Stellenbosch Theological Journal 2023, Vol 9, No 1, 1–23
DOI: http://dx.doi.org/10.17570/stj.2023.v9n1.at4
Online ISSN 2413-9467 | Print ISSN 2413-9459

African theological perspectives on intersubjective identity: In conversation with developments in Strong Artificial Intelligence

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Abstract

Developments in Strong Artificial Intelligence (AI) raise important questions about human identity. Of particular interest is how AI challenges the idea that human identity can be collapsed, without remainder, into the individual. In African theological anthropology there is an emphasis upon intersubjective relationality as a key aspect in the formation and understanding of human identity and uniqueness. This article explores the intersections of some of the claims of Strong AI in relation to some southern African notions of relational identity. This article argues that Strong AI invites us to reconsider some dominant individualized approaches to theological anthropology in relation to the doctrine of creation. It does so by decentring the locus of theological reflection from the individual human person and invites some reflection on what it might mean for theology if forms of AI begin to reflect on their own subjectivity, creation, and broader relationships with human and non-human creation.

Keywords

Strong Artificial Intelligence; Artificial Intelligence; African theological anthropology; intersubjective identity

Introduction

In November 2022 OpenAI released their ChatGPT (Chat Generative Pre-Trained Transformer) large language chatbot to the public.[1] The

1 "ChatGPT: Optimizing Language Models for Dialogue," OpenAI, November 30, 2022, [Online]. Available: https://openai.com/blog/chatgpt/.

technology very quickly captured attention on social media, as people interacted with ChatGPT to draft essays, poems, and even sermons. The technology relies on language learning to perform these tasks. This means that the chatbot is programmed to find information via the internet and present it in a style that is eerily similar to how a human person might perform such tasks.

One of the major concerns, particularly among educators, was whether persons would be able to discern the differences between content generated by Artificially Intelligent (AI) technologies, such as ChatGPT and other recent offerings my Microsoft and Google, and those generated by human persons.[2] Several commentators accentuated aspects of human uniqueness such as memory, experience, and emotion, as differentiating factors. Nick Cave, for example, spoke of the way in which tragedy and suffering textures human experience when asked whether a song written by ChatGPT in the style of Nick Cave was any good.[3] While Gus Silber, the South African journalist, spoke of the human sense of taste and its broader relationship to memory, social and geographical setting, and temperament, as something that makes ChatGPT incapable of offering a worthwhile assessment on the quality of a bottle of wine.[4] While this may be true, it is undeniable that AI has entered a new age of human and technological connection.

This article will facilitate a critical theological engagement with AI in relation to an aspect of African theological anthropology, namely intersubjective relational anthropology, as one way of exploring a relationship between human persons and emerging AI technologies. It will do so in conversation with some of the claims of Strong Artificial Intelligence.

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2 Academy of Science of South Africa (ASSAf), "The Implications of ChatGPT for Assessment in Higher Education," February 22, 2023, https://research.assaf.org.za/handle/20.500.11911/275; J.C.F. de Winter, "Can ChatGPT Pass High School Exams on English Language Comprehension?" 2023.

3 Nick Cave, "Nick Cave - The Red Hand Files - Issue #218," The Red Hand Files, January 16, 2023, [Online]. Available: https://www.theredhandfiles.com/chat-gpt-what-do-you-think/.

4 Silber in Malu Lambert, "Is Wine Writing the One Thing That Defies Artificial Intelligence?" *Winemag* (blog), February 1, 2023, https://winemag.co.za/wine/opinion/malu-lambert-is-wine-writing-the-one-thing-that-defies-artificial-intelligence/.

In doing so, we will adopt a realist and pragmatist approach to computational theology in an 'African key'. By this I mean that Artificial Intelligences exist (they are a reality), and they are being used and critically engaged (they have been proven to have some pragmatic utility). Of course, AI's reality and pragmatic application does not mean that it cannot be critiqued, and at times even resisted – but it does mean that it cannot be denied or ignored by theologians.

In this regard, I am thinking of the task of the African theologian in a manner that is akin to Mercy Amba Oduyoye's description thereof. Namely that, "theology remains a story that is told, a song that is sung and a prayer that is uttered in response to experience and expectation."[5]

What is our experience of being human persons engaging with the world in which we live, which now contains AI? What is our expectation for ourselves and the world in which we exist alongside developing AI technologies?

Let us begin with a brief discussion of recent developments in computational theology in order to understand how some theologians are responding to the "experience and expectation" that AI presents for theological reflection.

