Artificial Intelligence versus *Agape* Love
Spirituality in a Posthuman Age

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ABSTRACT   As Artificial Intelligence researchers attempt to emulate human intelligence and transhumanists work toward superintelligence, philosophers and theologians confront a dilemma: we must either, on the one horn, (1) abandon the view that the defining feature of humanity is rationality and propose an account of spirituality that dissociates it from reason; or, on the other horn, (2) find a way to invalidate the growing faith in a posthuman future shaped by the enhancements of Intelligence Amplification (IA) or the progress of Artificial Intelligence (AI). I grasp both horns of the dilemma and offer three recommendations. First, it is love understood as *agape*, not rational intelligence, which tells us how to live a godly life. Love tells us how to be truly human. Second, the transhumanist vision of a posthuman superintelligence is not only unrealistic, it portends the kind of tragedy we expect from a false messiah. Third, if as a byproduct of AI and IA research combined with H+ zeal the wellbeing of the human species and our planet is enhanced, we should be grateful.

KEYWORDS   agape; artificial general intelligence; artificial intelligence; computer; cyborg; ethical demand; H+; intelligence; intelligence amplification; love; robot; transhumanism

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Does AI (artificial intelligence) in computers or robots augmented by IA (intelligence amplification through deep brain implants) place our cyborg generation of philosophers and theologians at a crossroads? Do AI and IA portend the enhancement or abolishment of humanity?[1] The conductor is closing the doors on the transhumanist train, the track heading for a post-human future. Who is on board?

The destination, according to our transhumanist (H+) friends, is a post-human species enhanced by superintelligence. The *trans* in *transhumanism* refers to the present phase of advancing both AI and IA toward the Singularity, the threshold where superintelligence grabs the reigns of evolution, steers humanity toward posthumanity, and abandons *Homo sapiens* to the fossils of extinction.

Like the Pied Piper of Hamelin, Oxford's Nick Bostrom plays an enticing H+ tune.

> Let us make a leap into an imaginary future posthuman world, in which technology has reached its logical limits. The superintelligent inhabitants of this world are autopotent, meaning that they have complete power over and operational understanding of themselves, so that they are able to remold themselves at will and assume any internal state they choose … in any technological utopia we have a realistic chance of creating … a large portion of the constraints we currently face have been lifted and that both our internal states and the world around us have become much more malleable to our wishes and desires.[2]

Sun Microsystems Bill Joy is repulsed by such a H+ tune. "Our most powerful twenty-first century technologies—robotics, genetic engineering, and nanotech—are threatening to make humans an endangered species."[3] Utopia or extinction? That's the question, apparently.

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1. Does AI or IA portend monsters or angels? "Often cyborgs and other posthuman hybrids are seen as figures of the monstrous, moral abominations resulting from the transgression of ontological boundaries. Just as a common ancestry with nonhuman animals seems to threaten the ontological distinctiveness of humanity, so too can the technological innovation of the cyborg, as it presumes an ontological kinship with the nonhuman machine." Anne Kull, "Cyborg or Religious? Technonature and Technoculture," *Science et Fides* 4, no. 1 (January 2016): 302, doi:10.12775/SetF.2016.016.

2. Nick Bostrom, "Dignity and Enhancement," in *Human Dignity and Bioethics: Essays Commissioned by the President's Council on Bioethics* (Washington, DC: The President's Council on Bioethics, 2008), 202–3.

3. Bill Joy, "Why the Future Doesn't Need Us," *Wired*, April 2000, https://www.wired.com/2000/04/joy-2/.

Before the Christian theologian buys a ticket on the H+ train, he or she might consider planning the itinerary carefully. It appears Christian theologians face the following dilemma: either, on the one horn, (1) abandon the view that the defining feature of humanity is rationality and propose an account of spirituality that dissociates it from reason; or, on the other horn, (2) find a way to invalidate the growing faith in a posthuman future shaped by the enhancements of Intelligence Amplification (IA) or the progress of Artificial Intelligence (AI).[4]

This is more of an apparent dilemma than an actual one, I will argue; because the Christian theologian is not locked on to one or the other horn. Regarding the dilemma's first horn, there may exist good reasons to propose an account of spirituality that incorporates virtues other than reason. Specifically, it is love understood as *agape* that inspires and guides the godly life.[5] This will be the case regardless of the promise or threat of AI. Regarding the dilemma's second horn, "faith" in a posthuman future is a misplaced faith regardless of the spiritual alternative. Transhumanist utopianism is unrealistic; it is a sham substitute for the biblical promise of the eschatological Kingdom of God. H+ is elitist, privileging those with higher intelligence over the average; H+ risks a future tyrannical society replete with eugenics. Therefore, I recommend that the theologian grasp the first horn by substituting love for reason and then grasp the second horn with a prophetic critique of unrealistic if not dangerous promises.

Regarding the first horn of the dilemma, I will ask for a defining description of intelligence, the human trait that makes rationality possible. What is intelligence? I will answer by identifying levels of intelligence in all life forms, including the human species. Armed with a description of intelligence, we will ask: is artificial intelligence actually intelligent? My answer will be negative, at least insofar as AI researchers aspire to emulate human intelligence. I will then delineate the traits of the human intelligence we experience daily, attending to the presence of a subjective self, person-in-relationship, and the ethical demand to love those with whom we share our relationships. I will make the case that philosophically and theologically speaking it is love, not rational capacity, which defines the human person and inspires a godly life.

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4. One may pursue AI or IA without any interest in H+. Yet, H+ relies on AI and perhaps IA technology. "The field of artificial intelligence is deeply rooted in transhumanist visions for the future." Natasha Vita-More, *Transhumanism: What is it?* (S.I.: Bowker, 2018), 64.

5. The chief characteristic of love understood as *agape* is self-giving. "Divine love means that God gives *himself*," writes Gustaf Aulén, *The Faith of the Christian Church*, trans. Eric H. Wahlstrom (Minneapolis, MN: Fortress Press, 1960), 114. Through a live of "self-giving," the person of faith "comes to know" the "way of divine love" as "the way of the cross," ibid., 114–5.

