

Editorial

Artificial Intelligence: Theology and Ethics

Artificial Intelligence (AI), the “theory and development of computer systems able to perform tasks normally requiring human intelligence, such as visual perception, speech recognition, decision-making, and translation between languages”¹ has been gaining greater attention in recent decades. Artificial Intelligence may also be applied to “any machine that exhibits traits associated with a human mind such as learning and problem-solving.”²

On the one hand Artificial Intelligence offers a great possibility. Our devices are becoming smarter; they can make our tasks simpler and easier. Many such smart devices have already become an integral part of our day-to-day life. It is also predicted that by 2040 Artificial Intelligence would reach a human scale intellect, capable of acting and thinking like human beings. However, there are also concerns about possible threats posed by Artificial Intelligence. For example, Stephen Hawking has said: “We need to move forward on artificial intelligence development but we also need to be mindful of its very real dangers. I fear that AI may replace humans altogether.”³ Though he used scientific technology for his own survival, he has also said, “The development of full artificial intelligence could spell the end of the human race...”⁴ The concerns include the potential of Artificial Intelligence to disrupt fundamental societal values and norms as well as exacerbate existing issues such as inequality and inequity. The Church is optimistic of the potential benefits of AI, but at the same

¹ “Artificial Intelligence: What is it and how does it Work?” <https://www.lexology.com/library/detail.aspx?g=5424a424-c590-45f0-9e2a-ab05daff032d>

² “Artificial Intelligence,” <https://www.investopedia.com/terms/a/artificial-intelligence-ai.asp>

³ Richard Gall, “5 Polarizing Quotes from Professor Stephen Hawking on Artificial Intelligence,” <https://hub.packtpub.com/stephen-hawking-artificial-intelligence-quotes/>

⁴ Rory Cellan-Jones, “Stephen Hawking Warns Artificial Intelligence could End Humankind,” *News Technology*, 2 December 2014, <https://www.bbc.com/news/technology/30290540>

time, would like to ensure that ethical principles are safeguarded. In February 2020, The Pontifical Academy for Life conducted a workshop on Artificial Intelligence, inviting experts from various fields to work together to develop an ethics of AI.⁵ Balancing Artificial Intelligence against the potential harms is both critical and necessary for the future of human progress. Here the role of theology and ethics is vital.

Although still in the phase of development, AI calls for profound reflections and evaluations. Articles in this issue highlight the positive aspects of AI, as well as the possible threats and theological and ethical issues it may bring about.

Angelo Chakkanattu introduces what Artificial Intelligence is, mainly focusing on its scientific and technological aspects. He deals with the historical background and development of AI as well as its foundations. After delineating some of the applications of AI, and indicating the impact of AI during COVID-19, Chakkanattu briefly presents some of the ethical issues involved. Peter G. Kirchsclaeger, addressing an important characteristic of AI, that is, its complexity, proposes a more adequate term for AI, namely, “databased systems.” He argues in favour of databased systems with ethics and concludes with the complexity of ethics and its consequences for the ethical dimension of technology-based innovation. Gregory Mathew Malayil analyses different perspectives on the future of AI in light of philosophical and scientific dimensions. Though developments in brain sciences would enable AI to simulate more functions of human consciousness, Malayil, critically analysing and synthesizing the views of Roger Penrose and Stephen Hawking, infers that AI cannot replace human beings nor can it adequately explain the theological dimensions of human consciousness.

Andrea Vicini, after describing examples of the implementation of AI in healthcare, appraises the ethical challenges involved. He points out that “current developments in artificial intelligence invite us to reflect critically on who we are as human beings, on how we act, and on our society, with its current dynamics and power struggles.” AI should be used in ways that contribute to the common good of humankind and of the planet. Gregory Arokiaswamy evaluates the impact of AI on economy and employment, and how it will contribute to social justice. Though AI has the potential of increasing economic growth, it may either displace or disrupt the labour-market. In the Indian context, the most affected would be Dalits,