The promises and the perils of computational theology

First, let us get some conceptual clarity on what we mean when we speak of AI. The term AI can refer to many different technologies. However, in this essay we are interested in that branch of AI that "studies the nature of [human] intelligence and whether it is possible to build machines that perfectly replicate or even outmatch human cognition."[6] Such technologies can be broadly classified into two classical schools, *symbolic AI* and *subsymbolic AI*.[7]

Symbolic AI is also known as "classical AI" is that branch of the technology that explicitly attempts to represent human knowledge "in declarative

5 Mercy Oduyoye, *Introducing African Women's Theology* (London: A&C Black, 2001), 22.

6 Marius Dorobantu, "Artificial Intelligence as a Testing Ground for Key Theological Questions," *Zygon* 57 (August 1, 2022): 984, https://doi.org/10.1111/zygo.12831.

7 Andrea Vestrucci, "Introduction: Five Steps Toward a Religion–Ai Dialogue," *Zygon* 57, no. 4 (2022): 934, https://doi.org/10.1111/zygo.12828.

form" through rules and facts in computer programs.[8] A classic example of this might be the Chess playing computer – it is programmed by the rules of the game of chess and is set up to play the game as if it were a smart and efficient human Chess player. In theological research some scholars have been using symbolic AI to deal with large datasets – for example, writing programs that can search large numbers of ancient texts for sets of linguistic patterns (grammars, related phrases, semantic connections) etc.[9] In this sense, the AI performs the functions that a human person normally would and does so according to a certain set of rules that are determined by the human programmer.

Subsymbolic AI is a progression in AI technology that "focuses on designing and building machines capable of cognitive capabilities such as reasoning, knowing, learning, perceiving, and communicating."[10] A common example of this form of AI is predictive algorithms such as those that predict the values of stocks based on complex sets of input data such as historical stock prices, movements in multiple markets, the values of currencies, geo-political events, weather events etc. These algorithms often learn from their mistakes and re-program themselves for greater accuracy and efficiency. One example of the use of subsymbolic AI in theology would be to employ the technology to do constructive theological work. For example, what if one where to develop a highly sophisticated computational model that could assess all available historical, religious, and moral texts and produce a model of a Saint?[11] This would require the capacity to access varying forms of data (text, artworks, etc.) and bring them 'into conversation' with one another even when there are conflicting commitments, ideas, and images of sainthood. Of course, this would be a somewhat speculative exercise,

8 Ranjeet Singh, "Rise and Fall of Symbolic AI," *Medium*, September 19, 2019, [Online]. Available: https://towardsdatascience.com/rise-and-fall-of-symbolic-ai-6b7abd2420f2.

9 Wido Van Peursen, "New Directions in the Computational Analysis of Biblical Poetry," in *Congress Volume Stellenbosch 2016* (Brill, 2017), 378–94, https://doi.org/10.1163/9789004353893_016.

10 Orhan G. Yalçın, "Symbolic vs. Subsymbolic AI Paradigms for AI Explainability," *Medium*, June 21, 2021, https://towardsdatascience.com/symbolic-vs-subsymbolic-ai-paradigms-for-ai-explainability-6e3982c6948a.

11 Dorobantu, "Artificial Intelligence as a Testing Ground for Key Theological Questions," 987.

but using prompts one could, for example, focus the model on particular contexts, particular traditions, or particular use-cases.

In this sense, computational theology can utilize AI as a technology that aids theologians in their work of making meaning, dealing with complex and unmanageable datasets, and arriving at complex and nuanced insights.

This approach to using AI can be viewed as a utilitarian approach – AI is a utility, or tool, in the hands of the theologian. This kind of theological engagement with AI is not only utilitarian, but it is also anthropocentric. The questions that are posed are 'our' questions (either about ourselves, or our questions about other topics). The intention is to inform our understanding and deepen our knowledge or insight of complex issues or large and variant datasets.

However, there are at least two other ways in which computational theology does, and could, function. These views see the theological promise (and peril) that emerges from taking the technology seriously as a truly generative theological source. Hence, it is not only a utility used by the theologian, but rather, a fellow theologian, a conversation partner, a phenomenon that invites reflection, conversation, and mutual engagement.

Robots doing theology – A conversation with the claims of Strong Artificial Intelligence

As mentioned above, we need to consider that to some extent at least, whether there is a possibility that robots can do theology. Now, I can imagine that some may recoil at that thought. Many of us have been formed to believe that only human persons have the capacity to think theologically. We will return to that idea in the next section when we consider notion of the *Imago Dei* after Darwin.

