The Disappearing Human: Gnostic Dreams in a Transhumanist World

Jeffrey C. Pugh

Department of Religious Studies, Elon University, Elon, NC 27244-2020, USA; pughjeff@elon.edu

Abstract: Transhumanism is dedicated to freeing humankind from the limitations of biological life, creating new bodies that will carry us into the future. In seeking freedom from the constraints of nature, it resembles ancient Gnosticism, but complicates the question of what the human being is. In contrast to the perspective that we are our brains, I argue that human consciousness and subjectivity originate from complex interactions between the body and the surrounding environment. These qualities emerge from a distinct set of structural couplings embodied within multiple organ systems and the multiplicity of connections within the brain. These connections take on different forms, including structural, chemical, and electrical manifestations within the totality of the human body. This embodiment suggests that human consciousness, and the intricate levels of experience that accompany it, cannot be replicated in non-organic forms such as computers or synaptic implants without a significant loss to human identity. The Gnostic desire to escape our embodiment found in transhumanism carries the danger of dissolving the human being.

Keywords: Singularity; transhumanism; Merleau-Ponty; Kurzweil; Gnosticism; AI; emergence; technology

1. Introduction

In 1993, the mathematician and science fiction writer Vernor Vinge gave a talk at the Vision 21 symposium sponsored by NASA introducing the idea of the Singularity, an evolutionary moment when we would create the capacity for superhuman intelligence that would transcend the human and take us into the posthuman world (Vinge 1993). His opening statement presciently revealed what was to become our future: "The acceleration of technological progress has been the central feature of this century. We are on the edge of change comparable to the rise of human life on Earth. The precise cause of this change is the imminent creation by technology of entities with greater-than-human intelligence" (Vinge 1993). Vinge's predictions, now finding fulfillment in research programs of machine superintelligence or hybrid forms of human intelligence enhancement, made him a technoprophet.

The discourse around Vinge's vision, and Ray Kurzweil's popularization of ideas like the Singularity, has influenced contemporary technology, helping to create a new category of philosophical and political thinking about what humans are and will be in the future—transhumanism (Kurzweil 2005).[1] Though it shares diverse perspectives, this ideology is dedicated to everything from human enhancement to escaping the biological confines of the body altogether. Transhumanist ideas have become a passion for a growing group of thinkers and scientists working in the areas of genetics, nanotechnology, artificial intelligence, and robotics. Enormous resources are being poured into programs and labs that are working for a future where we can at last free ourselves of bodily

---

[1] The Time magazine cover that took up Kurzweil's ideas was the February 21, 2011 issue, vol. 177.

limitation, thus ensuring immortality and transcendence from the fragility of perishable human bodies (Geraci 2010). This desire to escape the body exhibits a structural and shared concern with ancient forms of Gnosticism, but comes at the cost of dissolving the richly textured experiences that constitute the human being.

2. Technognosticism?

The entire program of scientific and technological practices that shape transhumanism can be understood in religious terms, since transcendence of the mundane—a core animating concern of religion—drives much of the transhumanist agenda. It is not just the escape from the ordinary world, but the human struggle with death and finitude that permeates the work of transhumanists. This is not unique to transhumanism, however; the desire to deny our mortality and survive death has motivated human endeavors from antiquity to the present (Becker 1987).

While transhumanism does not replicate ancient Gnosticism, it does represent the reappearance of a perennial ideology that recurs through history and continues to shape and inform human culture. The Gnostic vision was rooted in the idea that the divine was held captive within the cell of the human body, which existed within the larger prison of Earth. The only way to achieve true freedom was to escape from this captivity and reunite with our true source and being in the realm of light. While not Gnostic in seeing the divine spirit within as the essence of human identity, transhumanism shares this eschatological vision—the end of all things leads to escaping the body.[2]

