Natural Resources for Human Health
eISSN: 2583-1194

Original Research

Received 13 July 2026
Revised 25 Aug 2026
Accepted 09 Sep 2026

Natural Resources for Human Health 2026, Vol. 6 (19s): 115–124

KEYWORDS:
Christian ethics, human dignity, human enhancement, imago Dei, transhumanism, technology.

Transhumanism, Human Dignity and Christian Ethics: Ethical Implications of Human Enhancement Technologies

Dr Emeka C. Ekeke

Department of Religious and Cultural Studies, University of Calabar, Nigeria and Department of Religion Studies, Faculty of Theology and Religion, University of Pretoria, South Africa.
Email: emekacekeke@unical.edu.ng; emekacekeke@gmail.com
ORCID: 0000-0002-8995-5676

ABSTRACT: Transhumanism is an international intellectual and cultural movement that affirms the use of science and technology to overcome biological limitations and to upgrade human physical, cognitive, and emotional capabilities. New technologies such as genetic engineering, artificial intelligence, brain–computer interfaces, robotics, nanotechnology and life-extension interventions have ignited fresh ethical debates about what it means to be human. In this paper the idea of transhumanism is discussed within the framework of human dignity and Christian ethics. It contends that Christianity need not reject all forms of technological enhancement, especially those directed to healing, restoring function, preventing disease, and promoting human flourishing. Christian ethics, however, should stand against enhancement that commodifies the body, objectifies persons as technological projects, subverts embodied human identity, exacerbates social inequality, diminishes human agency, or is directed toward the development of a posthuman species. Adopting a qualitative and literary research method with thematic content analysis, the article develops a Christian ethical framework based on the doctrine of the imago Dei, the sanctity of human life, embodiment, stewardship, justice, solidarity, and the common good. It concludes that enhancement technologies are ethically acceptable only when they protect intrinsic human worth, preserve meaningful human agency, promote equitable access, and remain ordered toward the flourishing of persons and communities rather than technological domination or limitless self-redesign. This paper develops a Christian ethical framework for evaluating human enhancement technologies that considers human dignity, the imago Dei, justice, and human flourishing. It distinguishes between therapeutic technologies that support healing and radical enhancements that threaten agency, equality and embodied human identity.

1. INTRODUCTION

Rapid developments in genetic engineering, artificial intelligence, neurotechnology, robotics, and digital medicine have renewed ethical debate about the meaning and limits of human enhancement. These technologies may contribute to the treatment of disease, restoration of bodily functions, improved communication, and expanded social participation. They may also, at the same time, permit interventions designed to change intelligence, mood, longevity, reproduction, personality, and physical capacities beyond therapeutic need (National Academies of Sciences, Engineering, and Medicine [NASEM], 2017, 2020; World Health Organization [WHO], 2021).

Transhumanism is a philosophical and cultural movement that advocates the use of science and technology to improve the human condition and, in its more extreme forms, to transcend some of the central biological constraints of the human species. It allows for the possibility of a significant improvement of cognitive, physical, emotional and life-prolonging capacities, and

also imagines the creation of beings with capacities that go beyond those of unenhanced humans (Bostrom, 2003, 2005; Bostrom & Savulescu, 2009).

Such aspirations raise profound questions of human dignity, justice, human identity, autonomy, disability, and the moral authority to remake human nature. Emerging technologies are increasingly being subjected to international ethical standards that require accountability to human rights, human dignity, fairness, safety and oversight by humans (UNESCO, 2021, 2025). Christian ethics enters this dialogue by asking whether enhancement technologies respect the intrinsic worth of persons, honour embodied human life, promote justice, and promote true human flourishing (Cole-Turner, 2011; Eberl, 2022; Meilaender, 2013).

2. RESEARCH METHOD

This study employs a **qualitative literary research design** using thematic document analysis. The method is appropriate because the study examines theological, philosophical, and ethical arguments concerning transhumanism, human dignity, and human-enhancement technologies rather than collecting primary data from human participants. Qualitative document analysis is a systematic process of identifying, examining, interpreting, and synthesizing written materials to identify meaningful meanings and themes (Bowen, 2009).

