

Transhumanism: Anthropological Challenge of the Twenty-First Century

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Abstract

Transhumanism is a philosophical and cultural movement that promotes human enhancement through advanced technological means such as nanotechnology. The philosophical characteristics of transhumanism, including the belief that human beings are modifiable at will, make it one of the most important anthropological challenges of the twenty-first century. This article introduces the main elements of transhumanism and highlights some possible apologetical interactions.

Transhumanism, still little known in Reformed circles, is rapidly growing in popularity. With the emergence and the ever-increasing progress of the NBIC (nanotechnology, biotechnology, information sciences, and cognitive sciences), possibilities previously envisaged only by quasi-prophetic authors are now at hand. This movement, which does not accept human limits (such as illness, death, etc.), seeks to transcend those boundaries. If transhumanism is not the fiction some might imagine, it is necessary to present the main features of its history in order to understand it.

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I. *Short History of Transhumanism*

Before considering the nature of transhumanism, let us look briefly at its history. To do so, it is necessary to go back to the 1950s and 1960s in the United States. Although transhumanism only gained a public voice during the 1980s and 1990s, its current form emerged around twenty years before. Indeed, pre-transhumanist intuitions had already emerged in the late 1920s and 1930s, but these philosophical intuitions remained without immediate consequences mainly because of the Second World War. Through investigating this “archeological” point we meet one of the fathers of transhumanism. The ancestry of this movement dates back to the first use of the term by Julian Huxley, brother of Aldous Huxley, who wrote in 1927,¹

We shall start from new premises. ... The human species can, if it wishes, transcend itself—not just sporadically, an individual here in one way, an individual there in another way, but in its entirety, as humanity. We need a name for this new belief. Perhaps transhumanism will serve: man remaining man, but transcending himself, by realizing new possibilities of and for his human nature. “I believe in transhumanism”: once there are enough people who can truly say that, the human species will be on the threshold of a new kind of existence, as different from ours as ours is from that of Pekin man. It will at last be consciously fulfilling its real destiny.²

In the years 1960–1970, the development of transhumanist thought followed closely the cultural wave of American science fiction represented by authors such as Arthur C. Clarke, Isaac Asimov, Robert Heinlein, and Philip K. Dick. This explains why today transhumanism remains a cultural movement too frequently associated with the science fiction genre. It would then be the pursuit of dreaming scientists, professors of robotics or science fiction geeks—nothing really serious. This is a simplistic and rather naive perspective on transhumanism. We must remember that science fiction itself has contributed to the development of robotics—for example, science fiction even gave us the word *robot*.³

¹ The invention of the term “transhumanism” is dated by Nick Bostrom to 1927 with the publication of Julian Huxley’s *Religion Without Revelation*. Nick Bostrom, “A History of Transhumanist Thought,” *Journal of Evolution and Technology* 14.1 (April 2005), online, <http://www.nickbostrom.com>. However, the term does not appear in this book, although the concept is already present, as in the following note: “[Man] is not only constantly overcoming what he thought were the limits of his nature, but in an individual and social development, also in the process of transcending its own nature, emerging into a new accomplishment.” Julian Huxley, *Religion Without Revelation* (London: Benn, 1927), 356.

² Julian Huxley, “Transhumanism,” in *New Bottles for New Wine* (London: Chatto & Windus, 1957), 17.

³ The Czech writer Karel Čapek invented the neologism “robot” in his play *Rossumovi Univerzální Roboti* (R.U.R., Rossum’s Universal Robots), published in 1920. However, the

In these same years, 1960–1970, began to emerge one of the underlying philosophical foundations of transhumanism. Reinterpreted in a context of sociopolitical protest and nurtured by technological advances that opened new horizons, the “French theory” quickly became the anchor of a variety of movements such as deconstructionism, gender studies, and of course transhumanism.⁴ With the radical deconstruction of the subject and objectivity, philosophical opportunities to “remake the human” were perceptible.⁵ The only remaining step for transhumanism was to make further technological progress in the fields of artificial intelligence and nanotechnology. The years 1980–2000 saw the accomplishment of precisely that.

In the early 1960s Fereidoun M. Esfandiary, a pioneer of transhumanism, symbolically changed his name to FM-2030. This change was an expression of his hope that, by the time of his hundredth birthday in 2030, humanity would have reached technological immortality. Building on this conviction, he formed one of the first groups of “futuristic” minded people. If he was one of the first great figures of transhumanism, he is far from being the only or even the most prominent. In 1965 appeared a name that became a symbol of transhumanism: Ray Kurzweil, one the most prominent inventors and thinkers of transhumanism, who received numerous awards for his technological advances as well as two major books, *The Age of Spiritual Machines* (2000) and *The Singularity Is Near* (2006).

In *The Age of Spiritual Machines*, Kurzweil made technological predictions, some of which were complete failures and contributed somewhat to discrediting him. For example, he predicted that by 2009 a \$1,000 computer would be able to make a trillion calculations per second, but the fastest of our regular computers make barely ten billion. Further, computer-controlled cars are far from being widespread, even on highways—although some steps in this direction have already been made. On the other hand, most of our electronic gadgets can actually connect wirelessly, and laptops are the size of a small book, and may soon be that of a credit card.⁶ Despite a rather

term robotics and some more fundamental intuitions go back to Isaac Asimov, undoubtedly one of the most influential authors of science fiction in the twentieth century. Science fiction is certainly one of the three major influences that Gilbert Hottois sees in the origin of transhumanism. See Gilbert Hottois, “Le transhumanisme entre humanisme et posthumanisme,” *Foi et vie* 114.4 (December 2014): 27–45, here 38.

