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Transhumanism and the Philosophy of the Elites

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In 2004, when Foreign Policy asked eminent scholar Francis Fukuyama to write an article answering the question, What is the world's most dangerous idea?, he responded with a piece titled Transhumanism.

Fukuyama argued that the transhumanist project will use biotechnology to modify life until humans lose something of their 'essence', or fundamental nature. Doing so will disrupt the very basis of natural law upon which, he believes, our liberal democracies are founded (Fukuyama, 2004). For Fukuyama, these losses lay unrecognised beneath a mountain of promise for a techno-scientific future of imaginative self-improvement.

Currently, the *Fourth Industrial Revolution*, in which transhumanism plays a central guiding role, is shaping the policies of global corporations and political governance (Philbeck, 2018: 17).

The converging technologies of this revolution are nanotechnology, biotechnology, information technology, cognitive sciences (NBIC), and artificial intelligence (Roco and Bainbridge, 2002).

The political class and the new technology elite routinely tell us that 'the age of AI has arrived' (Kissinger et al., 2021). Simultaneously, modern humans have also become increasingly dependent on advanced technologies and the complex systems they enable.

These changes have presented new challenges to old questions, namely: *what does it mean to be human?* And *what future do we want for ourselves?*

From the hype of super-intelligence to self-assembling nanobiology, the world can seem increasingly *science-fictional.* Contemporary technological society is "harder and harder to grasp", is full of "disruptions…that move ever faster", and is confronting us with "situations that seem outrageously beyond the scope of our understanding" (Schmeink, 2016: 18).

This paper aims to further our critical engagement with an ideology that is emerging across influential sectors of society. With this aim in mind, I will make three essential arguments:

Firstly, transhumanism is a movement based on a techno-scientific belief system that is striving towards the technological enhancement of biology and, in this regard, is self-consciously promoting bio-social engineering.

Secondly, the technologies of transhumanism have the potential to bring tremendous financial and political gains to corporations and governments who are not incentivised to seek out nor address their potential dangers.

Thirdly, the discontent towards transhumanism is diverse and comes overridingly from the threat to traditional values, nature-based ways of life, freedom, equality, and the loss of bodily autonomy to the will of those who operate these powerful systems.

Much of the current scholarship on transhumanism focuses on the intellectual contribution of the movement, with minimal work assessing socio-political impacts. This neglect is worrying since, within the reality of global capitalism, transhumanism may be overridingly motivated by economic and political forces as it may be by ideology. Furthermore, perhaps only a minority of humans may be able to access certain NBIC technologies or utilise them for profits (McNamee and Edwards, 2006: 515). Of course, the socio-economic ramifications may be culturally and politically disruptive in unanticipated ways. It is this overwrought relationship—of transhumanism, the global economy, profitable science, human nature, and traditional belief systems—that demand further critical examination.

> Schwab and other elites understand the social and political implications of their technological ideology and the rules of the 'winner-takes-all' market economy that will continue to consolidate gains from disruptive technologies.

Transhumanism: A brief history

Transhumanism is a predominantly an Anglo-American movement that has flourished since the 1980s in "American circles of science fiction fans" and with "computer experts and techno-geeks" (Manzocco, 2019: 36). Today, California's Silicon Valley, with its culture of technological optimism and imaginative entrepreneurship, is the hub of transhumanist thought and innovation. Though scholars have noted that there is no single definition of transhumanism, the essence of transhumanist ideology is to use science and technology to re-design and re-shape the human condition away from randomness, imperfectability, and decay, towards order, perfectibility, and control (Bostrom, 2005: 14).

This ideology emerged in early 20th Century Britain. There is a clear continuity of ideas between current proponents of transhumanism and those who were writing before the Second World War of the potential of science to shape the trajectory of nature, while fostering international cooperation and governance.

They included British scientists and thinkers such as Julian Huxley (credited with first using the word *Transhumanism* in the 1950s), his brother Aldous, and his grandfather Thomas Huxley, as well as their colleagues J.B.S. Haldane, H.G. Wells, J.D. Bernal, and Bertrand Russell.

These influential thinkers and internationalists were writing and working on promoting political and scientific outlooks that would form the basis of a century of scientific transhumanist thought (Bostrom, 2005: 4-6; Bohan, 2019: 74-108). The subjects they explored still attract transhumanists today: behavioural conditioning, genetic control, technological augmentation, artificial foods and wombs, space travel, life extension, and total disease control. These and other themes circle around the assertion that nature, including human nature, operates optimally under scientific adjustment and management (Bohan, 2019: 99-100).

Early transhumanists (or proto-transhumanists) viewed techno-scientific advancement as a cure for 'primitive' human nature (anger, violence, excess fertility), physical limitations (disease and possibly death), political ignorance, and international conflict. It was the Enlightenment ideal of mastery over nature, including human populations, that Aldous Huxley so aptly demonstrated in his dystopian novel, *Brave New World*. Huxley's novel, written in 1931, illustrates a scientific dystopia where transhumanist aims (genetic engineering, anti-aging interventions, biotechnology and enhancement drugs) are used to manage society implicitly through pleasure rather than explicitly through force.