In the very hope of cybernetic immortality, we are hard at work on technologies of extending ourselves beyond our current bodies. This envisioned future shows up in numerous cultural expressions like the HBO series *Westworld*, or movies like *Transcendence* and *Selfless*, shaping society to accept and embrace the worlds being prepared for us. Sometimes these expressions of material culture take on more dystopian themes, as in the *Matrix* trilogy, or *Blade Runner*, but in the labs and research programs working in AI, nanotechnology, and superintelligence, most conversation around transhumanism focuses on the promise more than the peril. One example of this type of optimism was offered by William Sims Bainbridge when he speculated that "[i]n the distant future, we may learn to conceptualize our biological lives on Earth as extended childhoods preparing us for the real life that follows in cyberspace" (Bainbridge 2014, p. 119). In Bainbridge's imagination, we would transmute from flesh into data, and as information we would travel throughout the universe taking on new bodies. Free from the constraints of our biology, the anticipated world of transhumanists offers us a type of resurrection and immortality (if you die in cyberspace, you can choose a new avatar). This type of vision represents the more extreme end of the transhumanist continuum; nonetheless, it inspires many who are working to create that future.

In his book, *Apocalyptic AI: Visions of Heaven in Robotics, Artificial Intelligence, and Virtual Reality*, Robert Geraci shows how intertwined our technology is with other themes, narratives, and imaginative tropes found in religion such as apocalypticism, dualism, the restoration of perfection from a "fallen" state, and even eternal life. Science and technology is creating virtual worlds in cyberspace where millions prefer to spend their time instead of engaging fully in this one (Geraci 2010, pp. 8–10). We will experience technosalvation through virtual bodies in the worlds we create (Geraci 2010, pp. 78–79). The masters of technology will even use hybridity to create new life forms: "Cyberspace allowed the technocracy to rethink salvation and what it means to be human; properly envisioned, cyberspace created a powerful new human–machine hybrid" (Geraci 2010, p. 12).

---

[2] The connection between Gnosticism and current expressions of transhumanism is being noticed with increasing frequency. See, for example, Mark Shiffman's review of Steven Fuller's work in "Humanity 4.5." (Shiffman 2015, pp. 23–30), or Lee A. Johnson. "Return of the Corporeal Battle: How Second Century Christology Struggles Inform the Transhumanism Debate." (Johnson 2015). For a more extended debate about Gnosticism and nature, see Benjamin Lazier. "Overcoming Gnosticism: Hans Jonas, and Hans Blumenberg. The Legitimacy of the Natural World." (Lazier 2003, pp. 619–37).

Technology, then, is not just an escape from a primal and superstitious human past; it is the latest iteration of what humans conceive of when they build cultures. The same themes of finitude, loss, and meaning are as present in our technologies as they were in ancient systems of religion and philosophies like Gnosticism (Geraci 2010, pp. 9–14, 31–38).

3. Are Our Present Bodies Crucial for Human Identity?

Though transhumanist programs range from the therapeutic (genetics, implants) to the full downloading of consciousness, the one constant is transcending the bodily limits of *homo sapiens*. Bodies are central to the transhumanist agenda. If the goal of transhumanists is to enhance the mind and preserve it in a more durable body, we should be thinking deeply about bodies. How our bodies mediate experience, and whether different bodies based in silicon or other materials might alter human experience, such that the distinctly human creature is erased, are crucial issues. Are there sacrosanct boundaries that should be respected as technology increasingly enters and affects our bodies? Is there a line that, once crossed, leads to the death of the human? For many, this may not be a loss because replacing the human body with something better is a step forward in the evolutionary process. No one romanticizes or mourns the loss of creatures before we evolved into *homo sapiens*. If *techno-sapiens* replaces us, it is doubtful anyone will grieve us either.

These are concerns that go to the core of what the human being is and is meant to be in the future. Presuming that some type of reverse engineering of the human brain could be done that would allow for human intelligence to exist in a non-biological platform, running algorithms that are of central importance to the existence of minds, would such a thing really be desirable? There may be a few sticky problems to solve, but achieving hardware parity with the brain at some point in the future is not outside the realm of possibility. Should we be skeptical of migration technologies that would allow consciousness and presumably identity to gradually shift from wetware systems (body–brain) to hardware systems (quantum computers)?