(a). Sources and Selection of Literature

The research uses peer-reviewed journal articles, academic books, theological writings and official reports from recognized institutions such as UNESCO, the World Health Organization and the National Academies of Sciences, Engineering and Medicine. A Christian ethical framework is developed using relevant biblical and theological texts.

Literature was identified through academic databases and scholarly search platforms using combinations of the following terms: *transhumanism*, *human enhancement*, *Christian ethics*, *human dignity*, *imago Dei*, *genetic enhancement*, *neurotechnology*, *artificial intelligence*, *human genome editing*, *embodiment*, *justice*, and *human flourishing*.

Sources were included when they directly addressed transhumanism or human enhancement and contributed to the analysis of human dignity, personhood, embodiment, justice, autonomy, Christian anthropology, or technological governance. Popular commentaries, promotional materials, unsourced online publications, and works lacking clear ethical or theological relevance were excluded.

(b). Data Collection and Analysis

The selected sources were read critically and organised according to their relevance to the research objectives. The following categories of analysis were used for extracting and recording key arguments, concepts and passages:

1. The meaning of transhumanism and its goals.
2. The difference between therapy and enhancement.
3. Personhood and dignity.
4. Christian anthropology and the image of God
5. Embodiment, finitude and creatureliness.
6. Autonomy, agency, and mental privacy
7. Justice, Inequality and Access.
8. Human Diversity and Disability.
9. Christian responsibility in the management of technology.

The study employs thematic analysis to identify common themes, consistencies, inconsistencies, and gaps in the literature. The analysis involved three phases. First of all, the selected texts were read several times to identify relevant statements and arguments. Second, similar ideas were coded and grouped into larger themes. Third, the themes were interpreted through a Christian ethical framework and compared with transhumanist arguments. This process follows the principle that document analysis involves organising textual material into categories and identifying patterns that illuminate the research problem (Bowen, 2009).

(c). Ethical and Theological Framework

The interpretation is guided by six Christian ethical principles: the *imago Dei*, the sanctity and inherent value of human life, embodiment and creatureliness, stewardship, justice and solidarity, and human flourishing. These principles are used to assess whether enhancement technologies promote healing and participation or instead commodify human beings, undermine agency, deepen inequality, devalue disability, or treat human limitations as defects to be eliminated.

The analysis is critical and comparative. It engages a conversation between transhumanist accounts of technological progress, autonomy and human transformation and Christian accounts of human identity, dependence, vulnerability, moral responsibility and the common good. The study does not assume that all enhancement technologies are morally equivalent. It distinguishes therapeutic interventions that restore or protect human functioning from radical enhancement projects aimed at creating posthuman forms of existence.

(d). Trustworthiness and Limitation

The credibility of the study is strengthened through the use of diverse scholarly and institutional sources and through comparison of competing perspectives. Arguments are traced to their original sources, and the analysis distinguishes between the claims of the literature and the researcher's own interpretation.

As a literary study, the research does not involve interviews, surveys, or experiments and therefore does not claim statistical generalisability. Its conclusions are interpretive and normative. It is also limited by its reliance on English-language sources and by the diversity of Christian perspectives on technology, human nature, and enhancement.

3. TRANSHUMANISM DEFINED

Science and technology are seen as radically transforming the human condition in the movement commonly known as transhumanism. The aim of this technology is to reduce or eliminate disease, disability, aging, cognitive limitation, emotional suffering and death. Its core aspiration is not merely to advance medicine, but to steer human evolution through intentional technological interventions (Eberl, 2022; UNESCO, 2025).

The transhumanist proposals vary in ambition. Technologies that would improve memory, restore mobility, prevent inherited disease, or compensate for loss of a sense are moderate proposals. More radical proposals are the genetic enhancement of intelligence, extensive neural integration with computers, technological control of mood and personality, radical life extension and the possibility of transferring consciousness into a non-biological medium (Eberl, 2022). Christian ethical evaluation must therefore make distinctions between such different forms of intervention, and not treat all uses of technology as morally equivalent.