Huxley's depictions were based less on his prophetic abilities and more on his intimate knowledge of the possibilities of social engineering as discussed and promoted by the scientific minds with whom he mingled. His later essay, *Over-population*, surmises that his novel's projections were "coming true much sooner than" anticipated (Huxley, 1960: 1).

Notably, Aldous's brother, Julian Huxley, also wrote about the ills of global overpopulation while promoting the genetic control ('improvement') of populations through eugenics (Hubback, 1989; Huxley, 1933). His 1957 essay, *Transhumanism*, claimed that man was the "managing director" of "evolution on this earth" (Huxley, 2015:12-13).

He was very involved with Britain's Eugenics Society for over three decades, serving as Vice-President and then President, as well as supporting "campaigns for voluntary sterilization…and for negative eugenics measures against persons carrying the scientific stigma of 'mental defect'" (Weindling, 2012: 3). Julian Huxley was the first Director-General of UNESCO and founder of the World Wildlife Fund (Byk 2021: 141-142). In this role, he promoted the ideology of an international, scientifically-founded welfare state to further his aim of liberating "the concept of God from personality" because "religions as all human activities is always an unfinished work" (Byk, 2021:149), (Huxley, 1957:10). Julian Huxley's work and writing envisioned an international social engineering project based on rational scientific management that promised to elevate humanity towards global peace (Sluga, 2010; Byke, 2021:146).

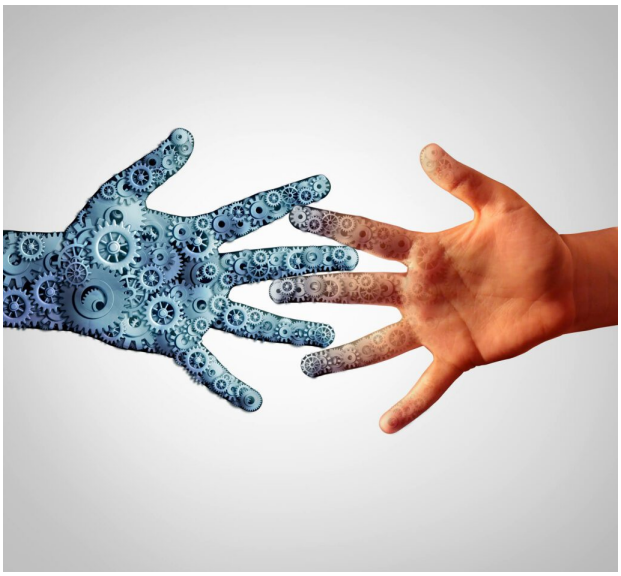
Philosophical and Spiritual Transhumanism: Towards a Technological Utopia

Transhumanism has a wide variety of interpretations, similar to how a major religion is expressed with a divergence of commitment, beliefs and motivations. In fact, many scholars consider transhumanism to be a novel, emerging religion with significant parallels to Christian eschatology (deGrey et al., 2022; O'Gieblyn, 2017). The vast majority of transhumanists do not accept a monotheistic 'God' or the moral restraints of traditional religions, but instead endow "technology with religious significance," leading scholars to define it as "a secularist faith" (Tirosh-Samuelson, 2012: 710).

While not all transhumanists partake in techno-spiritual views, transhumanists essentially

view technology as the redemption for fallible biology. For some, these perspectives were inspired by the philosophical work of Pierre Teilhard de Chardin (1881-1955). Tielhard de Chardin was a palaeontologist and Jesuit who believed that a "worldwide network would be woven between all men about earth" and that a "God-like entity" would form from a future "conscious, collective, omniscient mind—the Omega Point" (Bohan, 2019:92). The concept of technological 'transcendence' has continued to be central to Transhumanism in conversations about the worldwide web, the Internet of Bodies, artificial intelligence, and the 'Singularity', which is the belief that human-machine intelligence will grow exponentially and reach a point where humanity will be thrust into a posthuman age (Bohan, 2019:96; Kurzweil, 2005). The belief that humans (or rather posthumans) can become immortal and 'god-like' in a future machine-dominated age—complete with astral travel and digital telepathic communication—is why, in its philosophical form, many scholars understand transhumanism as a techno-materialist religious movement.

In an attempt to consolidate such a complex movement, transhumanist philosopher Nick Bostrom—current head of the Future of Humanity Institute at Oxford University, and transhumanism's most legitimate academic—co-founded the World Transhumanist Association in 1998 (Bostrom, 2005:12-13). Out of this work, the Transhumanist Declaration was drafted. It consists of bold statements such as: *Humanity will be radically changed by technology in the future. We foresee the feasibility of redesigning the human condition.* The Declaration concludes with: *Transhumanism advocates for the well-being of all sentience whether in artificial intellects, humans, posthumans, or non-human mammals.* The Declaration makes it clear that transhumanism is an unprecedented social engineering project promoting the desirability of using "technology to push the boundaries of what it means to be human and to transcend our biological condition", as described by Mark O'Connell, author of *To Be a Machine* (Mayor, 2018).



