

SYNTHETIC BIOETHICS AS A SYNERGY BETWEEN NATIVE-CENTRIC AND WESTERN BIOETHICS

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Abstract

Rapid technological advancements often outstrip the development of ethical frameworks to govern emerging technologies. Much approach had been suggested including the decolonization of Western bioethics for its inability to solve the problems of emerging technology in the health sector. The western bioethics characteristically grounded in philosophies such as autonomy, beneficence, non-maleficence, and justice, often derived from philosophical traditions like utilitarianism, Kantian ethics, and virtue ethics while the Native-centric bioethics is an approach to ethical decision-making that prioritizes the perspectives, values, and sovereignty of Indigenous peoples. It recognizes the importance of knowledge, cultural practices, and community involvement in addressing issues such as informed consent, genetic research, and healthcare disparities within Indigenous communities. Using the method of philosophical analysis, this study maintains that both western and native-centric bioethics is good but lacks the capabilities to outstrip ethical framework that govern emerging technologies and that synthetic bioethics is needed to advance the health care sector. Synthetic bioethics transcends traditional and the native centric boundaries of bioethics by integrating insights from different disciplines, including philosophy, medicine, law, sociology, and anthropology. It is a medical philosophy that recognizes the inherent complexity of ethical dilemmas arising from biomedical research, clinical practice, and healthcare policies. This article concludes that synthetic bioethics acknowledges the diversity within every culture and the complexity of cultural differences in upholding the primacy of ethical health and promoting the necessary changes or progress towards shared beliefs to promote ethical health autonomy, respect, and reciprocity.

Keywords: Western, Bioethics, Native-centric, synthetic, Diversities, Culture

Introduction

The pace of scientific progress, and increase global interconnectedness raises bioethical issues that transcend national borders. With limited resources in healthcare systems and with questions of distributive justice and equitable access to healthcare services, particularly in the context of disparities in wealth, geography, and social status often outstrips the development of ethical frameworks to govern emerging technologies. To solve the problem of technological advancement, a decolonization of Western bioethics has been recommended. Historically, bioethics has been rooted in Western philosophical traditions, often neglecting the rich ethical frameworks of indigenous cultures. Contemporary bioethics was born in Europe and thus reflects, not surprisingly, the customs of European moral philosophy and culture. The European foundation of bioethics which tends to prioritize individual autonomy and scientific progress (Ten Have, 2016) has posed the problem of moral imperialism

(Chattopadhyay & De Vries, 2008) to indigenous bioethics which emphasize community, interconnectedness, and respect for nature.

There are differences between the two schools of bioethics in reconciling Aboriginal beliefs with bioethical issues. This requires acknowledgment of diverse perspectives, cultural sensitivity, and collaborative dialogue to ensure ethical practices in order to respect all stakeholders (Kotali and Martin, 2016). The intercultural approach to bioethics is preferred because it involve collaboration takes advantage of the diversity of perspectives and practices offered in different worldviews. This approach aims at providing innovative solutions to complex problems (Reich & Reich, 2006). The Eurocentric approach to bioethics perpetuates a form of epistemic violence by marginalizing native-centric perspectives and reinforcing colonial power structures within healthcare systems. Western bioethics has inflicted epistemic violence on people and perpetuated damaging views that stress cultural limitations (Barugahare, 2018; Rentmeester, 2012). To restore the dignity of African people, bioethics grounded in indigenous ideas is more likely to be accepted by Africans (Behrens, 2013). This approach has failed to solve the problems of emerging technology. Synthetic bioethics adapts swiftly to address novel ethical dilemmas posed by innovations such as gene editing, artificial intelligence, and biobanks. Integrative bioethics faces the challenge of incorporating cultural diversity and sensitivity into ethical decision-making processes to ensure relevance and inclusivity. The synthetic bioethics is an act that accommodates different technological worldviews in bioethical judgment. Ellerby et al. (2000) maintain that aboriginal values are frequently discounted by Western colonial culture. The aboriginal perspective on health ethics is often linked with differences in health status and utilization of health. Western bioethics and native-centric bioethics often differ in their philosophical underpinnings, perspectives on health, and approaches to ethical issues as it affects technological advancement (Nie & Fitzgerald, 2016; Chattopadhyay & De Vries, 2008). Western bioethics is typically grounded in principles such as autonomy, beneficence, nonmaleficence, and justice, often derived from philosophical traditions like utilitarianism, Kantian ethics, and virtue ethics (Veatch, 1999; Ikechukwu & Ikechukwu, 2014).

