

CHAPTER VII

Morality and Ethics in AI: The Catholic Church's Perspective for Facing Technological Dilemmas

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Abstract

Today, the Catholic Church faces moral and ethical dilemmas due to the rapid development of AI. As a result, it is impacting new issues related to social justice, human dignity, and more. The Catholic Church recognizes that to resolve these issues and ensure that human values and morality are applied to artificial intelligence (AI) technologies, it needs to provide ethical direction and frameworks. The important moral and ethical issues raised by this rapid development of artificial intelligence include algorithmic bias, privacy, autonomy, and human accountability. By emphasizing human dignity and promoting social justice, the church seeks to protect people from the dangers of using artificial intelligence. The church recognizes that education is necessary to understand artificial intelligence and its impact on human life. The Church encourages discussion and collaboration between science and faith to ensure that artificial intelligence (AI) is used in a way that is properly aligned with the value of the dignity of human life. Through these actions, the Church seeks to protect human dignity and justice from uses of artificial intelligence that are incompatible with human dignity.

Keywords: Artificial intelligence (AI), morality, ethics, technology dilemma, principles

Introduction

In this journal, we will consider the teachings of the Catholic Church as moral and ethical principles to guide individuals and organizations in using AI for the common good. By emphasizing human dignity, the Church explores the implications of AI for decision-making, human autonomy, and potential harm; and

considers the morality and ethics approaching its use in health, war, and work. It is important to seek from the ongoing discourse on the responsible use of AI with a moral and ethical perspective.

In the rapidly evolving landscape of AI, the line between technology and ethics must be drawn. The Catholic Church strongly hopes that a deep understanding of human values and norms combined with ethical principles will provide the right framework for the future development of AI without losing sight of the dignity of human life, justice, and the well-being of all. In this regard, the Church has always emphasized the importance of protecting human rights without the exploitation of irresponsible use of AI by a few. This fundamental stance recognizes not only the importance of enhancing the potential of human life but also the ethical complexities and risks associated with its widespread use that also affects the lives of the environment.

Therefore, to realize the vision of AI in harmony with human dignity and ethics, the Catholic Church has advocated a multidisciplinary approach by holding open dialogue and collaboration between scientists, ethicists, theologians, policymakers, and various stakeholders to jointly use AI in harmony with existing ethics. Through the teachings of the Church, both individuals and organizations can ensure that technological advancement adheres to ethical standards that also safeguard social justice and human values. This is done by grounding the development and use of AI in the ethical teachings of the Catholic Church to encourage society towards the common good and the common good directed towards good and ethical use (*Artificial Intelligence*, 2020). This includes an ethical framework that guides the use of AI with an emphasis on the dignity and protection of human rights in all areas related to AI.

Moreover, in the field of healthcare, the Catholic Church emphasizes the importance of patient welfare, respect for individual autonomy, and adherence to ethical principles governing medical practice such as; revolutionizing diagnosis, treatment, and patient care. Likewise, the use of AI in warfare to provide new weapons is not to be encouraged or realized if it is for its own sake without regard to the common good. However, it may still be considered with AI innovation if it is for the sake of strengthening the country's strategy and defense against all enemy attacks (Song, 2020)

In the field of labor, the influence of AI is expanding, which can contribute to the improvement of employment and the economy. Many refinery industry sectors are using AI technology in the form of robots that ease the human

workload. Likewise, in terms of earning materials that can be done more quickly, thus adding to the country's source of income. However, it should be noted that there should not be dehumanization from uncontrolled automation that neglects the human work system. Through Catholic ethics, the well-practiced integration of AI with labor will promote a better and more advanced work system as well as a more humane work system.

In conclusion, in addition to providing a moral foundation for the development and use of AI, the ethics of the Catholic Church also provide a comprehensive way to preserve human dignity, protect human rights, and a multidisciplinary approach to regulating the use of AI, as well as in the field of employment that emphasizes justice in employment without neglecting human labor itself (Burdett, 2023).