The incorporation of the trope, metaphor, or analogy of the brain as equivalent to a computer is a central article of faith for many who are working to create the posthuman future. It is a given that if we can engineer faster cognition or machine superintelligence in some form that can survive the death of human bodies, this will result in a better world. The pragmatism of efficient causality—the ability to effectively achieve a task—seems to propel our movement into the future.

The type of technological determinism inherent in Moore's Law (i.e., exponential growth in computer processing capacity) will no doubt result in more integrated networks, facilitating communication among billions of people and agents. When we improve on DNA or optical or quantum computing, we will discover capacities that we are not yet aware of (Ceruzzi 2005). Are we, though, trying to replicate something that is of a whole other order than intelligence alone? Our bodies developed through processes of chemical and biological interaction, beginning with the minutest level of things in the universe and scaling up from there in evolutionary time. This process produced a complex and complicated creature with distinct properties. Can these organic processes be replicated in such a way that does justice to where evolution has brought us? Put another way—are we capable of engineering artifacts that can create not just the type of intelligence we find in AI programs, but also the depth of knowing that comes from an embodied consciousness?

4. The Infinite Complexity of Embodiment

Human knowing of the world is a distinctly embodied phenomenon. Human language relies on images and meanings derived from our spatial orientation, movement, perceptions, and bodily feeling. The semantics of all human language relies inescapably upon the images and meanings of the movement of our bodies. Language has the sinews of our bodies behind it in some sense. Such things as gestures and expressions transfigure our bodies into information systems that create worlds and layers of meaning. Through our bodies, we create spaces of signification and symbol that mold and shape cultures. Our entrance into a speaking world is made possible by the body. We

inhabit a world of meaning inherited from the past, a web of experience that was set up at our birth (Merleau-Ponty 2012).

In his account of how human evolution has moved from mimetic through mythic culture to the theoretic understanding of the world, Robert Bellah shows how the very building blocks of those experiences we deem "religious" have their origins in bodily movement and vocal noise (Bellah 2011). Even in our abstract thinking with terms like transcendence/immanence, we experience the realities of in/out or near/far in bodily perceptions as we interact with the environment around us: "Viewed developmentally, experience is better understood as embodied behavior, where embodiment is understood at multiple levels from the neural to the phenomenological and behavior is broadly construed to include linguistic and mental events as well as overt actions. Conceived in this way, there is no way (*pace* the perennialists) to *unequivocally* establish the meaning of experience apart from its expression in embodied behaviors, linguistic or otherwise." (Taves 2009, p. 64). Emotions also factor into this. The joy, pleasure, fear, anger, and anxiety located in the body lead us to create through such things as play and ritual the foundations of religion (Bellah 2011, pp. xiv–3).

Self-organizing and emergent capabilities of biological networks specified and evolved within our particular and distinct world. We cannot escape this without a significant change in how the world itself would be perceived. Our very way of interpreting the environment, of changing that environment, occurs because we are embodied within it. We take our cognitive clues and structure and interpret the world from within the space of our body. We are incarnate knowers. Religion itself, instead of being a *sui generis* phenomenon, is the result of our deeming some human experiences—all of which are embodied—as being of special, even spiritual, significance (Taves 2009, pp. 61–66). For example, we move our bodies from one place to another and "journey" or "path" becomes a part of our religious language. Religion itself emerges from our being embedded within the world.

This is not to say that AI programs are not embodied, because they are to the extent that they are located in silicon or other materials, but they remain disincarnate in the sense that they are nowhere close to human bodies with their distinct biological/organic emergent systems. The question of reducing human experience to minds and information processing is important. Models of artificial intelligence that use pattern and symbol recognition can replicate and will surpass some of what human intelligence accomplishes, but can this capture the complexity of such experiences as empathy, compassion, or love?

Human consciousness operates in a way that goes beyond computational processing alone. Computer scientist and theologian Noreen Herzfeld points to the fact that embodied experience means that it is not just functional concerns of information processing that distinguish us; we are beings continually in a relationship of reciprocity with the world and others. AI researchers going back to Turing—who bases his famous test on relational interaction—understand that "the center of our being is dynamic and cannot be isolated from the bodies, societies, and natural world in which they are embedded" (Herzfeld 2002, pp. 310ff). Relationships are what truly define us.

