Chapter 4

Mormon Transhumanism

by Lincoln Cannon

"We are poised somewhere in between animals and divinities, aided, enhanced, and altered by technologies; changing and changed by our environments, both natural and cultural. Arguably, the Bible begins as a speciesist manifesto--only humanity is created in the image of the divine...However, the Bible also contains multiple moments of disruption, boundary crossing, and category confusion: animals speak, God becomes man, spirits haunt the living, and monsters confound at the end. All of these stories explore the boundaries of the human in ways that destabilize the very category of the human. All of these stories engage thinking that broadly falls under the umbrella term *posthumanism.*"

-- Jennifer Koosed[1]

Abstract

Mormon Transhumanism is the idea that humanity should learn how to be compassionate creators. This idea is essential to Mormonism, which provides a religious framework consistent with naturalism and supportive of human transformation. Mormon Transhumanists are not limited to traditional or popular accounts of religion, and embrace opportunities and risks of technological evolution. Although usually considered secular, Transhumanism originates partly in religious Humanism and sometimes functions as religion. Accelerating change contextualizes Mormon Transhumanist narratives, which illustrate parallels between Mormonism and Transhumanism. Mormon Transhumanists have produced secular arguments for faith in God and religious arguments for Transhumanism. This is a revision and update of "What Is Mormon Transhumanism?"[2]

Key Terms

Mormonism, Transhumanism, enhancement, robots, gods, New God Argument, posthumanity, superhumanity, prophecy, Joseph Smith

[1] Jennifer L. Koosed, "Humanity at Its Limits," *The Bible and Posthumanism,* ed. Jennifer I. Koosed (Atlanta: Society of Biblical Literature, 2014) 3.

[2] Lincoln Cannon, "What Is Mormon Transhumanism?" *Theology and Science* 13, no. 2 (2015): 202-18.

Bio

Lincoln Cannon is a technologist and philosopher, and leading advocate of technological evolution and postsecular religion. He is a founder, board member, and former president of the Mormon Transhumanist Association. He is a founder and board member of the Christian Transhumanist Association. And he formulated the New God Argument, a logical argument for faith in God that is popular among religious Transhumanists. Lincoln is CEO at Thrivous, the human enhancement company. He holds degrees in business administration and philosophy. He is married with Dorothée Vankrieckenge, and they have three children.

Transhumanism is a new way to think about the future of humanity.[3] As Transhumanists, we have discarded the old assumption that human nature is or ever was static, not only because science has demonstrated biological evolution, but especially because history itself is cultural and technological evolution. We are diverse in background and perspective, but our common expectation is that humanity will continue to evolve. Our common ambition is to shape that evolution intentionally, changing our bodies and minds, our relationships, and our world for the better – perhaps even to learn, love, and create together indefinitely.[4]

Some have accused Transhumanism of being the most dangerous idea.[5] The risks truly are as horrible as the opportunities are wonderful. Even acknowledging concerns and emphasizing ethics, we might agree with our critics that we are trying to "play God." After all, what are the alternatives? What are the prospects for children who would not try to "play adult;" and who would not mature from playing, to learning, to being? Surely such a restricted nursery would soon prove too small, even for the smallest of the living. But for us, who know we are not dead yet, why not believe the most dangerous idea? Why not live?

Whatever the secular response (perhaps properly excusing itself from vying for the high spirit of humanity), the Mormon Transhumanist

[3] Nick Bostrom, "What Is Transhumanism?" Nick Bostrom website, 2001, http://www.nickbostrom.com/old/transhumanism.html (accessed June 04, 2016).

[4] "Transhumanist FAQ," Humanity+, http://humanityplus.org/philosophy/transhumanist-faq/ (accessed June 04, 2016).

[5] Francis Fukuyama, "Transhumanism – the World's Most Dangerous Idea," *Foreign Policy*, no. 144 (2004): 42.

response is a quickened heart and brightened eyes. We have heard this story before.[6] It is our calling; and our choice has not changed.[7] Children of God would try to play God, and more. We would learn how to be God. Dangerous indeed, and worthy of exquisite caution and utmost reverence. But for the child, there is no other way. Mormon Transhumanism stands for the idea that humanity should learn how to be God,[8] and not just any kind of god, not a god that would raise itself in hubris above others,[9] but rather the God that would raise each other together as compassionate creators.[10] Humanity should learn how to be Christ.[11]

A. Mormonism

Mormonism itself is an immersive discipleship of Jesus Christ.[12] Not so much a religion about Jesus, it is an aspiration to live the religion of Jesus.[13] With Jesus,[14] we would trust in,[15] change toward,[16] and fully immerse our bodies and minds in the role of Christ.[17] We would become messiahs,[18] saviors for each other,[19] consoling and healing and raising,[20] as exemplified and invited by Jesus.[21] We would also endure in that

[6] Moses 4:1-3.
[7] Abraham 3:24-27.
[8] Joseph Smith, *Teachings of the Prophet Joseph Smith*, compiled by Joseph Fielding Smith (Salt Lake City: Deseret News Press, 1938), 346.
[9] 2 Thessalonians 2:3-4.
[10] Romans 8:16-17.
[11] Colossians 1:27.
[12] 2 Nephi 25:26.
[13] Doctrines & Covenants 93:19-20.
[14] 2 Nephi 31:5-13.
[15] Ether 13:4.
[16] 3 Nephi 11:37-40.
[17] Mosiah 5:9.
[18] 2 Corinthians 1:21.
[19] Doctrines & Covenants 103:9.
[20] Matthew 10:8
[21] John 14:12

role,[22] working to reconcile with our relations and world,[23] through suffering and even death if needed,[24] anticipating the prophesied day of transfiguration and resurrection to immortality in eternal life.[25] So while Mormons may not be Christian by creed,[26] we are plainly Christian by gospel.[27]

Joseph Smith was born in the state of New York in 1805.[28] Joseph, as he liked to be called, spoke and wrote about visions and revelations from God, beginning in adolescence and continuing throughout his life. In 1830, Joseph published the *Book of Mormon*. He described the book as a revealed translation from engravings on golden plates by an ancient American prophet named Mormon, who had compiled a religious history of his people, including a visit from the resurrected Jesus Christ. Soon after publishing the book, Joseph founded the Church of Christ to be a restoration of primitive Christianity. The church grew quickly, amidst controversy and sometimes violent persecution, until a mob killed Joseph in 1844, and the already-strained church fractured.