Literature Review

Theological Foundations of Morality in AI

In the Catholic Church's efforts to advise on the development and use of AI in line with moral and ethical principles, some scholars criticize and hold the opposing view that the principles of the traditional teachings of the Catholic Church are incompatible with today's advances in AI technology (Brittain, 2020). The Church is too rigid in its strict adherence to doctrine to adapt to today's modern technological developments (*Pope Francis Urges Ethical Use of Artificial Intelligence - Vatican News*, 2023). They also criticized the Church's view that the use of AI in autonomous decision-making and AI-robot interactions is inappropriate for human social life (*Pope Francis Urges Ethical Use of Artificial Intelligence - Vatican News*, 2023). In this regard, the Church's teachings still believe that providing moral and ethical standards for the use of AI will help a lot in preserving and respecting the dignity of human life and the common good and well-being (Graves, 2022)

The area of labor is also a concern in the ethics of the Catholic Church. This includes the protection of key principles of human value, human rights, and in ethical decision-making with a multidisciplinary approach. By recognizing human value or dignity, the use of AI technology is no more than a means to serve human needs without compromising the well-being of all people. Ethics in the use of AI is also important in protecting human rights by ensuring that individual autonomy, privacy, and freedom are guaranteed. In addition, through an ethical framework, collaboration between scientists, theologians, and those involved can be realized to

clarify what is permissible and resolve any problems caused by AI (*Catholic Church, Tech Firms Join Call for Transparency in AI - UPI.Com*, 2020).

In addition, AI decision-making becomes a source of concern when it seems to replace humans as agents of free will who are supposed to determine decisions and actions. This raises the philosophical and ethical conundrum of AI decision-making that also impacts human autonomy and responsibility. It is important to ensure that AI is only a tool for assisting humans and not the arbiter of human decisions and actions (Hallamaa & Kalliokoski, 2022).

The rapid development of AI is increasingly coloring our daily lives with not only positive but also negative impacts. In the face of this dilemma, the Church continues to encourage all people and fields to continue to be open to dialogue together by focusing on the development and use of AI from a disciplinary perspective that cannot be separated from religion and ethics (*To Participants in the "Minerva Dialogues", Meeting Organized by the Dicastery for Culture and Education (27 March 2023) | Francis*, 2023).

Human Dignity and AI

The teachings of the Catholic Church have always placed the value or dignity of the human person first in all aspects of life. Therefore, the use of AI should always be a means only to help human beings but not to be designed or used in a way that is degrading or contrary to human dignity, such as promoting discrimination, division, inequality, or harming individuals or communities (*To Participants in the Plenary Assembly of the Pontifical Academy for Life (28 February 2020) | Francis*, 2020). The Church has never rejected AI as long as it is used to enhance human dignity in terms of capabilities and quality of life both individually and in society. In addition, it is important to emphasize solidarity in the ethics of AI which involves individual cooperation and responsibility towards others to promote justice and honesty, which in turn helps to reduce negative impacts on those who are marginalized or vulnerable (*To Participants in the Plenary Assembly of the Pontifical Academy for Life (28 February 2020) | Francis*, 2020).

A holistic approach to AI ethics also needs to be adopted. This involves collaborating technological advancements with ethical considerations rooted in the values of human dignity, solidarity, and the common good to mitigate the negative ethical implications of wrongful and irresponsible use by certain parties. Without this approach, various problems will arise such as loss of human control,

infringement of individual privacy, and problems with work and human relations (*Artificial Intelligence Must Not Hurt the Most Vulnerable, Pope Says - TheCatholicSpirit.Com*, 2023).

The Catholic Church has always emphasized that in the development and use of AI, human value and dignity must be prioritized as the standard. With this, AI systems will always be a tool in helping human beings for the sake of justice, equality, and solidarity without neglecting the human value of each individual. Therefore, the Church always hopes that both users and experts, as well as those involved in the development of AI, always balance it with moral and ethical principles that serve as benchmarks in ensuring that the use of AI is justly and well accounted for (Florida & Cows, 2019).

Ethical Decision-Making in AI Development

In the development and use of AI, one of the concerns is ethical decision-making. Increasingly advanced AI has been programmed to be able to upgrade itself to become more efficient and effective (Bengio et al., 2023). Therefore, it is very dangerous for humans if unchecked that AI systems might affect existing data systems (Hendricks et al., 2023). Therefore, there is a need for strict supervision of the AI datasystem base so as not to cause any problems and harm to humans.

In the view of the Catholic Church, the Church advocates that AI developers and researchers need to be programmed with an eye to the well-being and autonomy of individuals and demonstrate values that maintain human dignity to live in justice and the common good (Tomašev et al., 2020). Therefore, to overcome this problem, it is necessary to increase trust in AI through practical means of transparency and accountability, consistent auditing of data, and cooperation between industry, experts, and the producers of AI products (Díaz-Rodríguez et al., 2023). Likewise, organizations associated with the use of AI need to prioritize the equitable distribution of economic and material benefits by considering the principles of distributive justice and solidarity.

AI systems also need to be closely supervised and carefully monitored so as not to threaten humans due to the imbalance of data processing systems between humans and AI (Allen & Weyl, 2024). For example, algorithms in machines without ethical supervision may be biased and misaligned with what is expected by humans thus reinforcing that bias in making decisions (Gurstein, 1985). Therefore, auditing of bias-free training and algorithms should be done regularly and consistently so that decisions made by AI are fair and not biased or discriminatory.