This is one reason why relationships are of increasing importance to AI programs. The creation of machines that interact with humans has come a long way since COG and Kismet, but the authentic response to another human being involves more than recognition and response. To express an appropriate emotion means drawing on multitudes of human experience where memory creates a continually changing narrative of what gets learned (or not) about suffering, compassion, and empathy (Herzfeld 2015). Memories are not retrieved as intact wholes based on the pattern of one's neural connections, but by assembling the bits of them located throughout the body and then constructing them into the story that one believes to be true. Static memories, unaltered by human experiences, offer us a truncated existence. In this way, memory constitutes more than information to be retrieved; it is the story of persons constructed over time and circumstance in relationship to other bodies (Herzfeld 2013). The body allows for the appearance of novelty.

In organic self-organizing systems, new phenomena emerge not necessarily predicated on constituent parts. Mental properties like memory and empathy, and even consciousness itself, are

emergent phenomena of these biological systems, dependent upon, but not predicated on the physical substrates that form them. Human subjectivity itself constitutes a novel property not reducible to its constituent parts (Clayton 2004, pp. 107–39).[3] A crucial aspect of our embodied consciousness is found in our subjective apprehension of the world, aspects of which are our emotions, intuition, and feelings. Can discarnate models emphasizing the brain/mind equals the computer capture what something like an aesthetic experience feels like, or the depths of feelings that are mediated by an experience like forgiveness? We could program something like an aesthetic or moral response, but could we replicate the exact thing that human beings *feel* when they have an aesthetic moment or experience forgiveness? ((Nagel 1974), See also (Chalmers 1997) for a fuller examination of the problem of subjectivity.) The sublime experience of beholding the Sistine Chapel's ceiling when the brilliance of Michelangelo pops out, or the feeling of grief at losing a loved one, are not moments that we can shave off and label religious or even epiphenomenal; they constitute dimensions of the entirety of human experience. What gets left behind if the potential for these types of experiences disappears through the technological manipulation of the human being?

Transhumanism envisions our transcending biology or manipulating matter as a necessary part of the evolutionary process. We should not fear the progress this represents, nor feel anxiety that so much power is in our hands; the ability to enhance our lives only makes them better. For those who believe this usurps the divine power of creation, theologians like Philip Hefner challenge us to consider our role as created co-creators when thinking about science and technology. By emphasizing the *created* aspect of this term, Hefner calls upon theologians to realize their own contingency and reliance on God as they engage in the creative process of evolution. Thinking of ourselves as co-creators of the world allows for our powers to be used in ways that honor our moral and ethical responsibility for the planet (Hefner 1988).

Theologians who have welcomed this opening to partner with transhumanism are exploring how theology can inform and support emerging technologies. Thinking about the role of bodies in Christianity, Calvin Mercer explores how biblical writers understood the body, specifically the resurrected body. Using the resurrected or transformed body as a model of what a posthuman future might look like, Mercer is able to situate the Christian belief of a resurrected body (a very different body) with the ability of personhood existing in a cyborg or hybrid body (Mercer 2015, pp. 29–31). The transformed body does not have to constitute a diminished existence; it can open new doors to the future. The possibilities involved in this type of move give us the opportunity to reframe religion itself: "Perhaps the rise of transhumanism is another occasion to take a step back from anthropocentric religion and theology and reflect on how the religion and theological principles might apply to persons in a posthuman world. More specifically, is Christian theological anthropology flexible enough to view posthuman persons, or for that matter posthumans who do not meet the full criteria for personhood, as in the image of God?" (Mercer 2015, p. 30).

