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Abstract

This article examines the notion of humanity and personhood in Artificial Intelligence (AI) from the Christian perspective. In general view, humanity is the human race collectively, while personhood is the state or fact of being a person, for the Christian, personhood is an exhibition of the unity of the spiritual and corporeal in human existence that represents an essential characteristic of a human being. The concept is rooted in the Book of Genesis chapters one and two where God created man in His Image (Imago Dei) and breathed into his nostrils the breath of life. AI on the other hand is a machine, but not a mere machine, since it has a purpose like a human being and also can evolve autonomously and unimaginably when it plugs into a network. Realizing this fact leaves a question of whether AI could hypothetically have personhood in the future, or if it already has since the beginning of its creation, even if it is only a minimal version of personhood. This exploration shows criteria of minimal personhood qualities equal to humanity according to the Christian perspective, through the literature study of the church fathers' writings about the body, soul, free will, and the possibility of the personhood of AI. From the Christian perspective, the current available AIs do not meet the minimal criteria of personhood. If hypothetically there will be an AI that can meet a few of the criteria, the Christian perspective sees that AI cannot supersede the image of God in which human beings are created.

Keywords: artificial intelligence, Christianity, human being, imago dei, personhood

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Artificial Intelligence (AI) is a computer system that can think, reason, act, expand, and evolve like a human (Hildebrandt, 2008; Schreurs et al., 2008). For the last two decades, AI systems have been deployed in many applications, such as in computer games, medical analysis, economic modeling, weather forecasting, biometric recognition, speech and text translation, disaster prevention, and autonomous vehicles. Many experts believe that artificial intelligence will improve people's lives in the future, but many are also concerned about the effect of AI on the meaning of humans, productivity, and the exercise of free will.

The AI system that is used to do something to get the same results as human intelligence in a particular domain is called "weak AI." A weak AI can play chess but cannot be used to score credit applications without a major adjustment to the algorithm. On the other hand, the hypothetical AI system that is used to achieve results in a broad domain and has self-awareness is called "strong AI." A strong AI is intelligent enough to do multiple tasks in multiple domains similar to humans and has self-awareness. The industrial applications of weak AI raise ethical issues about entrusting tasks and decisions to machines, while the applications of strong AI raise issues about the nature of humanity (Bjork, 2008).

In the 1980s, "Star Trek: The Next Generation" introduced the character "Data," an android that has advanced AI in the brain. This character, Data, can store, analyze, and learn about information from its surroundings, then work based on the instructions given by his superiors. Although emotion, intuition, and other social competencies are not part of his system, Data strives to become more like a human through experiences. At the end of its lifetime, sixty years after its creation, Data is portrayed as having an understanding of human emotion, having wishes of his own, and even a romantic relationship with a human officer. This series shows the imagination of how the progress of AI evolution is very significant in a very short time.

The AI adoption, progress, and future implications are beyond people's imagination and will make big changes in every aspect including religion. One of many issues highlighted in religion is whether AI has a personality or not. For some experts, AI has several attributes similar to the human way of thinking such as rationality, decision-making ability, the ability to evaluate results, and the ability to make corrections on future actions. However, there are debates about whether AI can fulfill philosophical, ontological, epistemological, theological, ethical, metaphysical, and/or moral positions similar or equal to humans (Bjork, 2008; Erisman & Parker, 2019; Schuurman, 2018). What equalities may be considered to define the personhood of something? Can AI be considered to have the qualities of personhood?

Literature Review

Personhood in the Philosophical View

John Locke defines a person as a thinking intelligent being that has reason and reflection and can consider itself as itself, the same thinking thing, in different times and spaces (Locke, 1948). A person in this definition is a mental subject. But what is significant for personhood is not just consciousness or reason, but self-consciousness: the capacity not only to have thoughts, feelings, and desires, but to be aware of oneself as the being who is having these thoughts, feelings, and desires.