In the context of ethical work, it is necessary to comprehensively oversee the creation of robots associated with AI system technology so that the presence of these robots does not threaten humans or seize human job opportunities freely and unfairly. Therefore, there is a need for ethical guidelines in AI specifically for the development of AI-intelligent machines or robots so that human rights are guaranteed and preserved.

Discussion Integration of Catholic Morality in AI

The development of AI should be integrated within Catholic morality to ensure that its use is moral and ethical. This integration involves an approach that will prioritize the fundamental principles of the dignity of human life with attention to the welfare and human rights guaranteed and provide for a just and inclusive society (*Paolo Benanti - Wikipedia, 2022*). Through these endeavors, AI can become a means for the common good and promote love, justice, and solidarity (Gillath et al., 2021).

In addition, the ethical implications of AI also require collaboration and collective efforts from various parties including developers, policymakers, and the public. It is important to establish ethical guidelines and regular frameworks that prioritize human rights fairly and create awareness among the public so that they know and are aware of the potential good and bad that AI can bring so that it can be ethically justified (Luccioni & Bengio, 2020).

Therefore, integrating Catholic morality in the development and use of AI can ensure that AI systems are aligned with human dignity so that the use of AI is not wrongly and irresponsibly utilized by a few (Ferrara, 2023). With moral and ethical principles in the use of AI, all parties will become aware of the limitations of AI that should not exceed the value and dignity of human life in general.

Not only that, the approach of Catholic moral values also needs to be applied and publicized regarding AI. This can be done specifically in a team that is embodied by members of the Church in providing a view of the Catholic Church's teachings on AI technology (*Rome Call for AI Ethics, 2020*). For example, priests in giving their homilies try to address the implications of AI that is increasingly developing in human life today.

Catholic theologians and philosophers also play an important role in formulating views in the realm of theology and philosophy in response to the development of AI so that people are increasingly aware of the implications of AI

and have ethical guidance in developing and using it without threatening human dignity and the environment under the influence of this technology. Therefore, the integration of morality and ethics towards AI is necessary so that the advancement of AI technology is truly useful for humanity (Artificial Intelligence Must Not Hurt the Most Vulnerable, Pope Says - TheCatholicSpirit.Com, 2023).

Addressing Ethical Dilemmas in AI Through a Catholic Ethical Framework

It is undeniable that the development of AI has not only had a positive impact on human beings but has also created new ethical dilemmas such as bias and discrimination, misuse of data, loss of privacy, technological unemployment, and so on. In the use of AI, a Catholic ethical framework needs to be applied to prevent misuse of this technology. Among other things, the development of AI should be in line with the principles of justice, solidarity, and human dignity (Ferrara, 2023). This alignment can reduce the problems caused by AI while benefiting humanity by promoting the quality of human life in certain areas and avoiding the alienation of the marginalized (Berberich et al., 2020).

In addition, Church ethics also suggests that governments and industry players need to monitor data updates on AI systems so that they can develop in the right direction and be useful for all parties (*This Is a Preprint of the Article Forthcoming in Minds and Machines, December 2018 An Ethical Framework for a Good AI Society: Opportunities, Risks, Principles, and Recommendations*, n.d.). This can reduce bias in AI systems so as not to harm individuals or irresponsible parties who only take advantage of the misuse of AI.

Therefore, by incorporating a Catholic ethical framework in AI, a holistic approach can be applied to address complex social, moral, and legal challenges so that there is oversight of the development and use of AI involving all parties and fields as well as the relationship between science, science, and religion so that human dignity is guaranteed as well as the environment (*LVII World Day of Peace 2024 - Artificial Intelligence and Peace | Francis*, 2023).

Global Implications and a Collaborative Approach

The influence of AI not only impacts individuals and humans but also has global implications that can affect the environment and its surroundings. Therefore, AI systems should be well-designed, upholding human rights and taking care of the environment carefully and wisely (Wu et al., 2021). This requires cooperation

between governments, involved organizations, researchers, and developers of AI-specific technologies from different countries to settle on common guidelines to control this use (Zhang et al., 2023).

This partnership is an international cooperation by establishing dialogue and collaboration between various parties and fields between countries and across sectors to jointly address the problems posed by AI so that there is mutual agreement in the development of policies and fields (*Global Partnership on Artificial Intelligence - GPAI*, 2010). In addition, civil society, both non-profit organizations and advocacy groups, are involved so that they are more attentive to public needs and the common good. By creating a culture of cooperation and collaboration, the responsible use of AI can be realized across the world, and ensure that AI systems provide great benefits for enhancing the development of human life with dignity and freedom (AI, 2018).