Mercer expresses caution about blanket acceptance of agendas like superintelligence, but he does think that "value loading" of AI programs might allow for more positive outcomes around our new creations. In his call for theological openness to the transhumanist project he embraces a fluidity of what sort of bodies persons will be able to exist in: "And if this creature is a product of the co-creative work of God and humans why would we not embrace it, as long as getting to that future is done in a way that satisfies ethical precepts" (Mercer 2015, p. 30). Given what our bodies have mediated

---

[3]　Emergence in the sense that I am using it is the idea that systems of life develop in such a way that the whole cannot be predicted on the parts that constitute it, and that true novel properties emerge in evolution. It is a non-reductive argument in that the parts of the system cannot properly explain properties that are emergent features of a system. One of the most controversial aspects of this process comes when the issue is the relationship of the brain to the mind, especially when the idea of mental properties influencing material properties by a top down causality is invoked (think the Placebo effect). There is no consensus on this idea, some philosophers arguing that the mental states are nothing more than epiphenomenon, but evolution itself shows that we have now arrived at the place where mental properties will control the future of evolution and top down causalities will have much to say about what the future looks like.

to us over time, the interpretations of the world, the emergence of subjectivity, the constellation of experiences that have constructed human identity, is Mercer's optimism that we can replicate the complexity of this in other bodies warranted?

5. Our Bodies Contains Multitudes

Another dimension of human being complicates this optimism for some elements of transhumanism—we are shaped through informational processes taking place within the entire body, not just the brain. Candace Pert points to how the body and mind are connected and how emotions and the knowing associated with them are manifested throughout the body, not just in neuronal connections located within the brain (Pert 1986). Pert's work comes about through her investigation of neuropeptides—peptide structures produced by nerve cells in the brain (though not only there)—and receptor sites in the body that accept neuropeptides. Peptides are strings of amino acids that code for certain chemical interactions within the body. Produced by DNA, peptides move to the axon ball of neurons waiting for the right electrophysical event to release them. Once released, these peptides seek receptors in the body that serve as mechanisms to sort out the information exchanges carried by the electrochemical interactions (Pert 1986, p. 10).

Neuroscience agrees that emotions are mediated by the limbic system of the brain and these are areas that are rich with neuropeptides and their receptors, but they are not the only place where the chemical interactions that affect our consciousness are located. Neuropeptides and their receptors are found everywhere through the body, not just the brain. Research has shown that human monocytes—cells that move through the body—contain these receptor sites as well. These are the chemicals that impact our moods, feelings, and certainly color our perceptions of the world as experienced within our bodies (Pert 1986, p. 13). Cells of the immune system not only have receptors for neuropeptides, but manufacture them as well. There are subsets of immune cells that make beta-endorphins and there is ongoing study showing receptor cells within other organs and the circulation system. Evidence is plentiful that when someone says they have a "gut feeling" about something, they are responding to the interaction of neuropeptides and their receptors that line the human intestine (Pert 1986, pp. 13–14). Experimental work suggests that glial cells may have been monocytes that rose in the bone marrow and circulated around the body until they enter the brain and transform into glial cells (Pert 1986, p. 16).

We may need to think of the mind itself differently—as the information flowing not just through the brain, but through the whole body. The physical substrate of mental properties is the brain *and* the body, as well as an immaterial energy that has to do with information flowing within the entire body. Pert's work suggests that instead of the dualism we seek to escape of mind *and* body, we should perhaps think of ourselves in terms of bodymind.

If Pert and others who are investigating the chemical processes of our bodies are right, then the whole metaphor of the brain as computer needs to be reconsidered. A more nuanced understanding of our consciousness, the impact of immaterial energies on physical substrates, and the informational processing that takes place in the entirety of the human body, would show us that while artificial intelligence may be transferable, human consciousness and personhood is another thing altogether.

Given the complexity of biological systems, this puts the issue of a virtualized consciousness into sharp relief. I can readily envision a virtualized intelligence through some form of information download from our brains, but given that it is the subjective qualia of our experiences that define a significant piece of our personal identity, I find it difficult to see a road to the human/machine cyborg that incorporates the wisdom of the neuropeptides. The qualities of our experiences that lead us to conceive such things as compassion, love, art, relationships, and religion—which itself is descriptive of a world that in some very real sense is "in" us—leads me to think that the nuanced biological complexity of humankind cannot be technologically replicated.