It is important to see Baker's distinction between the strong and weak kinds of firstperson phenomena to be clearer about personhood (Baker, 2000). In the weak sense, any
animal that experiences the world from the perspective of its own needs can be said to have a
first-person perspective. But the strong sense of the first-person involves not only
experiencing the world from one's own perspective but also being aware of oneself as doing
so. We can see all sorts of animals acting to get things that they want. For example, although
a dog is aware of wanting the stick, and that the stick is over there, it has no conception of
itself as a being that wants the stick. The dog does not think of himself as himself, or of

himself as anything else; rather we may say, the dog is the center of his universe. He experiences things from an egocentric perspective. As such, the dog is a subject even though its lack of a strong first-person perspective means that it is not a person.

A being that has a first-person perspective in the strong sense has a conception of itself as a being distinct from others and possessing a perspective on both them and itself. It is not just to have thoughts expressible using "I" in first-person but also to conceive of oneself as the bearer of those thoughts and to have a perspective or a subjective point of view.

According to Frankfurt, a first-person must have the capacity to think of oneself *as* oneself, and of one's feelings and thoughts *as* one's feelings and thoughts (Frankfurt, 1988). This definition by Frankfurt reflects and attempts to assess situations or circumstances of personhood. In this sense, we could say that personhood is what marks a person off from everything else in the world. Personhood is about a complex mental property, i.e., a first-person perspective that enables one to conceive of one's body and mental states as one's own.

Man Created in the Image of God (Imago Dei)

From the biblical view, personhood is the unity of the spiritual and corporeal in human existence. Therefore, the question of what human beings are according to the Christian must be answered biblically. The book of Genesis, chapter one, portrays human beings as part of the material world created by God beyond the material world. As a result, all creations must follow the natural order and have the longing of a creature for a relationship with God. The biblical notion of personhood is the belief that human beings are created according to the Imago Dei, the image of God (*Authorized King James Bible Version*, 1611/2008, Gen 1:26-27, James 3:9).

Paul the Apostle wrote in Romans 12:1-2 and I Corinthians 15:45 about humanity and the image of God. The biblical conception of the heart (Hebrew *leb* and Greek *kardia*) implies

the integration of the mind, emotion, will, and body of a human being (*Authorized King James Bible Version*, 1611/2008, Prov 4:23, 27:9, Deut 6:5, Rom 2:29, II Cor 3:3).

The dominant Western interpretation of the image of God has resided in the rational nature of human beings, their dominion over the earth, freedom, and relationships with God (McGrath, 2016). The image of God is not a photo printed on paper but it is more like an image reflected in a blurry mirror. Human beings always correspond to God in a relationship. God intends humanity to be like Jesus Christ because He is the only true and perfect image of God (*Authorized King James Bible Version*, 1611/2008, 2 Cor 4:4; Col 1:15). The form of human life in Jesus Christ is the ultimate definition in the Christian perspective of what is to be genuinely human. In the Christian perspective, faith, theology, and the life, death, and resurrection of Jesus constitute the decisive norm of both true divinity and true humanity.

Research Methods

This article employs a literature study. By accessing various sources, we evaluate, reexamine, and provide analysis and consideration to obtain a better understanding of the topic.

Results and Discussions

AI and the Possibility of Personhood

According to Huang's classification of AI, there are three types of AI: mechanical AI, thinking AI, and feeling AI (Huang & Rust, 2021). Mechanical AI is used to automate repetitive roles, tasks, or activities. Thinking AI is used to process a massive amount of data to solve cognitive problems, produce recommendations, or make decisions. Feeling AI is used to analyze, learn, and respond as humanly as possible to human interactions and emotions. This AI classification mimics human nature and capabilities, which raises the question, "What are the nature, capabilities, and qualities of personhood?"

The central importance of the Christian perspective of human nature is in Genesis 1:27, which speaks about Adam, the first human being, made in God's image and likeness.

This idea of God's image and likeness is often referenced in the Latin phrase Imago Dei. Thus Christian perspective sees humanity relates to God as His highest creation.