Turning to the second horn of the dilemma, we note that most of what we call AI or artificial intelligence takes the form of complex calculation and even machine learning. Conventional AI relies on probabilistic predictive algorithms that operate quite differently from normal human cognitive processes. The Roomba that vacuums the living room carpet warrants at best only a yawn. Where is the excitement? The excitement lies with the prospect of a robot imitating or surpassing a human.

The ambitious mountain climbers in the AI industry are gearing up to tackle their equivalent of Mount Everest, Artificial General Intelligence or AGI. We're not there yet, even though this prospect charges the discussion with electric excitement. The transhumanist variant is superintelligence, a forecasted threshold that will lift our descendants off the human launching pad and rocket them into a posthuman future.

In what follows, we will recommend that theologians buy a ticket on the fast moving AI and H+ train. But, we will suggest that the AGI and superintelligent destinations are unrealistic. They promise more than they can deliver; and they risk a new elitism based on level of intelligence. Sober theologians should offer a prophetic critique of these promises. Theologians should draw energy for human spirituality from what is visionary, to be sure, but also on what is realistic and egalitarian.

Intelligence and Reason in *Homo Sapiens*

We *Homo sapiens* are rational animals. This is what Aristotle rightly observed. We are "thought-bearers" (ζῷον λόγον ἔχον, *animal rationale*). Thank goodness scientists followed Aristotle by calling us *Homo sapiens*, wise animals. We should be proud of our status in the natural world. As the lion is the king of beasts, we humans are the kings of the entire natural kingdom. Right?[6] Not exactly. Modern human egalitarianism combined with postmodern thrusts toward de-anthropocentrizing eco-ethics would suggest that an elitism based on relative intelligence is less than right.

So, we ask: is rationality a trait unique to our species? Or might it be shared with animals and machines? In the past, philosophers contrasted rational human beings with animals, the latter being governed by instinct rather than reason. Further, the rational component to human consciousness

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6. More recently, some philosophers and evolutionary theorists have designated symbolic language to be the distinctive trait that makes a human a human. Hermeneutical philosophers contend that it is language which equips the human mind to think abstractly. In evolutionary anthropology, Terrence Deacon's scholarship provides one of the most exhaustive arguments. *Incomplete Nature* (New York: Norton, 2012). Computers have language. But it has not yet been demonstrated that computers think abstractly.

overlapped if not defined the soul, a metaphysical dimension we share with the divine mind. When spirituality perfected, the human mind could enjoy the beatific vision, the *visio beatifica*.

All this is relevant to the first horn of our dilemma: is reason the defining characteristic of what makes a human a human? Is Christian spirituality predicated on this definition? If it can be demonstrated that either other sentient beings or even machines exhibit this same characteristic, will Christian theologians have to alter the goal of spiritual development?

I believe we should surrender the long-held belief that rationality is unique to the human person. We definitely share intelligence with animals and even single celled organisms, although to date we do not share intelligence with computers or other machines. In principle, it is possible that in the future we *Homo sapiens* may encounter other beings of equal or superior intelligence and reasoning capacity, either machines on Earth or sentient creatures living in civilizations on exoplanets. This raises the question: does it matter for Christian spirituality whether we humans alone bear the level of intelligence common to our species? My answer: no, it does not matter.

Do we find intelligence in so-called lower life forms?
The human race has no patent on intelligence. What we know as human reasoning, as highly developed as it is in human experience, exists in continuity—not discontinuity—with what other forms of life experience.

Curiously, the literature on intelligence generally avoids defining *intelligence*.[7] Rather, it sorts through degrees or levels of intelligence. Scientists prefer to measure intelligence, to distinguish between smarter and dumber. This results in scales of intelligence, in ranks ranging from simple to complex. In short, we do not typically draw lines between the total absence of intelligence and the presence of intelligence. At least in living creatures.

In what follows I will adumbrate seven criteria that reveal the presence of intelligence. These criteria are roughly ranked from simple to complex, although the lines between stages are blurry rather than sharp. Here are two points worth emphasizing. First, human intelligence which affords us the capacity to reason exists in continuity, not discontinuity, with all other

7. Shane Legg and Marcus Hutter have collected definitions of *intelligence*. These two prescribe a minimum of three components essential to any definition of intelligence: (1) agency when interacting with the environment; (2) goal setting leading to success or failure; and (3) adaptation to the environment by altering goals. In sum, "Intelligence measures an agent's ability to achieve goals in a wide range of environments." Shane Legg and Marcus Hutter, "A Collection of Definitions of Intelligence," 2006, http://www.vetta.org/documents/A-Collection-of-Definitions-of-Intelligence.pdf.

life forms we know on Earth today. Second, intelligence as we know it is inextricably tied to our biology; our intelligence is embedded.

I propose a seven-mark description of *intelligence.* With this list, I hope to demonstrate that very simple life forms exhibit some, though not all, marks of intelligent creatures. An organism is intelligent when it possesses.[8]

1. *Interiority*: a membrane or barrier which separates the interior from the exterior environment or world; further, the interior maps the exterior to guide intentional behavior.
2. *Intentionality* initiated from within that relates to the without—that is, goal-oriented behavior risking success or failure.
3. *Communication* with the environment, including other organisms.[9]
4. *Adaptation*: the capacity to change in order to adapt and evolve.
5. Mental activity, including reasoning in *problem-solving.*
6. Mental activity, including *self-reflection* and *theory of mind.*
7. Mental activity, including rendering sound *judgment.*

Most mammals and certainly human beings exhibit all seven marks. Yet, brainless microbes and simple organisms exhibit the first four marks. By establishing a spectrum of traits, all life from the simplest to the most complex can be dubbed intelligent, even though they differ in levels of complexity.

As said above, Aristotle and the Christian tradition that followed him were on target when describing us humans as "thought-bearers" (ζῷον λόγον ἔχον, *animal rationale*). But, we are not alone in this. We humans may bear more abstract thoughts than amoebas, to be sure; but there is no solid line dividing human reasoning from simple cell interiority or intentionality.

If this argument is persuasive, then we should ask: what are the implications for the future of machine intelligence? For artificial intelligence? For intelligence amplification?

Is artificial intelligence really intelligent?