⁴ The precise relationship and mutual influence between these different currents are complex, particularly because of the impossibility of systematizing transhumanism.

⁵ Strangely, this influence is not mentioned among the “origins” of transhumanism in the special issue of *Foi et vie*. See Vincens Hubac, “Science sans conscience: Le transhumanisme est-il un humanisme?,” *Foi et vie* 114.4 (December 2014): 9–26.

⁶ For a list of futuristic predictions by Raymond Kurzweil, see especially chapters 9–11 of his *The Age of Spiritual Machines* (New York: Penguin, 1999), 189–233. The number of Kurzweil’s predictions, and the myth that resulted, even earned them their own Wikipedia page!

impressive list of technological “prophecies,” Kurzweil gave the impression of being an inventor out of touch with reality. Of course, it should not be forgotten that in 1999 he received the National Medal of Technology and Innovation, the highest technological award in the United States, and two years later, in 2001, the Lemelson-MIT Prize, the highest international distinction in the field of technological innovation.⁷ Kurzweil is also one of the technological gurus of the Google empire.

An upturn in the history of the movement happened in 1982 during a meeting of the American Association for Artificial Intelligence. Vernon Vinge used for the first time a term that quickly became one of the keywords of transhumanist philosophy: *the Singularity*. Under Vinge’s pen, the term embodies the slogan that “within thirty years, we will have the technological means to create superhuman intelligence. Shortly after, the human era will be ended.”⁸ A few years later, in 1988, the first issue of *Extropy* magazine was published by philosophers Max More and Tom Morrow.⁹ Then, in 1991–1992, they founded the Extropy Institute,¹⁰ an organization dedicated to the promotion of extropianism, a philosophy defined as “an inspiring and uplifting view of life while remaining open to revision according to science, reason, and the boundless search for improvement.”¹¹ This view is unsurprisingly based on “challenging human limits by means of science and technology combined with critical and creative thinking.”¹² As such, extropianism can be seen as uninhibited scientism, breaking the shackles of philosophical contradictions and ethical boundaries. But the importance of this institute lay beyond its philosophical assertions: its imposing mailing list defines one of the first public manifestations of transhumanism, a movement still in the process of structuring itself.

⁷ “Raymond Kurzweil,” Massachusetts Institute of Technology, <http://lemelson.mit.edu/resources/raymond-kurzweil>.

⁸ Vernon Vinge, “What Is the Singularity?,” *Mindstalk*, 1993, <http://mindstalk.net/vinge/vinge-sing.html>.

⁹ These two authors also symbolically changed their names as the did FM-2030. The first changed his name from Max T. O’Connor to Max “More” and the second, Tom Bell, to Tom Morrow (also sometimes referred to as T. O. Morrow, “tomorrow”).

¹⁰ Contrary to what is sometimes written, this institute is not the first transhumanist association to have been created—the Foresight Institute was founded in 1986. Contra Thibault Dubarry and Jérémy Hornung, “Qui sont les transhumanistes?,” *Sens Public*, June 17, 2011, <http://www.sens-public.org/article527.html?lang=fr>.

¹¹ Max More, “Extropian Principles,” *High Existence*, <http://highexistence.com/the-extropian-principles/>. The term “extropy” was coined as a metaphorical opposite of entropy, thus indicating a belief in unlimited progress of human beings by means of scientific and technological improvement.

¹² *Ibid.*

While the Extropy Institute was organizing its first transhumanist conferences, the need for a more systematic organization of the movement became obvious, and a few years later, in 1998, the World Transhumanist Association was founded by Nick Bostrom and David Pearce. This association was to provide the organizational structure for transhumanist interest groups and to open the doors of political influence. If the WTA does not speak for all transhumanist subgroups, it does represent enough to be legitimately regarded as one of its leading voices.¹³ Two major documents of the WTA, the “Transhumanist Declaration” and its “FAQ” are among the best-known transhumanist writings.¹⁴

At the same time, another major transhumanist, Hans Moravec, adjunct professor at Carnegie Mellon University, published several works and led major scientific research in the field of robotics and artificial intelligence. In 1989 he published *Mind Children*, exploring the possible implications of robotics and mind (or consciousness) uploading. His particular emphasis on the transition towards artificial intelligence is reminiscent of some intuitions of Isaac Asimov in his “Robot” series, or of certain expectations of cyberpunk author William Gibson—notably in his *Neuromancer*, published in English in 1984.¹⁵

Since 2000–2005, the transhumanist movement has continued to grow and diversify. The current network is composite and nonuniform, gathering figures as diverse as Ray Kurzweil, Nick Bostrom, Natasha Vita-More (a leading transhumanist artist), Max More, and Aubrey de Grey, a specialist in the fight against aging.¹⁶ At the beginning of the twenty-first century,

¹³ That said, James Hughes has shown that the WTA represents a particular branch of transhumanism he labels “democratic-liberal transhumanism” as distinguished from “libertarian transhumanism” (represented by Max More and the Extropy Institute) or “fascist (or eugenic) transhumanism” or even “radical democratic transhumanism.” See James J. Hughes, “The Politics of Transhumanism,” *J. Hughes’ Projects*, March 2002, <http://www.changesurfer.com/Acad/TranshumPolitics.htm>. Note that the World Transhumanist Association has morphed into Humanity+.