Even in the pursuit of something as worthy as human enhancement, either genetically or through implant technologies, is there a boundary crossed into an essentially different creature than *homo*

sapiens? Keeping the intricacy of the human body, we can work on technologies that will reverse aging and other cellular deterioration. Even skeptical theologians see this as a proper use of our creative powers (See, for example, (Cole-Turner 2011)). This does not have to have a deleterious impact on persons, but is there a point in this process where something distinctly human gets lost? If some enhancements deal with intelligence amplification through implants, is there the danger that our brains would rewire to run only on the basis of the implanted programs? We could end up replicating and extending the initial inputs *ad infinitum*, creating a recursive knowing that never changes in interaction with others or the environment. The irony of this would be that in our desire to escape the body we become irretrievably imprisoned by our own technologies, unable to experience any of the novelty of life that has given us our very subjectivity. Without our particular bodies, we disappear.

6. Everything Old is New Again

While transhumanism does not replicate ancient Gnosticism exactly, it is the reappearance of a recurring philosophy that permeates history and continues to shape human cultures. Transhumanism shares the Gnostic notion of bodies and the world being prisons, but it differs from Gnosticism in that our emancipation will come from our commitment to pragmatic and technological solutions (Coenen 2014, p. 767). The ideology reappears, though in different form: "The transhumanist visions are seen as having some plausibility precisely because the views on science, technology, human corporeality, and nature expressed by them are radicalised versions of ideas and beliefs which have strongly shaped Western intellectual history" (Coenen 2014, pp. 766–67).

Even with the goods of enhancement, transhumanism, like Gnosticism, reflects an alienation from the *eros* of the sensuous world. Once life enters artificiality, it risks coming loose from the world itself. The counterfeit of reality is a negation of being. This sounds, perhaps, too much like nostalgia for the time when we knew our place in the universe and the hidden God, *deus absconditus*, resided in heaven, working all things out according to divine providence. The idea of final causes used to comfort us in the darkness, but most do not mourn the disappearance of divine purpose within the processes of nature given our successful scientific and technological abilities. In our hands nature itself becomes a malleable thing, without its own integrity, save as material for us to control and master. Whether the technology is artificial chromosomes, implantable computer chips, or artificial intelligence, the assumed goal is the necessity to escape the confines that nature and time have placed on us.

The assumed deficiency of nature is an ontological claim, but we cannot say with certitude that nature, for all its challenges, does not contain its own purposes. We have developed subjective capacities within our bodies through vast amounts of time that have enhanced our lives. Hope, forgiveness, awe, or wonder are only some of the foundations upon which the sublimity of our lives rests. Human biology has not impeded our growth into this world; it has given us the language and ability to contemplate aspects of it we would not experience without the way our bodies have evolved. Our bodies have been the means to create the rich textures of our lives. Because we no longer have adequate accounts of natural phenomena, rejecting the notion that nature had its own trajectories in the universe's process of becoming, we denigrate what nature has given.

Of course, the response to this is that we will still have bodies, and we will lose none of those capacities, but our new bodies will be better equipped to deal with the challenges of the future. Imagine not having to strip resources from the planet in order to eat, feel warm, or survive; not just humanity, but nature itself will be enhanced in the new world. No one decries the medical advancements that have been able to extend our lives; why should we stand in the way of progress? Yet, nested within the transhumanist vision is the recognition that we will have to become less human to survive: "Emphatically humanist at its core, transhumanism has always, almost religiously, aspired to dissolve the humanist individual, even long before the latter's theoretical decentering became widespread in academia" (Coenen 2014, p. 764).

Wariness concerning where our technology is taking us does not just come from fearful Luddites huddling in the corner. Bill Joy, Nick Bostrom, and Jaron Lanier are scientists and innovators who

warn that the unforeseen consequences of our technological explorations may have an existentially detrimental impact on nature and humankind. Every door we open with our technical abilities reveals massive complexities that we should consider more deeply before plunging onward. One only need look at the net of fear we spread over the world by splitting the atom. The concerns about creating superintelligence come from those who are most knowledgeable about the risks (Joy 2000; Lanier 2010; Bostrom 2016). This does not mean that we reject all our science and technology, but we do need to more carefully consider the consequences of our technologies. Yet, despite this caution, in the face of unknown consequences, speed seems to have become an objective necessity for us as we plunge into the future.