Human enhancement technologies can be divided into some broad categories:

- Genetic technologies, such as gene therapy, germline editing and genetic selection (National Academies of Sciences, Engineering, and Medicine [NASEM], 2017; WHO, 2021).
- Brain-computer interfaces, neural implants, cognitive monitoring, and technologies affecting neural activity (UNESCO, 2025).
- Artificial Intelligence (i.e. systems that enhance decision making, communication, diagnosis, education and interaction between humans and machines (Francis, 2024)).
- Robotics and cybernetics (prosthetics, exoskeletons, implanted devices, and human-machine interface).
- Technologies to extend life, e.g. slowing down aging, increasing resistance, or extending lifespan.
- Pharmacological enhancement is the use of drugs to improve your concentration, mood, memory, wakefulness or physical performance.

Some of these technologies can be used for therapeutic purposes, but others may be used to enhance traits beyond normal human functioning. The distinction between therapy and enhancement is sometimes blurred, but it is ethically significant (Eberl, 2022; NASEM, 2017).

Transhumanist advocates commonly distinguish between therapy and enhancement. Therapy is usually understood as intervention intended to prevent, cure, or manage disease and to restore ordinary functioning. Enhancement, by contrast, seeks to improve a capacity beyond what is considered normal or species-typical functioning. However, this distinction is not always clear in practice because an intervention that restores function for one person may enhance performance for another (Agar, 2010; President's Council on Bioethics, 2003).

This distinction is ethically relevant because therapeutic interventions are often justified by compassion and the duty to relieve suffering, whereas non-therapeutic enhancement requires a stronger justification. Questions have been raised about the safety of enhancement, the freedom of future persons affected by germline interventions, the prospect of social coercion, and whether competitive advantages should be purchased in markets (Habermas, 2003; NASEM, 2020; WHO, 2021).

4. HUMAN DIGNITY IN CHRISTIAN ETHICS

Every person has an intrinsic value, that is human dignity. In Christian ethics dignity is not based on intelligence, productivity, physical strength, independence, technological capacity, social status, age or health. This is due to the belief that human beings were created by God and bear the image of God, which is often expressed in the doctrine of the imago Dei (Eberl, 2022).

Philosophical commentators have also criticized radical enhancement suggesting that viewing persons primarily in terms of their capacities or genetic endowments might threaten human dignity. Fukuyama (2002) claims that the biotechnology revolution—threatening a common human nature—may undermine equal moral status. Habermas (2003) is concerned that genetic intervention might alter the nature of the parent-child relationship by making some aspects of a child's identity the result of intentional design. Sandel (2007) further argues that the striving for mastery over human characteristics may undermine humility, responsibility, and solidarity.

The human beings are made in the image and likeness of God (Gen 1:26-27). Imago Dei has been variously understood as rational capacity, moral responsibility, relationality, stewardship, the ability to know God, or the human vocation to live in loving community. These interpretations, however, agree in stating that people have dignity before they do, produce or perform anything (Eberl, 2022).

As a challenge to biological and technological reductionism, consider the Christian doctrine of the imago Dei. Human persons are not reducible to genetic information, neural activity, productivity, intelligence, or technological capacity. They are relational, moral beings who are spiritual beings, having value apart from their performance, health, independence, or enhancement status (Cole-Turner, 2011; Meilaender, 2013; Waters, 2006).

This information is very important for the improvement technologies. If dignity is based on performance, then persons with greater intelligence, physical capacity, technological access, or engineered traits may appear more valuable than persons who are disabled, dependent, elderly, poor, or unenhanced. Christian ethics denies the hierarchy. All human persons, including those with profound cognitive disabilities, chronic illness, limited autonomy, or diminished physical capacity, are equally valuable (Eberl, 2022; UNESCO, 2025; Ekeke, 2011).

A Christian account of dignity also affirms embodiment. Human beings are not merely minds housed in bodies, nor are bodies replaceable instruments of the self. Christian theology understands human life to be embodied, relational, vulnerable, dependent on God and others. The Christian hope of resurrection affirms the importance of bodily life, rather than interpreting bodily limitation as evidence of the need to transcend embodiment itself. Eberl (2022) argues that Christian anthropology contends that embodiment, vulnerability, and finitude are constitutive of human nature, and thereby resists transhumanist visions that would altogether transcend the body through technology.

