanimate and animate through technology. The succeeding subsection looks at the meaning of sex toys in the context of transcendence.

3.3.2. Sex Robots as Human Transcendence

Robots have been a source of relief to humans by taking over many laborious works, reducing fatigue and increasing recreation periods. The sense of otherness attached to them has not changed yet, but like other technologies, they often get personified. Imploring the car or computer to work faster when one is in a hurry is a common human impulse. Their influence on humans' lives has been

so telling that they have penetrated an area considered private and reserved for human intimacy. While it is still unthinkable for some people to imagine sex with robots, relationships with robots have developed from subject-object relationships to passionately subject-subject ones for others (Lee 2017, 5). Sex robots represent human identification with the other, in the idea of otherself. Sexbots, therefore, point to human transcendence. Jason Lee (2017, 5) explains that the sexbot has been part of humans' imagination and represents transcendence. Therefore, the discussion of the sex robot is fruitful, representing a form of transcendence coupled with the fact that they can represent analogies of Islamic eschatological icons. There are, therefore, strong bases to discuss them in line with the topic of this study. Sex robots are technological, representing the mundane, the profane and the secular. On the other hand, the *houris* are divine, representing the sacred, the holy and the religious. Sexual acts have been seen as desecrating, defiling and sinful in many religious narratives. The divine stays away from sex and people polluted with sex. However, the *houri* concept challenges such notions and points to sex as holy and divine.

Sex robots, often called *sexbot*, have become a seminal product in the 21st century, but they have been around for a long time. In Japan, sex robots have a long evolutionary history with humans, beginning when humans created tools to mitigate their finitude. In ancient Japan, there was a metaphor of tools appropriating the owner's identity, which has served as the foundation of their robotic technology even today. Tools were commonly named after their owners because tools were believed to appropriate the owner's "spirit" and identity from the acquisition day. The "spirit" of tools, after merging with the owner's spirit, was supposed to live harmoniously with them. In the advent of robotics, when a robot closely serves the owner for years, the spirit of the robot harmonises with that of the owner and becomes an extension of the owner (Shields 2006, 151). Similar stories and myths about personification and animated crafts emphasise humans' relationships with their creation in many cultures. Examples are the Chinese myth of *Yan Shi*, who made a human-like automaton for strenuous labours, Jewish golems for battle, the Christian story of Albertus Magnus, who constructed an android to take up domestic tasks and many others (Lee 2017, 2).

Besides working relationships, some narratives craft the desire for intimacy with the nonhuman other in various narratives such as Greek mythology, Galatea. The story is told about an ivory sculpture that responded to the affection of its creator, Pygmalion, by transforming into a woman. Pygmalion married her after the deity Aphrodite blessed their love relationship (Lee 2017, 2). Humans' erotic connection to robots might be due to certain attractive robotic qualities lacking in humans, such as excellence, precision and accuracy of delivery, modesty, submission, uncomplaining and obedience. Sex robots represent a partner par excellent to many; they possess the looks of the idol or a preferred celebrity of the owner and thus provide a bridge between human imagination and reality. *Sexbots*, therefore, bridge the gap between fantasy and reality, bringing fulfilment to humans' "out-of-star" desires. "Out-of-star" here means fantasy desires that an individual cannot realise in real life.

Lee explains that sex robots have been at the heart of the human imagination since the emergence of culture (Lee 2017, 5). This could be because, first, humans have always desired uncomplaining and obliging companions. Second, many people have difficulties establishing a relationship with other people, thus robot serves as the missing link. Thirdly some men may find sex toys invaluable because they are a significant source of sexual satisfaction without the obligation to satisfy the partner. Thus sexbots may provide the avenue where sexual weaknesses and inabilities are concealed. Fourthly, some women may also find sex toys a source of ultimate satisfaction. A partner able to deliver beyond human sexual abilities. *Sexbots* are recorded to effectively serve as therapeutic aid that supports people in overcoming traumatic breakups. Some people have also benefited from using them to cope with seemingly inevitable social and sexual deprivations due to cognitive and physical impairments (Döring & Pöschl 2018, 53).

Therefore, Lee (2017, 5) describes sex robots as the transcendence of all beings because they transcend the transient subject-object boundary and enhance the concept of intimacy. Sex robots also represent humans' innate desire for intimacy with the nonhuman other and the longing to relate to their creation. They serve as a continuation of the Japanese idea of tools having the identity and spirit of their owner (Carpenter, 2017, 263). *Sexbots* can function as a platform of horizontal transcendence, where humans decentralise themselves and identify their essence in the nonhuman other. It provides the avenue to imagine and transcend human limits, similar to the religious concept of the *houri*.

The robot as a sex object spurs emotional, ethical, relational, and religious questions. The fear of displacing human love relations is paramount. *Sexbots*, are anthropomorphic social robots designed to serve as human sex partners. They are often distinguished from sex dolls by their embodied machines with varying levels of agency and intelligence. In addition, they are habitually designed with sexual stimulating skills (Carpenter, 2017, 261). *Sexbots* lack human qualities such as emotions, consciousness, and the ability to distinguish good from bad, yet they possess some vital qualities in high demand in human relationships, such as availability, total surrender, uncomplaining and reliability. Furthermore, many people point to the fact that robots are not capable of loving. Thus, sexual gratification derived from robot sex does not transcend the ability to connect through sharing a physical expression of love and the need for each other. Nevertheless, their semblance to humans and the disposition to mimic them seem to invoke fear. The problem is aggravated by the prospect of *sexbots* competing with humans. The fear appears to be the primary reason behind anti-sexbot organisations, such as the Campaign Against Sex Robots (CASR) (Herzfeld, 2017, 98).

CASR express the notion that *sexbots* are potentially harmful and will contribute to social inequality. They argue that *sexbots* reinforce the subjugation of one gender over the other similar to prostitution which provides the platform to objectify one human to satisfy another's fantasy. To them, *sexbots* are synonymous with prostitution, sounding the alarm bell that they can harm inter-human

relationships as their use becomes common. Indeed, Helena Horton (2016) predicts that more people will have sex with robots than humans by 2050. Therefore, CASR sees the need to stem the production of *sexbot* before it overtakes humans and overwhelms society. Furthermore, equating *sexbots* to prostitution places them in conflict with the Abrahamic religions, which are often suspicious of novel forms of sexual expressions (Danaher et al., 2017, 47–56).

Noreen Herzfeld (2017, 91) rightly suggests that it is easy to apply a Bible passage from a different context to proscribe the use of *sexbots* by Judaism and Christianity. A typical passage that can be used is, "You also took your beautiful jewels of my gold and of my silver, which I had given you, and made for yourself images of men, and with them played the whore" (Ezekiel 16:17). Besides extrapolations of scriptures, doctrines such as sex for procreation within matrimony and the *imago Dei* concept are the major setbacks to using *sexbots* by the faith community. Herzfeld believes that many ancient religions would not have problems with sex toys due to the display of gods and goddesses and divinised gender, which permitted sexual activities among the divine and between gods and humans. Such engagements were mainly for gratification rather than procreation (Herzfeld, 2017, 92). However, the focus here is not on the challenges associated with socio-religious problems with sex toys but on their significance in the transcendence discourse. The subsequent subsection examines the *houri* concept in Islamic eschatology and how it could relate to *sexbots*.

3.3.3. The *Houri* as Sexual Trascendence

After the 2001 attack on the World Trade Center on September 11, the aspect of the Islamic faith that talks about Muslim males being rewarded with multiple feminine beings in Paradise attracted the attention of the American media. A document in Muhammad Atta's suitcase encouraging his fellow hijackers to be expectant of a harem of *houris*, often referred to as Paradise virgins, as they embark on a suicidal *Jihad* raised many questions (Rustomji 2007, 79). The conception of the *houris* has been a conspicuous part of Islamic eschatology since the early stages of the faith. Nerina Rustomji states that the concept attracted several writings and debates between the seventh and 12th century AD (Rustomji 2010, 166–169). *Al-Jannah*, is a Paradise of pleasure, unlike the Christian version, it is gender-sensitive and serves as a revolution of the existing marriage contractual norms in Islam. In the Islamic marriage contract, men are supposed to accept the responsibility of caring for the woman while she also agrees to obey, respect him and grant him sexual access (Rustomji 2017, 266).

However, the situation in Paradise seems to relieve men from the responsibility to care for their wives while maintaining the associated benefits. Men are not obligated to take care of women, and women do not need to be cared for by men, thus sex becomes liberated and accessible for everyone. *Al-Jannah* is based on the concept of perfection and completion. The transformative nature of the landscape provides perfection without the taint of earthly limitations. Contrary to the Catholic aspiration that individuals' transformed bodies shall be

immune to sexual desire in Heaven, Islam expects a perfect sexual instinct similar to that of carnal humans. Conspicuous aspects of the garden are three celestial figures. While a *ḥouri* is to provide companionship, the other two figures serve the faithful by running errands and ensuring ultimate pleasure (Günther, 2017, 189). Islamic eschatology reflects both horizontal and vertical transcendence. Horizontal because the embodied nature of the human is recognised, bodily resurrection with enhanced and glorified nature. There are enhancement features, such as the ability of one saint to eat the food of one hundred people. They are sexually enhanced to take complete charge of their erection to the extent of having the ability to satisfy over 72 feminine figures sexually (Jarrar 2017, 28). It challenges the perception of sexual shame and genephobia while deconstructing the dichotomy between sex, holiness, spirituality and transcendence.

The vertical aspect has to do with the subjugation of the feminine figure, which creates images of eternal instrumentation of one gender by the other and the other-worldly flavours. However, the *houri* concept represents a desire for sexual transcendence through the metaphysical as opposed to technological *sexbot*. The similarities between the *houri* concept and *sexbot* point to the fact that the desire to transcend is an innate part of the human and has been expressed in various ways within religious and technological platforms. This subsection draws an analogy of the *houri* as a religious product and *sexbot* as a technological product to express the mutual enrichment of religion and technology as platforms for human imagination. Furthermore, the dichotomy between divinity and humanity is blurred just as *sexbots* breach that of humans and non-humans.

The descriptions of the *houri* in the holy texts provide clues to the perception of what is a "perfect female" in the redactors' culture. *Houris* are women with big pearly round wide eyes and big round breasts that do not drop, and their duty is to entertain the citizens of Paradise (Free 2007). The purified females also offer extraordinary warm embraces and sweet melodies to the saints (Günther, 2017, 189). Thus Islam presents a clear vision of a perfect human race and its environments. Ironically, what could are considered desecration in this world, such as nudity, sexual gratifications, and lust, including what could be described as an orgy, are sanctified as perfect for the posthuman. What is not acceptable now will be edifying in the future. The doctrine of the *houri* in Paradise defies the idea of sacred, scandalises sexual shame and the thesis that sees the sexual act as potentially sinful and desecrating. Furthermore, it challenges the idea of sex as a hindrance to spirituality and transcendence. Islamic eschatology can represent the unity of divinity and carnality, pointing to the sanctity of sexual expression. Thus sanctity is identified within sexuality rather than chastity.

The reality of the *ḥouri* is reinforced by the record of Prophet Muhammad's encounter with them in his celestial visitations to Paradise. According to one account, Mohammad records how Gabriel took him into Paradise and saw a "paradise virgin" (*ḥouri*), and he accosted her because she pleased him much

when he saw her (Günther, 2017, 189). Here Paradise is portrayed as a realm similar to the Earth, providing an image humans can identify as a continuation of earthly life. The Qur'an 40:8, states, "And, O our Sustainer, bring them into the gardens of perpetual bliss which Thou hast promised them, together with the righteous from among their forebears, and their spouses, and their offspring for, verily, Thou alone art almighty, truly wise" (Rustomji 2017, 295–297, 2003).

According to the qur'anic verse above, "posthuman" Muslims are reunited with their earthly spouses, who are made perfect and transformed into *houris* for a perfect reunion. A relationship that might have eluded humanity due to the fall is restored to the worthy worshipers. Men's wives are supplemented with other beauties, the *houris* (Porter 1974, 66). Thus there is a conceptual unity between the carnal and divine. The human and the posthuman are intricately related, unlike the posthuman in transhumanism, who is expected to lose everything that is human. Furthermore, the houri concept indicates that humans are connected with the divine. Thus divinity connects with the nonhuman other through humans. Additionally, *houris* share some theoretical characteristics with the current sex robots. For example, they seem to lack autonomy as *sexbots* do (Jarrar 2017, 277). They neither menstruate nor bear children, and they are ever obliging to the posthuman's whims (Rustomji 2017, 300).

Both *sexbots* and the *houris* represent the principles inherent in the created co-creator and the cyborg concepts. *Sexbots* represent humans' desire to unite with their creation, the nonhuman other, while the *houris* the divine with humans, which Christianity enshrines in the concept of incarnation. The *houris* are made up of divine beings and transformed human females. Human males are expected to engage in sexual interactions with divine entities and those who were once humans. The *houri* concept invokes the idea of technological Singularity, where humans merge with technology and become superintelligence (see pages 171–173). Similarly, in Islamic Paradise, humans merge with the divine and become *houris,* "superbeauties" with superhuman skills and attractions (Porter 1974, 65–68). Again, the common desire to transcend inherent in humans comes into play.

The Islamic vision is not without controversies, such as the patriarchal outlook, potential instrumentation of the feminine gender, the subjugation of the feminine figure as objects of masculine pleasure, and a projection of images of a kinky and orgy celestial ontological realm. The pictures painted by non-Muslim commentators have compared Islamic scholars to advance several explanations to deflate a picture of male chauvinism and sex orgy in the holy "posthuman" realm. One suggestion is that the picture of the *houris* and transformed women should be seen as a metaphor. There is also the view that *houri* should be understood as aesthetic since the function of the feminine figures is not limited to sex but to provide companionship, including soothing and melodious music (Rustomji 2017, 298). Christoph Luxenberg even attributes the word *houris* to white raisins. He expounded on the position that the Syrian translation of the Arabic word *houris* means "white raisins" of "crystal clarity" rather than

doe-eyed and ever-willing virgins. Luxenberg claims that the context clarifies that food and drink are being offered, not unsullied maidens (Warraq 2002).

The effort to allude to metaphoric meanings of the feminine roles in the Islamic "posthuman" narratives constitutes a sound apologetic. However, they are contrary to the general Muslim belief that the Qur'an is the literal word of God revealed to Prophet Muhammad through Angel Gabriel at the beginning of the seventh century. Such an understanding makes it difficult to metaphorically translate some texts within the Qur'an (Smock 2004). Furthermore, Luxenberg's claim is at odds with the traditional understanding of the *houri* because it has almost always been associated with beauty, songs and sex in the Eschatological Manuals, the Qur'an, which is the holy book of Islam and the Hadith; the traditions of the prophets. Qur'an 44:54 and 52:20 refer to *houris* as wives. They are companions according to chapters 37:48, 38:52, and 55:56. According to common Islamic tradition, *houris* are made up of saffron, musk, amber, and camphor, and their hair is raw silk. Therefore it is inconsistent with the suggestion of food or the allusion to aesthetic symbols. Furthermore, there are records of prophet Mohamad's interaction with *houris* during his celestial visitations. He is recorded to have promised an older woman that she would be transformed into a *houri* in Paradise (Rustomji 2017, 303).

Moreover, Encyclopaedia Britannica (2014) provides the following rendition of the *houris*;

> *Houri*, also spelled *huri*, Arabic *Ḥawrāʾ*, plural *Ḥūr*, in Islām, represents a beautiful maiden who awaits the devout Muslim in paradise. The Arabic word ḥawrāʾ signifies the contrast of the clear white of the eye to the blackness of the iris. There are numerous references to the *houri* in the Qurʾān describing them as "purified wives" and "spotless virgins." Tradition elaborated on the sensual image of the *houri* and defined some of her functions; on entering paradise, for example, the believer is presented with a large number of *houris*, with each of whom he may cohabit once for each day he has fasted in Ramaḍān and once for each good work he has performed.

The *houri* figure appears to have been understood as a celestial being endowed with extreme beauty and perfection, possessing hymen that perpetually repairs itself. It brings to mind the notion of a restorative afterlife without ageing and decay. Just like all religious writings, the cultural norms of the Islamic accounts come into play. They reflect the culture of the life of seventh-century Arabia. A prominent feature of the cultural landscape was the opulence of wealthy noblemen who regularly surrounded themselves with lavish feasts in lush private gardens in the richest oases. The nobles kept many servants, wives, and harem, often dressed in white or brightly coloured elegant robes and sometimes sang to entertain the guests. Most of Muhammad's early followers were poor and could not afford such a lifestyle, though the general population desired such extravagance (Anderson 2019). According to Mark Anderson (2019), the hope of a super-rich lifestyle in the afterlife for eternity had a potent appeal to the

masses. Besides the poor, the thought of maintaining their wealthy lifestyle in the afterlife might have been a strong motivation for the rich, who later submitted to Islam. The Qur'an description of "posthuman" Muslims feasting in the eternal realm amidst the richest of fabrics, furnishings, and rivers flowing with fresh water, which was exceedingly scarce in the region, together with milk, honey and wine might have served as a coping mechanism for many (Free 2007).

The *houri* notion has been understood primarily in a literal sense during the early days of Islam. The concept dominated the fantasy of Paradise, serving as the fascination of many mystics and ascetics. These holy people reported various encounters with *houris* in visions and dreams (Jarrar, et al 2009). The popularity of the concept is linked to the fact that virginity was highly valued in many cultures during the early centuries and viewed as representing purity. Men generally desired intimacies with virgins in Arabia. The dream of being surrounded by beautiful willing virgins was sufficient to keep people's faith alive (Jarrar 2017, 282). There are, however, Muslims who perceive the idea of preoccupation with women in Paradise as a distraction from the real joy. For example, the wife of Abd al-Wāḥid describes the preoccupation with *houris* in Paradise as unfortunate and wretched. In contrast, Abd al-Wāḥid, was one of the sensational *houris* preachers who fantasised about the image as part of his worship (Jarrar 2017, 283).

Other pertinent questions are associated with the Islamic account of the "posthuman," such as the expected reward for the Islamic female martyr; whether she also gets 72 virgins to marry or 72 men to herself. Muslim apologetics, Moosaa Richardson (2013), argues that sexual pleasure is prominent among the soul's desires; thus, the availability of sexual life in Paradise is not unusual. He believes that women are always associated with beauty and attractiveness. Thus, their roles in Paradise will not change but will be enhanced. He points to the fact that "in the art and literature of all societies, the woman is accepted as the focal point of grace and attractiveness; she has been the theme of romantic poems and other artistic works; the woman has usually been in the position of being demanded not demanding" (Richardson 2013). In this regard, a female martyr is not likely to receive any reward and status different from other saved females.

Richardson calls for Muslims to recognise that Islam is unique and its eschatology should not be analysed through the lenses of Christianity. He stresses that Islam, unlike other religions, is balanced and does not shy away from reality. Moreover, the reality is that humans are created with instincts and inclinations that will be enhanced but not removed in Paradise. He insists that while Allah forbids fornication, adultery, and homosexuality, he does not prohibit legal intercourse (Richardson 2013). Many scholars like Richardson project the gender roles in Islamic "posthuman," similar to Islamic culture. However, it is difficult to imagine how one community's ancient culture could be the statutory culture of a cosmic future paradise. Richardson also clearly ignores the blurring roles between the sexes in this contemporary era. Moreover, Islam as a global

faith has a monumental task of interpreting its holy text to reflect the current fluid social trends to keep the faith relevant to society. Religion, in general, should recognise the technological incursions in their aspirations because technology keeps fulfilling many future aspirations of religion.

3.3.4. Reconstruction of the Female Body through Transcendence: Technological Purified Females versus Celestial Purified Females

The female body has been identified with sex over the ages. It has been the subject of contempt and the source of pollution in various religions (Zazueta, 2016, 7). In religious context, animals can even be more sanctifying than human females. For example, animal blood is perceived as sacred but menstrual blood is a pollutant. There is the desire to do away with the "feminine impurities" while maintaining her body as an image of pleasure (Nead 2004, 5). Therefore, the images of the female body dominate advertisements and arts in many cultures. Lynda Nead bemoans that despite Europe being a citadel of civilisation, the female body remains the dominant object of arts (Nead 2004, 41). The desire for a better female body devoid of the "female herself" is identified in the imaginations of technological and religious narratives. Besides displaying the female's body parts, including nudity in arts and the various media, sexbots constitute another way of maintaining the female body while doing away with her through technology. In religion, the *houri* remains a potent image of the transformed female body devoid of herself. Here, technology and religion are employed to illustrate the desire for the transcended female body, a perfect body, always available to satisfy needs and wants. This subsection draws an analogy between the technological imagination of the perfect female body (*sexbot*) and that of religion (*houri*) already discussed above. The analogies are discussed in recognition that there is a race for a fully animated *sexbot*, but currently, they are limited to speaking, making gestures, and facial expressions. They come in different sizes, colours and personalities, exhibiting shyness and other human traits to suit diverse consumer preferences and are customisable to a certain degree (Döring & Pöschl 2018, 53). "Recent models of sex robots marketed on the Internet include Harmony (Realbotix), Roxxxy Gold and Rocky Gold (TrueCompanion), and Suzie Software and Harry Harddrive (Sex Bot Company)" (Döring & Pöschl 2018, 53).

Fully animated *sexbots* are likely to make the Islamic aspiration of purified spouses a reality, a foretaste of Paradise on Earth. The *houris* have several similarities with *sexbots,* as discussed in the preceding subdivision. For example, *sexbots* are ambiguous, and products of human imagination and future reality, and so is the *houri*. In a couple of centuries, the possibility of having singing celestial-like, romantic entities (Jarrar 2017, 272) may become a reality through fully animated *sexbots*. *Sexbots* can also be possessed by cyber persons and copied minds as technology progresses, besides being animated by machines or other forms of techniques (Moore 2020). The animation will likely transform

sexbot brothels into a "paradise-like" sex market similar to the descriptions in Islamic texts. Progress in technology is expected to make it possible for the dead to possess robots and continue relationships with their living partners as transcended beings similar to the *houri,* with transformed beauty and skills. According to the Hadith, 34; 172, "There is in Paradise a market wherein there will be no buying or selling, but will consist of men and women. When a man desires a beauty, he will have intercourse with them." Qur'an 2: 25, states, "and they will have therein purified spouses, and they will abide therein eternally" (Günther, 2017, 188).

The above description of a celestial sex market is synonymous with *sexbot* brothels, where people may go and select varieties of sexual figures for sensual gratification. The descriptions in the Qur'an and Hadith accounts invoke images of a location populated by a variety of feminine figures, where men can visit to admire, fantasise and engage in sexual intercourse with as many of them as they desire. Similarly, sex toy brothels display various robots for customers to select as many as available, depending on their financial abilities. Just like the paradisiac condition, people who wish could keep these robots as partners (wives). *Sexbots* represent technological purified spouses, an analogy of paradisic (celestial) purified spouses. For example, the *houris* do not urinate, defecate, menstruate and reproduce (Free 2007). They are transparent even to the marrow of their bones, eternally young, hairless except for the eyebrows and the head, they are obliging and beautiful. Islamic scholars such as Ibn Majah and Al-Suyuti have described them as having libidinous vaginas, with men enjoying an ever-erect penis capable of satisfying over 72 *houris* (Jarrar 2017, 28). *Sexbots* likewise do not menstruate, defecate, urinate, and do not give out the biological odour. They are ageless and barren. They do not resist sex from anyone and may soon be singing and embracing their owners with the ability to analyse the mood of their human partners. They can also be made transparent as knowledge explodes. Probably, the *sexbot* industries are not producing transparent sex toys because they might not have identified a market for it. However, technological progress can go a long way toward replicating the account of the Hadith and the Qur'an descriptions on the Earth. Like Islamic eschatology, female sexbots dominate and "no transgender sex robots are on the market" (Döring & Pöschl 2018, 53).

Besides *sexbots*, sexual transcending technologies such as silicone, plastic and prostheses phallus, penile implants, and inflatable penis erection support devices can delight those who wish to spend more time having sex with beauties. When it comes to super-erect phallus, the evolution of human sexuality due to the use of medications and technologies can make it possible to satisfy hundreds of feminine figures sexually. The fusion of technology into human sexuality is producing sexual evolution, which is likely to eliminate problems such as premature ejaculations in males and eradicate female conditions such as dyspareunia and anorgasmia while increasing pleasure and heightening orgasms. When it comes to women's pleasure, the ever-erect phallus is available in this contemporary period; technology provides a foretaste of

Paradise through varieties of hi-tech sexbots, including remote-controlled sex toys with vibrating artificial phallus beside the possibility of virtual indulgences.

Another area in which technology provides a solution is restorative hymen and perpetual virginity. The hymen, over the years, has been used in many cultures as a physical marker of sexual purity, innocence and virginity. Although hymenal presence and behaviour depend on diverse physiological conditions, the myth of hymen as a mark of virginity has been used to oppress females in many cultures (Schaffir 2020). Islamic eschatology invokes the idea that some men take pleasure in women's hymen, desiring to break virginities regularly. However, such privilege, believed to be possible only in the afterlife, is becoming a reality through technology with artificial virginity solutions (Kwakye 2020a, 2013). Technology makes it possible for every female and transwoman who wish to be a virgin again to become one as often as they desire. This would make it possible for women in a religious setting that demands proof of virginity to fulfil their socio-religious obligations and become *houri-like*, transcending the limitations of a single hymen. Paradoxically, religious adherents are the principal opposition to techno-sexual mediations. For example, the Islamic men aspiring for eschatological virgins are not comfortable with artificial virginity, and Egyptian politicians are leading the crusade for a product like Gigimo artificial hymen to be banned (Kwakye 2020a, 2013). Thus while technological progress provides solutions to a socio-religious problem, religious adherents reject such solutions as "unnatural."

3.3.5. Technology and Religious Visions: Reinvention of the Afterlife

The transcending hopes have not abated, and techno-fulfilments keep trending towards humans' ultimate desire, immortality. Through technological mediations, human lives are enhanced, diseases are cured, and life prolonged. The desire for immortality and resurrection of dead relations, which many religious traditions have provided a conceptual pathway into, are being reviewed technologically. This effort involves transforming the human body through prostheses, machines, or cyberspace. Thus the antique human aspiration might be achieved physically rather than metaphysically. A conspicuous feature of the techno "posthuman" is that the messy system that produces human organic waste will be eliminated (Manzocco 2019, 122, 238).

These by-products of the body provided the bases for attachments of impurity to the body in religion, requiring various purification rites to check them (Zazueta, 2016, 7). It is thus understandable that such a biological mess would not be tolerated in Paradise. Similarly, transhumanists advocate for a "posthuman" realm without such a biological mess. The conceptual similarities between religious visions and technologies have produced typologies of religious icons on Earth (Manzocco 2019, 122).

According to the Islamic narratives, the most important thing is that believers will live near God, be greeted by angels, and live forever with their eternal spouses. Another thing is that Paradise is considered to be limitless and vast. It is similar to the Biblical account in Revelation 21 that talks about "new Earth and new Heaven." Similarly, technology is providing a new world through a medium like virtual reality. Thus, it serves as a platform for realising the afterlife intrinsic to religious eschatology in general, reinforcing the notion that technology should be seen as human becoming rather than in terms of "otherness." First, there is the prospect of copying and reanimating the dead as cyber citizens who can interact with the world. Second, the availability of cyber beings such as sex avatars and technologies like sex robots presents the possibility for religious adherents to experience a foretaste of Paradise on earth. This is because a significant aspect of *al-Jannah* is a Paradise of pleasure in which sex is paramount (Jarrar 2017, 285), and the concept of *houris* involves images that invoke ideas of sex machines.

The *houris* are significant features of Paradise, and many Muslims look up to the fantasy of living with these beauties. The *houris* and future sexual ecstasy in the realm of peace saturate and dominate the Islamic Paradise. The *houri* concept may be realised through technology which would ensure gender parity, an embodied egalitarian Paradise where all genders are treated equally. Technology provides a medium of transformed sexual gratification devoid of gender-based objectification and instrumentation by ensuring respect for all human agencies irrespective of gender (Günther, 2017, 181).

Through technological mediations, one can immerse in a diverse cyber environment through fully immersive virtual reality devices as cyberspace is increasingly becoming a human sphere. The internet opens the way for desiring people to indulge in indiscriminate sexual activities with virtual *houris* all day long, including the shredding of hymens as enshrined in Islamic hopes. Therefore, it is possible to live in cyberspace with *houri-like* avatars in a virtual Paradise. Cyberspace can also serve as a platform to interact with the dead as "resurrected beings" or copied humans. Technological progress is expected to facilitate the possibility of members of the cyber society hiring other people's bodies or utilising robots to interact with the corporal world (Moravec 1988, 117–109). Thus, the hope is that, dead spouses who are copied and reanimated can reunite with their spouses corporally or cybernetically. Through the mediation of technology, humans and "posthuman" can have a platform to interact and decide to be *houris* or resurrected saints as described in Islamic texts.

The comparability of technologies with religious concepts endorses the position that copied persons, cyber beings, avatars, and sex robots can qualify as analogies of *houris* and purified spouses. Technology is not just making the re-invention of the afterlife possible. However, religious and superstitious concepts such as ghosts, souls, mermaids, fairies, astral bodies, witchcraft, demons, and angels are becoming realities. People not enthused about cyber interactions can also feel Paradise through sex robots that are becoming more human-like in tandem with technological progress.

3.4 The Meaning of Enhancement
in the Transcendence Discourse

Many people are suspicious of technology and its effect on humans. Thus the enhancement topic often raises mixed feelings in theology. Enhancement is a critical term in the transcendence discourse. It is a process of improvement that leads to transcendence, making it possible for the extension of limits. It is often associated with science and technology, however, the above analogies show that enhancement is an intense desire in religion. Cosmetic body modifications can be sensed from the *houri* concept concerning the ideal body; shape and size of the breast, the posture of the eyes, the texture of the voice and skin etc. The desire for longer life and males' ability to control penile erections, including exploring sexuality, are paramount human aspirations. Technology enhances human conditioning in various ways through knowledge applications and tool use. However, the concept of enhancement has often been misunderstood as transhumanism creating suspicion and rejection.

Enhancement is an effective medium for transcendence therefore, discussing enhancement is likely to enhance readers' ability to navigate through this study. It may help the reader to appreciate the intricacies associated with transcendence, such as the role played by religion and technology. Tool use is associated with enhancement, and both are linked with the evolution of the human brain, including the current human physiological features such as the bipedal posture, which are attributed to various interactions (Braccinia et al. 2010, 234). I have argued elsewhere that there have always been interactions between humans and tools because *Homo sapiens* have been employing tools as a means to an end throughout their evolutionary history. Such human interactions with tools or machines create a unique relationship between users and machines/tools (Kwakye 2020a, 208). Furthermore, tool use tends to influence organism and their physiology. For example, the body adjusts and assumes a particular posture that reflects the common and frequent task of engagement (Braccinia et al. 2010, 238).

Indeed several kinds of research find assimilation of tools into humans both perceptually and physically resulting in enhancements such as Atsushi et al. (1996) research conducted with trained macaque monkeys. The study observed that as the primates learned to use a rake to obtain distant objects, numerous bimodal neurones[10] appeared to code their hands' schema.[11] Furthermore, as they used the tools, their visual receptive fields were altered to include the entire length of the rake. These findings may represent the neural correlates of the modified schema of the hand in which the tool was incorporated. Therefore, the presence of the body schemata is the basis to suggest that there was perceptual

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[10]   Bimodal neurones combine sensory input from two different senses, such as touch and sight. It is distinguished from a unimodal neuron, which responds to one sense.
[11]   Schema is derived from the brain processes and the sensory system that keeps track of limb positions, which plays a role in various actions with the limbs.

incorporation of tools and hands, which enhances the organism. Other notable studies are that of Botvinick and Cohen (1998) and Carlson et al. (2010). Both studies used humans as subjects of the study to ascertain the possibility of tools assimilating into the human body and mind. The results of the studies affirmed that external objects could indeed be assimilated into an extended self. However, they also observed that the extended body sense is highly plastic and that physical contact with the object appears to be essential for this assimilation to occur (Kwakye 2020a, 2008). Therefore, tool use strongly influences human evolution, enhancing and shaping them to their current state.

Furthermore, some devices are so integral to some people that such persons become defective without the tools. In the twenty-first century, it is extremely difficult for humans to function without tools like mobile phones, the internet, computers etc. The internet has become the prosthesis of amputees and the cane of the blind for many people. An example can be drawn from a simple device like mobile phones, which enhance and alter the users' sense of being by connecting them with people far away and near. When employed as a navigational device, they provide what Andrea Vicini and Agnes M. Brazal describe as "God's eye view of the digital map" (Vicini & Brazal 2015, 150). Thus the notion of enhancement is associated with tool use and its influence on the organism. However, enhancement in Christian theology, in particular, has often been misunderstood as transhumanism. The perception worsens with transhumanists' projection of technology as a saviour. While such responses are expected, they make it difficult to grapple with the holistic dynamism of enhancement theologically because the debate is often approached already eschewed. For example, in 2010, the Conference of European Churches (CEC) Discussion Document on Human Enhancement, prepared by its Working Group on Bioethics and Biotechnology, defined enhancement thus; "Human Enhancement' is about trying to make changes to minds and bodies–characteristics, abilities, emotions and capacities–beyond what we regard today as normal" (CEC 2010). This definition places the notion of enhancement in terms of transhumanism. Though the CEC (2010) paper discussed the general aspect of enhancement, the enhancement in the colours of transhumanism conspicuously appears to be the dominant theme in the paper. Transhumanism is a philosophy that differs from enhancement, but the concept is the fulcrum of transhumanist philosophies. The changes described in the definition of the CEC document are purely transhumanist aspirations rather than enhancement.

The term enhancement is characterised by broad meaning due to the diverse ways of its application. It has often been described as increasing the value of a person's life, but every definition has its unique challenges. Over the years, the synthesis of technology and humans has been noted to enhance performance or abilities. It is often understood as providing abilities that go beyond what is common to humans. Such a situation is often seen as an enhancement. Maxwell J. Mehlman, Professor of Law and Bioethics, defines "a biomedical enhancement as a substance that raises a person up by improving performance, appearance, or capability (Mehlman 2009, 6). For Mehlman, "an enhancement is an

improvement if the enhanced person thinks it is one" (Mehlman 2009, 3) it is only the enhanced person who can identify it. He explains that enhancement is not for preventing, treating, or mitigating the effects of a disorder but instead to improve the person. Julian Savulescu (2006), an Oxford bioethicist and philosopher, attributes enhancement to "any change in the biology or psychology of a person which increases species-typical normal functioning above some statistically defined level" (Moore 2008, xi). This definition which appears to be rather broad, shows that the definition of the CEC is just an aspect of enhancement. Savulescu definition implies that anything which elevates a human's ability constitutes enhancement, including training in a discipline to gain an advantage over several people who have not received such training. Under such a definition, all world champions would be considered enhanced. Besides that, certain types of mutations could then be attributed to enhancement because of their ability to increase people's capacities over others (Moore 2008, xi).

Enhancement is adding, integrating, or inducing an organism's abilities that enable it to overcome prevailing adverse conditions and extend its limits. In regards exclusively to humans, enhancement implies humans' response to environmental conditions through the utility of available knowledge and tools to ensure the perpetuation of the human race and reduce biological limits. The use of "organism" in the first instance agrees with posthumanism that other creatures such as animals, plants, and bacteria could be enhanced besides humans. Therefore, the value and goal of enhancement lie in overcoming adverse conditions and existential threats of an individual, group, community, or race while reducing limits. Enhancing the human condition is necessary because it improves the ability to overcome natural selection processes and facilitate a wholesome and fulfilling life. This view posits that every human being is enhanced in one way or the other, at least cognitively, through education. In addition, various activities such as medications, good hygiene, exercises, secured accommodation, and clothing often taken for granted are forms of enhancement. Hence, my view agrees with that of Denis Alexander (2009, 1), a Cambridge biomedical researcher who projects enhancement as encompassing daily activities. We can talk about enhancing activities such as vaccination, incorporation of prosthetic devices, contact lenses, hip replacements, cochlear implants, etc. Enhancement and self-enhancement are used in this work to indicate the same process.

Alexander groups enhancements into three main categories, the trivial, the conventional, and the transhumanist. The 'trivial' category includes vaccination and contact lenses. He uses the term 'trivial' in relation to their ethical and theological implication but not in a relationship with their function or relevance. The 'conventional' enhancements are in the category of cosmetic surgery, the non-therapeutic use of drugs for cognitive enhancement, and prosthetic devices used by amputees that enhance their athletic prowess beyond their non-disabled peers. Finally, transhumanist places enhancement technologies at the centre of explicit philosophical beliefs. Transhumanists aim to develop enhancements by using existing and emerging technologies beyond the "conventional," which

leads to the "posthuman" (Alexander 2009, 2). Thus it is evident that CEC's definition is under transhumanism and fails to capture the broader framework of the concept.

Cognitive enhancements span the complete gamut of categories, from the 'trivial' to the distinctive transhumanist, and are already a present-day reality, at least as far as drugs are concerned. For example, Ritalin and Adderall are prescribed mainly to treat attention deficit hyperactivity disorder (ADHD), but research shows they are widely used by students studying for exams for cognitive enhancement. Based on such possibilities, transhumanists aspire for radical cognitive enhancements that make it possible to alter memory. There are medications available currently that attempt to alter unwanted memories. The effort to alter memory data can make it impossible for the "posthuman" to identify with humans once they are transformed. Presently production of drugs in this regard is an active goal of many drug companies, including Memory Pharmaceuticals (Hall 2003, 54-57).

Thus enhancement is a natural process that depends on available technology, and it is distinctive from transhumanism. Enhancement is scientifically plausible and theologically consistent because there are many ethical reasons to support enhancement. Among the numerous benefits, enhancement is crucial to theology in administering empathy. Because enhancement facilitates the possibility to assist disabled people more efficiently, thereby increasing the human capacity to empathise, reducing the wasting of natural resources, and many others. Transhumanism is often perceived in the discussions of enhancements because it is the primary advocacy for technology. They dream of technological progress that can sustain radical enhancement leading to the emergence of the "posthuman." The philosophy of transhumanism is, however, not new. It is a way of aspiring to provide a solution for problems associated with life. Throughout history, many people have dreamed of ways to address life's problems. Some people have translated their aspirations into working toward solutions such as the development of fire (Jaj 2016, 2), clothes (Sanders et al. 2021), the wheel (Bulliet 2016, 2), and many other things to ease the burdens of life.

Scientific and industrial revolutions accelerated such a trajectory, and continued progress seems likely (Winyard 2019). Transhumanists believe that the pursuit of progress is fundamental to human nature. Hence, it is only natural to seek scientific solutions to life's problems such as health, ageing and death (Bostrom 2005b, 4). While enhancement technologies are integral to their advocacy, enhancement is not transhumanism. But rather a way of life that allows humans to overcome hostile conditions through the application of scientific knowledge. Enhancement corresponds to horizontal transcendence but transhumanism advocates for vertical transcendence.

Enhancements enable organisms to protect and perpetuate their species. For example, in nonhumans, it may be in the form of the secretion of repelling chemicals or the release of various defensive mechanisms, including tool use (Giray et al 2000, 46). Similarly, human hormones facilitate coping mechanisms that support the body to adjust to various conditions to facilitate enhancements

(Wright et al. 2012, 47). In the course of evolution, different species have employed the use of tools in quite advanced ways. For example, scientists have recorded species such as chimpanzees, birds, and otters, employing rudimentary technologies (Drees 2009, 43). Thus, enhancement and technology should be considered entirely natural processes that facilitate horizontal transcendence.

Such understanding will prevent theologians from treating enhancement as a transhumanist ideology. Because of the nature of enhancement notions that pervaded the CEC conference discussions, the conclusion was that the internal logic of enhancement is its undoing because one would have no reason to be satisfied with whatever enhancements one made to oneself. They explain that physical immortality can be as devoid of hope and meaning as life in abject poverty. The perception of enhancement projected in the paper has been the general understanding of enhancement in theology, and it reflects in the work of many theologians such as Brent Waters (2011; 2006), Ronald Cole-Turner (2015), and Michael Burdett & Victoria Lorrimar (2018). Enhancement is not about immortality but systematic processes that facilitate the perpetuation of species.

Looking at the enhancement through the lenses of transhumanism has magnified the notion that self-enhancement is contrary to Biblical tenets and synonymous with vanity, pride, lust, greed, and the likes. Theologians such as Jochen E Gebauer, Constantine Sedikides, and Alexandra Schrade (2017), in their article, "Christian Self-enhancement," erroneously stated that Scripture refers to self-enhancement as a worldly temptation that stands in the way of God's intentions for humanity. They posit that, for example, the Story of Lucifer in the Old Testament (Isaiah 14:12) "describes how the archangel succumbed to the lure of vanity and pride, which is why God reportedly condemned him to lead a miserable existence in hell. Likewise, in the New Testament, it is written that 'For all that is in the world — the lust of the flesh, and the lust of the eyes, and the pride of life — is not of the Father, but is of the world (1 John 2:16)" (Gebauer, Sedikides, & Schrade 2017, 788).

Various statements similar to the above presumably help believers "resist the enticement of self-enhancement." However, a close look at the passage reveals that the Bible does not condemn enhancement. Rather the hubris of wanting to be God and setting technology as a saviour are the triggers that contradict Scripture. It is obvious that neither the current technological culture nor the enhancement process is synonymous with vanity, pride, lust, greed, and the likes. In fact, without self-enhancement, life would become impossible for a high proportion of people in what Hefner describes as "technological civilisation" (Hefner 1998, 177). Indeed, technology and enhancement are natural to the *Homo sapiens*. It is estimated that at least 50% of people now living would die if technological overlay were drastically reduced (Greenberg, 2008, 49).