Native-centric bioethics is rooted in the values, beliefs, and worldviews of specific indigenous cultures (Osebor, 2023). These may include concepts like interconnectedness with nature, communal decision-making, and respect for ancestors and traditional knowledge (Osebor & Irabor, 2023). European bioethics often emphasizes individual autonomy and biomedical approaches to health, focusing on the treatment and prevention of disease. Indigenous bioethics may prioritize holistic notions of health that encompass physical, mental, emotional, and spiritual well-being (Smith, 2013). This perspective often includes harmony with nature and the community as essential components of health (Osebor, 2023). Western bioethics tends to approach ethical issues through frameworks such as principlism, casuistry, or consequentialism, relying on rules and principles to guide decision-making (Plöckinger & Auga, 2022). Indigenous bioethics may involve storytelling, oral traditions, and community consensus-building processes in health care services (Behrens, 2013). Decisions may be made in consideration of the interconnectedness of all living beings and the long-term impact on the community and environment. European bioethics often operates within a framework shaped by Western cultural values, legal systems, and a scientific

paradigm influenced by technological advancements (Ten Have & Gordijn, 2013). Indigenous bioethics emerges from the cultural, historical, and spiritual contexts of indigenous peoples, reflecting their unique experiences, knowledge systems, and relationships with their environments. It is a narrative ethics that has emerged within bioethics, recognizing specific contexts and providing a detailed account of Indigenous ethical systems for health service delivery (Stevenson, 2016). Overall, the difference between Western and indigenous bioethics highlights the diversity of ethical perspectives and the importance of cultural sensitivity and inclusivity in addressing bioethical issues, which must be synthesized for a more holistic bioethics (Christakis, 1992). But health research involving Indigenous peoples is regulated by guidelines based on the ethics of Indigenous health research, which establish routes to knowledge development in order to support and improve health for Indigenous communities (Huria et al., 2019; Kelley, et al., 2013). Despite these guidelines, health imbalances remain and continue to negatively impact Indigenous peoples (Rodriguez-Camacho, 2019). Indigenous bioethics faces various challenges, including reconciling traditional cultural values with modern medical practices, addressing disparities in healthcare access and outcomes for indigenous communities, and navigating conflicts between indigenous knowledge systems and Western biomedical ethics (Chuwa, 2014; Garve et al., 2004). Western bioethics may not always align with the cultural values and beliefs of non-Western societies, leading to clashes in ethical perspectives and practices (MacKay, & Dawson, 2021). However, rapid advancements in medical technology raise new ethical dilemmas, such as gene editing, artificial intelligence in healthcare, and organ transplantation, challenging traditional bioethical frameworks (Alexiou et al., 2020). The commercialization of healthcare, including pharmaceuticals, medical devices, and healthcare services, raises concerns about profit motives conflicting with patient welfare and equitable access to healthcare (Keulartz, 2007). Debates around reproductive rights, including abortion, surrogacy, and assisted reproductive technologies, challenge traditional ethical norms and raise questions about autonomy, consent, and the status of embryos (Eaton, & Kennedy, 2007). Ethical dilemmas surrounding end-of-life care, euthanasia, and physician-assisted suicide challenge Western bioethical principles, particularly regarding patient autonomy, beneficence, and non-maleficence. Addressing these challenges requires dialogue of integrative bioethics, which is a synthesis of adaptability within Western and Native-centric bioethics to ensure meaningful participation of indigenous peoples in decision-making processes regarding their health and well-being.