¹⁴ The Transhumanist Declaration is available online on the Humanity+ website, *World Transhumanist Association*, <http://humanityplus.org/philosophy/transhumanist-declaration/>. The statement is also published in Max More and Natasha Vita-More, eds., *The Transhumanist Reader* (Oxford: Wiley-Blackwell, 2013): 54–55.

¹⁵ William Gibson, *Neuromancer* (New York: Ace, 1984). This particular work is often considered the founding work of cyberpunk, a subgenre of science fiction often dealing with the social implications of technological transformation. Cyberpunk often positions itself in a nihilistic worldview and deals with the consequences of enhancements on human nature. Writers and filmmakers within this subgenre include William Gibson, Neal Stephenson, and in a certain way, Philip K. Dick. Other media include a significant cyberpunk influence, including movies (*Bladerunner*, *Robocop*, *Strange Days*) and anime (*Ghost in the Shell*, *Akira*, *Psycho-Pass*).

¹⁶ The end of aging, often considered one of the essential elements of transhumanism, is, for example, not affirmed by all the thinkers associated with the movement, unlike the promotion

transhumanist lobbies in the political and economic fields grew. Several indicators testify to the vision of the movement: the birth of a transhumanist party, founded by the writer Zoltan Istvan; the support of major figures like Larry Page (Google cofounder), Bill Gates (founder of Microsoft), Martine Rothblatt (United Therapeutics, Sirius), and Peter Thiel (founder of PayPal and Facebook administrator); and the synergy between the transhumanist innovation and some public institutions such as the US space agency, NASA, which houses the Singularity University of California.

The transhumanist movement, not surprisingly, is less represented in France. Not until 2010 was the first transhumanist association, Technoprog, created. Its first years were low in activity, as it was mainly building up the national network and organizing a few conferences. Technoprog organized its first international conference on transhumanism, Transvision, in November 2014, which was also funded by Humanity+. Among the authors and networks that attracted the attention of a growing readership were the think tank NeoHumanitas¹⁷ and Gérard Chazal, author of *Philosophie de la machine* (Philosophy of the Machine) and a growing number of respectable online resources—such as the article on transhumanism in the *Encyclopaedia Britannica*. Transhumanism is also the subject of interaction with religions, as in the case of French sociologist Raphaël Liogier, who edited a volume on transhumanism and contributed to an article from the Buddhist perspective.¹⁸

II. *Attempt at Definition*

Defining transhumanism is difficult. Because of the lack of uniformity of thought and major academic works, definition is forced back to broad key definitions or features mentioned by transhumanism itself. Moreover, while “one” transhumanism is referred to, the movement cannot be defined as a uniform reality, and its nuances should be noted. Further, it suffers from a deficient public image, often being seen as an idealist and Promethean movement. As a result, it is often considered ambiguously or negatively. However,

whether hazardous manipulators of the living, unscrupulous entrepreneurs, new utopians, realistic lobbyists or harmless dreamers, transhumanists raise a simple

of longevity. Aubrey de Grey is one of the main promoters of the fight against aging. See Aubrey de Grey, *Ending Aging: The Rejuvenation Breakthroughs That Could Reverse Human Aging in Our Lifetime* (New York: St. Martin's Griffin, 2007).

¹⁷ NeoHumanitas, <http://www.neohumanitas.org>.

¹⁸ Raphaël Liogier, ed., *De l'humain: Nature et artifices*, La pensée de midi 30 (Arles: Actes Sud, 2010).

question: what is happening to human beings in the early twenty-first century, when it seems we have acquired an unprecedented capacity to influence our biological nature?¹⁹

This is an implicit reference to what became one of the defining features of transhumanism, that is, its support for emerging technologies, in particular for the NBIC. A brief provisional definition of transhumanism is found in the opening of the Transhumanist Declaration:

Humanity will be radically changed by technology in the future. We foresee the feasibility of redesigning the human condition, including such parameters as the inevitability of ageing, limitation on human and artificial intellects, unchosen psychology and physiology, suffering, and our confinement to the planet earth.²⁰

According to transhumanism, these technologies could affect the various dimensions of human life such as physiology, rejuvenation, intelligence, emotion regulation, and the abolition of suffering. For Max More, the use of the NBIC explains the essential difference between “humanism” and “transhumanism”:

Transhumanism differs from humanism in its recognition and anticipation of radical changes present in nature, and in human possibilities resulting from various sciences and technologies such as neuroscience and neuropharmacology, life extension, nanotechnology, artificial ultra-intelligence, combined with a philosophy and a system of rational values.²¹

Devoted rationalism, assumed scientism, and self-proclaimed Prometheism: those are, at first reading, the main features of transhumanism. An article on the *Metanexus* website presents another relevant definition of transhumanism as “a rather simple idea: within certain limits that require investigation, it is desirable to use emerging technologies to enhance human physical and cognitive capacities, and to make other beneficial alterations to human traits.”²²

¹⁹ Gabriel Dorthe, “Naissance permanente ou immortalité? Essai de cadrage du transhumanisme,” *Studia philosophica* 70 (2011): 35–43.

²⁰ “Transhumanist Declaration,” § 1.

²¹ Max More, “Transhumanism: A Futurist Philosophy,” 1990 <http://www.maxmore.com/transhum.htm>. Some consider that transhumanism is a negation of modern humanism, almost antihumanism. Even authors associated with transhumanism indicate that humanism is “the idea by which constant identification with a quasi-mystical universal ‘human nature’ produces great cultural achievements, which serve to promote the cohesion of humanity in general.” Stefan Herbrechter, *Posthumanism* (London: Bloomsbury, 2013), 12.