Enhancement is scientifically and theologically critical to human survival because, without it, *Homo sapiens* would be extinct and unable to embark on their co-creator duties. Furthermore, the Bible fully supports enhancing the *imago Dei*. An example can be drawn from Genesis 3:21, where the first couple

realised the need for enhancement, probably against unfriendly weather, but failed to synthesise a more durable product. The Lord intervenes with a better form of covering to enhance them. Biggins Sean (2019, 188), discussing enhancement in the perspective of the Catholic faith, referred to the Genesis 3:21 event as a description of the "primary and divinely instigated instance of a customary enhancement of the body, namely the Lord God making tunics of skin for the fallen humans after they failed to clothe themselves with anything more durable than fig leaves" (Sean 2019, 188).

Therefore, theological understating of enhancement can be traced biblically to Eden; God provides a tunic to protect (enhance) humans from the hostile environment as their status in relationship with nature changed from absolute harmony to ambiguity. Genesis's account relates God's approval of enhancement and active participation in the humans' need to build their niche. The second reason identified for the ambivalence towards enhancement is the belief that humans have no role in the longevity of life. Research shows that many Christians believe that God ultimately decides the longevity of each individual's life and well-being (Bainbridge 2005, 97). However, such understanding is inconsistent with the theological basis of the relationship between God and humans. In the creation account, for instance, God gave the first couple the right to choose eternal and temporal life. Also, passages such as Deuteronomy 30:15–20 demonstrate how God has always left vital choices such as blessing and curses, life and death, poverty and wealth in the hands of humans. Furthermore, scientific findings attest that the availability of scientific knowledge, technology, and health resources reduces mortality rates and increases life expectancy, including quality of life (Fukuyama 2002, 28). Another reason for the pessimistic outlook towards enhancement is that commentators frequently emphasise the negative assessment of novel technologies and highlight fallouts such as side effects. The perception worsens with transhumanists' projection of technology as a saviour (McNamee & Edwards 2006). While such responses are expected, they make it difficult to grapple with the holistic dynamism of enhancement theologically.

3.5. Theological Meaning of Enhancement

Charity, benevolence and empathy for the other are hallmarks of Christianity. Christ Jesus, the Lord, was noted for various good deeds such as making the crippled walk, giving eyes to the blind and feeding multitudes. The apostles and early disciples continued the good works in their ministries through the grace of the Holy Spirit. They addressed thousands of people during the Pentecost experience in the Upper room when they were baptised with tongues of fire which marked the beginning of their ministry. The disabled, the blind, and the terminally ill were healed by enhancing their bodies through the name of Jesus in a period when technological interventions were minimal (O'Toole 1983, 245–248). Miracles, healing and the spectacular are an integral part of the Church. They have been witnessed throughout the history of the Christian ministry in various forms. In the 21st century, Miracles continue to characterise the activi-

ties of the Church. However, there has been a dramatic shift from divine-instigated miracles to that of technology. Paradoxically, many Christians remain suspicious of technology and enhancement despite its effectiveness in the activities of the Church.

The healings associated with Jesus' ministry and the apostles included the healed individuals overcoming their limitations and weaknesses, thus can represent analogies of enhancements. The tradition of miracles, healing and providing for the needy is supposed to characterise the gospel message till the *Parousia*. The show of empathy demonstrates God's immanence, love, mercy, faithfulness, grace and care. In this contemporary period, like any other, the values of doing good remain paramount in Christianity. The Church, which has become institutionalised from the apostolic movement, continues to administer such goodness using technology in response to the technocultural milieu. For instance, thousands of walkers and wheelchairs are donated each year by the Church and parachurch organisations such as Joni and Friends and Free Wheelchair Mission to people with Down syndrome, the terminally ill, the disabled and other incapacitated people. These ministries make it possible to live whole and satisfying life for the disabled that could not afford it themselves. Thus many people in developing countries are experiencing miracles through the love of Christ even today. Christian organisations such as Catholic relief services provide aid and support for medical interventions to reduce suffering and save lives without dictating the medical procedures. Christianity has always emphasised its social roles begun by Jesus, from which He gave the commandment to love our neighbours (Allsopp 1984, 105). Christian missionaries have made a concerted attempt to improve the economic and social conditions of the downtrodden by establishing hospitals, schools and other social interventions recognised widely (Ellwood 1913, 307). These efforts are part of an enhancement that extends the limits of the disabled, the poor, and the sick and increase longevity.

While the notion that God determines the number of our days persists, the faithful are encouraged to help the needy and oppressed. This gesture helps to save those who otherwise seemed destined to die. Similarly, medical enhancement is an everyday reality affecting almost every part of the body, including the most sensitive parts, such as the heart and brain. Indeed a process such as inserting a pacemaker into the heart to keep it in rhythm is a routine medical practice, including implanting long electrical needles into human brains for the treatment of diseases such as Parkinson's. As a result, thousands of patients now have spikes in their brains wired to electrical stimulators that are usually slipped just beneath the skin of the chests. Besides Parkinson's disease, insertions into the brains have also been used to control symptoms of depression, obsessive-compulsive disorder, Tourette's syndrome, chronic pain, and cluster headache (Moore 2008, 86). Regarding technology in human hearts, in 2015, there were about three million people worldwide with pacemakers, and each year, approximately 600,000 pacemakers are implanted (Ghojazadeh, 2015, 281). In addition, people control computers and other household appliances by

thinking via sets of electrodes attached to their skulls (Stetka 2021). These medical interventions extend and thus enhance the patient, making enhancement inevitable, a process that each one participates in consciously or otherwise.

Most often, it can be tempting for Christians to think that medical practice was lacking in biblical times due to the numerous account of miraculous healings. However, plant medicines usually synthesised by crushing to enable a mixture with other ingredients were common. For example, in the book of Ezekiel 47:12, the Bible explicitly points to plants as a source of therapeutic medicines. Furthermore, 2 Kings 20: 1–10, provides an account of how herbal medicine was synthesised to heal a terminally ill king. The passage outlines how divine and human efforts collaborated to provide relief to humans. After proclaiming God's decision to revoke the king's death sentence, the Prophet Isaiah asked for the application of a specific mixture of herbs referred to as "a poultice of figs" as medication to facilitate restoration. The Fig (*Ficus carica*) tree is one of the five specific plants mentioned explicitly in the Bible as a medicinal plant. The other four are Mandrake (*Mandragora officinarum*), Nard (*Nardostachys jatamansi*), "Balm of Gilead" (*Commiphora gileadensis*) and Hyssop (*Origanum syriacum*). However, studies show that about 264 identified plant species were synthesised with 20 different species of animals and 19 kinds of minerals in the production of medicine for various remedies in the Biblical period (Lev & Amar 2000). A similar pattern may be found in other cultures. Thus, utilising nature to produce drugs for therapeutic ends is scriptural, but it was in a rudimental form of synthesis.

Technological progress has transformed the process of synthesising organic products into drugs. Drug manufacturing has developed and diversified from derivations from naturally occurring molecules found in sources such as plants, bacteria, and fungi into complete chemical synthesis (Corey et al. 2007). However, the chemical drugs are based on organic molecule patterns serving as the framework for producing advanced medications, but they are not organic (Nicolaou & Montagnon 2008). These synthetic medications are the current leading curative and catalyst supporting humans' health and wellbeing despite being inorganic but highly synthesised chemicals through technology. They are compliant and accepted by human bodies as a restoration mechanism. If the human body accepts organic and inorganic molecules, then the thesis that draws dichotomies between nature and technology is problematic. Since organic connections are identified among all living things forming a network that intrinsically relates to the physicochemical system of the earth, which is in turn set within the cosmic processes of the universe. Humans could be viewed as open-ended and thus fully open to scientific and technological modifications (Hefner 1970, 43).

According to evolutionary science, life began as a single R.N.A. molecule (Combs & Krippner 1999; Stanley and Kolter 2012, 4). It implies that humans were created from that evolved strand that constitutes all nature. The implication is that everything in nature can be processed to enhance human nature subject to the right knowledge and technology. This is because humans are subject

to the addition and subtraction of matter (Rahner 1972, 18). Life intervention strategies have been part of the human culture and are rooted in the Scripture. For example, the monarch, Hezekiah, continued to live when God had determined his death earlier. He received medication as part of the restoration process. According to N.T. records, Jesus healed the sick, raised the dead and prevented a convict under capital punishment from being executed. It is therefore evident that human activities influence their longevity.

More fruitful theological discussions on enhancements should distinguish it from the philosophy of transhumanism. This is because, while the former is an everyday process, the latter is a speculative philosophy based on possible scientific and technological possibilities. Humans experience enhancement through medicine and allied technologies such as improved public health measures, vaccination, antibiotics, antipsychotics and antidepressants, sophisticated surgical procedures, and revolutions in obstetric care. These activities have led to enormous decreases in maternal, prenatal, and neonatal mortality rates (Jones 2010, 116). Enhancement is part of everyday activities, including eating a balanced diet to enhance the immune system, wearing warm clothing against cold weather, exercising the body to maintain fitness, and living in a secured accommodation. These activities involve science and technology, no matter how rudimentary they might seem.

Enhancement without transhumanists' colouring enjoys acceptance from a wide range of people. A study by Debra Whitman et al. (2018) has shown that restorative technologies, including even critical ones, receive near-universal approval from the American public. However, they reject interventions that are transhumanist in nature. Around 95% of respondents support physical and 88% cognitive restorative applications, but approval for the human upgrade was around 35%. Such responses would be similar among Christians when enough education is given, and a clear distinction is made between enhancement and transhumanism. After all, everyone wants diseases to be conquered and lives saved. Moreover, scriptural records show how humans have received such interventions with gratitude. Finally, Jesus demonstrated that diseases and untimely deaths are not from God.

Technology and enhancement strategies have been with humans from time immemorial, and scientific data show their crucial roles in human evolution. Biblically, there have been records of technological enhancements through health delivery and divine interventions. Enhancement in health delivery is evolving, but they remain biblically compliant, unlike transhumanism which projects technology as a saviour. However, it should be noted that human technology is just like humans. They often come with serious flaws and might cause harm to an aspect of the body while enhancing and restoring health. Nonetheless, through enhancement, humanity is becoming more effective in handling the affairs of life. The improved transportations, such as the ability to fly, including the free flow of communication, the ability to explore the world in the comfort of homes and create hybrids species, establish humans' status as the *imago Dei,* the co-creators of God.

Therefore, enhancement should be understood in theology as a possible process for transcending to facilitate attaining the complete status of the *imago Dei*. Ted Peters explaining the relationship between likeness and image of God refers to Irenaeus of Lyon (130–202 AD), who indicated that complete human likeness of God is eschatological; nonetheless, humans already possess the divine image (Peters 2018, 353). Therefore, it is understandable that while the likeness is eschatological, the image is a present-day reality that becomes sharper through various enhancements resulting from technological mediations that transcend human limits. The use of technology in advanced ways is a major distinguishing factor between humans and nonhumans, providing humans with the ability to affect other species by enhancing their survival and existential advantage. It should be noted that through science and technology, qualities that were centuries ago ascribed to deities are now integral to mortals in this century. For example, mobile phones enhance and alter the user's sense of being by connecting with people far away and near. When employed as a navigation device, they provide what Andrea Vicini describes as "God's eye view of the digital map" (Vicini & Brazal 2015, 149, 150).

It should be acknowledged that human technology is becoming more advanced and effective than humans' abilities. When embodied, humans become more effective and efficient. For example, artificial intelligence (A.I.) has proven to hold magnificent prospects for cognitive productivity when it comes to intelligence. During research projects like Project Cyborg 2001 events, the chess champion Garry Kasparov said there is no way a computer could come close to him in intelligence but was beaten by the computer program Deep Blue (Jackelén 2002, 291). Moreover, when it comes to brute strength, robots far surpass humans. Thus, incorporating tools and chemicals into human beings to cure and empower the body beyond its capacity should be considered a natural process. The process enhances the human co-creators for uttermost performance towards fully realising their status as the image of God.

Max Weber's statement on Christian trinitarianism as a reminiscence of Roman polytheism, providing humans with the avenue in the divine pantheon, is worth noting. "The incarnation of God presented men with the opportunity to participate significantly in God" (Weber 1963, 138). As co-creators, humans play their part in applying technologies, including genetic research that makes it possible to select the gender and other traits of the next generation through genetic testing of embryos from in-vitro fertilisation. Genetic technology also provides potential modifications that eliminate diseases such as cancers, making it possible to maintain a natural human state of health. However, humans' roles as co-creators have raised other ethical questions regarding decisions on new lives in eugenics, an application of technology that aims to perfect human biological and psychic natures. The eugenic procedure involves genetic testing of the embryos and abortions to prevent the birth of disabled children (Thompson 2012, 59). Technology is thus raising the stakes, and it is not deleting sin. Instead, it is making it possible to sin in a grander manner.

Therefore technologies are being employed for therapeutic purposes and perfecting the human race, which involves denying anticipated disabled children the right to live due to lack of medical intervention to correct their disabilities. Ironically, there are people who, after living out their lives, want to be preserved and resuscitated when a technological intervention could support them to live again. Thus, some people try to live forever through technology while others are being prevented from experiencing life through the same means. Eugenic is an example of the application of technology in a crude way, constituting vertical transcendence. Furthermore, it has become apparent that humans are making decisions that were once the preserve of the gods. It does not divinise the co-creator but represents increased human participation in God's creation as *imago Dei* whiles the likeness tallies. It represents horizontal transcendence, deepened knowledge of human nature, and their environment facilitates identification with the other. Thus theologians' constant awareness of technological progress is justified and needed to suggest ways of reducing misapplications of "technological virtues". Christians should get involved in technology and pray for the multiplication of co-creator technology. Prayer points should involve the phasing out crude technologies, particularly advanced military weapons of mass destruction.

The following section discusses some enhancing technologies that hold transcendence potentials. The discussions suggest that technological progress is advancing in an unprecedented way, however, it is far from becoming perfect. Therefore, the adjective "crude" indicates the need for improvement.

3.6. Enhancing through Substance Administration

Some ordinary ways of enhancing humans include eating balanced diets, taking chemical substances in the forms of drugs to enable the body to overcome certain biological constraints, boosting the immune system and accelerating healing. These might be administered through injection, spraying, inhaling, massaging, oral, etc. This section looks at three classes of drugs, stimulants, steroids, and beta-blockers frequently used beyond therapeutic purposes. It must be noted that many drugs have a history of application beyond their conventional use, which could be classified as abuse. Under this discussion, I will concentrate on the enhancement potentials of the drugs that facilitate transcendence to maintain the link with the topic under discussion. Because stimulants and steroids are noted for their exploitations to boost concentration, and stamina, including overcoming sleep, they serve as the central focus (White, al et. 2006, 264). These classes of drugs provide a form of enhancements that transcends the original status of users. Therefore, it constitutes transcendence, making them beneficial to this study. The discussion highlights the idea that enhancement is indeed an everyday process typical of human activities and must be recognised as part of life. The point is also made that some enhancement agents are not fully developed yet and might constitute a health hazard that is difficult to re-

verse. The uses of drugs manifest both horizontal and vertical transcendence at different levels. The enhancing ability goes horizontal and corresponds to co-creator technology, but the adverse side effects constitute vertical transcendence marking criteria for crude technology.

Stimulants enhance the central nervous system's activities and facilitate alertness, attention, and energy, including elevated blood pressure and increased heart rate and breathing rate. They are commonly used to treat Attention Deficit Hyperactivity Disorder (ADHD). Examples of stimulants are Adderall and Benzedrine, made from *amphetamine* and Concerta, Ritalin, and Provigil (Modafinil) from the *methylphenidate* group. Other stimulants are classified under *methamphetamine;* cocaine, and cathinone. While *methamphetamine*, such as cocaine, is among the commonly used and abused illegal substances, coffee (caffeine) remains the most widely used stimulant (Ciccarone 2011, 43).

Ritalin and Provigil are often used as cognitive enhancers by some students who need the extra hour to prepare for exams. In addition, Ritalin and Provigil are stimulant medications used to treat attention deficit hyperactivity disorder, obstructive sleep apnea, work-related sleep disorder, and sleepiness due to narcolepsy (Moore 2008, 81). Another drug in the stimulant family with similar use as Ritalin and Provigil is *Dextroamphetamine* prescribed as *amphetamine enantiomer* has a long history of being used for enhancement purposes. For example, records show that *dextroamphetamine* was widely used by American, British, German, and Japanese soldiers to keep awake and alert during World War II. Stimulants are, therefore, a significant enhancement resource for many (Jones 2010, 114).

Another class of drugs used for enhancement purposes is *anabolic-androgenic* steroids, commonly called anabolic steroids. According to research data, administering anabolic steroids to healthy young people between 10 to 20 weeks can increase body mass, muscle size, and strength. The increase is not affected by whether those involved engage in exercise or not (Moore 2008, 81). This drug is common among athletes, soldiers, and other bodybuilders who resort to increasing muscle mass and strength. The primary anabolic steroid hormone produced by the body is testosterone. It makes muscles more prominent and may reduce muscle damage during a hard workout, thus facilitating quicker recovery from training sessions and enabling more demanding and frequent workouts (Ihsan, 2010, 69). They are often administered through four means. They can be taken orally or through injection and applied as creams/gels and skin patches. Common anabolic steroids are stanozolol and methandienone made from *methandrostenolone* and methyltestosterone, oxandrolone (Kerr & Congeni, 2007, 772).

Besides stimulants and steroids, beta-blockers are another emerging drug group with enhancing potential. They are used medically to treat heart problems, prevent migraines, and control anxiety. They are from the group *Propanolol*, and are available under the brand name "Inderal." These drugs help block the formation of traumatic memories and can even erase them once established. The drugs prevent non-conscious pathological memories from trauma

such as combat, rape, and natural disasters that could potentially lead to post-traumatic stress disorder (PTSD). Such memories could be debilitating and incite anxiety, nightmares, suicide and detachment. P*ropranolol* could be administered before or after a traumatic event to help individuals in the military or emergency services deal with its psychological repercussions (Steenen et al. 2015, 2). In addition, this drug could be used beyond the therapeutic enhancement to give the brain a fresh start. Thus, this may help individuals break from unpleasant habits and addictions that may lead to life-threatening conditions (Jones 2010, 114). Nevertheless, these drugs have adverse effects on users, which are discussed below.

3.6.1. Challenges Associated with Enhancing Drugs

The drugs listed above possess considerable transcending potentials and they attract a wide range of users due to their high efficacy levels. Nonetheless, they fall under "crude technologies" due to the potentially harmful effects on users. The side effects can be detrimental to society. Although each drug possesses unique adverse consequences, there are effects common to all of them. Examples of such common adverse effects are acne, diminished sperm production in males, shrinking of the testicle, enlargement of the breasts. In females, masculinisations, such as deepening of the voice and male-pattern baldness are observed (Chung et al., 2010). In addition, significant side effects such as paranoia characterises the use of most of the drugs. Memory loss is a problem that is likely to destabilise society when a high number of people use drugs such as *dextroamphetamine* and *propanolol* (Jones 2010, 114).

Indeed *dextroamphetamine* is associated with a couple of accidents, and a major one is referred to as "friendly fire incidence" that took place on 17 April 2002 in Kandahar, Afghanistan. A US military Falcon F16s pilots, Major Harry Schmidt and Major William Umbach released a 500-pound, laser-guided missile on U.S. ally soldiers of the 3rd Battalion, Princess Patricia's Canadian Light Infantry Battle Group. They were engaged in a live-fire training exercise nine miles south of Kandahar airfield. Eight soldiers were injured and four killed in an area recognised as a training ground. The pilots seeing a fire on the ground, took it for an attack from the enemy and returned fire in "self-defence." Two unpublished reports into the friendly fire incident concluded that the pilots made the error because they failed to assess the supposed risk properly before striking. The incidence falls into a recognised side effect of *dextroamphetamine*, which produces a distinct feeling that "everyone is out to get you" (Moore 2008, 83, 78). This scenario gives credence that a society with many citizens taking this drug would be a nest of chaos.

Apart from *dextroamphetamine, propranolol* has been fingered for concurrent erasure of beneficial emotional memories, blunting normal, desirable fear responses, and alteration of moral judgment. The use of drugs to modify memory could go beyond the bounds of accepted therapeutic regimes to erase unpleasant memories considered an integral part of human life. Perhaps drugs

could even be developed to remove all traces of guilt, shame, or grief (Jones 2010, 114). However, these conditions pose danger to social cohesion and human relationships; thus, research on eradicating the identified side effects is needed to turn them into co-creator technology.

3.6.2. Genetic Technology as Enhancement Revolution

Another form of enhancement procedure critical for horizontal transcendence is genetic technology. However, it has ethical and moral repercussions, eliciting scientific precautions and theological responses. Genetic modification is a method of changing existing DNA to create a new modified version of the genome. Cloning, however, is used for creating an exact copy of or part of an organism's DNA that goes beyond therapeutic intervention into possible speciation, making it a critical area to attract theologians' interest. The World Council of Churches (WCC), 4th Assembly held in 1966, cautioned that fundamental human values are at stake in the expected technological evolution. The Council expressed the view that the advances in genetic research could enhance and stabilise human nature but may also degrade and destroy it. The statement of the Church called for stricter regulations when it comes to human genetic research. The possibility of manipulating humans' genes to maximise desired traits while mitigating undesirable traits invokes both hopes and fear. There is the hope of breeding a new human generation without some of the frailties associated with today's humans through cloning and gene editing. At the same time, there is the fear of extinction of the *Homo sapiens* or rendering them redundant members of the biosphere (Chapman 1999, 11). Genetics involvement in nature transcends human nature, it places the *imago Dei* as God's co-creator. In religion, such venture is the preserve of the gods who bring life and death, fertility and abundance, providing twins and triplets to those they choose to bless and increasing the yield of their fields.

The focus on cloning is essential given the huge debate it generated during its introduction. The question of whether it poses a threat to human dignity or contributes to human dignity was a major debate between the transhumanists Nick Bostrom, and the President's Council on Bioethics in Beyond Therapy (Lebacgz 2015, 51). It is even more crucial for this study because it represents an analogy of creation, a co-creation activity and participation in God's evolutionary creation. Genetic manipulation in general marks human transcendence. It provides platforms for human decisions to be inscribed in the genome of nature. The process facilitates the ability to produce new species and hybrids as humans imitate the creator by creating life in a creaturely way. Cloning refers to a clone, from the Greek word for twig, literary cutting, and grafting. However, the meaning is not definite. For example, cloning is the process of producing identical copies of DNA in molecular biology. In cell biology, cloning is the production of a progenitor cell to achieve a community of genetically indistinguishable cells, whereas, in animal biology, it relates to the generation of genetic models of unique animals employing nuclear transfer. Botanically, repro-

ducing completely identical creatures is an everyday practice in plant breeding. Thus, cloning can be classified into two categories, reproductive and therapeutic. However, the cloned species are often called "varieties" not "clones" (Keefer 2015, 8874).

Cloning technology could be one of the most fruitful animal and plant breeding endeavours and potentially eradicate many human childbirth diseases. The method often involves transferring the cell nucleus from an adult cell into an unfertilised oocyte, a developing egg cell, but the nucleus has been removed. Instead, an electric shock is used to propel the hybrid cell to divide, and then it develops into a blastocyst[12] that is implantable in a surrogate mother (Keefer 2015, 8876). For example, the first mammal clone, the Dolly, was considered a milestone in genetic research. The birth of Dolly demonstrated that genes in the nucleus of a mature differentiated[13] somatic cell could revert to an embryonic totipotent[14] state, thus creating a cell with the potential to be developed into any part of an animal. The success of the research reinforces the notion that each cell in an organism contains the complete DNA information needed for the re-creation of the complete organism. Most of the information in an organism is in a dormant state, which the Scottish researchers managed to re-activate. The successful Dolly experiment led to the possibility of human embryonic and adult stem cell research (Hansen & Schotsmans 2001, 75). The research represents an instance of human co-creation activity, which manipulates God's creation in a creaturely way that can be called a "positive divine mimicry."

There is the assumption that Dolly the sheep died early because it was cloned from the somatic cells of an adult animal. Thus, telomeres were already shortened rather than the longer ones of a newborn lamb and presumably could not live as long as a naturally born sibling (Williams 2003, 210). Telomeres act like the leaders in a filmstrip and ensure that the DNA is accurately replicated. Cell division involves splitting apart the two strands of the DNA molecule and their reconstitution into entirely new copies of the molecule in the daughter cells. However, the telomeres get a bit shorter with each cell division until they cannot protect the ends of the DNA strand and the cell. Thus, the shortest telomeres considered damaged DNA, cease growth and die (Fukuyama 2002, 28). Therefore, humans have a long way to go to become proficient in genetics, but new technologies such as CRISPR/Cas9 and Cas-CLOVER gene editing represent a giant leap.

CRISPR/Cas9 and Cas-CLOVER gene editing are applications of genome editing and genetic engineering and are used for verifying the presence of modifications, including switching on and off of particular genes. CRISPR/Cas9

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[12]　A blastocyst is a structure formed in the early development of mammals, its inner cell mass forms the embryo.

[13]　Dedifferentiation or reprogramming of a somatic cell into a pluripotent embryonic stem cell-like cell (ES-like cell) gives rise to three germ layers. Dedifferentiation opens a new era in stem cell biology and provides a potential therapeutic modality in regenerative medicine.

[14]　A totipotent cell can form an entire organism. Human development begins when a sperm fertilises an egg and creates a single totipotent cell.

technology evolved from earlier practices such as nuclease technologies, homing endonucleases, and specific chemical methods (Li, et al. 2019). Molecular techniques like meganuclease, transcription activator-like effector nucleases (TALENs), and zinc-finger nucleases (ZFNs) initially emerged as genome-editing technologies. These initial technologies had the problem of lower specificity and off-target side effects. The focus shifted to the use of small RNAs, such as microRNA (miRNA) and small interfering RNA (siRNA), in the research laboratories as a replacement for cell lines and lab animals prior to the discovery of CRISPR/Cas9 technology in 2012 (Li, et al. 2019). The technology is valued for efficiency, feasibility, and multi-purpose clinical application. CRISPR/Cas9 and, recently Cas-CLOVER biotechnologies seem to take genome-engineering techniques to the next level of molecular engineering (Ishino et al. 2018).

Gene technology, in general, signifies humans' ability to interpret some aspects of nature and has brought about the reproduction of enhanced plant and animal species. The production of numerous essential plant varieties is carried out, starting from small cuttings of other plants. In vertebrates, identical twins are regarded as spontaneous forms of cloning because through embryonic splitting in one of the earliest phases of development, monozygotic twins are formed. Since they originate from one zygote that resulted from the fertilisation of one ovum by one sperm cell, monozygotic twins are identical but differ from their parents (Keefer 2015).

Molecular cloning, on the other hand, refers to a routine technique in molecular biology that consists of cloning the molecular basis of heredity, the DNA. The DNA fragments are copied and amplified in a host organism, usually a bacterium. This highly reliable technique has culminated in the manufacture of vital drugs such as insulin, growth hormones, and erythropoietin.[15] In cellular cloning, copies are made of cells derived from the soma by growing these cells in laboratory cultures (Hansen & Schotsmans 2001, 75). Cloning technology has unlimited potential in medicine, which can be used to cure many defects in humans. The possibility of avoiding some health defects in babies through the Cell Nuclear Replacement Technique holds a bright future for humanity. Mitochondrial DNA affects several essential functions related to the role of mitochondria in providing energy for the cell. Tissue with high demands for energy, such as muscle, heart, brain, and eye, are particularly vulnerable to mitochondrial defects.

It is estimated that more than fifty inherited metabolism diseases are known to be caused by defects in mitochondrial DNA. A baby only inherits mitochondrial DNA from the maternal line because mitochondrial DNA in the sperm does not appear to pass through the fertilisation process. If the maternal mitochondrial DNA carries a disorder, it will always be passed on to the child. It may become possible to prevent the child from inheriting the disease by the cell nuclear replacement technique. The process would involve inserting the nucleus

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[15] Erythropoietin is often used to treat anaemia associated with dialysis for kidney disease and tissue plasmogen activator to dissolve clots after a heart attack.

of the mother's egg into a donor egg with healthy mitochondrial DNA and which has had its nucleus removed. This new egg could then be fertilised by the sperm of the woman's partner by In Vitro Fertilisation (IVF). Thus, a child born would have received its nuclear DNA from both mum and dad but would have healthy mitochondrial DNA from the donor egg (Campbell 2002, 268). However, the CRISPR-Cas9 system possesses the potential to solve such a situation without the need for a donor cell. The system requires a simple RNA guide to target a specific region in the genome, permitting what can be described as a "cut-and-paste" tool to modify genomes. The implication is that human participation in the affair of the cosmos has evolved. They can be said to have achieved the status of the gods, taking crucial decisions associated with fertility, health, life and death, including hybridity and speciation of organisms.

3.7. Conclusion

- ❖ Religion and technology are two major dimensions that have been instrumental in human existential history serving as leading platforms which support and manifest humans' dreams and aspirations to transcend their limits. Technology is the dominant force that influences the current socio-cultural formation but is linked with religion. Thus religion is technological, and technology is religious, which explains analogies such as mobile phones and telepathy, *Sexbots* and *houris*, images of flying broom/mat and aircraft. Technology and religion strive for unity to bridge ostensibly antithetical concepts such as sacred and secular, holy and desecration, human and non-human etc. Technological products such as *sexbots*, on the one hand, represent humans' desire to transcend horizontally, unite with their creation and cross the anthropocentric barrier. The *houri* concept, on the other hand, represents the desire of the divine to transcend horizontally to unite with creation, a deconstruction of the divine-human barrier constituting the abolishing of dualism between horizontal and vertical transcendence. The deconstruction of dualism is due to the vertical (divinity) crossing, the horizontal and humanity looking horizontal to identify with the divine within nature.

- ❖ Acquisition of knowledge through scientific research and applying the knowledge through technology to benefit human society and the environment are integral to being human. The endeavour constitutes a significant role of the *Homo sapiens* in the universe. Knowledge acquisition and its applications allow humans to re-examine their lifestyles and modify them by introducing new mechanisms that support flourishing and reduce human flaws, mortality, and diseases. Human theological history indicates that there have been divine instigated enhancements that supported human existence thus, enhancement is theologically consistent with religious doctrines of creation. Through enhancements, lives have been saved, diseases cured, and life of ease experienced, reflecting God's will as recorded in the Bible. The

crippled walking, the blind seeing, and reversing premature death are be-coming possible through technology.

❖ Scientifically, enhancement has been part of human evolutionary history through tool use that has been found with ramifications such as assimilations and embodiments of tools in organisms. Enhancement through tool use is a major medium of transcending horizontally. Technology has been critical to both human theological and evolutionary history. While technology has depended on available knowledge (science), the enhancement of the *Homo sapiens* has depended on technology that supports the survival of human communities. Therefore, enhancement is natural and could be said to be a biblical and religious process that supports humans to overcome adverse conditions while mitigating human finitude. However, transhumanists are taking enhancement to another level where it does not support the integrity of nature and tends to project technology as a sort of saviour that delivers humans from various flaws and sufferings. Transhumanism has affected the perception of many theologians regarding the enhancement topic, which has fuelled suspicious narratives about enhancement in theology. Enhancement, however, is a process that has been with humans, and everyone goes through it for individual survival because it facilitates continuous human existence. Humans are enhanced through food, medications, technology, implants, secured housing and the prospect of genetic modifications. Medical enhance-ment focuses on cures, but there is a need to invest in preventive procedures.

❖ Genetic research is a potentially effective preventive medical endeavour that involves imitating genetic engineering already existing in nature. It holds broad potential, but certain areas, such as human stem cell research and cloning for eugenics purposes, have ethical ramifications that require both religious and scientific illuminations. Consensus building on using such research for wholesomeness and human flourishing without discrimination is vital. Enhancement represents horizontal transcendence and can produce wholesomeness while projecting universal kinship and espousing human freedom.

❖ As co-creators, humans are responsible for acquiring a thorough knowledge of nature, including genetic makeup. Genetic proficiency will ensure the adoption of the most effective technological methods to intervene in issues associated with life and death. Genetic engineering should be employed just like orthodox medicine because medical science, including ES-cell research, aims to reduce human suffering and improve human life. Technology and enhancement are consistent with the theological theme that humans are created in the image of God. Although humans' likeness with God is in the future, they represent the image, which becomes sharper through enhancement, manifesting a shadow of the "likeness." The likeness becomes dimly visible as human contributes toward decisions on species features, hybridity, prosperity, fertility, life and death. The possible manifestation of the likeness breeds the notion that humans' status will likely change from human into "posthuman."

❖ The foundation of the Church is good work, miracles and salvation. These virtues continue to be part of the ministry to the world. While supernaturalism has given way to secularity, technology has become the resource for good work. It is a medium of miracles as the sick are healed, the cripple walk and the poor are fed.

The next chapter discusses the notion of "posthuman" in relationship with religious doctrines.

CHAPTER FOUR. Theories of Transcendence; the "Posthuman" in Posthumanism

4.1. Introduction

The preceding chapters discuss humans as natural organisms, created through a unique evolutionary process with the ability to enhance and transcend themselves through technology. The enhancement reduces frailties associated with their nature and supports them in their quest to transcend. The assumption is that the aspiration to transcend will require radical enhancement processes that lead to a new species or a transformed version of the human referred to as "posthuman." The term "posthuman" or "post-human" originated from science fiction and other related fields such as contemporary art, futurology, and philosophy (Ferrando 2013, 26). The term often implies an entity in a form beyond humans' nature, often post-biological. It invokes imagery of aliens, cyborgs, robots, AI, werewolves, and vampires that are "superior" to humans (Bugajska, 2021). It is, however, a key term associated with the redefinition of the concept of humans due to biotechnological progress in the era of the twentieth and twenty-first centuries (Midson 2018, 78). The "posthuman" discourse has cultivated philosophical background, resulting in the rising of several schools of thought. "Posthuman" can therefore be described as an umbrella term that chiefly describes the philosophies of antihumanism, metahumanism, new materialisms, posthumanism, and transhumanism (Ferrando 2013, 26).

However, the various groups apply the term in different ways. This chapter discusses the "posthuman" term as rendered in posthumanism by matching it with transhumanism and how it relates to religious notions. Transhumanism and posthumanism are the most conspicuous philosophical groups associated with the "posthuman" discourse. Although they differ in several aspects, they agree in some areas. For example, while they share some common perceptions of the human as possessing a non-fixed and mutable condition, they project different notions on the nature of humans as a whole. Haraway's cyborg is the main reference point in the discussion of "posthuman" in posthumanism. It should be noted that a major problem associated with the posthuman discourse is the tendency to easily conflate the terms "posthuman," posthumanism and the relationship with transhumanism. As a result, there is often philosophical confusion regarding the meaning of the "posthuman" term. Posthumanism, which is a distinct philosophical persuasion with its own strands, is often expressed as an umbrella body, with one of the branches being transhumanism (Midson 2015 146–149).

References to transhumanism as a strand of posthumanism are common expressions in the work of many theologians, including Scott A. Midson (2018, 72) and Elaine Graham (2021, 14–15). They refer to transhumanism as a branch of posthumanism, that an alternative strand is critical posthumanism. A renowned theologian, Brent Waters (2006), who has written extensively on the

topic, hardly distinguishes posthumanism from transhumanism in his writings. The term "posthuman" is expressed simultaneously as a being and as an epoch aggravating the muddle. Therefore there is the need to bring out the differences to contribute to the theological appreciation of the two philosophies and the "posthuman" notion. This chapter introduces the "posthuman" idea in posthumanism but further attempts to sketch vivid distinctions between the two philosophies to reduce the confusion that characterises the terrain.

4.2. Transcendence in Posthumanism

The theme of this chapter, in general, and this section, in particular, may sound strange to many posthumanists because they hardly view their philosophies in terms of transcendence. The term "transcendence" assumes an even more problematic posture when it suggests "going beyond nature" and the tendency to assume vertical transcendence. However, notions of transcendence can be identified within the philosophies of posthumanists, both from their elementary philosophies and the current technological twist (cyborg). Posthumanism offers a posthuman notion that provides a unique form of transcendence and contributes to exploring the diverse terrain of transcendence. Posthumanism contrasts humanism's idea of human autonomy status in the cosmos by pointing to humans' intricate relationship with nature and their embedded status that calls for repositioning the idea of the human in cosmic affairs (Graham 2021, 15). Transcendence in posthumanism should be seen as identifying humans as part and parcel of everything in the universe. They are part of the technology, microbes, plants, animals etc. The ability of the human organism to identify with the other, including the nonhuman other and locate itself beyond the individual level should be seen as a form of transcendence. Transcendence then means humans' recognition of their presence and relatedness in the other, the manifestation of the otherself principle (see page 53). This sense encourages the preservation of nature and respect for the other, recognising that harming the other constitutes harming the human essence (Liu 2016, 266). Transcendence in posthumanism means getting involved with technology and everything in nature and applying co-creator technologies for conservations and preservations.

If humans see their essence in the other, there would be an obligation to respect and protect the other as security for the individual. Thus although posthumanism represents post-anthropocentrism, their transcendence is mutually productive. However, locating the self within the other is a way of transcending horizontally. This can be derived from the fact that, in religion, God is located in nature, and God's immanence translates into transcendence. According to Kant, religion sees the entire creation as within God, who is seen as omnipresent, representing a sort of panentheism (Kant 1996, 192). Apostle Paul spoke of Christ ascending on high to fill all things in the book of Ephesians 4:7–10. William James posits that spiritual identity is a sense of oneness with all things and connects it to a mystic experience (James, 1902/1986, 385). Persuasions such as

animism, polytheism and pantheism recognise the transcendent divine within objects in nature. God is identified in everything, either physical or perceptual. They believe that God is immense, that divine nature is without limitation in terms of space and that the divine nature is immeasurable and incapable of being contained or bound (Inman, 2020, 127).

Schutz and Luckmann, who experimented with different transcendences and explored diverse ways of possible transcendence experiences, recognised transcendence in identifying with the other. According to Schutz's classification of transcendence, locating oneself with the other through the body or expression is placed under *Intermediate transcendences* (Schutz 1962–1966, 299). Luckmann states that Schutz's idea of *great otherworldly transcendences* is shrinking and giving over to small and *intermediate transcendences.* However, the intermediate transcendence is a sociological experience (Schutz & Luckmann 1983).

Luckmann's view can be supported by the empirical study conducted by David Thurfjell et al. (2019). The study suggests a relocation of transcendence in the secularised world from religious experience to that of nature. The study reports experiences of transcendence among secular respondents who recounted their experience as involving a sense of a greater connection, a sense of being absorbed in another world, and a sense of losing themselves when they retreat into nature (Thurfjell et al. 2019, 191, 192). The study observes that similar expressions are prevalent in public discourse about nature that indicates an existential, spiritual, or religion-like dimension to the nature-oriented practices of respondents. Therefore, the study concludes that a dimension exists with the connection to nature similar to that of religious experience and corresponds to Schutz and Luckmann's ideas about transcendence (Thurfjell et al. 2019, 209). For transhumanists, transcendence is technological. Thus transcendence is experienced through immersion in technology. In contrast, posthumanism often identifies transcendence in hybridity, a fusion that blurs dichotomies thus, the cyborg is a potent figure, representing barrier breaching and unity.

Posthumanists, therefore, see humans as enhanced when merged with technology or machines in human-technology relationships. Thus, the image of the cyborg that produces the notion of superhuman is often maintained in posthumanism. Furthermore, posthumanist writers such as Haraway see cyborgs as "posthuman" creatures which invoke the sense of being beyond human (Haraway 1991, 151). The spin on enhancement concerning posthumanism points to humans' identification with the other through the otherself concept; the male sees his essence in the female and vice versa. It involves identification with microbes, plants, water bodies, animals, natural resources, environment, technology etc. In contrast, transhumanism seeks to enhance the individual, including separating the individual from the mind. Thus while transcendence is often vertically perceived in transhumanism, posthumanism advocates for a horizontal transcendence that involves identifying with the other.

4.3. The "Posthuman" and Evolution of Posthumanism

Posthumanism has many faces and has evolved from literary criticism[16] over the years into the current anti-anthropocentric ideology. Francesca Ferrando (2013, 29), a professor at New York University, traces the roots of posthumanism to postmodernism.[17] She explains that the "posthuman" turn was wholly endorsed by feminist theorists in the late nineties within the field of literary criticism, which is now defined as critical posthumanism. The aspect of cultural studies that engage with such areas is referred to as cultural posthumanism. By the close of the 1990s, critical and cultural posthumanism developed into a more philosophically focused inquiry referred to as philosophical posthumanism. It was a comprehensive effort to re-assess each field of philosophical investigation through new insight into the limits of previous anthropocentric assumptions. Posthumanism is described as post-anthropocentrism and post-humanism, pointing to a "post" to humanism, and the predominant conception of the human, both of which are based on hierarchical social constructs and human-centric assumptions. Respect for each species is integral to the "posthuman" critical approach. The "posthuman" discourse is an ongoing process of different standpoints that are flourishing because of the contemporary efforts to redefine the human condition (Ferrando 2013, 29).

The term "posthuman" is shrouded by confusion because posthumanism and transhumanism express it differently, and the different interpretations by members within the groups further exacerbate the misunderstanding. However, in general terms, the "posthuman" in transhumanism represents the radical transformation of human beings through technological mediations. The transformation is expected to provide a form of paradise similar to religious eschatology, the difference being humans' effort rather than a divine decision. The "posthuman" discourse in posthumanism represents overcoming human primacy and anthropocentrism. Scholars such as Ferrando (2013, 29) see the "posthuman" in posthumanism as representing post-exclusivism and serving as an empirical idea of mediation that offers a reconciliation of existence.