Two American transhumanist philosophers who have worked, since the 1980s, to spread transhumanist ideas, are Max More and Natasha Vita-More. They are entrepreneurs in the cryonics industry, which deep-freezes human corpses (called 'patients') with the aim of future revival (McKibbin, 2019:184-185). Vita-More, in a recent interview, emphasised that the essence of transhumanism is, "a transition of being human-animal into becoming more mechanised using different devices and technologies to enhance humans into whatever they feel that they are." This very Californian-esque promise of becoming 'whatever you want to be' could result in a more mechanised, or augmented, version of you. We already

see the emergence of this new 'becoming whoever you want' phraseology in the popular acceptance of enhancement chemicals, biotechnology, and videogames. A pantheon of new technologies is on the horizon: exoskeletons, virtual reality, robotics, body-changing pharmaceuticals, remote-controlled nanotechnology, artificial foods, brain implants and synthetic organs. Adopting these technologies is a part of what Max More describes as becoming the *Overhuman*, otherwise known as the *Posthuman*: if you are Transhuman you are essentially a *transitional human*.

In *The Overman in the Transhuman*, More attributes attitudes in transhumanism to Nietzsche's philosophy, arguing that the overhuman is the "meaning-giving" concept meant to "replace the basically Christian worldview" of Nietzsche's time (and, to a lesser extent, our times). More holds that the current "relevance of the posthuman" is that it ultimately gives meaning to scientifically-minded people" (More, 2010:2). In this influential paper, More asks the reader to "take seriously Nietzche's determination to undertake 'a revaluation of all values'" (More, 2010:3). Since a modern *overhuman* upgrade will depend on human gene editing and other biotechnology applications (such as Elon Musk's Neuralink) becoming legally available, More's call to 'reevaluate values' is understandable. Issues raised on both sides of the academic debate concern which values and traits would be genetically chosen, and to what extent human enhancement will be voluntary (Levin, 2018).

While earlier Anglo-American eugenicists argued for the removal of anti-social genes by sterilisation, some modern transhumanist proponents have argued that moral bioenhancement, through selective gene editing, should become compulsory (Persson and Savulescu, 2008). Many notable transhumanists argue for *procreative* bioenhancement of offspring by the parents (Levin, 2018:38). Transhumanist advocates Ingmar Persson and Julian Savulescu believe moral enhancement should become obligatory like "education and water fluoridation," since "those who should take them are least likely to be inclined" (Persson and Savulescu, 2008: 22). Transhumanist Niel Levy argues that "cognitive enhancement could be required," much as vaccines currently are (Levy, 2013:38). Scholar Susan Levin writes that allowing a techno-scientific transhumanist vision to shape the "form that society takes" may lend itself to "socio-political requirements that

> would clash with…liberal democracy" (Levin, 2018:50). She also argues that when transhumanists use "public health analogies and reasoning" to "justify vigorous enhancement" they are putting into serious question their commitment to autonomy (Levin, 2018:48). In this way, the coercive vaccine mandates used during the Covid-19 pandemic can be interpreted as an early warning signal for how future bio-enhancements are likely to be accompanied by forceful moralistic and utilitarian arguments.

Ingmar Person, Julian Savulescu, and Niel Levy are prominent ethicists at the University of Oxford; all three advocate for mandatory genetic enhancement despite the trail of 20th century trauma wrought by grandiose social- and eugenic engineering projects. Does this suggest that a moral framework based on utilitarian arguments and flawed metaphysics remains fundamentally unchanged in public health governance since the last century?

In his recent book *God and Gaia: Science, Religion and Ethics on a Living Planet*, scholar Michael Northcott argues that a growing "post-human agenda" has become central to policies around public health—referred to as "biosecurity"—which has very little to do with authentic "human health or health of the environment" (Northcott, 89). The consequences of this ideology became apparent during the recent mandating of the experimental gene-

altering vaccines, and could represent what Northcott refers to as “automatism”. This is when we are culturally obligated to “use new technologies regardless of the possible consequences” because of a utilitarian ethic of the “managerial goal of efficiency” (Northcott, 2022: 114). To underestimate the suffering caused by one-size-fits-all public health measures is inadequate scholarship, yet despite this, only a minority of academics have openly questioned the use of coercive genetic therapy during the Covid-19 pandemic.