5. THE CHRISTIAN CASE FOR LIMITED ENHANCEMENT

Christian ethics does not require opposition to medicine, scientific research, or responsible technological development. The history of advocacy for care of the sick, relief of suffering, protection of vulnerable persons, and knowledge for healing is within the Christian moral tradition. Technologies that restore sight, hearing, mobility, communication, or bodily function may be expressions of compassion and justice, and enable persons to participate more fully in family, worship, education, work, and community life (Eberl, 2022; Meilaender, 2013).

Christian ethics might therefore underpin judiciously regulated interventions such as gene therapy for serious diseases, sophisticated prosthetic technologies, treatments for neurodegenerative diseases and communication technologies for those

with severe physical disabilities. The WHO (2021) acknowledges the potential of genome editing for diagnosis, prevention and treatment, but emphasizes the importance of safety, efficacy and ethical oversight and equitable governance. Christian ethics can support such therapeutic uses when they serve persons, not merely technological capacity or commercial interests.

Such a position is consistent with the idea of stewardship. The human person is called to the responsible use of knowledge for the good of others. Technology is a gift of human creativity and moral responsibility when aimed at healing, inclusion, and the common good (Eberl, 2022). The moral issue is not technology per se but the purposes, assumptions, power relations, and social consequences that inform its design and use.

Certain Christian bioethicists differentiate transhumanism as a doctrine from moderate enhancement for authentic human flourishing. Eberl (2022) argues that some types of enhancement may be consistent with Christian ethics if they allow individuals to develop appropriate human capacities as living, sentient, social and rational agents. Yet such support is not unconditional: enhancement must be undertaken in a manner that remains dedicated to human flourishing, and not to the creation of a fundamentally posthuman mode of existence.

The stewardship principle is a helpful framework for the assessment of technological innovation. Stewardship is not an end in itself, not an unchecked human mastery of nature, but the responsible exercise of knowledge that glorifies God, protects the vulnerable and serves the common good. Therefore, Christian ethics should assess not only the efficacy of a technology but also the who benefits, who bears the risks, who has control, and whether the use of a technology advances justice and solidarity (Cole-Turner, 2012; Waters, 2006).

6. ETHICAL CONCERNS ABOUT RADICAL ENHANCEMENT

(a). Human Identity and the Posthuman Ideal

A major ethical concern is the radical transhumanist aspiration to move beyond present humanity. Some transhumanist visions propose not simply assisting persons through medicine but redesigning the human organism, merging biological and artificial systems, radically extending life, or transferring mental life into non-biological media. Such proposals raise questions about whether continuity of personal identity, embodiment, relationality, and moral responsibility can be preserved when human existence is reconceived as an endlessly modifiable technological project (Agar, 2010; Bostrom, 2005; Waters, 2006).

Christian ethics sees human nature as meaningful, not accidental. Human finitude, mortality, embodiment and dependence are not simply deficiencies to be overcome. These are conditions where persons learn love, responsibility, humility, compassion, solidarity and hope (Eberl, 2022). A technological project that treats all limits as evils may misunderstand the moral significance of creatureliness.

The Christian tradition does not glorify suffering or oppose healing. Rather it rejects the notion that the value of a human being is the capacity to transcend all limitations. A society that understands the good life only through control, efficiency, performance and constant self-improvement may become less able to appreciate people who are vulnerable or dependent (Eberl, 2022; UNESCO, 2025).

In Christian theology man is a created being. Man is not self-created. Creatureliness does not imply that human beings should refuse healing or improvement; it means that finite, embodied, dependent life has moral and theological significance. Radical attempts to eliminate vulnerability, mortality, and bodily dependence may overlook the ways in which human relationships, moral responsibility, compassion, and solidarity are created in embodied life (Eberl, 2022, 2025; Meilaender, 2013).

(b). Commodification of the Human Person

The problems of commodification are particularly acute where enhancement is shaped by consumer markets and reproductive choice. If intelligence, physical appearance, athletic ability, emotional disposition or longevity are available for purchase, prospective parents and parents may be pressured to select or engineer children to fit socially desirable standards. This poses a danger of transforming the moral relation between parent and child from one of unconditional acceptance to one of technological production and expectation (Habermas, 2003; Sandel, 2007).