Brigham Young emerged as the recognized leader of the majority of Mormons, who he led across the plains and mountains of the American west to settle in what has become the state of Utah. There, in 1851, he incorporated The Church of Jesus Christ of Latter-day Saints, which now consists of over 15 million members around the world.[29] Many Mormons that did not follow Brigham Young eventually coalesced around the leadership of Joseph Smith III, the oldest surviving son of Joseph Smith. In 1860, he established The Reorganized Church of Jesus Christ of Latter-day Saints, which changed its name in 2001 to

[22] 2 Nephi 31:16-21
[23] 3 Nephi 12:21-24
[24] Doctrines & Covenants 138:11-14
[25] Ibid., 63:49-52
[26] Joseph Smith History 1:19
[27] Mormon 7:8-9
[28] Richard Bushman, *Joseph Smith: Rough Stone Rolling* (New York: Random House, 2005).
[29] "Facts and Statistics," The Church of Jesus Christ of Latter-day Saints, http://www.mormonnewsroom.org/facts-and-statistics (accessed May 28, 2016).

Community of Christ, and today consists of over 250,000 members.[30] In addition to these large Mormon denominations, there are numerous small denominations, such as the Fundamentalist Church of Jesus Christ of Latter-day Saints, which continues to practice polygamy, unlike most other Mormon denominations.

Mormonism posits a metaphysics, in contrast to classical substance dualism, that is consistent with some accounts of physicalism and naturalism. According to our scriptures, everything is material, including our minds;[31] and everything is embodied, including God.[32] Moreover, God did not create matter.[33] Instead, as Joseph described it, God was once as we are now: finding ourselves in the midst of minds and matter, instituting new laws within the context of existing laws, and organizing the world out of chaos.[34] In other words, God became God,[35] and it was not the first time – nor should it be the last.

Mormonism offers a theodicy that explains evil as an unavoidable risk inherent in any opportunity to create more genuine creators.[36] At a grand council in heaven before the creation of this world, the children of God presented two plans.[37] One plan would optimize for thriving cultivation. The other would optimize for suffering mitigation. The first would be challenging, with wonderful joy and terrible misery: new angels and demons, new gods and devils, even a new Christ and a new Satan. The second would be easy. No real losses, and yet no real gains. As the story goes, God chose the first and war ensued, continuing to this day.[38]

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[30] "General Denominational Information," Community of Christ, http://www.cofchrist.org/pr/GeneralInfo.asp (accessed November 1, 2014).
[31] Doctrines & Covenants 131:7.
[32] Ibid. 130:22.
[33] Ibid. 93:23, 29, 33.
[34] Smith, *Teachings of the Prophet Joseph Smith*, 354.
[35] Ibid., 345-346.
[36] 2 Nephi 2:11.
[37] Moses 4:1-3 and Abraham 3:24-28.
[38] Revelation 12:7-9.

Mormonism projects an eschatology of transformation, of the Earth into heaven,[39] and of humanity into God,[40] and would thereby provoke us to fervent participation in its narrative.[41] Our scriptures situate us in a time of rapid progress,[42] apocalyptic risk, and millennial opportunity.[43] It culminates in the return of Christ, not as a solitary wanderer, but like the rising sun for all to see,[44] and for all to be like.[45] The scriptures go on to describe a Millennial Earth, beyond present notions of poverty or death, where the living are transfigured and the dead are resurrected to immortality.[46] Then the Earth itself is transfigured,[47] becoming like a crystal globe, a sea of glass and fire, where all things are manifest: past, present, and future.[48] Its inhabitants receive the full grace and power of God,[49] and they learn of a yet higher order of worlds.[50]

B. Postsecular Religion

For some, God is not a living proposition, let alone prophecy or religion. They wonder if we have not heard that God is dead,[51] and they are right to wonder. Following their Gods, traditional religions may be dying, particularly in technologically advanced and prosperous places.[52]

[39] Doctrines & Covenants 88:25-26.
[40] Ibid. 132:20.
[41] Ibid. 43:23-25.
[42] Ibid. 88:73-80.
[43] Ibid. 43:26-33.
[44] Smith, *Teachings of the Prophet Joseph Smith*, Matthew 1:25-26.
[45] Moroni 7:48.
[46] Doctrines & Covenants 101:26-34.
[47] Ibid. 63:20-21.
[48] Ibid. 130:6-9.
[49] Ibid. 76:92-95.
[50] Ibid. 130:10.
[51] Friedrich Nietzsche, *Thus Spake Zarathustra*, translated by Thomas Common (New York: Dover Publications, 1999), 3.
[52] James K. A. Smith, "Secular Liturgies and the Prospects for a 'Post-Secular' Sociology of Religion," in *The Post-Secular in Question: Religion in Contemporary Society*, edited by Philip S Gorski (New York: NYU Press, 2012), 159-84. doi:10.18574/nyu/9780814738726.003.0007.

Observing this, many have embraced the secularization hypothesis that religion itself is dying. However, that hypothesis is showing its age, embraced more by anti-religious voices in popular culture than by careful students of the religious phenomenon, among whom another hypothesis is gestating.[53]

If God is merely a supernatural superlative, he very well may be dead, but positing such as God misses the practical function of God. God always has been, and is at least, a posthuman projection, an extension and negation of human desire, imagined and expressed within the constraints of human thought, language, and action.[54] That is not to say God is only so much. To the contrary, we may have moral and practical reasons to trust that others have already realized posthuman projections.[55] However, no matter your attitude toward faith, God is at least this posthuman projection. Understood in terms of that function, God clearly is not dead and never was, except perhaps to the extent recurring death is part of evolution, including that of God.

