BOOK REVIEW

Transhumanism's eternal sunshine of the spotless mind

Future Superhuman: Our Transhuman Lives in a Make-or-Break Century Elise Bohan (2022) 368pp., $AUS30 paperback, University of New South Wales Press, Sydney, ISBN: 9781742236759

'The eternal sunshine of the spotless mind' is a line from Alexander Pope's influential 1717 poem 'Eloisa to Abelard', perhaps better known nowadays as the title of the 2004 film starring Jim Carrey and Kate Winslet, in which two former lovers try to erase each other's memories from their minds. While the power of Pope's imagery occludes its exact meaning, the poetic pretext of a twelfth-century doomed romance between a nun and a philosopher – a relationship that was intellectual and erotic in equal measures – might be understood as one that will be re-enacted in generations to come, which will at least partially exonerate the original Eloisa and Abelard from whatever bad thoughts might have informed their actions. The intuition behind the 'eternal sunshine of the spotless mind' is that latecomers are likely to take a morally 'consequentialist' attitude to their predecessors, not merely because the intentions informing original agents will have become harder to decipher, but more importantly because the actions themselves will appear attractive in the light of later events, which encourage the latecomers to supply their own motives as they perform actions similar to those of the original agents. As a matter of fact, this is how romance morphed into Romanticism over the course of the eighteenth century. In the twentieth century, the process was encapsulated as nostalgia. While familiarity may breed contempt, distance makes the heart grow fonder (Fuller, 2006).

There is also a lesson here for transhumanism, which trades on nostalgia, insofar as humanity's quest to approximate the dimensions of divinity has been persistent, at least in Western history (Fuller, 2019). More generally, it may be a peculiar feature of the human condition that successive generations can fall in love with the same failed ideas and yet manage to do enough with them to motivate the next generation to do a bit more. What we normally mean by 'progress' may be simply that. The point is relevant for understanding *Future Superhuman,* which immediately reminds us of the age – or 'longevity', to put a positive spin – of transhumanism. Its author, Elise Bohan, born in 1990, was only in single digits when Oxford-trained Max More completed his Ph.D. at the University of Southern California, which laid out a philosophical basis for the cornerstone contemporary transhumanist tenet of 'morphological freedom', and the online *Journal of Evolution and Technology* began to set out the main debates and debaters that continue to define the field. Back then, arguments were generally conducted in the style of science fiction-inflected thought experiments perfected by More's Oxford mentor, Derek Parfit, though some (such as James Hughes) valiantly tried to inject social democratic concerns that speak more directly to the problems that humans already face in their everyday lives. Indeed, Hughes (2023) still advocates what he calls a 'left futurism'. Bohan's book contains only a couple of superficial references to More and none to Hughes.

I entered the world of transhumanism nearly a decade later, once it was strongly implicated in the 2002 US National Science Foundation report on 'converging technologies' that were set to cause a step-change in human health and productivity. I had become the UK partner of a European Union project designed to explore the 'knowledge politics' of this development. Transhumanism was generally – and reasonably – seen at the time as marking a new direction in post-Cold War science policy towards what Brookings Institution scholar Donald Stokes (1997) was calling 'Pasteur's quadrant', research based on real-world problems whose findings have the potential to transform basic science. I soon integrated transhumanism into my teaching and into a 2006 booklet published

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by Demos, Tony Blair's favourite think tank, called *Better Humans? The Politics of Human Enhancement and Life Extension*. It gathered together a variety of respectable people from across science, politics and ethics, including right at the start Nick Bostrom (2006) talking about what he still talks about; namely, the likely social effects of an exponential increase in computational capacity. I continue to recommend this booklet to my students because the talking points surrounding transhumanism haven't really changed in all those years, even though Bohan doesn't take notice of just how old they are.