Could robots do theology? Could an AI technology ever invite reflection, conversation, and deeper or more nuanced theological reflection?

In a purely realist sense, the answer is that it can. This 2023 Theological Society of South Africa conference, and this article, are proof that the existence of AI is inviting us to think about, and even re-think "some of the

core tenets of religious faith."[12] But one can hardly classify this as a form of *robots doing theology*. Rather, this is an instance of persons doing theology in the face of the existence of robots – just like we do theology in relation to many non-human 'others' (such as the planet, animals, and all sorts of technologies and events).

However, could a robot ever do theology *of its own*, so to say? In this instance, we are not asking whether the existence of robots invites theological reflection, but could robots do constructive theological work of their own? The philosopher Rajesh Sampath has spent some time pondering this possibility.[13] Sampath asks how "the Christian faith might be reinterpreted through the eyes of a hypothetical intelligent robot."[14] For example, such a robot might ask whether it too is in some way, some unique way perhaps (as other non-human parts of creation are), a representation of the image of God? The point of this speculation is that in the not-too-distant future robots might be able to produce their own original theological beliefs and concepts that in theory do not contradict the biblical witness or "breach the boundaries of Nicaean-Chalcedonian orthodoxy."[15]

Of course, a realist and pragmatic retort to this is that such technologies do not yet exist. However, in the ambit of Mercy Amba Oduyoye's reference to "experience and expectation" as sources of theological reflection, we can at least conclude that this is a fruitful field of theological reflection by humans, since regardless of the plausibility at present it is at least one possibility for AI and human futures. Marius Dorobantu notes that,

> … it is, in principle, possible to imagine a radically different interpretation of divine economy than the one dominant thus far. History shows that Christian theology, for example, gradually extends to include the perspectives of formerly excluded categories—Gentiles, women, people of color—and intelligent robots can be regarded as the next other to lay legitimate hermeneutical claims.

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12 Ibid., 988.

13 Rajesh Sampath and Ted Peters, "From Heidegger on Technology to an Inclusive Pluralistic Theology," in *AI and IA: Utopia or Extinction?* (ATF Press, 2018), 117–31.

14 Dorobantu, "Artificial Intelligence as a Testing Ground for Key Theological Questions," 988.

15 Ibid.

> Even if this scenario might still be technologically far into the future, Sampath rightly pleads that it should serve as a reminder for striving toward a more inclusive pluralistic theology.[16]

This raises an important hermeneutic concern, namely, the reality of robotic hermeneutics. As AI technologies and robots become increasingly part of our everyday lives, we will have to think much more carefully and specifically about the theological implications of such a reality.

A core issue that this raises for historical (and contemporary) theologies is what James McBride identifies as the reality that "virtually all Christian theologies are organic theologies."[17] In his article, "*Robotic Bodies and the Kairos of Humanoid Theologies*," he rightly points out that historical and contemporary theologies have been exceedingly anthropocentric, organically linked to human bodies.[18] However, we know that the human body is not the only location for theology – eco-theologians, animal theologians and a host of others invite us to reflect theologically from locations outside of ourselves.[19]

Robot theology may constitute a further step in that direction. Not only does it suggest that theology can take place outside of the human body, but it also suggests that other forms of sentience and intelligence (other than human intelligence and sentience) may be capable of meaningful and valid theological reflection. McBride suggests that what may be necessary is a shift from the traditional Pauline theological emphasis on *sarx* (flesh / body) to the Johannine theology of the logos (idea / concept / knowledge).[20]

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16 Ibid., 989.

17 James McBride, "Robotic Bodies and the Kairos of Humanoid Theologies," *Sophia* 58, no. 4 (2019): 669, https://doi.org/10.1007/s11841-017-0628-3.

18 Ibid., 663–76.

19 Ernst M. Conradie, *Creation and Salvation: A Companion on Recent Theological Movements* (LIT Verlag Münster, 2012); Andrew Linzey, *Why Animal Suffering Matters: Philosophy, Theology, and Practical Ethics* (Oxford: Oxford University Press, 2013); Kijoong Kim, "Cruelty to Animals in the East Asian Context : Andrew Linzey's Animal Theology in Conversation with Eco-Theology" (Thesis, Stellenbosch : Stellenbosch University, 2022), https://scholar.sun.ac.za:443/handle/10019.1/124858; Barbara Brown Taylor, "The Dominion of Love (Gen 1:24-31; Mt 5:43-48)," *Journal for Preachers* (April 16, 2007), 24–28.