What is commonly called artificial intelligence is not intelligent at all. It's a bucket of code. It's a laundry basket of processes with rules of operation. AI performs jaw dropping feats of calculation, to be sure; and we should

8. See Ted Peters, "Where There's Life There's Intelligence," in *What is Life? On Earth and Beyond*, ed. Andreas Losch (Cambridge University Press, 2017), doi:10.1017/9781316809648.014. See also Ted Peters, "Can We Hack the Religious Mind? The Interaction of Material Reality with Ultimate Reality in the Human Self," in *Interactive World, Interactive God: The Basic Reality of Creative Interaction*, ed. Carol R. Albright, John R. Albright and Mladen Turk (Eugene, OR: Wipf & Stock, 2017).

9. Dale W. Laird, Paul D. Lampe, and Ross G. Johnson, "Cellular Small Talk," *Scientific American* 312, no. 5 (2015), doi:10.1038/scientificamerican0515-70.

applaud the computer engineers who have designed machines that learn how to provide us with answers to complex questions. Yet, *intelligence* is not the word to describe information processing, no matter how dramatic.

You may wish to ask, "who's doing the thinking here?" Answer: "nobody's at home." If the goal of the strong AI movement is to create *artificial general intelligence* (AGI)—defined as "interactive, autonomous, self-learning agency, which enables computational artifacts to perform tasks that otherwise would require human intelligence to be executed successfully"[10]—then that goal is furtive.

What machine intelligence lacks is item seven on our list of intelligence traits, namely, knowledge produced by sound judgment. AI even in the form of DNNs [deep neural networks] rely on pattern-recognition technology; and reliance on pattern-recognition to classify inputs sets the limit of what DNN can accomplish. Without the capacity for judgment, DNNs can be easily fooled. The change in just a few pixels, for example, changes a DNN's perception from seeing a lion to seeing a library. It's easy "to make DNNs see things that were not there, such as a penguin in a pattern of wavy lines."[11] No amount of rules can overcome AI's lack of judgment. "Even if rules can be embedded into DNNs, they are still only as good as the data they learn from."[12]

If today's human intelligence provides the model for future AI, we are not even close. "Robots that can develop humanlike intelligence are far from becoming a reality … [AI] still belongs in the realm of science fiction," is the prophecy of Diana Kwon, writing for *Scientific American.*[13] After six to seven decades of attempting to construct a machine with intelligence, Noreen Herzfeld notes, the accomplishment rate is zero. "We are unlikely to have intelligent computers that think in ways we humans think, ways as versatile as the human brain or even better, for many, many years, if ever."[14]

10. Mariarosaria Taddeo and Luciano Floridi, "How AI can be a force for good," *Science* 361, no. 6404 (24 August 2018): 751, doi:10.1126/science.aat5991.

11. Douglas Heaven, "Deep Trouble for Deep Learning," *Nature* 574, no. 7777 (10 October 2019): 164, doi:10.1038/d41586-019-03013-5.

12. Ibid., 165.

13. Diana Kwon, "Self-Taught Robots," *Scientific American* 318, no. 3 (March 2018): 31, doi:10.1038/scientificamerican0318-26. With the advent of quantum computers, what can we expect? More speed. Greater capacity. But not intelligence. "Quantum computers are a not-yet-existent technology in search of problems to solve." Editorial, "Computer games. Classical and quantum machines are battling for computational superiority," *Nature* 564, no. 7736 (20/27 December 2018): 302, doi:10.1038/d41586-018-07801-3.

14. Noreen Herzfeld, "The Enchantment of Artificial Intelligence," in *AI and IA: Utopia or Extinction?*, ed. Ted Peters (Adelaide: ATF Press, 2018), 1-14, at 3.

Despite this demure, transhumanists drive the train of technological development toward superintelligence. Transhumanists anticipate crossing a threshold, the *Singularity*, an idea drawn from science fiction writer, Vernor Vinge. With the creation of "superhuman intelligence ... the human era will be ended."[15] We anachronistic *Homo sapiens* will have crossed into the posthuman.

Yet, we must ask: is it possible for moderately intelligent *Homo sapiens* to give birth to superintelligent children? It depends on your philosophical assumptions. Scholastic theologians thought that the creator would necessarily be more complex and more intelligent than what gets created. "No effect exceeds its cause," said Thomas Aquinas.[16] This implies that God is more complex and more intelligent than us creatures. Might this classic theological principle of causation apply to today's human AI creators?

In sum, if the criterion by which we measure existing machine intelligence is intelligence itself, then the amoeba in the pond ranks above the Dell computer sitting on my desk.

IS HUMAN INTELLIGENCE AUTONOMOUS OR SOCIAL?
Note how the goal of the AGI project is to create "autonomous" intelligence. This formulation of the goal is problematic, because human intelligence as we experience it is not autonomous. It's social.

Yes, our brains as physical entities are autonomous, to some degree. But the brain circuitry that co-develops with social interaction is anything but autonomous. It is the product of loving interaction with our families and our educational institutions, without which such intelligence could not grow or mature.

One neuroscientist, Michael Graziano, puts it this way. "Social intelligence almost certainly spans the entire range from perception through cognition to motor control. Our social needs have no doubt shaped every aspect of brain function from input to output."[17] Our social interaction wires the brain to create mental models so we can understand our social interaction.

The creation of mental models makes both Theory of Mind [grasping that others have a mind like I have] and empathy possible. "The brain does contain special-purpose machinery whose job is to attribute volition,

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15. Verner Vinge, "What is the Singularity?," 1992, accessed September 9, 2018, https://mindstalk.net/vinge/vinge-sing.html.

16. Thomas Aquinas, *Summa Theologica*, II-II, 32, 4, obj. 1.

17. Michael S. A. Graziano, *God, Soul, Mind, Brain: A Neuroscientist's Reflections on the Spirit World* (Teaticket, MA: Leapfrog Press, 2010), 23.

intentions, agenda, goals, emotions, and other mentalistic events" to our neighbors.[18] What is important here is that our human intelligence is embodied in a person-in-relationship with a specific social biography.