If transhumanism were just another political ideology, what I have just described wouldn't seem so unusual. While ideologies are linked to specific visions of the ideal world, they also contain an element of 'lifestyle politics', which enable people to continue inhabiting the vision even when the ideal world doesn't appear to be a short-term prospect. In this respect, ideologies are reasonably seen as secular religions. A case in point is the significance attached to recycling and organic food by today's green movement. However, after its initial brush with science policy two decades ago, transhumanism increasingly diverged from mainstream politics and became closer to a millenarian religion which focuses more on self-preparation for the inevitable rupture in the world order than on living day to day with people who don't share the vision. Thus, transhumanist devotees are invited to sign up to cryonics and digital afterlife schemes, one-way tickets to the cosmos and early adoption of brain-boosting drugs and age-reversing treatments – all of which would be regarded as highly risky and even morally problematic investments by non-transhumanists. At the same time, it is not clear that rank-and-file transhumanists lead conventionally healthier lifestyles than ordinary people simply interested in enhancing their native capacities within their presumed biological limits. The prospect of a technological fix functions for transhumanists just as the rapture has for millenarian Christians down through the ages (MacFarlane, 2020).

In the annals of social psychology, millenarian religions are seen as providing proof of concept for what Leon Festinger calls 'adaptive preference formation', specifically in the context of failed prophecy (Festinger *et al.*, 1956). What happens if the promised Messiah never appears or the world as we know it doesn't end on time? This creates what Festinger famously dubs 'cognitive dissonance', which needs to be resolved if the millenarian believers are to resume meaningful lives. Of course, some millenarian groups don't survive the dissonance and even become suicide cults, openly identifying the end of their earthly existence with the promised transition to a new and improved life. Transhumanism certainly displays a similar tendency in its ambivalence towards the impending 'Singularity'. Is it something that should be promoted, if not accelerated? Or should it be slowed, if not stopped altogether? Depending on whether Ray Kurzweil or Nick Bostrom is speaking, the dawn of such 'superintelligence' marks either humanity's achievement of self-transcendence or the greatest existential risk that humanity has ever faced. Not surprisingly, in the shadows of transhumanism lurks the 'Dark Enlightenment', whose spiritual leader is the post-Deleuzian philosopher, Nick Land. He believes that Mother Nature will have the last laugh, as *homo sapiens* is cut down to its proper animal size once we are subject to the perfect storm of financial, political, climate and cyber catastrophes. For the Dark Enlightenment, this is the likeliest form that the Singularity will take (Fuller, 2019). Given Bohan's allegiance to the human evolutionary narrative, it's too bad that she does not engage with this prospect, which despite its sinister and reactionary overtones is no more far-fetched than other futuristic scenarios inspired by transhumanism.

Shifting focus from macro- to micro-level, the relatively primitive state of the procedures that transhumanists hope will someday overcome the current biological limits of their own bodies might be interpreted as flirting with suicide. Thus, cryonics is legally unproblematic if one is already dead – because it is simply an air-conditioned burial – but legally very problematic if one undergoes it while still alive. At that point, it looks like suicide. But only the wealthier of the more committed transhumanists adopt cryonics as a lifestyle choice. Otherwise, as Festinger originally noted of the millenarians, the transhumanists adapt their preferences to match likely prospects, which then serves to reduce dissonance, even as the most testable features of their faith are routinely falsified. This strategy is most apparent in the shifting target date by which, say, ageing will be reversible or

some superintelligent computational Singularity occurs. The date gets pushed into the future and probabilities are massaged to claim that, if research carries on at its current pace, there is more than 50% chance that we will achieve exit velocity to indefinite human longevity by the year 2036 (e.g., Newman, 2023).

That intellectually nimblest of transhumanists, Aubrey de Grey, has come very close to making such pronouncements against the backdrop of previous failed predictions. It is rhetorically very effective in terms of both continuing to engage current investors in age-reversing technologies and recruiting new members to the cause. De Grey's success at the latter is revealed in Chapter 8 of Bohan's book, which is largely devoted to his efforts, efforts which have advanced for a quarter century with relatively modest success. Of course, this is not to deny that longevity researchers may be on the verge of a breakthrough that enables significant human ageing reversal. Indeed, if enough capital and labour are dedicated to the task for a sufficiently long period, it is bound to be realized. On this Bohan and I agree. And in this respect, transhumanism is not quite a millenarian religion. Nevertheless, it comes close, especially considering not only the project's direct costs, but also the cost in lost investment opportunities to benefit people living normal lifespans. (From this standpoint, Bill Gates' biomedical philanthropy is a welcome exception to the rule.) Moreover, what might be the negative externalities of indefinite human longevity? You will not find any discussion of these issues in Bohan's book. Nevertheless, as *de facto* immortality approaches realization, perennial philosophical concerns about the 'meaning of life' reassert themselves in a new key, not least whether the capacity for indefinite life obliges us to exercise it. Put another way, if human mortality morphs from being a necessity to an option, then suicide might not merely lose its moral stigma but, on the contrary, be reasonably discussed as a moral obligation at some point in one's life – if only to make room for future generations. In this case, suicide will be morally upgraded to a form of self-discipline, just as the ancient Stoics originally insisted (Fuller, 2019).