If prophecy is merely fortune-telling, it too may be dying, but that also fails to account for function. Whether or not it becomes fore-telling, prophecy is always forth-telling: a socially interactive work of inspiration, even provocation, that would steer us from perceived risks toward desired opportunities. At its best, it is a persuasive expression of compassion, even if punctuated with serious warnings, aimed at a shared sublime potential, not as narrowly preconceived, but rather as openly imagined from a position that would transcend itself in genuine creation. But to function with power, prophecy must be connected, in the heart and mind of its recipient, with living possibilities, especially pressing

[53] Jürgen Habermas, "Notes on Post-Secular Society," *New Perspectives Quarterly* 25, no. 4 (2008): 17-29.
[54] Sigmund Freud, *Civilization and Its Discontents*, translated by James Strachey (New York: Norton, 1961), 45.
[55] Lincoln Cannon and Joseph West, "Theological Implications of the New God Argument," in *Parallels and Convergences: Mormon Thought and Engineering Vision*, edited by A. Scott Howe and Richard L. Bushman (Salt Lake City: Greg Kofford Books, 2012), 111-21.

necessities and urgencies.[56] Prophecy matters, becoming fore-telling from forth-telling, only to the extent it reaches into us and changes our thoughts sufficiently to change our words and actions, which just might change our world.

Likewise, if religion is merely genuflection to the supernatural, it very well may be dying, but again that overlooks function. Many of us have regarded religion narrowly, and much that is supposed to be secular may actually function as religion.[57] For example, some claim inspiration from science or ethics. Awe fills us as we contemplate the vastness of space or the voice of the people. Yet the inspiration is not merely in the reductionist implications of science or the procedural adjudications of ethics. Rather esthetics is woven through them, tying them together in meaning, and that is why we care about science or ethics. Esthetics shape and move us, and at their strongest, they provoke us as a community to a strenuous mood.[58] When they do that, they function as religion, not necessarily in any narrow sense, but esthetics that provoke a communal strenuous mood may be understood to function as religion from a postsecular vantage point.[59]

Of course, none of this means science or ethics should or even could be displaced by religion. To the contrary, science should continue to reconcile our contending accounts of experience, as ethics should our contending accounts of desire.[60] Each should expand its reach to the uttermost,[61] always better informing our esthetics, affecting each other in a feedback loop.[62]

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[56] Émile Durkheim, *The Elementary Forms of Religious Life*, translated by Carol Cosman (Oxford: Oxford University Press, 1912), 325-327.
[57] John Milbank, *Theology and Social Theory: Beyond Secular Reason* (Oxford: Blackwell, 2006).
[58] William James, *The Will to Believe, and Other Essays in Popular Philosophy, and Human Immortality* (New York: Dover Publications, 1956), 213.
[59] James K. A. Smith, "Secular Liturgies and the Prospects for a 'Post-Secular' Sociology of Religion."
[60] James, *The Will to Believe*, 190.
[61] Sam Harris, *The Moral Landscape: How Science Can Determine Human Values* (New York: Free Press, 2010).
[62] Albert Einstein, *The Private Albert Einstein*, compiled by Peter A. Bucky and Allen G. Weakland (Kansas City: Andrews and McMeel, 1992), 85.

Yet even as science and ethics increasingly empower us, we should not fool ourselves into supposing they will ever be finished or sufficient in themselves.[63] It is not enough that we can describe our world through science or imagine a better world through ethics. We also want to make a better world. We can do that through engineering and governance, but it is also not enough that we can make a better world. We want to feel it, sometimes powerfully, and more: we want to share our powerful feelings with others in ways that move us together. As engineering and governance are action on science and ethics, religion is action on esthetics. As engineering and governance are the power of science and ethics, religion is the power of esthetics.

We care for and use science and ethics only in accordance with esthetics, which presents itself as foremost among them in the most vital moments of life, when we must act, according to whatever wisdom and inspiration we might have. Life cannot wait.[64] How will we act? Will we see beauty in science? Will we feel unity in ethics? Will we care, and how much will we care? Could our degree of concern make a practical difference? These questions matter to all except perhaps the most apathetic, escapist, or nihilistic among us. These questions and answers scope our future.

If we can raise our eyes from the altars of religious and anti-religious dogma, we will see that the hand raised to finish the dying God is the sign of the oath to the resurrecting God. If we can keep our eyes raised, resisting the carnage below, we will also see the hand is our own and it holds a blade that is aged and stained. That is when we have a choice, either to repeat the old sacrifices of our ancestors, or finally to make the new sacrifice that they always implied: we can put ourselves on the altar and learn how to be God. We can recognize that the negation of one posthuman projection always implies another, misrecognized

[63] Durkheim, *The Elementary Forms of Religious Life*, 325-327.
[64] Ibid.

until humanity embraces its transformation.[65]

C. Technological Evolution

For some, the idea of transformation into posthumanity conjures images of comic book cyborgs with gun arms and laser eyes. But most would agree that gun arms and laser eyes would not be particularly desirable transformations, either practically or esthetically. For better examples, look at the technology that is transforming you right now. You may be using a computing device to extend your ability to communicate. You may be reading through glasses, contacts, or surgically-modified eyes, or listening through hearing aids or cochlear implants. You are probably wearing clothing to enhance your ability to adapt to environmental change. Under those clothes, you might have implants or prosthetics. Through your blood, drugs may be relieving pain, heightening attention, or facilitating growth. That is just now. Think through the rest of the day leading up to this moment. Think through your life. Consider human history. If technologically-enhanced humans are cyborgs then we have always been cyborgs.[66] We have always been transforming humans, transhumans, and to the extent we have welcomed that, we have been implicit transhumanists. At least in context of the past and present, that is not particularly controversial.

The controversy arises when we look forward. How will technology change us in a few years or decades?[67] What about a thousand years from now? How many drugs, surgeries, prosthetics, and other changes are there between humans and posthumans, as different from us as we now are from our prehuman ancestors? Is it possible to change that much? If so, should we?

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[65] Hava Tirosh-Samuelson, "Transhumanism as a Secularist Faith," *Zygon* 47, no. 4 (2012): 710-34.
[66] B. E. Brasher, "Thoughts on the Status of the Cyborg: On Technological Socialization and Its Link to the Religious Function of Popular Culture," *Journal of the American Academy of Religion* LXIV, no. 4 (1996): 809-30.
[67] Ray Kurzweil, *The Singularity Is Near* (New York: Penguin Books, 2005).

