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Saved through technology: Exploring the soteriology and eschatology of transhumanism

Mikael Leidenhag

School of Divinity, The University of St Andrews, St Andrews, UK

Correspondence
Mikael Leidenhag, School of Divinity, The University of St Andrews, St Andrews, UK.
Email: mikael.leidenhag@st-andrews.ac.uk

Abstract

According to the intellectual and cultural movement of transhumanism, human beings are in the early stages of development, and it encourages the use of modern science to radically enhance physical, intellectual, psychological and moral capacities. This article offers an overview of transhumanism by outlining its historical roots and some current debates within this movement. This article will further describe several theological responses to transhumanist ambitions and predictions about the future. As will be seen in this article, how one understands 'salvation' affects whether the relationship between Christianity and transhumanism can be framed in terms of a conflict or cautious friendship. The article will end by showing the ways in which transhumanism itself gives rise to both soteriological and eschatological beliefs about human nature and the wider cosmos.

1 | INTRODUCTION

New technological tools offer the possibility of redesigning human nature. Advances made in genetics (most recently CRISPR-Cas9), nanotechnology, biotechnology, robotics and so on pose significant challenges to our received sense of the human condition. Might these advances in technology eventually offer us the possibility of completely transcending the limitations of human physicality? And, would this be *desirable*? Transhumanists take an affirmative stance on these issues. According to the intellectual and cultural movement of transhumanism, human beings are in the early stages of development, and it encourages the use of modern science to radically enhance physical, intellectual, psychological and moral capacities. Human nature is, therefore, malleable, and the positive

message of transhumanism is that technology offers us a chance to remedy nature's unfortunate mistakes.

On some versions of this transhumanist vision, technology promises not only the possibilities of enhancing human capacities and features. More speculatively, notable thinkers within this movement argue that practical reason and the further implementation of technology will lead to the emergence of posthumans; beings that are no longer unambiguously human (Bostrom, 2013). In this posthuman age, 'humans will no longer be controlled by nature; instead, they will be the controllers of nature' (Tirosh-Samuelson, 2011, p. 20). Technology might ultimately offer a path to immortality, whereby such posthuman beings exist, post-biologically, in a digital realm. Indeed, this idea has in various ways been brought forward as the final *telos* to human existence. Such notions of cyber-immortality (Herzfeld, 2016) raise important issues regarding the theological and religious dimensions to transhumanist depictions of the integration of humanity within the technological sphere.

This article will provide an overview of contemporary transhumanism, its historical roots, religious responses to the transhumanist movement, and the ways in which transhumanists express theological concerns regarding the purpose of humanity. A main argument in this article is that transhumanism not merely gives rise to theological beliefs and ideas, but that it can and should be considered as an emerging secular religion.

2 | TRANSHUMANISM: THEN AND NOW

Although he did not coin the term transhumanism, Julian Huxley (1887–1975) is frequently singled out as a notable populariser of it (see Harrison & Wolyniak, 2015). In his 1957 book, *New Bottles for New Wine*, Huxley outlined his vision of evolutionary humanism, which suggested the bold vision of humanity transcending itself 'by realizing new possibilities of and for his human nature' (Huxley, 1957, p. 17). Transhumanism, as Huxley considered it, was a 'new mental attitude that would usher humanity into a new phase by bridging science and the arts and by using science to build a better world' (Tirosh-Samuelson, 2011, p. 20). In a teleological fashion, Huxley believed that humanity will be 'consciously fulfilling its real destiny' by taking charge of the evolutionary process (Huxley, 1957, p. 17). Huxley's grand vision of the future can in many important ways be considered as a precursor to contemporary transhumanism.

Similar proto-transhumanist thinking can be found in the writings of the English philosopher and statesman, Francis Bacon. Bacon, who played a decisive part in the formation of the scientific method, argued in *The Advancement of Human Learning* (1605) and *Novum Organum* (1620) for the need of moving away from the meta-physical reasoning of the Scholastics and Platonists and towards methodological empiricism (More, 2013, p. 9). Bacon acknowledged the epistemic costs of human sin. That is, our fall from grace limits, significantly, human knowledge about the world. The aim of his *Novum Organum*, in light of the cognitive limitations of human beings, was to offer a 'qualitative and organized approach to the acquisition of reliable knowledge about the natural world, one that relied upon induction rather than tradition' (Burdett, 2011, p. 21). For Bacon, the new information about the world should be used in the construction of new technologies, which would help to re-establish humanity's rightful place as having dominion over nature. Bacon's utopic vision was further elaborated in his work *The New Atlantis* (1626/1915), which offers us a glimpse of a flourishing humanity that has been redeemed through practical reasoning. For Bacon, technology is not merely a useful tool, it constitutes a significant emancipatory force as it helps human beings to 'access the book of Creation' (Burdett, 2011, p. 24).

