

BIBLICAL ETHICS AND ARTIFICIAL INTELLIGENCE: TOWARDS A MODEL OF INTEGRATION IN THEOLOGICAL EDUCATION

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ABSTRACT

Artificial intelligence's mechanisms and inventiveness has raised some ethical or moral questions, some of which are from religious quarters, small and large societal groups, government and other organizations. The weight of the moral concerns depends on the level of the communities or societies that engage and explore this great revolution in the history of mankind. Attempts have been made to address the moral concerns, but they have not been adequately addressed from biblical perspective. From the standpoint of biblical ethics, this paper provides a thorough analysis of the primary moral questions related to the effects of artificial intelligence on human civilization. Biblical ethics is based on moral revelation in the bible. But the relevance of it to the contemporary times is also contested, that is, how significant is the individual ethical texts of the Bible to the situation of the modern man? Integration model in utilizing Artificial Intelligence for doing theological education from biblical ethics perspective may be of great value to enhance a balance for the contemporary man. Analytical approach is used to establish the coherence of biblical ethics and Artificial Intelligence for theological education. The paper reveals that the Christian ethical perspective on Artificial Intelligence is supported by several theological principles based on the fact that humans and robots are seen as having distinct essences, making them unequal; human dignity is rooted in being created in God's image (Imago Dei), as described in Genesis 1:27-28; humans are called to prioritize their relationships with God, fellow humans, and the natural world with a sense of creativity. Artificial Intelligence is not a demon but a tool programmed by man for his own development. Employing Artificial Intelligence in a manner that promotes theological education should be encouraged.

KEYWORDS: Artificial Intelligence, Biblical Ethics, Model, Integration, Theology, Education.

INTRODUCTION

It is generally believed by Christians that "Life's operating instructions are found in the Bible." This is a simple method of applying the Bible to Christian living that is taught in many churches and Christian groups worldwide. It is usually emphasized that God

created us and he knows best how we should live. When Christians are looking for moral direction for the world and themselves, they are urged to consult the Bible. Many insist that one must follow the teachings of Scripture, regardless of one's personal preferences.

Many Christians now believe that they can find the protection they seek if they base their findings for a modern ethic on the precision of the biblical text. This is because God approves of such a move, as believed. On the other hand, some instances in the biblical records leave the modern man to doubt the validity of direct application of the ethical values in the text because the moral situation in the culture in which the passage was written is considered archaic and barbarous in the context of the contemporary development or civilization. Understanding this conundrum has contributed to a greater understanding of the necessity of examining the assumptions we make about the biblical text and its possible ramifications for religious and ethical life in the modern era. It should be understood that the content of the bible was spoken not to 'us' but to a different audience with a different culture of long ago. The authors were motivated to write to address the ethical situations of their immediate audience who belonged to a generation far-gone to the contemporary times and in fact the bible is made of books with many different genres: poems, prophecies, parables, stories, histories, letters and so on. This does not nullify the relevance of the core message of the scripture, but the interpretative strategies should be revisited. In fact, the Bible is far more comprehensive and is full of inspirational ideas than just one idea. Numerous great (religious, moral, and political) movements have been sparked by it, including the struggle for equality, human rights and the cessation of slavery and so on.

It is in this respect that this paper aims to establish the relationship between the two fields harmonizing their methodologies to lessen the complexities in judging what is ethical and what is not and then consider the ethical implications of Artificial Intelligence mechanisms on theological education.