In addition, it should also be noted that the collaborative approach also applies at the local and community level. Therefore, the community is also encouraged to be involved in the correct application of AI technology, for example, for the sake of increasing income resources, farmers are encouraged to use AI technology to increase their agricultural yields. Likewise, vertical collaboration from the grassroots to policies is needed in the use of AI which from the lower level of socialization policies are important to ensure consistent use (Gasser & Almeida, 2017).

Education Initiatives and Ethical Awareness

The rapidly growing technology of AI systems affecting various aspects of human life requires exposure to knowledge or education about this technology. The government by involving various sectors such as education, industry, media, and so on is trying to provide specialized education on the implications of the use of AI (Tai, 2020). Through this approach, all parties can ethically raise awareness and be willing to address the problems that AI may cause in the immediate or future. For example, in education, materials on AI are incorporated into science and technology education courses; collaboration between all stakeholders to realize general guidelines for the use of AI; industry sectors are given exposure and training to become more responsible in the use of AI and so on (Han et al., 2018).

In addition, it is also important to approach the public about AI. This is so that people are not ignorant of the development of this technology and make them aware of the new implications that they will face both now and in the future. With

the help of mass media, this information is channeled into various forms so that the public is increasingly sensitized to AI and can use it ethically with knowledge and awareness (Gurstein, 1985).

In addition, cooperation with religious leaders and organizations is also very important in supporting the development of AI technology. The use of AI not only involves moral and ethical issues but also religious principles and values are also standard so that human dignity as a creature of God can be upheld without becoming a slave to AI (Graves, 2022). Every religion has its religious values and overall, religions always pay attention to and prioritize the value and dignity of human life to uphold virtues such as love, justice, and social responsibility, and to maintain the dignity of human life.

Concerns About Autonomy and Dehumanization

Rapidly evolving artificial intelligence (AI) has led to serious ethical discussions about maintaining and preserving human autonomy and the possibility of dehumanization (Federspiel et al., 2023). Concerns about the threat to human autonomy by AI include human labor being replaced by AI technologies such as robots and other machine tools so that what has been human labor is all controlled by AI. This can directly reduce human labor resources and result in a lot of unemployment occurring because it no longer requires the services of human labor in existing jobs (Manyika et al., 2017). In this regard, the Catholic Church emphasizes the importance of putting the value of human dignity first so that it is not mistaken that AI technology is just a tool that can never replace the position of humans as well as in the field of work (*LVII World Day of Peace 2024 - Artificial Intelligence and Peace* | Francis, 2023).

In addition, the widespread surveillance conducted by AI systems reaches out en masse which may limit the freedom and privacy of individual people. This is very much against the right to human freedom and can also manipulate existing data systems. In this regard, Pope Francis has voiced that "mass surveillance is a very dangerous attack on human freedom", so he advocates that regulations and ethics for the use of AI be established to control and supervise it so that it does not cause conflict with the dignity of human life (*To the Participants in the Seminar "The Common Good in the Digital Age", Organized by the Dicastery for Promoting Integral Human Development (DPIHD) and the Pontifical Council for Culture (PCC) (27 September 2019)* | Francis, 2019). Another problem that arises is the manipulation or propaganda caused by AI due to irresponsible parties to gain their benefits and benefits without considering the interests of others. Information,

data, or news can be manipulated through a system called micro-targeting by conducting massive analysis of user data to influence the views or behavior of users. In response to this, the Church calls for users to always be vigilant and critical in responding to all information presented by AI so that they are not easily influenced and deceived and can be more careful in storing their data (*Ethics in Internet*, 2002).

Another form of AI problem that arises is dehumanization specifically in decision making without ethical values. Keep in mind, an AI system is just a programmed machine that does not have a heart and soul which is very different from humans or it can be said that AI does not have a conscience. Therefore, it is dangerous to put AI in decision-making because they are only conditioned with strict programmers that may cause various problems if not supervised by humans (Smit et al., 2006). For example, if AI is authorized to run an employee recruitment system, it may discriminate against certain candidates based on pre-programmed data systems that are strictly followed by the AI system.

Conclusion

The rapid development of artificial intelligence (AI) technology requires the application of Catholic moral and ethical values that always place the dignity of human life first and emphasize solidarity, justice, welfare, and the common good. Through this endeavor, the development and use of AI can be accounted for and reduce the risk of new ethical problems arising from the uncontrolled use of AI with the guidelines for the ethical use of AI technology, it will be more helpful in increasing the value of human life.

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