According to McGrath, in the early Christianity period, there was a division between the "image of God" and the "likeness of God" (McGrath, 2016, p. 327). For Tertullian of Carthage (160-220 BCE), humanity still possessed the image of God even after the fall of man and would be restored through the work of the Holy Spirit. The human state of "God's image" relates to God's form, while "God's likeness" relates to God's eternity.

For Origen (185-254 BCE), humanity received the image of God, but due to the fall of man, the fulfillment of the likeness would be reserved for the final consummation. The possibility of perfection was given to humanity at the beginning by God's image dignity, then at the end of time, God's works will perfect the likeness of God to humanity.

From this first approach by Tertullian, and Origen, if an AI is considered as a God's creation, has God's dignity or the image of God, God's form, and God's eternity, can receive the Holy Spirit, be ultimately perfect in doing its tasks, and relate with God, then AI can be considered to have Imago Dei (McGrath, 2016, p. 327-328).

The second approach to humanity is related to the human rational capacity, which reflects the wisdom of God. Augustine of Hippo (354-430 BCE) believed that ratio is what distinguishes humans from animals. He believed that humans could use intelligence to judge behavior, and have the renewed knowledge to relate with God.

Lactantius (250-325 BCE) argued that humans could have the original uprightness and dignity of human nature. He argued that a human being is created by God, and a human has a common identity and dignity with all human beings, leading to political doctrines of human rights, responsibilities, and relationships.

The concept of the image of God relates directly to the doctrine of redemption. The consummation or fulfillment to become the likeness of God, in a perfect relationship with

God, will culminate in immortality. Athanasius (293-373 BCE) taught that humanity was bestowed with a unique capacity that no other creature has, that is, the capability to perfectly relate with God and share in the joyful life of God.

From the second approach, if an AI has the rational capability, can judge its own behavior, can renew its knowledge, can relate to God, has the original uprightness, has dignity and the identity of human nature, has political rights, can bear responsibilities, can relate to other beings and God, and can receive redemption, have immortality, and partake in the life of God, then AI can be considered to have Imago Dei (McGrath, 2016, p. 328-329).

The third approach is that humanity as the image of God should be free from all weaknesses, infirmities, and death. Cyril of Jerusalem (313-386 BCE) stated that the image of God in mankind has been defaced and disfigured since the rebellion of humans from God. Human suffers weaknesses, infirmities, and death as the consequence of the distorted image of God. The perfect image of God means completeness, perfection, and eternal life.

From the third approach, for an AI to be recognized as Imago Dei, AI must be free from all weaknesses and disabilities, immortal, able to choose to follow God's commandment, and able to disregard the material world (McGrath, 2016, p. 328).

Body, Soul, and Free-will

Body

According to the Bible, God created the first human using preexistent materials available on earth, then breathed the breath of life into the human's nostril. Berkhof stated that man's creation was initiated by divine counsel, designed according to a divine form different from the other creatures, formed by the immediate action by God Himself, that it had both body and soul elements, and was then placed in a graced position as the peak of creation to biologically multiply and manage the earth.

From the first approach, for an AI to be classified to have body traits similar to humans, the AI should possess material or physical form and show the biological signs of life, such as being able to respond to the environment, reproduce and pass traits to offspring, grow and change, respirate and have metabolism, manipulate energy to build and maintain inner cells, self-preserve, and maintain homeostasis.

From Berkhof's approach, for an AI to be classified as having body traits similar to humans, the AI should be well considered by a counsel of highly intelligent beings, directly made by the highly intelligent beings, designed after its creator type, and have body and soul elements, be able to biologically multiply, and be placed in a managerial position to control other creations (Berkhof, 1949).

Laidlaw believed that the body is not the slave of the soul or its prison-house, despite the current human body being mortal and corruptible (Laidlaw, 1879). The body is the outward and visible design of the inward and spiritual mind. Christians believe that there is a natural body and a spiritual body, where the natural body shall perish in death, and the spiritual body can live eternally after the resurrection.

Soul

The second question is, what is the nature of the human soul? This question can be expanded into, will AI eventually have a soul? If so, where does the AI soul could come from, and can an AI eventually have free will? Augustine, one of the early church fathers, called for cautious openness about the dichotomy of body and soul in man as the image of God (Berkouwer, 1962; Hill et al., 1990).