A clash between individual rights and a movement that aims to “re-design the human condition” seems inevitable. In the words of transhumanist scholar Nick Bostrom, “human nature is a work-in-progress, a half-baked beginning that we can learn to remould in desirable ways” (Bostrom, 2005: 3). As the co-founder of the World Transhumanist Association, David Pearce said,

> “…if we want to live in paradise, we will have to engineer it ourselves. If we want eternal life, then we’ll need to re-write our bug-ridden code and become god-like…only high-tech solutions can ever eradicate suffering from the living world”. *DOEDE, 2009: 47*

It is human nature that often comes into direct conflict with massive social engineering projects. Understanding transhumanism as a bio-social engineering project of unprecedented scale is a useful perspective in that it focuses the potential conflicts as *value-based* and *ideological* rather than as a direct result of specific scientific advances (Broudy and Arakaki, 2020). Furthermore, the term ‘social engineering’ is in itself inadequate, in that a utopia that aims to phase out *Homo sapiens*, while making way for the new, enhanced posthuman, is historically unprecedented (Bauman, 2010), and is possibly an energetic form of nihilism or an expression of ‘losing oneself’ to an intoxication with machine power, inspired by what scholars identify as “machine fetishism” (Geisen, 2018: 6). Yet, the surprising willingness to martyr one’s physical self to attain paradise has always been particular to our species (Pugh, 2017).

Corporate Transhumanism: The Pursuit of Wealth and Power

In congruence with the scholarly work available, I have focused on the ideas of *philosophical and academic transhumanists*, but transhumanism is an ideology reaching far beyond discourse. Though under-discussed in the academic literature, the movement is advanced by corporate and political transhumanists, and transhumanist scientists. Massive corporate and state investment in NBIC technologies rely on specialised scientists working in the military, elite universities, and corporate laboratories to push the frontiers of reality with robotics, artificial intelligence and biotechnology (Mahnkopf, 2019: 11).

These scientists are designing technologies with such potential that the world’s most powerful players, such as the Chinese Communist Party and the US Department of Defense (DOD), are deeply involved. In January 2023, Harvard University’s esteemed chemist Charles Leiber was on trial for lying to the DOD about his involvement with the Wuhan University of Technology over his work on “revolutionary nanomaterials.” In his Harvard laboratories, Leiber and his assistants have created nanoscale wires that can record electrical signals from neurons (Silver, 2022). Nanowire brain implants were designed by Leiber to “spy on and stimulate individual neurons” (Gibney, 2015:1). In an age where neurotechnology and mind-machine interfaces are changing the nature of warfare, the contested power-potential of transhumanist techno-science is quickly apparent (DeFranco, 2019).

The transhumanist vision for the future should not be viewed outside of the 'technological arms race' or a competitive, utilitarian mindset that informs business, war-making, and our cultural esteem of scientific research. This suggests that more research understanding *corporate and political transhumanists* is critical in analysing how this group is actively involved with determining humanity's future. Political leaders with a sharp sense for power understand that machine intelligence and enhancement may determine the world's winners and losers (Kissinger et al., 2021).

As Vladimir Putin articulates: "Artificial Intelligence is the future, not only for Russia, but for all of humankind. It comes with colossal opportunities but also threats that are difficult to predict. Whoever becomes the leader in this sphere will become the ruler of the world" (Karpukhin, 2017).

The elite fascination with transhumanist technologies concerns the *potential power* inherent in the technology itself—and in who creates and controls it. The influential historian and speaker, Yuval Noah Harari, expressed this view in his 2021 Davos Summit presentation where he said that technology "might allow human elites to do something even more radical than just build digital dictatorships. By hacking organisms, elites may gain the power to re-engineer the future of life itself. Because once you hack something, you can usually geo-engineer it."

Harari is a frequently featured speaker at the World Economic Forum (WEF) and associated events. The WEF is currently acknowledged as one of the "most significant case studies of private authority with global impact" (Vincent and Dias-Trandade, 2021: 711). Criticised as being a "transnational elite club, with high media visibility" and a neoliberal "agenda-setting power," the WEF can be understood as an "instrument for global geopolitical domination" (Vincent and Dias-Trandade, 2021: 711). At the very least, it is a forum where heads of state, CEOs of multi-billion-dollar companies, and academics who intelligently promote strategic values, are encouraged to collaborate and shape the global future. On WEF and other media collaborative platforms, Harari eloquently argues for humanity to "break out of the organic realms to the inorganic realm" with the creation of a new type of machine human so much more sophisticated than us that our current form will be more drastically different from it than "Neanderthals" or "chimpanzees" are from us today (BBC, 2016). Perhaps this epochal vision is received with welcome at the WEF because it boldly asserts a future dystopia for those who choose to ignore this high-tech revolution. It may act as a motivational warning to "acculturate" or "disappear."

Scholar Kasper Schiølin (2020) believes WEF agenda setting is accomplished through strategic political and corporate marketing and the discourse of "future essentialism" where the "fabrication of power" and of an inevitable global destiny is reinforced by "sociotechnical imaginaries" and "epochalism." Future essentialism is the construct of narratives that use "historical analysis…speculative estimates…and hard statistics" to disseminate an idea of a "fixed and scripted…future" that can be "desirable if harnessed" but also "dangerous if humanity fails" to accept the vision. "Epocholism" is an attempt to capture "The Spirit of the Age" and promote a feeling that the current times are of unsurpassed historical significance. These strategies, Schiølin (2020:553) convincingly argues, are how the "WEF produces a moral-political universe around The Fourth Industrial Revolution (4IR)." Is it possible that these techniques can create a narrative of urgency, significance, and global opportunity that can persuade us (or our leaders) to participate in a transnational, transhumanist future?