Some theologians agree. "We are not simply disembodied reasoning machines but persons in bodily and communal context," observes Gregory Peterson.[19] Ian Barbour also agrees. "Recent work in neuroscience is consistent with the biblical emphasis on embodiment, emotions, and the social self.… The biblical view does indeed conflict with the determinist and materialist philosophical assumptions of many neuroscientists but not, I suggest, with the data and theories of neuroscience itself."[20]

It is the social dimension of human intelligence that leads to confidence in the Turing Test, a test designed to see whether a claim to machine intelligence is valid. Herzfeld draws out the significance of the assumptions supporting the Turing Test. "If we accept the Turing Test … as the ultimate arbiter of intelligence, then we have defined intelligence relationally."[21]

This leads Graziano to stipulate that Theory of Mind and even empathic understanding become defining components of humanlike intelligence. "To update the Turing test: how will we know when a computer has achieved consciousness? When it has algorithms to model the contents of another person's mind. When those algorithms are so complete that the model contains a reconstruction of the world as seen by the other person—of the contents of the other person's awareness. When the algorithms can be used to create a model of the computer itself."[22]

In sum, the goal of AGI to make autonomous intelligence avoids recognizing a distinctive human trait, namely, person-in-relationship. Human intelligence is social, indelibly social. In order for there to be social interaction between one's brain and the brains of others, there must be interaction between one self and another. To the human self we now turn.

Does machine intelligence include selfhood?

Could there be a connection between neuroscience, AI research, and human intelligence? Is there an analogy between our experience of awareness and

18. Ibid., 14.

19. Gregory R. Peterson, *Minding God: Theology and the Cognitive Sciences* (Minneapolis, MN: Fortress Press, 2010), 218.

20. Ian G. Barbour, "Neuroscience, Artificial Intelligence, and Human Nature: Theological and Philosophical Reflections," *Zygon* 34, no. 3 (September 1999): 374, doi:10.1111/0591-2385.00222.

21. Noreen L. Herzfeld, *In Our Image: Artificial Intelligence and the Human Spirit* (Minneapolis, MN: Fortress Press, 2002), 46.

22. Graziano, *God, Soul, Mind, Brain*, 83.

consciousness and the machine's awareness or consciousness? Does the machine exhibit selfhood like we do?

Before pressing the analogy further, we should distinguish between general awareness and consciousness. Beyond general awareness, we who are conscious experience our self as a Self.[23] We experience self-consciousness, and even consciousness of self-consciousness.

This experience of awareness of our awareness of our awareness—called *reflection*—is for Pierre Teilhard de Chardin the mark of human achievement in the story of evolution.

> The central phenomenon, *reflection* ... indicates the power acquired by a consciousness to turn in upon itself, to take possession of itself *as an object* endowed with its own particular consistence and value: no longer merely to know, but to know oneself; no longer merely to know, but to know that one knows.[24]

Reflection reveals the self to the self as person-in-relationship. Intelligence as we humans experience it inheres in our selfhood.

Might an intelligent machine develop such a self? According to the phenomenology of Eugene d'Aquilie and Andrew Newberg, "Strictly speaking, consciousness involves the generation of a Self as an element in subjective awareness."[25] It appears that a number of things must come together in a single package: intelligence, awareness, consciousness, selfhood, and

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23. The search for the machine self places us on the doorstep of neurophilosophy. "Neurophilosophy ... works the interface between philosophy's grand old questions about choice and learning and morality and the gathering wisdom about the nature of nervous systems. It is about the impact of neuroscience and psychology and evolutionary biology on how we think about ourselves. It is about *expanding* and *modifying* our self-conception through knowledge of the brain." Patricia S. Churchland, *Touching a Nerve: The Self as Brain* (New York: W.W. Norton & Company, 2013), 20.

24. Pierre Teilhard de Chardin, *The Phenomenon of Man* (New York: Harper Perennial, 1959), 165. Pierre Teilhard de Chardin, *The Phenomenon of Man*, Intro. by Julian Huxley (New York: Harper,1959) 165; Teilhard's italics.

25. Eugene G. D'Aquili and Andrew B. Newberg, "Consciousness and the Machine," *Zygon* 31, no. 2 ((June 1996): 239, doi:10.1111/j.1467-9744.1996.tb00021.x. "We define *subjective awareness* as any and all mental content that inheres in a subject, excepting only a reified sense of self. We define *consciousness* as any and all mental elements which inhere in a subject, one of which elements is a reified sense of self," ibid., 238. See Ted Peters, "The Transcendence of the Self in Light of the Hard Problem: A Response to Bas van Fraassen," *Nova et Vetera, English Edition* 17, no. 2 (2019), doi:10.1353/nov.2019.0025. See: Ted Peters, "The Transcendence of the Self in Light of the Hard Problem: A Response to Bas van Fraassen," *Nova et Vetera*, English Edition, 17:2 (2019): 391–400.

person-in-relationship. Can we expect this convergence to take place in a machine?

Selfhood raises the theological question: what about the human soul? "There is a piece of your consciousness that has no shape, size, weight, or color. This is the piece of you that is of infinite value and dignity," speculates journalist David Brooks.

> The soul is the piece of your consciousness that has moral worth and bears moral responsibility. A river is not morally responsible for how it flows, and a tiger is not morally responsible for what it eats. But because you have a soul, you are morally responsible for what you do or don't do.[26]

Brooks speculates further on the thrust of the soul toward spirit, toward unity with the other and with God. "Mostly, what the soul does is yearn. If the heart yearns for fusion with another person or a cause, the soul yearns for righteousness, for fusion with the good."[27]

Here is the point: the general human intelligence we have come to know is co-present with the self, the person-in-relationship, the soul.[28] To date, machine intelligence lacks selfhood.[29] To date, so-called machine intelligence does not emulate human intelligence in this regard. AI is selfless, soulless. The only human intelligence we know is found here: the embodied person-in-relationship.[30]

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26. David Brooks, *The Second Mountain: The Quest for the Moral Life* (New York: Random House, 2019), 46.

27. Ibid., 47.

28. According to Plato, "the soul is immortal and imperishable, and our souls will truly exist in another world." Plato, "Phaedo," in *The Dialogues of Plato*, vol. 1 (New York: Random House, 1892), 492. "In distinction from Plato's view of the deity of the soul Christian theology views us as creatures in both body and soul, destined indeed for immortality in fellowship with God, yet not possessing it of ourselves, nor able to secure it for ourselves, but receiving it only as a gift of grace from God." Wolfhart Pannenberg, *Systematic Theology*, trans. Geoffrey W. Bromily, 3 vols., vol. 3 (Grand Rapids, MI: William B. Eerdmans, 1991–1998), 571.