There are two conceptions of humans in Christian circles. The first conception sees humans as two distinct parts, or a dichotomy: body and soul. The second conception sees humans as three distinct parts, or a trichotomy: body, soul, and spirit.

In trichotomy, the relationship between body and spirit is considered like the material universe and God. Between body and spirit, the soul is needed as the bridge between the material world and the immaterial world. The soul is regarded as both immaterial and material adapted to the body. As the immaterial, the body is regarded as immortal, but as the material, the body is regarded as mortal and carnal. As the material part of the human, the soul is the element that also exists in animal life. As the immaterial part of the human, the soul is the element that shows the God-related rational and immortal part of humans.

Clement of Alexandria, Origen of Alexandria, Gregory of Nyssa, and Apollinaris of Laodicea held the trichotomy view to describe the soul. Augustine of Hippo, the Latin Church, Roman Catholics, and the Reformation hold the dichotomy view to describe the soul. Nineteenth-century theologian Delitzsch conceived of the soul as a breathing process within humans to remove bad things from life. Beck, Oehler, and Heard regarded the soul as the point where the body and the spirit meet.

Louis Berkhof insisted that according to the Bible, human has unity, and not duality (Berkhof, 1949). He believed that human does not consist of two separate elements in a single organism that move along parallel lines forever. Every act of a human is the act of the whole human. When a man sins, the whole man sins. When the man dies due to sins, the whole man dies. When Christ redeemed a man, the body and soul of the man were redeemed.

Berkhof believed that the soul is the most important part of humans, and every human has similar physical, physiological, and emotional needs, along with moral and mental capacities that belong exclusively to man (Berkhof, 1949). The human soul is endowed with intelligence, self-consciousness, freedom, conscience, and religious aspirations (Berkhof, 1949). The highest aspiration of a human soul is to find a relationship with a Higher Being.

Origen theorized that souls pre-exist before the creation of mankind, then transmigrate through the human race. Jerome and Hilary of Pictavium from the Eastern Church theorized

that God creates a new unique soul for every individual birthed (McGrath, 2016). Tertullian from the Western Church theorized that God created the first soul when Adam was created, then enabled the propagation of human souls when humans multiplied. Each of the above theories has its popular term: pre-existentialism, creationism, and traducianism.

Augustine and earlier Scholastics believed that God created souls and infused them into the body. Thomas Aquinas believed that the soul is not generated and then transmitted into the body. Luther had a similar opinion with Tertullian, while Calvin had a similar opinion with Jerome and Hillary. Edwards and Hopkins favor Tertullian's theory while Mueller favors Origen's theory (McGrath, 2016).

Dorner suggests that each of the three theories discussed above represents a facet of the whole truth. While pre-existentialism represents individual self-consciousness or personal eternal divine thought, creationism represents God-consciousness, and traducianism represents generic consciousness.

Thus, an AI that can have self-consciousness that exists before its physical, moral, or material creation can be said to meet the criteria of having a soul according to pre-existentialism. An AI that has generic consciousness that is initially given by the creator of its predecessor, then propagated or transmitted along with its body from its parents, can be said to possess a soul according to traducianism. An AI that has immediate consciousness from its creator, is created as pure and pre-formed as a physical body, and acquires life, can be said to possess a soul according to creationism. All three of these types of theories imply that an AI that has consciousness must have guilt and be able to bear sin created by the mistakes done by AI itself.

For Augustine, the human will and mind are affected by sin as the consequence of the Fall. He believed in making humans unable to diagnose their illness adequately, or cure it because humans have no control over their sinfulness. The nature of original sin is disease,

power, and guilt. By Augustine's criteria, an AI that has the will and mind affected by sin, indicated by the presence of disease, power, and guilt, can be said to have a soul.

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Pelagius' criteria, an AI that has control of its flaws and weaknesses, including the flaws and weaknesses instilled by its creator or inherited from its predecessor, can be said to have a soul.