Klaus Schwab is the founder of the WEF and the one responsible for conceptualising and promoting this revolution, which was announced in his 2016 book *The Fourth Industrial Revolution*. Schwab (2017) describes the 4IR as a social re-setting (named the 'Great Reset') enabled by "a range of new technologies that are fusing the physical, digital and biological worlds, impacting all disciplines, economies and industries, and even challenging ideas about what it means to be human." Analyses of the 4IR conclude that the rate of technological change is supposed to "accelerate" and be "exponential", covering the Internet of Things (IoT), AI, automation, genetic engineering of humans and natural biology, nanomedicine, smart cities (where sensors are embedded all over the environment), a sci-fi enabled military, and algorithms with political agency (Trauth-Goik, 2021: 3).

Political scientist Klaus-Gerd Giesen convincingly argues that transhumanism is the "dominant ideology" of the 4IR, having become a "grand narrative" for politicians while "advancing the interests of multinational tech giants" (Geisen, 2018: 10). Giesen views this revolution as a "significant rupture in the evolution of capitalism" as well as the tradition of humanism, arguing that "transhumanist machinism" is "fundamentally anti-human—not least because the machine is by definition inhuman" (Geisen, 2018: 6). With global 5G networks, the Internet of Things and of Bodies, and the convergence of the NBIC technologies, the "body as market" (Geisen, 2018: 10), or what Céline Lafontaine defines as the *corps-marché* (Céline, 2014), is complete. The sheer mass of consumption will exponentially rise with marketable 'smart' products: "wearable tech, autonomous vehicles, biochips, bio sensors" and other new materials (Mahnkopf, 2019: 2). This is a materially focused future where consumer upgrades are baked into the system, so it's no wonder that corporate monopolies such as Amazon, Apple, Facebook, Google, and Microsoft, the "new industrial kings" are actively promoting this revolution (Mahnkopf, 2019: 14).

> Is it possible that human flourishing is encouraged by the ancient struggle with the limitations of our own animal natures, rather than by conforming to the constructs of complex technology? With transhumanism, who is in control and who benefits?

In his book, *Falter: Has the Human Game Begun to Play Itself Out?,* the environmentalist Bill McKibben writes that, "the Silicon Valley tycoons are arguably the most powerful people on earth" (McKibben, 2019: 183). North American West Coast transhumanist visionaries are an avant-garde community of ultra-rich technologists, businesspeople and inventors who are idolised by the media and who collaborate extensively with the US State to advance their aims. Eric Schmidt illustrates the collaboration common between US State defence organs, academia, and giant technology corporations (Conger and Metz, 2020). With a net worth of $23 billion, Schmidt was the Executive Chairman of Google and is now the current Chairman of the National Security Commission on Artificial Intelligence (NSCAI) for the US Department of Defense, where he advised President Biden to reject a ban on AI-driven autonomous weapons (Shead, 2021). Schmidt believes that artificial intelligence will "govern society" and be "perfectly rational", outdating and rendering useless human intuition and knowledge. As with most tech billionaires, Schmidt has set up a private charity, *Schmidt Futures*, and has so far donated a billion dollars towards his AI educational aims (Philanthropy News Digest, 2019). While he admits that he did not design Google to regulate 'misinformation' more effectively, censorship is increasing with the accelerated abilities of AI (working with humans) to moderate and remove content on the Internet (Desai, 2021).

Many of our most influential technologies come from programmes at the US Defense Advanced Research Projects Agency (DARPA).

DARPA funds 'blue sky' technology research and is credited with inventing the Internet, GPS, virtual reality, and drones.

The agency is now set on advancing human augmentation both in and off the battlefield, with the goal of mastering brain-computer neural-interfaces (Krishnan, 2016).

Arati Prabhakar is the former head of DARPA, and Chief Science Advisor to President Biden. Prabhakar, like the prior head of DARPA, Regina Dugan, moves between working with technology companies in Silicon Valley and the US Department of Defense. Like most, she is enthusiastic about a transhumanist future of augmentation, and advocates for this as a matter of national security. And yet, she also admits that this "will bring surprises that we may not like.

For generations we have thought about technologies that change our tools – but this is about technology that changes us." We already have ample evidence that our current technologies, particularly wireless devices and chemicals, are physically changing our human (and planetary) biology, but the aims of DARPA and the DoD are more ambitious and revolve around the complete mastery of evolution (including the human genome) and natural systems (including the human population) using technology (Carr, 2020). This is exemplified in the recent, far-reaching US Executive Order for Advancing Biotechnology, which states that "we need to develop genetic engineering technologies" to "write circuitry for cells and predictably program biology in the same way in which we write software and program computers." The order states that this is to "help us achieve our societal goals." These societal goals are central to what the White House identifies as the "bioeconomy" where "computing tools and artificial intelligence" will help us "unlock the power of biological data", scale up production, and reduce "obstacles for commercialization" (Biden, 2022).