Posthumanism is linked with human technological enhancement, but they project technology entirely different from transhumanism. Furthermore, the history of posthumanism differs from the history of technology. However, the contemporary theories of posthumanists have focused on technological changes. However, a crucial premise of posthumanism is its critical position on the notion of humans as a superior species in the schemes of nature (Miah 2008, 76–77). Posthumanists' spin on enhancement focused on human adaptability with

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[16] Literary criticism is the study, interpretation and analysis of literature. It involves comparison, and evaluation of works supported by evidence such as historic settings, political context, style etc.

[17] Postmodernism, also known as postmodernity, is a broad movement that developed in the mid-to-late 20th century across architecture, art, literature, philosophy, popular culture etc. It was characterized by broad scepticism, and a general suspicion of reason; and an acute sensitivity to the role of ideology in asserting and maintaining political and economic power.

the nonhuman other. Thus, the figure of the cyborg is discussed from different angles. While transhumanists see the cyborg as representing the possibility of enhancing the human, posthumanists look at crossing the anthropocentric barrier. For example, Haraway describes cyborgs as "creatures simultaneously animal and machine, which populate worlds ambiguously natural and crafted" (Haraway 1991, 149). Thus the cyborg is a creature made up of organism and machine; they are from nature and are the work of natural organisms. Thus the posthumanists and transhumanists present diverse notions of the "posthuman." Jeanine Thweatt-Bates (2012, 15) explains that "these two visions mark a bifurcation of 'posthuman' possibility and employ radically different philosophical and ethical commitments. Mapping the contrast between these two competing 'posthuman' visions provide both an entry into the 'posthuman' discourse as well as illuminating the issues at stake" (Thweatt-Bates 2012, 15). Brent Waters observes that it is impossible to define the "posthuman" for two reasons. Firstly, the ambiguous nature of its projections, and secondly, there is little consensus among those who speculate on its emergence (Waters 2006, 50).

Thweatt-Bates (2012, 2, 5) sees the term "posthuman" as an umbrella term covering a span of related concepts such as genetically enhanced persons, artificial persons, androids, uploaded consciousness, cyborgs, and chimeras. Thus, the "posthuman" is a philosophical projection, an assumption about human beings and their possible future state. She explains that the term which is used in the plural sense represents one way of approaching an emerging future reality, which human beings carry the responsibility for constructing, though it carries no guarantees of success. She brings out an important question associated with the "posthuman" discourse, continuity and discontinuity with the human race. Elaine Graham uses the term to express the vagueness and multiplicity of imaginations of what the envisaged "posthuman" might be. "The 'posthuman' is that which both confounds but also holds up to scrutiny the terms on which the essentially human will be conceived" (Graham 2002, 11).

The "post" literally represents the 'after' and is expressed in terms of species; *the Homo sapiens*. Haraway, however, presents the "post" as post-anthropocentrism and post-exclusivism in her cyborg narrative like most posthumanists. Thus, while dissociating herself from transhumanism, she sees her cyborg narrative within posthumanism's ideology, although Haraway has indicated that she had moved on and has distanced herself from the term "posthuman" (Nicholas & Haraway 2006, 141). Nonetheless, the philosophical and ethical issues she identifies in the cyborg narrative have become indispensable within the "posthuman" discourse (Thweatt-Bates 2012, 15).

Haraway is acknowledged as one of the prominent posthumanists who introduced technology into the socialist-feminist discourse. Ferrando (2013, 28) explains that technology was introduced into the posthumanist debate through the mediation of feminism in general and Donna Haraway's cyborg that dismantles strict dualisms in particular. The following sections identify three major themes which are of interest to me within the "posthuman" narratives in general and

Haraway's cyborg in particular which are gender, universal kinship, and religion. The discussions start with the introduction of Haraway's cyborg.

4.4. The Cyborg, a Symbol of Unity and Ambiguity

Haraway is a feminist theorist whose essay on the cyborg icon has become a reference point for discussing the "posthuman." I refer to the cyborg as an icon, symbol, and image in reference to Haraway's narration as a figuration, a figure that does not stay still, mutating in fact and fiction (Haraway 1991, 148). Hefner describes his "created co-creator" image as "an idea," a metaphor" or "symbol," similar to Haraway's cyborg (Hefner 2004). The word icon is used in the same way as image, figure or symbol. The image of the cyborg is a potent symbol when it comes to discussions on the "posthuman" topic. The cyborg marks technology's influence on humans, showing that they can be modified with the nonhuman other to mitigate their finitude. "In the cyborg figure, the human is physically intertwined with the nonhuman, the organic with the mechanical. The cyborg, therefore, has become the symbol of the 'posthuman' par excellence, for it wears its differences visibly, literally engrafted into the skin" (Thweatt-Bates 2012, 15). Haraway's concept of a cyborg marks a deliberate breakdown of the dichotomy between the natural and unnatural. She thus spins her narrative from the unity of organism and machine that exposes commonalities rather than uniqueness. Her work serves as a critique of human uniqueness in recognising the nonhuman other; technological, and other species.

The word "cyborg" has been attributed to Manfred Clynes, who coined it to describe an emerging hybrid of machines and humans. The word appeared in an article, "Cyborgs and Space," in the *Journal Astronautics* in September 1960, written by Clynes and Nathan Kline, both of Rockland State University. They conceived an enhanced human, a human-machine who is enabled to work in a particular environment hostile to humans. Clynes and Kline express the view that instead of providing similar conditions to that of the Earth in space for human survival, it is better to alter human body function to make it suitable for extra-terrestrial environments. They explain that space exploitations invite humans to participate actively in their biological evolution. Their view is in tune with the notion that future scientific and technological growths may be exploited to allow humans to survive in environments that differ drastically from those they are used to on Earth. They refer to such mechanically enhanced human who could survive extra-terrestrial environments as a cyborg. A cyborg is thus a "self-regulating man-machine system" (Clynes and Kline 1960, 26, 30). Clynes and Kline suggested an exciting idea of automatic/mechanical processes giving over to "machines" so that space cyborgs can do their creative scientific work, such as increased mind freedom and enhanced creativity. Haraway focuses on the implication of the unity of the human and machine, pointing to the fact that the living and non-living, human and nonhuman, natural and unnatural, could unite in the medium of mutual respect in egalitarian ways. How-

ever, transhumanist narratives focus on the enhancement aspect, the potential "superhuman" abilities inherent in such fusion.

A cyborg in "posthuman" narrative is an icon that represents a hybrid that is neither fully organic nor fully mechanical; the hybridity has been recognised as simultaneously holding both threat and promise. On one side, there is a threat to social cohesion and, at the same time, the hope of liberation from socially constructed boundaries. According to Haraway, the cyborg represents the breaching of human/animal, organic/machine, and physical/nonphysical boundaries. These identified boundaries define the content of human nature thus, breaching them constitutes a challenge to the concept of the human. Therefore, Haraway sees cyborgs as "posthuman" creatures that need connection; they are creatures with no substantive pedigree and therefore possess vague ontology (Haraway 1991, 151).

Scott A. Midson (2018, 7) also points to the ambiguous nature of the cyborg that re-enforces ambiguity in their relationship with their human creators, making references to Science Fiction heroes, such as the Terminator figure and Robocop. He posits that cyborgs might represent an enhancement that is celebrated, but at the same time, it nurtures fears and suspicions in humans. They are similar to humans, but they are not humans. Their lack of connectivity with social structures ignites a sense of alienation. Nevertheless, they represent a strong critique of what could be conceived as human while representing the hope of a better understanding of the post-human nature. The cyborg can be presented as an "OncoMouse," a representation of a scientific research tool (genetically modified laboratory mouse) to find a cure for breast cancer and also as a "hypermasculine killing machine, the Terminator" (Midson 2018, 13), signifying the eradication of the human species.

Haraway expresses the view that, through the accumulation of biological research into the evolutionary theory for decades, it has become evident that the various anthropocentric boundaries have been breached already. Therefore, a dichotomy between humans and nonhumans is no longer accepted. She uses another term, chimeras,[18] which she uses as equivalent to the cyborg's image to emphasise the eroding nature of human-made boundaries. She believes that scientific findings from research that explore similarities and shared features between humans and nonhumans provide evidence that humans have much more similarities than differences with nonhumans (Haraway 1991, 151).

The cyborg brings out the benefits associated with the kinship between humans and the nonhuman other and the prospect of countless future benefits predicted by scientists. For example, there is the prospect of pigs carrying pregnancies for humans, hope for the barren, and a cure for infertility. Another prospect that represents a medical revolution is xenotransplantation, which is expected to

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[18]   In genetics, a chimera represents an organism or tissue that contains two or more different sets of DNA, usually originating from the fusion of many different zygotes. The term is derived from the chimera of Greek mythology; a fire-breathing monster that was part lion, part goat, and part dragon.

impact humans' lives. Xenotransplantation represents kinship with the nonhuman other and the hope of saving an average of ten people a day who perish in the US alone amid a severe shortage of human donor organs to treat organ failure. The prospect of the xenotransplantation method marks a deepened human dependence on the nonhuman other for wholesomeness. Cyborg, therefore, represents horizontal transcendence, the improvement of humans through fusion with the nonhuman other. However, confusion and ambiguity surround the cyborg concept's workability in the present technoculture. For example, Midson (2018, 113) points out that the current technological progress is based on a particular notion of the "natural" as opposed to technological. "Natural" is often associated with nature rather than the "artefact," human-made. Human nature is envisaged as capable of producing a better world through technology rather than merging with technology.

Haraway's cyborg encompasses the whole range of technology, from simple tools use to the radical enhancement and beyond. It includes interventions such as medication, clothing and goes beyond radical enhancements such as implants. Based on various medical fusions, genetic overlaps, scientific findings on human relatedness to nonhumans, Haraway writes, "by the late twentieth century, our time, a mythic time, we are all chimeras, theorised and fabricated hybrids of machine and organism; in short, we are cyborgs" (Haraway 1991, 150). Haraway uses chimeras and cyborgs as representatives of the "posthuman" in a roughly equivalent manner. Just as the chimera represents the breaching of species classification, the cyborg equally confuses and pulls down special dichotomies (Haraway 1991, 150).

4.5. The Image of the Cyborg and Disembodied Notions

Haraway's "posthuman" narrative, unlike that of religion, is devoid of metanarratives, and unlike transhumanism, it counters dualism that defines the human as disembodied rationality. Haraway presents her idea of a cyborg to challenge the socio-political order and its anthropocentric metrics. Thus, the cyborg icon represents the "posthuman" as embodied being with organic and inorganic nature. It contradicts transhumanists' notion of a pattern that can exist out of the body, which is the foundation of their Singularity concept (Haraway 1991, 149).

The concept of Singularity stipulates that the human person is a mind that is running on the brain, which serves as hardware. The brain itself is a constantly changing pattern, but it is possible to scan and copy through a process referred to as download or upload. According to the concept, both the brain and the body molecules can be copied and reanimated. Ray Kurzweil (2006) built his version of Singularity on the neurotic understanding that the majority of the human cells change in a matter of weeks, and even neurons, which persist as distinct cells for a relatively long time, nonetheless, change all of their constituent molecules within a month (Kurzweil, 2006, 383).

On this premise, transhumanists see the prospect of uploading carbon into silicon as a viable venture. The uploading/downloading process, sometimes called, brain reconstruction transfers an intellect from the brain to a computer. Downloading first involves scanning a particular brain's synaptic structure and then implementing the data in an electronic medium. Thus, an upload could have a virtual (simulated) body that gives the same sensations and possibilities for interaction as a non-simulated body. Furthermore, uploads would not have to be confined to virtual reality; they could interact with people outside and even rent robot bodies to work in or explore physical realities.

Being conscious that embodiment plays a vital role in the "posthuman" discourse, Haraway made it vivid in all aspects of her narratives. Arguing from cybernetic insights regarding the flow of information between mechanical and biological organisms, she diverges from the transhumanists' position that human persons are bodiless patterns of information. Haraway acknowledges that humans are information, but the information that constitutes the human is embodied (Thweatt-Bates 2012, 80). Thus, the significance of emerging technologies is not how they allow the mind to extend or instantiate itself in novel ways but how technologies extend and reconfigure the body. Haraway insists that communications technologies and biotechnologies are crucial tools for recrafting bodies than leading to disembodiments. She emphasizes that the cyborg's significance lies in its power to reshape the body rather than re-inscribing the mind (Haraway 1991, 164). Haraway's position thus digresses from transhumanism while providing a possible bridge with Christian notions of the human.

4.6. The Cyborg, Christianity and Transhumanism on Embodiment

Christian theology insists on embodiment (even if it is occasionally forgotten). Thus theology does not have an inherent problem with Haraway's concept of a cyborg. Theologically, the human is not a pattern of information but embodied creature. An indication that the aspired "posthuman" nature will remain embodied. Christianity emphasises the importance of the body through the use of liturgies in public worship places and the doctrine of the incarnation, which stipulates that God the creator was embodied in the flesh. The notion of incarnation is a central tenet of the Christian faith, serving as a proclamation that God manifested in human flesh (Hefner et al. 2015, 1). Therefore, the Christian "posthuman" transformation involves the resurrection of the body, manifesting changes that shed off the current frailties into a new supernatural life of grace. The Christian "posthuman" narrative thus involves a transformed body similar to the current nature but with superior characteristics similar to that of the divine. This shared divine life aims to unite humans with God forever, a goal that transcends biological desires (Biggins 2019, 188).

Some commentators see the current state of Christians' lives as conflicted because though the Spirit lives in them, they still experience the curse of sin.

The Christian hope is that the curse will be fully removed after death and resurrection or during the rapture as described in 1 Corinthians 15:50–54, 1Thessalonians 4:13–17. This hope reaches its climax in the doctrine of glorification; removal of any taint of sin, and eradication of limitations and flaws. In the Christian narratives, human beings are incapable of accomplishing their salvation; it is exclusively the work of God. Thus unlike transhumanists and Haraway's narratives, the Christian hope has nothing to do with science and technology but the act of the Holy Spirit that lives in the faithful. However, like Haraway's narrative, Christianity perceives both the human and the "posthuman" within the materialistic embodiment but in a transformed nature (Winyard 2019, 11).

Although Christianity and transhumanism disagree on the importance of the body, there remains a connection between Christian aspirations to eliminate fundamental limitations associated with the human condition and that of transhumanism. Some transhumanists even liken their aspirations to that of religion, and they identify elements of religion in their ideologies. For example, Max More (2013, 3, 8), has expressed how transhumanism can act as a philosophy of life that fulfils some of the same functions as a religion. This aspect includes faith (not in the divine), love, morality, and care for the others, which goes beyond humans and their neighbours to nonhumans, including virtual beings. Furthermore, both Christianity and transhumanism believe in the resurrection and transformation of the body. Generally, transhumanists' idea of resurrection stems from the notion that death is not the cessation of bodily function; instead, death occurs when information resident in brain structures is lost. Finally, Christianity, the Cyborg concept and transhumanism stand for gender equity and respect for human life. Gender is one of the themes linking Christian doctrine, the cyborg, and transhumanism.

4.7. The "Posthuman" Discourse and Gender

Gender is one of the most conspicuous aspects of the "posthuman" discourse. It is projected in terms of "postgender," because a transformation of the current nature of gender is envisaged. However, Christianity, transhumanism, and cyborg concepts project diverse views on "posthuman" gender. Haraway's concept introduces the cyborg as a feminist icon and links it to the embodiment, using the feminine pronouns most of the time or she/he. Transhumanism, however, employs an approach to gender issues that seeks to minimise the importance of bodily differences. Emphasis is made on aspects of personhood which are independent of particular embodiments while at the same time placing gender within broader morphological freedom. In contrast, Haraway seeks an approach to gender that recognises the significance of different embodiments. She, therefore, integrates into her cyborg perspective critical viewpoints of feminist, womanist, postcolonial, and queer theories (Thweatt-Bates 2012, 84).

Thweatt-Bates explains that the word "postgender" is used in both discourses to signal different visions, "postgender" in transhumanist discourse leads to a technologically mediated genderless future. In contrast, Haraway's concept of "postgender" represents a continuing renegotiation of the reality of gender, not transcendence or negation. Haraway's cyborg often takes the feminine pronoun, while Simon Young's 2008 "transhumanist manifesto" talks of the "posthuman" destiny of "man." The use of "man" is not intended to be masculine but to negate gender because it represents the entire humankind (Thweatt-Bates 2012). Therefore, gender is actively present in the "posthuman" discourse, even when methodically ignored.

Furthermore, the cyborg introduced a new perspective to the feminist discourse that counters the tendency to "see deepened dualisms of mind and body, animal and machine, in the social practices, symbolic formulations, and physical artefacts associated with 'high technology' and scientific culture" (Haraway 1991, 154). Haraway challenges the notion that a woman's identity is assumed to be naturally given, self-evident, and unchanging. Thereby, she challenges the attempt to define human identity based on what is described as natural. The rejection of "nature" forms the fundamental critique of her "posthuman" discourse, which serves to break down the dichotomy between nature and technology.

Therefore, the cyborg is "postgender" in a context in which the word "gender" signifies the social construct of essential and what is understood as a woman. Haraway illustrates the disruption of universal gender categories through boundary transgressions which lead to an open-ended plurality (Thweatt-Bates 2012, 84). "Postgender" thus represents the abolition of social construction that separates humans based on physiological disparities such as the absence or presence of the phallus, using nature as justification.

Haraway's cyborg "postgender" perspective and transhumanism are similar to the Christian view on gender, though both oppose religious precepts in general. First, Apostle Paul calls for the abolition of hyping one gender over the other and discrimination based on sexual differences so that men and women may function in identical capacities during public church services in the book of Galatians 3:28. Second, according to Matthew 22:30, there are neither males nor females at the eschaton, but the post(human) are like celestial beings. The former coincides with Haraway's cyborg. Thus it can be said that scripture recognises the significance of different embodiments rather than different genders because there is the recognition of diversities in humans' bodies and their unity in Christ. The latter is similar to transhumanists' techno-sexless beings propounded by prominent transhumanists. These Biblical passages thus project images of "postgender" that are useful in the "posthuman" discourse.

Haraway sees gendered bodies as a means of deconstructing gender. However, transhumanism rejects biologically gendered bodies because they accept inverted gender essentialism. Here gender is negative and fluid. For example, gender roles like reproduction would not be consigned to a gender but technological incubators. Nikki Olson and Hank Pellissier believe that pregnancy is

one of the riskiest and most unpleasant things women are expected to endure. They further described the womb as a dark and dangerous place, a hazardous environment for foetuses. Olson and Pellissier, like other transhumanists, anticipate humans' imminent "return to the egg," which they taunt as an evolutionarily superior option via artificial wombs. The cyborg, however, recognises equity in diversity, similar to the equity between humans and nonhumans in terms of kinship. The "postgender" in transhumanism embellishes disembodiments while that of the cyborg acknowledges the embodiment of gender notions (Thweatt-Bates 2012, 91, 88).

4.8. The Cyborg, Kinship and the *Imago Dei*

Apart from boundary breach, the cyborg represents an expression of epistemological and political-ethical kinship with nonhuman animals. Thus, the cyborg is placed at the boundary between humans and animals, advocating for universal kinship. Haraway uses "chimera" alternatively with "cyborg" in an effort to emphasize her concept of dismantling the notions of human uniqueness that places *Homo sapiens* in an ontological category that rejects both animal and machine kinship. Her effort in this respect becomes even more vivid in her 1997 work, "Modest_Witness@Second_Millennium. FemaleMan©_Meets_OncoMouse™ Feminism and Technoscience." It focuses on individual nonhuman agents incorporated into human techno-scientific practice. She claims a relationship with the "OncoMouse[19]" as a sister within the specific context of the laboratory technoscientific practices. She posits that lab animals should not be seen as "test systems, tools, means to brainier mammals' ends, and commodities, but there should be the understanding that these sister mammals are both us and not us; that is why we employ them" (Haraway 1997, 82). Elain Graham, the theologian, points to Haraway's illustration of the Edenic story about "the formation of an inclusive, ethical, planetary coalition of species at ease with their own ontological ambivalence" (Graham 2021, 18) as Haraway's own illustration of the fall narrative an engagement with theology. She links the OncoMouse with the biblical "suffering servant," a sacrifice that possesses redemptive significance (Graham 2021, 18).

Thus, besides the cyborg representing the breakdown of the boundaries between the organic and mechanic, the boundary-crossing between animals and humans is high on her cyborg's transgression narratives. The kinship perspective appears to be a major focus which might have informed Haraway's current focus on companion species (Nicholas & Haraway 2006, 141). Haraway makes a clear point that humans are responsible for how they construct relationships

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[19] The OncoMouse™ also called the Harvard mouse, is a genetically modified laboratory mouse (Mus musculus) based on Harvard University scientists Philip Leder and Timothy A Stewart's modifications. The modification is designed to carry a specific gene called an activated oncogene purposely for cancer research. Haraway claims kinship/sisterhood with all her "characters" such as cyborg, OncoMouse™ and companion species.

with the nonhuman agents, in the laboratory, in the wild and in their homes. She thus calls for a retrospective reflection on human evolutionary history in relating with other species. The narrative challenges the theological concept of the *imago Dei* which apparently ascribes a privileged place for humans in nature (Haraway 1997, 52, 79).

The *imago Dei* doctrine is often seen within the idea of domination. This is because classical and contemporary understandings interpret it substantively within the idea of dominion. It places the human species in a privileged position that fosters anthropocentrism. Thus the utility of animals in research and any anthropocentric ends lacks ethical and moral repercussions. This brings theology at odds with Haraway's cyborg. However, other understandings enrich the relationship between the theological concept and Haraway's cyborg. Midson sees the need to shift from a substantive understanding in recognition of humans' intricate relationship with various actors in nature. He explains that the relational view of the *Imago Dei* encompasses the recognition of the image of God as imminent in diverse systems in the cosmos while focusing on the compassionate aspect of God that is a reminiscence of His imminence in all creation. He believes that relationality decentralizes the human notion, recognizing humans' kinship with all other actors that create intricate dynamic relationships with everything in the cosmos in ethical ways (Midson 2018, 271).

The relational view of the *imago Die* concept reinterprets the "domination" notion into responsibility. Humans' relationship with the nonhuman other means an obligation to care for the biodiversity in nature where God is visible through the creation, and His compassion flows through all creatures. An analogy can be drawn from a relationship between children and their parents. Parents "dominate" children through responsible care; while preventing them from doing things that might be detrimental to their (children) welfare, they ensure their safety and freedom. For example, parents may prevent their kids from eating too many candies, staying in insanitary environments, and playing games for a long time. However, they are translated into care, though the children would like to have their ways. The dominating and ruling associated with the *imago Dei* concept does not mean disparaging and oppressing to anthropocentric ends. Indeed Hefner sees the concept as a declaration of the existing relationship between God and the world (Hefner 1993, 239).

Thweatt-Bates draws attention to Barth's textual exegesis of Genesis 1:26–27, which focuses on different portions of the text, leading to a relational rather than substantive interpretation. Barth's exegesis brings out a concept of human uniqueness that inculcates kinship with the rest of creation. The fact of scriptural truth that reveals human embeddedness in material creation and continuity with the nonhuman community is presupposed, and the concept of the *imago Dei* is reinterpreted as "emerging from nature itself" (Thweatt-Bates 2012, 115, 118; Shults 2003). Barth's work is a departure from the interpretation of the *imago Dei* that provides humans with the right to dominate the nonhuman other to an anthropocentric end. Rather it means the responsibility that requires a relationship. The responsible relationship with the nonhuman other constitutes

unity in diversity. However, the concept of uniqueness that privileges one species over the other is what Haraway describes as the last beachheads of uniqueness that have been polluted if not turned into amusement parks (Haraway 1991, 152). The cyborg and *imago Dei* discussions indicate a relationship between the cyborg concept and religious doctrines.

4.9. Theological Engagements with the Cyborg

Haraway cyborg does not only challenge and oppose cultural perceptions of what is understood as human and nonhuman, organic and machine, nature and artificial but also commonly held notions of God and Goddess. She opposes religious metanarratives in general and Christian tradition, including the biblical narrative of God together with the cultural narrative of nature. She expresses atheistic themes in her narratives, indicating that divinity is obsolete. She even expresses the view that teaching Christian creationism should be fought as child abuse. These declarations set the cyborg in opposition to the culturally dominant Christian narratives and religion in general. Therefore, theological engagement with the cyborg could be seen as a fraught enterprise (Haraway 1997, 162; 1991, 152). She prefers to be a cyborg that unites the living and non-living and ensures horizontal transcendence rather than a goddess that creates dualism between the divine and humanity, where there is even hierarchical domination of masculine divinity over feminine goddess representing vertical transcendence. Nevertheless, she seems fascinated by her "trickster figure" and the dynamic contradictory positions attributed to Him (Haraway 2000, 90, 89).

His incarnation is a breach of the existing dichotomy of the divine and human, Immanuel, the embodiment of God within matter, disrupting the gnostic dichotomy of evil body and good spirit. Christ Jesus represents the excellent spirit in an "evil body," abolishing the religious dichotomy between the extremely holy and hopelessly desecrated. The Christian doctrine of incarnation challenges every form of dualism between the sacred and secular as God transcended not beyond Himself but within nature calling the process Immanuel, God's immanence in nature. The incarnation represents a deconstructing of dualism between the sacred and the profane, immanence and transcendence, metaphysical and physical, where Graham's cyborg and goddess hybrid are fulfilled (Graham 2021, 19). Similarly, Anne Kull posits that the incarnation of Christ in terms of Haraway's cyborg signifies the fusion of materiality and spirituality (Kull 2001, 284).

Graham sees the need for blurring dichotomies such as those between sacred and secular in what she terms "post-secular." She posits that post-metaphysical theology is needed for posthumanism's theological engagement in which the binaries of transcendence/immanent, sacred/secular, and spiritual/material are deconstructed (Graham 2021, 16, 18). She alludes to Haraway's sacramental materiality where the sacred suffuses the material signifying divine grace and a unity of spirit and matter. She sees such unity as crucial, facilitating the unity of

transcendence and incarnation/immanence that abolishes dualism associated with the goddess and cyborg (Graham 2021, 18). Two central Christian doctrines seem to respond to Graham's proposal for post-secular, post-metaphysical concepts, the incarnation of Christ and resurrection of the body. The two doctrines present scenarios where the metaphysical subsumes the physical and deconstructs the dichotomies therein even more deeply.

The incarnation of Christ represents the material suffusing the sacred. Christ's divinity was within His material body, indicating a sort of cyborg egalitarianism. However, in the sacrament, divinity suffuses humanity. The doctrine of incarnation provides the avenue for the divine to transcend horizontally and immense in the matter. The process allows materiality (flesh) to transcend into the divine marking the end of dualism, a challenge to the hierarchical notion of divine and humanity. The immortal (God/Christ) experiences mortality and the mortal attains immortality with the proclamation of the resurrection of Christ. The bodily resurrection of Christ reinforces the expectation of the *eschaton*, when the dead in Christ are raised with transcended nature like that of Christ Jesus. The body then triumphs over senescence and mortality with a transformed nature, not as an immaterial soul. The delight of transhumans is made available by faith to the entire humanity and their environment. Oliver Crisp put it this way, "all human beings have a nature that is capable of such hypostatic union, in principle. And all human beings are given a nature that has the requisite image of God so that God the Son may unite himself with that nature" (Crisp 2016, 63).

Christian challenge to dualism is further entrenched with the belief in the resurrection of the dead, the risen Christ serving as surety to what to come. Christ's bodily resurrection serves as the hope for the faithful. Thus Christian aspiration to transcend limits is horizontal and contradicts body-soul dualism, where the aspect of the person which is perfect leaves the flawed body into eternity. Just as God dwelt fully in bodily form, so will humans dwell fully, immersed in nature. Death in Christianity marks humans' immanence with the rest of nature, where their bodies disembody and re-embody with nature in absolute transcendence within even the genetic codes of the microbes. Therefore, the cyborg is Christian, and Christianity corresponds to the cyborg metaphor. Thweatt cautions that the cyborg is resistant to dualism, a flight from the body (Thweatt, 2021, 79). Similarly, the incarnation of Christ and resurrection of the body resist body-soul constructions and emphasises psychosomatic unity.

Despite Haraway's atheistic stance, there is a relation between Christian doctrines and the cyborg. The relationship has elicited engagement with Haraway's cyborg by many theologians, including Anne Kull (2000, 2001, 2002, 2016), Philip Hefner (2004), Scott A. Midson (2018), Brent Waters (2006), and Jeanine Thweatt-Bates (2012). Haraway's cyborg's rejection of the divine itself constitutes an engagement with religion. Furthermore, religious figures such as Jesus Christ are discussed together with the theological understanding surrounding the image of Christ in the cyborg narratives. Midson rightly posits that a theological engagement with the cyborg is meaningful and fruitful. However,

"in order to challenge problematic notions of the human, as Haraway does with her cyborg figure, it is not enough simply to identify and point blame in one direction, namely towards theological traditions" (Midson 2018, 23–24). Theological narratives highlight the porous nature of exclusivism, classism, racism, sexism, and nationalism, where the cyborg concept is needed to mend. Unfortunately, Haraway's notion appears to script a cyborg, which is ahistorical, that contributes to separation notions while at the same time advocating for unity.

Anne Kull has written extensively on the figure of the cyborg. Drawing from the perspective of Haraway, she challenges the normative dichotomies between the term "natural" and "artificial," "human" and "nonhuman" and "materialism" and "divinity" (Kull 2000; 2001). She expresses the opinion that it may be easy to identify the cyborg, but at the same time, it is not easy to discern the cyborg figure. Nonetheless, it challenges the perception of the human in relation to the nonhuman other and cosmos-related occurrences. The cyborg is represented in different ways, ranging from speciation, a fusion of human and machine, human and animal, or even human and the supernatural. Some instances that conjure the cyborg image are the crone, such as the Dolly, which represents the ultimate blurring of classificatory species boundaries, and Robocop, in science fiction, a representation of a fusion of organism and machine. The images of the werewolves and vampires represent what is nonhuman and human, the physical and spiritual, and symbols of both the fictional and the mythical. Kull explains that the cyborg can mean simple medical devices such as prostheses and more complicated ones such as pacemakers. In addition, she uses the cyborg to express human affinity with technology, kinship, and Christology (Kull 2016, 299).

On kinship, Kull brings out the challenges associated with the Judeo-Christian perception of humans as privileged members of the biosphere, created in the image of God with the ability to relate with the celestial realms. She asserts that such a position nurtures the claims that humans have the right to destroy nature toward anthropocentric ends. Referring to Hefner's created co-creator, she stresses the need to recognise that humans are not islands of themselves but are intricately linked to nature and other creatures (Kull 2002, 279–280). Kull believes that human kinship with the nonhuman other is an innate part of humans and affects humans' desires. For example, she explains that kinship might account for the desire to cross over, which is expressed in arts, poems, songs, and stories.

> But however firmly they may have believed in the anthropocentric barriers and uniqueness of themselves, people have always been fascinated by the thought of crossing these barriers. Since ancient times, poets have written about humans who take on animal form and animals that seem to act like humans. There is a special place in the literature of horror for creatures dwelling in an intermediate zone between the species, werewolves, vampires, and beasts in human shape (Kull 2002, 280).

Kull attributes the strong desire of humans to cross the line between humans and the nonhuman other to the strong relationship and interdependence arising from universal kinship. The desire to cross the line and transgress the human/nonhuman barrier is thus inherent in humans, marking the cyborg nature of the human species that like other species are interdependent and subject to modifications.

4.9.1. The Cyborg Christ

Kull's (2001) article, "Cyborg Embodiment and the Incarnation," expresses the view that the image of the cyborg upholds the concept of embodiment and the logic of the Christian doctrine of the incarnation. Thus the "posthuman" can have an affinity with Christology. She explains that the incarnation in the context of the cyborg represents emancipation and choice. Kull presents a theological interpretation of the cyborg, which projects Jesus as a hybrid of the divine and human. Hybridity ignites the sense of unity between genetically unlike organisms, here expressed between the divine and human.

Kull's rendition is in contrast to Waters, who objects to any form of Christological hybridity by insisting on the divinity of Christ. Although he admits that Jesus represents both the divine and humanity, he objects to a possible mixture of the two. However, Waters makes no disparities between the cyborg and transhumanism in his discussion of the "posthuman" but consistently mixed the cyborg concept with the upload. He projects the view that "posthuman" represents the end of faith in Christ and thus annihilation of the Christian race. He explains that Christ became human to redeem humans but not "posthuman." Waters refers to the cyborg, but his focus appears to be on transhumanist projections. Thus he ignores the primary themes of the cyborg, such as embodiment. Furthermore, he ignored the "posthuman" nature of the concept of redemption inherent in Christian eschatology (Waters, 2006, 106, 95).

Kull, however, approaches Haraway's cyborg with the understanding that Haraway uses the cyborg as an analytical tool and metaphor for all humans' technological relationships and as a signifier of contemporary postmodern times, marking the changing relationship between humans and technoscience (Kull 2000, 35). She follows this conviction and utilises the cyborg as an analytical tool and a metaphor in her cyborg Christology. Thus the figure of Jesus falls within the cyborg category with Kull, but Haraway places the Christ figure relatively close to the cyborg but not within the cyborg category. Instead, she classifies Jesus as a "trickster figure." Thus, Kull's analyses of the cyborg Christology introduce scientific understanding into theology by describing Jesus as a hybrid, while Haraway brings out the theological enigma of the figure of Christ.

Both Haraway and Kull introduce some theological challenges associated with understanding the figure of Christ in their work. First, Jesus is portrayed as a figure that defies the generic understanding of both God and human. A figure that breaks fidelity to specific material conception, Jesus represents a hybrid

reality that dismantles the notion of generic, pure, and universal humanity (Haraway 1991, 90; Kull 2001, 284). Hybrids of different species are usually sterile. Jesus Christ left no biological offspring and lived on the borderline of humanity and divinity, therefore fulfilling the description of a hybrid. However, He also defies what is understood as a hybrid in science by simultaneously demonstrating full humanity and full divinity. As a figure of humanity, Jesus is thus a post(human) who upsets accepted notions about the meaning of humans and disrupts common assumptions about God as well.

Kull's cyborg Christology can serve as an analytical tool that places the cyborg Christ at the border between humans and God, a possibility for the recognition of Human-God, and ultimately explains Haraway's "trickster figure." Kull sees theological and Christological opportunity with the image of the cyborg while acknowledging that it destabilises what it means to be human and troubles what it means for God to become human. Her cyborg Christ does not present only Jesus as a hybrid but the incarnation (His manifestation process) as a hybridity of God and human into Haraway's idea of cyborg. She thus identifies a relationship between the incarnation concept and Haraway's hybridity idea: a cyborg and a chimera. The Christ figure in the context of the cyborg signifies redemption of "creatureliness" and fusion of materiality and spirituality. It is in line with the Christian concept of breaking the barrier between God and humans through Christ, thus a theology of reconciliation (Kull 2001, 284).

For Haraway, Jesus is a "trickster figure" from the very beginning. This is because of the multiple and mostly contradictory forms ascribed to Him by the Christian tradition. For example, He is referred to simultaneously as the King of Kings and the suffering servant, a criminal and innocent, scapegoat and saviour, God and human. However, in each scenario, He is absolute; King of Kings, Lord of Lords, not just a servant but a suffering servant, a lamb, a lion, a victim, and a saviour. Thus, He is not a mixture of two but absolute in each status; fully man and fully God. Though for Christians, Jesus came to signify "the union of humanity and divinity in a universal salvation narrative, His nature is difficult to comprehend (Haraway 1991, 4).

Haraway, nevertheless, identifies a close affinity of the figure of Jesus to that of the cyborg; He is an illegitimate son with whom, as "Sojourner of Truth observed, Man had nothing to do with Jesus, after all, He came from God, and a woman" (Haraway 19921 90, 89). Jesus's connection with the Jewish patriarchal society was vaguely similar to the cyborg. The "trickster figure" is akin to the cyborg, but they remain distinguishable in the context of Haraway's cyborg. However, Kull provides a link between the cyborg and Christology while indirectly explaining the trickster figure of Haraway. By so doing, she identifies Christ within the cyborg category, fusing the trickster figure of Haraway and her cyborg image, thus constituting a breach of the conceptual dichotomies of the two icons. Barrier breaching is a central feature of the cyborg concept, an aspect that links the concept with Hefner's created co-creator theology. The relationship between the two constitutes discussions for the next topic.

4.9.2. The Cyborg as a Sibling to the Created Co-creator

Hefner's metaphor of created co-creator has various similarities with Haraway's narrative of a cyborg as a proposal for interpreting human experience and creativity:

1) They both represent humans' engagements with technology and exploration of possibilities with the non-human other. 2) Hefner expresses the relatedness of his created co-creator concept to Haraway's cyborg by placing the two metaphors in a dialogue. He explains that a common meaning central to the ideas of the cyborg and created co-creator is the crossing or breaking down boundaries, both figuratively and literally.

The created co-creator represents a boundary breach between humanity and divinity, and the cyborg, living and non-living thus, they are siblings (Hefner 2004). There is, however, an apparent opposition between the two concepts. The created co-creator concept is seen as humanist inclined, while Haraway's cyborg is post-humanist. For example, Maidson identifies anthropocentric elements within Hefner's concept while the cyborg seeks to displace the human from the centre of the affairs of the cosmos. According to Maidson, the cyborg, which represents ambiguity and vagueness, stands for schism, while the created co-creator represents relationalism that portrays the *imago Dei* identity. The *imago Dei* in a way celebrates human uniqueness and accords a privileged position to humans. In contrast, the cyborg challenges the concept of the human and seeks to reduce and pull down the human notion along with established data that sustains the current identity politics. Hefner emphasizes relationships with God and ascribes creation to the divine. In contrast, Haraway "blasphemes" in her atheistic stance; she rejects Edenic origin and the normative notion of nature (Midson 2018, 149–154).

Hefner nonetheless focuses on imagination which he believes is common to both icons. He traces the origin of the cyborg to the imagination of two scientists and explains that created co-creator similarly requires imagination and creativity, which unites the created with the Creator. "Thus, the basic idea of the cyborg was to fuse the human and that which is not human, to enable the human to work in an environment that required such a fusion. The boundary between human and technology is transgressed in the very idea" (Hefner 2004, 3). Thus, the created co-creator in the context of the cyborg represents the fusing of humanity with God that makes humans co-creators. Such fusion inculcates the ability to imagine and create in order to affect evolution. The cyborg also represents the possibility of fusing science and theology in the context of created co-creator (Kwakye 2020b, 296).

Furthermore, both are metaphors; the created co-creator represents human creative potential in line with God's purpose for creation, and the cyborg represents a similar endeavour. However, Donna Haraway insists that her cyborg is not from Eden and that it has no links with biblical stories. However, a created co-creator can find biblical sources among her/his progenitors. Nevertheless, both authors use multiple sources thus, both created co-creator and cyborg can

be called, using Haraway's words, "polluted categories" (Haraway 2000, 291). On the one hand, the cyborg sources are linked with World War II and nuclear culture writing, and on the other hand, the created co-creator sources are linked with all pollution, including the nuclear pollution whose era ushered in the cyborg.

Eden represents ambiguity, a paradise, nature, innocence, and a loss of innocence, including expulsion and seclusion. Seclusion is included because one cannot get in or out, and access to Eden rests on God's decision, according to the Judeo-Christian doctrine of creation (Kwakye 2020b, 296). The account indicates that humans were created in Eden, which has been used to critique urban settings. Technology is perceived in relationship with the urban and the artificial instead of nature, which is linked with rural settings (Genesis 1–11). The prevalence and potency of technology are perceived as focused on threatening the harmony of the natural environment, which might have informed Haraway to excuse her cyborg from Edenic bliss (Midson 2015, 104). Haraway's posture is a way of describing the cyborg's defiance of these ontological boundaries by referring to it as "unnatural" in context within the prevalent essentialist and dualistic understandings of nature. Because the hybridity of the cyborg, and its manufactured, technological origin, challenges the expectation of a single, given, biologically inherited "nature." "In a larger sense, a cyborg hybridity also calls into question the concept of "nature" as the determining origin of given biological natures" (Thweatt-Bates 2012, 26).

The created co-creator concept, however, reveals that technology is not a stranger in Eden. Eden is ambiguous, and so is human creativity and technology. Within Eden, itself perceived as the citadel of nature, marked the beginning of creative work. Indeed, theologically, nature should be acknowledged and appreciated as God's creation and the only medium of understanding the world (Kwakye 2020b, 297). However, nature is not just the medium of knowledge but also human purpose, which is to co-create (Hefner 1993, 40–41).

There is an intrinsic connection between the nature of the created order and the Creator's nature, which fully reveals in humans. This *createdness* connects the human person to God and the natural world. Theologically, technology began in a relationship with both God and nature. Furthermore, the created co-creator introduces avenues for caring for nature by first understanding it through science and the application of technology. It represents a relationship between God, humans, and technology. Thus, just as the cyborg represents unity, created co-creator equally stands for the unity of what is perceived in common understanding as unrelated. The created co-creator is identified with nature which technology belongs to; in contrast, Haraway's cyborg has nothing to do with nature (Hefner 1993, 4, 41).

However, the cyborg is not detached from nature because Haraway herself describes cyborgs as "creatures simultaneously animal and machine, who populate worlds ambiguously natural and crafted" (Haraway 1991, 149). She explains that a cyborg image displaces accepted meanings by forcibly dragging meanings from incommensurate fields into a union with each other. Thus, the

cyborg is part of nature and also technology, providing the platform to unite diverse ideas. Similarly, the created co-creator draws meaning from diverse incommensurable fields such as theology, religion, science, technology, anthropology, philosophy, psychology etc., into union with each other, including the effort to unite the Creator and the created (Kwakye 2020b, 297–298).