29. "Critics of Artificial Intelligence claim that a machine will never have a capacity for self-reflection; in other words, it will always lack a sense of self ... [but] it is perfectly viable to elaborate an algorithmic program that allows the machine to report its own internal states. This seems to be a sufficient criterion to affirm that a machine can indeed have an inner sense of reflection." Gabriel Andrate, "Philosophical Difficulties of Mind Uploading as a Medical Technology," *Philosophy and Medicine* 18, no. 1 (Fall 2018): 17, https://www.academia.edu/37633487/Philosophical_Difficulties_of_Mind_Uploading_as_a_Medical_Technology.

30. The presence of the self or the person warrants the attribution of dignity and the demand to love. Anne Foerst observes how researchers and visitors in the MIT lab would bond with the robots. Their patterns of interaction indicated they were treating Cog and Kismet as persons. The personhood of the robots did not derive from an intrinsic quality; rather it

The *Ethical Demand*: love your neighbor!

Philosophical theologian Nancey Murphy teams up with mathematical cos-mologist George Ellis to describe spirituality in terms of kenotic love, that is, *agape* love willing to sacrifice on behalf of the welfare of the neighbor.

> This kenotic ethic—an ethic of self-emptying for the sake of the other—is in turn explained and justified by a correlative theology: the kenotic way of life is objectively the right way of life for all of humankind because it reflects the moral character of God.[31]

This is a theological assertion that finds buttressing if not justification in phenomenology.

For the next phase of our exploration, let us turn to Denmark and two phenomenologists, to a twenty-first century cognitive scientist and a twentieth century philosopher.

First, phenomenologist Dan Zahavi directs the Center for Subjectivity Research at the University of Copenhagen. Zahavi follows in the footsteps of Edmund Husserl and Martin Heidegger, wherein the self or ego is that which understands itself pre-linguistically and pre-objectively as imbedded in the world. When *consciousness-of* intends an object, this experience presupposes a subjective ego who is intending that object. Consciousness requires a self to be conscious, according to this model.[32] In short, the conscious human self presupposes the self. We cannot understand either our self or our world apart from the presupposed self that intends the world. We cannot escape understanding ourselves as anything other than person-in-relationship.

Second, let's turn back the clock three quarters of a century to the University of Aarhus, to philosopher Knud E. Løgstrup. When we wake up in consciousness and become aware that we are aware, we become aware that

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was the result of the relationship fostered by the interaction. Foerst concludes, "So the only definition for personhood we can give so far is that it is independent from the concept of humanity. Even as we deny our fellow humans personhood, we do apply it to nonhuman creatures. A more intuitive understanding is the application of dignity and worth to the other. We treat someone as a person when we treat her with respect and acceptance. We treat someone as a person whom we love. The biblical term *agape* describes the attempt to treat everyone as a person." Anne Foerst, *God in the Machine: What Robots Teach Us About Humanity and God* (New York: Dutton, 2004), 160.

31. Nancey Murphy and George F. R. Ellis, *On the Moral Nature of the Universe: Theology, Cosmology, and Ethics* (Minneapolis, MN: Fortress Press, 1996), 17.

32. Dan Zahavi, *Subjectivity and Selfhood: Investigating the First-Person Perspective* (Cambridge, MA: MIT Press, 2008), 106.

we are already person-in-relationship. We are, as Martin Heidegger might say "thrown" (*Geworfen*) into relationship and cannot avoid defining our self in terms of our existing relationships.

Now, ontology becomes ethics. Realization of our being a person-in-relationship produces the inescapable *ethical demand*, according Løgstrup. This demand belongs to our very ontology as human beings. To be is to be a person-in-relationship; and this relationship entails the demand that we serve the wellbeing and even the flourishing of the other party in that relationship. When we wake up to find ourselves in being, we find that we are not individuals first who then add relationships. Rather, we find that whatever individuality and responsibility we have derives from a prior world of concrete relationships. We are interdependent. And entailed in this interdependence is a silent yet potent command: love your neighbor!

Our responsibility is inescapable.

> By our very attitude to one another we help to shape one another's world. By our attitude to the other person we help to determine the scope and hue of his or her world, we make it large or small, bright or drab, rich or dull, threatening or secure.[33]

Løgstrup, like Martin Luther before him, believes each of us can serve as "daily bread" for those around us. Our impact on another person

> may be a very small matter, involving only a passing mood, a dampening or quickening of spirit, a deepening or removal of some dislike. But it may also be a matter of tremendous scope, such as can determine if the life of the other flourishes or not.[34]

To be human is to be in relationship, and relationship demands that we love. Responding to the ethical demand to love one's neighbor becomes the way

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33. Knud Ejler Løgstrup, *The Ethical Demand* (Notre Dame, IN: University of Notre Dame Press, 1997), 18.

34. Ibid., 15–6. Is this a theological or a philosophical argument? Methodologically, it is phenomenological and, therefore, philosophical. "I am convinced that his [Løgstrup's] philosophical argument can, in fact, stand on its own without any specifically Christian presuppositions." Hans Fink, "The Conception of Ethics and the Ethical in K.E. Løgstrup's *The Ethical Demand*," in *Concern for the Other: Perspectives on the Ethics of K.E. Løgstrup*, ed. Svend Andersen and Kees van Kooten Niekerk (Notre Dame IN: University of Notre Dame Press, 2007), 10–1, doi:10.2307/j.ctvpj7cn6.6.

we mortals express our love for the eternal God. "Love for neighbor is the concrete way in which we love God," observes Karl Rahner.[35]

It's not reason, but compassionate love that tops the Christian's list of perfections. "Charity, the highest virtue of Christian perfection, included the vertical love of God as its centre and the horizontal love of neighbors as a consequent," avers Simo Knuuttila. Charity, or agape love, expresses itself in daily life as compassion. The medieval term for compassion, *compassio,* connoted an emotion, the feeling of sorrow for the misfortune of others. Compassion takes the form of mercy, love arising out of emotion rather than reason. "The horizontal charity was understood in terms of a compassionate attitude, which in some way imitated God's mercy."[36]

As valuable as rationality is to us as human beings, for the Christian it is compassionate love to which we first aspire. 1 John 4:16: "So we have known and believe the love that God has for us. God is love, and those who abide in love abide in God, and God abides in them." Regardless of the level of intelligence residing in each of our brains and minds, it is love and not reason that becomes the measure of our godliness. In *Laudato Si,* Pope Francis waxes with eloquence.