Enlightenment thought displays strong tendencies towards the belief in science and technology as forces of emancipation, particularly in regards to the notion of 'progress'. Progress, in this new setting, could only be achieved if the 'old' was rejected. In fact, many people took scientific progress to mean emancipation of restrictive (religious) traditions. As long as external authorities do not interfere, progress is achievable and inevitable. The view here is that 'history/society/humanity has advanced, is continuing to advance, and will advance in the future' (Burdett, 2015, p. 132).

However, as James Hughes has noticed, the transhumanist relation to the enlightenment project is an ambiguous affair (2010). Reason was a central value for many enlightenment thinkers, and we see a similar emphasis on the utility

of human reason in relation to scientific and technological progress within transhumanist thinking. At the same time, transhumanists argue that human reason is rather limited and that we need to 'outsource' it to the technological realm by creating artificial general intelligence (Goertzel, 2013). Mark Walker suggests similarly that we need to 'create persons who are smarter and more virtuous than we are' in order to prevent the extinction of human civilization (Walker, 2011, p. 108). That is, becoming posthuman is our only hope for securing our survival. This idea of overcoming human nature shares important similarities with Nietzsche's conception of the 'Overhuman', and this connection has attracted much attention within research on transhumanism (Ansell-Pearson, 1997; Sorgner, 2009; Tuncel, 2017). For some, Nietzschean thinking can be seen as an important precursor to the development of contemporary transhumanism, while others consider the similarities between *Ubermensch* and the transhumanist conception of the posthuman to be rather superficial and exaggerated (See Bostrom, 2005, for a negative assessment).

The transhumanist project remains in an antagonistic relationship to external authorities, including religious traditions. Nevertheless, the Catholic theologian, palaeontologist, and technological optimist, Pierre Teilhard de Chardin (1881–1955), displayed crypto-transhumanists beliefs in his depictions of the role of technology in shaping the future. As Michael Burdett explains, Teilhard's optimistic beliefs about technology are evident in his eschatology and displayed in three different ways (Burdett, 2011, p. 29). First, Teilhard predicted that as populations grow, more people are forced to share an even smaller place, making people more reliant on good infrastructure, energy sources and food. That is, 'social unification' entails further technological development and dependency on such developments. Second, technology will not be going away, and the world will speed towards further mechanization of society. This, for Teilhard, is a natural development, as technology 'represents the external counterpart which consciousness relies upon for its own propagation' (ibid., p. 29). Technology creates the necessary bridge between human consciousness and the world and enables a more efficient interaction between these two spheres. Third, Teilhard's belief that the world is in as state of unification and convergence, moving towards an Omega Point, and the way in which this process results in a Trans-Human or Ultra-Human, bears striking similarities to a transhumanist understanding of technological progress (ibid., p. 31). The notion of 'Noosphere', which plays an essential part of Teilhard's eschatology, suggests that everything 'immanent in the cosmos is funnelling its energy toward a single point at the end of history', whereby the Ultra-Human person is finally subsumed within Christ (ibid., pp. 31–32). Although it seems easy to view Teilhard as a proto-transhumanist, the similarities between Teilhard's theology and transhumanism should not be overstated, and there remains important differences between the two regarding death, immortality, embodiment and the ethical ends of humanity (See Grummet, 2011, in particular, for a critical discussion on these issues). These differences will be elaborated on later in the article.