4.10. Conclusion

❖ The term "posthuman" is seen as ambiguous. It is projected in the narratives of posthumanists, transhumanists, and other philosophies differently. In posthumanism, it represents an exploration of the porous character of boundaries associated with humans and the nonhuman other such as machines, animals, and plants. Haraway's cyborg has become a significant symbol in the "posthuman" discourse, and as a posthumanist icon, it has differences and similarities with transhumanism and religions. This chapter examined common notions in the "posthuman" discourse, such as "human," gender, and their relationship with religion.

❖ Posthumanism is a philosophical perspective of how global change is implemented with conceptualisation that is antithetic to humanism. Whereas a humanist viewpoint recognises the human as conscious, autonomous, intentional, and distinctive in acts of change, posthumanists perceive agency as distributed through dynamic forces in which the human participates but does not completely intend or control. According to posthumanism, humans are physically, chemically, and biologically enmeshed, dependent on the environment. Thus humans act through interactions that create effects, habits, and reason, possessing no attribute that is uniquely human but is instead made up of a larger evolving ecosystem. Thus they transcend vertically by identifying with the other.

❖ A cyborg in "posthuman" narrative is an icon that represents a hybrid that is neither fully organic nor fully mechanical; the hybridity has been recognised as simultaneously holding both threat and promise. It may represent concurrently the enhancement and extermination of humans. According to Haraway, the cyborg represents the breaching of human/animal boundary, organic/machine, and physical/nonphysical. It is distinguished from transhumanism with its insistence on embodiment. However, the cyborg harmonises with Christian theology, which emphasises the body as a means of worship and salvation, proclaiming the incarnation of Christ as God in the body who died and was bodily resurrected. The doctrine disrupts the dichotomy between the divine and human, living and non-living, holy and desecrated, sacred and secular, males and females vertical and horizontal transcendence and even embodiment and disembodiment thus, all dichotomies end in Christ Jesus.

❖ When it comes to gender, Christian scriptures recognise the significance of different embodiments, rather than different sexes, signifying recognition of

diversities in humans' bodies and their unity in Christ. Thus, the postgender in Christian notions coincides with Haraway's narrative, which aspires to deconstruct gender and transhumanists' genderless notions.

❖ The primary point of departure between Haraway and transhumanism on postgender is that Haraway sees gendered bodies as a means of deconstructing gender. However, transhumanism rejects biologically gendered bodies because they accept inverted gender essentialism, where gender is not just fluid but negative.

❖ Haraway presents her cyborg as a breakdown of the boundaries between the organic and mechanic, animals and humans, physical and non-physical. Apparently, the cyborg challenges many theological concepts, such as the *imago Dei*. However, a relational view of the doctrine can translate the "dominate" aspect into responsibility, recognising humans' kinship that creates intricate dynamic relationships with everything in the cosmos.

❖ Haraway cyborg does not only challenge and oppose cultural perceptions of what is understood as human and nonhuman, organic and machine, natural and artificial but also commonly held notions of God and Goddess. Furthermore, she opposes religious metanarratives in general and Christian tradition in particular, including the biblical narrative of God. She is critical of the cultural narratives of nature while admitting that the narratives of nature cannot be ignored. Nonetheless, the cyborg concept is religious in many aspects, and so are transhumanist musings. Both have attracted the attention of many theologians and have received fruitful religious engagements.

❖ Transhumanists want to get into the paradise of immortality, similar to the Christian vision. In contrast, cyborgs do not want to return to the Garden of Eden since they lack affinity to the kind of origin stories that do not acknowledge human creativity and species egalitarianism. The cyborg represents enhancement that improves the species but does not save them from sin and susceptibility to senescence, diseases, and death. Transhumanism seeking to provide solutions in this regard wishes to do away with the organic aspect of the cyborg and focus on disentangling the mind from the body through technology.

CHAPTER FIVE. Techno-Transcendence; "Posthuman" Discourse in Transhumanism

5.1. Introduction

The "posthuman" in transhumanism is a being without the senescence, diseases, and the inevitable death associated with *Homo sapiens*. It has broader cognitive abilities and freedom. It can operate in a rich virtual world as much as the physical and live in space (More 2013, 4). Natasha Vita-More (2015), a transhumanist artist, has painted various representations of the possible "posthuman" nature. The images include a meta-brain, uploaded with an enhanced cognitive self-correction system, a smooth skin composed of nano-particles and prosthetics, including the possibility of changing sex at will. Her "posthuman" image possesses the ability to procreate in every assumed gender. It has nanotech memory and circulation systems far more efficient than what pertains to humans. This image constitutes the predominant image of "posthuman" in many strands of transhumanism. Such a "posthuman" concept is similar to the religious perception of the afterlife. The human species is expected to be transformed into a post-human saint with similar characteristics. Transhumanism is significant advocacy for technological transcendence. Its "posthuman" concepts represent the possible nature of the transcended human species, making them part and parcel of this study. Transhumanists' posthuman accounts have several characteristics of Christian doctrines, yet they see religion as a hindrance to progress. This chapter looks at transhumanist aspirations and their relationship with religion.

Although transhumanism is not a monolithic philosophy because it comprises diverse and broad ideologies, it has an organisation and an official declaration. Two philosophers, Nick Bostrom and David Pearce founded the umbrella organisation, the World Transhumanist Association, an international non-profit organisation, in 1998. Its ideologies were enshrined in the Transhumanist Declaration, adopted by other groups such as H+ led by Natasha Vita-More (Roco & Bainbridge 2002).

The current membership of transhumanism is estimated at five thousand globally, and they are made up of many geographically separated units, including special-interest associates. These associates are mainly contemporary organisations such as the Institute for Ethics and Emerging Technologies, Alcor Life Extension Foundation, the Extropy Institute, the Foresight Institute, the Immortality Institute, and the Singularity Institute for Artificial Intelligence that play various roles in the transhumanists movements (Roco & Bainbridge 2002). Transhumanists rarely speak with one voice. In contrast, members of the movement express a range of contradictory longings. Nonetheless, the diverse opinions have several overlapping themes, and many aspirations are common to the transhumanist discourse. For example, almost all transhumanists subscribe to the concept of evolving human nature and the need for indefinite human hap-

piness. Other fundamental beliefs include the desire to utilise a biotechnological enhancement to maximise human cognitive and physical qualities. The idea of radical life extension, and the possible synthesis of humans with the machine, which will ensure concrete immortality, is also generally accepted by all transhumanists (Mercer & Trothen 2021, 19). "Transhumanist" is used in the study to include technologists and advocates who refer to themselves as futurists but promote transhumanist ideologies, such as Ray Kurzweil.

Mainstream transhumanists share the view of Julian Huxley that humankind is the dominant species on the Earth and the agent with the duty to direct and ensure future evolution. Humans are believed to be able to tame the universe and strip it of all existential risks by first transcending their current nature (Huxley 1957, 77). Several proposals have been outlined for attaining such aspirations, such as technological Singularity, archiving, cryopreservation and resurrection of the dead, etc. These views stem from the unique identity ascribed to humans as the mind serving as software that can be copied, archived, and reanimated. These concepts are discussed in detail below, beginning with Singularity. However, this chapter discusses and critiques transhumanism by pointing out the religious undertones associated with their philosophies and disembodiment concepts that promote vertical transcendence. In addition, the discussion covers their perception of human identity, ageing, and death. The term "transhumanism" refers to a set of concepts that supports the use of technology to further humans' evolution.

5.2. Transhumanists Aspirations

One of the dominant themes in transhumanism is the freedom of the *Homo sapiens* from diseases, ageing and death. Bostrom sees the starting point of the transhumanists' aspiration for human freedom from Pico della Mirandola's (1463–1494) Oration of the Dignity of Man (1486). He situates the transhumanist desires within the tenders of Mirandola, which states that humans are neither of Heaven nor Earth, neither mortal nor immortal. Since they are free shapers of their being, they should rise again to the superior orders whose life is divine. Therefore, the aspiration to overcome limitations and reshape the future to influence the evolutionary process is human's purpose (Bostrom 2002). Such desire itself serves as the force binding the various transhumanist institutions together. Furthermore, this inclination is expected to influence humanity to harness technology to usher in the "posthuman" phase of evolution, a dispensation when humans control nature and likely will develop technologies to mitigate the various existential threats to the Earth and other planets (Huxley 1957, 17).

However, the "posthuman" ambition of contemporary transhumanism contrasts with the idea that gave birth to the term transhumanism. Julian Huxley, a humanist, envisioned transcended humans rather than "posthuman." "The human species can if it wishes to transcend itself … in its entirety. We need a name for this belief. Perhaps transhumanism will serve: man remaining man but

transcending himself, by realising new possibilities of and for his human nature" (Huxley 1957, 17). Huxley believed that the human species is dynamic and possesses the inborn abilities to redesign itself and influence the universe, which is humanity's real purpose in life.

Transhumanism represents a future development of super-intelligent machines that far surpass the capacities of human brains in virtually every discipline, including science, creativity, practical wisdom, and social skills. Their expectation includes the possibility of lifelong emotional well-being through a recalibration of human pleasure centres. They seek to realise it by building on what pharmaceuticals do concerning mood alteration. It is expected to drastically reduce negative emotions in one's life and even eliminate bad memories. They are looking forward to what can be called "personality pills" that can exceed what drugs and gene therapy can potentially do to reshape personalities to reflect positive character traits thought to only be attainable through religious disciplines. Max More, a leading transhumanist who is the leader of Alcor Life Extension Foundation and the president of the Human Enhancement Movement, defines transhumanism as follows;

> Transhumanism is both a reason-based philosophy and a cultural movement that affirms the possibility and desirability of fundamentally improving the human condition by means of science and technology. Transhumanists seek the continuation and acceleration of the evolution of intelligent life beyond its currently human form and human limitations by means of science and technology, guided by life-promoting principles and values (More 2013, 137).

Transhumanists focus on anti-ageing and mind uploads that facilitate the merging of humans and technology. Max More and other transhumanists, such as Aubrey de Grey, talk about vastly extended lifespan through gene therapy and other biological measures that could inhibit ageing. The possibility of uploading consciousness into virtual reality through further development of computers and software enables the perpetuation of existence indefinitely as a disembodied consciousness is central to transhumanism. All these notions are intended to alleviate grave suffering and improve human foresight and wisdom. The comprehensive attainment of these characteristics can lead a person from a "transhuman" state to a "posthuman" (Childs 2015, 10, 9).

Transhumanist aspirations have been echoed throughout the centuries. However, what seems to have brought their tenets into the limelight was a 2002 National Science Foundation (NSF) report under the theme: Converging Technologies for Improving Human Performance: Nanotechnology, Biotechnology, Information Technology and Cognitive Science (NBIC). The NBIC Report emphasised convergence of techno-science; "If the Cognitive Scientists can think it, the Nano people can build it, the Bio people can implement it, and the IT people can monitor and control it" (Roco et al., 2013). Although the NBIC report does not officially endorse transhumanism, the recognition of the importance of convergent technology and sciences in shaping the future is within

the realm of transhumanism. Indeed, transhumanists such as William S. Bainbridge and Mihail C. Roco have sourced funding toward their vision under the theme of "converging technologies" (Roco & Bainbridge 2002).

The NBIC event created new opportunities for funding studies associated with convergence science. Prominent institutions, including US federal agencies, turned attention to and became interested in this area of study, which appears to give legitimacy to the claims of transhumanists. Transhumanists see convergence as legitimised by history and government analysts; therefore, their aspirations are scientific and realistic. They recognise their faith in convergent techno-sciences for enhancement as comparable to religious faith. They have developed their aspirations based on their definition of what they perceive to be human (Bavinck 1980).

Transhumanists believe that the current technology is not sufficient for their purposes, but scientific research will soon open the door to human enhancements that currently exist only in science fiction. Other transhumanist themes include space colonisation, the possibility of creating super-intelligent machines, and other potential developments that could profoundly alter the human condition. The sphere incorporates economic, sociology, institutional designs, cultural development, psychological skills, and convergent technology in shaping the future. Transhumanism with solid religious themes, notwithstanding, excludes religion from the sphere of their aspirations (Bostrom 2005b, 87).

5.3. Transhumanists Views on Cyborg and Religion

Some scholars see transhumanism as the advancement of the cyborg concept. Cary Wolfe states that "arguably the best-known inheritor of the cyborg strand of posthumanism is what is now being called transhumanism" (Wolfe 2010, xiii). Transhumanists, however, distance their aspirations from the concept of the cyborg and also religion. Indeed, some transhumanists regard the cyborg as primitive and a concept that distorts transhumanism. They also regard religion as an obstacle to their aspirations, though some transhumanists still involve both religious ideas and the cyborg concept in their aspirations. When it comes to the cyborg concept, More posits that transhumanism generally looks down on the cyborg concept as primitive and unhelpful because the distinction between the two can be described as a square peg and a round hole. He expresses the sentiment that the cyborg concept has been forced on transhumanists and used as the basis to accuse transhumanism of seeking to mechanise the human body. "Transhumanists has been percieved as fearing, hating, or despising the flesh because of the cyborg concept" (More 2013, 143).

He implies that while the cyborg concept sees the human biological body as disgusting or frightening, transhumanism does not. He stresses that transhumanism finds the body to be a marvellous yet flawed piece of engineering. The evolutionary process that is blind could hardly design a better being. There-

fore, it is inevitable to enable individuals to alter and improve their bodies according to what they perceive as the standard (More 2013, 143).

More's notion is a recipe for chaos because if everyone can use available technologies to redesign themselves according to their fantasy, there will be a threat to social cohesion, as admitted by Bostrom. The scenario invokes images of invisible mechanical persons moving in mid-air, a saturation of diverse personalities that are difficult to regulate. The threat to lives will increase because the tendency of malevolent minds to weaponise themselves for malicious and destructive activities would be imminent. References can be made from the creation of computer bugs, viruses, and hacking software, which can bring organisations to their knees (Bostrom 2005b).

Regarding religion, More's statement is at odds with the Biblical account in Genesis. God pronounced that creation is good six times, and after creating Adam and Eve, God declared that everything created is "very good." Although the evolutionary process might be blind, it serves as an instrument for creation by a perfect God who acknowledges creation as good. The introduction of human beings into creation made it very good. A good product, nevertheless, is not immune to limitations. Moreover, excellent products are those that are subject to modification and improvements. Also, good products become beneficial when the user understands the product's specifications and realms of use. Nature is still a mystery to humans despite the vast availability of accumulated knowledge. The lack of ample knowledge impedes the ability to maintain and harness it to human satisfaction. Nature is not created to be perfect from the human perspective. The seeming imperfections open up many possibilities for humans to be co-creators. Nature serves as a medium of creativity and fulfilment for the entire human species rather than the entrenchment of individual humans. The fact that nature is not an ambit of individual immortality demonstrates that the evolution process is not individual-centred but respects generations of species. Different minds and ideas are allowed to experience life, contribute to the evolutionary process, exit, and be succeeded by descendants. Longevity should be embraced in terms of generational continuity of phenotypes and diversity rather than individual immortality. Just as nature is imperfect, so are the human species and their technology. Nevertheless, they work together to make the universe suitable for survival.

While More acknowledges the relationship between transhumanism and religion, he points to the challenge associated with religion to progress. Many transhumanists see faith as a major hindrance to their aspirations (More 2013, 3, 8). Ted Peters, however, points out that such perception is indeed a mistake because religion, in general, is open to change, and Christianity, in particular, has always stood for human improvement and betterment. He stresses that Christianity nonetheless will oppose every experiment that counters human dignity and imperils social cohesion (Peters 2010, 152). Russell Blackfold, a transhumanist advocate, agrees with Peters' assertion. Nevertheless, he concludes that despite Christianity's openness to change and acceptance of technological innovations, it is not open to the kind of technology that is "transhuman," instead, they are

significant roadblocks to transhumanist aspirations (Blackford 2010, 178). Thus, the discourse between the two, a theologian and atheistic transhumanist, leads to the conclusion that Christianity is technophile in nature. However, it will likely resist technological interventions that are products of pseudo-science, which are likely to cause harm to the consumer or threaten social cohesion.

Transhumanists nonetheless, see religion as a major hindrance to human freedom and the success of their aspirations. They sometimes accuse the Church of suppressing individual freedom in line with the recognition of God as a Monarch whose will should override that of humans. They believe that the true human freedom that transhumanists aspire would violate the rights of divine kings, so even the most secularized forms of religion will brand transhumanists' aspirations sacrilegious (Bainbridge 2005, 92).

Nevertheless, transhumanism itself is full of religious themes. For example, Kurzweil's version of Singularity is a mixture of religious eschatological flavours, although he is one of the transhumanists who constantly antagonize religion. He accuses religion of being guilty of what he describes as "deathist rationalization;" rationalizing the tragedy of death which is entirely evil as if it were good. In his view, nothing good comes from death, and for religion to claim otherwise is deceptive. Nonetheless, his dualistic futurism, which focuses on the essence of the human, is highly religious (Kurzweil 2006, 372). Christians and other religions that believe in an afterlife understand death as a passage from this world into the next. Thus death is not a cessation of life or loss of information, as perceived in transhumanism.

Brent Waters (2006) explains that both suffering and death mark the beginning of a new life. The griefs and limitations of the human condition are mitigated not through a denial of death but through its embrace. This is because death is ultimately defeated through the cross and resurrection of Christ. In other words, the perfection of humanity does not occur by the negation of the body but by embracing corporeal humanity. Similarly, Karl Rahner sees death as the only permanent door to the absolute. He, however, insists that it is essential to employ technology to enhance the human. He explains that death should not be seen as something to overcome but as the door to absolute transcendence (Rahner 1972, 221–223). While the eschaton tallies, there is the need to enhance through technology, at the same time, there should be the readiness to embrace death. We can say that while transhumanism seeks to evade death, Christianity perceives death as a possible door to eternity, representing transcendence through mortality. However, both aspire for something similar in the future. For example, Christians hope that Christ Jesus will herald a new order of freedom without pain and death. A realm provided by a sublime intelligence that rules lovingly overall, similar to transhumanist aspiration. Kurzweil state, "Once we saturate the matter and energy in the universe with intelligence, it will 'wake up,' be conscious, and sublimely intelligent. That's about as close to God as I can imagine" (Kurzweil 2006, 374–375). Thus Kurzweil, like many transhumanists, views the future in theistic terms like Christianity.

Other technological advocates such as Huxley and More look for religion without God but as a concept that addresses meaning. Huxley advocated for the notion of a post-biblical religion, conceivable within the framework of a definition of religion that was not supernatural but natural, not dualistic but monistic. He objected to theistic religion under the notion that it is full of magic and superstition. He also averred to a strong and popular tribal notion of a God who intervenes in the universe's workings and in the affairs of individual persons based upon prayerful appeals and deistic whim (Huxley 1957).

Just as transhumanists have criticized religious tenets over the years, many theologians have critiqued transhumanism by pointing out flaws associated with their agenda. Nonetheless, some notable theologians have engaged transhumanism by focusing on the positive aspect of their aspirations in their work. Examples are Karl Rahner, Ted Peters, Hava Tirosh-Samuelson, Ronald Cole-Turner and Philip Hefner. Cole-Turner, who has written extensively on transhumanism, traces the origin of the term "transhumanism" to Christian roots. He, therefore, perceives a strong relationship between the two. Cole-Turner traces the term to the Christian poet Dante Alighieri (1265–1321), who used the word "trasumanar"[20] to describe the transformation associated with the Christian eschatological hope long before Huxley. Cole-Turner posits that Dante invented the term to describe the transformation within the Christian aspiration as humans making their way by grace to glory (Cole-Turner 2015, 20). Natasha Moore, the leader of H+, also traces the term to Dante, acknowledging that the term predates Huxley (Vita-More 2012, 78–79). Both scholars explained that Dante used "trasumanar," to mean transcending beyond the flesh. According to Cole-Turner, Dante coined the term to demonstrate that "to go beyond the human is something that cannot be described in words" (Cole-Turner 2015, 20).

Cole-Turner urges Christians to reclaim the term "transhuman" because Dante invented it to describe a transformation central to the Christian gospel. He sees the core of transhumanism as genuinely Christian because the fundamentals rest on Christian revelation. He explains that his conviction is based on the understanding that the hope of transcending beyond the present human condition and entering into an indescribably rich and inexhaustibly glorious realm is the core of the Christian gospel. He explains that transhumanists' root is located in the doctrine of the incarnation, God manifesting in the flesh to open the avenue for human transformation into a new and glorified state. He suggests that Christians and transhumanists should be considered visionary partners rather than opponents. Cole-Turner, however, acknowledges the difference between the Christian vision and that of transhumanists. He brings out differences such as the transhumanist spin on evolution, dependency on technology and rejection of a creator God (Cole-Turner 2015, 21, 22).

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[20] The term derived from the Italian root was about the Moon and Paradiso. Dante, in a poem, coined the term to describe his ascent from the Terrestrial Paradise to the celestial realm of the blessed, which cannot be expressed adequately in words. He used the term "trasumanar" to represent "to transhumanize," which is to pass beyond humans.

Similarly, Philip Hefner expresses positive views on some aspects of transhumanist aspirations. He classifies transhumanist aspirations into two, 'Upper Case Transhumanism (UCTH) and Lower Case Transhumanism (LCTH). The UCTH involves a fantastical "posthuman" existence parallel to science fiction, which is expected to apply genetics, nanotechnology, and robotics. The LCTH involves the application of enhancement and therapeutic techniques for health and ease of life. Hefner believes that the expression of LCTH is found in the conviction that humans need not settle for their birth nature because human nature can be altered in ways that are deemed desirable. He posits that transhumanism represents a fundamental challenge to understanding human nature and what God intends for humans to become. Hefner believes that transhumanist projection is natural for humans because, as created co-creators, using imagination to solve problems is a natural aspect of their being. Therefore, the encounter with transhumanism is more than an ethical challenge but is synonymous with an encounter with the numinous (Hefner 2009, 166). Rahner sees the need for Christians to engage fully in technological development and provide constructive suggestions that provide data for technological enhancement. He sees only criticism against enhancements as unfruitful. Rahner posits that human enhancement (manipulation) is part of God's plan and the *futurum* within the *adventus*. Thus, no matter how enhancements are conducted on the human, they will only be within the *futurum* and ultimately end in the *adventus* that only God can bring about (Rahner, 1972, 213, 219). Thweatt explains that Rahner acknowledges the difficulty associated with anticipating the *futurum*, which involves planning and the absolute *adventus*. Nevertheless, it is easier to understand by "locating the human activity of 'self-manipulation' as new extension of an essentially human activity, within the mundane future which is itself taking up into the absolute future determined by God" (Tweatt 2021, 83–84).

Christianity, in particular, has been a major contributor to the transhumanists' ideas. There have been ardent Christian individuals who have advocated various ideas that constitute the present day's transhumanism. For example, Nikolai Fyodorovich Fyodorov (1829–1903) used Christ as a model to project various technological possibilities. Moreover, many Christian leaders have seen technology as a gift of God to humans that has the potential to lift humans to their rightful status, which is akin to the divine (Hauskeller 2016, 49). However, the position differs from the transhumanists' view, which presents technology as a saviour. Theology is thus far from becoming a roadblock to transhumanism. Rather, they challenge each other's concepts, which can facilitate a better understanding of their aspirations. Moreover, transhumanism has several religious outlooks. For example, they demonstrate religious-like faith and acknowledge the desirability of life. They even expound on apocalyptic theories (see pages 188–198).

5.4. Transhumanists Idea of "Human"

Transhumanists generally perceive the human person as a pattern, information in a container. They see the human as a mind within the brain that controls the body, similar to a car's engine. They suggest that because the mind is a pattern, the human person is also a pattern. Thus, technically, humans are minds in a body. The robotics and artificial intelligence researcher Hans Moravec, for example, expresses the conviction that he as a person is "the pattern and the process going on in my head and body, not the machinery supporting that process. If the process is preserved, I am preserved. The rest is mere jelly" (Moravec 1988, 117). Moravec believes the dichotomy between the body and mind is similar to that between a vehicle and its engine. Nonetheless, his idea sees a vehicle without an engine as more important than the body without the mind.

Moravec, a former director of robotics at Carnegie-Mellon University who worked as a developer of innovative robots for both NASA and the U.S. military, promoted the idea of living perpetually through a digital substrate based on the notion that humans are patterns. In his 1988 book, *Mind Children*, he envisioned a procedure that can encode the entire information within the human brain's neurons, making it possible to be read, copied, and uploaded to a computer (Moravec 1988, 109).

Kurzweil (2006), who is a major Singularity advocate, considers mind uploading to be inevitable. He built his concept on the assumption that the human being is a mind and, therefore, a pattern, anticipating a future scenario by which "we will have effectively uploaded ourselves, albeit gradually, never quite noticing the transfer" (Kurzweil 2006, 202). Apart from increased longevity, mind uploading also pursues greater intelligence by sidestepping the limitations of the biological and degenerating brain. Personal identity and memories can be "backed up," and the uploaded mind would benefit from running on more efficient hardware. Therefore, transhumanists see the human being as a pattern of information synonymous with software. It is a significant notion that influences their aspirations and methods of immortalisation. According to their seminal concepts, such as Singularity, the body is the limiting factor that should be eradicated to ensure freedom (Koene 2013, 147–48).

5.4.1. Singularity; Transcending into Superintelligence

"Singularity," also referred to as "technological Singularity," stipulates that humans will be transformed through technological means. The first stage will be "transhumans", and further development will ensure a total transformation into "superintelligence" in a "posthuman" state. The term "Singularity," has a long history in science and mathematics. Nicolas de Condorcet (1743–1794) referred to the term in relation to human intellectual faculties in 1795. However, the first explicit use in the context of technology is attributed to John von Neumann (1903–1957) in 1955. He used the term to indicate a hypothetical future when technological growth becomes uncontrollable and irreversible, drastically

changing civilisation and human life. Neumann envisages intelligence explosion as a result of an Artificial General Intelligence (AGI) going into a cycle of self-improvements, with each cycle surpassing its former version without human intervention and eventually becoming a superintelligence that far surpasses human intelligence (Lara et al. 2019, 2). Kurzweil uses the term to predict the merging of machine and the human mind by the year 2045 to enhance humans' computing ability. The concept outlines how humans will merge with technology and become immortal "superintelligence" (Kurzweil 2006, 205–206). The idea is based on the expected revolution of the convergence of three leading emerging technologies; genetics, nanotechnology, and robotics. Kurzweil expects computers to exceed human brains' memory capacity and computational ability in the near future. The situation will then compare humans to facilitate relationships with automata to transcend their limits, and ultimately, the distinction between humans and machines would be eliminated.

Cyborgs, downloaded personalities and spiritual machines would then populate the cosmos (Kurzweil 1999, 388). According to the tenet of Singularity, transcending human limits involves replacing human neurons with artificial ones because they are a better alternative to the biological. The process could facilitate a transformation by the gradual replacement of the biological brain. Conceptually, replacing some neurons will upgrade humans to the "transhuman" state. The new condition would serve as a platform for the total replacement of the remaining biological neutral, rendering humans "posthuman." According to the Singularity concept, the process will provide humans with the capacity of an AI, facilitating their evolution to become "superintelligence." The process will erase the dichotomy between humans and computers. Kurzweil describes "superintelligence" as a creature capable of radically outperforming the best human brains in every field. At the level of humans becoming "super-intelligent," the only difference between them and AI creatures of standard design is origin; humans were once natural (Kurzweil 2006).

Kurzweil indicates that the human person as a mind that is running on the brain's hardware is a pattern that is constantly changing, but it is possible to scan, copy and reanimate. The singularity notion of the human relies on a material perception of the self, therefore permitting replication on a computer model (Kurzweil, 2006, 383). Singularity believers often use the language of information technology in describing the human brain, borrowing from the computational model of the brain and its cognition introduced in 1958 by John von Neumann (Rescorla 2017). Kurzweil sees the possibility of creating a human mind by using nanobots to scan the brain from the inside out and replicating it with better materials or uploading the details into the virtual realm. He expresses the need to increase the "essence" of an adult human from the range of 300 million to one billion in the effort to increase their capacities (Kurzweil 2012, 383). Singularity involves a future in which AI-capable computers are implanted in human brains, mind uploading through WBE, and the possibility for humans to have access to the cloud; living in the cloud and the cloud in humans' brains.

The contemporary version of Singularity relates closely with Teilhard's concept of "Unification" and aspects of his "Socialisation" of the *noosphere* where humans merge with technology and become "brain of brains," a "super-Brain", a "stupendous thinking machine" (Hefner 1970, 43). The movement toward unification or the Socialisation of humankind was central to the thoughts of Pierre Teilhard de Chardin (1881–1955), representing his unity and synthesis concept. Mechanism possessed the unification of humans with the potential of changing the role of manual labour (Hefner 1970, 43). Teilhard, a priest and palaeontologist in the early years of nuclear power, computers, and molecular biology, expressed a hopeful vision of the technological future in his writings. He envisioned computers and electronic communication in a network of interconnected consciousness, a global layer of thought that he called the *noosphere*. He anticipated the last human evolutionary moment as the Socialisation of the *noosphere*. This consists of constructing what can be described as a superorganism in which cellular individuality and specialisation will be deeply enriched (Teilhard 1968). The Socialisation of the *noosphere* involves the possibility of humans having total control over the matter for reconstructing the very stuff of the universe. He believed there is a future where interplanetary travel and the unification of the Earth based on cultural and intellectual interaction will become a reality. This is to be achieved through spiritual and technological development linked together to shape humans and the cosmic destiny (Teilhard 1968, 7–8). Teilhard thus places future transcendence in the hybridity between the physical and metaphysical. He sensed deeply the dynamics of evolutionary development that has shaped the world from its origins, and he recognised that human beings had become agents of their own evolution (Grumett 2011, 37, 39, 50).

Like the Singularity concept, the future transformation begins with a technological enhancement of the brain. It involves copying, enhancing and technological mediations that turn humans into "super-Brains, synonymous with "superintelligence" (Grumett 2011, 35–49). This is another example of theologians' contributions to the transhumanist concept. Both Unification and Singularity provide hope for the resurrection of the dead through technology. Those who demonstrate faith in the techno-resurrection are expected to commit substantial resources to it to experience resurrection. Such adherents are copied and archived in the form of software in anticipation of advances in technology that will allow archived humans to be brought to life again, even in transformed bodies suitable for life on other planets as "superintelligence" (posthuman). There are several parallels in religion, for example, believers give tithes, offerings and other faith-based investments as part of the journey into immortality. They hope to live in Heaven (the otherworld) with their transformed bodies.

These new conditions (saints/superintelligence) are expected to defy the prevailing biological limitations associated with the human species. However, while the faith communities see a continuation of the human species, the journey to the proposed "posthuman," a god-like being, intelligent and immortal, is a journey towards annihilating the human species. Furthermore, the expected species type is vaguely defined; they could be cyborgs or wholly machines

lacking genetic commonality with humans (Alexander 2009, 2). Therefore, *Homo sapiens* will be replaced by a descriptive like *Techno sapiens, Homo cyberneticus, Homo Deus,* to provide the avenue to avoid death and ageing. Transhumanists see death as needless and wasteful of potentially valuable data. Death should therefore be a choice, not the fate of humanity. Besides death, ageing is seen as a deplorable disease that needs to be eradicated because it marks a human's fatal destiny. However, while it is difficult to avoid, it can be overcome. Death and ageing are thus the two major enemies that should be banished to ensure freedom (Manzocco 2019, 14).

5.4.2. Technological Singularity, an Avenue for Techno-Resurrection

The Singularity concept has provided the conceptual framework for various life-extension strategies, including reinventing the afterlife in a new cyber society known as "substrate independence." The idea is based on the psychological theories of identity that see death not in terms of the cessation of bodily functions but rather as the loss of the information pattern resident in brain structures (Chalmers 2010, 41–42). Thus, the Singularity concept seeks to suggest various ways to preserve the information pattern in the brain to keep people alive.

Cryonic establishments such as Human Resurrection through Artificial Intelligence (HUMAI), an Australian company founded in 1998 and The Alcor Life Extension Foundation, often referred to as Alcor, an American non-profit organization founded in 1972, utilise artificial intelligence and nanotechnology to store human data as a way of preservation. The data include behavioural patterns, thought processes and information about how bodies function from the inside-out. They are making efforts to code the data into multiple sensor technologies to build into an artificial body with the brains of deceased humans. Alcor also preserves bodies and brains at low temperatures hoping that scientific progress will one day allow reanimation of the dead. The vision is to be achieved by cryo-conserving the brains of the freshly deceased and then constructing an artificial body to house the brain, which can then be reanimated (More 2003).

Cryopreserved brain structures would be scanned, and their embedded memories and thinking patterns decoded. With this information, the preserved person's mind could be reproduced in a computer, and the resulting cybernetic life could continue to exist in a virtual world indefinitely, alternatively, it could be installed in a new or repaired body (More 2003). There has been continuous research on the best ways to preserve the dead, and various milestones have been achieved. For example, in 2001, Alcor started using a mixture of anti-freezing compounds that make it possible for bodies to freeze without icing to preserve the dead waiting for techno-resurrection. Between the 90s and 2000s, several groups of cryonic companies were established in almost all developed nations (Allenby & Sarewitz 2011, 8). The most notable cryonic institutions are The Cryonics Institute, Suspended Animation Inc., and KrioRus (Winyard 2019).

Cryonics as a way of preserving the human body originated from cryobiology, a scientific discipline for studying the effect of low temperatures on tissues and living organisms. The scientific communities have however challenged the application of the method as a human resurrection incubator. It is seen as religious rather than scientific. Cryonics concepts can be traced to 1773 when Benjamin Franklin and his friends supposedly immersed themselves in a barrel of Madeira in the hope of being revived by the sun's rays in order to witness the future of America. Their action was linked with religious belief and connected to notions such as faith and resurrection of the body (Manzocco 2019, 122, 123).The idea of techno-resurrection is linked to Christian philosophers such as Nikolai Fyodorovich Fyodorov (1829–1903), a Russian futurist who theorized about the eventual perfection of the human race and society, including radical ideas like immortality, the revival of the dead, space and ocean colonisation (Hauskeller 2016, 49). He believed achieving immortality and the resurrection of all people who ever lived was two inseparable goals. He argued that immortality should come with resurrection for human ancestors who bequeathed culture and life to them to benefit from resurrection and enjoy immortal life through technology (Manzocco 2019, 126).

Fyodorov, who lived a rigid ascetic lifestyle, believed what was promised in the Bible could be achieved through technology. Robert Manzocco (2019, 13) explains that prominent scholars who were contemporary to Fyodorov saw his idea as a great leap of the human spirit towards Christ. Pre-transhumanist ideology has often been inspired by religion, and almost all transhumanist concepts have religious roots. Therefore, transhumanist aspirations and that of faith communities converge but diverge on the means to be employed. Cryonics, for example, could qualify as a modern form of Ancient Egyptian mummification, but the hope of resurrection relates to both Christianity and Islam. On the one hand, the faith communities aspire to participate in the afterlife by grace through the vehicle of faith. On the other hand, transhumanist depends on science through the agency of technology to enjoy life after death (Manzocco 2019, 122, 123). The following sections serve as a critique of the Singularity concept.

5.4.3. Technological Singularity and Human Identity

The Singularity concept identifies the human being as a pattern containing information similar to software. The idea of the human in the concept poses a challenge to both scientific and theological understandings of the human. It can be described as flawed scientifically, dehumanising, and based on an outdated religious perception of humans. Scientifically the brain and mind are embodied and commonly seen as communal. The brain, which is a complex jelly-like tissue, is seen as the most complicated body component (Barrett 2009, 326–328). It has approximately 100 billion nerve cells, each connected to thousands of other nerve cells in a complex network that produces the various impulses which direct human actions (Buffalo, Movshon, & Wurtz, 2019). Traditionally,

scientists have defined the mind as the product of brain activities, the brain as the physical substance, and the mind as the conscious product of the neurons. However, current studies show that the mind, which is the seat of consciousness, goes far beyond the physical workings of the brain. The mind is the product of the entire body, blood, health conditions, culture, and the environment, thus it transcends brain activities (Osiński 2021, 153–156).

Like many transhumanist aspirations, the Singularity concept relies on psychological theories of identity; the perception of the mind running on the brain. Individual survival involves preserving the memories associated with mental state, thoughts, etc. Thus it falls short of current scientific findings, which link somatic activities to psychology and are often based on biological theories of identity. Biological theories of identity hinge a person's survival on the complete biological makeup, including the body and brain and, therefore, their psychological state (Chalmers 2010, 41–42). Singularity ignores the fact that humans are biological and that the psychological state of a person depends on their biological state. Furthermore, human psychology is also biological, and the two are inseparable (Szopa, 2021, 2008). Thus, the existence of a person without the biological renders them ambiguous. Therefore, the prospect of uploading a person is problematic because the process ignores humans' embodiment in nature.

The information that constitutes humans is embodied, similar to other intelligent creatures. Singularity, therefore, demonstrates a relatively porous scientific grounding. Theologically, the notion that humans are information patterns that can exist as disembodied intelligence is reminiscent of the premodern notion of the disembodied soul separated from the body. Firstly, such a dualistic notion of humans vilifies the human body, trampling on its sanctity and regarding it as an evil that should be discarded (Tirosh-Samuelson 2010, 44). Thus, transhumanism portraying the human body as subordinate to an unseen pattern that is perfect, needing to be disentangled from the body by technology, is Gnosticism rather than novel science. The transhumanist narrative will therefore go into history as a contemporary version of Gnosticism. Secondly, the process of uploading is synonymous with cloning. Thus when successful, the result is two different organisms that look alike instead of one person. Finally, transhumanists admit that when mind uploading becomes possible, the copy cannot be said to be a human mind nor that which is copied, but a poorly defined techno-being (Osiński 2021, 156). The following section discusses the problems of copying human consciousness using cloning technology to upload.

5.4.4. Cloning Human Consciousness

Uploading within the singularity concept is referred to as copying or cloning. It implies a duplication of the essence of an organism (Kurzweil, 2006, 383). Duplication renders the idea of uploading a person into a machine flawed because the process would produce two beings instead of one, each having a unique essence. Besides that, cloning an animal has no commonalities with cloning human consciousness. Moreover, the perspective of uploading raises ethical ques-

tions and removing humans from their natural environment into cyberspace is tantamount to annihilation. Thus it is fraught with disembodiments that contradict the current understanding of human nature.

According to the Singularity concept, cloning is the process of copying the essence of the consciousness of the human person, but the concept brings to the fore four significant problems. First, at the subatomic level, changes occur too rapidly to allow for perfect copying. Moreover, not all the genetic information of an organism is present in the nucleus, which is the part of a cell used in the cloning process. Finally, additional strands of genetic information are floating in each cell's cytoplasm, such as mitochondrial DNA, which is not susceptible to cloning using the current techniques. Nevertheless, a cloned sheep is considered a copy of the essence of its mother (Keefer 2015).

The second point is that consciousness is subjective to its possessor and, therefore, the position that a person who had all of another's mannerisms, personality traits, recollections, values, feelings, beliefs and attitudes would surely be the essence of the other's consciousness is faulty. Thus the concept does not consider the complexities of the human person and the dichotomies between animals and humans. Martine Rothblatt (2010, 115), a transhumanist, provides a crucial explanation that seems to have been ignored in the Singularity concept. He points out that the mind clone would know they were the same and different from the original.

Though he tried to consolidate the logic behind the concept, the statement reveals that the clone would be different from the cloned. He further indicates that the current technology only permits copying one's conscious essence to reside in a computer system and depend on the web for their social interactions. Thus, the result of mind cloning is software that thinks of itself as a human being when running on an appropriate computer but does not assume the identity of the person copied. Therefore, we can safely deduce that when the clone and the cloned live together, they would be subject to some form of competition among themselves, and disagreements are inevitable. Moreover, transhumanist perception of "consciousness" is problematic because human consciousness is still a mystery to contemporary science and dealing with it is overly complicated. However, Manzocco (2019, 233) rightly points out that the only way to build a conscious machine is to understand consciousness, but there has been no concrete consensus as to what it means.

The third problem is the anticipation that future technologies will provide the avenue to download the copied mind from a conscious computer into the brain of new bodies. It is suggested that the bodies for this project could be grown from stem cells just like today's skin grafts, but they can be built as nano-bio-tech hybrids similar to current artificial joints (Rothblatt 2010, 115). The ethical challenge of reproducing human embryos for the use of other humans persists here, and the effects of technological by-products on the environment are ignored in such projections. It is also evident that transhumanists are conscious that they are not talking about uploading the individuals but rather the creation of a 'masquerade;' because my clone is not me, and mimicking software con-

taining my personal data cannot assume my identity (Osiński 2021, 156). Therefore, immortalising such a product does not immortalise me. Rather, it is tantamount to creating a techno-being as my replacement.

Finally, humans are natural beings whose flaws and perfections reflect nature, hence they are intricately connected. The relationship between nature and humanity answers the transhumanist argument that nature's gifts are sometimes poisoned and should not always be accepted (Glover 2001). Transhumanists point to unpleasant conditions such as illness, ageing, starvation, suffering, cognitive shortcomings, etc., as the basis for saying nature is flawed. An example of such a conception is found in More's letter to Mother Earth (2013). They also point to human nature as a rich source of thoroughly unacceptable susceptibility to disease, murder, rape, genocide, racism, etc (More 2013). These flaws in nature are replicated in humans because humans are part of nature, reinforcing the fact that humans are natural.