Sometimes we talk about humans becoming more robotic or robots becoming more human. When thinking of robots, we might feel cold metal or hollow plastic. If that is what robots are then we are not and never should (or could meaningfully) be robots. However, such language relies on a dichotomy that is increasingly insufficient for describing not only the possibility space, but even the actuality space. Does a human receiving a prosthetic limb or an artificial heart become less human? Can a body originating from artificial DNA, conceived through an artificial process, or gestated in an artificial environment ever be human, even if it is practically indistinguishable from natural humans? For that matter, how natural are humans? Are agriculture and medicine natural? The blurring between natural and artificial is as ancient as the stick our distant ancestor wielded to extend her reach, and the leaves donned to enhance his skin. In an important sense, a synthesis of anatomy and tools is part of what made us human, empowering us above and differentiating us from our prehuman ancestors. In that sense, perhaps we have always been robots, for at least as long as we have been humans.

Why do we want to enhance ourselves? The answer is not new. We want to enhance ourselves for all the reasons we have made tools since the beginning of history. Tools empower us. So we will continue to build more and better tools, and their synthesis with our anatomies will become increasingly seamless and intimate, because we want to and because we can, for the power it provides.

Like all power, tools and their intimate evolution into body and mind enhancements are not inherently good or evil. Rather, they are both risks to mitigate and opportunities to pursue according to whatever wisdom and inspiration we might have. On the one hand, tools can empower us against each other. Some hoard, and others deplete. Elites form, totalitarians control, and tyrants oppress. Artificial catastrophic

risks well beyond those of nuclear weapons present themselves.[68] Perhaps we could realize our worst imaginations of the Apocalypse. On the other hand, tools can also empower us for each other. Already we have used them to build, relate, console, and heal in ways our distant ancestors imagined only God to have the capacity. Perhaps someday we might transfigure ourselves into ageless bodies.[69] We might even raise each other as sublime minds that relate with unfathomable compassion and conceive thoughts that in themselves constitute nothing less than the creation of new worlds.[70] In any case, Mormon or otherwise, Transhumanists affirm that we can and should change through continued ethical use of technology to expand our abilities.

D. Transhumanism

Transhumanists usually trace our ideological origins to secular Humanism. Pre-Socratic Greek philosophers looked beyond traditional gods for scientific explanations of the world. Seventeenth-century astronomer Galileo Galilei deferred to human observation when conflicting with ecclesiastical authority. Eighteenth-century scientist Marquis de Condorcet eschewed religion, claiming that reason and medical science would perfect humanity.[71]

Although most self-identified Transhumanists today are secular, Transhumanism also originates in part from religious Humanism. New Testament writers and centuries of early Orthodox and Catholic authorities syncretized with Neoplatonism,[72] the popular science of their

[68] Nick Bostrom, ed., *Global Catastrophic Risks* (Oxford: Oxford University Press, 2008).
[69] Aubrey de Grey, *Ending Aging: The Rejuvenation Breakthroughs that Could Reverse Human Aging in Our Lifetime* (New York: St Martin's Press, 2007).
[70] Anders Sandberg, "The Physics of Information Processing Superobjects: Daily Life Among the Jupiter Brains," *Journal of Evolution and Technology* 5, no. 1 (1999).
[71] George Dvorsky, "Marquis De Condorcet, Enlightenment Proto-transhumanist," Institute for Ethics and Emerging Technology, January 26, 2008, http://ieet.org/index.php/IEET/more/dvorsky20080126 (accessed June 04, 2016).
[72] Edwin Hatch, *The Influence of Greek Ideas on Christianity* (New York: Harper Torchbooks, 1957), 32-33; and Edward K. Rand, *Founders of the Middle Ages* (Boston: Harvard University Press, 1928), 27-48.

day, and many advocated identifying with Christ and becoming God.[73] Thirteenth-century Scholastic theologians continued the synthesis of Christianity with popular science,[74] which was at the time the newly rediscovered ideas of Aristotle.[75] Nineteenth-century Russian Orthodox priest, Nikolai Fyodorov, proclaimed that the common task of humanity should be the technological resurrection of our ancestors.[76] And twentieth-century Jesuit priest, Pierre Teilhard de Chardin, advocated a vision of human evolution, accelerated by technology, merging inexorably into a conception of God.[77]

The self-identified Transhumanist movement began in the last few decades of the twentieth century. In the 1960s, futurist Fereidoun M. Esfandiary ("FM-2030"), began identifying as "transhumans" those who behave in a manner conducive to a posthuman future.[78] In the 1980s, philosopher Max More formalized a Transhumanist doctrine, advocating the "Principles of Extropy" for continuously improving the human condition.[79] In the 1990s, a group of influential Transhumanists authored the "Transhumanist Declaration," stating various ethical positions related to the use of and planning for technological advances.[80] Also in the 1990s, philosophers Nick Bostrom and David Pearce founded the World Transhumanist Association, which became the largest network of Transhumanists with membership in the thousands, and later changed its

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[73] Lincoln Cannon, co., "Christian Authorities Teach Theosis," *New God Argument*, https://new-god-argument.com/support/christian-authorities-teach-theosis.html (accessed June 04, 2016).

[74] Johannes Alzog, F. J. Pabisch, and Thomas Sebastian Byrne, *Manual of Universal Church History*, Vol. 2 (Cincinnati: O.R. Clarke, 1874), 741; and Stephen Hawking, *On the Shoulders of Giants* (Philadelphia: Running Press, 2002), 2.

[75] A. C. Crombie, *Medieval and Early Modern Science* (New York: Doubleday Anchor Books, 1959), 33-34.

[76] N. A. Berdyaev, "The Religion of Resusciative Resurrection," N. A. Berdyaev. http://www.berdyaev.com/berdiaev/berd_lib/1915_186.html (accessed June 04, 2016).

[77] Eric Steinhart, "Teilhard de Chardin and Transhumanism," *Journal of Evolution and Technology* 20, no. 1 (2008): 1-22.

[78] FM-2030, *Are You a Transhuman?* (New York: Warner Books, 1989).

[79] Max More, "Principles of Extropy 3.11," *Internet Archive: Wayback Machine*, 2003, https://web.archive.org/web/20131015142449/http://extropy.org/principles.htm (accessed June 04, 2016).