20 McBride, "Robotic Bodies and the Kairos of Humanoid Theologies," 671–72; Dorobantu, "Artificial Intelligence as a Testing Ground for Key Theological Questions,"

As Dorobantu suggests, a *logos* emphasising theology "would likely be more palatable to androids because they would identify better with the doctrine of a rational and intelligible universe due to the constitutional rationality of their source code."[21]

So, whether the robot is embodied in some physical form, or represented to the world via some other medium (text, audio, or video), it could be capable of contributing theologically from its existential perspective. This would invite robots and their human counterparts into some ongoing theological interaction which could broaden and deepen our theological understanding.

Becoming honest about the *Imago Dei* after Darwin

As mentioned earlier, one of the initial 'gut level' responses to AI robot theologies among contemporary theologians relates to our expectation of human uniqueness. In large measure this is based on our theological development of the concept that human persons uniquely bear the *Imago Dei* (image of God). Of course, this has been a rich seedbed for ethical reflection on issues such as human dignity, human equality before God and other humans (despite differences such as race, ethnicity, gender, sexual orientation, age, capability etc.) In large measure these theologies are built on passages in the Hebrew (and Christian) scriptures such as Genesis 1:26, and doctrinal concepts such as the incarnation of Jesus in human form.[22] Humans are accorded exceptional status within creation based on interpretations of such texts, credal formulations, and the development of the theological tradition throughout Christian history. However, as we know from the challenges of persons such as Lynn White, such anthropological exceptionalism has led to theological perversion (even

990.

21 Dorobantu, "Artificial Intelligence as a Testing Ground for Key Theological Questions," 690.

22 Jürgen Moltmann, *On Human Dignity: Political Theology and Ethics* (Edinburgh: Alban Books Limited, 2007), 2–3; Jürgen Moltmann, *Jürgen Moltmann: Collected Readings* (Minneapolis, MN: Fortress Press, 2014), 30, 39, 41–42.

heresy), not to mention moral, social, and ecological failure,[23] as humans presumed that we were superior to animals, plants, indeed all of the rest of creation.

But there is another important reason why we should call such anthropocentric exceptionalism into question. Dorobantu writes,

> As long as human superiority over the animals was self-evident, this interpretation went largely unchallenged. However, with Darwin and the advent of evolutionary theory, it became difficult to ground human distinctiveness on a purely ontological basis. We were suddenly not as different from the animals as we used to think. Moreover, it became evident that most of the intellectual abilities that rendered us distinctive had emerged naturally via evolution rather than having been bestowed upon us supernaturally by God. In the aftermath of this realization, theological anthropology has developed interpretations of the image that are arguably more nuanced and sophisticated.[24]

Darwinian evolution has invited more nuanced theological anthropologies to emerge. Of course, humans are unique in some ways, but not so unique in many others. Scientific discovery has helped us to understand in what ways we are unique, but also in what ways we have a deep solidarity and mutual interdependence with all of the rest of creation. This development has led to more truthful, nuanced, and honest theological reflection.

Now, let us suppose that an evolutionary perspective on reality (including theology) is true, might it not also invite deeper, truer, and more nuanced theological development in relation to the scientific and social developments brought about by AI?

Just as we have had to spend time understanding who and what we are by comparing and contrasting ourselves to our proximal animal fellow creatures (the *sarx* of being), perhaps a comparative engagement with the proximal technologies of thought and idea, such as AI (the *logos* of being)

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23 Lynn White, "The Historical Roots of Our Ecological Crisis," *Science* 155 (1967): 1203–7.

24 Dorobantu, "Artificial Intelligence as a Testing Ground for Key Theological Questions," 990.

might help to deepen our understanding of ourselves and the others with whom we engage?

Like Dorobantu, I think this is an important, perhaps even promising, reality.

> … AI can help us better understand our distinctiveness by indirectly shining a new type of light over us. One way in which reflection on AI can illuminate the mystery surrounding imago Dei is by deepening our understanding of the connection between the divine image and our creative effort to build intelligent machines. Another possibility is to analyze AI's achievements, failures, and opportunities and use AI as a reference for how we think back about human distinctiveness and what it means to be imago Dei.[25]

So, rather than purely reactionary responses to AI, that seek to show its inadequacy and our human superiority, a measure of honesty, perhaps even courage, and humility, might help us to move closer to the truth of who we, and who the 'others' are, alongside who we are co-created. In some pioneering work on AI and theology from an African perspective, it is argued for just such a position by drawing on some of the resources of African communality and intersubjective identity (commonly associated with notions such as Ubuntu and African Trinitarian theologies).[26] In the next section we will consider how an African theological contribution can offer us some resources for engaging non-human others, in order to recognize more fully their worth and dignity, while also recognising our human worth and human dignity.