²² Russell Blackford, “H+: Trite Truths about Technology: A Reply to Ted Peters,” *MetaNexus*, <http://www.metanexus.net/essay/h-trite-truths-about-technology-reply-ted-peters>.

It is also possible to show that transhumanism expresses itself at three different levels. Initially it develops a philosophical and metaphysical posture. At that level, “the transhumanist sees a world in a ‘process of evolutionary complexification toward ever more complex structures, forms, and operations.’”²³ It might be assumed that because of the inherent complexity of the world, transhumanism would tend to recognize the limits of humanity. But it is not ready to concede the nonsufficiency of humanity. Instead, at a psychological level, it implies that “human beings are ‘imbued with the innate Will to Evolve—an instinctive drive to expand abilities in pursuit of ever-increasing survivability and well-being.’”²⁴ This stress on the will is reminiscent of Nietzsche, and some transhumanist thinkers do not hesitate to reclaim the “philosopher with the hammer.”²⁵ Of course neither the metaphysical dimension nor the psychological dimension would be complete without the third level, ethics. In fact, the first two levels “lead to the ethical level, where ‘we should seek to foster our innate Will to Evolve, by continually striving to expand our abilities throughout life.’”²⁶ Transhumanism, on this last point, can be considered as technological hedonism.²⁷ Because of the combination of these three levels, as well as the cultural and political implications of transhumanism, this topic is highly significant for Christian apologetics.

Transhumanism can thus be seen as faith in the necessary progress of human beings to improve individuals and the human species itself. Progress will be made possible by politicosocial and technological advances within a horizon that exceeds the boundaries that have historically limited the definition of the human person. Ultimately, it will literally make the future of humanity transhuman.²⁸

²³ Ted Peters, “H-: Transhumanism and the Posthuman Future: Will Technological Progress Get Us There?,” *MetaNexus*, September 1, 2011, <http://www.metanexus.net/essay/h-transhumanism-and-posthuman-future-will-technological-progress-get-us-there>.

²⁴ *Ibid.*

²⁵ The Nietzschean paternity of transhumanism is open to debate. Bostrom, for example, strongly denies arguments concluding that the German philosopher can legitimately be considered a distant ancestor of the movement. Stefan Sorgner maintains that the transhumanist stress on the “non-fixity of human nature” is a clear Nietzschean perspective. See Bostrom, “A History of Transhumanist Thought,” 4–5; Stefan Sorgner, “Nietzsche, the Overhuman, and Transhumanism,” *Journal of Evolution and Technology* 20.1 (March 2009): 29–42, <http://jetpress.org/v20/sorgner.htm>.

²⁶ Peters, “H-: Transhumanism and the Posthuman Future.”

²⁷ Cf. Hubac, “Science sans conscience,” 9–26, esp. 23–25.

²⁸ Gabriel Dorthe mentions three common points to all forms of transhumanism: (1) research to improve all dimensions of human life by technical progress, including new rights and values; (2) an enthusiastic vision of technical progress; (3) and an interest for debating the importance, use and future of these techniques in order to highlight potential risks. Dorthe, “Visions, histoire et géographie du transhumanisme.”

1. *A Radical Overcoming*

Being transhuman, this movement offers a radical and holistic overcoming. As Max More describes it, “becoming posthuman means exceeding the limitations which define the less desirable aspects of the ‘human condition.’ Posthuman beings would no longer suffer from disease, ageing, and inevitable death (but they will face other challenges).”²⁹ What is at stake is not so much a quantitative improvement of human nature, but a qualitative one. As a symbol of this perspective, More comments on his change of name: “It seemed to really encapsulate the essence of what my goal is: always to improve, never to be static. I was going to get better at everything, become smarter, fitter, and healthier. It would be a constant reminder to keep moving forward.”³⁰ The objective of radical overcoming is obvious here.

First, transhumanism seeks to transcend theological and philosophical limits. According to More’s extropian principles, transhumanism prefers “reason over blind faith and questioning over dogma. Remaining open to challenges to our beliefs and practices in pursuit of perpetual improvement. Welcoming criticism of our existing beliefs while being open to new ideas.”³¹ Classical philosophies are challenged by transhumanism, which presents itself as radical materialism and pragmatism. Transhumanist science would then aim only at determining what is most fitting for the world. Transhumanism is the radical end, the surpassing of all philosophies that More calls “pancritical rationalism.” This theory of knowledge holds that everything should be criticized because everything evolves: the body, truth, society, even personality. Once this first limitation has been overcome, transhumanism promotes a second step beyond the realm of the cognitive and the bodily.

These forms of technological overcoming eventually lead transhumanism to proclaim four “ends”: of disease, of objective law, of gender, and of humanity. The first is at the heart of the transhumanist project: the end of disease, suffering, and aging. All those associated with the movement do not hold the same attitude on this point. Some defend *abolitionism* and longevity, arguing for an extension of human life as well as for the moral obligation to abolish suffering and disease. However, they also believe that death will not be overcome.³² Others hold to *immortalism* and expect that

²⁹ Max More, “The Philosophy of Transhumanism,” in Max More and Natasha Vita-More, eds., *Transhumanist Reader: Classical and Contemporary Essays on the Science, Technology, and Philosophy of the Human Future* (Oxford: Wiley & Sons, 2013): 3–17, here 4.