BIBLICAL ETHICS

There had been tremendous developments in the field of biblical ethics in the last two decades. The contention between the approaches of the Biblicist and Christian ethicists had been a major concern. The whole experience had evolved to engage integrated approach – an approach that brings the Biblicists and Christian ethicists together to appreciate each other's major focus to bare. Biblical ethics is not a recent field of study. The Protestant and Catholic methodologies differ because the protestant have long been defending their use of Scripture as the only source for Christian ethics. Roman Catholic, in history, gradually embraced sola-scriptura and that also defines what they regard as biblical ethics. For instance, Catholic manualists frequently drew proof passages from the Scriptures. Catholic intellectuals demanded a more biblical approach to moral theology in the 17th and 18th century in the Council of Trent and Vatican II. In the middle of the 20th century, it was proven that moral reasoning should come from Scripture. An

attempt was made in 2008 by the Pontifical Biblical Commission to place Christian morality within the larger sphere of anthropology and of biblical theologies (Pontifical Biblical Commission 12).

The integration of Scripture and theological ethics is far from satisfactory, as the two branches "continue to operate separately with little cooperation: few biblical scholars are interested in conversing with moral theologians, and moral theologians do not read much of what biblical scholars write." (Lúcás Chan 2). In addition to the lack of interest, significant barriers are maintained by the two disciplines' increasing complexity, the associated problem of professional training and competency development, and the lack of communication between them.

In all, it is expedient to note what the text meant to the original audience. What are the differences between the biblical audience and us? What is the theological principle in this text? (Hays 3-19). Breaking these questions down, one should also consider cultural particulars. "For instance, the ancient justification for the prohibition of adultery in the seventh commandment may include an assumption that husbands enjoy property rights in their wives – an assumption that we would reject on broader biblical-theological grounds" (Rabens 5). Essential is the point that ethical guidance of the scripture for the ancient culture may be relevant for the contemporary culture. "Paul's command not to get drunk with wine (Eph 5:18) may establish that the effects of drunkenness in antiquity were virtually the same as the social and societal damages of alcoholism today" (Rabens 5). Some ethical texts in the bible may be in agreement with the scientific assumption such as ones in the Pentateuchal purity laws compared with the contemporary medical guidance. "One may trust the Bible for guidance in faith and practice without taking it as a guide on scientific questions" (Cosgrove 150). Other biblical writings differ from the prevailing cultural viewpoints, in contrast to the cultural conformity of certain of the ethical ideas contained in the Bible. This discrepancy could be interpreted as an indication of a key biblical principle or value that needs to be given more consideration in the discussion of the Bible and modern Christian ethics. There are countercultural tendencies comparing the biblical text with the contemporary. Such countercultural tendencies may be sounding as a voice for liberation, that is a voice for the powerless or the poor which is in contrast to the real practice in the culture. For instance, harboring and even abusing a slave based on passages such as Exodus 21:20–21 would disregard the text's countercultural revolution in its socioeconomic context in which it was usually not illegal to beat a slave to death. In doing justice to this, Webb opines that "the redemptive spirit of Scripture" ought to motivate modern ethics while bringing the ancient text into our world (Webb 31).

To grasp how biblical ethics could motivate moral behavior in the modern world, one must understand how the Bible's various texts and sections relate to one another. According to Rabens while concluding on the approach of dialogue between the two participants – Biblicist and moral theologian – for biblical ethics, he submits that we move

back and forth amongst the participants in this open debate as we follow the connections between the biblical text and our current questions. Our interaction with both viewpoints should result in a process of mutual enlightenment in our pursuit of meaning and deep comprehension of the text in its cultural embeddedness as well as of ourselves and our cultural conditioning. This can prevent us from viewing the conversation as a one-way street from the text to the present.