In March 2022 at the *World Government Summit,* Elon Musk, a self-identified transhumanist, and the world's wealthiest individual, spoke bluntly from the podium. He announced that he sees the upcoming AI apocalypse as a human-extinction event. What is the solution? *"We must all become cyborgs if we are to survive the inevitable robot uprising."*

This may be marketing, since Musk's *Neuralink* is poised to start human trials of brain implantable chips" (Neate, 2022). Radically enhanced human cognition should, Musk predicts, counterbalance the dangers posed by super-intelligent machines. If the richest man on earth prophesied a mass AI extermination event and an inevitable posthuman future from the platform of the *World Government Summit*, should we dismiss it as just another tech business strategy?

In her analysis of the 4IR, Birgit Mahnkopf (2019:2) writes that a "system of physical-to-digital technologies embodied in machines and equipment…would enable sensing, monitoring, and control of the entire economy." This is occurring against a backdrop of increasing global inequality and centralisation of wealth. It is estimated that eight men own as much as half the monetary wealth of the other eight *billion* humans (The New York Times, 2017). Schwab and other elites understand the social and political implications of their technological ideology and the rules of the 'winner-takes-all' market economy that will continue to consolidate gains from disruptive technologies. Universal basic income and social credit systems (with a resource-based economy and central bank digital currencies, or CBDCs) are presented as solutions to managing popular resistance and social unrest.

The WEF represents the fusion of transhumanist goals within global governance. As Schwab notes, the organisation has been very effective at 'penetrating the cabinets' of national governments. As Harvard scholar Kasper Schiølin (2020:549) astutely observes, the "4IR is justified as kings and emperors once justified their authority as divine and natural in uncertain times." Hence, it may be that the potential problems from transhumanist ideologies come, not so much from the prospect of an AI take-over, but from the elites' use of the culture and technologies of transhumanism. It may be that these risks overwhelm liberal democracies long before sentient AI does.

The Discontents

Few intellectuals note the opposition to transhumanism better than the transhumanists themselves. Nick Bostrom writes that resistance comes from:

> "Ancient notions of taboo; the Greek concept of hubris; the Romanticist view of nature; certain religious interpretations of the concept of human dignity and of a God-given natural order; Karl Marx's analysis of technology under capitalism; various Continental philosophers' critique of technology, technocracy, and the rationalistic mindset that accompanies modern technoscience; foes to the military industrial complex and multinational corporation; and objectors to the consumerist rat-race." BOSTROM, 2005:18

Bostrom's summary is a panorama of human expression, literature, thousands of years of culture, religion, philosophy and human meaning-making. Modern literature on philosophy, culture and technology, from Jacques Ellul, Jerry Mander, Neil Postman and Wendell Berry to Jürgan Habermas and Martin Heidegger, offer poignant critiques that are relevant to opposing transhumanist visions of the future, and remind us of the value of community, embodied wisdom, and traditions, and the effects of technological systems. The difference in writing styles is noteworthy: while pro-transhumanist writing tends to be utilitarian and have a tone of scientific authority, 'bioconservatives' will often use narrative, symbols, and a writing style considered traditionally beautiful in human culture.

What is noticeable is that the opposition to transhumanism is broad, ill-defined and diverse. Nick Bostrom notes that "right-wing conservatives, left wing environmentalists and anti-globalists" are all pushing back against central transhumanist aims (Bostrom, 2005: 18). Firstly, there are the well-published intellectual and academic opponents that engage in a forceful scholarly debate with transhumanism over issues such as biotechnology, threats to liberal democracy, and scientific materialism (Leon Kass, 2000 and Francis Fukyama, 2003), and the environmental and social costs of transhumanism (Bill McKibbin, 2019). Also noteworthy are the bioethicists, George Annas, Lori Andrews and Rosario Isasi, who have advised making "inheritable genetic modification in humans a 'crime against humanity'" (Annas, et al., 2002: 154-155). These scholars fear the posthuman potential for inequality and war, warning that, "the new species, or 'posthuman', will likely view the old 'normal' humans as inferior, even savages, and fit for slavery or slaughter…it is the predictable potential for genocide" (Annas, et al., 2002: 162). The common factor amongst these academics is that they believe biological engineering (of humans) would be disruptive to values, rights, and equality, and would threaten liberal democracy itself. These men have been labelled *bio-conservatives* or, more dismissively, Neo-Luddites, for rejecting the legitimacy of a posthuman future (Agar, 2007:12).