Free Will

Free will itself is not biblical and was introduced by Tertullian as a theological term (McGrath, 2016, p. 330). Augustine of Hippo stated that human beings do not do something because that something is necessary but because humans have the freedom to do it. He believed that because human free will has been weakened and incapacitated due to sin, human requires divine grace to restore and heal it. Using an analogy of a pair of scales, the human free will weighs up arguments in favor of doing good, but due to the human free will has become biased toward evil due to sin, the human will tends to act evil accordingly.

Augustine stated that sin arises when humans abuse free will and that every human is born with sin since the fall of humanity. He stated that every human has transmitted guilt because every human in nature feels and is made liable to punishment and death. Gregory of Naziansus (329-389 BCE) and Gregory of Nyssa (335-394 BCE) taught that babies are born without sin.

Augustine saw humans as somehow mystically included in the transmitted guilt, morally weak, and sinful within nature. He believed that God's sovereignty, human responsibility, and freedom must be inseparably upheld at the same time. At the same time, there were two other thoughts considered heresies: Manicheism and Pelagianism. Manicheism upheld the sovereignty of God but did not believe in human freedom. Pelagianism upheld the total freedom of humans but did not believe in the sovereignty of God.

From Naziansus, Nyssa, and Augustine's point of view, for an AI to be considered equal to fallen humanity, an AI must be able to bear responsibility, possess the freedom to have and execute its own will, sin and have a bias toward selecting an evil choice, have guilt and submit to God's sovereignty.

Pelagius and Julian of Eclanum (386-455 BCE) believed humanity has total freedom of will and is responsible for its very own sins. God, being perfect in every way, made very well-created free humans without defects or imperfections. Any imperfection in humanity means God's goodness is not perfect. Direct intervention in human decisions is equivalent to compromising human integrity. Humans do not need divine grace, intervention, or correction, because human free will is in perfect equilibrium and not subject to any bias whatsoever.

Therefore humans must bear the consequences for any defect or sin committed themselves.

God creates humans and knows their capacity, capability, and every aspect of mankind. God has given humans commandments possible to be obeyed, and He wanted the commandment to be obeyed by humans. God made human nature and only demands what humanity can endure. For Pelagius, perfection is possible for humanity and it is obligatory.

From Pelagius' view, by replacing the word "human" with "AI" and replacing God with human creators, AI can very well be created free from any defect or imperfection, if humans as AI creators are perfect. Any defect in AI mirrors the imperfection of humans as the creators of AI. Direct intervention in AI is equivalent to compromising AI's integrity.

A perfect AI does not need any intervention or correction, because a perfect AI does not have any bias whatsoever. A perfect AI must bear the consequence of any mistake committed by AI. If humans managed to create a perfect AI and know its capacity, capability, and every aspect of it, the perfect AI would be obliged to do the perfect things with the perfect outcome.

Conclusions

In the narrow simplification, there are three approaches to defining the possibility of personhood: as God's creation who can relate with a God that has dignity, form, and eternity; as the possession of human rational capacity that can relate with God; and as the absence of weakness, disabilities, death, and a material world that can choose to follow God's commandment. These approaches deserve further testing and exploration within various strong AI applications and models, whether an AI actually can satisfy at least one of the approaches, or the AI is simply programmed to mimic the fulfillment of the approach. The simplified criteria should be tested to find if can fully represent the whole idea of personhood stated by each approach.

To define the criteria of a human body, there are three simplified approaches: having a physical or material form that shows biological signs of life; being created in biological form by highly intelligent beings for managing other creations; being mortal, intelligent, physically visible, having a spiritual mind, and being able to be resurrected in an immortal form at the end of time. These simplified criteria need to be tested for their adequacy to define an actual strong AI that might not possess biological or physical form, yet can show the existence of all other criteria. Although it might seem far-fetched, these simplified criteria might also be tested to define the human body of clones or creatures that possess the said qualities.