[80] "Transhumanist Declaration," Humanity+, http://humanityplus.org/philosophy/transhumanist-declaration/ (accessed June 04, 2016).

name to Humanity+.[81] In the 2000s, technologist Ray Kurzweil published *The Singularity Is Near*, popularizing the idea of accelerating technological change. Also in the 2000s, the Mormon Transhumanist Association became the largest network of religious Transhumanists with membership in the hundreds.[82]

E. Misrecognized Religiosity

Despite occasional equivocation,[83] whether among Transhumanists or from external accounts, Transhumanism is not atheism. In fact, recent polls suggest only about half of Transhumanists identify as either atheist or agnostic,[84] and that is down about 15% from surveys done five to ten years previously.[85] Given that agnosticism tends to be more prevalent than atheism in most populations, it may be that not even a quarter of Transhumanists are atheists, and the proportion of atheist Transhumanists may be in decline.

What might explain a decline? One contributor could be simply that religious persons are increasingly recognizing compatibility and even complementarity between their religious views and Transhumanism. Another contributor could be that some common Transhumanist expectations, if not aspirations, may be incompatible with atheism. For example, achieving the capacity to simulate or otherwise emulate our evolutionary history may entail that our world was created by beings that qualify as God in some religions.[86] Perhaps

[81] "About," Humanity+, http://humanityplus.org/about/ (accessed June 04, 2016).
[82] "About," Mormon Transhumanist Association, http://transfigurism.org/pages/about/ (accessed June 04, 2016).
[83] Zoltan Istvan, "Some Atheists and Transhumanists are Asking: Should it be Illegal to Indoctrinate Kids With Religion?" Huffington Post, http://www.huffingtonpost.com/zoltan-istvan/some-atheists-and-transhu_b_5814484.html (accessed June 04, 2016).
[84] "Who Are the IEET's Audience?" Institute for Ethics and Emerging Technology, July 16, 2013, http://ieet.org/index.php/IEET/more/poll20130716 (accessed June 04, 2016).
[85] "Executive Summary of the 2007 WTA Member Survey," World Transhumanist Association, January 2008, http://www.transhumanism.org/index.php/WTA/more/2007survey/ (accessed June 04, 2016).
[86] Cannon, "Theological Implications of the New God Argument."

another contributor is that some atheist-inclined Transhumanists have become alarmed by or weary of the fervent anti-religiosity advocated by some atheists.[87] Having no wish to be associated with that any more than with religious fundamentalism, they might be adjusting their self-descriptions.

Yet another contributor could be that we are beginning to recognize that Transhumanism itself functions as a religion for some of us, and perhaps most especially for some of us that most strongly deny that function.[88] That is not to claim that Transhumanism is inherently a religion. In itself, advocacy for ethical use of technology to extend human abilities need not be religious. However, it still ends up functioning as religion for some that adopt and identify with the ideology.

There are the sacraments of dietary supplements, the rituals of cryonics, the prophecies of indefinite healthy life extension, the spirits of substrate independent minds, the apocalyptic and messianic postures toward artificial intelligence, the millennial paradisiacal hope of life and abundance beyond present notions of suffering and poverty, and ultimately the pantheon of posthumanity.[89] While, in the minds of some individual Transhumanists, these may really only be rough analogies between religious and Transhumanist views, they are nonetheless infused with collective strenuous emotion among some groups of Transhumanists.

In other words, among some Transhumanists, our vision and practice function as religion, perhaps not according to narrow presecular accounts of religion, but rather from broad accounts of the religious phenomenon from deep history through its evolution into popular

[87] Giulio Prisco, "Yes, I Am a Believer," Institute for Ethics and Emerging Technology, May 23, 2012, http://ieet.org/index.php/IEET/more/prisco20120523 (accessed June 04, 2016).
[88] Tirosh-Samuelson, "Transhumanism as a Secularist Faith."
[89] James Hughes, "Millennial Tendencies in Responses to Apocalyptic Threats," in *Global Catastrophic Risks*, edited by Nick Bostrom (Oxford: Oxford University Press, 2008), 72-89.

traditional trappings and on into its emerging postsecular manifestations.[90] Transhumanism, for some Transhumanists, is postsecular religion, even if misrecognized.

F. Accelerating Change

In the 1960s, Intel co-founder Gordon Moore observed that the ratio of computing capacity to cost was doubling predictably, every couple years or faster. In other words, a computer built in 1969 had roughly twice as much capacity as a computer built at the same cost in 1968, and over a hundred times as much capacity as a computer built at the same cost in 1962; a computer built in 1969 would also reliably have roughly half the capacity of a computer built at the same cost in 1970, and less than a hundredth the capacity of a computer built at the same cost in 1976.

That trend, known as Moore's Law, has continued to the present.[91] Today, a $150 smartphone can store about a million times more data and process that data about a thousand times faster than the $150K Apollo Guidance Computer that took astronauts to the moon in 1969. The smartphone also has wireless access to extended computing capacity on the Internet, including powerful systems such as Google, Amazon, and Facebook. And while Moore's Law has ended for traditional 2D integrated circuits (which have reached their maximum density), if we consider the broader trend from older computing architectures (transistors and tubes), and project it through promising near-term computing architectures (3D, biological, and quantum), exponential growth is continuing.

Suppose Moore's Law and its analogs in new computing

[90] James K. A. Smith, "Secular Liturgies and the Prospects for a 'Post-Secular' Sociology of Religion."
[91] "Moore's Law and Intel Innovation," Intel, http://www.intel.com/content/www/us/en/history/museum-gordon-moore-law.html (accessed June 04, 2016).

architectures continue.[92] Within decades, whatever replaces smartphones would have millions, billions, and then trillions of times the overall computing capacity at the same cost. Within a century, $150 could perhaps purchase more computing capacity than that of all human brains combined.[93] Imagine the possibilities.

If accelerating change continues, our informal intuitive sense of what the world might look like ten, thirty, or a hundred years from now is almost certainly and quite dramatically wrong. Even predictions based on the best social and economic and political theories, if not accounting for accelerating change, would be stunningly incorrect. The future probably will not be even close to what we imagine, if accelerating change persists, and if we do not work to account for that possibility in our expectations.