In the face of this technological inevitability, those voices expressing concern are not given sufficient attention. Our technology constrains our decision making into avenues that have most to do with mastery and control. However, technical mastery is not the only ideology that shapes the future. Those who control the money enjoy the mastery. Theologian Ted Peters worries that laissez-faire capitalism is so baked into the value systems of the technological ethos that all technological advancement will be directed to the interests of investors, leaving those without power at the mercy of those who possess the ability to control society (Peters 2011, pp. 70–71). This raises the issue of how the reality of transhumanism will look as opposed to the hopeful visions of it. Social Darwinism lurks in the shadows, claiming it can pick the winners and losers. In this case, it is those with the most resources who are able to control the contours of the new human being in the posthuman world. If history is any indication, the dystopian works of science fiction may be more prescient about what the future looks like than we want to think.

That future will be shaped by how we think about the world and our place in it. Certainly, a type of nihilism about a universe devoid of meaning can push us forward; or, we may recover a sense of teleology about the world we are embedded within.[4] Contemplation on nature might give us the picture of something that we need not be alienated from. The universe is not so much things or particles as much as it is a process made up of events, relationships, and experiences that we access in our biological bodies, which, for all their limitations, have brought us to the present. The richness of our interior worlds, our journey to the creation of the aesthetic, occurred because of—not in spite of—our embodiment within the world (Clayton 2004, pp. 163 ff.).

Many transhumanists counter that maximizing our potential is also a response to the universe's lure.[5] It is nature that has brought us to this point, and we should use our powers to improve upon it. However, our track record at improving our environment is consistently at odds with our use of technology. We are more likely to use technology to increase our powers, like intelligence, than the moral and ethical qualities of empathy or care for the natural world. This raises a larger question about whether we have developed sufficient habits, ethics, or wisdom to acquire and use such powers in ways that would not constitute the paths to our disappearance. Is the economic capital presently driving our technologies and science more of an existential threat than we realize? Is it wealth that gets to decide what bodies look like in the future, or which bodies are worth valuing and saving? We risk doing great harm in our desire to do great good.

Though it is inevitable that we will create some type of superintelligence, we will not likely create enhanced compassion to accompany it. Certainly, the ported brain does not seem a likely candidate

---

4　The philosopher Hans Jonas was deeply concerned about the ways in which modern technology was pushing aside assumptions about ethics and natural purpose. See, for example, "Technology and Responsibility: Reflections on the New Tasks of Ethics." (Jonas 1973, pp. 31–54). See also his treatment of the ways in which Gnosticism still shapes our thinking about the world in "Gnosticism and Modern Nihilism." (Jonas 1952, pp. 435–52).

5　Kurzweil actually does have this type of teleology in mind when he ascribes a certain type of purpose to the universe. The goal of the universe is increased intelligence. "The purpose of the universe reflects the same purpose as our lives: to move toward greater intelligence and knowledge" (Kurzweil 2005, p. 372; Herzfeld 2013, p. 69). At this point, however, Kurzweil enters into metaphysical speculation that borders on the religious. Such claims as purpose and meaning can be made, of course, but at that point we've left the world of science, and Whitehead's understanding might hold far more wisdom than Kurzweil's.

for capturing this dimension of human experience. Until qualities such as compassion, forgiveness, or empathy become our priority, I suspect that no matter how far we are able to move toward the eschatology of batteries and silicon, our Gnostic dreams of immortality constitute an existential threat to the fragile wonder that is humankind.

Conflicts of Interest: The author declares no conflict of interest.

References and Notes

Bainbridge, William Sims. 2014. Progress toward Cyberimmortality. In *The Scientific Conquest of Death*. Buenos Aires: Libros en Red, pp. 107–22.

Becker, Ernest. 1987. *The Denial of Death*. New York: Free Press.

Bellah, Robert N. 2011. *Religion in Human Evolution: From the Paleolithic to the Axial Age*. Cambridge: Belknap Press.

Bostrom, Nick. 2016. *Superintelligence: Paths, Dangers, Strategies*, Reprint ed. Oxford: Oxford University Press.