Interestingly, Bohan's concerns about the level of hype surrounding transhumanist longevity research relate to its credibility, given the repeated failures of its predictions. Indeed, she invokes a term from Festinger's lexicon, 'self-fulfilling prophecy', to describe Aubrey de Grey's *modus operandi*, which she worries will backfire if the long-promised breakthroughs don't come soon enough (p.195). Here Bohan positions herself as a 'kibitzer', the Yiddish term for a helpful nuisance that gives unwanted advice from the sidelines. Her licence to kibitz comes from an intellectual background in 'Big History', a field that aims to take an integrated view of human history in the light of evolutionary biology and the Earth's environmental history. Yuval Harari's best-selling books, *Sapiens* and *Homo Deus,* provide recent popular precedents for her approach, all drawing on the now rather amorphous field of evolutionary psychology. In Bohan's hands, the argument amounts to a tale of two halves, which reflects the Peter Singer-inflected style of reasoning at Oxford's Future of Humanity Institute. The tale begins by arguing that the achievement of indefinite longevity would produce an exponential amount of good for humanity, but then draws attention to the heavy burden that our evolutionary past poses in achieving this end. The result is a sort of passive-aggressive style of social policy thinking that aims to encourage the long-term goal, but without fuelling unrealistic expectations in the short term. Easier said than done!

Here Festinger was right in suggesting that humanity may be subject to a species-distinctive form of motivation that requires people consistently to imagine themselves in alternative (futuristic) states of being, which enable them to discount whatever negative feedback their actual selves might receive in trying to realize them. Some, notably Giambattista Vico and more recently Jon Elster (1983), see this as self-deception, but this is what Festinger originally meant by 'adaptive preference formation'. In short, if indefinite human longevity is eventually achieved, the hype that Bohan complains about will have contributed to the project's ability to overcome various obstacles – to a large extent by minimizing their real significance. (Think of a kind of epistemic pain-suppression, or ideological aspirin.) That such self-deception works is evidenced in the steady stream of private investments in cryonics and age-reversal research, notwithstanding their trail of failed prophecies. 'Where there is a will, there is a way' is the loftiest expression of this sentiment. In the end, Bohan

differs from the near-millenarian versions of transhumanism in that she 'endogenizes', as economists say, the movement's externalities. Instead of locating the obstacles to transhumanist breakthroughs in insufficient funding, excessive state regulation and a poorly informed and fearful public, Bohan locates them in the transhumanists themselves, who as *homo sapiens* are at once our only salvation and their own worst enemy because of various hardwired biases they share with the rest of us; hence, her passive-aggressive policy style.

At one level, Bohan's shift in perspective seems to cast a sobering light on transhumanism. However, that is very much at the level of appearances, given that we are nowhere near capable of intervening strategically in the human genome to correct for these hardwired biases, which are often attributed to our descent from reptiles. Of course, some transhumanists aim for what they call 'moral enhancement' by chemically manipulating the neurotransmitters dopamine and serotonin, but these proposals require heroic assumptions about the physiological reducibility of mental states, the credibility of which approximates to that of electroshock therapy or bloodletting in their heyday. In the end, from a public policy standpoint, references to evolutionary hardwiring are about as helpful as astrological pronouncements. In both cases, the presumed sense of 'action at a distance' (temporal, in the case of evolution) is so great that, even if one took seriously that our brains are beholden to either reptiles or planets, our ability to affect the putative causes of our behaviour would be so remote that fatalism would become the default policy attitude. To her credit, Bohan, while ever the dogged optimist, largely understands the rod that she has made for her own back by treating our evolutionary history as her policy polestar.