Contemporary transhumanism includes a number of influential thinkers, who approach the relationship between technology and the future of humanity from a diverse set of disciplinary perspectives: Nick Bostrom, Anders Sandberg, Max More, Natasha Vita-More, Mark Walker, Ray Kurzweil, Hans Moravec, James Hughes, Aubrey De Grey, Ben Goertzel, Victor Vinge and others. They all agree that technology promises change for human nature, but there is notable disagreement as to what extent or degree human nature will be altered. Philip Hefner makes the helpful distinction between, what he dubs, 'Upper Case Transhumanism' (UCTH) and 'Lower Case Transhumanism' (LCTH; Hefner, 2009).

In transhumanist discourse, UCTH typically refers to the more hypothetical scenarios, whereby certain future technological advancements in biotechnology, nanotechnology and genetic engineering, will allow us to transcend the human condition completely. Machine intelligence has superseded human intelligence, and this greater-than-human-intelligence drives further the acceleration of technological development beyond human control. This is the 'Singularity', which represents the point where 'our old models must be discarded and a new reality rules' (Vinge, 2013, p. 366).

UCTH is clearly present in the transhumanist ambition to 'upload' human minds; that is, the futurist ambition to scan a mental state, and the wider neurological network to which it belongs, and copy it onto a digital device. Anders Sandberg and Nick Bostrom, who prefer to label this scenario *Whole Brain Emulation*, suggest that the basic idea of this approach 'is to take a particular brain, scan its structure in detail and construct a software model of it

that is so faithful to the original that, when run on appropriate hardware, it will behave in essentially the same way as the original' (Sandberg & Bostrom, 2008, p. 7). The successfulness of this proposal rests, of course, on several technological achievements and steps. First, scanning the brain structure requires 'high-throughput microscopy with sufficient resolution' that can capture the relevant physico-mental properties. Second, the raw data captured through a brain scan needs to be adequately interpreted and translated into a three-dimensional model. Third, we need to develop a hardware powerful enough to run a simulation based on the acquired and interpreted data (Bostrom, 2014, pp. 36–37). This ambition is a clear manifestation of the transhumanist hope of completely transcending the human condition, of being fully liberated from our animal nature and the limitations of our biological makeup.

LCTH focuses on enhancing human nature and adopts a softer tone compared to the more speculative voices of UCTH. As Hefner explains, this makes LCTH much more difficult to deal with, and it is more challenging to assess the consequences of this perspective for the larger question about what it means to be human. The author and biomedical gerontologist Aubrey De Grey has in various books, articles and reports argued for the possibility of altering and significantly delaying the ageing processes of the human body. De Grey, while he does not endorse the strong notion of physical immortality of UCTH, believes that modern technology might offer us ways to extend the human lifespan beyond its current natural limit. De Grey's main ambition is to develop 'rejuvenation biotechnologies', new biomedicines and biomedical therapies that can repair cellular damage caused by our biological ageing processes (De Grey, 2007). The hope is that such technologies can effectively repair various age-related damages to the human body in order to maintain a state of negligible senescence, thus delaying the damaging effects of ageing.

LCTH proceeds on the assumptions that (a) it is good to enhance human physical and mental capacities and override any undesirable traits by utilizing various therapies, and (b) our current biological makeup is not our destiny, but we are free—and perhaps even obliged—to enhance our nature. We can and should improve what nature has bestowed upon us, and this entails not merely fixing something that is wrong (therapy) but designing our human nature in a manner in accordance with our ideals (enhancing).

Whilst different in scope, proponents of UCTH and LCTH adopt similar strategies for justifying changing human physicality through modern technology. For example, both camps often stress the arbitrariness of drawing a line between *therapy* and *enhancement*. This 'line-drawing objection' (Murray, 2007) states that it is impossible to draw a strict line between therapy and enhancement given that curing *S* of some disease entails enhancing the life experience of *S*. Another argument, frequently employed within UCTH and LCTH, is that we are *inevitably* speeding towards a world in which it is no longer possible to ontologically distinguish between the realms of humanity and technology. On this 'resistance is futile argument', it is too late to rewind the clock of technological progress, and so we have no choice but to embrace our posthuman future. The clear boundary between humanity and the sphere of the technological has already been shattered.

2.1 | Theological responses to transhumanism: Conflict and cautious friendship

Whether the relationship between Christianity and transhumanism is one of conflict or cautious friendship depends on how 'salvation' is defined. Both movements offer a soteriological vision of some sort, but what it means to be saved varies and is constantly being negotiated in the Christianity–transhumanism dialogue. Because 'salvation' is not a stable concept, the relationship between Christianity and transhumanism can be imagined in a number of different ways, as will be explored in this section.