³⁰ Ed Regis, “Meet the Extropians,” *Wired*, October 1994, <https://www.wired.com/1994/10/extropians/>.

³¹ More, “Extropian Principles.”

³² *Ibid.* See More, “The Philosophy of Transhumanism,” 4; Bostrom, “A History of Transhumanist Thought”; Natasha Vita-More, “Life Expansion Media,” in *The Transhumanist Reader*:

nanomedicine will lead to the extinction of suffering and aging, rendering humans almost eternal. As noted above, Aubrey de Grey is a prominent promoter of this position.

Yet one of the major sociopolitical conclusions of transhumanism is that the programmed end of disease cannot be achieved in the current political context. Hence it is necessary to overcome what they sometimes refer to as “objective law.” This touches upon the nature of political transhumanism—whether democratic or libertarian. These two political manifestations of transhumanism, while holding to different views, both try to show that transhumanism is the preferred means by which each of us will reach the fullness of well-being through the rational control of environment and society. If objective law must be overcome, it can be done in several ways. The first is “upwing” transhumanism represented by FM-2030: this brand of political transhumanism seeks to overcome left-right political dialectics by promoting institutional unity and by developing a global language and citizenship.³³ If FM-2030’s political bent has not been very influential hitherto, the opposite can be said of Donna Haraway’s “Cyborg Manifesto.” Written in 1984, this article is not really a true transhumanist manifesto; rather, as the subtitle clearly says, it is about “Science, Technology, and Socialist Feminism in the 1980s.”³⁴ However, because of its many implications, it can still be included in the transhumanist canon, and its sociopolitical significance should not be underestimated.³⁵ Despite the links some see between the political left and transhumanism, “the fact that a left futurism has been so slow to emerge is somewhat surprising, since technoutopianism, atheism, and scientific rationalism have been associated with the democratic, revolutionary and utopian left for most of the last two hundred years.”³⁶ But political transhumanism can also take other forms such as cyberpunk—with egalitarian accents promoting a *via media* between capitalism and socialism—or a libertarian version that advocates a *personal* right to change and increase one’s own body—thus promoting a very *subjective* definition of law.³⁷

Classical and Contemporary Essays on the Science, Technology, and Philosophy of the Human Future, ed. Max More and Natasha Vita-More (Oxford: Wiley & Sons, 2013): 73–82.

³³ FM-2030, *Up-Wingers* (New York: Popular Library, 1977).

³⁴ Donna Haraway, “A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century,” in *Simians, Cyborgs and Women: The Reinvention of Nature* (New York: Routledge, 1991): 149–81, *Georgetown University*, <http://www9.georgetown.edu/faculty/irvinem/theory/Haraway-CyborgManifesto.html>.

³⁵ The link between this form of social criticism and transhumanism has yet to be specified, though. Cf. Hughes, “The Politics of Transhumanism.”

³⁶ *Ibid.*

³⁷ This current in particular is represented by James J. Hughes’s *Citizen Cyborg* (Cambridge: Westview, 2004).

With the end of disease and objective law, the final overcoming of gender and human nature would also be guaranteed. Here, transhumanism manifests strong ties with postgenderism and with the wider circle of posthumanism.³⁸ Postgenderism, or even gender studies, is a cultural and social philosophy aimed at the voluntary elimination of biological genders through the use of postmodern philosophies, biotechnologies, and new assisted reproductive technologies. Here Haraway's "Cyborg Manifesto," along with "queer futurism," is an important part of literary science fiction close to LGBTQ movements. For others, the overcoming of gender, and therefore social equality control, can only come about through the development of artificial life. In 1970 Shulamith Firestone was already arguing that "patriarchal society" could only be abolished by creating artificial wombs, freeing women from an imaginary role implemented by a masculine-conditioned reading of their own physiology.³⁹ Although the interaction between transhumanism and postgenderism is rather vague, technological and social promises made by transhumanism could be catalysts for a dynamic and synthetic combination of these movements.

Finally, at this stage, the overcoming of the human, the end of the human species, would be *consummated*. This direction, supported by a large majority of transhumanist movements, is a particular focus of extropianism, whose founding principles advocate a proactive approach to human evolution, advancing it through the integration of new technologies. Kurzweil offers an advanced version of this position, predicting the coming of "the Singularity." This last notion is defined as the point after which technological growth will be self-exponential and self-directed. After the Singularity, humans will witness the birth of a new species, yet undefined.⁴⁰

2. *From Technology to Redemption*

As we have seen, transhumanism grants an almost limitless value to technology. However, the question remains: Why do emerging technologies

³⁸ The difference between post- and transhumanism remains to be clarified. In this article, posthumanism is considered a broader philosophical and cultural circle than transhumanism.

³⁹ Shulamith Firestone, *The Dialectic of Sex: The Case for Feminist Revolution* (New York: William Morrow, 1970). This conclusion is also discernible in the opinion of Marc Roux who believes that transhumanist philosophy and "Surrogacy" are part of "the same logic that can allow us to make ourselves as independent as possible ... of our body." Marc Roux, "Conclusions," *TransVision* 2014, <http://www.youtube.com>.