Enhancement technologies may make human qualities into commodities. Intelligence, appearance, dispositions, life-span and reproductive traits could be converted into objects of consumer choice, commercial competition or parental preference. In such a context, children might be seen less as gifts with intrinsic value and more as projects to be designed (NASEM, 2017).

Genetic enhancement raises this concern especially sharply. Technologies intended to prevent severe disease may be ethically distinguishable from interventions intended to select or engineer socially desirable traits. This can reinforce negative stereotypes about people's intelligence, disability, gender, race, looks, or how well they do in society (NASEM, 2017; WHO, 2021).

Concerns about governance loom large regarding heritable genome editing, because interventions could impact future generations who are unable to give consent and may change the conditions of how they perceive their own identity. NASEM (2020) Any step toward the clinical use of heritable human genome editing must satisfy stringent standards for necessity, safety, long-term monitoring, transparency, public engagement, and equity. Likewise, WHO (2021) advocates for strong national and international governance of genome editing research and clinical use.

Christian ethics resists the commodification of human life because persons are never merely means to another person's ambitions. A child, a disabled person, an elderly person has moral value regardless of social preference for some traits. Human beings are to be welcomed and treated as persons with inviolable dignity, not as biological materials to be optimized (Eberl, 2022).

(c). Justice and Unequal Access

If only the rich, rich institutions or rich countries can access human enhancement technologies, they could make things worse. Disparities in access to genetic enhancements, cognitive technologies, neural implants and life extension treatments could produce a social divide between those who can afford bio- or cognitive enhancements and those who remain unenhanced. Such inequalities can have an inter-generational impact on access to education, employment, health, political power and social prestige (Bostrom & Savulescu, 2009; Fukuyama, 2002; UNESCO, 2005).

This is not a hypothetical concern. Rich and wealthy countries usually get the first access to the latest biomedical technologies. In the absence of meaningful public regulation, market-based access may be a mechanism for perpetuating privilege across generations (WHO, 2021).

In Christian ethics, the values of justice, solidarity and a preferential option for the poor, the marginalized and the vulnerable are highly valued. Technology that benefits a few and marginalizes many cannot be justified just because it is new or profitable. Ethical policy must take into account affordability, access to the public, inclusion of the disabled, global inequality and the distribution of scarce health resources (UNESCO, 2025; WHO, 2021).

UNESCO's neurotechnology framework emphasizes that neurotechnology should respect dignity and rights, in particular for persons in vulnerable situations. It also associates responsible governance with inclusiveness, accountability and protection against technologies that exploit vulnerability or undermine personal rights (UNESCO, 2025).

Christian ethics thinks about technological innovation in terms of the principles of justice, solidarity and care for the poor or vulnerable. But a technology is not ethically justified because it is safe or effective for those who can afford it. The ethical evaluation also has to consider if the technology will promote greater disadvantage, distract resources from urgent health needs, strengthen discrimination, or diminish public dedication to universal care (Meilaender, 2013; UNESCO, 2025; WHO, 2021).

(d). Autonomy, Agency, and Mental Privacy

Neurotechnologies and Artificial Intelligence (AI) also raise particular concerns for autonomy, agency, mental privacy, and human control. Cerebral-computer interfaces, neural observation systems, anticipatory algorithms and AI-assisted decision-making instruments might enhance communication, diagnosis and treatment. They can also lead to behavioural manipulation, invasive surveillance, discrimination, coercive workplace monitoring, and the extraction/misuse of sensitive neural data (UNESCO, 2021, 2025).

Christian ethics honours liberty, but that liberty is not the liberty of choice alone. Real freedom is freedom to do what is right and to love and to create community and to oppose domination. Technologies that change preferences, change personality without meaningful consent, or allow employers, governments, corporations or institutions to monitor mental states threaten this type of freedom (UNESCO, 2025).

In a similar vein, contemporary Vatican considerations on artificial intelligence stress the need for humans to maintain meaningful control over the decisions made by artificial intelligence systems. "Human dignity depends on safeguarding proper human control over decisions influenced by artificial intelligence" (Pope Francis, 2024).

The Christian view of freedom is not simply the right to choose anything. It contains the ability to act responsibly, to develop virtue, to build relationships, and to seek the good without domination. Hence, technologies that shape personal preferences, that change personality without strong consent or that shift decisive agency from persons to opaque systems, endanger human agency. Pope Francis (2024) also argues that humans should maintain meaningful control over decisions affected by artificial intelligence.