CONCEPT, HISTORY AND DEVELOPMENT OF ARTIFICIAL INTELLIGENCE

Artificial Intelligence has been described as the ability of a computer or robot to perform tasks that typically require human intelligence, such as learning, reasoning, problem-solving, and using language. It is applied to various domains, such as speech recognition, self-driving cars, and web search. It is a rapidly evolving field of computer science that aims to create systems that can perform tasks beyond the capabilities of humans (Ouyang 2). In the Korean National Standard Institute's standard dictionary, 'artificial intelligence' is a vocabulary equivalent to a computer, which is defined as 'a computer system with functions such as learning, reasoning, adaptation, and argumentation of human intelligence.' On the other hand, the English version of Encyclopaedia Britannica defines it as 'the ability of a digital computer or computer-controlled robot to perform tasks commonly associated with intelligent beings'. In practice, however, it refers to a program that emulates some of the features of human intelligence in logical formulas, or a machine that mounts the program on a physical mechanism (Im & Ham 237). According to Lee, the term 'artificial intelligence', was first coined in the mid-1950s by an American computer scientist, Allen Newell and an economist and physicist, Herbert Simon, and it was called GOF AI (Good Old-Fashioned Artificial Intelligence). (Lee 81-96).

From the mid-1950s when the concept of artificial intelligence was born, the development of AI has been divided into three stages according to its research and development (Heo, Yang, Kim, Moon & Choi 101-132). The first step was counted from the introduction of AI at the Dartmouth Conference in 1956 where John McCarthy an American computer scientist and cognitive scientist, in a workshop held at Dartmouth College, invited a group of researchers to discuss the possibility and challenges of creating machines that can think, until the mid-1970s when computer programs could solve structured problems through complex mathematical and logical calculations. The second stage, from the 1980s to the early 1990s, originated from the input of more complex information and knowledge into the computer rather than from simple calculations. By inputting and accumulating enough specialized information and knowledge in a specific field, such as medical or legal fields, one can solve complex problems related to that field. Therefore, at that time, AI of expert models specialized in more specialized fields was developed, and 'MYCIN', a medical AI system representatively developed by Stanford University. MYCIN has sufficient medical knowledge and has a system for diagnosing and

prescribing medical patients' illnesses. The final third stage is from the mid-2000s to the present.

The AI, as the icon representing the so-called 4th Industrial Revolution era, is the representative technology that leads the change of the times. Through the convergence of life sciences, it has been able to mimic the neural network of human beings, and AI has the ability to perceive, identify, judge, and predict objects.

The field of AI is far from homogeneous, thus, there is a multiplicity of approaches to the study of AI given the foundational subjects contributing to and forming the basis of the field. At the very least the following disciplines are relevant: Neuroscience (identifying how the brain processes information); Psychology (explaining how humans think and act); Linguistics (assessing how language relates to thought); Control Theory (analysing how artefacts can operate autonomously); and Computer Science (designing and implementing effective computational reasoning systems) (Coghill 605). Given these perspectives, there are several different viewpoints on what constitutes AI and how it should be undertaken. These may be grouped according to whether the primary focus is on humans or rationality, and on whether it is thought or behaviour that is deemed more important (Stuart & Peter), such as thinking humanly: where the aim is to get a machine to think like a human; thinking rationally: where the aim is to construct a machine that reasons in the best possible way; acting humanly: where the aim is to build a machine that performs in the same manner as humans and acting rationally: where the aim is to get a machine to act in the best possible way.

So, there is a spectrum of approaches, from Cognitive Science at one end (driven by a desire to understand and model how humans operate) and hard-core engineering at the other (driven by the desire to produce a system that will not be affected by the frailties of human behaviour); because, the noetic effects of sin ensure that humans do not always think or behave in a rational manner (Coghill).

ARTIFICIAL INTELLIGENCE: ETHICAL CONSIDERATIONS

Drawing reference from the iconoclastic tradition upheld by the Byzantine Church, icons are also regarded as pieces of technology which represent the application of knowledge to solve a problem as such, technology involves the adoption of novel techniques and tools that interact with their environment. It becomes clear that religions have never existed apart from technology because religion exists in the midst of people who must interact with their world (Langford 71).