It is clear that both humans and nature require refining and care thus, theologically, the human species is tasked with maintaining and improving the natural world, including human nature itself. Improved nature translates into improved humans, their culture and their environment. Nature, like humans, is no hindrance to progress, therefore it does not deserve ostracism, rather, scientific data and co-creator technology are to be employed to harmonise and care for it. Nature has been able to sustain bio-diversity, including the production of complex human cultures and societies. Therefore, a flight from the natural world does not constitute a solution. Technologies that ensure pragmatic and sustainable evolution by mitigating limitations are required, rather than the crude mechanisation and a flight from nature suggested in the Singularity concept in a desperate move to avoid death. Replication of humans does not stop death, it only provides a monument for the dead. The following section examines the perception of death within transhumanism.

5.5. Death as a Savage Monster and Immortality in Mortal Realms

Transhumanists see death as an unnecessary waste of life (information). Furthermore, death is regarded as a process that obstructs human freedom and inflicts needless pain and torture. Therefore, death and its vehicle (ageing) should be conquered and subdued since no cost is too high to pay for eradicating the duo. Overcoming death and ageing in transhumanism involves the convergence of science and technology from various scientific and technological fields. Death is difficult to overcome, but death is not invincible. Bostrom summarises the transhumanist view on death in his article "the fable of the dragon tyrant" as an evil monster that inflicts torture and wastes lives.

> Death is like a tall dragon covered with thick black scales, with a pair of red eyes glowing with hate, and from its terrible jaws flew an incessant stream of

evil smelling yellowish green slime. This monster demanded from humankind a blood curdling tribute to satisfy its enormous appetite, thousands of people every evening to be presented at the foot of the mountain where the dragon tyrant lived. Sometimes the dragon would devour these unfortunate souls upon arrival, but there are times it would lock them up in the mountain where they would wither away for months or years before eventually being consumed. The misery inflicted by the dragon tyrant was incalculable. The dragon was overfed as humankind had to give birth to more children to be able to avoid extinction, the dragon kept increasing the demand for people. It was the major source of humanity grieving and mourning (Bostrom 2005a, 273).

Bostrom places the possibility of humanity overcoming death in the synergy of science and technology, spearheaded by progressive scientists. Religion is depicted as motivating people to accept their fate as meat rather than encouraging them to fight for freedom. Bostrom, like other transhumanists, places the possibility of eradicating death upon sufficient funding and governmental attention, especially the relaxation of various restrictions upon related scientific and technological research (Bostrom 2005b, 4).

Bostrom attributes the inability to overcome ageing and death to conservative bioethicists who rebuff the desirability of eternal life and promote caution about the side-effects of technologies that intervene in ageing and dying (Bostrom 2005a). Therefore, the aspirations of transhumanists are not only to extend the lifespan of humans but also to extend the productive years of life and the health span. He argues that this social desire to save a life is manifest in many contemporary technologies, such as the airbag development, which was driven by the desire to avoid premature deaths and injuries (Bostrom 2013, 33).

The above fable indicates that transhumanists see ageing and mortality as the two critical adversaries to human freedom and happiness, eliciting the marshalling and harnessing of resources towards their eradication. Bostrom portrays ageing and death together as a tyrant beast bent on torturing humans and putting the human race into constant danger of extinction. Conversely, he sees a boundless joy for humans when death and ageing are vanquished.

The pertinent question from the transhumanist's quest for agelessness and immortality pertains to whether immortality can end the woes of the human species. Transhumanists consider mortal life meaningless. Hauskeller expresses the transhumanist view as follows, "there is no point in really trying to achieve anything if we are all going to die anyway. Only the possibility of 'boundless expansion' of the self into an unlimited future can make human lives truly meaningful. Fighting and eventually killing death must therefore be our priority" (Hauskeller 2016, 48). Life without the two ills must therefore be desirable and fulfilling. However, many science fiction novels and movies have conceptualised the possible scenario where people may live as immortals through metaphysical or technological means as possessing their own unique problems and consequences devoid of the anticipated utopia.

Neil Jordan's movie *Interview with the Vampire* (1994) tells the story of Louis, a 24-year-old plantation owner, who became a vampire to escape life's

problems. Traditionally, vampires are alien species, "equipped with supernatural powers, a creature that is not human, because if it ever was, then it has undergone a radical transformation that has eradicated the human nature" (Hauskeller 2015, 206).

Louis, who attains immortality, realises after several years that ageing does not affect him. His companion, Claudia, a child vampire, was even more troubled as she contends with the thought that she will never grow up. After 200 years of pointless existence, Louis is interviewed by a present-day reporter, who becomes so intrigued by Louis's story that he implores him to transfer what he sees as the gift of eternal life to him and make him a vampire too. Louis refused because he had come to realise that immortal life is more a burden than a blessing. He describes himself as "detached, unchangeable, and empty." If life was painful while he was still mortal, it is now even more painful and meaningless though perhaps in a different way (Hauskeller 2015, 208).

The movie brings to light the fact that death itself is life in disguise because, without death, life is meaningless. The desire to overcome death lacks awareness of the complexities in nature. Life and death complement each other, and each derives meaning from the other. Thus without one, the other loses meaning. The realm of human existence is a mortal one that has produced mortals to participate in its evolution. Therefore, it does not make sense for immortals to exist in the mortal sphere. Even the Earth and the heavenly bodies have finite lives, thus human beings are happier when they embrace their finitude while enhancing horizontally to reduce their frailties.

Human beings are embodied in nature, in fact, they are understood in the context of the natural processes through which they emerged, which constitutes their being. Ageing and death are part of nature's evolutionary process. The past, present, and future evolve and grow thus, ageing and death for the individual are inevitable. The evolutionary process in nature must cause one individual to die while causing another life to spring up in its place. Life is natural, and nature involves the cycle of beginning and completion; however, the ending serves as the platform for the beginning of life for diversity, an opportunity for a new experience. Thus, ageing and death are not enemies but part of cosmic evolution. Davide Sisto (2014), an expert in thanatechnology, the study of death from a philosophical perspective concerning medicine, digital culture and the "posthuman," stresses the need to accept death as part of the very fabric of life. He explains that death is an agent of change and renewal, deeply embedded in biology. It is, therefore, misleading to see death as the opposite of life, which can then be removed from the process without destroying what life actually is. "Death begins before death and life goes on after life" (Sisto 2014, 45).

Phillip M. Thompson (2012, 68) posits that wishing for personal immortality indicates that one cuts oneself off from the entire process that constitutes life. He believes such desires constitute the self-centred belief that individuals view themselves as more important than the rest of the world. Therefore such individuals do not care if everyone perishes so far as they are safe. He concludes that such an attitude is not an affirmation of power but rather an indication of

impotence. It is an attempt to stifle the flow of life and repudiate life's sovereignty. The effort to overcome ageing constitutes the next topic for discussion.

5.6. Transcending Senescence and the Quest to Reverse Ageing

There is a race by biochemical companies to find an antidote for ageing based on the notion that eradicating ageing is a panacea for long life, perpetual youth and happiness. Indeed ageing is perceived by transhumanists as the deadliest disease that requires systematic and concerted effort to eliminate. The notion is based on the fact that ageing has been designated as a major ally of death, the agent who keeps death active. Besides the fact that ageing has the highest possible fatality rate, it is also a disease that everyone is afflicted with from birth.

Eric Drexler, an American engineer, known for his seminal studies on the potential of molecular nanotechnology, explains that, unlike other diseases, there is no chance to avoid ageing, and it condemns everyone to death, though humans may die of other causes. He, therefore, proposed building a computerised robot the size of a virus called a "nano-machines" capable of manipulating matter at the atomic and molecular levels. These micro-machines were expected to reverse and also stop ageing. The method is expected to serve as a means for realising all transhumanist aspirations (Manzocco 2019, 37). It is estimated that humans now live, on average, twice as long as a century ago because of improved sanitation and healthcare. Nonetheless, many transhumanists, such as Aubrey de Grey, Chairman of the Methuselah Foundation, insist it is not enough. Thus, they have formulated an array of plans for the indefinite postponement of age-related physical and mental decline (De Grey & Rae 2007).

According to de Grey, it is possible to eliminate ageing, and its absence will make it possible to enjoy eternal youth. Death would then be confined to common causes to young people, such as accidents, suicide, and homicide. However, age-related diseases that are today's primary cause of death in the industrialised world would be banished. De Grey thus calls for funding a war on ageing so humans can live in a new summer of perpetual youth. He believes that the body is like a car and that humans merely have to be kept in good operating order through maintenance (De Grey 2007b, 9). The research against ageing seems to be progressing steadily in line with the life-extending visions of Kurzweil and de Grey. For example, researchers have doubled the life span of worms by partially disabling a single gene. At the Mayo Clinic, a drug has been used to target and kill senescent cells in mice. These senescent cells were identified as producers of harmful toxins that cause ageing in mice. Thus, the effort at curbing ageing is thought to have been met with bright prospects (Thompson 2012, 66).

Transhumanists see one of the greatest successes for an intervention in the ageing process as "caloric restriction." In 1934, C.M. McCay and Mary Crowell published a paper indicating successful prolonging the lifespan of mice through

caloric restriction (McCay & Crowell 1934). Michael Rose also managed to double the lifespan of fruit flies in his laboratories through caloric restriction (Rose 2004: 25). The most effective intervention into ageing and other frailties appears to be that of Drexler's nano-robot machines that can theoretically cure practically any disease by dismantling microbes, cancer cells and repairing damage from both injuries and degenerative diseases. Contemporary health delivery is to be supplanted by nano-health delivery, which is precise and without side effects. The procedure represents a revolution in medical delivery, surpassing procedures that have existed since prehistoric periods (Manzocco 2019, 144).

Research into ageing among biotechnology companies is mainly based on the theory that human lifespans depend on cells' ability to divide and create new ones continuously. The outcomes of these researches are expected to extend life spans by several decades over the next century. According to the projection of some transhumanists, there will be no limits on human life expectancy soon. This effort is based on the transhumanists' notion that ageing is synonymous with disease and a vehicle of death. Transhumanists advocate for such perception to become seminal (Thompson 2012, 59). However, this assertion is problematic because ageing is a part of nature and is vital for life's evolution. Ageing is not a disease because, without it, there would be no life; foetuses would be still-born, and their deliveries would be considered abortions or miscarriages, and conception would not even be possible thus, human generation would be abated. The anti-ageing methods advanced by transhumanists remain speculative with little scientific bases and should be considered unscientific.

It is factual to state that the notion of ageing as a deadly disease constitutes a spat on transhumanist claim of superior scientific frameworks. While it is realistic that humans become vulnerable and susceptible to diseases with age, it has not been established that ageing is synonymous with disease. The life cycle involves birth, maturation and death, which illustrates the rhythm of creation. Hava Tirosh-Samuelson (2010, 42) rightly points out that the process of ageing does not merely have negative but also positive aspects, such as the accumulation of wisdom. She explains that with ageing come acceptance, wisdom, compassion and forgiveness, which are not common when the good life is perceived in terms of enjoying eternal pleasure. She argues that life is rather enriching and meaningful when people are conscious of their finitude and mortality.

It should be noted that the perception that sees ageing as a disease would render all humans and every living organism sick because ageing starts at the beginning of life. Therefore ubiquitous attribution of disease to ageing is faulty. Moreover, if transhumanists advocate for everyone to be considered sick because of ageing, it will become impossible to recognise the sick when dealing with diseases regarding the law (De Grey 2005, 9). The dichotomy between the sick and the healthy is breached in this sense, resulting in chaotic ambiguity. Transhumanists like More and de Grey equating disease to ageing fail to distinguish between age-caused and age-related diseases.

It should be noted that ageing itself does not cause disease, but underlying health conditions are often exacerbated with age. Herman T Blumenthal (2003) cautions rightly that the causes for many diseases that appear more frequently in old age are still unclear. It is, therefore, practical to prioritise the term "age-related" or "age-associated disease" over the term "age-caused diseases" until there is substantial evidence that links age with ill-health. In the present situation, transhumanists associating and referring to ageing as a disease render their claims unscientific and insufficient. My position does not deny that ageing is frequently accompanied by various diseases, including cognitive and physical decline. Besides, an ageing population may pose a challenge to societies. Nevertheless, there could be other means of sustaining the aged with technology and resources, such as good nutrition and efficient health deliveries. Unfortunately, transhumanists focus only on stopping and reversing ageing through technological means, which is less fruitful and less scientific. For example, De Grey speculates on several scientific methods that can be used to eradicate ageing, such as stem cell therapy and genetic intervention. He further suggests that small molecule drugs and somatic gene therapy could support this aim and subsequently even reverse the ageing process. In 2009, he co-founded the "Strategies for Engineered Negligible Senescence" (SENS) research foundation and published various findings on how to overcome ageing (De Grey 2003, 930).

Nonetheless, the findings of Grey and Michael Rose on ageing have been disputed by notable scientific communities such as the biogerontological community. They challenged the integrity of the findings and the method employed with an official statement to the effect that the quality of SENS research does not meet scientific standards (Warner et al. 2005, 1008).

Furthermore, the majority of the methods proposed by transhumanist anti-ageing advocates have been found to possess porous scientific backing. For example, intervention such as "caloric restriction" has been disputed as having no concrete relationship between it and the lifespan of humans. Apart from the speculative nature of available anti-ageing procedures, studies with other species accepted by the scientific community, which have strong empirical backing, still meet a significant challenge with extrapolation from lower mammals and insects to humans (Olshansky & Carnes 2013). This is because every species has specific physiological details, and special modification responses vary. Nano-intervention has a long way to go and might also come with its unique challenges, such as the bots losing control and replicating and consuming the host (Manzocco 2019, 238). The desire to slow ageing is attractive, but ageing should not be seen as a disease. Ageing is part of life, it might be slowed down when necessary, but it cannot be eradicated.

5.7. Transhumanists Aspiration and the Human Species

While transhumanists consider their philosophies to be the most progressive, they are ridden with many challenges. Indeed they have a beautiful vision for

humans and the universe. However, their implementation is likely to create novel social challenges. An American political scientist Yoshihiro Francis Fukuyama points out critical implications of their vision, such as the possibility of overturning societies. He notes that the aspirations represent an imminent anthropogenic risk to the human species. As a result of the anticipated problems, Fukuyama (2004, 43) calls the transhumanist vision the most dangerous idea in the world. He points out the challenge of transhumanism to equality and social cohesion in the scenario where the willing wealthy transform and the masses are either unable to afford or unwilling to transform. He explains that human is a complex product of extensive evolutionary processes, and good human characteristics are intimately connected to the bad ones. For example, violence and aggression are linked to the ability to defend oneself, and feelings of exclusivity are linked to loyalty, and the ability to love is linked to jealousy. He points to the fact that human mortality plays a critical function in allowing the human species as a whole to survive and adapt. He believes that if any of the critical characteristics of humans are modified, it inevitably entails modifying a complex, interlinked package of traits, and it is impossible to anticipate the outcome (Fukuyama 2004).

Besides Fukuyama's observations, another problem with the transhumanist vision is that it separates humans from their evolutionary ancestors. Genome sequencing has established strong links between human ancestors from *Homini* (*hominins*), *Homo erectus*, Neanderthals and Denisovans through *Homo sapiens* (Tishkoff & Verrelli 2003). However, transhumanists' dream of techno-transcendence breaks away from nature entirely because the envisioned "post-human" cannot trace any genomic link to any organism in nature. It implies a deliberate annihilation of the human race and their evolutionary history supplanted by mimicking machines. Thus, the promised immortality is actually the immortalisation of human work, not the human species. The human being is biocultural; a separation of the biological from the cultural is tantamount to the destruction of the species.

Furthermore, the possibility that such progress harms the environment, persons, or other species involved in research trials, leading to even more significant problems than existing ones, is ignored. Many scholars perceive this and many other shortcomings as part of a vision based on a naïve trust in technology. Technological development in the context of transhumanism represents developing technologies without proper analysis of the side effects upon humans, other species and the environment. Such vision constitutes a greater existential risk than the entire known natural risk put together. For example, the World Health Organisation and the World Economic Forum listed climate change and its effects as one of their top existential risks for the year 2019. However, a major factor that sustains the climate change crisis is the use of crude technologies. Thus wanton technological activities and experimentation pose a greater social and existential risk to humans. Transhumanists like Bostrom also recognise that artificial intelligence, biotechnology, cyber attacks, environmental disasters, accidents caused by experimental technology, global

warming, mineral resource exhaustion and nanotechnology are more likely to cause extinction than the various natural risks. He, however, offers the transformation into "posthumanity" as the solution to anthropogenic risks (Bostrom 2002; 2005a). Technological progress should be seen as ambivalent because it is associated with both positive and negative outcomes. For example, while it fosters increased mobility, it is also associated with environmental crises. The transhumanists' one-sided narrative is evident in Bostrom's "Fable of the Dragon Tyrant", which ignores the adverse effects of explorative technologies while extolling the benefits.

5.8. Conclusion

❖ Transhumanism appeals to disembodiment notions. The human is perceived as disembodied rationality that can be transformed into superintelligence in a "posthuman" state. Because humans can be disentangled from the body and replicated as software, their transcendence is vertical, reminiscing a religious notion of a Paradise, yet distinctive from the Christian concept of humans and eschatology. The posthuman in transhumanism also differs from that of posthumanism, which espouses horizontal transcendence. Nonetheless, these concepts have identifiable similarities, and transhumanism appears to have a strong religious root and progenitors in Christian theology. Transhumanist focus on the fanciful aspect of enhancement and tend to move beyond the idea of the cyborg by providing a solution to humankind's inner desire to transcend death.

❖ The "posthuman" in transhumanism is a hypothetical ageless, immortal superhuman with abilities that far supersede that of humans, similar to images in science fiction. Agelessness is a vital aspiration of transhumanist philosophy. Ageing is perceived as a disease that facilitates the entrenchment of mortality. Death is, however, the primary obstacle to human freedom. Therefore, transhumanism is preoccupied with technological innovations that possess the potential to overcome both ageing and death. A "posthuman" is a "descendants" of a modern human that is no longer human (maybe over human) as a result of certain augmentation history.

❖ The desire to overcome various limitations can be considered a natural yearning of humans, which transhumanism seeks to realise. However, transhumanism ignores scientific realities and the fact that humans are complex creatures. In the proposed "soteriological" methods, transhumanists fail to appreciate that the *Homo sapiens* is a product of millions of years of evolution. Therefore the vision to strip humans of their natural constitution is tantamount to an effort to annihilate the human species and immortalise their automata. Furthermore, the methods proposed are vertical and constitute an entrenchment of a Gnostic form of dualism.

❖ Transhumanism seeks individual freedom and immortality, but the evolutionary process supports generations of diverse life forms. Thus the trans-

humanist vision counters nature's rhythm. Although transhumanism has a noble ambition, it is fraught with pseudo-science and faulty religious precepts. Transhumanism fails to appreciate that life ceases when there is no ageing, and life loses its meaning without death. Furthermore, humans are natural beings and cannot subsist outside nature, which is the realm of their existence. Because, humanity's technological engagement is possible only within the natural world, and it flourishes when it is in harmony with nature.

CHAPTER SIX. Transcending into "Posthuman" Theories, Doctrines and the Downside

6.1. Introduction

Secular "posthuman" narratives such as transhumanism and posthumanism usually assume a post-religious posture. However, their aspirations and activities have been noted to have strong religious colourings, as discussed in the preceding chapters. For example, the nutritional supplements that transhumanists regularly take daily are comparable to religious sacraments. The cryonic suspension is linked to mummification, and techno-transcendence is synonymous with eschatology. Furthermore, many religions, such as Christianity, approach their sacred texts similar to how transhumanism approaches technology, and they are both faith-driven. For instance, there is a contrast between biblical narratives on sex and some ecclesiastical sex doctrines, though they are supposed to be grounded in the Bible. Similarly, technologies point to horizontal transcendence while transhumanists aspire for a flight from the body. There are several overlapping notions of transhumanist ideals with religion, therefore, there have been several attempts to merge mainstream religions with transhumanism. The effort has created organisations such as Christianity plus (Christinity+). In addition, several efforts have been made to merge Buddhism and other major religions with transhumanism. Mormons' Transhumanists Association is an example of the outcome of such an effort (Manzocco 2019, 270–271).

Besides the above, transhumanist philosophies are saturated with religious themes. The faith community and transhumanism provide similar reasons for the need to transcend human biological nature. They believe in the desirability of life and health and acknowledge that humans are imperfect yet represent an advanced form of life. They unanimously accept the mutability and malleability of human nature and the need for improvement. They see humans as limited, frail and unstable, needing enhancements. Other religious themes in transhumanism include; that the earth has a limited life span and does not constitute eternal habitation of the human species and that the human species can outlive the earth. Both are expecting humans' ability to colonise space/heaven. Their apocalyptic visions call for action that could perpetuate the human species beyond expected momentous events or avert them. Furthermore, both see the possibility of humans becoming like God.

Religious philosophers and their "secular" technological counterparts expect a "posthuman" future involving transformed humans with transformed genders and sexualities. This chapter analysis common concepts in transhumanism and Christianity, such as faith, apocalyptic visions and the nature of possible future genders. The various factors that influence Christian constructions of the body, the effects of vertical transcendence in ecclesiastical doctrines, and gender issues in the Church are discussed.

6.2. Analogy of Faith in Transhumanism and Religion

Faith is one of the most vital elements that characterise religion. The importance of faith becomes even more critical when it comes to transcendence, which is a future expectation requiring no pre-informing evidence. One aspect of future transcendence in religion is that nothing can be done to hasten or delay it. Christians have to depend on faith in God and biblical accounts (Peters 2006, 74). Faith is, therefore, the primary vehicle for religious transcendence. However, faith is not only a religious precept, it is identified as a major element of transhumanist aspirations.

Faith in this study follows the meanings, in the Latin *fides* and Old French *feid* which are in tune with the NT rendition. In the NT, the eleventh chapter of the book of Hebrews defines *faith* as being sure of what is expected and being confident of what is not visible. This definition is in harmony with many English Dictionaries, such as *The Stanford Encyclopedia of Philosophy*. Peters perceives faith as believing and trusting, *notitia* and *fiducia* (Peters 2015, viii). Believing should therefore be trustful to become faith. In other words, the two components are essential. "Generally, 'faith' means much the same as 'trust;' confidence or trust in a person, thing, or concept" (Bishop 2016). Several theologians have elaborated on the importance of trust in their expression of faith. However, theologian John Calvin and Church fathers, such as Cyril of Jerusalem, see the need for knowledge to be part of faith. They expressed knowledge in terms of illumination as an essential aspect of faith. They posit that trust must be illuminated with knowledge (of God) to become faith (Pitkin 1999, 3–9). While transhumanism demonstrates faith, trust, confidence, and knowledge in technological redemptive potentials, Christianity shows faith in God's grace to redeem humanity from its flaws.

Suppose transhumanists' understanding of trust is compared with the NT definition of faith, it can qualify as faith. Although transhumanists have not yet seen the future of convergent technology, knowledge of the current trend provides illumination, which ignites the trust that technology will transform humans (Ehrman 1999, 234). Similarly, in Christianity, salvation depends on the knowledge of the salvific work of God through the Son of Man, Jesus Christ, and accepting Him as Lord through the indwelling of the Holy Spirit. Christians have not seen the future events as described in the Bible. However, knowledge of God's immanence and His divine ability provide the trust that God is faithful in His word to redeem humankind, and His promises are sure and Amen.

Indeed, several transhumanists have expressed faith in technology in their aspirations. Moreover, there is an effort to divinise technology. Several people have dedicated their lives to various research and experiments due to their trust in science and technology. Besides, many have invested their life savings into technology, hoping for "techno-afterlife." For example, people are investing a considerable amount of money into cryonic organisations, and insurance

schemes are springing up to support people who have developed faith in technology's ability to resurrect the dead (More 1997).

Like religion, faith in technology has served as a coping mechanism for those facing death and hope beyond the finite life (More 2013, 3). Inference can be drawn from the case of 23-years old Kim Suozzi, who was diagnosed with a severe brain tumour in 2012. Having a strong faith in techno-resurrection, she went contrary to her family's wishes to launch a campaign to raise the seventy thousand dollars needed for cryonic neuro-suspension. She passed the last couple weeks of her life near the headquarters of Alcor with a hope of resurrection (Manzocco 2019, 126). Kim's example is reminiscent of religious faith, thus transhumanism and the faith communities have many things in common. Kim is reported to have considered her demise as nothing more than a long sleep that will produce unimaginable refreshment.

6.3. "Posthuman" Narratives, and Religious Doctrines

The "posthuman" represents "the after" the present human condition and involves a transformed or different body that is better than the current one. The "posthuman" in posthumanism denotes the prospect of a new nature with the cyborg symbol, which is multifaceted. However, the cyborg image represents the merging of organism and machine (Thweatt-Bates 2012, 2). Transhumanism presents "posthuman" as post-biological humans who have radically evolved through technology. Christianity presents a being with post-biological and metaphysical nature. Theologians and secular scholars see the "posthuman" term as an umbrella term covering related concepts on the human future (Ferrando 2013, 26). The posthuman therefore points to a possible post-transcendence being.

Given the above understanding of the term, it is evident that "posthuman" narratives started with religion because, before the advent of notions like metahumanism, antihumanism, new materialisms, posthumanism and transhumanism, various religious tenets have already projected pathways to transcend into the post(human) state. These religious narratives provided an account of the possible post(human) nature and their new environments or world. The Abrahamic communities presented comprehensive imagery of the pathway and the difference between what is yet to come and the present conditions before the emergence of the "posthuman" term. Thus the religious doctrines on future transcendence qualify as "posthuman" discourses per the general definition of the term. Given that the various philosophies are recent development as compared to the world religions, religions can be credited as the source of the posthuman concept. It is estimated that Hinduism presented its transcendental pathways at its inception somewhere between 2300 B.C. and 1500 B.C., in the Indus Valley, near modern-day Pakistan (Ridgeon & Houston 2003, 14–20). Even the youngest world religion, Islam's concept of *al-Jannah/Jannah* was introduced in the 7th century. Passages in the holy books, such as Qur'an 31:8,

describe where humans who live good lifestyles, especially Muslim adherents, go after life on the Earth and their new "posthuman" nature. The Qur'an describes the environment as "gardens of pleasure" (Rustomji 2017, 295–296).

Christianity began in the first century after the death and resurrection of Jesus Christ, representing the Christian vision of the expected "posthuman." Christ Jesus's resurrection from the dead reinforces the teaching that life does not end in death. In contrast, death is a resource for transformation that produces a being immune from biological limitations. The Bible provides an account of the "posthuman" Jesus passing through closed doors, and He exhibited qualities of virtual reality. He could disintegrate and appear in different places and dismantled the effect of gravitational force by ascending to dwell in the heavens. He spoke about a heavenly kingdom for the righteous where there is no more death, sickness and sorrow. The street is made of gold, and the entrance is monitored by a pearly gate where there are many mansions and feasting with celestial soothing music (Ehrman 1999, 233).

The biblical account induces images of transformed bodies rather than a replaced or copied body. Apostle Paul in I Corinthians 15:31–49 indicates that "posthuman" dwells in transformed bodies because they reflect the image of Christ while the present body conforms to that of Adam. The present body is simultaneously biological and spiritual. Death functions as an alternator that enables the spirit to manifest from the biological. Because the spiritual is embodied in the biological and the biological intertwined with the spiritual. Philippians 3: 21 and I John 3: 2 (ESV) indicate that the human body shall be changed. According to 1Corinthians 15: 35 (ESV) account, the changes will make it possible for humans to assume the capacity to "colonise space" (the heavens). Verses 53–54 elaborate on how the body shall clothe itself with the spiritual and thus become immortal, culminating in the swallowing of death in glory. The event corresponds with eliminating mortality and flaws associated with the body.

However, the immortal body shares many characteristics with the mortal, such as the ability to eat, drink, sing, show emotions, appreciation, and worship. Moreover, the spiritual has a strong unity with the biological thus, the transformed being recognises relationships built on the biological platform. Christ Jesus, after the resurrection, recognised His disciples and dealt with them based on their previous communications and relationships. Christianity, Islam and transhumanism seem to recognise that the human person is beyond the biological. The biological is intertwined with an immortal aspect which may be referred to as virtual, mind, soul, immaterial or spirit. Unfortunately, it is often assumed that this aspect can be disentangled from the body.

6.4. The Dream to Transcend, an Effort for Restoration

The preceding narrative provides the basis that the desire to transcend is religious but goes beyond the creed. It is an innate human desire, simultaneously

secular and religious. The religious narratives often point to the recapture of the original perfection. For example, the Abrahamic faith seeks to return to the primordial Garden, where humans were believed to have been created perfect and were in tune with nature and the divine. However, according to the story, humans became flawed when they decided to challenge the divine orders and take their destiny into their own hands under the inspiration of a serpent. The serpent, representing the devil, apparently told them partial truth and thus became the deceiver. As a result, the human species became limited, susceptible to diseases and even death as mortality filtered into their immortal state (Greenblatt 2017).

Therefore, the new state of human nature that is comparatively limited might have produced the urge for restoration and the desire to transcend into their original state. The urge to transcend should thus be seen as inborn. Biblically, various tools to mitigate finitude began immediately after the fall. It is also recorded that when Cain fell out of favour with God, his generations depended tremendously on technology, creating various tools and weapons for various purposes as farming became unfavourable to his generation. The various prehistoric technologies have co-evolved with their human creators over several centuries and have become an indispensable part of the modern human. There is the anticipation that technology will be the medium for the next phase of human evolution as the transformation of the human species becomes imminent (Bostrom 2005b).

In posthumanism, the desire to transcend is represented mainly by the cyborg icon, which projects a possible enhancement due to fusion with the nonhuman other, emphasizing unity and kinship (Haraway 1991, 150–151). The enhancement narrative is often drawn from medical interventions associated with implants and replacing human organs with prostheses, plastics, silicones etc. The cyborg, which represents the fusion of the nonhuman with the human for research, therapeutic and enhancement purposes, represents strength in unity (Clynes and Kline 1960, 30). Nevertheless, the concept goes beyond human and nonhuman, it could also represent medical interventions such as blood transfusion, organ transplant from one human to the other or nonhuman elements. Thus, the cyborg narrative simultaneously presents boundary breaching that renders the organism ambiguous and enhanced. The mitigating effects of the fusion of different creatures within the icon of the cyborg are synonymous with the attempt to restore the lost abilities in the Edenic creation accounts. It is an effort to extend the self by uniting with nature in recognition of human belonging and kinship with other humans and the nonhuman other. It gives credence to the position of Midson that theology relates to the cyborg in historical terms. Thus while Eden needs relocation and reinterpretation of the concept of nature, theological records remain relevant to the cyborg figure (Midson 2018, 280–283).

As stated earlier, transhumanists also see the human being as a flawed piece of work. However, unlike religions, humans are not a product of a divine designer but from a mindless evolutionary process. Therefore, there is a need for

urgent modifications of the *Homo sapiens* to become more relevant in the affairs of the cosmos. Like the religious "posthuman" figure, transhumanism aspires for a "posthuman" with the ability to live in the "heavens" (Bostrom 2003; More 1997). Ironically, many theologians see the desire to overcome human limitation as a hubris attempt to be like God, despite scriptural indication of the need for improvement. For example, Manzocco (2019, 1) believes transhumanism represents human hubris and the desire to ascend like stars and be like God. His position is in tune with Tirosh-Samuelson, who attributes the effort to overcome death to hubris and rebellion;

> From the vantage point of the Jewish tradition, the ideal of indefinite postponement of death is the highest form of human hubris, one more example of human rebellion against God, who created humans as finite beings whose life narrative has a beginning, middle, and an end. Instead of extending our physical life forever, it will be more beneficial if we make sure that our life stories have meaning and that they are instructive to others (Tirosh-Samuelson 2010, 42).

The statement above from Tirosh-Samuelson rightly sums up the meaning of life to many philosophers and theologians. However, her position that God created humans finitely is incongruent with the Jewish scriptures. Furthermore, the description of the idea of indefinite deferment of mortality as the height of human hubris and representing human revolt against God poses a challenge to a theological understanding of human nature. According to Genesis chapters 2 and 3 accounts, the human was created immortal and became mortal after the fall. Thus, the transhumanists' effort to regain immortality cannot be a rebellion against God. Rather, it should be perceived as a human effort to restore what was rightly theirs. It is an effort to satisfy an inner desire through science and technology. Moreover, the faith communities also aspire to attain immortality through grace.

Contrary to Manzocco and Tirosh-Samuelson's position, Hefner posits that the intentionality expressed in transhumanism is inherent in the human project. Thus it is a part of human nature. He explains that intentionality, which he refers to as the created co-creator, goes to the heart of essential humanity and defines what it means to be human. Therefore, the transhumanists' quest for agelessness and immortality does not constitute a rebellion. In contrast, it is an expression of human's inner desire that makes them co-creators. Furthermore, an attempt to be like God should not be seen as hubris because humans were created to be like God, expressed in the Bible with the phrase "image and likeness" (Hefner 2009, 162). St. Augustine reiterates the Pauline idea that the original Adam, having been created in God's image, was immortal, a distinctly divine characteristic forfeited with the fall. Christ, the "Son of Man … come in the glory of his Father with his angels," was identified by Paul as the "last Adam" (Augustine 1958 526). He posits that the resurrection revealed Christ's true di-

vinity and immortality, symbolically made accessible to the disciples through the ritual of baptismal regeneration (Augustine 1958, 526–526).

Both Islamic and Christian theologies demonstrate that divinity yearns to identify with humans reciprocally. For example, the incarnation of Christ Jesus represents eradicating the dichotomy between God and humans. The deconstruction of the dichotomy between divinity and humanity is replicated in Islam through the *houri* doctrine. Therefore, the effort of humans to be like God appears to be a mutual longing of divinity and humanity for each other. We can therefore suggest that the effort of transcending through human techniques does not contradict Scripture. Here both the religious community and transhumanism strive for something similar, if not the same, but the medium to be employed is a major difference. Thus transhumanism and religion (Judaism, Christianity, and Islam) agree that humans are imperfect and need improvement, and they acknowledge that a medium is needed for that purpose. Religion and transhumanism agree that the human was created (a product). The former attributes the source to God, the latter to the evolutionary process (Bostrom 2003, 491, 493). Hefner clarifies and reconciles the two positions by explaining that God used the evolutionary process as an instrument for creation. Therefore, the evolution's progression is God's process (Hefner 1993, 42). Also, they both agree that the mortality and other frailties associated with the human being are objectionable and should be eliminated. Furthermore, transhumanists espouse religious apocalyptic themes that ascribe finitude to the universe and possible human infinitude. The sanctity of life and the desire to enjoy long and healthy life on Earth are projected in both Christianity and transhumanism.

They both show a dual paradoxical posture on life on Earth. They see the need to save lives because life on the Earth is desirable while aspiring to migrate to live elsewhere, which is perceived to be better. Transhumanism uses anti-ageing and anti-death movements and concepts like biohacking, and technogaianism to show their desire to live longer on Earth. People who are about to die could even live on through cryonics preservations. Alcor believes Christians should be his major customers because the cryonic concept is predominantly a Christian notion and in tune with other Abrahamic and Eastern religious concepts. Pointing to biblical passages, he explains that God wants people to stay healthy and live longer lives. Thus, preserving people's lives corresponds with God's will (Alcor 2020).

Similarly, Christians see life on the Earth as a temporal affair, yet there have been efforts to save lives through medical and divine interventions. The Bible record several life intervention scenes that kept people from dying and even the dead being raised to life. The New Testament extended the OT concept of saving lives as God manifests in the flesh. Jesus referred to sicknesses as works of the devil and proclaimed the will of God for people to live healthy and longer on Earth. He went further to express the desirability of life on Earth despite humans' eternal home in Heaven by raising the dead back to life and healing the sick to avert death (Szopa, 2021, 200–204). The faith communities perpetuate the notions of healing and life preservations, desiring even to raise the dead.

This posture is maintained by transhumanists who work hard to keep healthy bodies and long life and, at the same time, aspire to transcend vertically into space (cyber/physical).

Transhumanists' aspirations can be compared to the story of Gilgamesh, the mythological king of Uruk, and his friend, Enkidu, undertaking a series of dangerous quests and adventures. Gilgamesh, a son of a Goddess and a human King, is 70% god and 30% human. Realising his mortality after the death of his friend, Gilgamesh commences a search for the secret of immortality. He went through various perils to get to Utnapishtim, the only human immortal hoping to get to the mystery of living forever like the gods. His hopes seem to be dashed when he learns that Utnapishtim's immortality is not a result of a secret or an adventure, a task accomplished but bestowed by the Gods. Utnapishtim offers a magical plant that could keep Gilgamesh younger till death. The king sets off to return to his kingdom but felts thirsty along the way. While drinking water from a river, a snake steals the magical plant (Manzocco 2019, vi–vii). He returns empty and disappointed, pointing to the futility and dangers associated with the human quest for physical immortality.

Christianity offers immortality through Jesus, who tasted death and triumphed over it. Transhumanists, who seek victory over death, should act like Gilgamesh and seek Jesus Christ the Lord. Like Utnapishtim, He is immortal, unlike Utnapishtim, He already tasted death and will not disappoint them. Transhumanists hope to overcome the death and ageing process through research and technological mediations to identify two paths; either radical life extension or cybernetic immortality. The first process includes enhancing the body and brains with drugs, nanotechnology, genetic modifications, implantations and other techniques to extend life for at least millennia. In this instance, biological life will be vastly extended as ageing and diseases are eradicated. Major proponents of this means are Eric Drexler, Aubrey de Grey and Max More.

Cybernetic immortality is the second transhumanist concept for overcoming death, advocated by cybernetic hopefuls such as Ray Kurzweil, Hans Moravec and Natasha Vita-More. Proponents see the body as the main hindrance to human freedom. Thus uploading the mind translates to liberation from biological prison. To ensure a thorough liberation, the superintelligence will be detached from the biological environment. Posthuman intelligence will then find a way to eradicate every existential threat to the cosmos. The posthuman will live in the clouds such as IBM, AWS, Azure and Google Clouds like the religious God as an omniscient, omnipotent, omnipresent being. "As humanism freed us from the chains of superstition, let transhumanism free us from our biological chains" (Young 2006, 32). Kurzweil and Moravec foresee a universe saturated with consciousness. Thus, there will be a transformation of cosmic history in the distant future. The cosmos will come alive by awakening to its own nature (Moravec 1988, 44). Another similarity inherent in transhumanism and religion is apocalyptic postulations. Just as Christianity and Islam often see the physical universe as temporal and heading towards a catastrophic end, transhumanists expect similar events in years to come, even without anthropogenic causes.

6.5. Transcedence, the Solution to Coming Apocalypse

Apocalyptic themes are as old as religion, and the dark images appear to have entered Christianity through Jewish literature, part of which constitutes the Christian Old Testament. The call for repentance within the Abrahamic religions is closely linked with apocalyptic doctrines. Islam paints a somewhat chaotic picture of an event after the trumpet is blown for judgement, a period of anarchy and strange manifestations. There is the impression that apocalyptic preaching is an integral part of the socio-cultural narratives of the Ancient Near East (Middle East) (VanderKam 1996, 1–6). However, the life and death of Jesus Christ are believed to have inspired the growth of apocalyptic sermons. The coming God's Kingdom indicates God's intervention in cosmic affairs, marking the overthrow of evil forces in a cosmic act of judgment. In the early Judeo-Christian tradition, God's Kingdom applied to Israel, later it became universal. In the synoptic tradition, it is simultaneously here and eschatological. For example, the Lord told the disciples in Luke 17:20, "the kingdom is among you." The access to the Kingdom is not for pious ones but the humble, the poor, etc., (Matthew 19, Luke 16). In Jesus, instead of punishment, incessant forgiveness is available to all (Matthew 18:23–25) (Ehrman 1999).

Apocalyptic doctrine is closely related to transcendence because it is often presented as an event that will devastate humanity. However, the believers will be transformed into a transcended state which immunes them from the anticipated catastrophes. In transhumanism, the only way to avoid extinction is for humanity to transcend through technology (Bostrom 2002). The discussion of the apocalyptic narratives is an essential topic for this work because the apocalyptic notion has religious origins with scientific correlations. Transcendence is perceived as the antidote that immunes from anticipated apocalyptic devastations. While many theological doctrines in transhumanism, such as the resurrection of the dead and immortality of human essence, lack scientific data, apocalyptic prediction is grounded in science. The term has become common in various disciplines as issues such as climate change and its consequences on lives on the Earth pervade literature (Lambelet 2021, 34).

Ecologists and environmental activists have employed the desert images as a metaphor for what should be expected if mitigating measures are not employed (Natalie 2021, 36). Alexey Turchina & David Denkenberger (2018) notes that existential risks threaten the future of humanity, but it is difficult to predict their coming. This is similar to the Islamic and Christian expectations, where the hour of the end is unknown, calling for vigilance. Brian Patrick Green (2019) posits that it is established in science that the situation of humanity should be seen as perilous. He enumerates various prevailing conditions such as wars, terrorism, and violent crime, together with the proliferation of nuclear weapons and other weapons of mass destruction that are being or could be developed. He includes Cyber-weapons and other lethal autonomous weapon systems ("killer robots"), AI weapons, synthetic biological weapons, and nanotechnological weapons. He also suggests even the possibility of redirecting asteroids to impact

the Earth and intentionally triggering supervolcanic eruptions. Finally, he points out that there are certainly individuals and groups who would be happy to destroy humankind without thinking twice.

For Green, self-preservation should be humans' first ethical priority for this age, in the current situation where there can be apocalyptic events at any time. He sees the need to preserve the human species since they are the only known species with developed morality, and their extinction would deprive the universe of major moral actors (Green 2019, 35). Turchina & Denkenberger (2018) point out that the threat of annihilation through the apocalyptic event has become so imminent that scientists are lobbying to have a reserve library of humans' scientific and cultural achievements built and maintained on the moon. The endeavour could help a possible new civilisation to appreciate human culture and scientific achievements.