> Love, overflowing with small gestures of mutual care, is also civic and political, and it makes itself felt in every action that seeks to build a better world. Love for society and commitment to the common good are outstanding expressions of a charity which affects not only relationships between individuals but also macro-relationships, social, economic and political ones.[37]

For the Christian, the love of the heart takes precedence over the genius of the mind, even if the genius of the mind is to be treasured.

DOES RELIGIOUS TRANSHUMANISM MAKE SENSE?
The advance of AI technology threatens virtually no one. In fact, we excitedly line up around the block to buy the next generation of computers

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35. Karl Rahner, *Foundations of Christian Faith*, trans. William V. Dych (New York: Crossroad, 1978), 447.

36. Simo Knuuttila, "Compassion in Medieval Philosophy and Theology," in *Apprehending Love: Theological and Philosophical Inquiries in Honor of Risto Saarinen*, ed. Pekka Kärkkäinen and Olli-Pekka Vaino (Helsinki: Luther-Agricola-Seura, 2019), 266. "A pure love would require a person who is not seeking his own profit but would act altruistically. Giving a completely free gift would be an example of pure love and altruism." Risto Saarinen, *God and the Gift: An Ecumenical Theology of Giving* (Collegeville, MN: Liturgical Press, 2005), 52.

37. Pope Francis, "Laudato si," May 24, 2015, http://w2.vatican.va/content/dam/francesco/pdf/encyclicals/documents/papa-francesco_20150524_enciclica-laudato-si_en.pdf.

and cell phones. The promises of IA technology in the form of deep brain implants raises hopes for improved human health for patients suffering from Alzeheimers. The pursuit of AI and IA do not by themselves imply or require extravagant futuristic promises such as we find in transhumanism. The question of spirituality arises when we hear the conductor announce the destination of the transhumanist train: a posthuman utopia to follow upon human extinction.

Does transhumanism inspire and direct spirituality? Does it make sense for religious devotees to board the H+ train, enhance intelligence along the way, and retire in a posthuman utopia?

"Yes," answers Buddhist Michale LaTorra at New Mexico State University. "I am a self-identified Buddhist transhumanist."[38] Why does LaTorra connect his Buddhist spirituality with H+? Because he wants to combat suffering with medical science. "Reducing suffering and increasing happiness are goals common to Buddhism and to transhumanism," he holds.[39]

"Yes," answers Unitarian Universalist James Hughes, director of the UU Network. "We have a unique gift because of our uniquely humanist understanding, whether theist or non-theist, that humanity is called to be co-Creator of our own future."[40]

"Yes," shouts Mormon Lincoln Cannon. "Mormonism actually mandates transhumanism … one cannot be a Mormon without being a transhumanist."[41]

"No," thunders Jewish culture scholar Hava Tirosch-Samuelson. "I view transhumanism as an elaborate pursuit of perfection … I reject transhumanism because it calls for the *planned obsolescence of the human species* on the grounds that biological humanity, the product of a long evolutionary process, is not only an imperfect work in progress but a form of life that is inherently flawed and has no right to exist."[42]

38. Michael LaTorra, "What is Buddhist Tanshumanism?," *Theology and Science* 13, no. 2 (May 2015): 220, doi:10.1080/14746700.2015.1023993.

39. Ibid., 219.

40. Transhumanist UU Network, accessed August 3, 2018, https://groups.yahoo.com/neo/groups/TUUN/info.

41. Lincoln Cannon, "What is Mormon Transhumanism?," *Theology and Science* 13, no. 2 (May 2015): 213, doi:10.1080/14746700.2015.1023992.

42. Hava Tirosch-Samuelson, "In Pursuit of Perfection: The Misguided Transhumanist Vision," *Theology and Science* 16, no. 2 (May 2018): 203, doi:10.1080/14746700.2018.1463659.

"Yes, but only conditionally," tenders Muslim Tamim Mobayed: "While the modern movement towards transhumanism aims to improve sensory perception by way of scientific intervention, Islamic transhumanism calls on believers to improve and purify their perceptions by way of God-consciousness, brought about increasing in remembrance of God. It might be argued that a Muslim's transhumanist goals are directly tied to their devotion to God, rather than mastery of secular science. This difference embodies the fundamental difference between an Islamic transhumanism and secular transhumanism."[43]

"Yes," exclaims Micah Redding, founder of the Christian Transhumanist Association. "Christian Transhumanists will continue to advance the vision of a radically flourishing future that is good for all life."[44]

The difficulty the Christian must confront is that H+ proffers a pseudo-eschatology, a flimsy promise of a technoutopia. Transhumanism, argues Celia Deane-Drummond, betrays "an implicit secularized eschatology, one that is bent towards goals that cannot be attained merely within finite human existence."[45] By promising a superintelligence to cure all ills—a promise it may not be able to deliver—H+ risks becoming a false messiah.

A modest amount of interest in AI and IA is fitting for the attention of the public Christian theologian who engages the wider culture.[46] When it comes to promises of superintelligence or a posthuman future that glitters like the New Jerusalem, however, the public theologian may wish to speak prophetically to invalidate the promises: *this destination is unrealistic.*

Even if the final destination promised by AGI or H+ is unrealistic, some of the stops along the way could offer a salutary side trip. Machine intelligence has been making manufacturing more efficient for decades. Computerized robots are enhancing surgical procedures in hospitals. Experiments with deep brain implants show promise for retarding dementia. In sum, AI and

43. Tamim Mobayed, "Immortality on Earth? Transhumanism Through Islamic Lenses," Yaqeen, December 11, 2017, https://yaqeeninstitute.org/en/tamim-mobayed/immortality-on-earth-transhumanism-through-islamic-lenses/.

44. Micah Redding, "Christian Transhumanism: Exploring the Future of Faith," in *The Transhumanism Handbook*, ed. Newton Lee (Heidelberg: Springer, 2019), 794, doi:10.1007/978-3-030-16920-6_61.