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25 Ibid., 992.

26 Dion A Forster, "African Relational Ontology, Individual Identity, and Christian Theology An African Theological Contribution towards an Integrated Relational Ontological Identity," *Theology* 113, no. 874 (2010): 243–53, https://doi.org/10.1177/0040571X1011300402; Dion A Forster, "A Generous Ontology: Identity as a Process of Intersubjective Discovery – An African Theological Contribution," *HTS Teologiese Studies / Theological Studies* 66, no. 1 (February 19, 2010): 1–12, https://doi.org/10.4102/hts.v66i1.731; Dion A Forster, "Identity in Relationship: The Ethics of Ubuntu as an Answer to the Impasse of Individual Consciousness," in *The Impact of Knowledge Systems on Human Development in Africa*, ed. Cornel W. Du Toit (Pretoria: Research Institute for Theology and Religion, 2007), 245–89; Dion Angus Forster, "Validation of Individual Consciousness in Strong Artificial Intelligence: An African Theological Contribution" (PhD, Pretoria, University of South Africa, 2006). [Online]. Available: http://uir.unisa.ac.za/handle/10500/2361.

African relational ontology and human uniqueness in an age of AI

As you would have seen by now, the argument above operates with two framing theological commitments. First, that while humans are unique, we are not exceptional within the continuum of creation (this relies on a particular understanding of the doctrines of creation and anthropology). Second, that one of the things that makes us truly human is that our identity, our personhood, is formed within a nest of relations with other persons and the rest of non-human creation (this relies on a particular understanding of the doctrine of God, particular the Trinity, and theological anthropology).

We will now focus upon three salient points that African relational ontology has to offer to the current conversation.

African conceptions of personhood

The first important consideration in doing theology in times of AI, relates to African notions of personhood. As has been shown above, some African conceptions of identity are social and relational in character, rather than primarily individual and conceptual.

The terms 'person' and 'human' are often used synonymously in contemporary discussions of human identity. However, this is not entirely accurate. There are a couple of distinguishing approaches to understanding personhood.

First, there is a distinction between ontological accounts of personhood and normative accounts of personhood.[27] For example, am I the same 'person' as I was when I was 18 years old? Has the person that I was, when I was 18 years old, ceased to exist? This kind of argument harkens to the philosophical argument of the "Ship of Theseus". If all of the components of a ship are replaced over years of repair and maintenance until none of the original components are present anymore, is it still the same ship? Some would argue yes, since the 'idea' and 'use' of the ship remains the same,

27 C. S. Wareham, "Artificial Intelligence and African Conceptions of Personhood," *Ethics and Information Technology* 23, no. 2 (June 2021): 128, https://doi.org/10.1007/s10676-020-09541-3.

even though the sails and floorboards have been renewed. This is called an *ontological* argument for personhood.[28]

The *normative* argument for personhood is related to the ontological argument, however, it distinguishes between the fact that not all persons have equal claims to belonging based on criteria related to morality, rights, duties, and entitlements.[29] Within the normative category there are two sub-categories for defining personhood. First, there are *minimal* or *threshold* accounts. Second, there are *maximal* or *perfectionist* accounts.[30]

Minimal or *threshold* accounts seek to provide some conditions for full (or near full) rights and claims to personhood. For example in contemporary bio-medical ethics some scholars argue for rights of a foetus since they claim that it meets the minimal conditions to claim personhood.

In the *maximal* or *perfectionist* account, it can be argued that one becomes more human, more of a person, when one possesses certain moral or other characteristics. For example in the Southern African ethics of *ubuntu*, one becomes more fully human, more fully a person, by growing into personhood through good and harmonious relationships with other persons and creation. As Menkiti contends, "personhood is something at which individuals could fail, at which they could be competent or ineffective, better or worse."[31]

Of course, personhood is also, at times, detached from humanness. In contemporary jurisprudence, corporations are sometimes accorded the rights of persons (such as protection from slander, abuse etc.). Wareham argues that such non-anthropocentric approaches to personhood are important in relation to AI, since robots "could in principle be persons if

28 Ibid., 129; Motsamai Molefe, "Personhood and Partialism in African Philosophy," *African Studies* 78, no. 3 (July 3, 2019): 309–23, https://doi.org/10.1080/00020184.2018.1519337.