The apocalyptic doctrine in Jewish literature was closely bound up with the fundamental fact of the Christian Gospel, and thus the two seem to have merged into one. This is mainly because the two shared similar characteristics: the doctrine of rewards for faithful service and punishment for disobedience (VanderKam 1996, 2). They served as a vital resource to strengthen the faith and the courage of the early Christians under persecution and trial. The coming of the righteous judge who would not overlook iniquity heightened the call to repentance which always preceded the offer of the consolations of the Gospel (Shively, Dunn & Holladay 2012 88–96). Due to the nature of the apocalyptic images in the Bible, many Christian fundamentalists have made failed prophecies about the end of the Earth. On the one hand, some of the fanatics attributed their claims to divine revelations, and others who were mainly in the scholarly circles claimed they had arrived at their predictions through analysis of the various biblical prophecies. For example, Isaac Newton (1643–1727), after studying the book of Daniel and Revelation, projected the fulfilment of the apocalyptic messages in the Bible to 2065. He was believed to have attempted to decode the dates in the book of Daniel (Snobelen 2003, 539). Similarly, transhumanists paint a bleak future and expound on various existential threats to the cosmos in their philosophies (Bostrom 2018; 2004).

From the Judaeo-Christian account, the entire universe will grind to a halt due to divine intervention, and the Earth will experience great terror. The event appears to be non-anthropogenic. However, the focus on the divine sources might be due to the early centuries' limited scientific and technological activities. During the Bible periods, such dangers as nuclear, AI, and robotic weapons were inconceivable. The Bible account projects gloomy images, such as the flow of blood and fire, vapour of smoke, the sun becoming dark, and the moon turning into blood and unable to give its light. The vision includes catastrophes such as the "stars falling from their orbits," and the powers of the heavens shaken (Weigert 1989, 74). The heavens will disintegrate with a roar then the components of the Earth will be destroyed by fire. Under such conditions, Apostle Peter believed that faithful Christians could still survive and be undaunted by the catastrophes. He states in II Peter 3: 10–13 that, despite the de-

struction of the heavens by fire that will produce so much heat that their elements will melt in the heat, Christians who live a holy life will stay unharmed. Apostles such as Paul, John, and Peter relied on apocalyptic themes to preach the Gospel messages. They present Jesus as the sinner's justification (Ehrman 1999 245). While faith in the resurrected Lord is the antidote to immune and fortify against the future apocalyptic universal onslaught, transhumanists see salvation in technological transcendence.

Transhumanists see existential risk in both technological progress and evolutionary processes. They propose that to facilitate the perpetuation of the human species beyond possible apocalyptic events, humans should transform into posthuman to ensure survival (Bostrom 2018; 2001). Transhumanists typically list non-anthropogenic and anthropogenic risks to legitimise their call for drastic technological development to facilitate human transcendence. Common examples of the risks are the possibility of an asteroid colliding with the Earth and wiping life out of its surface. Others are a super volcanic eruption, a lethal gamma-ray burst, a geomagnetic storm, natural long-term climate change, hostile extra-terrestrial life invasion, the sun transforming into a red giant star and consuming the Earth and other planets and then becoming a small super dense white-dwarf object (Bevere 2013).

Many scientists believe that even if the universe survives all the future existential tragedies, like the asteroid impact that eradicated the dinosaurs about sixty–five million years ago or possible nuclear war, the universe will still cease to exist. There will be a time, perhaps 4 billion years from now, when the sun will have used up all its core hydrogen fuel, causing it to expand to form a red giant body that will swallow up any life still surviving on this planet. Transhumanists believe that "posthuman" species might be able to resolve these existential threats (Manzocco 2019 xiii). Some of these scientific-based apocalypses can be seen as modernised and upgraded forms of religious apocalyptic doctrines, reformulated to conform to scientific understanding. For example, the Bible talks about stars coming down on the Earth. It might sound funny, but it should be noted that during the first century, when the prediction was made, the heavenly bodies known were the stars, the moon, and the sun (Kettley 2019). Therefore asteroids would be described in terms of one of the three. Until the Italian priest and astronomer Giuseppe Piazzi (1746–1826) discovered the first and largest asteroids in 1801, while making a star map, asteroids were considered stars. Thus the Bible account of the star coming down on the Earth should be understood in terms of asteroid collisions. Asteroid threats, rogue gamma-ray bursts and powerful solar flares are real, according to scientific data. Since the Earth's formation about 4.5 billion years ago, asteroids and comets have routinely slammed into the Earth. It is estimated that approximately 65 million years ago, a six-mile-wide asteroid struck the planet in modern-day Mexico, which caused the extinction of the dinosaurs (Choi 2017).

Various incidences associated with such threats have been recorded in recent times. For example, in 2013, over 1,000 people were injured due to the explosion of an undetected asteroid above Russia's Chelyabinsk oblast (town)

(Kettley 2009). According to the space agency NASA, an asteroid like the one that killed the dinosaurs strikes the planet every 50 million to 100 million years. More minor asteroids could cause local cataclysms to happen even more frequently. These scientific predictions are close to the descriptive inherent in the biblical apocalypse accounts and attest to the validity of the Christian text in this contemporary technoculture (Choi 2017).

Even though the Bible apocalyptic narratives are basically cataclysmic, many Christians, like their transhumanist counterparts, have pointed at a potential nuclear event that may end civilisation if the divine source devastations tally. Such postulations are not based on speculations but on empirical observations. There have been records of several instances of near apocalypse in the advent of the atomic bomb when the arms race saw the US and the USSR as rival superpowers amassing arsenals beyond 70,000 nuclear warheads in 1986, which is more than enough to erase every trace of civilisation from the Earth (Baum et al. 2018). Classified archives and the testimony of retired policy-makers, officers, and analysts have exposed various activities and incidents that repeatedly brought the world close to catastrophe. Many scholars that analysed the situation have concluded that the avoidance of nuclear holocaust remains a mystery or perhaps due to sheer luck. While Christians present Jesus as the only one who can save from every form of apocalypse, transhumanists present the development of convergent techno-science as a practical way of escape.

Transhumanists further tabulate other dangers inherent in emerging technologies such as AI, nanotechnology, and robotics that may get out of control and unleash an uncontrollable onslaught on society. They point to rapid transformation into a "posthuman" state as the only way to avoid possible cyber-related holocausts. According to Bostrom, scientific and technological progress might change people's capabilities in ways that could destabilise civilisation. He refers to advances in "do it yourself" (DIY) biohacking tools, which might make it possible for people with elementary training in biology to kill millions. Citing the atomic bomb example, he opines that novel military technologies could trigger arms races that will mark the demise of Earth's civilisation. The situation could be so tense that whoever strikes first has a decisive advantage, making the world too chaotic to live in, even if survivors remain. Bostrom calls for drastic technological development to solve anthropogenic and non-anthropogenic threats (Bostrom 2018; 2001). Rahner sees anthropogenic apocalypse as a possible part of a larger divine plan which might not require stars falling from heaven. However, human's warfare, genocides and possible act of absurdity are more likely to terminate life on Earth (Rahner 1972, 223).

Religion, science, and transhumanism are saying the same thing differently though they employ different sources. Scientists often talk about two possible sources of an apocalypse. The first is that there is a sort of "comic expiring date" due to evolutionary processes, but difficult to estimate the period. The second possible source is the proliferation of crude technologies. Christianity and Islam equally identify two sources: God's divine judgement and the proliferation of crude technologies. Christianity points to faith in Christ Jesus as the

means of transformation and salvation, while transhumanism calls for faith in technology for transformation and salvation. The question then arises regarding the post(human) nature and the expected transcended gender that is expected to outlive a possible apocalypse.

6.6. Transcended Gender and Sexuality in the "Posthuman" Discourse

The gender of the posthuman is one of the questions critical to both religious and nonreligious accounts. The narrators of the various posthuman accounts have projected various views on how the transcended gender should be envisioned. Gender is closely related to the body, and the body is the focus of transcendence. This is because, in transhumanism, transcendence involves two methods. The first is the application of tools to the body for enhancements that reduce biological limitations (Huxley 1957, 17). The second involves the body's dissolution to disentangle it from the mind (Moravec 1988, 117). Similarly, in Christianity, it might be achieved through divine empowerment of the biological body. This makes it possible for the people to perform activities beyond human ability, such as miraculous healings and commanding the hands to turn into flames, as was associated with asceticism (Valantasis 1995, 775). Ultimately, the body is expected to be transformed in the *Parousia* event (Staunton 2019, 14). In Platonism, the body can be peeled off the "real human" as the soul departs incorruptibly into eternity (Austriaco 2015, 654). Posthumanism, however, sees the body in a relationship with the other (Thurfjell et al. 2019, 191, 192). Transcendence involves the hybridity of the body, including breaking the boundaries associated with it (Haraway 1991, 149).

Furthermore, human sexuality, the centre of gender identity politics, is part of the body. Therefore, the body is crucial in the posthuman accounts, and gender and sex are major identity marks of the body. In transhumanism, there is an effort to reduce sex from the status of "biological imposition" to assumed status giving *Homo sapiens* the freedom to choose their sex and gender roles (Dvorsky & Hughes 2008). In religion, sex is associated with impurity, defilements and desecration to the extent that Christianity hopes to do away with it in the afterlife (Zazueta, 2016, 7). The body, gender and sexuality are thus connected to theological and technological transcendence. The preceding sections look at the effects of transcending notions of the three elements; body, gender and sex. The sections demonstrate how the body, the mark of human identity, has been appreciated in religion in general and Christianity in particular.

In transhumanism, the "posthuman" gender is post-biological, indicating that the human gender will be transformed along with human nature. Transhumanists such as George Dvorsky and James Hughes (2008) see biological gender as a mark of limitation of human's neurological and anatomical potentials. They define "postgender" as the ability to change gender roles and sex at will, rendering them a non-biological and noncultural imposition. They predict a gender-

less society, which is not sexless by implication. Rather people could benefit from assumed gender that could be changed rapidly. For Islam, gender is enhanced but not changed in transcendence, it is eternal. Only some roles are modified for females to enable them to perform sexual duties without interruptions. Christian transcendental nature appears to be devoid of sex roles. Gender is assigned only to the human, not posthuman and is temporary (Gregory of Nyssa 1967). The gender topic and sexuality are thus essential for this study. Moreover, it has been of interest in transhumanist debates with theology. I also believe that discussions about posthuman gender and sex "are relevant because they are not just about the end times but are also very much about the here and now" (Kamitsuka 2010, 262).

Posthumanists such as Vita-More postulate that to ensure absolute freedom, not only should gender be a matter of choice, but people dissatisfied with their bodies should have the right to choose a new bodily form or no body at all. She thus advocates for a radical change in human existence that provides an avenue to recognise one or more "posthuman" species (Vita-More 2015). Indeed, transhumanists such as Martine Rothblatt anticipate a future when cybernetic and biological persons will be regarded as complete equals (Winyard 2019). One may decide to be a virtual or embodied being, male, female, genderless or multi-gendered. Thus transhumanism and posthumanism recognise the technological other as members of the human community. Similarities could be drawn from this view and Christian "posthuman" aspirations, though the details might be radically different. For example, Christians expect a transformed genderless body similar to that of transhumanism. Nevertheless, the Christian "posthuman" might be both genderless and sexless.

The Christian idea of sexless saints appears to align with the restoration of the human into the original Adamic state when Eve was still a part of Adam. The notion that humans were created either sexless or together simultaneously male and female, an androgyne, has been suggested by some scholars. Ed Noort (2000, 4) posits that the use of "male and female He created them," in Genesis 1:27 indicates non-binary gender. Noort explains that God separated the androgyne, man and woman, by creating Eve in the Genesis 2:18 accounts, where the androgyne is split up into two distinctive creatures, a male and a female. The unity of the man and woman is thus revisited in marriage when the two become one. J.T.A.G.M. Van Ruiten (2000, 33, 34) suggests that the existence of humans transcends the division of male and female. He explains that, despite the vast field of early Jewish literature that refers to the creation in the Apocrypha and Pseudepigrapha, only a relatively small number of texts contain references to sexual differentiation. He suggests that the original unity of the sexes might have accounted for the many texts that refer to the creation of Adam, man, or mankind exclusively.

In Matthew 22:30 Jesus explains that the "posthuman" (resurrected/transformed saints) will be like the angels in Heaven, they neither marry nor reproduce (Noort 2000). They are self-efficient and in tune with God. As the Pauline "new Adam," Jesus demonstrated self-sufficiency by not marrying but

demonstrating both feminine and masculine natures. Unlike the teachers of the law, He treated children and women with kindness and referred to children as heirs of the kingdom of God and women as children of Abraham. He demonstrated feminine empathy, fed the people, healed the sick and defended the vulnerable (Ruiten 2000). He wept in public when Lazarus died, which was not common with Jewish men but was regarded as a feminine disposition. He assumed masculine physiology and acted like one, but His interactions with the masses revealed various feminine traits. Therefore, the "posthuman" in Christianity may not need to possess genitalia since their function ends with humanity. Sexlessness of the Christian "posthuman" indicates the acceptance of all sexes and diverse genders. No particular gender will be recognised in Heaven, but each person will be considered a unique posthuman (Garner, 2020).

6.7. Factors that Define Christian Construction of the Human Body

The body is the centre of transcendence, be it vertical or horizontal, in religious and technological settings. It is the medium of transformation, enhancements and salvation. Thus it is impossible to ignore it in the discussions of transcendence in either religion or technology because it reveals how transcendence is constructed. Christian faith projects the human body as simultaneously sacred and secular, shared by humans and God, the holy Creator. However, some factors have overshadowed the Bible's reverence for the human body. This section identifies two main factors: the desire for a vertical form of transcendence and religio-cultural influences. James D. G. Dunn's book, *The Parting of the Ways*, discusses the characteristics that distinguished Christianity from Judaism in the first century A.D. Dunn elaborating on the roles associated with the body in Christian doctrines describes the origins of Christianity as bodily faith. He posits that the proclamation that the Messiah has manifested in the person of Christ Jesus was crucified and died, but was resurrected and ascended into glory was not just a decisive break from Judaism but also an emphasis on the body as sacred (Dunn 2006, 4–6). This fact was further affirmed with the declaration of the Holy God in the human body and the Apostel Pauls inferring that the Holy Spirit tabernacles in the individual bodies. The early Church emphasised the body as a medium of transcendence, either consciously or otherwise. Nevertheless, the perception of the imminence of the *eschaton* appears to challenge the importance of the body that the incarnation, death, resurrection and bodily ascension convey. The vision of attaining a transcended body apparently surpassed the sacred nature of the body within the gospel message.

According to Caroline Walker Bynum, St. Paul's image of resurrection as sowing a seed that sprouts and grows, manifesting changes as recorded in 1 Corinthians 15: 21–54, was one of the prevailing conceptions about the resurrected body in the early period of Christianity. There was a near consensus that some forms of continuity exist between the current body and the future transcended

body (Bynum 1995, 11). Bodily resurrection was asserted to be a reality in the *eschaton* where humanity would be raised ever more perfect than in the biological life. Tertullian asserted that, after death, humans would be resurrected with mouths that would not eat, complete with genitals that would not procreate, but which were essential to remain as God had created them and were therefore beautiful (Staunton 2019, 14). This idea might have been the baseline of the Christian idea of keeping the genitalia and renouncing sexual intercourse. The body's desires needed to be suppressed by fasting and abstinence from sex as ways to spiritual growth. Chastity, therefore, reflected the expected transcended body, angel-like and pure, returning to the paradisiacal garden in an androgynous state when humans were both male and female (Elliott 2012, 12). Teresa M. Shaw posits that there was a longing to return to the Edenic state, which defined Christianity in the early stages (Shaw 1998, 166). Bodily resurrection was proclaimed within the vision that believers should be raised in transcendence with perfection often contrasted with the current body.

During the second century, theologians were tasked with adequately examining the body's construction to respond to gnostics and pagan challenges. The Church fathers, such as Tertullian and Irenaeus, expected radical changes in the resurrected body though there would be semblances between the two (Bynum 1995, 37). Later, St. Augustine writes,

> How complete, how lovely, how certain will be the knowledge of all things, a knowledge without error, entailing no toil! For there we shall drink of God's wisdom at its very source, with supreme felicity and without any difficulty. How wonderful will be that body which will be completely subdued to the spirit, will receive from the spirit all that it needs for its life, and will need no other nourishment! (Augustine 209, 1079).

The resurrection of the body was thus sustained though in varying forms, but transcendence was generally perceived horizontally. The challenge to the importance of the human body in Christianity seems to be the desire to transcend the current body in anticipation of a new body with perfect knowledge and wisdom, similar to that of the ascended Lord. However, the perception of a "new body" nurtured dualistic thinking towards the body in terms of new and old. The current body was therefore perceived as subservient to the future body. Paul in 2 Corinthians 5:1, comparing the current body to the transcended eschatological body, equates the current body to an earthly tent built by humans and that of the transcended body as an eternal home built by God. While the analogy encouraged Christians to stand firm in the face of persecution, it challenges the integrity and sanctity of the body as the means of worship, grace and salvation. In this respect, Christians were willing to barter the inferior product for a more enduring one which entrenched vertical transcendence in Christian thoughts. The desire for vertical transcendence might have contributed to the flow of martyrdom in the early years of the faith. The expectation for the imminent end of the age was high (Staunton 2019, 14). Death at this period was a

matter of escaping the dreadful apocalypse in view. When the *Parousia* tallied, and the persecution was stalled with the legitimisation of Christianity, through Constantine's military victory, the martyrdom ceased thus, the avenue to follow Christ's suffering and death through political persecution was eliminated. Christians, therefore, repositioned the identification with Christ through His temptations in the desert. Martyrdom was thus realised through the "beating of the flesh" (Brock 1973, 8).

The perception that the body is temporal and subservient to the eschatological body aligned with the Roman dualistic view. According to Peter Brown, the Christian body was marked as a suffering body in anticipation of the eschatological vision. He posits that Christianity ushered in a dramatic shift to the perception of the body, building upon the notions of the prevailing Roman worldview while maintaining aspects of the Jewish notions (Brown 2008, xii–xiv). According to Margaret Miles, "Roman religions and Judaism were not background for, but interactive with Christianity" (Miles 2004, 17). Thus Christianity cannot be said to have absorbed Judaism or Roman paganism completely. However, the two cultures, including Greek, influenced the Christian idea of the body, which was somewhat fluid. While the Roman's body was in the service of the empire, the Jewish understood the body as sanctified creation in honour of God (Miles 2004, 17). According to Alyson Staunton, Christianity brokered a unique relationship between God and the individual that was personal and peculiar to each person. "The body was not managed for the sake of health, the good of the state or as the locus of honouring God. Rather, the body was oriented towards God and therefore beyond the concerns of society and the mortal life" (Staunton 2019, 3). She, however, argues that such a notion was a challenge to the female body due to continuous links with society. "Women's bodies in antiquity formed part of the honour/shame culture whereby their activity was seen as reflecting on the honour of the male" (Staunton 2019, 3).

> In general, anthropological studies have identified honour as a value embodied by males and shame (here, in a positive sense, as a concern for reputation) as embodied by females. Male honour is related to the struggle to preserve the shame of kinswomen. Female shame is demonstrated through sexual chastity. Therefore, male reputation is linked to female sexual conduct. When males are not successful in maintaining the chastity of females, their honour is diminished in relation to other males (MacDonald 1996, 28).

The female body remains subject to masculinity; males decide how the female should function in society. Thus women remained silent in the Church just as society determined. They were supposed to be heard by their fathers or husbands. "The voices of women in antiquity come to us, therefore, through the male. Our textual sources for the day-to-day lives of women in antiquity are sparse. Women in Greek antiquity (c. 800–48 BCE) led strictly circumscribed lives" (Cohen 1989, 4). Just as women could not participate in politics and rarely control inheritance but served as wives, managed the household, and

controlled the burial rites, their duties in the Church were also limited to keeping the place of worship in order (Hame, 2008, 9).

In Graeco-Roman society, the fear of the woman's body pervaded every aspect of life. Their bodies are inferior to men's and characterised by almost all the immoralities associated with humanity, such as gluttony, laziness and insatiable sexual appetite. Females were ever ready to lure the males into immorality (Staunton 2019, 3). The suspicion and fear of the females' sexuality was the driving force that defined women's societal roles. She should be treated cautiously to avoid polluting the male and impeding their duties to the state. The only time when there were suggestions of parity between men and women was in relation to the metaphysical, where the souls lack the tendency to seduce (Blair 2012, 197). These notions appear to encourage women to remain virgins. Before the Edict of Thessalonica on February 27, 380, virginity was a mark of respect to females as they were devoid of the "desire to entice." Indeed Vestal Virgins had rights similar to those of males, such as the right to control properties and be free from their father's authority. Vestal Virgins, in Roman religion, were priestesses, representing the daughters of the royal house, who tended the state cult of Vesta, the goddess of the hearth. The cult is believed to date to the 7th century BC. But for women to achieve a male-like freedom through the vestal system, they have to sacrifice a chunck of their lifetime to service of the goddess and live in constant danger. The virgins were beaten for a lapse in their service to the goddess and were buried alive on the suspicion that they had violated their oath of chastity (Staunton 2019, 3).

Therefore, the woman and her body were inextricable; the woman was her body, and her body was sexual that needed to be controlled by men. This notion might have influenced the Church, given their attitude towards the body and the woman in particular. Besides the Graeco-Roman influence, there is gynophobia in Judaism which reflects in the attitudes toward females in some Christian denominations. Women were seen as impure due to their menstruation which made it almost impossible to participate in public life due to the purity laws in Judaism (Fonrobert 2000, 2, 8). The window to operate as autonomous agents was restricted to certain women, such as unmarried women and widows who were not in a position for childbearing (Wegner 1988, 114–117). Alyson Staunton states that Rabbinic Judaism characterised women with reference to men from the late second century to the early seventh century. Women were either obedient wives and unsullied virgins or unfaithful and sexually immoral beings (Staunton 2019, 3). The attitude towards females was even documented in prayer materials. In the rabbinic benediction, formulated around the second century, Jewish males give thanks for not being a Gentile, woman or a boor. Women were coupled with heathens and enslaved people in prayer books, and (Kahn 2011, 68–70) are described as "gluttonous, eavesdroppers, lazy and jealous', and it is asserted that 'women are lightminded" (Satlow 2002, 229).

The construction of women's bodies in Graeco-Roman society and Jewish antiquity can be said to differ in degree but not in kind. They equally saw women's bodies in terms of their sexuality. The significant boundaries were

purity, sources of pollution and symbolic otherness to men, the source of male anxiety (Baskin 2002, 161). The early Church appears to have absorbed these doctrines to a large extent. Scholars point to evidence such as the silence of women in the early Christian text. Peter Brown observes that aside from representations of women recorded in the martyrdom and conversion texts, there was no actual historical and textual work on women. Thus, there is little evidence of women's daily lives (Brown 2008, 145–155). Like Judaism and Greaco-Roman faiths, virgins who dedicated their lives to the Church form majority of the recognised women in the early Church. This is because virginity was praised, and every Christian household was encouraged to have a virgin (Brown 2008, 327). Though the elevation of virginity in Christianity is eliminated, the ecclesiastical emancipation of the female is incomplete. The female body as a sexual body that entices and pollutes lingers on. The general contempt for the body was even more pervasive during the early ages when Christianity was seen as a part of Judaism. The representation of the body as a medium of the incarnation was diluted within Greek and Judaism ideas about spirituality and holiness. Over the centuries, however, Christianity affirmed that the soul could not exist in heaven and on earth without the body and that the soul and the body constitute the human person. According to Bynum, Christian writers in the second century and the Middle Ages spoke about the "somatised soul" and saw the body as important (Bynum 1995, 14). Antique and medieval theologians alike perceived the body as part of human identity (Bynum 1995, 14). Horizontal transcendence has been historically the dominant idea in Christianity. Indeed transcendence in Christianity represents a disruption of dualism between horizontal and vertical transcendence. However, when it comes to the construction of the female body, it has always been characterised by vertical transcendence.

For example, one of the reasons stated on January 3, 1521, Pope Leo X's papal bull *Decet Romanum Pontificem*, which excommunicated Martin Luther (1483–1546) from the Catholic Church, was his attitude towards the female body. The error thirteen condemned Luther as a heretic for ascribing "even women the same power as bishops and pope to give absolution to repenting sinners" (Leo 1963, 379). Luther's ministry is recorded to have diverged from the Catholic Church by his extensive teaching on the mutual, equal partnership of women and men, which was practical in his relationship with women (Treu 1999, 170–174). He is credited for advocating for the education of the masses irrespective of gender and socioeconomic status. His advocacy is believed to have facilitated the proliferation of public schools in Germany, replacing monastic education for the rich (Becker & Woessmann 2008, 777–805). Luther's ministry is recorded with the integration of women into the official church life as midwives, deacons, and teachers as paid professions. Midwives functioned as a substitute for pastors with the duty to proclaim the word of God with authority to baptise in urgent circumstances. While the female deacons served the poor and sick people as professionals, female teachers were teaching all disciplines alongside male teachers (Pedersen 2019, 5), a significant disruption of the di-

chotomies between vertical transcending notion and horizontal transcendence in the Church.

6.8. Vertical Transcending Notions
in Ecclesiastical Doctrines

Religious transcendence depends on human's relationship with the divine. Therefore, people seeking to transcend should live in a way that makes them conducive to a regular visitation of the ultimacy. Activities abhorred by the ultimacy are often considered an abomination by the worshippers thus, the divine control adherents who seek transcendence. In Christianity, sex is often seen as sinful, a seed of evil and since sin is a barrier between God and humans, it is a major setback to transcendence. Therefore, people who want to grow spiritually and experience transcendence must avoid sex and distance themselves from the opposite sex. While some Christian denominations see sex within marriage as chaste, others see it as a necessary evil (Kamel 2020, 320). For Saint Augustine of Hippo (354–430 AD), every form of sexual act is polluted by lust (Kamel 2020, 319). Thus the ability of sex to hinder spirituality and, therefore, metaphysical transcendence becomes even more pronounced. Such a notion of sexual evil is disembodied, lacking knowledge of the reality of the human as a sexual being. Thus, the idea of demonising sexuality to "please God" constitutes vertical transcendence. The idea of sex as evil comes from the notion of an evil body and good soul derived from ancient Greek thoughts. In Gnosticism, Manichaeism and Stoicism, sexuality was seen as an obstacle to authentic spirituality (Kujawa 2015) by implication, a hindrance to humans' transcending efforts. Sex represented body gratification, which was seen as pollution to the authentic self. Therefore, engaging in sex had a high possibility of polluting the holy self and inhibiting transcendence. Consequently, early Gnostic asceticism was characterised by the rejection of women and marriage. "Women were regarded as the work of Satan; hence those who consorted in marriage fulfilled the work of Satan. Man from the navel upwards is a creature of God, but from the navel downwards a creature of evil power" (Karavites 2015, 88).

For some Gnostic sects, passion, pleasure and desire originated from the navel down. Therefore, they came from Satan and those from the navel up godly. Peter Karavites, Professor Emeritus of Greek and Roman History, observes that, sex as a pollutant was notion was a major bridge between Gnosticism and Christian asceticism and monasticism. Thus asceticism facilitated the infiltration of Gnostic ideas into the Christian community (Karavites 2015, 88). The notion that sexual activities hinder spirituality became grounded in Christianity, comparing those who want to transcend to embrace an ascetic lifestyle. The Christian tradition over the centuries has cultivated such a dichotomy projecting sex as sinful and women as suspicious. Therefore, notions that dichotomise, those that frown on sex and ignore or limit women are not biblical but from ancient philosophies. Richard M. Davidson rightly posits that sexual theologies

often ignore that God was the creator of the sexes, and there was an emphasis that He created them male and female (Davidson 1988, 5). The sexual differentiation and emphasis point to the fact that they are equal in value but play complementary roles. Moreover, God further stated that all His creations were very good. With this data, giving credit to Satan as the creator of what God has claimed is apostasy and seeing a part of the body as sinful is tantamount to disembodiment thus, the transcending process based on such a notion is vertical transcendence.

Gender discrimination and genophobia are discussed as crucial aspects of disembodied doctrines in the Church in particular and religion in general in this section. Unlike negative concepts such as racism, classism and ableism, gynophobia and genophobia facilitate gender-based discriminations, which are endemic in religion. Besides being endemic, they are institutionalised as part of many persuasions as if God discriminates based on gender. This perception has produced doctrines that limit females' roles in religions and enshrines the sex for procreation notions as part of the process to transcend. Sex and gender are crucial for this study because of the notion that they are in a way able to hinder transcendence by defiling the body. Notions of transcendence that seek to overcome the body and operate in the other world have historically involved abstinence from sex and denial of the body through asceticism. Asceticism believed to be rooted in the Judeo-religious culture, merged with Christianity right after its inception, encouraging widows and virgins to stay celibate. Celibacy was celebrated as a high form of spirituality during the first century, and celibates usually took leadership roles in the organisation of prayer and fasting meetings in Christianity (Dodds 1965, 6). The practice became a part of the urban churches of the first three centuries based on teachings attributed to Christ and the Apostles, together with older beliefs from Judaism and Greek philosophies making asceticism a desirable path to spirituality. Asceticism involved abstention from sexual relations, food and wealth. Virgins and Widows were celebrated for their sexual renunciations because abstinence became a means to strengthen the purity of the heart, which is vital for prophecy and prayer (Finn 2020). Sex has therefore been a crucial topic in the religious aspect of transcendence. In the construction of transcendence, positive appraisal and its acceptance as part and parcel of humans reflect horizontal transcendence. When sex is viewed as a desecrating and a hindrance, the notion constitutes vertical transcendence.

Besides Christian asceticism and monasticism being a major link between ancient Greek ideologies and the Church, Christian leaders who converted from sects within Greek faiths are significant sources of infiltration into the Christian tradition. These converts are recorded to have imported their doctrines to fill the sexual purity gap in Christianity (Brown 1988, 31). For example, one of the most significant contributors to Christian theology, Augustine of Hippo, converted from Manichaeism. Two of the most influential theologians whose contributions have shaped modern Christian theology, Martin Luther, and John Calvin (1509–1564), were recognised as disciples of Augustine. Luther was an

Augustinian monk, and Calvin's teaching was also called Augustinian Calvinism, identifying John Calvin's theology within that of Augustine's. Apart from the two, several influential theologians, such as Thomas Aquinas (1225–1274) used Augustine's theology massively (Pitkin 1999, 314). Thus Gnostic doctrines slipped into Christianity through Augustine, who expressed guilt about his sexual desire and inability to control it. He even linked sex to the fall of humanity (Cavadini 2005, 201). Unfortunately, the feminine gender was the basic connection to the fall through seduction. Thus both the female gender and sex are stereotyped as arbiters of the fall. This conception continuously revitalises a strong gynophobia and genophobia in Christianity, similar to Gnosticism. Augustine speculates that sexual erection and sexual desire are linked to the fall because sexual arousal was necessary to achieve an erection only after the fall. For him, every sexual expression is corrupt, including even procreative sex. Augustine also speculated that the tendency to sin is because of the transfer of the original sin of disobedience through sexual intercourse, stimulated by sinful craving in humans (Mastin 2009).

The Gnostic and Manichaeism dualistic doctrines that attach inferiority to the human body have affected sexual expressions in general as impure. Therefore, virginity represents wholeness, purity, innocence and incorruptibility. Thus, it can be concluded that the sense of filth attached to sex is traced to the notion of inferiority attached to the body (Cooper 2009, 32). It appears that sex is tolerated in many religions because it is the primary medium of perpetuating the human race. This is likely one of the reasons for the construction of the sex for procreation concept that stigmatises every other purpose for sexual interactions besides procreation. The doctrine of Manichaeism and Gnosticism was based on the separation of matter and spirit, and adherents were expected to work towards spiritual growth and deny the body. Sex was limited to the realm of the flesh, serving as a major lure from the spirit. This notion has pervaded various contemporary religions, including Christianity. Ironically, the early Church contested such doctrines because the ambivalence toward the body challenged the Christian concept of incarnation (Beck 2008, 302). The concept stipulates that God became embodied in the flesh, was born, lived, died and resurrected. Since the flesh is perceived as evil, the concept has been contested for centuries, primarily by Gnostic scholars. Gnosticism links matter with evil, sees the body as a product of matter, and recognises sex as a product of the body. Therefore, Gnosticism aspiring to transcend the physical body vertically projected the body as a hopeless encasement, evil and a source of enticement (Beck 2008, 306). This notion has been a significant basis for vertical transcendence and otherworldly flavours associated with notions of transcendence in religions and transhumanism. In contrast, the Bible is a rich source for embodied notions that affirms the importance of the body and sex, pointing to horizontal transcendence.

The Bible records texts about a body prepared for the Lord God to dwell among humans (Hebrews 10:5). Several passages affirm the body's role in the divine-human relationship, such as the need to offer the body as a living sacri-

fice in worship (Romans 6: 12). This is because, the Holy Spirit indwells the body, making it a holy temple (Romans 12:1). One significant milestone is the symbolic sharing of the body of Christ in the Eucharist (2 Corinthians 4: 16) etc. The psalmists even marvel at how splendidly the body has been made as a source of praise to God. Besides the ascension of the Lord with the physical body, there are records of Enoch and Elijah, who experienced bodily transcendence into glory. The Eucharist, an essential Christian sacrament, is made up of the body and the product of the body; the blood of Christ. Moreover, the Church represents the body of Christ (Mercer, & Trothen 2021, 26). There is enough information in the Bible to provide bases for Christians to treat the body with dignity while respecting sexual expressions.

Stefanie Knauss (2014) rightly states that the Bible does not project the body as a disposable outer shell. In contrast, it projects the body as integral to the human person, the source of existence and arbiter of salvation that leads to eternal life. The theological view of the body as seductive matter and evil corresponds to the transhumanist view of human biological bodies as a hindrance to transcendence. While some Christians try to suppress the body and hope to do away with it (Beck 2008, 304) during the eschaton, transhumanists want to re-design the body and get rid of it in the "posthuman" state (Hughes 2004, 87). Therefore, Christian theology is obligated to unveil the sacredness attached to the body by Scripture to show a better example to transhumanism. The body should thus be "recognised beyond the "don't" in order to avoid defiling it" (Knauss 2014, 70). Therefore, there is a need to motivate a positive view of the body and its holistic processes as a medium for spiritual engagements to engender horizontal transcendence in Christian thoughts. Cultivating a positive view may reduce the poor attitude towards sex and nullify the perception of females as polluted gender. Sex as a pollutant in Christianity is not limited to heterosexual sex, the censorship assumes even catastrophic proportions when it comes to same sex discussions.

Christians often extrapolate scriptures to taint sex as ungodly to sustain genophobic notions in the Church. A typical example is the story of Sodom and Gomorrah, where the Abrahamic communities provide different reasons why the cities were destroyed from the reasons provided by the Bible account. The faith community interprets the story to implicate sexual expressions as sinful. In contrast, Genesis 18: 20 passage attributes the destruction of the cities to egregious sins "because the outcry against Sodom and Gomorrah is great and their sin is very grave." The reasons provided by the Bible records are ignored, and homosexuality is blamed based on the demand of some inhabitants in the city for sex with the angels. It is also possible that the sex of the messengers were veiled thus they might look to these rapists mob as females or unusual humans to be explored sexually. However, the decision to wipe out the city was taken before the attempted rape of the messengers (Wolde 2012, 71–78). Unfortunately, Sodom and Gomorrah have been represented both historically and in contemporary discourse as a metaphor for homosexuality. Thus the English word "sodomite," is used as a derogatory word for male homosexuals, and

"sodomy," is usually applied in a legal context for anal sex. However, there is a lack of biblical records that point to homosexuality as the cause of God's displeasure. Some records rather counter such a notion. Ezekiel 16:49–50, records that the sin of Sodom is pride, inhospitality, and neglect of the needy. "Behold, this was the guilt of your sister Sodom: she and her daughters had pride, excess of food, and prosperous ease, but did not aid the poor and needy. They were haughty and did an abomination before me. So I removed them, when I saw it." There was nothing sexual about their sins. The word abomination used in the passage has often referred to a wicked act, vile, and moral evil, as explained in Proverbs 6:16–19 (Lehniller 2014, 107).

The misrepresentations of scriptural messages have been a challenge to Christianity regarding the construction of the body in general. It has created strong dichotomies between sex and gender as mundane and transcendence as divinely based on ideas which fail to measure up to available scientific and scriptural data. The ecclesiastical censorship of same-sex activities is often linked to the lack of procreation associated with such endeavours. Human sexuality itself has manifold functions, including reproduction. There are suggestions that human sexuality lost its exclusive reproductive meaning early in the evolution of the genus *Homo.* With an obscured female ovulation and accessibility to the male during the whole menstrual cycle, there was the need to avoid conception rather than seek it during sexual activities. The contraception revolution in the 20th century has challenged the idea of sex for procreation as couples enjoy more freedom with the ability to plan and space childbearing without having to avoid sexual intimacy (Benagiano & Mori 2009, 50). Early Christian teaching on sexuality focused on abstinence, leading to the idea that sexual activity defiles the individual. Members of the Abrahamic family have taken different positions regarding sexual intimacy. For example, the Catholic Church, which has been at the forefront of the battle against dehumanising the reproductive process, has stood by the tradition of the early Christian teaching based on sex for procreation. Judaism has assumed a much more open position. However, the need for the Church to recognise that sexual love can be expressed without procreational intent is growing in theology (Benagiano & Mori 2009, 50).

Probably, one of the reasons why Christians' sexual doctrine resists sexual freedom is that, unlike the ancient religion where the divine was sexually active and engaged in frequent sexual activities with themselves and humans (Manzocco 2019, ix), the Abrahamic God is chaste. In fact, chastity is part of the notion of holiness attributed to God. Furthermore, Christ Jesus, who was fully God and fully human, was celibate, and two of His influential apostles, Barnabas and Paul, were also celibate. The fact that Christ Jesus is the icon of transcendence in Christianity creates the sense that a closer relationship with the divine requires chastity. This sense is aggravated by the apostle Paul's declaration in 1 Corinthians 6:9, *Or do you not know that the unrighteous will not inherit the kingdom of God? Do not be deceived: neither the sexually immoral, nor idolaters, nor adulterers, nor men who practice homosexuality*. Such declarations

make sexual behaviour critical to salvation and thus transcendence. Because the kingdom of God is transcendent, and those who enter are required to live a transcending lifestyle, proponents ignore the grace factor. John H. Elliott notes that using such passages as a sex guide is problematic because many translation versions frequently ignore the text's context (Elliott 2004, 17–18). Besides, the closest disciples of Jesus during His earthly ministry were not celibate, and He is recorded to have visited Peters's home and healed the wife.

This fact does not support the perception that celibacy provides a transcendental status similar to divinity. Indeed ascetism is associated with power, which is attributed to an enhanced relationship with the divine (Valantasis 1995, 775). The encouragement of women to live alone goes contrary to both the New Testament admonition for unity," that all may be one" and the declaration that it is not suitable for a person to live alone in the OT. Barth put it this way, "we cannot say man without having to say male or female and also male and female. Man exists in this differentiation in this duality" (Barth, 1960, 42). He speaks in terms of the complementarity of the sexes. Living together in unity reflects God's grace, unity and love. A couple demonstrating divine unity by living in harmony and love can also be expressed in genitalia intimacy, which brings us closer to God rather than separating us from Him.

In the mid-third century, Origen of Alexandria (185–253), born Origen Adamantius offered a highly persuasive account of asceticism within the individual's struggle for holiness that propelled the movement of asceticism from the community into the desert. The desert spirituality produced notable Christian monks and missionaries such as St. Antony of the Desert, St. Pachomius, and Augustine of Hippo (Finn 2020). From the 3rd to the 5th centuries A.D., Christian asceticism was marked by sanctity and endurance, including heroism characterised by fasting and sexual celibacy that follows the pattern of Stoicism and Gnosticism. Stoicism taught that emotions like fear, envy, impassioned sexual attachments, and passionate love of anything are due to ignorance, so the sage, a person who had attained moral and intellectual perfection, is immune to them. Stoics believed that humans naturally exhibit emotions such as love and desire for sex due to poor judgement. However, the impulses can be resisted to enhance the quality of the soul (Baltzly, 2008). They believe in a separate soul that can exist without the body. Unlike Gnosticism, the soul consists of matter similar to that of the body, which is mortal. The elites were known as free sages due to their knowledge and wisdom, but everyone else was seen as enslaved persons (Long 1982, 35).

In Christianity, both the teachings of Jesus and the apostles were devoid of comprehensive sex doctrine. Therefore early Christian sexual perception was based on Jewish sources and, later, Greek purity, taught by the Stoics and Gnostics. Jewish purity ascribes sex for procreation, and stoicism was based on controlling impulses and giving rational purpose to sex, which is reproduction. A combination of the "Greco-Jewish" concepts of purity produced the notion of controlled sexual urges and affirmation of celibate life as emulation of both Christ and God served as the root of the Christian doctrine of celibacy and sex

for procreation. According to Noreen Herzfeld (2017, 92–93), sex for procreation within marriage was a medium to control lustful desires in Greek and Jewish thoughts. Biblical records such as Lot's daughters' erotic abuse of their father and the story of Juda and Tamar, Abraham and his wife's slave girl, and Jacob and his wives' servants highlighted the sex for procreation notion that was endemic in the sociocultural order of the age. Nonetheless, the other functions of sex are portrayed in Scripture. For example, Juda having sex with a prostitute and a prostitute, Rahab's household being saved from the Jewish onslaught. There was no pronouncement condemning sex for pleasure in both stories, not even indulgence in prostitution.