⁵ <http://www.academyforlife.va/content/pav/en/events/intelligenza-artificiale.html>;
<http://www.academyforlife.va/content/pav/en/events/general-assembly-2019.html>

Tribals, and women. Élio Gasda discusses the impact of AI on labour and employment. Assessing AI in the context of the 'Fourth Industrial Revolution,' Gasda asks whether AI offers the possibility of thinking about a new paradigm of labour and of civilization, and emphasises that AI must be put in the service of humanity and not of the market. Evaluating AI in the background of 'Technocratic Paradigm,' Sahayaraj Stanley emphasises that "technology needs to be pro-poor and pro-planet..." While acknowledging the benefits of AI, he also warns that AI, if not employed prudently, can aggravate unemployment and inequality in countries like India. Roderick O'Brien discusses the use of AI in armed conflicts in light of Catholic Social Ethics. He argues how the Just War doctrine is challenged by autonomous weapons, and underscores the need for respectful dialogue between ethicists and developers of weapons, giving priority to peace.

Patrick Dolan discusses how close AI can become to humans, created in the image and likeness of God. Distinguishing between dominance and the Genesis concept of 'dominion,' he points out that humans need to maintain dominion over AI. Rajesh Kavalackal investigates the anthropological and theological aspects of AI, especially making use of the concept of *Imago Dei*. He is optimistic about AI, but cautions that we need to safeguard human dignity and personhood.

Considering how COVID-19 has affected human life globally, we have included it as a sub-theme for the issue. James F. Keenan evaluates humanity's progress in light of COVID-19. He examines the present precarity of humanity, the need for greater solidarity and vulnerability, and calls for rearticulation of the mission of the Church today. Keenan underscores that "When we finally begin to confess our guilt, assume our vulnerability by humbly recognizing and accompanying our neighbour, only then will we begin to see rightly the goals we need to set for human progress." Mathew Illathuparampil discusses some of the important ethical questions raised by COVID-19: professional responsibility versus personal safety; patient confidentiality; triage; research ethics; personal liberty versus common good; and the environment. Continuing the discussion on the ethical issues raised by COVID-19, Anthony L. Fernandes affirms that the values of human dignity, human rights, privacy, equity, and justice are to be upheld at all times as we make our way out of this crisis. He calls for a close collaboration of all the principal actors for tackling the crisis.

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Editor-in-Chief

Paul Kalluveetil, CMI (1940-2020)



Rev Fr Paul Kalluveetil, CMI, a member of the Editorial Team of *Asian Horizons*, was called to eternal reward on 31 August 2020.

Fr Paul was ordained a priest on 01 December 1964. He successfully completed his doctoral studies in Sacred Scripture at the Pontifical Biblical Institute, Rome; his thesis was on “Declaration and Covenant: A Comprehensive Review of Covenant Formulae from the Old Testament and the Ancient Near East.” He dedicated his life for the service of the Word of God and taught Old Testament at Dharmaram Vidya Kshetram, Bangalore, Samanvaya & Khrist Premalaya Regional Theologate, Bhopal and Mary Matha Seminary, Thrissur. He has published many books and articles, both in English and Malayalam on Biblical Theology, Liturgy, St Kuriakose Elias Chavara, and Servant of God Fr Canisius Thekkekara CMI. He taught with passion and inspired the students to read and interpret the text in the living context. His publications include: *Declaration Formulae in the Old Testament Secular Covenants Bibliography*, *Declaration and Covenant: A Comprehensive Review of Covenant*, *Vachana Bhashyam* (3 Vols), *Vachana Vedam*, *Syro-Malabar Qurbana: Biblical Perspectives*. Some of his articles in *Asian Horizons*: “An Asian Biblical Hermeneutics” (1, 1 [June 2007]); “Woman in the Divine Vision” (3, 1 [June 2009]); “New Movements during the Old Testament Times (4, 2 [December 2010]); “Sojourner and Foreigner” (8, 4 [December 2014]).

The Editorial Team of *Asian Horizons* remember with gratitude the scholarly contributions and the great services rendered by Fr Paul Kalluveetil. May God grant him eternal joy!