Tandana opines as to how several theological principles support the Christian ethical perspective on Artificial Intelligence viz-a-viz how Artificial Intelligence is being considered as an alternative for God, prophesied as a “human-like image” in the scriptures. Romans 1:23 reads: “They replaced the glory of the incorruptible God with an image similar

to that of a mortal man...” The word “mortal likeness” in the original Greek “*εἰκόνοσφθαρτοῦ ἀνθρώπου* (*eikonosphthartouanthrōpou*) more accurately is translated into “mortal likeness”. This phrase can be interpreted as “human-like robots”. The word “similar” (*eikonos*) from the word “*eiko*” is defined as “similarity, namely statue, profile, or representation, resemblance.” While the word “mortal” (*phthartou*) means “perishable, perishable, rotting.” Then the word “man” (*anthropou*) means “A man, one of the human race; has a human face, that is, a human.” So, the definition of “mortal human-like” can be interpreted as a statue or object that is similar to a human face or has a human face. This image can be regarded as depicting a robot with a human face. This has raised concerns about how humans are likely to worship robots in the future (Tandana 97).

Furthermore, robots are not to be equated with humans as both have distinct essences. God created man to exalt Himself (1 Cor. 10:31). While robots are created by humans to serve human interests, the usage and treatment of Artificial Intelligence must not disregard its moral and spiritual aspects; otherwise, it can have negative effects on human life. Examples include causing financial crimes, reducing human privacy and controlling humans (Tandana). Also, Artificial Intelligence is merely a means to support human life, rather than its purpose. The development of technology must be dealt critically and creatively so as not to undermine the Christian faith (Tandana).

INTEGRATION OF ARTIFICIAL INTELLIGENCE IN EDUCATION

Undoubtedly, the historical context of AI accounts for its relationship with education, or learning and teaching. Alan Mathison Turing (June 23, 1912 - June 7, 1954), a computer scientist and English mathematician who was born in Maida Vale London, United Kingdom, helped crack Nazi codes and established the field of artificial intelligence. He first proposed AI in 1950, introduced a ‘learning machine’ that can be learned by programme, there was also a bright outlook on AI as well as its positive relationship with education. (Cooper 17)

In the learning society of the twenty-first century, integrating technology with education or learning is essential. Technology integration has been facilitated by a number of factors, including favourable government plans and regulations, training for instructors' technical competencies, and access to technological resources (Jiwak 3-11). Beyond the technologically-equipped classrooms and instructors' technical proficiency to aid successful technology integration, Brickner's research reveals instructors' attitudes toward integrating technology with teaching and learning in the education system. The results show that instructors' personal views on technology integration and their ability to develop lesson plans that use technology are crucial. According to the research, even though there were enough technological devices in the classroom, teachers were unable to implement technology integration because they seem not to believe it, owing to the primitive mindset and practice system before getting introduced to AI.

The education sector has experienced an increasing emphasis on adopting student-centred learning and shifting away from teacher-centred learning (Tang 2022). In teacher-centred learning, teachers control the pace, activities, and evaluation of the learning process. It offers the advantages of maintaining order and ensuring coverage of key topics but limits student engagement, collaboration, and creativity (Tang 72-83). Whereas, in student-centred learning, teachers become facilitators or guides rather than the sole source of knowledge (Tang 2020). This form of learning can enhance the accessibility of education and the development of essential skills and competencies (Tang 2021). The upsurge of Artificial Intelligence could facilitate student-centred learning by providing personalized and adaptive learning experiences, feedback, and student support. It also helps teachers to develop activities and materials such as virtual modules and courses that better suit the needs of students and more effectively engage them (Zhao, He, Jin & Wang).

AI also provides opportunities for higher education institutions to introduce new courses. This prepares students to take on new challenges in the era of AI and trains the experts much needed in AI-related fields. It reshapes teaching and learning in higher education institutions by making it more interactive and student-centred. AI tools can enable online and blended learning and reduce language and cultural barriers, thus offering educational opportunities to underserved and marginalized communities (Bozkurt, Karadeniz, Baneres, Guerrero-Roldán & Rodríguez). It provides an instrumental channel to diversify learning modalities while improving access to education in general (Tang 23-61). Therefore, AI not only has implications for tertiary education, but it also impacts education of all types at all levels (Kuok Ho 66) which could also include theological education.