29 Kevin Behrens, "Two 'Normative' Conceptions of Personhood," *Quest: An African Journal of Philosophy* XXV, no. 1 (December 15, 2013): 103–18.

30 Wareham, "Artificial Intelligence and African Conceptions of Personhood," 129.

31 Ifeanyi A. Menkiti, "Person and Community in African Traditional Thought," in R. Wright (ed.), *African Philosophy: an Introduction* (Lanham, MD: University Press of America, 1984), 173.

they met the relevant criteria. Indeed, some have argued that they could be the bearers of rights under certain circumstances."[32]

For example, if a machine convinces us that it feels pain, or experiences fear, would our personhood in the *maximal* sense, not require that we do whatever we can to alleviate the fear and suffering of this non-anthropocentric machine? However, a valid question would of course be, in a *minimal* sense, does an AI technology meet the requirements for personhood that should illicit a *maximal* response?

The South African philosopher, Thaddeus Metz, has developed the most comprehensive minimal conception of African personhood.[33] Metz's view arises out of the "Afro-communitarian emphasis on the value of harmonious relationships as the end of morality."[34] Desmond Tutu sums up this value:

> Harmony, friendliness, community are great goods. Social harmony is for us the *summum bonum*—the greatest good. Anything that subverts or undermines this sought-after good is to be avoided like the plague.[35]

Metz follows this line of reasoning, building upon African moral conceptions of personhood, to argue that true personhood requires the ability to live in deeply harmonious relationships of identity and solidarity. It is argued that individual goods, individual identity, and autonomy are not the grounding of true personhood.[36] Rather personhood requires that one can be a subject – that is being able to have deep solidarity in relationships and

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32 Wareham, "Artificial Intelligence and African Conceptions of Personhood," 130.

33 Thaddeus Metz, "African and Western Moral Theories in a Bioethical Context," *Developing World Bioethics* 10 (December 1, 2009): 49–58, https://doi.org/10.1111/j.1471-8847.2009.00273.x; Thaddeus Metz, "An African Theory of Moral Status: A Relational Alternative to Individualism and Holism," *Ethical Theory and Moral Practice* 15, no. 3 (June 1, 2012): 387–402, https://doi.org/10.1007/s10677-011-9302-y.no. 3 (June 1, 2012

34 Wareham, "Artificial Intelligence and African Conceptions of Personhood," 131.

35 Desmond Tutu, *No Future Without Forgiveness* (New York, NY: Random House, 2012), 35.

36 Forster, "Identity in Relationship: The Ethics of Ubuntu as an Answer to the Impasse of Individual Consciousness"; Forster, "African Relational Ontology, Individual Identity, and Christian Theology An African Theological Contribution towards an Integrated Relational Ontological Identity," 243–53.

being able to identify as "we" with the other, "coordinating one's behaviour to achieve shared ends."[37] In addition to the behaviours of solidarity it also requires "attitudes such as affections and emotions being invested in others, e.g., by feeling good consequent to when their lives flourish and bad when they flounder."[38]

In addition, personhood requires that one can also be an *object* of harmonious, communal relationships. In other words, the supposed "other" should be able to see in our behaviours and attitudes that we are truly human, truly persons.[39] For example, humans tend to have a capacity to care for animals, yet when we care for other humans, the ability to return this care validates our shared humanity.

This is where it becomes quite interesting. Since, as we have already stated, many forms of symbolic and subsymbolic AI are created to represent our image. They are technologies that are being refined to more accurately and consistently convince us that they are like us. We may soon find that such *minimalist* criteria invite us to recognise the *maximalist* inclusion of AI technologies within the categories of personhood.

AI as subjects of communal relationships with humans

Given the claims of Strong AI, and recent developments in this field, a realist pragmatist view must at least hold the possibility of AI becoming moral agents. If this is the case, they may become "genuine subjects of harmonious communal relationships, exhibiting solidarity and identity."[40] Of course, it is equally important, in a realist pragmatist sense, to argue that the computing power and technological development that will be necessary for a "syntactical machine agent" to fool "us into the mistaken belief that it genuinely experiences empathy and cares for us" is not yet obtainable.[41] However, it does raise an important concern about how long we (human persons) will be able to detect the intersubjective inadequacies

37 Metz, "An African Theory of Moral Status," 393.

38 Ibid.

39 Ibid., 394.

40 Wareham, "Artificial Intelligence and African Conceptions of Personhood," 133.

41 Ibid., 134.

of AI technologies. When that barrier is breached, we will have to reconsider the boundaries of moral subjecthood.