Conceptual Illumination

Synthetic philosophy is one of the central concepts in Kant's philosophy. It plays two central roles in bioethics: it demonstrates a conscious mechanism, that integrates a variety of human values by providing a specific type of resolution to an argument or conflict, and it describes a mental process that combines different world-views or values in an ethical judgment.-The diverse information coming from principles, values, and customs is conceived and unified (Ikechukwu and Benson, 2022). Bioethical synthesis is the perception of mind and matter as two sides of a coin, but the two sides taken as a whole (Ikechukwu and Benson, 2022). The

benefits of synthetic bioethics, such as new medical treatments or sustainable biofuels, must be equitably distributed to ensure that values in society are integrated in value judgment.

Ethical Considerations

The pace of scientific progress often outstrips the development of ethical frameworks to govern emerging technologies. Integrative bioethics must adapt swiftly to address novel ethical dilemmas posed by The field of synthetic bioethics involves the combination of ideas and functions from scientists, bioethicists, and engineers in the health-care sector (Kaebrick et al., 2014). Ethical considerations for synthetic bioethics are significant, spanning from birth to death in the emerging technologies (Thomasma & Kushner, 1996; McGee, 2012). It is crucial to respect different views as we consider the many divisive bioethical issues that affect engineers and health-care workers. As bioethics delves deeper into the realm of manipulating life at its most fundamental level, questions arise about the potential risks, benefits, and moral implications of their work (Vallero, 2011). Synthetic bioethics is a branch of ethics concerned with the morality in the development and application of ground-breaking science in biological science, engineering, computer science, chemistry, and different worldviews to improve human capabilities (Potter, 2012; Bryant & La Velle, 2018). At its core, it involves the right and wrong of designing and constructing bioethical systems borrowing ideas from different cultures. One of the key techniques in synthetic bioethics is synthesizing cultural values that allow scientists to modify sequences to achieve desired traits or behaviors in organisms (Loike, J. 2018). This process often involves the use of genetic parts, such as promoters, genes, and regulatory elements, which can be assembled like building blocks to create synthetic genetic circuits (Gómez, 2019). As synthetic bioethics continues to advance, moral questions about issues such as genetically modified organisms (GMOs) in the environment raise concerns about unintended consequences, ecological disruption, or the spread of engineered traits to wild populations (Myhr, & Myskja, 2014; Monday, 2019). Ethical frameworks must weigh the potential benefits of synthetic biology against its environmental risks and establish safeguards to minimize harm. It offers the potential to create powerful new tools for biodefense, bioremediation, and agriculture (Monday, 2020). However, there is also the risk that these technologies could be misused for malicious purposes, such as bioterrorism or the creation of bioweapons. Ethical guidelines are needed to ensure responsible research practices and prevent the misuse of synthetic biology for harmful ends (Monday, 2020).

Synthetic Bioethics

In the rapidly advancing field of synthetic bioethics, it is essential to establish a robust framework to guide the development and application of synthetic organisms and biological systems. This is particularly important in the context of healthcare, where synthetic biology has the potential to revolutionize the diagnosis, treatment, and prevention of disease. A well-organized ethical healthcare system should be underpinned by a comprehensive set of bioethical principles that address the unique ethical challenges posed by synthetic biology. These principles should encompass issues such as safety, security, equity, and informed consent, among others. Furthermore, the development of synthetic organisms and biological systems should be subject to rigorous ethical review and oversight to ensure that they are