ETHICAL ISSUES OF ARTIFICIAL INTELLIGENCE ON THEOLOGICAL EDUCATION

Artificial intelligence has emerged more rapidly than nearly any technology in history. The rate of development and adoption of AI has meant that our digital wisdom is still catching up. For Christians, this digital wisdom must include theology of which John Macquarrie a Scottish theologian defines theology as “the study which, through participation in and reflection upon a religious faith, seeks to express the content of this faith in the clearest and most coherent language available.” This definition takes into account a perception of God that is possible through the participation in faith, which enables a certain kind of knowing (Macquarrie).

Langford asserts that, in much the same way that we might say that technology ineluctably develops as humanity interacts with the world around it, we might also say that theology ineluctably develops as Christians interact with the world around them. The text of the New Testament might be seen precisely as the work of Christ-followers as they

worked out, in thought and language, their theology in consideration of questions that came up, or they believed would come up, in their interactions with others. Our encounter with new contexts will also call for new questions that demand theological reflection, thus, as we embrace God's mission in a world of Artificial Intelligence, we must theologically grapple with this new means of technology (Langford 71-73).

AI's ability to process vast amounts of data and make connections may lead to interpretations of sacred texts (i.e., Holy Scripture, historical creeds, teachings of the Church Fathers like Augustine, Justin the Martyr, and John Chrysostom, etc.) that deviate from traditional, theological understandings. This potential for theological distortion raises severe concerns about misinterpretation and theological confusion, as AI systems may lack the nuanced understanding and contextual sensitivity necessary for accurate theological analysis (Sterling). Biblical theology and ethics properly suffused in the exploration of Artificial Intelligence by theological education, goes a long way in bringing to bare the ethical standards of the Bible on contemporary ethical norms. Theological educators, Christian teachers, Biblicists and Christian ethicists all live in a social milieu laden with vices; hence, the dire need for harnessing the principles of biblical ethics and the boons of artificial intelligence to combat ethical and societal issues that pose a great threat to humanity.

The theological notion of humanity's special status as beings created in God's image is in danger of being undermined by the growing incorporation of AI. AI reduces the value of moral reflection, and group solidarity while promoting reliance on non-human entities by undermining human agency, moral autonomy, and relationality. AI also discourages human creativity as it is also prone to encourage plagiarism during the research writing; and plagiarism is regarded as a criminal issue globally. Sterling Martine opines that, the introduction of AI into Christian religious settings like theological institutions is prone to challenge traditional theological concepts and interpretations. The reliance on AI for theological insights may undermine the rich tradition of theological scholarship and the human capacity for discernment and interpretation. Theologians and educators alike must critically engage with AI technologies to align with and enhance established theological frameworks which should encompass principles of human dignity, respect for religious values and accountability (Sterling).

The tendency to worship technology and use it to oppose the Christian worldview could constitute social issues which influence Christian teaching and learning. There arises a need for theological education to be thoroughly guided by the Word of God, as well as a commitment to sound intellectual inquiry (ICHE 209). The use of Artificial Intelligence helps us keep pace with technological advancements and when channelled rightly by theological educators, it will aid a proper maximization of choice to use it for ethical purposes other than unethical purposes.

AI is neither a wicked or evil thing by nature. This type of technology has enormous potential for good and may even propel people to a higher standard of living. However, AI is not just a science fiction; it already exists in both small and huge entities. Therefore, our response to this mechanism should be positive. Theologians should critically examine the implications of AI and promote balanced ethical frameworks that preserve every human being's worth and dignity as a reflection of the divine image in order to maintain the theological integrity of human existence. This is necessary because scholars in the field are of the opinion that AI developed so far still falls short of human capabilities in some senses despite exceeding human beings in other domains.