AI as objects of communal relationships with humans

If, hypothetically, an AI technology was to pass the criterion for subjecthood, it still raises the major barrier of AI being the object of harmonious communal relationships. "Even if they empathise and attempt at communion with us, this would not be sufficient for them to count as members of our moral community in the sense that persons are."[42] This makes sense as a general proposition. However, in a pragmatist realist sense we know that this is simply not true. We are aware of many instances in which persons have built compassionate and empathetic relationships with non-human technologies. Some examples from popular entertainment are Tom Hanks's humanoid ball from the 2000 movie *Castaway*, or the anthropomorphic robot which is given human-like physical features and emotional characteristics in the 2021 film, *Finch*. Then, there is the South African dystopian figure in the movie Chapie – a robot that tugs at the heartstrings because of his criminal upbringing and abusive development. In literature there is the wonderful book *Klara and the Sun*, by Kazuo Ishiguro.[43] This is not too far from the reality, where some persons are already building meaningful emotional and physical relationships with robots (in robo-psychology, sex robots, and robot companions).[44] Of course, we could question whether such engagement is misguided, too utilitarian, or not truly reciprocal. But, for the persons who experience care and find

42 Ibid., 135.

43 Kazuo Ishiguro, *Klara and the Sun* (New York, NY: Knopf Doubleday Publishing Group, 2022).

44 Nancy S. Jecker, "Nothing to Be Ashamed of: Sex Robots for Older Adults with Disabilities," *Journal of Medical Ethics* 47, no. 1 (2021): 26–32; Junzhao Ma, Dewi Tojib, and Yelena Tsarenko, "Sex Robots: Are We Ready for Them? An Exploration of the Psychological Mechanisms Underlying People's Receptiveness of Sex Robots," *Journal of Business Ethics* 178, no. 4 (2022): 1091–1107; Amelia Fiske, Peter Henningsen, and Alena Buyx, "Your Robot Therapist Will See You Now: Ethical Implications of Embodied Artificial Intelligence in Psychiatry, Psychology, and Psychotherapy," *Journal of Medical Internet Research* 21, no. 5 (2019): e13216; Sooyeon Jeong et al., "A Robotic Positive Psychology Coach to Improve College Students' Wellbeing," in 2020 *29th IEEE International Conference on Robot and Human Interactive Communication (RO-MAN)* (IEEE, 2020), 187–94; Antonella Marchetti et al., "Robotics in Clinical and Developmental Psychology," *Comprehensive Clinical Psychology,* 2022, 121.

meaning and recognition with such technologies, such subtle arguments seem moot.

The quote below, from the late African philosopher Augustine Shutte, illustrates the complexity of African views of being human in relation to other humanising / personable technologies. He writes:

> It is truer to the African idea, however, to see self and other as co-existing, each in the other in the sense of being identified with each other. The fundamental human reality must be seen as a field of personal energy in which each individual emerges as a distinct pole or focus. The field of life is the same in each; in each it is their humanity. All persons form a single person, not as parts for a whole, but as friends draw their life and character from the spirit of a common friend. They have a common identity.[45]

Furthermore, Gabriel Setiloane writes,

> … the essence of being is participation in which humans are always interlocked with one another … the human being is not only a 'vital force', but more a 'vital force' in participation.[46]

Lastly, Cornel Du Toit contends that for Africans:

> … to be human is to participate in life and respect the conditions that make life possible. To participate in life means ultimately to participate in the fellowship of the community … African society emphasises solidarity rather than activity, and the communion of persons rather than their autonomy … That personhood is identified by an individual's interaction with other persons does not eliminate personal identity … It simply says that my personal identity comes to the fore in my interaction with, and place in, my community.[47]

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45 Augustine Shutte, *Ubuntu: An Ethic for a New South Africa* (Pietermaritzburg: Cluster Publications, 2001), 52–53.

46 Gabriel M. Setiloane, *African Theology: An Introduction* (Johannesburg: Skotaville Publishers, 1986), 14.

47 Cornel W. Du Toit, "Technoscience and the Integrity of Personhood in Africa and the West: Facing Our Technoscientific Environment," in *The Integrity of the Human Person in an African Context: Perspectives from Science and Religion*, ed. Cornel W. Du Toit (Pretoria: Research Institute for Theology and Religion, 2004), 33.