Many scholars have seen transhumanism as standing in an antagonistic relationship to religious traditions. Similarly, many religious scholars have voiced concerns about the metaphysical assumptions and aims of the transhumanist movement. Brent Waters suggests that transhumanism offers radically different soteriological and eschatological answers compared to Christianity, and that the 'convictions underlying transhumanism are both inadequate and dangerous' (Waters, 2011, p. 164). For transhumanism, as we have seen, embodiment 'is the

principal problem of the human condition' (ibid.). The body is a prison, which imposes upon us severe physical and cognitive limitations. Not only does it limit us in particular ways, it also causes suffering and pain. The soteriological message of transhumanism, therefore, is that we need to be *saved* from our limited and fragile biological prisons. Hence, the transhumanist strategy is to develop such technologies that allow us to remedy the immediate problems associated with being biological creatures and ultimately escape our embodied condition. Waters points to the Manichean influence on transhumanism, according to which the material body is intrinsically evil and from which the soul must escape. Likewise, transhumanism gives way to a Pelagian notion of human beings achieving perfection by will. As transhumanists pursue a condition of disembodiment, its portrayal of the human person collides with those theologies that emphasize the importance of creatureliness and a shared nature across all humankind. As Celia Deane-Drummond remarks, 'The idea of solidarity prominent in Roman Catholic social teaching, based on a shared human condition, is no longer tenable in a transhumanist world, for the human itself is now being transformed away from its roots in shared creaturely being' (Deane-Drummond, 2011, p. 124).

According to many of its critics, transhumanism falls to the temptation to play God. Although often not spelt out, the 'playing God objection' involves according to Ted Peters three overlapping meanings. First, it can mean that we are trying to learn '*God's awesome secrets*' (Peters, 2003, p. 11), and by learning such secrets we acquire God-like powers—powers that no human being should have. A second meaning is that human beings, when successfully wielding the power of technology, gains '*power over life and death*' (ibid.). The assumption, here, is that such power should only belong to God. A third meaning, which is particularly relevant to the research on transhumanism, is that the use of practical reason, science and especially technology gives humanity the powerful ability to '*alter life and influence human evolution*' (ibid.). This is not an objection as such, but it connects with a larger concern about transhumanism, namely that it significantly overstates what humanity can achieve through modern technology. A transhumanist epistemology is *hubris* in disguise, meaning that we 'overreach ourselves and transgress divinely imposed limits' (ibid., p. 12). A robust theological position requires 'an honest recognition of human sinfulness. At any time and in any place, otherwise happy and fulfilled human beings may initiate evil and destruction' (Peters, 2011, p. 170). In failing in this respect, transhumanism stands in further tension with the Christian conviction that human history remains under divine judgement.

Transhumanism is frequently critiqued on theological grounds. Nevertheless, some have argued for a less antagonistic relationship between transhumanism and Christian theology, suggesting that theologians can embrace parts or aspects of transhumanism. Ronald Cole-Turner, for example, has argued for a limited adoption of transhumanism from a Christian perspective on, seemingly, two different lines of reasoning. Contrary to some scholars, Cole-Turner traces the source of transhumanism back to Christianity itself and more specifically to the Western notion of *divinization* and the Eastern notion of *theosis*. These theological ideals promise us an ascension towards God, a gradual participation in the very being of the divine reality through spiritual transformation. Such doctrinal statements are the real roots of transhumanist thinking, argues Cole-Turner, thus suggesting that as 'transhumanism is authentically and essentially Christian', one can embrace the transhumanist vision on a theological basis (Cole-Turner, 2015, p. 151; For more discussions on theosis/divinization/deification as it pertains to transhumanism, see Cole-Turner, 2018; Walker, 2018). Cole-Turner's second reason for his compatibility-thesis connects with broader soteriological and eschatological claims regarding God's ongoing renewal and transformation of the cosmos. Drawing on the theology of Karl Rahner, Cole-Turner affirms the idea of God acting *through* evolutionary categories and the possibility of cosmic self-transcendence, which resulted in the emergence of humanity. Cole-Turner interprets this idea to support the transhumanist goal of technological self-transcendence through modern technology. God works through technology, and this is consonant with the reliance of transhumanism upon technology for transforming humanity. Technology allows us to participate in God's transformation of this world. We can see how Mark Walker affirms this when he writes that he advocates using 'genetic engineering to enhance our biological capacity for virtuous living, for becoming godlike, for deification' (Walker, 2018, p. 252) Not all forms of playing God are wrong, and we should instead celebrate that God has, through the gift of technology, 'made it possible for us to take steps to become more godlike, even divine' (ibid.).