G. Myths and Visions

Mormon Transhumanists have many myths and visions – many stories and dreams. And we express them in many narratives. They tend to reflect love for our culture, hope in ecumenical outreach beyond sectarian restrictions, and trust in the possibility of universal thriving. They are informed of scripture, theology, secular history, contemporary science, trends in emerging technology, and of course unabashed exercise of imagination about how they all may work together.

Some of our narratives may be shocking, which is partly the point of constructing them, aiming to motivate more than casual consideration. And the only certainty is that our myths are deficient to some extent. But perhaps our visions will provoke imagination even further, to the possibility of perpetual improvement.

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[92] Katherine Noyes, "The quantum era has begun, this CEO says," *PC World*, June 04, 2016, http://www.pcworld.com/article/3079086/cios-need-to-start-planning-for-quantum-computing-this-ceo-says.html (accessed June 04, 2016).

[93] Kurzweil, *The Singularity Is Near*, 136.

Here is a narrative that combines common elements to illustrate parallels between Mormonism and Transhumanism.

> Without beginning, Gods of Gods found themselves creating heavens and worlds without end.[94] Our world was formless and empty, having neither happiness nor misery, neither life nor death, neither sense nor insensibility, and no purpose.[95] Darkness encompassed the source, and the Mind of the Gods was brooding over it.[96] And the Gods said, let there be light, and there was light.[97] The Gods saw the light, that it was good because it was discernible.[98] The Gods saw darkness, that it was separated from the light.[99] And the light shining out of darkness was the first category.[100]
>
> The Gods counseled among themselves.[101] And some said,[102] let us prepare the source to evolve abundantly, to bring forth sense, and life, and happiness; and form creators in our image, after our likeness, to have dominion over all the world.[103] And others answered and said,[104] let us not evolve more creators because some will be lost, but give us the honor and power.[105] The Gods chose the first, and there was war in heaven.[106] But the Gods watched those things they had ordered,[107] and saw their plan was good.[108]

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[94] Genesis 1:1; Moses 2:1; Abraham 4:1; Moses 1:3-4, 35; Abraham 3:22-23; and Smith, *Teachings of the Prophet Joseph Smith*, 354.
[95] Genesis 1:2, Moses 2:2, Abraham 4:2, and 2 Nephi 2:11-12.
[96] 1 Corinthians 6:15-20; and Smith, *Teachings of the Prophet Joseph Smith*, 350.
[97] Genesis 1:3, Moses 2:3, and Abraham 4:3.
[98] Genesis 1:4, Moses 2:4, Abraham 4:4, and Alma 32:35.
[99] Genesis 1:5, Moses 2:5, and Abraham 4:5.
[100] John 1:1-5 and Doctrines & Covenants 88:45-50.
[101] Abraham 4:26.
[102] Doctrines & Covenants 76:23-24 and Abraham 3:24-26.
[103] Genesis 1:24-31, Moses 2:20-31, Abraham 4:20-31, and Moses 4:2.
[104] Doctrines & Covenants 76:25-27 and Abraham 3:27.
[105] Doctrines & Covenants 29:36 and Moses 4:1.
[106] Revelation 12:7, Moses 4:3-4, and Abraham 3:28.
[107] Abraham 4:18
[108] Genesis 1:31, Moses 2:31, and Abraham 4:21

Two thousand five hundred years ago, humanity was evolving into a new way of thinking, expressed in part by transition away from polytheism. The Persian Empire governed much of the civilized world, and Zarathustra's teachings had spread throughout, yet in the heart of the empire a smaller religion was coming together. Its adherents combined Zoroastrian doctrine with mythology about indigenous Semites to make new scripture. They pioneered from Babylon, established a colony in Judea, and began to build a temple. In time, they would syncretize with the science of their day and conceive Christianity, the most influential ideology in history.

Two hundred years ago, humanity was again evolving into a new way of thinking, expressed in part by transition away from monotheism. Jesus' teachings had spread throughout most of the civilized world, and the United States of America was ascending to unparalleled global influence. In the heart of the nation, a small religion was coming together. Its adherents combined Christian doctrine with mythology about Native Americans to make new scripture. They pioneered from Illinois, established a colony in Deseret, and began to build a temple. In time, they too would syncretize with the science of their day and conceive something transcending themselves.

Today, we are a childlike civilization, a Telestial world in the Fullness of Times.[109] Filled as if by an unstoppable rolling river pouring from the heavens, our knowledge becomes unprecedented.[110] Nothing is withheld, whether the laws of the earth or the bounds of the heavens, whether there be one God or

[109] Ephesians 1:10; Doctrines & Covenants 76:81; and Kevin Barney, "The Etymology of 'Telestial,'" *By Common Consent*, January 27, 2010, http://bycommonconsent.com/2010/01/27/the-etymology-of-telestial/ (accessed June 04, 2016).
[110] Doctrines & Covenants 121:33

many Gods, everything begins to manifest.[111] And the work of God hastens.[112] Repeating the words of Christ, we speak,[113] and information technologies begin to carry consolation around the world. Emulating the works of Christ, we act,[114] and biological technologies begin to make the blind see,[115] the lame walk,[116] and the deaf hear;[117] agriculture begins to feed the hungry; and manufacturing begins to clothe the naked.[118] Hearts turning to our ancestors, we remember them, and machine learning algorithms begin to process massive family history databases, perhaps to redeem our dead.[119]

A biotech revolution begins.[120] Synthetic biology restores extinct species, creates new life forms, and hints at programmable ecologies. Some recall prophecies about renewal of our world[121] – or perhaps its destruction.[122] Personalized medicine begins to restore vitality to an older generation. Some insist that death is necessary for meaning, but new voices repeat old stories about those who were more blessed for their desire to avoid death altogether.[123] Reproduction technology enables infertile and gay couples, as well as individuals and groups, to conceive their own