Thus, true humanity comes to the fore through interaction in community, living in harmony with God, other humans, and non-human creation. There is no doubt that some applications of this concept can be oppressive rather than liberative, and that in the wrong community, or a community that does not "respect the conditions that make life possible" there is great possibility for abuse. However, in the context of ubuntu, mutual respect and interdependence are the necessary foundations for relational identity. In this context relationships with others raise us up, rather than put us down, they offer us life, rather than demanding it from us. This holds great possibilities for notions of personhood in the age of AI.

What can we learn about ourselves, reality, and God from our engagement with AI?

First, it is argued above, that the reality of AI invites us to broaden our theological reflection beyond an anthropocentric focus, to a broader focus upon God's relationship to both human and non-human creation.

Second, our fascination with AI, the desire to create a technology that mimics our image, highlights, according to Herzfeld, how we seek both to facilitate relationship to the created order,[48] but also to establish our uniqueness from the rest of creation. This is what one could call an anthropically mediated theological reflection on AI, since it is a reflection upon the supposed "other" to understand the self, more clearly.

Third, AI invites us to reflect on God's relationship to aspects of creation that are other than human, on their terms, not ours. For example, could such AI technologies every bear the *Imago Dei*? What if the claims of Strong AI were to be realised, and some forms of sentience were to emerge in a robot – what would that mean for that sentience, for its being, its salvation? This is what I call an unmediated theological reflection on AI, since it seeks to reflect theologically not in the first instance for the self, but particularly about the supposed other.

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48 Noreen L. Herzfeld, *In Our Image: Artificial Intelligence and the Human Spirit* (Minneapolis, MN: Fortress Press, 2002), 10–52

Finally, since we create these technologies in our image, we need to acknowledge the ethical limitations and pitfalls of programming ourselves into these technologies. David Bentley Hart speaks of this as the Narcissus problem.[49] As African Christians, we must undertake our theological and moral reflection through a critical realist lens of our own painful and broken Christian and social histories. Colonialism, apartheid, and globalisation have shown that technologies are often uncritically developed with the western individual (often precisely the white male western individual) as a central impetus and beneficiary. There are already numerous research studies, reports, and concerns being raised about the ways in which the programmers of AI, the developers of algorithms, and the funders and beneficiaries of symbolic AI and subsymbolic AI technologies operate with inherent and uncritical biases towards majority world identities and experiences.[50] This will require both a clear and critical understanding of ourselves, and a clear and critical understanding of these developing technologies, in order to advocate for a more just, inclusive, equitable world in which these technologies will play an increasingly significant role.

Conclusion

This article argues that the reality of AI technologies invites (African) Christians to reflect in unexpected ways on our beliefs about God, God's creation, and our place within the created order.

First, the reality of AI invites us to critically re-evaluate the tacit anthropocentric emphasis of much of historical and contemporary theologies. Second, the reality of AI invites Christians to understand in new, and perhaps more meaningful ways, how our identity is formed in relationships – a relationship to God who is creator and to God's creation, and of course also those aspects of creation that we seek to fashion in our own image. Third, the reality of AI invites us to consider that theological

49 David Bentley Hart, "The Myth of Machine Consciousness Makes Narcissus of Us All | Psyche Ideas," *Psyche*. [Online]. Available: https://psyche.co/ideas/the-myth-of-machine-consciousness-makes-narcissus-of-us-all [Accessed: June 14, 2023].

50 H. Mdingi, "Race and Robotics: Black Theology in the Digital Age," in E. Benyera (eds), *Africa and the Fourth Industrial Revolution. Advances in African Economic, Social and Political Development* (Springer, Cham, 2022), 17-31.

meaning for other parts of creation might not be directly mediated through the human person. For example, the claims of Strong AI highlight the importance of reconsidering topics such as identity (the Imago Dei) and soteriology for other aspects of the created order. Lastly, it is argued that the somewhat shallow, knee jerk, luddite views that simply seek to deny any value or meaning in AI are neither sensible nor reasonable form a pragmatic realistic theological perspective.

Indeed, if theology is "a story that is told, a song that is sung and a prayer that is uttered in response to experience and expectation."[51] Our experience of being human in a world where AI exists, and continues to develop, should invite deep and constructive theological reflection on personhood and humanness.

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51 Oduyoye, *Introducing African Women's Theology*, 22.

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