⁴⁰ In his book *The Singularity Is Near* (London: Penguin, 2005), Kurzweil speaks of Singularity as a near universal transcendence (388–90). However, we must not understand "transcendence" in a theological sense but as the affirmation of the sublimation, the intelligent transformation of the whole universe.

nourish so many futuristic and alarmist fantasies? One reason, it seems, lies in the almost religious or redemptive nature of the movement. Underlying this technological philosophy of redemption is an almost technological ontology highlighted very early in the history of its development. As early as 1968 the psychologist and historian of science Serge Moscovici wrote in his *Essai sur l'histoire humaine de la nature* (Essay on the Human History of Nature) that with cybernetics the need for human agency became, for the first time, superfluous. Others add that for transhumanism, “humans should (or should be permitted to) use technology to remake human nature,” so legitimizing the redemptive nature of transhumanism’s technological hopes.⁴¹ In particular, cybernetics would proclaim the emergence of a technique that would be self-evolving. Hence the conclusion of the *NeoHumanitas* think tank:

Most versions share the assumption that technology is involved in a spiraling dynamic of co-evolution with human development. This assumption, known as technogenesis, seems to me compelling and indeed virtually irrefutable, applying not only to contemporary humans but to *Homo sapiens* across the eons, shaping the species biologically, psychologically, socially and economically.⁴²

We could as easily say that, psychologically, a human frontier was overcome: technology was no longer mediation with an environment external to human beings; instead, since it is now within the body, it is used as mediation between the person and his or her own self.

Here, transhumanism takes on an almost theological connotation. It is in fact a theology of creation in which the universe is to be improved and “made alive” by intelligence and human creativity—all the while being of the mind that human potential for development is inherent in matter.⁴³ Transhumanist anthropology is partly based on a disputed interpretation of Nietzsche. For those who discern a positive influence of the German thinker, human nature is not a given, but something everyone should be creating. So appears a

⁴¹ Heidi Campbell and Mark Walker, “Religion and Transhumanism: Introducing a Conversation,” *Journal of Evolution and Technology* 14.2 (August 2005), 1. See also Nick Bostrom, “Transhumanist Values,” 2005, <http://www.nickbostrom.com/ethics/values.html>.

⁴² Katherine Hayles, “H-: Wrestling with Transhumanism,” *MetaNexus*, September 1, 2011, <http://www.metanexus.net/essay/h-wrestling-transhumanism>.

⁴³ “What we find in transhumanists’ predictions is the use of the doctrine of progress. Transhumanists think that progress, understood as an improvement over time, is inherent in nature and inherent in culture.” Peters, “H-: Transhumanism and the Posthuman Future.”

new paradigm about the future of humanity, based on the assumption that human nature, which up to now has been considered sacred and untouchable, does not exist. Human nature is not an untouchable dogma. The human species is malleable and fundamentally improvable.⁴⁴

However, an important difference remains between transhumanism and Nietzsche: the latter would never have implied that human beings could or even should be disembodied. Now, as Ted Peters has noted, transhumanism “assumes that human intelligence and personality can be disembodied.”⁴⁵ Out of this theology of creation emerges a doctrine of inherent sin: matter, although subject to humankind, contains a deep flaw, an imperfection. The fallibility of the world, and consequently of humanity, is manifest in a profound dissatisfaction. This frustration finds its root in natural, social, and psychological conditions sometimes considered debilitating. Human sin is defined as not being what one desires to be—and should become. Here again the religious nature of transhumanism appears clearly.

Finally, transhumanism also offers redemption through the will to technological acceleration. Thus, Kurzweil’s statement that “the machines are an expansion of our own intelligence” is not a mere utopian affirmation about the power of technology, but rather an attempt to redeem a humanity dissatisfied by itself.⁴⁶ Of course, the means through which this redemption can be accomplished are diverse (sociopolitical, cultural, and technological), but they all share a holistic dimension. Thus human redemption will be cosmic, or it will not be. The conditions of technological redemption also lead to a distinction within transhumanism between those who anticipate slow and difficult progress through a kind of purgatory and those who expect a “critical leap” in which change will be fast and radical, almost instantaneously transferring us from our current hell to the paradise of singularitarian bliss.⁴⁷

III. *The Anthropological Challenge of the Twenty-First Century*

The vast majority of Christian traditions have criticized transhumanism, even though some remain more appreciative than others. In *The Transhumanist Wager*, a science-fiction novel by Zoltan Istvan, Christians—fundamentalists, of course—are the main opponents of transhumanists and, led by the elated Reverend Belinas, begin a guerilla war against transhumanist

⁴⁴ Vincent Schmid, “La foi au défi du transhumanisme,” *Évangile et liberté* 234 (December 2009): 10–15, here 12.

⁴⁵ Ted Peters, “The Soul of Transhumanism,” *Dialog* 44.4 (Winter 2005), 381–95, here 385.

⁴⁶ Ray Kurzweil, “In-Depth with Ray Kurzweil,” *C-Span*, November 5, 2006, <https://www.c-span.org/video/?194500-1/depth-ray-kurzweil>.