[111] Ibid. 121:26-32
[112] Ibid. 88:73-80
[113] Mark 16:15
[114] Matthew 10:8
[115] Alice Park, "Stem Cells Allow Nearly Blind Patients to See," Time, October 14, 2014, http://time.com/3507094/stem-cells-eyesight/ (accessed June 04, 2016).
[116] John Hewitt, "Paralyzed man walks again after surgeons transplant cells from his nose to his spine," Extremetech, October 22, 2014, http://www.extremetech.com/extreme/192548-paralyzed-man-walks-again-after-surgeons-transplant-cells-from-his-nose-to-his-spine (accessed June 04, 2016).
[117] Macrina Cooper-White, "See The Amazing Moment When A Deaf Person Hears For The First Time," Huffington Post, February 10, 2015, http://www.huffingtonpost.com/2015/02/10/people-hear-for-first-time-video_n_6646594.html (accessed June 04, 2016).
[118] Jacob 2:19 and Mosiah 4:26
[119] Doctrines & Covenants 128:6-9
[120] Kurzweil, *The Singularity Is Near*, 206.
[121] Articles of Faith 1:10
[122] Moses 1:38
[123] 3 Nephi 28

genetic children. Some recoil from threats to tradition, while others celebrate gifts to new families.[124] Weaponized pathogens threaten pandemics, as well as targeted genocides and assassinations. Meanwhile, solar energy becomes less expensive than any other. And the Internet evolves into a distributed reputation network, creating new incentives for cooperation. Missionaries find their work more globalized than ever before.[125]

A nanotech revolution begins.[126] Atomically-precise printing erupts with food, clothing, and shelter. Welfare systems solve old problems and make new ones.[127] Among the wealthy, robotic cells flow through bodies and brains, extending abilities beyond those of the greatest athletes and scholars of history. Enjoying restored vitality, many become convinced that we can vanquish that awful monster, death.[128] But cautionary voices call attention to stunning socioeconomic disparities.[129] With the ability to read and write data in every neuron of the brain, the Internet evolves into a composite of virtual and natural realities. We begin to connect with each other experientially, sharing senses and feelings. Spiritual experiences become malleable, meriting careful discernment.[130] Wireheading haunts relationships and burdens communities. And weaponized self-replicating nanobots threaten destruction of the biosphere. Meanwhile, robotic moon bases mine asteroids and construct space colonies, reinvigorating the pioneer spirit.[131]

A neurotech revolution begins.[132] We virtualize brains and bodies. Minds extend or transition to more robust substrates,

[124] Doctrines & Covenants 88:33
[125] Ibid. 14:3-4
[126] Kurzweil, *The Singularity Is Near*, 226.
[127] Doctrines & Covenants 42: 34, 55; and 2 Nephi 26:30-31
[128] 2 Nephi 9:10, 19, 26
[129] Doctrines & Covenants 78:6
[130] Smith, *Teachings of the Prophet Joseph Smith*, 202.
[131] Doctrines & Covenants 136
[132] Kurzweil, *The Singularity Is Near*, 259.

biological and otherwise.[133] As morphological possibilities expand, some warn against desecrating the image of God, and some recall prophecies about the ordinance of transfiguration.[134] Data backup and restore procedures for the brain banish death as we know it.[135] Cryonics patients return to life. And environmental data mining hints at the possibility of modeling history in detail, to the point of extracting our dead ancestors individually. Some say the possibility was ordained, before the world was, to enable us to redeem our dead,[136] perhaps to perform the ordinance of resurrection.[137] Artificial and enhanced minds, similar and alien to human, evolve to superhuman capacity.[138] And malicious superintelligence threatens us with annihilation. Then something special happens: we encounter each other and the personification of our world, instrumented to embody a vast mind, with an intimacy we couldn't previously imagine.

In that day, we will be an adolescent civilization, a terrestrial world in the Millennium.[139] Technology and religion will have evolved beyond our present abilities to conceive or express, except loosely through symbolic analogy.[140] We will see and feel and know the messiah,[141] the return of Christ, in the embodied personification of the light and life of our world,[142] with and in whom we will be one.[143] In a world beyond present notions of enmity, poverty, suffering, and death – the living transfigured and

[133] Doctrines & Covenants 76: 98, 109
[134] Smith, *Teachings of the Prophet Joseph Smith*, 170.
[135] 1 Corinthians 15:51-55
[136] Doctrines & Covenants 128:22
[137] Brigham Young in *Wilford Woodruff's Journal*, 3, by Wilford Woodruff, edited by Scott Kenney (Utah: Signature Books, 1985), 323-324.
[138] Doctrines & Covenants 77: 1-4
[139] Ibid. 76: 91 and Articles of Faith 1: 10
[140] Doctrines & Covenants 1: 24
[141] 1 John 3: 2
[142] John 8: 12, Mosiah 16: 9, 3 Nephi 11: 11, and Doctrines & Covenants 88: 7-13
[143] John 17: 20-23

the dead resurrected to immortality – we will fulfill prophecies.[144] And we will repeat others, forth-telling and provoking ourselves through yet greater challenges:[145] to maturity in a Celestial world,[146] and beyond in higher orders of worlds without end.[147]

H. New God Argument

Popular among Mormon Transhumanists, the New God Argument is a logical argument for faith in God.[148] Here are definitions of key words in the argument:

Faith: trust: belief that something is reliable or effective for achieving goals

Compassion: capacity to refrain from thwarting or to assist with achieving goals

Creation: the process of modifying situations to achieve goals

Intelligence: capacity to achieve goals across diverse situations

Superintelligence: intelligence that is greater than that of its evolutionary ancestors in every way

Humanity: all organisms of the homo sapiens species

Posthumanity: evolutionary descendents of humanity

[144] Doctrines & Covenants 101: 26-34
[145] Ibid. 43: 31
[146] Ibid. 88: 25-26
[147] Ibid. 130: 9-11
[148] Cannon, "Theological Implications of the New God Argument."

Superhumanity: superintelligent posthumanity

God: superhumanity that is more compassionate than we are and that created our world

The New God Argument consists of four parts:

1. Faith Assumption
2. Compassion Argument
3. Creation Argument
4. God Conclusion.

The *Faith Assumption* is a proposition that humanity will not become extinct before evolving into superhumanity. It consists of a single assumption:

F1: humanity will not become extinct before evolving into superhumanity (assumption)

The assumption may be false. However, to the extent we do not know it to be false, we may have practical or moral reasons to behave as if it is true.[149] In any case, the Faith Assumption is a common aspiration among secular advocates of technological evolution,[150] and it may be consistent with the religious doctrine of theosis, also known as divinization or deification: the idea that humanity should become God.