(d). Disability, Diversity, and the Meaning of Normality

Discourse about human enhancement can inadvertently reinforce ableism by taking for granted that a life is less worth living if it is disabled, old, dependent, or cognitively different. The Christian view of human dignity denies this assumption, because a person's value is not based on bodily perfection, nor on intellectual achievement, nor on independence. Technologies that alleviate suffering may be good, but should not signal that persons with disabilities are deficient or socially undesirable (Meilaender, 2013; Waters, 2006).

Christian ethics demands respect for the dignity, voice, and full social inclusion of persons with disabilities. Views on disability should inform decisions about genetic screening, prenatal interventions, neural modifications and physical enhancements. It is not just a matter of whether technology can alter or prevent a trait, but whether society is willing to accept and support people who are physically and mentally different from the norm (Eberl, 2022).

A dignity-based approach has to be able to address ableism. Instead, it must drive accessibility, inclusiveness, health, education and social engagement, not simply technical standardization (UNESCO, 2025).

Enhancement ethics should engage people with disabilities, their families, advocates, health care providers and affected communities. We ask them to challenge policies that narrow down normalcy, see diversity as a disorder, and privilege technological solutions over social accessibility, care and inclusion. Human dignity requires that medical advancements be accountable, and social structures that marginalize people with disabilities be transformed (UNESCO, 2005, 2025).

7. A CHRISTIAN ETHICAL FRAMEWORK

Christian constructive engagement with enhancement technologies will not accept technological progress at face value, nor will it reject technological progress entirely. Instead, it should evaluate particular interventions according to a set of interconnected ethical principles (Eberl, 2022; UNESCO, 2025).

(a). Respect for the *Imago Dei*

Technology must acknowledge the intrinsic and equal value of each and every person. It is important not to create a hierarchy where the enhanced are above the unenhanced, disabled, poor, elderly or dependent (Eberl, 2022).

(b). Healing and Human Flourishing

The strongest ethical justification is when technology prevents serious disease, restores function, relieves suffering, or enables social participation. Interventions should be aimed at genuine flourishing, not vanity, domination, competitive advantage or the elimination of human vulnerability (Eberl, 2022; WHO, 2021).

(c). Preservation of Agency

If enhancement is to be possible, it must be informed and voluntary. Technologies should not be used to manipulate people, threaten mental integrity, erase identity, or transfer excessive power to governments, corporations, clinicians or designers (UNESCO, 2025).

(d). Embodiment and Creaturely Limits

Christian ethics must cherish the body as an integral part of personhood. It should beware of projects that imagine the body as obsolete, disposable or separable from the self. Human finitude is not a flaw that is to be eliminated technologically (Eberl, 2022).

(e). Justice and the Common Good

The development of technology must be judged by its impact on the poor, the vulnerable and the excluded. Enhancement technologies should not be the privilege of the rich or a means of discrimination and should be subject to public policy (UNESCO, 2025; WHO, 2021).

(f). Responsibility and Accountability

Scientists, technology companies, clinicians, faith communities, policy makers and users are responsible for the consequences of enhancement technologies. Ethical oversight should include transparent regulation, independent review, public engagement, data protection, and avenues for remedy if harm occurs (NASEM, 2017, UNESCO, 2025, WHO, 2021).

8. PRACTICAL IMPLICATIONS

Christian churches, theological schools, bioethics committees, universities and public authorities have important responsibilities in responding to human enhancement technologies.

First, churches should advocate for moral literacy around biotechnology, artificial intelligence, genetic editing, neurotechnology, and human enhancement. Faith communities should not simply react to these developments with fear and rejection. They should allow members to distinguish therapeutic care from enhancement that is exploitative or dehumanizing (Eberl, 2022).

Second, theological education should see technology and human dignity as major issues in contemporary Christian ethics. Ministers, chaplains, educators and Christian healthcare professionals need to be prepared to collaborate with patients, families, researchers and policy-makers with informed moral reasoning (Eberl, 2022; UNESCO, 2025).