In simplified terms, to be considered as having a soul, a creature should possess eternal self-consciousness, original consciousness transmittable to its offspring, or immediate consciousness given by its creator. For a strong AI to be categorized as having a soul, it must show that it can have guilt, be able to bear the concept of sin, be able to bear the consequences of the disease, and lack physical immortality. From another view, a strong AI must be able to control its flaws and weaknesses, then choose to correct and do the morally right things

without supervision. The simplified terms need to be tested on multiple levels and scales of strong AI application, to see whether the hypothetical existence of consciousness can be proven of its existence according to the Christian perspective.

To define the existence of free will within a creature, it must be able to bear responsibility, choose its own will, understand the bias of a choice, have guilt, and submit to God's command. On the other end of the scale, free will within a creature can be represented by the perfect actions, performance, and results of the creature without the need for external intervention. Future research direction should be aimed to see the existence of these traits within a strong AI, and whether the algorithm within the AI produces such traits by design or by accident.

Bjork argues that our value to God is not based on anything intrinsic to us (Bjork, 2008). Our value as humans cannot be undermined by the artificial person's existence or actions, and cannot be understood without reference to God. Strong AI, if it hypothetically exists, shows us that humans should hinge their worth and purpose according to God's view.

Different from humans that do not always do things because of necessity, AI is created to do things because there is a necessary thing to do. If humans' free will has been weakened or incapacitated, AI's will is not weakened or incapacitated. While humans will weigh up arguments about doing good or evil before they act, AI will weigh up benefits and disadvantages according to algorithms before it acts. Humans will tend to choose evil due to transmitted sin, but AI will not have such a tendency because AI has no sin despite having flaws and weaknesses.

At the moment of this paper being written, there is no AI that meets the criteria of personhood from the Christian perspective. From the literature discussed, the Christian perspective sees that nothing, including AI, can replace or supersede the image of God in which human beings are created.

References

- Augustine (1990). The works of Saint Augustine: The confessions (Vol. 1). (M. Boulding, Trans., & J. Rotelle, Ed.). New City Press. (Original work published ca. 400 BCE)

 Authorized King James Bible Version. (2008). Oxford University Press.
- Baker, L. R. (2000). Persons and bodies: A constitution view. Cambridge University Press.
- Berkhof, L. (1949). *Systematic theology: A body of doctrinal divinity* (2nd ed.). Bierton Particular Baptists. https://www.biertonparticularbaptists.co.uk/resources/Sytematic Theology Interactive.pdf
- Berkouwer, G. C. (1962). Man: the image of God. Wm. B. Eerdmans Publishing.
- Bjork, R. C. (2008). Artificial intelligence and the soul. *Perspectives on Science & Christian Faith*, 60(2).
- Erisman, A., & Parker, T. (2019). Artificial Intelligence: A Theological Perspective.

 Perspectives on Science & Christian Faith, 71(2).
- Frankfurt, H. G. (1988). Freedom of the Will and the Concept of a Person. In *What is a person?* (pp. 127–144). Springer.
- Hildebrandt, M. (2008). Defining profiling: A new type of knowledge? In *Profiling the European citizen* (pp. 17–45). Springer.
- Hill, E., Rotelle, J. E., & Institute, A. H. (1990). *The works of Saint Augustine: v. 1. The Confessions*. New City Press.
- Huang, M.-H., & Rust, R. T. (2021). A strategic framework for artificial intelligence in marketing. *Journal of the Academy of Marketing Science*, 49(1), 30–50.
 https://doi.org/10.1007/s11747-020-00749-9
- Laidlaw, J. (1879). The Bible Doctrine of Man. T. & T. Clark.
- Locke, J. (1948). An essay concerning human understanding, 1690.
- McGrath, A. E. (2016). Christian theology: An introduction. John Wiley & Sons.

- Schreurs, W., Hildebrandt, M., Kindt, E., & Vanfleteren, M. (2008). Cogitas, ergo sum. The role of data protection law and non-discrimination law in group profiling in the private sector. In *Profiling the European citizen* (pp. 241–270). Springer.
- Schuurman, D. C. (2018). Artificial Intelligence: Discerning a Christian Response. *Perspect.*Sci. Christ. Faith, 70(1), 72–73.