The second group that is emerging as anti-transhumanist are the environmentalists, non-

conformists, primitivists, and anarchists committed to Wild Nature with forceful anti-industrial sentiments. In North America, this includes elements of the Deep Green Movement (Bilek, 2021), represented by various writers, artists, activists, ecologists, organic farmers, herbalists and healers, forest-dwellers and hunter/gatherers, spiritualists, and various alternative people, off-grid or nomadic, who refuse to live within a mechanised, industrial system, and may intentionally attempt to sabotage it. As an eclectic group, they have significant influence over specific geographical areas, tend to identify with traditional local indigenous values, and deeply resent Western consumerist culture, war, global corporations, pollution, and industrial infrastructure (Tsolkas, 2015). Notably, some ecofeminists have written that biotechnology is a dangerous "extension of traditional patriarchal exploitation of women" in promoting the reshaping of natural human bodies (Bostrom, 2005: 18).

The third group that has rapidly developed increasing opposition to transhumanism is religious groups. Besides the Mennonite and Amish communities, who maintain 'old world' lifestyles across significant sections of the United States, there is a rising anti-transhumanist sentiment and increasing religious fervour amongst some Evangelical Christians across North America. *The New York Times* reported on the increasing politicisation of evangelical congregations, with defiant unifying songs that repeated, *"We will not comply"* in the chorus (Dias and Graham, 2022). The language these groups use to describe transhumanism is often symbolic, archetypal and apocalyptic, and understood as an epic battle between light and darkness. For example, speaker and writer, Thomas Horn, has been preaching about the dangers of transhumanism to Christian congregations for over a decade. His books have titles such as *Pandemonium's Engine: How the End of the Church Age, the Rise of Transhumanism, and the Coming of the Ubermensch (Overman) Herald Satan's Imminent and Final Assault on the Creation of God.* Suspicions of 'Satanic technology', and anti-transhumanist sentiments may have been a part of the reason why Evangelical Christians were the demographic most unlikely to cooperate with Covid vaccination mandates in the United States (Lovett, 2021; Porter, 2021).

The tragic situation in Ukraine suggests that ideologically-driven wars may increase with the growing animosity between religious and transhumanist world views, or this may be used in war propaganda. The Russian Orthodox Church, with well over one hundred million members, considers the invasion of Ukraine as a battle of light and darkness, with 'Holy Russia' fighting against an unholy NATO alliance (Klip and Pankhurst, 2022). The Church Patriarch, Kirill of Moscow, has taken a strong position against biotechnology—including "gene therapy", "cloning" and "artificial life extension"—and views the Russian Orthodox Church as defending the traditional family against the liberalism of the West (Stepanova, 2022: 8). Addressing the leaders of Russia at the recent 24th World Russian People's Council, the orthodox believer and philosopher Alexander Dugin proclaimed, "this war is not only a war of armies, of men…it is a war of Heaven against Hell…the Archangel Michael against the devil…the enemy came to us…in the face of LGBT, Transhumanism—that openly Satanic, anti-human civilization with which we are at war with today." It may be that an influential number of religious Russians believe that they are not fighting against Ukraine at all, but rather rescuing it from the Satanic hold of the Transhumanist West (Siewers, 2020).

The fourth major group that is exhibiting overwhelming anti-establishment sentiments towards what is perceived as the 'elites' and their 'transhumanist agenda' are the politically and economically disenfranchised working classes and displaced farmers. Known in academic circles as 'populists' (Mazarella, 2019: 50), this group has recently displayed

significant anger over extended 'lockdowns'; losing the freedom to travel and to access decent healthcare (in the US); and experiencing unemployment and poverty. Their physically non-compliant behaviour, seen in mass demonstrations, notably across Europe and with the Canadian truckers, has been met with discursive and physical violence from increasingly irritated political leaders and media corporations. These 'populists' often reject transhumanism as an elitist ideology that they fear will lead to further loss of bodily autonomy, increased surveillance, political disempowerment, and a reduction of dignified employment to robots and automation (Mazarella, 2019: 130-134). These fears are not altogether unfounded since, according to the WEF, the 4IR is proposed to lead to significant worldwide job losses, perhaps up to 70% (Mahnkopf, 2019: 7). Steven Bannon, the instrumental 'populist' of Trump's 2016 election force, uses religious polemics to rally resistance against what he sees as a rising transhuman globalist agenda. His popular show, the *War Room,* features broadcasts such as *Descent into Hell: Transhumansim and the New Human Race.* The outrage this group has towards 4IR transformations and transhumanism cannot be underestimated: within the US many working class families, though not all, also hold values of egalitarian weapons ownership, and their discourse exudes a willingness to engage in violent confrontation over threats to bodily autonomy (Sturm and Albretch, 2021: 130).