⁴⁷ Against Gabriel Dorthe, it seems that transhumanism promises an eschatology.

interests.⁴⁸ This is symptomatic of how many transhumanists view religion, especially the Christian religion. However, it must not be thought that transhumanism has found no positive echo in Christian theology.⁴⁹ Indeed, with its emphasis on the fight against human fallibility and the potential evolution of the human species, it is not surprising that transhumanism found a positive reception in theological circles close to radical evolutionism—mostly associated with Teilhard de Chardin, Alfred North Whitehead, and process theology. Whatever theological echo transhumanism found in Christianity,

it is likely that [transhumanism] will have an important place in the intellectual debate in the coming years. Indeed nothing seems now to replace the scientific model that informs our society so deeply. And nothing can prevent it from nourishing very stubborn hopes.”⁵⁰

An apologetic response and dialogue with transhumanism therefore seems necessary. In some countries, like France, this movement is only in its infancy. However, we should not forget that it is an important sociocultural phenomenon. Very few articles or books are written from a theological perspective; most of the literature originates in transhumanist circles, coming from the transhumanists themselves, as for example the articles in the *Journal of Evolution and Technology*.⁵¹ The wider Christian community remains largely unaware of the challenge. This lack of interaction, in a Western world much less turned towards religion, encourages transhumanists to look at messianic science for answers. Hence the conclusion of Ted Peters: “The transhumanist movement seeks to fill the widening cultural void in Western civilization due to the disintegration of the former religious glue that held us together in a common spirit.”⁵²

⁴⁸ Zoltan Istvan, *The Transhumanist Wager* (Futurity Imagine Media, 2013). With reference to the three laws of Asimov’s robotics, Istvan proposed “three laws” of transhumanism: (1) “A transhumanist must safeguard one’s own existence above all else”; (2) “A transhumanist must strive to achieve omnipotence as expediently as possible—so long as one’s actions do not conflict with the First Law”; (3) “A transhumanist must safeguard value in the universe—so long as one’s actions do not conflict with the First and Second Laws.” Zoltan Istvan, “The Three Laws of Transhumanism and Artificial Intelligence,” *Psychology Today*, September 29, 2014, <https://www.psychologytoday.com/blog/the-transhumanist-philosopher/201409/the-three-laws-transhumanism-and-artificial-intelligence>.

⁴⁹ The United Protestant Church of France promptly launched a reflection on transhumanism after Vincens Hubac proposed a motion at the National synod at Avignon in 2014. In decision no. 34, the Synod decided to initiate further reflection.

⁵⁰ Schmid, “La foi au défi du transhumanisme,” 12.

⁵¹ Notable exceptions are the special issues of *Évangile et liberté* and of *Foi et vie*.

⁵² Peters, “H-: Transhumanism and the Posthuman Future.”

1. *Systematic Theology Facing Transhumanism*

To promote interaction with transhumanism, focus on precise areas is necessary. The first area of interaction with transhumanism is systematic theology. In fact, several studies offer a transhumanist reinterpretation of the main aspects of the Christian faith.⁵³ Three theological issues need addressing in a contextualized way. First, particular attention should be given to the type of evolutionism promoted in theology. The debate between creationism and evolutionary theism is certainly not over. However, interaction with transhumanism suggests that a move away from an internal evangelical debate to an external debate with materialistic evolutionism would be beneficial. This question is highly anthropological and requires more dialogue and less emotionally charged debate between the two aforementioned versions of creationism. In this context, we need to address the question of death and suffering and to be sensitive to this essential quest of transhumanism: "If it is natural to die then let's get rid of nature. Why submit to tyranny? We must rise above nature. We must refuse to die."⁵⁴ In this emotive context, the normativity of human nature becomes one of the major systematic issues.⁵⁵

Furthermore, the theology of the incarnation could also benefit from a reframed formulation with reference to transhumanism. This theological locus has received increasing interest from different theological perspectives. For example, Jeanine Thweatt-Bates has made a reasoned presentation for a christological formulation taking into account the contributions and radical philosophical intuitions of transhumanism. However, her contribution also involves a significant reinterpretation of classical Christology, based on an ambiguous view of the reality of Christ's divinity.⁵⁶

Finally, eschatology needs integration into systematic reconsiderations. If transhumanism is a theology of redemption, it is also an *eschatology*. In fact, it offers redemption from a life of frustration and limitation because it hopes for a completely new and transformed cosmic reality. In that new world, humanity, even if it does not become the measure of all things, will at least be individually its own measure. Beyond the Singularity lies the promised land, or rather, the promised "transhuman" condition. Faced with

⁵³ See the works of Philip Hefner, Jeanine Thweatt-Bates (*Cyborg Selves*) or the publications of the Christian Transhumanist Association (<http://www.christiantranshumanism.org>).

⁵⁴ Quoted by Benjamin Tiven, "The Future Takes Forever Becoming FM-2030," *Bidoun*, <http://bidoun.org/articles/the-future-takes-forever>. Until recently, this was one of the key phrases on FM-2030 site, <http://fm2030.us>.

⁵⁵ Bernard Baertschi, "L'obsolescence programmée de la nature humaine," *Foi et vie* 114.4 (December 2014): 46–61, here 48–52.

⁵⁶ Jeanine Thweatt-Bates, *Cyborg Selves: A Theological Anthropology of the Posthuman* (Farnham, UK: Ashgate, 2012), 175–92.

this challenge, Christian theology needs an eschatology rooted in the theology of creation. Eschatology is not to be considered as a mere appendage to redemption, but a consequence of the creative act of God.

2. Apologetics Responding to Transhumanism

It is necessary for systematic theology to interact with transhumanism because apologetics builds on that primary discipline. The apologetic challenge of transhumanism must somehow encourage greater proximity between apologetics and systematic theology, even developing a new type of systematic and philosophical commitment. Only if systematic theology interacts with transhumanism can an apologetics-based answer to this twenty-first century challenge be developed. The following points may be indicated. First, an apologetic response to transhumanism could center on the concepts of longevity and immortalism. The ideal (or idol) of mastery and annihilation of “human time” is an apologetic question.⁵⁷ Ultimately, transhumanism must answer as to whether human embodiment *in time* is not de facto a necessary and beneficial condition of humanity.