The *Compassion Argument* is a logical argument for trust that superhumanity probably would be more compassionate than we are. The basic idea is that humanity probably will continue to increase in

[149] Ferdinand Schiller, *Studies in Humanism* (London: Macmillan, 1907), 430; and James, 26.
[150] "Executive Summary of the 2007 WTA Member Survey."

decentralized destructive capacity, so it probably will stagnate or destroy itself unless it increases in compassion. If we trust in our own superhuman potential, we should trust that superhumanity would be more compassionate than we are.

The argument consists of two assumptions and a deduction from those assumptions and the Faith Assumption.

> *CO1: EITHER humanity probably will become extinct before evolving into superhumanity OR superhumanity probably would not have more decentralized destructive capacity than humanity has OR superhumanity probably would be more compassionate than we are (assumption)*
>
> *CO2: superhumanity probably would have more decentralized destructive capacity than humanity has (assumption)*
>
> *CO3: superhumanity probably would be more compassionate than we are (deduction from CO1, CO2, and F1)*

The deduction of the Compassion Argument is necessarily true if its assumptions and the Faith Assumption are true. Either or both of the Compassion Argument assumptions may be false. However, we may have historical and technological reasons to believe they are true. For example, records suggest that violence has decreased and civil liberties have improved as governments have become more powerful,[151] and some technologists believe that machine intelligence may destroy us if we do not ensure its friendliness, at least as instrumental cooperation if not as internalized compassion.[152]

The *Creation Argument* is a logical argument for trust that

[151] Steven Pinker, *The Better Angels of Our Nature: Why Violence Has Declined* (New York: Penguin Books, 2011).
[152] Nick Bostrom, *Superintelligence* (Oxford: Oxford University Press, 2014).

superhumanity probably created our world. The basic idea is that humanity probably would not be the only or first to create many worlds emulating its evolutionary history, so it probably will never create many such worlds unless it is already in such a world. If we trust in our own superhuman potential, we should trust that superhumanity created our world.

The argument consists of two assumptions and a deduction from those assumptions and the Faith Assumption.

> *CR1: EITHER humanity probably will become extinct before evolving into superhumanity OR superhumanity probably would not create many worlds emulating its evolutionary history OR superhumanity probably created our world (assumption)*
>
> *CR2: superhumanity probably would create many worlds emulating its evolutionary history (assumption)*
>
> *CR3: superhumanity probably created our world (deduction from CR1, CR2, and F1)*

The deduction of the Creation Argument is necessarily true if its assumptions and the Faith Assumption are true. Either or both of the Creation Argument assumptions may be false, but we may have technological and mathematical reasons to believe they are true. For example, some technologists believe that computation may enable us to run many family history simulations detailed enough to consist of emulated conscious persons, in which case statistics would show we almost certainly are already living in such a family history simulation ourselves.[153]

[153] Nick Bostrom, "Are We Living in a Computer Simulation?" *The Philosophical Quarterly* 53, no. 211 (2003): 243-55.

Finally, the *God Conclusion* is a logical deduction for faith in God. It consists of a single deduction, which is necessarily true if the Compassion Argument and Creation Argument are true.

> *G1: BOTH superhumanity probably would be more compassionate than we are AND superhumanity probably created our world (deduction from CO3 and CR3)*

Given assumptions consistent with contemporary science and technological trends, the deduction concludes that if we trust in our own superhuman potential then we should also trust that superhumanity probably would be more compassionate than we are and created our world. Because a compassionate creator may qualify as God in some religions, trust in our own superhuman potential may entail faith in God, and atheism may entail distrust in our superhuman potential.

I. Mormonism Mandates Transhumanism

Some Mormon Transhumanists contend that, beyond mere compatibility or even complementarity, Mormonism actually mandates Transhumanism. From this perspective, one can be a Transhumanist without being a Mormon, but one cannot be a Mormon without being a Transhumanist, at least implicitly. Although this is a controversial claim, we can use Mormon scripture to formulate a supporting argument based on four premises.

> *M1: God commands us to use ordained means to participate in God's work (assumption)*

This first premise is based on scriptures like 1 Nephi 3:7, which

says God prepares ways for us to accomplish God's commands; Alma 60:11, 21-23, which says God will not save us unless we use the means God has already provided; and Doctrines & Covenants 58:27-28, which says we should engage in good causes without waiting for God to provide specific commands.

M2: science and technology are among the means ordained of God (assumption)

This second premise is based on scriptures like 1 Nephi 17:8-11, 16, where God commands Nephi to construct a ship to save his family; Alma 37:38-39, which says God gave Nephi a compass to guide his family to the promised land; Doctrines & Covenants 88:78-79, where God commands us to study and teach everything from astronomy and geology to history and politics; and Doctrines & Covenants 121:26-33, which says we will learn all the physical laws of the world before attaining heaven.

M3: God's work is to help each other attain Godhood (assumption)

This third premise is based on scriptures like 3 Nephi 12:48, where Jesus commands us to be perfect like God; Doctrines & Covenants 76:58-60, 92-95, which says God would make us Gods of equal power with him; and Moses 1:39, which says God's work is to make us immortal in eternal life.

M4: an essential attribute of Godhood is a glorified immortal body (assumption)

This fourth premise is based on scriptures like Ether 3:7-16, where

the Brother of Jared sees that God is embodied; Doctrines & Covenants 76:70, which says God has a body glorified like the sun; Doctrines & Covenants 93:33-36, which says full joy requires a body, elements are the body of God, and intelligence is the glory of God; and Doctrines & Covenants 130:22, which says God's body is as tangible as that of a human.

From these four premises, we can make three deductions, all of which are necessarily true if the premises are true.

M5: God commands us to use science and technology to participate in God's work (deduction from M1 and M2)

M6: God commands us to use science and technology to help each other attain Godhood (deduction from M3 and M5)

M7: God commands us to use science and technology to help each other attain a glorified immortal body (deduction from M4 and M6)

The concluding deduction is both a religious mandate, in that it purports to express the will of God, and a description of the Transhumanist project, advocating the ethical use of technology to expand human abilities. If we arrived at this conclusion by valid reasoning, which we did, and if we began with premises that accurately reflect Mormonism, then Mormonism mandates Transhumanism.