The United States' most infamous anti-transhumanist/anti-technologist came, not from religious circles, but from within the radical environmental movement and academia. Theodore Kazcynski, a mathematical genius and professor at UC Berkeley, conducted an anti-technology terrorist campaign that spanned 17 years, killing three people and injuring 23 (Fleming, 2022). He blackmailed the FBI into publishing his 35,000-word thesis titled *Industrial Society and its Future* in the *Washington Post* and *New York Times*, which led to his capture. Since spending 25 years in solitary confinement, he has published volumes about how to conduct a revolution against the scientific elite. In one volume, *The Anti-Tech Revolution: Why and How,* he writes,

> "The techies themselves insist that machines will soon surpass human intelligence and natural selection will favour systems that eliminate them (humans)—if not abruptly, then in a series of stages so that the risk of rebellion will be eliminated." KAZCYNSKI, 2016: 79

Kazcynski reacted with terrorism to what he considered an existential threat posed by technology to humans and his greatest love, Wild Nature. His fear was a loss of freedom and masculine human nature, as well as the transformation of society into a controlled *Brave New World*, something he viewed as inevitable without a revolution (Moen, 2019: 3). In fact, it is arguable that the United States was already too similar to the *Brave New World* for Kazcynski, since he depicts "fighting industrial society" as "structurally similar to escaping a concentration camp" (Moen, 2019: 3).

Bill Joy, founder of Sun Technologies, authored an influential essay at the dawn of the 21st century, *Why the Future Doesn't Need Us*, advocating for the relinquishment of developing "AI, nanotechnology and genetics because of the risks" (Joy, 2000). Interestingly, Joy argues for the legitimacy of Kazcynski's logic about the threats of advanced technologies, despite Kazcynski having "gravely injured" one of his friends, a computer scientist, with a bomb. Parts of Kazcynski's writing that shifted Joy's views included the following:

> "The human race might easily permit itself to drift into a position of such dependence on machines that it would have no practical choice but to accept all of the machines' decisions. As society and problems that face it become more and more complex and machines become more and more intelligent, people will let machines make more of their decisions for them…eventually a stage may be reached in which the decisions necessary to keep the system running will be so complex that human beings will be incapable of making them intelligently. At that stage, the machines will effectively be in control. People won't be able to just turn the machines off, because they will be so dependent on them that turning them off would amount to suicide." JOY, 2000: 48-49

This scenario is not too hard to imagine since it is quickly becoming our modern predicament. There is an implicit and explicit consensus in much transhumanist and anti-transhumanist thought, by Musk, Kazcynski, Joy and many others, that this phenomenon is leading, and will continue, to this logical end. The other scenario that Bill Joy quoted in his essay, again from Kazcynski, was:

> "On the other hand, it is possible that human control over machines may be retained. In that case the average man may have control over certain private machines of his own…but control over large systems of machines will be in the hands of a tiny elite—just as it is today, but with two differences. Due to improved techniques the elite will have greater control over the masses; and because human work will no longer be necessary the masses will be 'superfluous', a useless burden on the system. If the elite is ruthless they may simply decide to exterminate the mass of humanity. Or if they are humane they may use propaganda or other psychological or biological techniques to reduce the birth rate until the mass of humanity becomes extinct, leaving the world to the elites." JOY, 2000: 48-49

Interestingly, the scenarios do not seem mutually exclusive, at least for a time.

Scholar Ole Martin Moen has noted similarities between Kazycinski, Nick Bostrom and Julian Savulescu in their projections of a future crisis (Moen, 2018: 5). Like Kazcinski, Bostrom has argued that transhumanist technologies expose humanity to a significant risk of eradication (Bostrom, 2019). Savulescu, also like Kazcyinski, argues in *Unfit for the Future: The need for moral enhancement*, that evolved human nature combined with transhumanist technologies will lead to catastrophic consequences (Persson and Savulescu, 2012). Kazcinski, who believed these outcomes were logical, reacted with violence because his highest ethic was one of authentic, uncontrolled freedom (Moen, 2018:5-6). His life is a warning that some human natures may be entirely incompatible with a techno-scientific future. In fact, the transhumanist vision of human extinction and a 'posthuman' future may actually *promote* anxiety and violence in some humans.

Conclusion

Martin Heidegger has warned that those who seek to use technology's influence without realising the immense power that the technology has over them, are trapped into becoming extensions of machines rather than free actors. They are "framed like men with advanced computational devices into seeing all of reality as computational information" (Doede, 2009:49). For thousands of years, human existence and meaning-making has accumulated from "birth and death, flood and fire, sleep and waking, the motions of the winds, the cycles of the stars, the budding and falling of the leaves, the ebbing and flowing of the tides" (Powys, 1930: 73), and it seems fitting to question if our highly evolved human tissues and

'natures' are strengthened or undermined by advanced technology. Is it possible that human flourishing is encouraged by the ancient struggle with the limitations of our own animal natures, rather than by conforming to the constructs of complex technology? With transhumanism, who is in control and who benefits?

It may be fair to say that transhumanism is a bio-social engineering project that ultimately concentrates power in machines, and humans who behave with machine-like characteristics. Large sections of the earth's population, such as various religious groups, the working class, indigenous peoples, and other nature-based humans, may resent undemocratic announcements from forums like the WEF that, with the 4IR, industrialization is accelerating towards genetic engineering, robotic automation and virtual living. Furthermore, we may risk promoting an existential crisis and extreme reactions in those who dislike being told that the future belongs to the posthuman rather than to themselves and their offspring. It is a contested future and one that is entirely unwritten.

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