Christian theology on sex has been based chiefly on selected readings of the Bible instead of a hermeneutical understanding of Scripture. The Bible is often alluded to as an endorsement of assumed sexual purity notions from different cultures. The Judeo-Greco cultures, the settings of the Bible, identified the female gender with impurity because of their unique biological nature (Migotti & Wyatt 2017, 16). They were often valued for their sexual and reproductive potential. Thus, barrenness represented social nonentity. Just as sex was treated with suspicion, so was the feminine gender. The attachment of women to childbearing from these cultures breeds the idea in Christianity that procreative sex within a nuptial union could be chaste. However, all sexual acts for pleasure are sinful, including sex tools use (Knauss 2014, 72). The notions from these cultures often receive justification from Bible passages like Genesis 1:28, which states, "And God blessed them, and said to them, 'Be fruitful and multiply and fill the earth and subdue it...'" Obviously, the passage is not intended for sexual didactics and does not represent a resource for instructions on sex; instead, it declares a mandate for the human generation to prosper on the Earth.

Sex for procreation doctrine has been a source of social worry because the repercussions from the fallout contradict the Churche's efforts to protect the marriage institution, which possesses sacramental status. First, sex for procreation corresponds to marriage for procreation because couples who are not ready for childbearing would have little grounds to be married since the temptation to break the rule is higher. Second, childlessness has been a source of divorce due to such expectations, couples having regular sex without the expected results are likely to despair and devalue their union. Third, if the Church preaches to adherents that the purpose of sex is purely procreational, then the barren commit sin when knowingly their condition, engage in sex, and their conscience could torment them. Furthermore, couples who are not ready for a child may feel guilty about having sex, inhibiting the joy associated with nuptial romance. Finally, it is also possible for one party to be tempted to deny the other based on the Church's teaching. By so doing, the party involved goes contrary to the teaching of Apostle Paul, which demands believers not to deny each other sex in marriage, and thus the church doctrine will contradict Scripture. The doctrine is thus unbiblical and a recipe for chaos in marriage. Furthermore, childlessness is already identified as a significant cause of anxiety and tension within marriage and a potential source of marital disharmony (Khan & Konje 2019).

The Church upholding "sex for procreation" as a doctrine thus entrenches the idea of "marriage for procreation" concept instead of companionship. Debra D. Castaldo, a clinical social worker, in her book *Divorced, without Children: Solution Focused Therapy with Women at Midlife* brings out various problems that women who are unable to have children, either by choice or by circumstances, have to contend with, due to social expectation. She elaborates on the relationship between childlessness and divorce and the challenge to women's lives (Castaldo 2008, 3). The doctrine of sex for procreation may end up legitimising divorce based on the inability of one party to bear children or even both instead of preserving marriage as a permanent union contracted through God. Thus infertility becomes synonymous with singleness. The doctrine could breed infidelity, rancour, disappointments and other ills. In some societies, couples are stigmatised, and the woman is often seen as the infertile one. The devote Catholic situation is aggravated by the Vatican's stance on technologically mediated childbearing (Coughlan 1988, 294). The Bible expresses a multiplicity of the functions of sexual intimacy and motivates readers into a lasting nuptial romance that ends only in death. The Biblical theme on sexuality is about "and they lived happily ever after," while discouraging whimsies that might breed rancour, pains, victimisation and broken hearts (Knauss 2014, 70). The sexual relationship prone to breed such ills is regarded as sexual immorality or "fornication." Apostle Paul, therefore, wrote in I Corinthians 7: 2–5;

> But because of the temptation to immorality, each man should have his own wife and each woman her own husband. The husband should give to his wife her conjugal rights and likewise the wife to her husband. For the wife does not have authority over her own body, but the husband does. Likewise the husband does not have authority over his own body, but the wife does. Do not deprive one another, except perhaps by agreement for a limited time, that you may devote yourselves to prayer and fasting, but then come together again, so that Satan may not tempt you because of your lack of self-control.

Paul uses a typology of the relationship between the Lord and the Church to express how married couples should surrender themselves to each other for their mutual sexual gratification. He carefully avoids the Jewish concept of marriage by ascribing to equality and mutual surrender. Just as my body belongs to her, so is her mine thus, just as I can use my body anytime but for useful purposes, so should I approach that of my partner. The passage enjoins couples to avail themselves to each one entirely and unreservedly for mutual sexual explorations. The text goes contrary to "sex for procreation" dogma and thus sexual policing in marriage, including censorship on the use of contraception. Pope Paul VI (1965) writes;

> If therefore there are well-grounded reasons for spacing births, arising from the physical or psychological condition of husband or wife, or from external circumstances, the Church teaches that married people may then take advantage of the natural cycles immanent in the reproductive system and engage in mari-

tal intercourse only during those times that are infertile, thus controlling birth in a way which does not in the least offend the moral principles which We have just explained.

The statement ignores the potential spontaneous nature of humans' sexuality. Such contradictions between Christian doctrines and their texts confirm Knauss's (2014, 67) position that theology has over-emphasised its normative function over the years, while its hermeneutical role seems to have receded to the background when it comes to sexuality. However, theology's role involves hermeneutical tasks to interpret the human situation and social developments related to sexuality. The normative functions of the Church involve developing doctrines based on the interpretations and principles that guide sex and its role in society, including the human relationship with God.

Hermeneutically, sexual acts have often been expressed in the Bible as a lover who longs for consummation. It is often considered a typology of God's love which expresses the desire to establish communion with humans. Songs of Solomon is often considered a prime example of the beauty and diversity of sexual love. The book brings out both the beautiful and ugly sides of sexual passion. It scripts scenes of love in orchards and vineyards contrasted with harassment and violence by the sentinels of the city. The scene brings out satisfying passion and proximity with longing and distance. According to Ecclesiastics chapter 8:6, there is the statement, "for love is strong as death, passion fierce as the grave" (Knauss 2014, 71). Such passages should guide the faithful when constructing doctrines on sex because it shows how difficult it is to resist love and sexual urges.

Many Christian denominations employ selective readings of the Bible in the formulation of doctrine on sex. Thus the Bible and the Church seem to approach sex from different perspectives. For example, some Christian denominations, such as the Catholic Church, accept sexual expression solely within the context of an indissoluble and permanent marriage between a male and a female. Furthermore, each sexual intimacy should be open to procreation and express mutual love (Knauss 2014, 78). This position, by implication, prohibits contraception and artificial inseminations even with the husband's seed. Also outlawed are divorce, masturbation, homosexual relations, and all premarital and extramarital sexual relationships. Furthermore, virginity and celibacy are still considered higher states of life than marriage (Herzfeld 2017, 93). Such doctrines have both positive and negative influences on society. The Catholic Church sees such teaching as a check on dangerous contemporary tendencies such as the depersonalisation of sex and the sexualisation of society.

Christianity as a faith community should definitely have structures that define the faith community. Some forms of sexual restrictions are needed to maintain sanity in the faith community and ensure conformity to the Christian tradition. Nonetheless, such restrictions should reflect humans' embodied nature and contribute to bringing people to Christ. According to studies, the influence of religion on shaping sexual attitudes and influencing positive behaviour, in society,

among married and unmarried people is indisputable. Also, the ecclesiastical restrictions imposed are vital for checking human excesses that may harm individuals and society because sexual acts are saturated with varying forms of emotions. The stifling effects on sexual activities also reduce sexually transmitted diseases, unwanted pregnancies, abortions and their repercussions on society, such as broken homes and street children, while entrenching the family as a vital unit of society. Nonetheless, the Church imposes rigid regulations exclusive in genre and does not consider the broader nature of human sexuality. The implication is that many people who find it difficult to radically alter their sexual responses are prevented from accessing the salvific grace of Christ through the Church (Laumann et al. 1994). Furthermore, church leaderships overstretch the limit common to humans. For example, pledging groups cajole unmarried Christians to sign undertakings to avoid sex until marriage (Janus & Janus 1993). However, it turns out that between 61% and 88% of abstinence pledgers either revoke their pledge or have sex while the pledge is still in force before their marriage (Brückner & Bearman 2005). This indicates that abstinence is not natural and counters human embodied nature. Thus, the effort to transcend vertically by stifling the body's natural needs is flawed and less successful.

Theology on sexuality over the years is centred on the right and wrong forms of dogma, similar to that of the Jewish culture during the early centuries. However, the setting of two cultures of different ages cannot be the same because culture and social norms are not static. Sexuality in first-century Israel differs from that of twenty-first-century Europe. Therefore, there is a need for Christianity to eliminate the ancient cultural norms that project a negative attitude towards sex in this techno-sexual age (Cornwall 2013, 7). The holistic functions of sex that encompasses the provision of pleasure, establishing and defining relationships, as a medium of communication and procreation should be part of the ecclesiastical doctrines on sex (Plummer 2003, 19). It is evident that sexual activities neither bring us to God nor separate us from him. Thus spirituality and transcendence are not affected by sexual activities.

The challenge associated with sex for procreation and the disdain towards sex is further deepened with the Catholic tradition's preference for celibacy; it is best to follow Christ's own example of abstinence instead of indulging in the right and wrong treatise of sex life. Two classes of Christians in Catholicism are unmarried, celibate monks/priests and married Christians. Though the married can have sex, their sexual expressions, even in a nuptial setting, are not free and strictly linked with procreation (Grovijahn 2008, 122). Pope Paul VI insists on the Catholic doctrine that, even though sexual intercourse does not always result in procreation, all sexual acts should be within marriage and should be opened to procreation. Several scientific types of research reveal that sex transcends procreation (Rider, et al. 2016, 180). Scripturally, the first coupling was for companionship (Davidson 1988) and possibly teamwork. Childbearing was an added advantage of unity and love. Sex for procreation concepts therefore stem from ancient culture rather than Christianity. The doctrine, therefore, represents

a vertical way of transcending because it approaches spirituality through disembodiment ideas. Nonetheless, some current theologians have projected a positive view of sex as an expression of God's own self-revelation in creation, demonstrating His love and desire for intimacy and consummation of His saints (Herzfeld 2017, 93).

6.8.1. Transcending through Disembodiment

In Christianity, disapproval of sex outside marriage is near-unanimous, and chastity is synonymous with holiness; however, several types of research show that the overwhelming majority of Christians engage in both pre-marital and extra-marital sex (Janus & Janus 1993). Among American Christians in the 1990s, over 90% of men and about 85% of women engaged in pre-marital sex before their wedding. A cross-sectional study of the religion-sex relationship among married adults in America revealed that fewer than 30% of "very religious" respondents refrained from pre-marital sex. In contrast, only about 7% of non-religious respondents abstained (Uecker 2008, 728). It should be expected that the number of Christians refraining from pre-marital sex will dwindle further in the contemporary period, where society is much more sexually inclined.

The implication is that, while religion affects sexual expressions, abstinence from sex is not practical because an overwhelming majority of the religious population cannot comply with the demand for abstinence. The inability is not peculiar only to the pew but is endemic among the clergy who propound such theories. There have been instances where Church leaders under the oath of celibacy are found engrossed in sexual jaunts. A typical example is Pope John XII (937–964), who doled out land to his mistress, murdered several people mainly to cover up his sexual escapades and died committing adultery (Saul 2020). Religious leaders found wanting when it comes to sex is not also a recent occurrence. There were records of secret sexual escapades among the sages in stoicism and widespread sexual acts among the Gnostic sects who claimed celibacy (Petrey 2015). Irenaeus of Lyons wrote about instances where several Gnostics impregnated their "sisters" and other community members while preaching against sexual relations and marriage (Against Heresies 1.6.3).

Thus within the confines of heterosexual monogamy as a cultural norm, ordained celibate priests claim a special relationship with vertical transcendence. However, in a confused manner, clandestine special rights for sexual and horizontal transcendence as well. Therefore records of celibate priests' sexual intercourse with women, other men and children are regrettably common. The fact that anointed pastors and priests determined to overcome sexual urges failing shows that vertical transcendence lacks practicality and cannot easily overcome the fact of human embodiment. Just as several mammal species express their sexuality freely as part of their nature, humans should be expected to demonstrate similar attitudes. Spirituality does not dilute human nature as sexual beings (Jordan 2000, 18). The inner craving to belong to the other that

compares dedicated priests to breaking the oat of celibacy could be comparable to a strong supernatural force. It points to humans belonging to and inseparable from nature, they are embodied beings. Sexual expressions cannot be sacrificed for spiritual virtue. Abstinence from sex has historically proven to be futile, often shrouded in surreptitious sexual activities. To elaborate further, the various notions of humans discussed in this work point to humans as embodied rationality, a being from nature uniquely created through a unique evolutionary process.

One of the inborn qualities associated with humans' embodiment is their intuitive longing for intimacy, for touch, including sexual contact, which is associated with many organisms and common in mammals. This longing is traceable in all stages of human development, beginning from the embryonic state. Babies develop and live in their mothers' bodies, relying on her body for survival. They continue to depend on physical contact after delivery, through which they build a strong relationship with their parents and develop the desire to survive. The growing child expresses the need to connect in several ways, culminating in the desire to communicate through sexual contact. Roland Karo (2009, 173) asserts that almost all humans experience sexual desire because sex drive is intrinsic in nature. Humans are therefore inextricable from sexual expression and intimacy with the other. The need for physical touch and sexual expression in humans has been established in several studies, which identify several adverse conditions associated with emotions, psychology and other health problems due to lack of sexual activities (Rider, et al. 2016, 180).

The connection between sex and wellbeing points to humans' interconnected and embodied nature. Thus religious doctrines that demand sex solely for procreational purposes and seek to stifle erotic expressions ignore human embodied nature. Humans strive in complex interrelationships, not in isolation (Villines 2019). Such doctrines could be considered a deliberate effort to dissociate faith from sexuality, but the two are intricately connected. Furthermore, biblically, sexual activities are not confined to procreation ends. The aspect of pleasure, lust, unity, communication, and as a form of showing appreciation to God is part of the narratives (Seldin, et al. 2002, 4010).

It should be acknowledged that despite the general conservative outlook towards sex in Christianity, several dynamic theologians have made some efforts to expand the functions of sex over the years. Karl Barth is one of the earliest theologians who challenged the prevailing sex for procreation notion. Although he projected sexuality and marriage in terms of heterosexuality and condemned other forms of sexual expressions, he dispelled many commonly held notions of his time. He posits that the female sex and male sex complement each other, and each cannot get satisfaction by themselves without the other. In this work, Barth brought out various functions of sexual intimacy such as amusement, communication, love, desire and as an act of worship (Barth 1960, 167). Many stories and passages in the Bible show that sex is not limited to a catalogue of socially acceptable acts but can include behaviour that transgresses

the norm. Examples are the stories of Tamar, Ruth, Esther, Lot, Jacob, Juda, Ruben and many others (Knauss 2014, 71, 70).

The biblical accounts of sexuality give credence that the conservative nature of sex within Christian circles should be understood as cultural rather than biblical. The traditional notions about sex make it difficult for many Christians to appreciate sex as a gift from God, which is concurrently divine and mundane. Susanna Cornwall (2013, 4) rightly expresses the need to expand the bounds of acceptable sexual expression by Christians when she posits that sexuality expresses the mystery of human creation as those who need to reach out to each other for the physical and spiritual embrace of one other. She explains that sexual expression expresses God's intentions to find our authentic humanness, not in isolation but in relationships. Sex expresses humans' intimate communion with others, the natural world, and God.

For humans to fully appreciate the grace of God and respect the body created so marvellously, sex and sexual expressions should be accepted as part of being human. It should be understood that the Edenic story is not meant to segregate humans but to unite them as recipients of God's love. The account speaks of creatures in God's love made a little lower than the angels but too frail to follow the divine precepts impeccably. The dysphoria that creates the perception of humans' ability to become "superhumans" through separation should be identified and eradicated to appreciate human nature. The effort may reduce the tendency to apportion blames and insult one gender as impure and incapable while apportioning impeccability to the other. It should be understood that gender does not change humans' status before God. Humans are sinners but made righteous through the blood of the Lamb, both males and females. As far as sexual differentiation exists, there will be different gender roles, including sexual interactions and expressions. Religions should provide an equal right for everyone to function according to their call. This will help eradicate gender inequality in the faith community. Discrimination based on gender that leads to gender inequality is sinful and should be purged from the Church.

6.8.2. Religion and Gender Inequality

"Gender inequality" is a major social problem that has been with human communities from time immemorial. It is often defined as "the greater status and power of men than women that often emerges in the control of women's sexuality and other aspects of their behaviour" (Wood & Eagly 2012, 699). The past century saw a substantial decrease in gender inequality in many aspects of life, such as economic power, political representation, choice of mate preferences and many other areas (Zhua & Chang 2020, 2). However, the psychological basis for gender inequality, such as sexism, can not be said to be abated. It can be identified in varying degrees in many societies (Wood & Eagly, 2012). Sexism is stereotyped, justifying outdated gender roles and gender discrimination. It has been seen as a major cause of the underrepresentation of females in critical areas is leadership (Wood & Eagly, 2012).

Religion has become a major institution with the responsibility to lead the advocacy for eradicating social ills such as gender inequality and racism, where one race is seen as superior to the other and ableism; social bias against people with disabilities. However, religion has a long history of gender inequality, and the canker is a part of how many faith communities structure their worship to avoid "sexual-based pollutions." The idea that separating from women is the best way to avoid sex and transcend through spiritual growth in anticipation of a better future body is noticeable in the Church. Gender discrimination is associated with body constructions and is a major effect of vertical transcending doctrines in the Church thus, it is vital for this study.

David Leeming posits that there has been a strong relationship between religion and sexuality since the beginning of human history, which placed the feminine gender in high esteem. For instance, there were sexual relationships among deities, which extended into divine-human sexual intercourse. Leeming believes the emergence of the Abrahamic religion marred this relationship due to their fear and prejudice toward sex (Leeming 2003, 101–104). However, it should be noted that such fears and prejudices are not the exclusive identities of the Abrahamic religion rather, they are widespread in human culture. The result has been an attempt to suppress the female person and her sexuality. Some humiliating and suppressive practices are integrated into social norms to inculcate sexual shame that limits her sexual identity. Such attempts to suppress the female have been a source of cultural practices such as puberty rites. Teenage girls are paraded almost entirely naked and made to dance and bathe in public in many African and Asian counties while their male peers look on. Girls who fail to pass through such rites are considered outcasts and are often banished from their communities or ostracised (Leeming 2003, 104). These rites, often detrimental to the females, serve as a rite of passage, a prerequisite for social recognition and marriage. One of the most heinous treatments attached to such rites is female genital mutilation. In this practice, the main target is the clitoris of the victims, a unique organ that facilitates female sexual pleasure, and there is no such organ in the human body like it (Herzfeld 2017, 92).

The clitoris is comparably more petite than the penis. However, it contains a similar amount of nerve endings to the penis serving as the major pleasure point and a significant source of sexual arousal (Mazloomdoost & Pauls 2015, 246). It dares to challenge the penis in a patriarchal social order. Thus it attracts the cruel knife. Female sexual mutilation is often done under religious precepts, ostensibly to prevent immoral sexual desire and lifestyle. However, it counters the well-grounded scientific fact that sexual arousal is rewarding and a source of emotional strength even when it does not lead to sex (Lehniller 2014, 69).

Also, sexual arousal is common in almost all mammals. Karo (2009, 172–173) posits that an effort to stop people from experiencing it is detrimental to the individual. The practice of female circumcision indicates exalting sexual purity above the safety and wellbeing of the victim. It is well documented that the process can be fatal or leaves irreversible damage to the victim's body. The practice aligns with vertical transcendence, an effort to "transcend" the embod-

ied, natural body through ignorance, hurting the flesh and the vulnerable in the process. The common notion stipulates that transcending immorality requires "beating" the body, similar to asceticism. However, unlike asceticism, victims are not encouraged to go through the process but are compelled and often forced. Sexual arousal becomes such a dangerous enemy that human lives are emperiled to overcome it. The social determination to deny women their God-given pleasure seems to outweigh their safety, wellbeing, and even lives.

According to the UNICEF (2020) report, at least 200 million girls and women living in 31 different countries are victims of female genital mutilation. Millions of girls each year go through it, mostly in religious communities. One of the most alarming aspects is that, more often, it is performed by practitioners with little knowledge of human anatomy, usually without anaesthesia and often under unhygienic conditions. This heinous practice is endemic in Asian countries such as India, Pakistan, Malaysia, Indonesia, and Sri Lanka. It is also common in Middle Eastern countries like the United Arab Emirates, Yemen, Oman, Iran, Iraq and Palestine, including several African counties (Wallen & Lloyd 2011). In these cultures where womens 'lives are imperilled for cultural imperatives, everything is done to protect the male's interest. Several cultural norms are constructed to suppress the female while elevating the male as a sort of social hero, entrenching gender inequality.

While the world's major religions distance themselves from female genital mutilations, there are strong religious undertones in practice (Heise et al. 2002, 5). Thus the disdain towards the female gender is a major socio-cultural problem and can not be associated with the emergence of the Abrahamic religions. However, they are in a strategic position to help turn the tide.

6.8.3. Elements of Violence in the Abrahamic Faith

The Abrahamic religions have evolved over the centuries, and the need for gender inclusion is transforming the face of worship. There are several iconic religious women whose image characterises worship, such as the Virgin Mary, St Macrina, Mother Theresa, and Kathryn Kuhlman, to mention a few. The Church, in particular, is obligated to remove every taint of gender discrimination to reflect its stance against oppression, segregation and enslavement. The current society is making several efforts to identify and eliminate all forms of violence against women globally (Flood & Pease 2009, 125). The effort should inform religions to revise various discriminative notions that tend to affect the welfare of females directly or indirectly. Declarations such as the 2011 Council of Europe Convention treaty known as the Istanbul Convention and the United Nations General Assembly (UNGA) in 1993 should send the signal to religious institutions that doctrines that may constitute a form of violence against women will soon be challenged and the laws may compare them to be dropped.

Reviewing religious doctrine to spearhead liberation by the faith communities is better than being compared, which will attract backlash likely to support the assumption that religion is backwards, discriminative and oppressive.

The Declaration on the Elimination of Violence Against Women, adopted by UNGA, defines violence against women in terms of gender-based actions that result in physical, sexual and psychological harm to women. It includes threats of such acts, coercion or arbitrary deprivation of liberty, and physical, sexual and psychological violence perpetrated or condoned by the state, wherever it occurs (Krantz, G., & Garcia-Moreno 2005, 819). Violence against Women is linked with various health hazards to the victim, including erosion of self-esteem, self-confidence and the desire to live (Krantz & Garcia-Moreno 2005, 818). Besides causing injury, violence subjects women to long-term risk of several other health problems, including chronic pain, physical disability, depression, drug and alcohol abuse (Heise et al. 2002, 5). Given these facts, religion should be women's foremost haven and refuge against gender-based violence. Moreover, religion, in general, has many reasons to enshrine women's welfare in their doctrines. On the contrary, religion is a significant institution that perpetuates violence against women. The Abrahamic family have several reasons that should serve as incentives to celebrate women and their sexuality in their theology because of the significant roles they play and have played in their histories.

However, some Christian denominations can identify various forms of violence against women. The predominant forms of violence that can be identified are mostly psychological violence against the feminine gender, which is institutionalised as a form of gender-based subjugation. Females are brought out to see themselves as inferior to males in ecclesiastical leaderships, limited by their gender though females form the majority of many Christian denominations. Here violence can be adduced from verbal pronouncements and teaching that women cannot be priests and should serve under males. Priesthood in Christian institutions constitutes the pinnacle of leadership and is a critical decision-making body. In the Catholic Church, God is responsible for the ordination of priests. The whole process is God's process. Starting from discerning God's plans for the individual (Hankle 2010, 201), by implication, the exclusion of the feminine gender is attributed to God's decision.

The "divine edit" is thus tantamount to a declaration that females are God-forsaken or limited by their nature. Internalising such doctrine can breed various complexes that may damage the female's abilities and minimise their potential in life. The "decision of God" to exclude females from leadership positions in Christian denominations such as Southern Baptists, Latter-day Saints, Roman Catholics, and the Orthodox Church persists in smaller denominations such as the Church of Christ, Seventh Days Adventists and others. The Catholic Church has created a similar avenue for females who are called into the ecclesiastical priesthood to respond to their calling in recognition of females' invaluable contributions to Christianity. However, most Catholics see the need for women's priesthood (Ecklund 2006, 82). While sisterhood is an equally dignifying position, the hierarchical nature of authority, decision making, and exclusive privileges associated with priesthood make it problematic to be limited by gender. The priesthood historically and sociologically represents endurance, preser-

vation, and resistance against social ills and oppression. Thus while ministerial priesthood represents horizontal transcendence due to their unique roles in helping the pious interact with the world and has sustained the Christian virtues by holding out the light of the gospel to the world, the gender-based exclusion and the hierarchical outlook constitute vertical transcendence. The need to entrench horizontal transcendence features such as egalitarianism, respect for the human body and sexual expression while suppressing the aspects that constitute vertical transcendence is imminent.

6.8.4. Religious Doctrines on the Status of Females

The female gender is often identified with sex, and they are often seen as sex objects. Therefore, females are compelled to dress and act in a particular way to avoid "seducing" the male (Staunton 2019, iii). The more challenging aspect of the perception of the female is that, while they are associated with sex, the attitude towards sex in religion is a notch of disembodiment. It is expressed as synonymous with the Edenic forbidden fruit, a regretful human action. Thus, there is a sense that spirituality and purity demand abstinence, leading to the celebration of celibacy and chastity. The worse aspect of the idea is that the woman is implicated in the destructive act; she used her erotic attraction to lure the "innocent male" into sin that devastated the human race (Vermeulen 2017, 302–309). According to the narrative from the Abrahamic communities, humans were created perfect in the Garden of Eden. Everything was at humans' disposal, except one tree at the centre of the primordial garden, which contained knowledge of right and wrong. The woman was the first to eat from the forbidden tree and "enticed" the man into what spelt doom for human generations (Nielsen 1999, 455–461). This narrative, though a mythological expression, renders the feminine gender complicit in the act, she is the source of enticement and the object of blame retold in the Greek Pandora myth.

Thus, the female is the initiator of the human race's fall and the male's manipulator. This notion conforms to the position of Christian theologians, such as Tertullian (160–220 AD), who saw women as "the devil's gateway." Saint Augustine later developed such a notion in his "doctrine of Original Sin," which accuses women of being originators of sin, who seduce men to transfer the original sin from generation to generation (Lehniller 2014, 107). These theologians did not even see marital sex as acceptable since it is an avenue to perpetuate sin. To transcend thus means avoiding sexual acts, and females thus both have attracted negative religious stereotypes due to such narratives (Lishmah, 2013, 41). Vertical transcendence has become the order of the day. Unlike the ancient religions where the mother earth reigns superior, a source of fertility and productivity, the patriarchal context sought to "punish the sin" of the woman through subjugation, objectification, instrumentation, suppression and stigmatisation (Leeming 2003, 101).

The Christian denominations that uphold such misinterpretation of the story and limit women ignore the fact that this "impure" gender sponsored Jesus'

ministry, and the "pure" Judas Iscariot was stealing from the coffers (John 12:6, Luke 8:1-3). The vital roles played by women such as Mary, Johanna, and Mary Magdalene in the Gospels appear to be snubbed when it comes to promoting male chauvinism in the Church (Sim 1989). If the Lord God instituted horizontal transcending structures by involving females in the schemes of eternal life and salvation, can vertical transcending doctrines that exclude females be linked to God? In other words, do such vertical transcending doctrines oppose or support God's intentions? The questions can be answered by examining God's schemes of salvation, such as the genealogy of Christ. The incarnation involved specific categories of women that Abrahamic religion generally places at the margin as polluted, and the Church, in particular, would disqualify as too desecrated to be an instrument of grace. This is because, besides being polluted, the female body, in general, is seen in the Abrahamic culture as an object of men's pleasure, subservient to men and desecrated; unfit for the human-divine interaction (Lishmah, 2013, 41). Paradoxically, the genealogy of the Messiah recorded in a patriarchal setting involved five women. The status of four was in the social "deviant" category, least to be recognised in the divine scheme of salvation. They were God-forsaken, "polluted" by illicit sex, prostitution, ill-fate, misfortune, etc. This challenges the integrity of some of the vertical transcendence doctrines, such as segregation and male exclusivism in ecclesiastical leadership. Transcendence in religious leadership is often dominated by men, serving as the anointed priests, prophets and kings. However, while politics in religion exalts one gender over the others, several records show that God is no respecter of gender and provides an equal avenue for all to transcend. The records of four women in the root of Christ, a group of women often referred to as "transgressive women" in the Bible, show that contrary to the vertical socio-religious structures, God builds salvation horizontally.

6.8.5. Marginalised Women in the Family Tree of Christ, a Challenge to Vertical Transcendence Notions

The marginalisation of minorities, the weak, the poor and women has been part of many societies. Humanity causing psychological harm to the other due to differences appears to contradict God's will, as can be understood from the genealogy of Christ. According to the Gospel of Matthew account, the genealogy of Christ involved five women, Tamar, Rahab, Ruth, Bathsheba and Mary. While one is classified as chaste and virtuous, the remaining four were seen as defiled, sexually polluted and located on the social margin. These formed a category of women whose social status challenged ecclesiastical notions of ideal people worthy of the service of the Lord. They represent a challenge to doctrines of "purity," "monogamy," "sex for procreation," "sex within a loving marital relationship," celibacy and chastity. The notion of holiness has been reduced to "separation from sex," thus, sexual transgression reduces the integrity of people and defiles them in the eyes of society, rendering them unfit for sa-

cred duties. However, people perceived as chaste with good social standing could transcend the human status to become vessels of the Most High YHWH.

The incarnation of Christ thus defies holy-defiled dichotomies pointing to the fact that everyone, irrespective of their social status, sexual choices and health, is accepted and valued by God. This section demonstrates how the construction of social transcendence by theologians could contradict God's constructions. The story of these transcended women demonstrates that the vertical transcendence exhibited by the Church in particular and the Abrahamic religions in general that discriminates based on sexual choices and gender contradicts the horizontal transcending constructions of the God of Abraham. The story of the transgressive women in the genealogy of Christ represents horizontal transcendence as opposed to the sociological vertical transcendence of the OT setting. The story contrasts humans' socio-religious idea of exclusive transcendence against God's ways of inclusive transcendence. Humans transcendence construction is marred by vindictiveness, segregation, sexism, and denial of human embodiment thus, it is often vertical. God demonstrates that transcendence should be inclusive, uniting and full of love. Therefore, the story of transgressive women is relevant to this study. The story shows the need for transcendence constructions to tilt towards horizontal rather than vertical.

In this regard, I traverse the story of the women, whose names appeared in the genealogy of Christ in the Matthew account, expressing the view that the religious doctrines that suggest that women and sex may taint spirituality and hinder transcendence lack sound theological and scriptural illuminations. Sex and women are often perceived as a major hindrance to spirituality and transcendence. Thus the accounts of the transgressive women in the lineage of Jesus challenge the idea of sex as a hindrance to transcendence and women as subservient to men. It also points to the fact that males alone cannot sustain God's salvation design, but every gender has a role to play, which is of equal importance.

Tamar was the first woman to be mentioned in the genealogy of Christ. According to Genesis 38:1–25, she was a woman who had been widowed twice and had attracted the suspicion of the father-in-law. Judah had returned her to her father's house ostensibly to wait for a child to grow and marry her so she might enjoy matrimony again. Having no children renders her a woman without status, no inheritance, and no social security because the future of women was children determinative. Although Judah was reluctant to allow Shelah to marry Tamar, he did not divorce her to enable her to remarry and change her status. After years of neglect, she becomes pregnant in her father's house, and the irresponsible in-law determines that she should be burnt alive together with the germinating lives within her, which turn out to be twins (Rose 2019, 3).

This Jewish father-in-law, Judah, felt he had the right to premarital sex with anyone he liked, even prostitutes. However, the in-law, deprived of affection and sex for several years, deserved to die in violence and torture for possible sexual activity. He would not ask to be burnt when it turns out that he was responsible for the pregnancy (Lishmah, 2013, 28). Both Leviticus 20:10 and Deuteronomy 22:22 prescribe the death sentence for both male and females who

commits adultery, but typically, women alone were executed in the Jewish communities for adultery. In John chapter 8 verses 5, a scenario is recorded where only the woman was presented as guilty, deserving death in a case of adultery. Sexual crimes were often identified with the feminine gender, though the society was predominantly heterosexual. Tamar and one of her babies, who were to be incinerated alive, had their genetic codes transferred into that of the Lord and Saviour of the world.

Rahab, like Tamar, was a Canaanite and lacked the Jewish bloodline. Her profession aggravated her status. As a prostitute, she was far from being useful to YHWH in the Jewish socio-cultural standards (Rose 2019, 3–7). However, she had been the source of salvation to her household from the bloody Jewish conquest as she demonstrated faith in YHWH. However, it did not cross her mind that the Lord would find her worthy to serve as a root of broader salvation received through faith. Rahab got married to a Jew and was blessed with children, one of them, Boaz, became a direct ancestor of the Messiah through King David. The third recognised feminine figure was from Moab, the loins of Lot. Israelites have been suspicious of the Moabite women, tagging them with seduction due to the incidence recorded in Numbers chapter 25. Their low status among the Jews was exacerbated by descending from an incestuous relationship between Lot and her daughters, daughters seducing father. Ruth, a Moabite, had demonstrated faith in YHWH and settled with Naomi in Israel. She uses her "seduction" skills on Boaz, who succumbs to her "enticements" and marries her. Tragically, Boaz dies on the night of their marriage, reinforcing the notion that marrying a Moabite was evil (Lishmah, 2013, 33). Ruth was treated with suspicion and contempt; little did she know that the fatal union would produce the great grandfather of one of Israel's greatest kings, David. The Moabites, through Ruth and the Canaanites, became part of the genealogy of the incarnation of Christ.

The fourth woman Bathsheba whose adulterous endeavours with the powerful monarch caused the death of her husband, Uriah, unlike the other three Gentiles, was Jewish. However, in Abrahamic culture, she is equally a misfit and polluted. She was complicit in the murder of her husband, though a woman cannot challenge the power of an anointed monarch, her society places her at the margin, after all, she had been widowed. However, her adulterous relationship breeds royal blood into her veins, providing the license to contribute to the Messianic genealogy. Nitzevet bat Adae was one of the women whose name was excluded from the Jewish annals due to suspicion of being unfaithful to her husband. She is believed to be the mother of David. According to extra-biblical legend, she got pregnant on the blind side of her husband by employing a tool similar to Leah and Rachel's switch. The husband, Jesse, had separated from her due to his own inferiority complex and married his Canaanite servant, depriving Nitzevet of her conjugal rights (Weisberg 2020). He had the right to sexual pleasure outside their union, but she did not. David grew up an outcast, and his mother, Nitzevet, was despised as an immoral woman. He was treated less than a servant in the family due to suspicion of her mother's infidelity. Da-

vid groaned, "I am a foreigner to my own family, a stranger to my own mother's children" (Psalm 69:8). The immoral tag on Nitzevet made her anonymous in the Jewish society, a status that affected David, the product of the affair (Weisberg, 2020). Even though David rose to prominence and was close to his mother, Jewish redactors refused to mention her name in their records.

The final female figure, Mary, carried the arbiter of salvation, the source of the Christian faith, in her womb and nursed Him in her bosom, not for herself alone but for generations to come. The scenario testifies that God does not associate impurities and limitations with women. It should be noted that women played pivotal roles in the ministry of Jesus on Earth. The canonised account of the Gospel attributes the declaration of the resurrection of Christ by celestial beings first to women. Mark chapter 16 and John chapter 20 accounts credit Mary Magdalene as the first to see the resurrected Lord and receive the mandate to proclaim the Gospel message. Mary Magdalene was also tainted and perceived to be on the social margin. She was desecrated and a misfit because she was once possessed by unclean spirits (Rose 2019, 3–7), which the Lord exorcised. Therefore, the Saviour family tree encompasses those placed on the margin by the socio-religious systems. They were polluted, sexually impure, and deviants but esteemed and loved by God. They were significant actors in the scheme of salvation though society refused to recognise them.

Most women from the margin were bestowed with mighty ministries, demonstrating that God does not regard any gender as subservient to the other, and people's conditions do not determine their status in God. We can conclude that God does not see one gender as superior to the other. Moreover, extramarital or other "irregular sexual expressions" do not pollute females as the Abrahamic traditions portray it. Instead, all people, irrespective of their gender, have the divine mandate to express their sexuality according to their unique orientations. Doctrines that discriminate and segregate based on gender, sexual expressions, and social status should be considered contrary to God's will. Furthermore, the stigmatisation of sexual expression as impure and desecrating has no basis in Judeo-Christian text. God anoints and permits all people to transcend to exalted positions irrespective of their social status. The dichotomies associated with gender, social status, holiness and desecration are abolished in God.

6.9. Towards Theology of Embodiment

The introduction to this chapter stated that a common characteristic of Christianity and transhumanism include their attitude toward their philosophical resources. Technology points to human embodiment and seeks to enhance the holistic being, but many transhumanists focus on the mind and thus escalate disembodied notions. Christianity expresses a low view of the body and sexual expressions despite the body being at the centre of Christian theology. The doctrines of *imago Dei*, incarnation, and resurrection point to the need to appreciate the body, which is simultaneously sacred and secular. Furthermore, the body is the centre of the Christian liturgy. A cross-section of Christians propagates male

chauvinism and slights womanhood while the Bible espouses gender equity and celebrates both the body and sex.

Historically, Christianity's idea of the human person has been based on dualism and materialism, two main contradictory notions concerning what happens after death. Dualism stipulates that the body dies and the soul departs to be with God, similar to Platonism and other Greek thoughts. Christians who view the human person in terms of psychosomatic unity expect bodily resurrection, indicating that a person who dies ceases to exist until the period of resurrection. Murphy (2006, 7) explains that for centuries these two ideas merged to form something like the body dies, the soul departs, and at the end of time, the soul receives a resurrected or transformed body. The dualistic notion renders the body redundant so far as eternity is concerned. The body is viewed instead as the temptation that provides temporal comfort in exchange for permanent torment. The body must then be "trodden" for the real person within to transcend the pleasures of life. Abstinence from the desires and even needs of the body, such as comfort, food, wealth, and sex, then becomes the way to help the soul overcome the body. Women should be avoided to prevent pollution and seductions that defile the soul. These perceptions are the central disembodied ideas that hinder egalitarianism and rationalism in Christian doctrines. It effectively fuels gender-based segregations and genophobia that entrenches disembodiments and vertical transcendence aspirations. In this regard, transcendence appears to oppose the body, affirmation of the body then represents renunciation of transcendence, as some feminists such as Naomi Goldenberg perceive,

> What I am calling the body stands in contrast to the notion of transcendence in traditional theology. Transcendence is a wish for something beyond the body, beyond time, and beyond specific relationships to life. Such a world of perfect safety involves negation of this world and is probably motivated by a characteristically (but not exclusively) male fear of being merged with matter. Theologians envision salvation as up, out, and beyond, and call this hoped-for state of dissociation the ultimate reality (Goldenberg 1993, 211).

The notion of transcendence that dichotomises the human and demonises the body directly challenges the doctrine of the incarnation of God who dwelled in a bodily form in fullness, who took up the form of a servant. During the Pentecost experience, women were baptised by Holy Spirit. Furthermore, Apostle Paul declares that gender disparities are no more in Christ Jesus, for all were made to drink the same Spirit by which we exclaim *Abba* (Montague 1991, 82–94). Suppose both males and females received the same Spirit, and the gender barrier was broken in the early Church through the involvement of women in a patriarchal society. In that case, current Christians have a task to do better in a more balanced contemporary society. The gains should not just be maintained, but every effort should be made for a radical transformation. In fact, the Church should be at the forefront of social transformation that eradicates discriminative

genitalia advantages. Carter Heyward (1987, 45), a feminist theologian, is right when she states,

> We cannot comprehend the meaning of sexuality from a historical perspective without viewing its place in the context of power relations between genders. In particular, we must understand sexism, the oppression of women in which men are expected to play their manly roles – on top of women, enforcing the rules by which patriarchal, androcentric society is naturally and rightly ordered.

Theology should be a unifying force integrating recent scientific data and social experience while exploring (Hefner 1993, 8–9) sensitive issues such as sexual activities to enable people to make informed choices. Currently, the church appears to be confused because, on the one hand, the rituals and symbols point to the sacred nature of the body and the fact that everyone can transcend, irrespective of gender. Besides the celebration of the body by the Bible, Christian worship, in general, affirms the sacredness of the body and rejects the notion that slights the body, albeit subconsciously in the use of liturgy. Liturgies emphasise the importance of embodiment; it requires different positioning of the body in worship. Mark Wynn (2009) posits that theologians and philosophers are attending more to the role of bodily practices, such as the movements associated with particular liturgies, in shaping the way society thinks and feels about matters of faith. The Christian liturgy captures the human desire and imagination, emphasising the desired relationship with God and the ecstasy of the eschaton. James Smith (2013, 109) explains that liturgies inculcate in humans' particular visions of the good life because they are story-laden practices, and over time they inculcate adherents into their stories. He argues that the formative power of both secular and religious liturgies is bound up with their aesthetic force. Liturgies are pedagogies of desire that shape human love because they picture the good life in ways that resonate with imaginative human nature. Thus, the embodiment is crucial for Christianity and other religions that employ liturgical orders to communicate the now and the future (Smith 2013, 137). On the other hand, salvation is often viewed in terms of delivering the soul which is able to live on with the demise of the body. The body is constrasted with the spirit and efforts channelled towards beating the body in order to exalt the spirit/soul.