Consider morphological freedom, which I earlier called a 'cornerstone transhumanist tenet'. It is clear from the few references to the concept in *Future Superhuman* that Bohan is not its biggest fan. On the contrary, she believes morphological freedom produces a deep confusion of evolutionary signals that make it harder for biological men and women to arrange the sort of mating procedures that promote species reproduction. In a shrewdly revealing moment, she diagnoses today's explicit gender transitioning – the most obvious example of morphological freedom in the public domain – as the result of people taking too literally the idea that life is a work of art (p.254). And while she is almost certainly correct, her normative spin leaves something to be desired. What Bohan does not seem to understand or accept is that much of contemporary transhumanism does indeed treat life as a work of art because it takes what I have called a 'substrate-neutral' approach to the human. In short, to be human is to satisfy the concept of humanity, regardless of embodiment (Fuller, 2022). In contrast, for Bohan, human = *homo sapiens*, which in turn justifies her emphasis on our animal lineage to define reasonable parameters for transhumanism. Nevertheless, such prominent transhumanists as Ray Kurzweil and Martine Rothblatt believe that it's only a contingent fact that humanity emerged from apes and that in the future what we most value of humanity might be transmitted, conserved and propagated in some non-apelike, even non-carbon form. In this respect, *homo sapiens* is simply the 1.0 platform for an ever-evolving humanity. Two points are worth noting here.

First, the contemporary version of transhumanism that stresses morphological freedom operates within a different metaphysical horizon from what inspired Julian Huxley to coin 'transhumanism' in the 1950s, on which Bohan still largely relies. Huxley was really repackaging eugenics for the post-Second World War world by invoking *homo sapiens'* impending obligation to steer otherwise blind evolutionary processes, which he saw as emergent on our species' increasing knowledge of how evolution works, especially at the level of molecular biology. In this version of transhumanism, which quite happily commits the 'naturalistic fallacy', questions about mating choices and sustainable populations loom large. Moreover, this version might even be justified by appeal to such diverse biological thinkers as Aristotle, Linnaeus and Darwin, who nevertheless could all agree that *homo sapiens* is an earthbound creature. Of course, such geocentric transhumanism remains, but it now coexists with the more expansive metaphysical horizons provided by morphological freedom, in which problems relating to sustainability might be solved by the mass migration of *homo sapiens* to other planets, if not a complete ontological conversion of the human

from a carbon to a silicon platform, popularly known as 'uploading consciousness'. Indeed, this latter possibility might subvert the rhetorical force of hardwiring altogether.

Second, the material equivalence of 'human' and *homo sapiens* dates only from Linnaeus' exceptionally influential taxonomy of animals, plants and minerals in the mid-eighteenth century. Before that time 'human' was an 'open predicate', as logicians say, that might be satisfied by any range of individuals if they possess the relevant human qualities. To be sure, these qualities are generally rooted in cognitive and emotional traits that are familiar, if not unique, to *homo sapiens*. However, the character of their expression is also relevant, which together configures how candidate humans present themselves to other self-recognizing humans (think Turing test). Humanity, in this broader pre-Linnaean – and I would argue also post-Linnaean – sense, might be displayed either spontaneously or after some sort of training. In the end, some non-*homo sapiens* animals and machines might pass, whereas some *homo sapiens* might not pass (Fuller, 2019). Keep in mind that anthropomorphism as a pejorative for the projection of human traits onto non-*homo sapiens* dates only from the late nineteenth century, by which time – courtesy of Darwin – the equation human = *homo sapiens* had been consolidated. The prior legitimacy of anthropomorphism had underwritten the humane treatment of animals from ancient times to Jeremy Bentham's early nineteenth-century campaign to prevent cruelty to all sentient beings, notwithstanding his claim that the very idea of human rights is 'nonsense on stilts'. The easiest way to reconcile these two seemingly contradictory positions is that Bentham retained a strong pre-Linnaean distinction between being human and being a *homo sapiens,* even as that distinction was falling out of fashion. Thus, in his mind, anthropomorphism was preferable to human rights.