Third, dignity-centred safeguards should be adopted by governments and regulatory institutions. The WHO has called for governance mechanisms for human genome editing at the institutional, national, regional and global levels (WHO, 2021). Such governance should include protections against coercion, unsafe experimentation, genetic discrimination, neural-data misuse, and unjust access.

Fourth, Christian institutions should advocate for public investment in therapeutic technologies that increase access for persons with disabilities, chronic illness, and limited economic resources. Innovation is more useful to the common good when it reduces suffering and social exclusion, not when it increases inequality (UNESCO, 2025; WHO, 2021).

Finally, the ethical process must include a range of voices. People with disabilities, patients, women, youth, ethicists, theologians, scientists, health care professionals, religious minorities and communities in low- and middle-income countries should be involved in policy-making about human bodies and futures (UNESCO, 2025).

9. GOVERNANCE, CHURCH, AND PUBLIC RESPONSIBILITY

Institutional, national, regional and global governance of enhancement technologies needs to be established. The WHO (2021) proposes mechanisms for governance of human genome editing which include research oversight, registries, international collaboration, prevention of unsafe or unethical research, stakeholder engagement, and public education. The safeguards are especially important in the case of heritable genome editing and non-therapeutic enhancement, where the risks may reach beyond individual patients to future generations and society at large.

International ethical guidance also stresses the continuation of AI and neurotechnology in accordance with human rights, dignity, transparency, privacy, fairness, accountability and human well-being (UNESCO, 2021, 2025). Governments should therefore develop legislation and ethical review processes to protect informed consent, prevent genetic and neural discrimination, regulate commercial claims, secure sensitive data, and ensure that the benefits of technology are not limited to the wealthy.

Churches and theological institutions should participate actively in public deliberation. Their role is not to obstruct science but to articulate moral questions that technological enthusiasm can neglect: What kind of society is being created? Who benefits from enhancement? Who may be excluded? What does it mean to receive, rather than manufacture, human life? How can technologies serve the common good without reducing persons to objects of design, control, or economic value? (Cole-Turner, 2011; Eberl, 2022; Francis, 2024).

10. CONCLUSION

Transhumanism raises important possibilities and serious risks. Technological innovation can relieve suffering, restore function, improve communication, and strengthen participation in social life. Christian ethics should therefore not reject biotechnology, neurotechnology, artificial intelligence, or medical enhancement simply because they are new or powerful. Therapeutic technologies are morally praiseworthy when they are safe, voluntary, equitable, and aimed at healing and human flourishing (Eberl, 2022; WHO, 2021).

But Christian ethics also imposes serious limits. Human dignity is not a function of intelligence, bodily perfection, productivity, independence or technological enhancement. It is based on the intrinsic worth of persons made in the image of God. Thus, human enhancement is ethically problematic when it commodifies children, entrenches inequality, instrumentalizes the body, undermines agency, devalues disability, weakens mental privacy or treats creaturely limitation as a condition to be eradicated rather than a dimension of embodied human life.

The responsible Christian response would be to affirm technological developments that heal, restore, include and advance the common good, and resist those that reduce persons to biological materials, market products or programmable systems. The goal should not be technological mastery of humanity, but morally accountable innovation ordered toward justice, solidarity, dignity, and authentic human flourishing

Acknowledgements

I sincerely appreciate Prof Jaco Beyers, Deputy Dean: Teaching and Learning and Head of Department: Religion Studies, University of Pretoria, for his academic support which encouraged me to complete this work.

Competing interests

The author has declared that no known conflicts of interest exist in this article.

Author contributions

E.C.E. as the lead author was responsible for the conception of the idea, data arrangements, analysis, writing of the initial draft, the literature review and all aspects of this article.

The author used Perplexity AI and Quillbot AI to correct grammar and confirm references. The author is responsible for the work in its entirety from conceptualization to findings and conclusion.

Ethical considerations

This article followed all ethical standards for research without direct contact with human or animal subjects.

Funding information

This article did not receive any fund or grant for its research. However, the publication was supported and funded by the Department of Religion Studies, Faculty of Theology and Religion, University of Pretoria, Pretoria, South Africa

Data availability

The data for this article are not available for access by a third party except on permission.

Disclaimer

The views and opinions expressed in this article are those of the author and do not necessarily reflect the official policy or position of any affiliated agency of the author.