used responsibly and in the best interests of patients and society as a whole. This may involve the establishment of dedicated regulatory bodies and ethical committees to evaluate the ethical implications of synthetic biology research and applications. Synthetic bioethics transcends traditional boundaries by integrating insights from different disciplines, including philosophy, medicine, law, sociology, and anthropology. At its core, it recognizes the inherent complexity of ethical dilemmas arising from biomedical research, clinical practice, and healthcare policies. Rather than relying solely on a single ethical theory or approach, synthetic bioethics encourages a nuanced understanding that takes into account cultural diversity, patient autonomy, distributive justice, and the common good. The synthetic bioethics is the cross-cultural and trans-global bioethics (Kaebnick, et al., 2014). It is the acknowledgment of the “internal plurality within every culture; highlighting the complexity of cultural differences; upholding the primacy of morality; incorporating a reflexive theory of social power; and promoting changes or progress towards shared and sometimes new moral values” (Nie, & Fitzgerald, 2016). Synthetic bioethics may have both beneficial and potentially harmful applications. The ethical dilemmas arise when scientific advancements have the potential to be used for both peaceful and destructive purposes (Heavey, 2013). Balancing the promotion of scientific progress with the need to mitigate security risks is a central challenge. The precautionary principle advocates for taking preventive action in the face of uncertainty, especially when dealing with potential risks to public health or the environment (Von Schomberg, 2006). In the context of synthetic bioethics, this principle emphasizes the importance of assessing and mitigating risks when deploying new biotechnologies (Rippe, & Willemsen, 2018). Synthetic bioethics is a responsible innovation that emphasizes the need for scientists and policymakers to anticipate and address the societal implications of emerging technologies, and to avoid systemic racism that Indigenous communities face while participating in a justice of reconciliation (Matthews, 2019; Monday, 2020). This approach encourages interdisciplinary collaboration, stakeholder engagement, and the incorporation of ethical considerations throughout the research and development process (Penuel et al., 2020). Ethical impact assessments involve evaluating the potential ethical implications of synthetic bioethics projects before they are undertaken. This process may involve considering factors such as safety, environmental impact, social justice, and the implications for future generations (Palm & Hansson, 2006). Ethical impact assessments help researchers and policymakers make informed decisions about which projects to pursue and how to mitigate potential risks. Participatory governance involves engaging diverse stakeholders, including scientists, policymakers, industry representatives, and members of the public, in decision-making processes related to synthetic biology (Rappert & Selgelid, 2013).-Synthesizing bioethics involves centering native-centric healthcare practices that respect the diversity of cultural perspectives and promote justice and equity. It also involves recognizing and embracing the values and worldviews of indigenous peoples and Europeans. Native-centric values such as interconnectedness, reciprocity, and respect for nature are central to this approach.

Synthetic bioethics requires a deep understanding of diverse cultural perspectives and a willingness to challenge existing power structures in the healthcare system would lead to conflicting viewpoints and values because different stakeholders may have divergent beliefs,

cultural norms, and priorities, making consensus difficult to achieve. However, by embracing synthetic bioethics, we can move towards a more holistic and inclusive approach to healthcare that respects the values and beliefs of all individuals and communities (Monday, 2021). It requires dismantling entrenched power structures, confronting institutionalized racism, and challenging dominant narratives of knowledge production. However, it also presents opportunities for transformative change, fostering collaboration, and innovation in healthcare delivery and policy-making. As we strive to decolonize bioethics, it is imperative that we engage in critical self-reflection, center voices and perspectives, and work towards building more just and equitable healthcare systems. By synthesizing bioethics, we can create a more ethical framework that honors the diversity of human experiences and promotes health and well-being for all.

Conclusion

Synthetic bioethics is the integration of Western bioethics and native centric. It is essential to solving the problems of emerging technologies because it is rooted in diversity and respecting the dignity and autonomy of all individuals, regardless of cultural background. By addressing challenging colonial legacies and embracing indigenous perspectives, we can move towards a future where healthcare is truly inclusive, equitable, and just. In addition, healthcare professionals and researchers working in the field of synthetic biology should receive training in bioethics to ensure that they are equipped to navigate the complex ethical issues that may arise. This will help to foster a culture of ethical responsibility and accountability within the healthcare system. By integrating synthetic bioethics into the fabric of the healthcare system, we can ensure that the potential benefits of synthetic biology are realized in a responsible and ethical manner, while minimizing the risks and potential harms. This will help to build public trust in the field of synthetic biology and pave the way for its widespread acceptance and adoption in healthcare.

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