In Philip Hefner's terminology, we are 'created co-creators'. Coined in his much-influential book *The Human Factor* (1993), the concept of 'created co-creator' seeks to outline what it means to be created in the image of God. We are created beings, and God is the ground of our existence, but we are *also* free beings that exercise a significant degree of freedom in relation to God. We are, therefore, in a qualified sense of the term *creators*, such that our activities contribute to the unfolding of the cosmos. However, our actions participate and *cooperate* with the divine agency. This idea allows Hefner to cash out the important theological conclusion that human beings, as created co-creators, are called to contribute to creation's unfolding, including the ongoing development of the technological sphere (Hefner, 2009). Hefner's framework is, unsurprisingly, frequently utilised in the trialogue between theology, ethics, and technology, and it has been emphasised as a particularly useful model for enabling a more constructive theological engagement with transhumanism (Garner, 2015). It even allows for a cautious friendship between the two.

One could argue, on this more permissive response, that enhancement technologies are acceptable as long as they do not undermine those properties or characteristics that are essential to human nature. From a Catholic standpoint, Brian Patrick Green has argued that natural law ethics is partly compatible with the ambition to change human nature. Drawing on Aquinas's distinction between first (biological) nature and second (cultural) nature, Patrick Green makes the argument that, as our cultural nature has already been affected by technology, and our cultural nature is ontologically tied to our biological nature, the ongoing technologization of the world has affected our biological constitution as well—medicine being a clear example. Technology has extended the scope of human power and agency, and 'if action follows being, and human action has changed, then our being may have changed as well' (Patrick Green, 2015, p. 205). Human nature is already changed. This situation can be deemed acceptable if one subscribes to the rationalist school of thought within natural law tradition, which considers 'the morally relevant aspect of human nature to be mental' (ibid., p. 208). So long as a transhuman/posthuman retains its rational mental faculties, this scenario does not pose a problem to Catholic natural law teaching. A similar conclusion has been offered by Benedikt Paul Göcke, who recently argued that 'moderate transhumanism' is acceptable to Christian theology, if an enhancement does not 'conflict with the character of human beings as free and autonomous moral agents' (2017, p. 352). The frameworks of Green and Göcke point towards the possibility of a cautious friendship between the movement of transhumanism and that of Christian theology.

3 | THE RELIGIOUS IMPULSE OF TRANSHUMANISM

Transhumanists view religious authority with suspicion, and they consider such external voices to be obstacles to technological progress. As I outlined earlier, transhumanist thinking is very much rooted in the metaphysical and epistemological frameworks of the enlightenment project, especially in virtue of its commitment to the 'myth of progress' narrative. Although many transhumanists take their worldview to be in opposition to religious outlooks on life, transhumanism itself displays a remarkably strong religious impulse. Anders Sandberg has helpfully outlined several ways in which transhumanism engages with the larger issue of the meaning of existence. Although the majority of transhumanists self-identify as 'secular' (Hughes, 2008), Sandberg shows how the broader issue of meaning comes to the surface within three different forms of transhumanism. Within *individual* transhumanism, meaning is related to the possibility of living a life 'by enhancements so as to achieve better health and mental capacity, refined emotions, new abilities, and longevity and perhaps become a posthuman' (Sandberg, 2015, p. 4). Such an enhanced condition allows one to engage with new realms of value, inaccessible to non-enhanced people. *Terrestrial* transhumanism proceeds from a more communal standpoint and urges us to develop the necessary technologies in order to usher humanity into a posthuman era, 'liberated from the constraints imposed by natural evolution' (ibid., p. 9). *Cosmist* transhumanism applies this techno-progressive vision on the universe as a whole, arguing for the technologization of the entire cosmos by converting matter into mind. On one possible scenario, outlined by Kurzweil, the universe becomes intelligent and 'wakes up' (Kurzweil, 2005;

Sandberg, 2015, p. 14). In other words, our cosmos is moving towards the realization and emergence of God (Kurzweil, 2002, p. 53).