45. Celia Deane-Drummond, "Future Perfect? God, the Transhuman Future and the Quest for Immortality," in *Future Perfect? God, Medicine and Human Identity*, ed. Celia Deane-Drummond and Peter Manley Scott (London: T. & T. Clark International, 2006), 181–2.

46. See Ted Peters, "Public Theology: Its Pastoral, Apologetic, Scientific, Political, and Prophetic Tasks," *International Journal of Public Theology* 12, no. 2 (2018), doi:10.1163/15697320-12341533.

IA offer human enhancements worth greeting with applause and gratitude. One need not remain on the train all the way to the final destination just to enjoy the ride.

CONCLUSION

Should the Christian theologian board the transhumanist train?[47] Yes, but I recommend riding this train hesitantly for only a few stops while peering out the window at the posthuman destination.[48]

Where does the category of the *posthuman* fit in the Christian conceptual framework? Does the posthuman mandate the extinction of the human? Or, should the posthuman promise fulfillment of the human?

Philosophers and theologians sense in Artificial Intelligence and transhumanism an ambiguity, a mixture of promise with risk.[49] We have been confronted with a dilemma: we must either, on the one horn, (1) abandon the view that the defining feature of humanity is rationality and propose an account of spirituality that dissociates it from reason; or, on the other horn, (2) find a way to invalidate the growing faith in a posthuman future shaped by the enhancements of Intelligence Amplification or the progress of Artificial Intelligence.

In summary, I have attempted to grasp both horns of the dilemma and offer three recommendations. First, it is *agape* love, not rational intelligence, which should inspire and guide the godly life. Second, the transhumanist vision of a posthuman superintelligence is unrealistic; it risks the kind of tragedy we expect from a false messiah. It is the prophetic task of the public theologian to issue a warning about false messiahs. Third, if as a byproduct of AI research and H+ zeal the wellbeing of the human species and our planet is enhanced, we should be grateful.

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47. See Ted Peters, "Boarding the Transhumanist Train: How Far Should the Christian Ride?," in *The Transhumanism Handbook*, ed. Newton Lee (Heidelberg: Springer, 2019), doi:10.1007/978-3-030-16920-6_62.

48. See Ted Peters, "The Ebullient Transhumanist and the Sober Theologian," *Sciencia et Fides* 7, no. 2 (Fall 2019), doi:10.12775/SetF.2019.018.

49. "From a Christian worldview, technology is not inherently good nor evil. Technology is morally benign but we are not. Human beings who develop and use technology are moral agents who stand responsible before God who defines the boundaries of good and evil. So, part of what Christians bring to the transhumanist conversation is the question of *should.*" Carmen Fowler LaBerge, "Christian? Transhumanist? A Christian Primer for Engaging Transhumanism," in *The Transhumanism Handbook*, ed. Newton Lee (Heidelberg: Springer, 2019), 774, doi:10.1007/978-3-030-16920-6_60.

Bibliography

Andrate, Gabriel. "Philosophical Difficulties of Mind Uploading as a Medical Technology." *Philosophy and Medicine* 18, no. 1 (Fall 2018): 14–29. https://www.academia.edu/37633487/Philosophical_Difficulties_of_Mind_Uploading_as_a_Medical_Technology.

Aulén, Gustaf. *The Faith of the Christian Church.* Translated by Eric H. Wahlstrom. Minneapolis, MN: Fortress Press, 1960.

Barbour, Ian G. "Neuroscience, Artificial Intelligence, and Human Nature: Theological and Philosophical Reflections." *Zygon* 34, no. 3 (September 1999): 361–98. doi:10.1111/0591-2385.00222.

Bostrom, Nick. "Dignity and Enhancement." In *Human Dignity and Bioethics: Essays Commissioned by the President's Council on Bioethics*, 173–206. Washington, DC: The President's Council on Bioethics, 2008.

Brooks, David. *The Second Mountain: The Quest for the Moral Life.* New York: Random House, 2019.

Cannon, Lincoln. "What Is Mormon Transhumanism?". *Theology and Science* 13, no. 2 (May 2015): 202–18. doi:10.1080/14746700.2015.1023992.

Churchland, Patricia S. *Touching a Nerve: The Self as Brain.* New York: W.W. Norton & Company, 2013.

D'Aquili, Eugene G., and Andrew B. Newberg. "Consciousness and the Machine." *Zygon* 31, no. 2 (June 1996): 235–52. doi:10.1111/j.1467-9744.1996.tb00021.x.

Deacon, Terrence. *Incomplete Nature.* New York: Norton, 2012.

Deane-Drummond, Celia. "Future Perfect? God, the Transhuman Future and the Quest for Immortality." In *Future Perfect? God, Medicine and Human Identity*, edited by Celia Deane-Drummond and Peter Manley Scott, 168–83. London: T. & T. Clark International, 2006.

Editorial. "Computer Games. Classical and Quantum Machines Are Battling for Computational Superiority." *Nature* 564, no. 7736 (20/27 December 2018): 302. doi:10.1038/d41586-018-07801-3.

Fink, Hans. "The Conception of Ethics and the Ethical in K.E. Løgstrup's *the Ethical Demand*." In *Concern for the Other: Perspectives on the Ethics of K.E. Løgstrup*, edited by Svend Andersen and Kees van Kooten Niekerk, 9–28. Notre Dame IN: University of Notre Dame Press, 2007. doi:10.2307/j.ctvpj7cn6.6.

Foerst, Anne. *God in the Machine: What Robots Teach Us About Humanity and God.* New York: Dutton, 2004.

Francis, Pope. "Laudato Si." May 24, 2015, http://w2.vatican.va/content/dam/francesco/pdf/encyclicals/documents/papa-francesco_20150524_enciclica-laudato-si_en.pdf.

Graziano, Michael S. A. *God, Soul, Mind, Brain: A Neuroscientist's Reflections on the Spirit World.* Teaticket, MA: Leapfrog Press, 2010.

Heaven, Douglas. "Deep Trouble for Deep Learning." *Nature* 574, no. 7777 (10 October 2019): 163–6. doi:10.1038/d41586-019-03013-5.