Further, the two connected domains of *human cognition* and *emotions* are the object of transhumanist interest. Apologetics can also provide the foundations without which such human abilities as memory, analogical reasoning, and concentration cannot be explained in a satisfactory way. Here the debate will most likely oppose two radically different worldviews: materialistic and supernatural, atheistic and biblical-theistic. In addition, the ability to take pleasure in life and to respond appropriately to various situations is also a matter to be addressed apologetically. An apologetic of the emotions, human pathos, although difficult to develop, should be formulated in the context of a response to transhumanism. The apologist must therefore simultaneously strive to value human emotions while critically engaging transhumanism, particularly as the latter considers that one of the roots of current suffering lies in human emotions leading to wrong decision making.

Moreover, it is impossible to ignore the ethical stance that theology, and thus the church, has to make. Of course, the contours of transhumanist ethics must be traced, although these are not yet completely clear, and some may doubt they will ever be. Transhumanism is more concerned with ethical rejections than with ethical affirmations. From a theology of the

⁵⁷ One fact remains, as Ted Peters indicates: “Our redemption through resurrection into a new creation does not match the physical longevity or cybernetic immortality.” Ted Peters, “Progress and Provolution: Will Transhumanism Leave Sin Behind?,” in Ronald Cole-Turner, ed., *Transhumanism and Transcendence: Christian Hope in an Age of Technological Enhancement* (Washington, DC: Georgetown University Press, 2011), 73.

body to procreation, or to obvious social issues concerning justice, transhumanism raises countless ethical questions.⁵⁸ One case in point: if human growth is to be part of tomorrow's economic landscape, what are we to make of the following possible scenario?

We could even speculate about the members of the privileged stratum of society eventually enhancing themselves and their offspring to a point where the human species, for many practical purposes, splits into two or more species that have little in common except a shared evolutionary history. ... The non-privileged would remain as people are today but perhaps deprived of some their self-respect and suffering occasional bouts of envy.⁵⁹

This quotation, penned by a major transhumanist author, illustrates that, although they are aware of potential problems, their answers remain idealistic, relying on a belief in the inherent goodness of human nature.

Finally, apologetics must respond to transhumanism's technological idealism. In this respect, the work of Jacques Ellul encourages criticism of the way in which technology inexorably leads human beings to redefine themselves.⁶⁰ While transhumanism proclaims that technological control is desirable and that humans would remain in control of things and themselves, Ellul constantly points out that it is impossible to anticipate what the real consequences of technological change might be. By becoming an all-powerful mediator, technology mutates, incorporating into itself the remains of a humanity that has lost its identity.⁶¹

Conclusion

As well as being a systematic and apologetic question, transhumanism is an eminently pastoral problem. Its therapeutic aspirations might find a critical echo in pastoral theology practice, opening a way to a holistic renewal—something transhumanism also seeks. The hope of a world without pain or suffering must also challenge us to better minister to and increasingly manifest compassion in a world obsessed with the promise of an accessible earthly paradise. In this area, creative propositions remain unexplored.

⁵⁸ Cf. Jean-Michel Besnier, *Demain les posthumains* (Paris: Hachette, 2009), 206–7.

⁵⁹ Nick Bostrom, "Human Genetic Enhancements: A Transhumanist Perspective," *The Journal of Value Inquiry* 37.4 (2003): 493–506, <http://www.nickbostrom.com/ethics/genetic.html>.

⁶⁰ See for example Joël Decarsin, "Regard ellulien sur le transhumanisme," *Foi et vie* 111.2 (June 2012), *Technologos*, <http://technologos.fr>.

⁶¹ Sci-Fi fans will benefit from reading Maurice Dantec, *Grande Jonction* (Paris: Albin Michel, 2006).

Pastoral care has to be developed to address a transhuman context. In this sense, apologetic and pastoral counseling overlap and make understanding transhumanist philosophy a prerequisite for an appropriate response to this “techno-redemptive” movement.

We must end this introductory reflection with the importance of listening and understanding—both central to pastoral counseling and apologetics. It would be a fatal mistake to put aside, discredit, or attack transhumanism thoughtlessly. If confrontation is necessary, it must be done with relevance. But that can only be done if, beforehand, the questions raised by this movement have been heard and understood. Thus, a certain empathy is necessary before we can hope to critically engage this philosophical and cultural movement. Perhaps transhumanism might then have a positive impact on theology, requiring greater inner consistency on our part, but also careful thought and a more engaged attitude with contemporary challenges. In this sense, Jean-Michel Besnier has rightly concluded that transhumanism “radicalizes and focuses our attitudes: welcoming as an *alter ego* the person who is different from myself, because that person does not belong to my horizon of meaning or my definition of the human.”⁶² The interaction with transhumanism does not imply, however, acceptance, but recognition of its current importance. To avoid apologetic dialogue and criticism would be a tragic mistake that would harm the future of Christ’s church.

This should not obscure the serious problems or dangers inherent in transhumanism. In promising radical transformation of human nature it promotes, without acknowledging it, a radical negation of everything that defines the human person—especially human dignity, integrity, responsibility, and freedom.⁶³ By contrast, faith in a personal God, transcendent and triune, a God who took on our nature, remains the necessary foundation for the defense of a true and radical humanity.

⁶² Besnier, *Demain les posthumains*, 208.

⁶³ See the conclusions of Hottois in “Le transhumanisme entre humanisme et posthumanisme,” 43–44.