REFERENCES

[1] Agar, N., 2010. *Humanity's End: Why We Should Reject Radical Enhancement.* MIT Press.

[2] Bostrom, N., 2003. Human genetic enhancements: a transhumanist perspective. *The Journal of Value Inquiry 37 (4),* 493–506. https://doi.org/10.1023/B:VALU.0000027849.72249.53.

[3] Bostrom, N., 2005. In defense of posthuman dignity. *Bioethics 19 (3),* 202–214. https://doi.org/10.1111/j.1467-8519.2005.00437.x.

[4] Bostrom, N., Savulescu, J. (Eds.), 2009. *Human Enhancement*. Oxford University Press.

[5] Bowen, G.A., 2009. Document analysis as a qualitative research method. *Qualitative Research Journal 9 (2),* 27–40. https://doi.org/10.3316/QRJ0902027.
[6] Cole-Turner, R., 2011. *Transhumanism and Transcendence: Christian Hope in an Age of Technological Enhancement*. Georgetown University Press.
[7] Cole-Turner, R., 2012. The new world of genetic enhancement. *Theology and Science 10 (3)*, 277–295. https://doi.org/10.1080/14746700.2012.695258.
[8] Cole-Turner, R., 2022. God became human so that humans could become posthuman? *Christian Bioethics 28 (3)*, 157–163. https://doi.org/10.1093/cb/cbac013.
[9] Eberl, J.T., 2022. Enhancing the imago Dei: can a Christian be a transhumanist? *Christian Bioethics 28 (1),* 76–93. https://doi.org/10.1093/cb/cbab016.
[10] Eberl, J.T., 2025. Who wants to live forever? Transhumanist immortality and Christian eternity. *Christian Bioethics 31 (2),* 82–91. https://doi.org/10.1093/cb/cbaf004.
[11] Ekeke, E.C., 2011. *Issues in Biomedical Ethics: A Christian Perspective.* LAP LAMBERT Academic Publishing, Saarbrücken.
[12] Fukuyama, F., 2002. *Our Posthuman Future: Consequences of the Biotechnology Revolution*. Farrar, Straus and Giroux.
[13] Habermas, J., 2003. *The Future of Human Nature.* Polity Press.
[14] Meilaender, G., 2013. *Bioethics: A Primer for Christians,* 3rd ed. Wm. B. Eerdmans Publishing.
[15] National Academies of Sciences, Engineering, and Medicine, 2017. *Human Genome Editing: Science, Ethics, and Governance.* The National Academies Press. https://doi.org/10.17226/24623.
[16] National Academies of Sciences, Engineering, and Medicine, 2020. *Heritable Human Genome Editing.* The National Academies Press. https://doi.org/10.17226/25665.
[17] Pope Francis, 2024. Address of His Holiness Pope Francis to the G7 Session on Artificial Intelligence, 14 June 2024. The Holy See. https://www.vatican.va/content/francesco/en/speeches/2024/june/documents/20240614-g7-intelligenza-artificiale.html.
[18] President's Council on Bioethics, 2003. *Beyond Therapy: Biotechnology and the Pursuit of Happiness.* U.S. Government Printing Office.
[19] Sandel, M.J., 2007. *The Case Against Perfection: Ethics in the Age of Genetic Engineering*. Harvard University Press.
[20] UNESCO, 2005. *Universal Declaration on Bioethics and Human Rights*. https://unesdoc.unesco.org/ark:/48223/pf0000146180.
[21] UNESCO, 2021. *Recommendation on the Ethics of Artificial Intelligence.* https://unesdoc.unesco.org/ark:/48223/pf0000381137.
[22] UNESCO, 2025. *Recommendation on the Ethics of Neurotechnology.* https://www.unesco.org/en/legal-affairs/recommendation-ethics-neurotechnology.
[23] Waters, B., 2006. *From Human to Posthuman: Christian Theology and Technology in a Postmodern World*. Ashgate.
[24] World Health Organization, 2021. *Human Genome Editing: A Framework for Governance*. https://iris.who.int/handle/10665/342484.
[25] World Health Organization, 2021. *Human Genome Editing: Recommendations.* https://www.who.int/publications/i/item/9789240030381.