Herzfeld, Noreen. "The Enchantment of Artificial Intelligence." In *Ai and Ia: Utopia or Extinction?*, edited by Ted Peters, 1–14. Adelaide: ATF Press, 2018.

Herzfeld, Noreen L. *In Our Image: Artificial Intelligence and the Human Spirit.* Minneapolis, MN: Fortress Press, 2002.

Joy, Bill. "Why the Future Doesn't Need Us." *Wired*, April 2000, https://www.wired.com/2000/04/joy-2/.

Knuuttila, Simo. "Compassion in Medieval Philosophy and Theology." In *Apprehending Love: Theological and Philosophical Inquiries in Honor of Risto Saarinen*, edited by Pekka Kärkkäinen and Olli-Pekka Vaino, 252–74. Helsinki: Luther-Agricola-Seura, 2019.

Kull, Anne. "Cyborg or Religious? Technonature and Technoculture." *Science et Fides* 4, no. 1 (January 2016): 295–311. doi:10.12775/SetF.2016.016.

Kwon, Diana. "Self-Taught Robots." *Scientific American* 318, no. 3 (March 2018): 26–31. doi:10.1038/scientificamerican0318-26.

LaBerge, Carmen Fowler. "Christian? Transhumanist? A Christian Primer for Engaging Transhumanism." In *The Transhumanism Handbook*, edited by Newton Lee, 771–5. Heidelberg: Springer, 2019. doi:10.1007/978-3-030-16920-6_60.

Laird, Dale W., Paul D. Lampe, and Ross G. Johnson. "Cellular Small Talk." *Scientific American* 312, no. 5 (2015): 77–. doi:10.1038/scientificamerican0515-70.

LaTorra, Michael. "What Is Buddhist Tanshumanism?". *Theology and Science* 13, no. 2 (May 2015): 219–29. doi:10.1080/14746700.2015.1023993.

Legg, Shane, and Marcus Hutter. "A Collection of Definitions of Intelligence." 2006, http://www.vetta.org/documents/A-Collection-of-Definitions-of-Intelligence.pdf.

Løgstrup, Knud Ejler. *The Ethical Demand.* Notre Dame, IN: University of Notre Dame Press, 1997.

Mobayed, Tamim. "Immortality on Earth? Transhumanism through Islamic Lenses." Yaqeen, December 11, 2017, https://yaqeeninstitute.org/en/tamim-mobayed/immortality-on-earth-transhumanism-through-islamic-lenses/.

Murphy, Nancey, and George F. R. Ellis. *On the Moral Nature of the Universe: Theology, Cosmology, and Ethics.* Minneapolis, MN: Fortress Press, 1996.

Pannenberg, Wolfhart. *Systematic Theology.* Translated by Geoffrey W. Bromily. 3 vols. Vol. 3, Grand Rapids, MI: William B. Eerdmans, 1991–1998.

Peters, Ted. Ed. *AI and IA: Utopia or Extinction.* Adelaide: ATIF Press, 2018.

——— . "Boarding the Transhumanist Train: How Far Should the Christian Ride?". In *The Transhumanism Handbook*, edited by Newton Lee, 795–804. Heidelberg: Springer, 2019. doi:10.1007/978-3-030-16920-6_62.

——— . "Can We Hack the Religious Mind? The Interaction of Material Reality with Ultimate Reality in the Human Self." In *Interactive World, Interactive God: The Basic Reality of Creative Interaction*, edited by Carol R. Albright, John R. Albright and Mladen Turk, 207–43. Eugene, OR: Wipf & Stock, 2017.

——— . "The Ebullient Transhumanist and the Sober Theologian." *Sciencia et Fides* 7, no. 2 (Fall 2019): 97–117. doi:10.12775/SetF.2019.018.

——— . "Public Theology: Its Pastoral, Apologetic, Scientific, Political, and Prophetic Tasks." *International Journal of Public Theology* 12, no. 2 (2018): 153–77. doi:10.1163/15697320-12341533.

——— . "The Transcendence of the Self in Light of the Hard Problem: A Response to Bas Van Fraassen." *Nova et Vetera, English Edition* 17, no. 2 (2019): 391–400. doi:10.1353/nov.2019.0025.

——— . "Where There's Life There's Intelligence." In *What Is Life? On Earth and Beyond*, edited by Andreas Losch, 236–59. Cambridge University Press, 2017. doi:10.1017/9781316809648.014.

Peterson, Gregory R. *Minding God: Theology and the Cognitive Sciences.* Minneapolis, MN: Fortress Press, 2010.

Plato. "Phaedo." In *The Dialogues of Plato*. Translated by Benjamin Jowett. Vol. 1, New York: Random House, 1892.

Rahner, Karl. *Foundations of Christian Faith.* Translated by William V. Dych. New York: Crossroad, 1978.

Redding, Micah. "Christian Transhumanism: Exploring the Future of Faith." In *The Transhumanism Handbook*, edited by Newton Lee, 777–94. Heidelberg: Springer, 2019. doi:10.1007/978-3-030-16920-6_61.

Saarinen, Risto. *God and the Gift: An Ecumenical Theology of Giving.* Collegeville, MN: Liturgical Press, 2005.

Taddeo, Mariarosaria, and Luciano Floridi. "How Ai Can Be a Force for Good." *Science* 361, no. 6404 (24 August 2018): 751–2. doi:10.1126/science.aat5991.

Teilhard de Chardin, Pierre. *The Phenomenon of Man.* New York: Harper Perennial, 1959.

Tirosch-Samuelson, Hava. "In Pursuit of Perfection: The Misguided Transhumanist Vision." *Theology and Science* 16, no. 2 (May 2018). doi:10.1080/14746700.2018.1463659.

Transhumanist UU Network. Accessed August 3, 2018, https://groups.yahoo.com/neo/groups/TUUN/info.

Vinge, Verner. "What Is the Singularity?", 1992. Accessed September 9, 2018, https://mind-stalk.net/vinge/vinge-sing.html.

Vita-More, Natasha. *Transhumanism: What Is It?* S.I.: Bowker, 2018.

Zahavi, Dan. *Subjectivity and Selfhood: Investigating the First-Person Perspective.* Cambridge, MA: MIT Press, 2008.