Ceruzzi, Paul E. 2005. Moore's Law and Technological Determinism: Reflections on the History of Technology. *Technology and Culture* 46: 584–93. [CrossRef]

Chalmers, David. 1997. Facing up to the problem of Consciousness. In *Explaining Consciousness: The 'Hard Problem'*. Edited by Jonathan Shear. Cambridge: MIT Press.

Clayton, Philip. 2004. *Mind and Emergence: From Quantum to Consciousness*. New York: Oxford University Press.

Coenen, Christopher. 2014. Transhumanism in Emerging Technoscience as a Challenge for the Humanities and Technology Assessment. *Teorija in Praska* 51: 754–71.

Ronald Cole-Turner, ed. 2011. *Transhumanism and Transcendence: Christian Hope in an Age of Technological Enhancement*. Washington: Georgetown Press.

Geraci, Robert. 2010. *Apocalyptic AI: Visions of Heaven in Robotics, Artificial Intelligence, and Virtual Reality*. New York: Oxford University Press.

Hefner, Philip. 1988. The Evolution of the Created Co-Creator. *Currents in Theology and Mission* 15: 512–25.

Herzfeld, Noreen. 2002. Creating in Our Own Image: Artificial Intelligence and the Image of God. *Zygon* 37: 303–16. [CrossRef]

Herzfeld, Noreen. 2013. Outsourced Memory: Computers and Conversation. *Perspectives on Science and Christian Faith* 65: 176–86.

Herzfeld, Noreen. 2015. Empathetic Computers: The Problem of Confusing Persons and Things. *Dialog* 54: 34–39. [CrossRef]

Johnson, Lee A. 2015. Return of the Corporeal Battle: How Second Century Christology Struggles Inform the Transhumanism Debate. In *Religion and Transhumanism: The Unknown Future of Human Enhancement*. Edited by Calvin Mercer and Tracy J. Trothen. Westport: Praeger.

Jonas, Hans. 1952. Gnosticism and Modern Nihilism. *Social Research* 1: 435–52.

Jonas, Hans. 1973. Technology and Responsibility: Reflections on the new tasks of ethics. *Social Research* 1: 31–54.

Joy, Bill. 2000. Why the Future Doesn't Need Us. *Wired Magazine*. April. Available online: https://www.wired.com/2000/04/joy-2/ (accessed on 28 December 2016).

Kurzweil, Ray. 2005. The Singularity is Near: When Humans Transcend Biology. New York: Penguin Books.

Lanier, Jaron. 2010. You Are Not a Gadget: A Manifesto. New York: Vintage Press.

Lazier, Benjamin. 2003. Overcoming Gnosticism: Hans Jonas, and Hans Blumenberg. The Legitimacy of the Natural World. *Journal of the History of Ideas* 64: 619–37. [CrossRef]

Mercer, Calvin. 2015. Bodies and Persons: Theological Reflections on Transhumanism. *Dialog* 54: 27–33. [CrossRef]

Merleau-Ponty, Jean. 2012. *Phenomenology of Perception*. Translated by Donald A. Landes. New York: Routledge, pp. 80–81.

Nagel, Thomas. 1974. What is it like to be a bat? *The Philosophical Review* 83: 435–50. Nagel uses the bat to ask the same question. We can understand all the factors that bats use to experience the world, but we no ability to really know that experience.

Pert, Candace. 1986. The Wisdom of the Receptors: Neuropeptides, the Emotions, and Bodymind. *Advances* 3: 8–16.

Peters, Ted. 2011. Progress and Provolution: Will Transhumanism Leave Sin Behind? In *Transhumanism and Transcendence: Christian Hope in an Age of Technological Enhancement*. Edited by Ronald Cole-Turner. Washington: Georgetown University Press.

Shiffman, Mark. 2015. Humanity 4.5. *First Things* 257: 23–30.

Taves, Ann. 2009. *Religious Experience Reconsidered*. Princeton: Princeton University Press, pp. 61–66.

Vinge, Vernor. 1993. Technological Singularity. Available online: http://www.frc.ri.cmu.edu/~hpm/book98/com.ch1/vinge.singularity.html (accessed on 26 December 2016).