AI is a human invention. It can only change human perspective of things; it cannot replace them. Therefore, approaches to the study of the scripture and theological education generally should be revisited. Modes of doing theological education will change. Critical thinking of theological students should be developed based on the theological foundation on the advancement and influence of scientific civilization including AI. There should be the inclusive approach of the Christian worldview that will enhance capacity to deal with the many theological and philosophical issues caused by AI.

Reading and interpreting an ethical text out of contexts will produce a wrong result. And using a wrong result to judge a matter will lead to disaster. Therefore, employing historico-critical method and engaging sociological approaches to study an ethical text will always make the scripture relevant to the modern man. In this context, condemning AI from a parochial and rigid approach to relevant passages without considering the contemporary development in all spheres of life will render theological education and our Christian practice archaic.

We are tasked with employing Artificial Intelligence in a manner that promotes human flourishing while exhibiting humility to avert potential harm. We are also aware that there are circumstances in which Artificial Intelligence should not be implemented and constraints may be necessary. Sterling asserts that the responsible implementation and oversight of AI technologies within Christian religious settings are crucial. Engaging interdisciplinary teams of theologians, ethicists, and technologists can help navigate the challenges and risks associated with AI integration. Transparent decision-making processes and ongoing evaluation are necessary to ensure that AI aligns with the Christian faith's theological orthodoxy and ethical orthopraxy (Sterling). The majority of technologies are not neutral, not just because of their underlying assumptions, but also because of their expanding influence on our work, culture, and planet (ICHE).

CONCLUSION

This paper examined issues related to biblical ethics especially in the context of judging the use of Artificial Intelligence in theological education. The Christian ethical perspective on Artificial Intelligence is supported by several theological principles. Firstly,

humans and robots are seen as having distinct essences, making them unequal. Humans were created by God to glorify Him, while robots, created by humans, tend to serve human interests. Hence, the possibility of humans deifying robots in the future is acknowledged. Secondly, human dignity is rooted in being created in God's image (*Imago Dei*), as described in Genesis 1:27-28. This sets humans apart from other living beings and inanimate objects, including robots. Thirdly, humans are called to prioritize their relationships with God, fellow humans, and the natural world. Leading a virtuous life as intended by God is emphasized. Considering these theological principles, the development of Artificial Intelligence should incorporate ethical considerations and safety standards. With humility and acknowledgment of our fallen condition, we should try to develop instruments that mitigate the repercussions of sin, enhance justice, and exhibit mercy. Our instruments should facilitate our work as agents of redemption (Tandana).

Embarking on a discourse about AI from a theological perspective serves as more than an academic exercise; it is a reflection of how we, as theological educators or learners, engage with one of the most transformative aspects of our modern age. AI is a tool and not a demon or force so separated from man. It is closest to every human being of this generation. As a tool, theological education can be more effective with the use of AI in terms of making theological education available no longer in the four-wall classroom, but everywhere. It makes information available at the tips of our fingers and that makes the work easier for the theological educator.

To navigate the intricate ethical landscape and ensure that Artificial Intelligence technology benefits all of humanity, it is crucial to maintain ongoing discourse, collaboration, and research at the intersection of Artificial Intelligence and Christian ethics. By doing so, we can foster a more ethical and human-centered approach to Artificial Intelligence that serves the greater good for humanity (Tandana). It is Christian teaching and learning that can best provide the necessary theological and practical help that Christian professionals need to assert a Christian influence on the fields of science and technology that prove controversial, mainly because of their tendencies to violate Christian ethical norms (ICHE 189). There should be an active engagement in theological reflection and dialogue to navigate the complexities of AI integration which involves thoughtful consideration of AI's theological implications and potential dangers, fostering open discussions, and seeking wisdom from theological traditions. Such dialogue promotes ethically responsible and theologically informed decision-making within Christian religious settings. The curriculum of theological institutions should contain subjects and programs that will aid in building a fundamental knowledge of various disciplines related to Artificial Intelligence such as science, philosophy and logic, computer literacy, etc.

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