Albeit conceptualised in different ways, these forms of transhumanism construe meaning as achievable 'engineering targets' (Sandberg, 2015, p. 4). Far from rejecting the pursuit for meaning, transhumanism brings it into the realm of technological development. Transhumanism displays strongly religious elements. Indeed, one can locate within this techno-optimist view both a soteriology and eschatology. Several transhumanists posit digital immortality as the soteriological goal of technological development and as the very *telos* of human existence. I suggested earlier that the body is portrayed as a prison within transhumanist/posthumanist discourse, from which humanity needs to be liberated. Our biological condition is a mere accident of history and not an inevitability of this world. As Hava Tirosh-Samuelson explains, 'Through technology humans will presumably be able to achieve what traditional religions have sought for millennia: immortality' (Tirosh-Samuelson, 2012, p. 715). Technology gives us what established religion never could. Ray Kurzweil is explicit about the teleological dimension to a transhumanist anthropology when he suggests the following: 'I regard the freeing of the human mind from its severe physical limitations of scope and duration as the necessary step in evolution. Evolution, in my view, represents the purpose of life. That is, the purpose of life—and of our lives—is to evolve' (Kurzweil, 2002, p. 53). As some scholars have noted, this picture of bodily emancipation entails an ontological *dualism* by identifying our personhood with transferable *digital information*, which is taken as ontologically distinct from pure matter (Herzfeld, 2016).

Cybernetic immortality is by many considered as the soteriological goal of transhumanism and quite possibly the *endpoint* of our evolutionary development. In this way, transhumanism posits a distinctively secular eschatology. Tirosh-Samuelson observes that transhumanism shares with traditional religion an 'eschatological impulse, even though transhumanism speculates about the eschatological end of the world as a goal that can be accomplished by human efforts alone rather than with divine intervention' (Tirosh-Samuelson, 2012, p. 721). A main difference, then, between a transhumanist eschatology and that of, for example, Christianity pertains to *methods of transcendence* (See Hopkins, 2005).

Transhumanism, some have argued, does not merely overlap with broadly speaking religious interests. It can be considered as a religion in virtue of some of its claims regarding the ultimate purpose of the world and human nature, but also in the way that transhumanism is functionally similar to religious traditions by 'providing a vision of something greater than the present condition', as well as a sense of belonging through a community united by such a vision (Jordan, 2006, p. 58). Moreover, while transhumanism does not possess or entail any formal rituals, it 'could be said to possess symbolic representation of shared meaning in the form of transhumanist art, which includes symbols, vocabulary, images, songs, films and science-fiction literature' (ibid., p. 59). Transhumanism provides a story about our 'sacred history' of not only our origin, but in terms of our destiny as well.

4 | A SUMMARY

This article has explored the cultural and intellectual movement of transhumanism, focusing particularly on the history of transhumanist thinking, the diversity of opinions among transhumanist proponents and the ways in which theologians have engaged transhumanism. Although many theologians critique the ontological underpinnings of transhumanism, others have explored the possibility of a cautious friendship between Christian theology and transhumanist thinking, suggesting that the two have overlapping soteriological concerns. Many transhumanists take their worldview to be in direct opposition to a religious outlook on life, yet it was seen that transhumanism brings the pursuit of meaning into the sphere of technology. Indeed, it seems as if transhumanism gives rise to both a soteriological conception of human nature and an eschatological prediction about physical reality.

ORCID

Mikael Leidenhag https://orcid.org/0000-0002-5307-9846

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AUTHOR BIOGRAPHY

Mikael Leidenhag is the Science and Theology Editor at The School of Divinity, University of St Andrews. He completed his dissertation on *Naturalizing God? A Critical Evaluation of Religious Naturalism* at the Department of Theology, Uppsala University. He has published in journals such as *Zygon*: *Journal of Religion and Science*, *Philosophy Compass*, *Open Theology*, *American Journal of Theology and Philosophy* and *The Heythrop Journal*.

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