Christianity should recognise the vital roles the body plays in worship and the salvation narratives. The incarnation of Jesus, His bodily resurrection and ascension should be informing that, the body is the ambit of faith and salvation. The human body should be considered simultaneously sacred and secular in its dynamic nature. Sacred because it is the arbiter of faith and vessel of the Holy Spirit, moved by grace to demonstrate the love of God in a somewhat ambiguous world. Secular because it engages in the world and participates in the passions and affected by both religion and secular interests.

6.10. Conclusion

❖ Discussions in this chapter are based on the premise that "posthuman" discourses have religious roots and that the vision to extend the self is of faith origin. The first part of the chapter is an effort to justify why religious eschatology should be considered one of the "posthuman" narratives. Analogies are drawn with common elements such as faith, apocalyptic theories, and gender. The second part discussed religious notions on sexuality under "posthuman" gender, and the third part challenges associated vertical transcendence visions in Christianity.

❖ Faith is identified as one of the major elements in religion and transhumanism. However, the faith aspect in the "posthuman" discourses is expressed differently; while transhumanists profess faith in technology, religion ascribes to faith in the divine. Furthermore, transhumanists and theologians have similar notions about humans. For example, they both see humans as flawed and subject to improvements. Both subscribe to apocalyptic theories and see the universe as a temporal system, expressing the hope to colonise space (heaven). However, they differ on the means of achieving their aspirations; religion looks to divine intervention while transhumanism looks to technology, but both inculcate disembodied notions into their visions and ignore the principles of their sources. Because both the Bible and technology point to an embodiment of the human. However, humans are free not to value their bodies, which has been the primary practice for centuries. Technology, however, has served as a medium for fulfilling religious visions by embodying their abstract concepts. The Latin terms *adventus* and *futurum* distinguish the two aspirations.

❖ Religious and nonreligious "posthuman" discourses are both gendered. Transhumanism ascribes to a genderless future similar to Christianity, but unlike the Christian vision, it is not sexless. In contrast, sex is assumed and changeable. Furthermore, the Christian notion of the afterlife focuses on personalities rather than genders, thus it is devoid of sexuality. The discussions link the Christian sexless "posthuman" with the traditional attitude toward sex topics that prescribes sex solely for procreation within heterosexual, monogamous relationships. However, the Bible presents a rich outline of sexual expressions that transcends the purposes of procreation in a monogamous union.

❖ To lead the world in the fight against segregation, discrimination and downplaying of the importance of the body, the Church should permit everyone who feels called into the ordained ministry to go through a fair selection procedure irrespective of their gender, sexual orientation or marital status. The pros and cons of combining the responsibilities of ministry and family should be made available to help individual priests make informed decisions about whether to be involved in marriage or not. The choice should be the decision of the priest, but it should not be a precondition for the ordained ministry.

- ❖ The genitalia seem to be a critical component in religious transcendence. The phallus represents spirituality, leadership and purity, while the clitoris represents lust, mundane and desecration. The more the male avoids genital contact with the female, the more transcendent he becomes. However, he sinks into a quagmire of unredeemable defilements when the holy phallus mingles with the same gender. According to Christian tradition, it seems female celibates lose the power to lure men and therefore qualify for transcendence. Thus celibacy corresponds to transcendence in many religions.

- ❖ The ecclesiastical doctrines on gender and sex are rooted in non-Christian cultural myths such as the Pandora story rather than the Bible records. In the context of the Pandora stories, the female committed the "blunder" alone due to curiosity. Nevertheless, the Bible records say otherwise. The effect of the woman eating the fruit was insignificant till the man joined in. Theologians such as St. Augustin, who accused females based on the Edenic story, write from the influence of his Greek thoughts rather than Biblical understanding. The difference between the Greek cultural myth and the Bible accounts is that, while the cultural myth apportions gender-based blames, the biblical records implicate both sexes. Thus, doctrines of the fall that specifically accuse the female gender are unbiblical.

- ❖ There are Greek cultural influences in both Christian notions of transcendence and transhumanism. Christian theology can expunge such dualistic notions and replace them with meanings based on current scientific data. This is likely to promote embodied theology that reflects the thought of God through biblical revelations. Christian theology would then demonstrate horizontal transcendence and become a potent source of liberation.

CHAPTER SEVEN. Conclusions and Summaries

7.1. Introduction

This concluding chapter summarises my findings that respond to the hypothesis and formulates recommendations. The primary goal of this research was to explore humans' dreams to transcend their biological nature through religion and technology. Religion served as the dominant premier social driver and was primarily used to promulgate pathways to transcend. However, religious influence has subsided and succumbed to the dominance of technology as the contemporary means of transcending. Although technologies project horizontal transcendence, the foremost technological advocates, transhumanists focus on vertical transcendence that is less scientific, unsustainable and more religious in genre, despite their theoretical post-religious stance. Furthermore, technologies appear to be built on a religious framework to fulfil religious aspirations.

The research first sought to understand how to identify the human by analysing Hefner's created co-creator concept to explore these areas. The predominant "posthuman" narratives were explored while mapping the parallels between technological innovations and religious visions. The following findings and conclusions were arrived at;

7.2. Apparent Opposing Concepts in Science and Theology are Premises for Fruitful Engagements

Science/technology and theology/religion have more things that unite them than what divides them. Many apparent disagreements are a premise for fruitful engagements because they say something similar but employ different sources. For example, both subscribe to universal kinship; in science, it is the evolution from a single cell, while in theology, the origin from one God. They both see humans as embodied and embedded in nature and yet unique.

The evolution theory, which many theologians have contested since its inception, can be understood as God's instrument for creation. Thus the evolutionary theory is theologically consistent with the biblical account of creation, expressed in *creatio ex nihilo* and *creatio continua*. These notions point to the fluid nature of God's act of creation which is often understood within the context of humans' creativity. However, God's creative dynamics are beyond humans' compartmentation. Humans rather have to acquire knowledge in nature to understand God's creative trends. This will help them to replicate God's act in their co-creation in recognition of their status as technological co-creators. Furthermore, transcending notions in religion confirms the evolution theory position that human nature is unstable, evolving and likely to transform.

Human's technological activities reflect God's creative grace and affirm humans' created origin. Thus technology demonstrates human's relationship with God, pointing to God's immanence. Hefner's concept of created co-creator

aptly reinterprets the Christian doctrine of creation in terms of kinship, dependency and creativity, where science merges with myths. Humans' uniqueness is identified in the context of their unique evolutionary history that has bestowed unique features, culminating in the freedom that engenders creativity and technological activities. Thus, the faith community should not fear technology but embrace it as God's gift to humans, a medium for co-creation.

7.3. Hefner's Created Co-creator Concept Bridges Theology and Technology Pointing to Transcendence within Nature

Hefner's created co-creator concept is theological but expressed in a way that scientists may recognise familiar claims. It adequately unites science and theology and serves as a bridge between many concepts in science and religion, such as evolution and creation, *Imago Dei,* and humans' unique evolution that enables them to affect the evolution of other organisms. The created co-creator concept transcribes the uniqueness of humans to responsibility in relation to their embodiment in nature which requires co-creation through technology to facilitate a wholesome future.

Therefore transcendence is recognisable horizontally within kinship, dependency and creativity. Hefner's view is based on the fact that scientific research has relied on human kinship with the nonhuman other to solve many human problems. Instances can be drawn from the use of animals in the lab, the prospect of animals carrying a pregnancy to term for humans, possible future application of xenotransplantation, artificial joints, contact lenses, prosthesis, plastics, pills, good nutrition, and other available medical and technological interventions. These mitigations usually challenge the boundaries between humans and nonhumans, thus, questioning human uniqueness since humans' transcendence has been possible in cooperation with the nonhuman other. Humans' dependency on various factors in nature, the importance of creativity for humans' survival and the evolution of nature into a more wholesome state become more pronounced in kinship. Because humans are natural and part of nature, where they assume their identity, they can transcend through research and technological mediations within nature.

7.4. Disembodied Notions Lack Religious and Scientific Backing

Both evolutionary science and creation stories agree that humans are embodied in nature and that their physical body is made up of the very stuff of the universe. The implication is that the body serves as the medium of human identity rather than a disposable outer shell. Furthermore, science and religion emphasise the body in recognition of the *Homo sapiens* as a creature. In religion, the ancient Abrahamic texts express the human body as sacred. The body is placed

at the centre of Christian theology through *imago Dei*, incarnation, and resurrection of the body doctrines. Christianity revolves around the resurrection of the body, and Islam aspires for bodily resurrection into the celestial realm with the mundane senses intact. God incarnated into the corporal world, forming the basis of the celebration of His body in the Eucharist by the Church. Moreover, the human body serves as the living temple of God. Additionally, religious liturgies emphasise the importance of the body as the medium of worship and relationship with one another and with God. Transcending, therefore, involves improvement and possible body transformation. Dualistic notions within the Abrahamic religion that vilify the body are rather cultural.

Nonetheless, understanding human beings in dualistic terms might not be wrong. This is because dualism appears in different forms of understanding humans, such as psychosomatic, biocultural, body and mind, body and soul. Thus, the human being is made up of embodied information and can be understood as having a body, soul, spirit, material, immaterial, culture, and genome, but all these aspects should be seen as united, indivisibly co-adapted and co-evolved into one whole. The implication is that, separation represents destruction. The psychosomatic unity idea best describes the human. The human could be identified within the interception of body and mind, physical and spiritual, simultaneously immortal and mortal. Theologically, Christ's example should be the yardstick; the "posthuman" Christ was not separated from the body but resurrected and ascended embodied. It represents horizontal transcendence and challenges notions that vilify the body. Thus both religion and science can aspire for horizontal transcendence.

7.5. The *Imago Dei* Doctrine does not Contradict Science

The *imago Dei* doctrine in theology does not counter science rather, it corroborates scientific data. The doctrine elaborates humans' unique attributes that distinguish them from any other species. It also emphasise humans' ability to influence evolution through technology. The idea stems from human activities such as domesticating other species, hybridity, genetic manipulations, and potential space colonisation as stipulated by science. According to scientific story, the evolutionary processes have bestowed on humans characteristics that are difficult to identify in other species. Such characteristics mark humans' uniqueness. Theological meaning making intepretes such features in terms of special status that places humans between divinities and the mundane, *imago Dei* who are the custodians of the universe.

The created co-creator concept adequately explains the *imago Dei* doctrine by describing humans as simultaneously created and creators. The concept expresses the doctrine in terms of the ability to make decisions and construct justifying stories through the process of feedback. Thus, humans' uniqueness as co-creators is expressed through their unique features, culminating in freedom. The human's purpose is understood in creativity as a reflection of God's creative

grace. Thus *imago Dei* points to a relationship between God and the world while representing creative responsibility.

Humans are creatures like other species from the evolutionary matrix. However, they are distinguished from all others because of their unique evolutionary history that has bestowed the freedom to construct stories through knowledge acquisition and their applications. Humans are thus unique in characteristics but not in value. The doctrine can be reinterpreted to represent responsibility and relationship, synonymous with a parent-child connection. The *imago Dei* doctrine can therefore be interpreted in relation to evolutionary science.

7.6. Enhancement is a Natural Process and Distinct from Transhumanism

"Enhancement" is a natural process that depends on available scientific data and technology, driven by the desire for trascendence. Enhancement is scientifically plausible and theologically consistent, but it has often been understood in terms of transhumanism. In contrast, enhancement represents a resource that provides *Homo sapiens* with an existential advantage in the evolutionary processes as they encounter an ever-changing panorama and new environmental conditions.

Scientifically, *Homo sapiens* have gone through various forms of enhancements in their evolutionary history. Theologically, God's gift of warm clothing was probably the first enhancement to fortify humans against unpredictable environmental conditions and impart technological knowledge. Technology and enhancement thus have a solid theological base because they began in a relationship with God. Enhancement has become inevitable in the current technoculture where the source of miracles have moved from metaphysical to technological. Thus technology has become a crucial means for the Church to continue the good work of Christ Jesus. It is noteworthy that many activities taken for granted, such as good nutrition, drugs, contact lenses, workouts and medical intervention, contribute to the human enhancement process. Furthermore, radical medical procedures, including implantable cardioverter-defibrillators, prostheses for amputees, and neural implants, are acceptable forms of enhancement and do not represent transhumanism.

7.7. Transcendence Serves as Uniting Concept between Religion and Technology

Technology should be understood theologically as humans' evolutionary becoming and a premise for transcending human limits horizontally. Technology is the medium of faith and fulfilment of religious aspirations on the Earth because various technological innovations serve as analogies of what is hoped for and the realisation of what is anticipated. Technology should therefore be accepted as a medium of human relationship; a platform that collapses physical

distance and fosters a relationship with God. It is also a premise of humans' survival, comfort, enlightenment, extension, support and health.

Theology often subscribes to vertical transcendence, which is antithetic to technological horizontal transcendence. However, the various analogies indicate an intrinsic relationship between technology (science) and theology (religion). Technologies utilise the "other" human and nonhuman other to cure, enhance, and augment, eventually fulfilling religious transcendence. Theological transcendence relies on abstract ideas mostly of metaphysical nature to build frameworks that are primarily otherworldly. However, such abstractions serve as a solid framework for technological activities that point to humans belonging to the Earth.

Therefore theology should support novel technological activities such as genetic research since technologies project the feasibility of religious aspirations. For example, cloning technology points to humans as co-creators and can serve the theological purpose of saving lives, healing diseases and reducing human limits.

7.8. There are Disembodied Notions in Religion and Transhumanism which contradict their Sources

Transhumanists allude to science and technology as their sources, while religions to their sacred texts. However, disembodied concepts in both transhumanism and the Abrahamic religions lack support in science and scriptures. For example, while technology improves the complete human and facilitates horizontal transcendence, technological Singularity seeks vertical transcendence, similar to Gnosticism; the body is vilified in place of a theoretic essence, which is unscientific. While the Abrahamic religious texts honour the body as sacred and promise bodily resurrection, the communities project the body as temporal and subservient to the soul. Furthermore, women's bodies are discriminated against as impure and incomplete and often objectified. Additionally, the female body is often identified with sex and viewed with suspicion in religion. On the contrary, the Abrahamic texts project womanhood as the means of divine-human interaction, eternal life and salvation.

Both scientific data and religious texts recognise humans' embodiment and diverse gender. Moreover, availability of sex reassignment smacks gender discrimination in religions, a sign that males are not distinctive from females. Furthermore, while the Bible celebrates sex, there are ecclesiastical doctrines that stifle sexual expressions and celebrate celibacy. However, the health hazards associated with sexual restrictions and celibacy, coupled with priestly perjury and sexual scandals, refutes such chastity doctrines. Several studies indicate that such doctrines ignore human embodied nature. Additionally, the body's needs cannot be forfeited for vertical transcendence. Islam, however, sees sex as an eternal reward to the "posthuman" in Paradise. Furthermore, the *houri* concept represents the deconstruction of the dichotomy between divinity

and humanity, sex and transcendence, holy and defiled, sanctity and desecration, Paradise and Earth, including divinity and technology. Similarly, *sexbots* represent the hybridity of the mundane and divine, male and female, human and nonhuman, sexuality and holiness, marking the emergence of a techno-religious cyborg. The Paradise virgins, the *houri* concept and *sexbots* represent the deconstruction of dichotomies of vertical and horizontal transcendence.

7.9. Religious Eschatology should be seen as "Posthuman" Account

When it comes to posthuman theories, the faith communities are the premier narrators because eschatology predates so-called post-religious "posthuman" narratives. Besides, scholars see the term "posthuman" as an umbrella term that describes various notions related to theories about human transformations. They narrate possible forms of existence after the current nature, similar to what exists in religious eschatology. Religions present metaphysical/mythical "posthuman" accounts, while transhumanism and posthumanism provide physical/technological "posthuman" accounts.

It should be noted that posthumanists and transhumanists use the term "posthuman" in diverse ways to mean different things. Thus there is no consensus on the precise meaning. In transhumanism, it revolves around enhancing and enabling the human, a vertical transformation through technology into a godlike state. Posthumanism views it as representing barrier crossings such as that between humans and nonhumans, the living and non-living. Thus, it represents all breaches mainly perceived as crossing the anthropocentric barrier. Consequently, it could also mean a post-anthropocentric era of cyborgs, which is simultaneously religious and secular.

7.10. The Cyborg Challenges Religious Exclusivism and Discriminations

The cyborg is an ambiguous image but symbolises unity, barrier breaching, hybridity, equity and kinship. It exhibits credentials that dwarf religious standards of equity. The cyborg unites the sacred with the profane and challenges humanism, sexism, racism, segregation, and systems that accord privileged status to a particular species, gender, race, etc. The cyborg reveals humans' affinity to the nonhuman other and the divine. The concept does not only project humans' desire to crossover to the nonhuman other but also the desire of the divine to crossover to the human. This brings the cyborg in relationship with Hefner's concept of created co-creator that advocates for the unity of humanity and divinity in creativity and freedom, including kinship with the nonhuman other. Theological appreciation of the cyborg serves as uniting icon that challenges doctrines of separation and exclusivism in religion. The cyborg represents re-

sistance to divisiveness, suspicion and hatred in the faith communities like what pervades between Islam and Christianity, Sunnis and Shiites, Muslims and non-Muslims. Women in Islam, Judaism and many Christian denominations may find solace and strength in the cyborg figure.

7.11. Transhumanists Aspirations to Transcend is more Religious than Scientific

The transhumanist methods outlined as means to overcome ageing should be considered unscientific, rather, they should be seen as a premise for pseudo-science. Transhumanists assume a post-religious posture, however, they inculcate various religious notions, including the discredited gnostic dualism that vilifies the body and divinises an invisible aspect into their aspirations. Like Gnosticism, transhumanists portray the human body as subservient to a perfect pattern, needing to be disentangled from the body through technology. Immortality in transhumanism is tantamount to the extermination of biological humans and immortalising humans' automata. However, while transhumanism fails to acknowledge humans' kinship properly, it holds various values such as creativity and the ability to dream and work towards its realisation. These are essential for human existential continuity and motivate the fulfilment of their cosmological purposes. Transhumanism aspires for a religion-like paradise, and their aspiration represents the realisation of humans' primordial innate desire to overcome death. The organism part of the cyborg will die, but the "posthuman" upload is immortal.

7.12. Posthumanism and transhumanism equally see the need to use technology to improve the human conditioning but for different purposes

Transhumanism's desire to use technology for transcendence ignores the existing systemic problems and the potential adverse effects of technology on other species. Posthumanism criticises the anthropocentric utilisation of technology that might have inimical consequences on other members of the commonwealth of nature. Posthumanist sees the need to use technology to solve the systemic problems that provide a privileged position to one species over the other with hierarchical identity politics. They believe that enhancement would be more beneficial when the various dichotomies are removed, and equal opportunities are given to all species to participate in enhanced life. Posthumanism, therefore, seeks enhancement through harmonisation. Immortality is thus achieved even in death because the dead are still genetically linked with the living. However, transhumanism understands death as a waste of information and a colossal loss that technology must address.

7.13. Technology is Crucial for Human Survival and should not be left for transhumanism alone to suggest its trend

The *Homo sapiens* is a religious *Techno sapiens* because, religion is techno-logical, and technology is religious. Consequently the faith community cannot be apathetic towards technology. The faithful should get involved in technology since it is a gift from divinity to humanity and a premise for survival. It should be noted that transhumanists depend heavily on theological doctrines to formulate their technological ideologies. The implication is that, there are in-depth resources available for believers to engage in co-creator technologies and theories. Theology can contribute to technological discussions and encourage religious adherents to participate in technology when theologians are more open to technological progress. The faith community's involvement in technological activities can facilitate the production of embodied technologies that identify with human nature as embedded in nature and engender a holistic horizontal transcendence.

7.14. General recommendations

Many religious texts reflect the scientific knowledge of ancient communities because scientific data has been vital to ancient spiritualists and theologians. Therefore, it is necessary for contemporary theologians to inculcate current sci-entific data into their work so that theology may reflect modern science instead of ancient science. Unfortunately, antique science forms the basis of many current religious doctrines. Suppose the current science is inculcated into theology. In that case, contemporary theology may provide an idea of the scien-tific environment that influenced the current theology to posterity while facilitating the process for people to identify with religious dogma. Christianity, in particular, should formulate its transcending aspirations based on Christ's incarnation, death and bodily resurrection that culminate into the creedal declaration of resurrection of the body as a significant affirmation of faith. This is because the Bible emphasises the human body as a vital platform for divine-human relationships. Thus, the body should be treated with reverence and recognised as the medium of transcendence. The doctrinal terms such as the incarnation and resurrection should be reinterpreted to reflect the current scientific and social understanding of the body.

Furthermore, the contemporary era is technocultural, providing increased ac-cess to freedom of choice and promoting sexual adventures and explorations. Theology and ecclesiastical doctrines should be sensitive to the socio-cultural shift from sexual shame to sexual exploration, an era where techno-sexual experiences are part of human expressions. It should be noted that as birth control technologies progress rapidly, other functions of sexuality (besides procreation) have moved to the foreground. Technological sexual expression is part of society and popular culture. Moreover, many types of research confirm

that a growing number of people are employing technology for sexual explorations. Thus, theologians should inculcate technologically enhancing-sexual interactions in their theologies of creation, embodiment, *imago Dei* and other topics. The Gospel message should respond to the authentic cultural situation, not just imaginary social reconstructions where human sexuality finds expression just for procreation. The gospel should affect all dimensions of life and increase the advocacy for unity, equity and elimination of gender-based segregation. Thus females should be valued equally to males and must not be reduced to sex objects and procreative tools, neither in cultural nor religious imaginations. All genders should have an equal route to religious leadership, including priesthood as a reflection of equity in Christ.

7.15. Areas of Further Research

Further research is needed on the responses and contemporary justifications of the various identified disembodied notions in religions and transhumanism, such as aspiration to transcend vertically, subjugation of females in some religions and stereotyping of sexual expressions. The study may analyse the logic behind such justifications in relation to available scientific and theological data.

7.16. Summary in English

This study explores the meaning of transcendence in religion/theology and science/technology. The effort involves analysing the "posthuman" discourses in selected religions, transhumanism and posthumanism. The study proposes two ways to perceive transcendence, horizontal and vertical. Horizontal transcendence points both forward and backwards, focusing on interhuman relationships and one that exists between humans and nonhumans, referred to in the study as "nonhuman other." Horizontal transcendence involves enhancements that recognise humans' embodiment in nature. It therefore, emphasises kinship with both living and non-living entities in nature. That is, moving beyond limits through research and the application of technology in recognition that technology is a tool, part of human nature and a gift from God. Therefore, technology should be employed for wholesome ends rather than harming the other for parochial anthropocentric ends. Horizontal transcendence facilitates team building, community, respect and cares for the other as one would do for him/her self by applying the otherself principle. The principle requires the individual to identify the self in the other; the human and the nonhuman other.

Vertical transcendence points upwards and it is otherworldly focused. It represents the desire and vision to separate from nature through technology or divine means. Vertical involves a dualistic understanding of the human. The human is perceived as a being that can be enhanced through separation into mind/souls/immaterial from the body/material. Vertical transcendence includes

notions and doctrines that ascribe privileged positions to individuals, groups or species and deny humans' embodiment in nature. It includes transcendence ideas that treat the body with gnostic contempt and facilitate sexism, gynophobia, genophobia, racism and other socially exclusive concepts.

The research is in seven chapters, each conveying a unique yet collaborative discourse. Chapter one maps and introduces the study and the methodology employed. Besides the introduction of the work, the meaning of theology and the obligation of theologians to interpret theology within the context of the dominant contemporary understanding is discussed. It is suggested that it is possible through an alternative approach to formulating theology that is sensitive to contemporary scientific and technological understandings. Finally, religion is discussed under the notion that despite the doctrinal diversity, there are concepts that characterise all religions. Therefore it is possible to broaden the discussions of transcendence beyond Christian theology.

Chapter two focuses on Hefner's created co-creator theory, a theological concept formulated with the scientific method. Hefner discusses the roles of myths and rituals in human evolutionary history, pointing to the fact that scientific and religious data are needed to develop human society. Thus, the concept brings out the complementary roles of science and theology and how they need each other for meaningful socio-cultural building. Theologically, if humans and their roles are to be understood, there is the need to reinterpret various concepts that help in the meaning-making processes.

For example, the *imago Dei* concept in theology is expressed in terms of the ability to make decisions and construct justifying stories through the process of feedback. Thus, humans' uniqueness as co-creators is expressed through their unique features, such as anatomical qualities and advanced cognitive abilities, culminating in freedom for technological activities. Furthermore, human's purpose is understood in creativity as a reflection of God's creative grace. Technology is thus a natural part of human nature, serving the human purpose in the evolutionary milieu.

Chapter three discusses the relationships between theology, technology and transcendence. Analogies of transcendence are drawn to emphasise the idea that there is an intricate relationship between human technology and religious notions. The chapter evaluates the concepts of enhancement and how theologians express them, stressing that enhancement should be seen as an everyday process entirely different from transhumanism. Enhancement is a resource that provides *Homo sapiens* with an existential advantage in the evolutionary process as they encounter different environmental conditions. The enhancement process has both scientific and theological histories. Furthermore, technology and science are great enhancement resources and vital in human evolutionary processes. The chapter concludes that human theological history indicates that there have been divine-instigated enhancements that supported human existence after the fall. Thus, enhancement is theologically consistent with religious doctrines of creation. Furthermore, Christians promote enhancement, albeit subconsciously, through the demonstration of love such as charitable activities. The ancient

records of miracles continue to manifest in Christianity today through enhancement technologies. Thus the divine-oriented miracles are giving way to technology-mediated miracles.

Chapter four introduces the "posthuman" discourse in transhumanism, posthumanism and Christianity. The chapter, however, focuses on posthumanism and Haraway's narrative of a cyborg. Posthumanist ideas are contrasted with transhumanist notions of transcendence. While transhumanism anticipates bold new dawn of perfection, posthumanists aspire to eradicate various constructed barriers in recognition of universal kinship. Transcendence in posthumanism, therefore, indicates identification with the other; humans, environment, technology, etc. Thus posthumanism's idea of transcendence is horizontal, but transhumanists focus on vertical transcendence.

The cyborg is a potent symbol of posthumanism and has been the fulcrum of major discourses associated with the "posthuman" future. The cyborg represents unity, fusion, hybridity, universal kinship and egalitarianism. The idea of the "human" within the cyborg framework is similar to that of transhumanism as "information." However, unlike transhumanism, the "information" is embodied similar to the Christian notion of the human.

Chapter five discusses transhumanism and transhumanist proposals for eliminating ageing and deaths. The research expresses the view that the transhumanist desire to overcome human finitude is a natural inclination of the human co-creator. However, it ignores scientific realities and the complex nature of the human being as millions of years product of evolution. The desire to strip humans of their natural constitution is synonymous with annihilating the human species and immortalising their automata. Therefore, transhumanism is identified with pseudoscience rather than their claims of breakthrough science because they employ numerous unscientific methods in their aspirations. Furthermore, despite exhibiting post-religious postures, transhumanist visions have many radical religious elements, including Gnosticism. The transhumanist harbours the ambitions to go beyond the cyborg concept. Because while the cyborg may represent enhancement, the organic part may be susceptible to sickness, senescence and death, but the "posthuman" in transhumanism is immortal, ageless and immune to diseases.

Chapter six discusses the relationship between "posthuman" narratives and religion, articulating the position that religious eschatology should be considered a "posthuman" narrative. This is because of identified similarities between secular "posthuman" narratives and religious eschatological visions. This chapter identifies various shades of disembodied elements in transhumanism and religious doctrine, which lack scriptural and scientific bases. Such elements include doctrines that stigmatise sexual expressions, foster gender-based discrimination, and the desire to abandon the body. Sexism, gynophobia, and genophobia in Christianity are discussed in relation to the idea of transcendence. The study avers that notions that facilitate such biases are cultural, lacking scriptural bases and scientific illuminations. Thus, they correspond to vertical transcendence.

Chapter seven constitutes the summary and conclusion of the research, which articulates that religion/theology and science/technology should be seen as complementary disciplines, not opposing fields. This is because they diverge and converge in many areas to provide diverse data for holistic human understanding. For example, science and theology present different notions of the identity and distinctiveness of the human person. However, they converge on the uniqueness and their kinship with all other creatures in nature. That technology is a gift of God and part of human nature, a premise for survival and wholesomeness, but "crude" technologies constitute a significant threat of extinction and suffering. Therefore, the faith community must get actively involved in technology to ensure the proliferation of co-creator technologies.

Finally, violence against women is endemic in many cultures serving as an avenue for dehumanising society. The faith community should therefore concentrate its advocacy in this area. However, a semblance of violence against the female is instituted in many religions in general and Christianity in particular, making it impossible to challenge such social ills. Therefore, there is the need to eradicate doctrines that nurture segregations, genophobia and sexism in the Church. The eradication of such conduct will make the faith community credible to play its advocacy role to ensure egalitarian principles and equal opportunity for all. If the Church does not remove limits, there could be a period when it will be compared to do so. However, since the Church is the arbiter of freedom and morality, it will be scandalous for the courts to compare the Church to eradicate limits placed on the female body and ensure equity.

7.17. Summary in Estonian

Transtsendentsus kui üks teema teoloogias ja tehnoloogias

Selles töös uuritakse transtsendentsi tähendust religioonis/teoloogias ja teaduses/tehnoloogias. Seejuures analüüsitakse „posthumanistlikke" diskursusi valitud religioonides, transhumanismis ja posthumanismis. Uuring pakub välja kaks võimalust horisontaalse ja vertikaalse transtsendentsuse tajumiseks.

Horisontaalne transtsendentsus osutab nii ette- kui ka tahapoole, fokusseerides suhetele meid ümbritsevate inimestega ning kogu tehnoloogia ja loodusega. See hõlmab teaduse ja tehnoloogia kaudu toimuvat looduse/inimese täiustamist. Horisontaalne transtsendentsus osutab inimese kehastusele looduses, väärtustades sugulust nii elusate kui ka elutute olenditega. See hõlmab piiride ületamist teadusuuringute ja tehnoloogia rakendamise kaudu, tunnistades, et tehnoloogia kui vahend on osa inimloomusest ja Jumala kingitus. Seetõttu tuleks tehnoloogiat kasutada heaolu edendavatel eesmärkidel, mis ei kahjusta keskkonnas leiduvaid organisme. Horisontaalne transtsendentsus hõlbustab meeskonna ülesehitamist, kogukonda, austust ja hoolitsust teise kui iseenda eest.

Vertikaalne transtsendents osutab ülespoole ja see keskendub teispoolsusele. See esindab soovi ja nägemust loodusest eralduda tehnoloogia või jumalike vahendite abil. Vertikaalne hõlmab dualistlikku arusaama inimesest, mida saab täiustada mõistuse/hingede/immateriaalse kehast/materjalist eraldamise kaudu. Mõisted ja doktriinid, mis omistavad indiviididele, rühmadele või liikidele eeliseisundi, on vertikaalsed, sealhulgas sageli eitavad inimeste kehastumist looduses.

Uurimus koosneb seitsmest peatükist, millest igaüks arendab üht aspekti või teemade kimpu transtsendentsuse, religiooni ja tehnoloogia diskursuses. Esimeses peatükis kaardistatakse ja tutvustatakse uuringut ja kasutatud metoodikat. Lisaks töö sissejuhatusele arutlen teoloogia tähenduse ja teoloogide kohustuse üle tõlgendada teoloogiat domineeriva kaasaegse arusaama kontekstis. See on võimalik alternatiivse lähenemise kaudu teoloogia formuleerimisel, mis juurutab teaduslikku ja tehnoloogilist arusaama. Religioonist räägitakse lähtudes arusaamast, et hoolimata õpetuslikust mitmekesisusest on olemas mõisted, mis iseloomustavad kõiki religioone. Seetõttu on võimalik laiendada arutelusid transtsendentsuse üle kristlikust teoloogiast kaugemale.

Teises peatükis fokusseeritakse Hefneri loodud kaaslooja teooriale, milles presenteeritakse, kuidas teoloogia võiks olla formuleeritud teaduses. Käsitletakse müütide ja rituaalide rolli inimkonna arenguloos, osutades faktile, et inimkonna arenguks on vaja teaduslikke ja religioosseid andmeid. Seega toob see kontseptsioon esile teaduse ja teoloogia teineteist täiendavad rollid ning selle, kuidas nad vajavad teineteist mõtestatud sotsiaalkultuurilise ülesehituse jaoks. Teoloogiliselt, kui tahetakse mõista inimest ja tema rolli, on vaja ümber tõlgendada erinevaid mõisteid, mis aitavad kaasa tähenduse loomise protsessidele.

Näiteks imago Dei kontseptsioon teoloogias väljendub võimes langetada otsuseid ja konstrueerida õigustavaid lugusid tagasisideprotsessi kaudu. Seega väljendub inimeste ainulaadsus kaasloojatena nende ainulaadsetes omadustes, nagu anatoomilised omadused ja arenenud kognitiivsed võimed, mis kulmineeruvad vabadusega. Inimese eesmärki mõistetakse loovuses kui Jumala loovuse peegeldust. Tehnoloogia on seega inimloomuse loomulik osa, täites evolutsioonilises keskkonnas inimlikku eesmärki.

Kolmandas peatükis käsitletakse teoloogia, tehnoloogia ja transtsendentsi vahelisi seoseid. Transtsendentsuse analoogiaid kasutatakse idee rõhutamisel, kus inimtehnoloogia ja religioossete arusaamade vahel on keerukas suhe. Peatükis hinnatakse täiustamise mõisteid ja seda, kuidas teoloogid neid väljendavad, rõhutades, et täiustamist tuleks vaadelda kui igapäevast protsessi, mis on täiesti erinev transhumanismist. Täiustamine on ressurss, mis annab Homo sapiens'ile eksistentsiaalse eelise evolutsiooniprotsessis, kuna nad puutuvad kokku erinevate keskkonnatingimustega. Täiendusprotsessil on nii teaduslik kui ka teoloogiline ajalugu. Lisaks on tehnoloogia ja teadus suurepärased täiustamisressursid ja inimkonna evolutsiooniprotsessides üliolulised. Peatükis järeldatakse, et inimteoloogiline ajalugu viitab sellele, et on olnud jumalikke, tagant õhutatud täiustusi, mis toetasid inimese eksistentsi pärast

langemist, seega tõhustamine on teoloogiliselt kooskõlas religioossete loomis-doktriinidega. Kristlus on jätkanud mineviku imede tegemist. Kuid praegu täiustamistehnoloogiate kaudu.

Neljandas peatükis tutvustatakse „posthumanistlikku" diskursust trans-humanismis, posthumanismis ja kristluses. Peatükk aga keskendub posthuma-nismile ja Haraway jutustusele küborgist. Posthumanistlikud ideed on kont-rastsed transhumanistlikele arusaamadele transtsendentsist. Kuigi transhuma-nism eeldab täiuslikkuse uut julget koitu, siis posthumanistid püüdlevad erinevate konstrueeritud tõkete kaotamise poole, tunnustades universaalset sugulust. Järelikult viitab posthumanismi transtsendentsus samastumisele teiste inimestega, keskkonnaga, tehnoloogiaga jne. Seega on posthumanismi idee transtsendentsusest horisontaalne, kuid transhumanistid keskenduvad verti-kaalsele transtsendentsusele.

Küborg on posthumanismi võimas sümbol ja on olnud „posthumanistliku" tulevikuga seotud peamiste diskursuste tugipunktiks. Küborg esindab ühtsust, sulandumist, universaalset sugulust ja egalitarismi. „Inimese" idee küborgi raames on samastatav transhumanismi kui informatsiooniga, kuid erinevalt transhumanismist on informatsioon kehastatud sarnaselt inimese kristliku mõistega.

Viiendas peatükis käsitletakse transhumanismi ja transhumanistlikke meetodeid vananemise ja surma kõrvaldamiseks. Uurimuses väljendatakse seisukohta, et transhumanistlik soov ületada inimese lõplikkust on inimese kui kaaslooja loomulik kalduvus, kuid see eirab teaduslikke reaalsusi ja inimese kui miljonite aastate evolutsiooni produkti keerulist olemust. Soov võtta inimestelt nende loomulik konstitutsioon on sünonüümne inimliigi hävitamisega ja nende automaatide surematuks muutmisega. Seetõttu samastatakse transhumanism pigem pseudoteadusega kui nende väidetega läbimurdelise teaduse kohta, sest nad kasutavad oma püüdlustes arvukalt ebateaduslikke meetodeid. Lisaks sellele on transhumanistide visioonides, hoolimata postreligioossetest hoia-kutest, palju radikaalseid religioosseid elemente, sealhulgas gnostitsismi. Transhumanismi ambitsioonid lähevad kaugemale küborgi kontseptsioonist, sest kui küborg võib esindada täiustamist, siis orgaaniline osa võib olla vastu-võtlik haigustele, vananemisele ja surmale, kuid transhumanismi „posthuma-nist" on surematu, vananematu ja haigustele immuunne.

Kuuendas peatükis arutletakse „posthumanistlike" narratiivide ja religiooni vaheliste suhete üle, sõnastades seisukoha, et religioosset eshatoloogiat tuleks käsitleda kui „posthumanistlikku" narratiivi. Selle põhjuseks on tuvastatud sarnasused ilmalike „posthumanistlike" narratiivide ja religioonide eshato-loogiliste visioonide vahel. Selles peatükis tuvastatakse transhumanismis ja religioossetes õpetustes erinevaid kehastatusmõtete varjundeid, millel puudub pühakirjanduslik ja teaduslik alus, näiteks õpetused, mis stigmatiseerivad seksuaalseid väljendusi, soolist diskrimineerimist ja soovi loobuda kehast. Sek-sismi, günofoobiat ja genofoobiat arutatakse kristluses seoses transsenden-taalsuse ideega. Uuringus väidetakse, et selliseid eelarvamusi soodustavad

arusaamad on kultuurilised, neil puuduvad pühakirjalikud alused ja teaduslikud valgustused, seega on tegemist vertikaalsete transtsendentsuse ideedega.

Seitsmes peatükk on uurimuse kokkuvõte ja järeldused, milles sõnastatakse, et religioon/teoloogia ja teadus/tehnoloogia peaksid olema üksteist täiendavad, mitte vastanduvad valdkonnad. Seda seetõttu, et nad on küll erinevad, ent lähenevad teineteisele paljudes valdkondades, et pakkuda mitmekesiseid andmeid ja tõlgendusi inimese terviklikku heaolu jaoks. Näiteks esitavad teadus ja teoloogia erinevaid arusaamu inimese identiteedist ja eripärast. Siiski lähenevad nad teineteisele selles, et inimene on ainulaadne ja et ta on suguluses kõigi teiste looduses elavate olenditega. Tehnoloogia on Jumala kingitus ja osa inimloomusest, eelduseks ellujäämisele ja tervislikkusele, samas võivad mõned tehnoloogiad kujutada ohtu elule, sealhulgas inimese väljasuremisele. Seetõttu peab usukogukond aktiivselt tegelema tehnoloogiaga, et tagada kaasloojate tehnoloogiate levik. Lõpuks, naistevastane vägivald on paljudes kultuurides endeemiline. See on inimkonna dehumaniseerimise vahend, mille vastu võitlemisel peaks usukogukond olema esirinnas. Siiski on paljudes religioonides üldiselt ja eriti kristluses kehtestatud naisi pisendav ja dehumaniseeriv kujutlus, mis muudab võimatuks selliste sotsiaalsete hädade vastu võitlemise. Õpetused, mis toidavad segregatsiooni, genofoobiat ja seksismi, tuleks kirikus välja juurida. See muudab kiriku usaldusväärseks, kui kirik täidab oma propageerivat rolli võrdsete põhimõtete ja võrdsete võimaluste tagamisel kõigile. Nii kristlikus kui enamikes teistes religioonides on olemas õpetuslikud suunad, mis seda toetavad. Kirik ei peaks ootama õigluse nõudmisega senikaua, kuni seda hakatakse kirikult nõudma ilmalike kohtute kaudu!

LIST OF ABBREVIATIONS

ADHD	Attention Deficit Hyperactivity Disorder
A.I	Artificial Intelligence
DIY	Do It Yourself
DNA	Deoxyribonucleic Acid
EPA	Environmental Protection Agency
ES	Embryonic Stem
ESV	English Standard Version
HUMAI	Human Resurrection through Artificial Intelligence
H+	Humanity Plus
IVF	In Vitro Fertilisation
IT	Information Technology
LCTH	Lower Case Transhumanism
NASA	The National Aeronautics and Space Administration
NBIC	Nanotechnology, Biotechnology, Information Technology and Cognitive Science
NSF	National Science Foundation
NT	New Testament
OT	Old Testament
PTSD	Post-traumatic Stress Disorder
RNA	Ribonucleic Acid
UCTH	Upper Case Transhumanism
UNGA	United Nations General Assembly
WCC	World Council of Churches
WBE	Whole Brain Emulation

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1. "Created Co-creator, a Theory of Human Becoming in an Era of Science and Technology." *Scietia et Fides* 8(2) 285–305 (2020)
2. "Using Sex Toys and the Assimilation of Tools into Bodies: Can Sex Enhancements Incorporate Tools into Human Sexuality?" *Sexuality & Culture*, 24, 2007–2031(2020)
3. "Homosexuality in Ghana: Perspectives of Science, Social Learning Theory and Religion." *Oguaa Journal of Religion and Human Values*, 5(1), 18–40 (2019).

Other Publications
1. "Perceptions of Homosexuality in Romans 1:26–27 in the Ghanaian Bible Reading Communities; What does the text say?" – *E-Journal of Religious and Theological Education*.
2. "Homosexuality in Ghana: Controversies in Science, the Law and Religious Response." *Developing Country Studies Journal*.

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