A general conclusion to be drawn from this discussion of *Future Superhuman* is that Bohan's self-styled Big History approach to the human condition lacks historicity, by which I mean a reflexive awareness of one's own place in the processes under discussion. Bohan's *modus operandi* is to see transhumanism through the lens of evolution, yet she doesn't seem to realize that both transhumanism and evolution have themselves changed over time – not to mention the standards by which 'progress' has been measured. Nevertheless, her lack of historicity, which is a hallmark of the eternal sunshine of the spotless mind, facilitates a version of adaptive preference formation that Festinger did not identify, one that accompanies intergenerational change. Understandably, each new generation takes its current position as default for reality in general, even though reality's default settings are continually changing at various speeds and on many levels, all of which the liabilities of human memory help to smooth over. (Philosophical discussion around the saying 'to forgive is to forget' is a good place to start to appreciate the moral implications of this point: Margalit, 2002.) Consider the fervour of those who claim to speak for future generations in a precautionary voice by insisting that we should restrain ourselves now to enable our children, grandchildren, etc., to enjoy the same prospects for flourishing as we have. While this sounds reasonable when said today, what if someone with the same concerns were speaking in 1900 or even 1950? For those of us who would have had to live with their decision, at least some aspects of their sense of flourishing might seem a bit old-fashioned or beside the point, if not oppressive, given the state of the world we now inhabit.

Bohan's lack of historicity is evident at the very start of *Future Superhuman*, which flashes back a century to the geneticist J.B.S. Haldane (1924), whose futuristic essay, *Daedalus*, projected how advances in science and technology would radically transform the human condition. He envisaged a wide range of innovations, some of which have come to pass while others are still very much on the transhumanist agenda. I assign my students Haldane's essay in the first week of class so they can see how a very well-informed transhumanist *avant la lettre* from 100 years ago imagined the world in which we now live – and then draw some lessons from Haldane's hits and misses. For her part, Bohan does not engage substantively with Haldane's argument. Instead, she alights upon his introductory remarks, where he stresses that some may take offence at his essay's 'undue and unpleasant emphasis on certain topics' (Haldane, 1924, p.vii). While this sets the tone for Bohan's own approach to the topic, it leaves readers with the impression that Haldane was somehow telling

people things they were inclined to resist. On the contrary, Haldane thought he might be undue and unpleasant because he gave voice to lingering desires on the part of his audience despite the recent conclusion of the First World War, the most globally devastating up to that point in human history. In effect, he realized that he might be seen as too optimistic in thinking that science could still be our salvation. Keep in mind that Haldane's essay appeared amidst many famous obituaries for the 'doctrine of progress', including *The Idea of Progress* by J.B. Bury (1920) and especially *The Decline of the West* by Oswald Spengler (1923/1991).

My guess is that Bohan makes *Daedalus* appear to be a foreboding work because she wants it to mimic the foreboding that many people today feel about the adventurous human transformations proposed by transhumanists. If so, it would illustrate her lack of historicity, since it's entirely possible –I would say likely – that people in Haldane's day were *more* adventurous on such matters than we are now. A good indicator is Haldane's main contemporary interlocutor, Bertrand Russell (1924), whose complementary essay *Icarus* -- not mentioned by Bohan, but also assigned to my students – strikes a downbeat note. Russell argues that the Holy Grail of Haldane's vision, the prototype for transhumanism's moral enhancement agenda, is bound to fail because our science and technology could never overcome human nature, which Russell understands as an evolutionary burden rather than a manifestation of original sin. Nevertheless, he agrees with St Augustine that our capacity for *both* good and evil increases with advances in science and technology. As for Haldane, Russell agrees with him that eugenics could serve to eliminate unwanted births. Both supported legalized contraception, abortion and planned parenthood – or 'negative eugenics', as it was known then. Indeed, they followed John Stuart Mill in regarding these policies as crucial to the emancipation of women. However, Haldane went a step too far for Russell by endorsing 'positive eugenics', whereby people might design their own offspring. For Russell, it remained unclear whether any further evolution of *homo sapiens* would ever enable us to wield such power responsibly. Russell's doubts about whether moral progress follows the march of science would only increase over the twentieth century, resulting in his strong anti-nuclear stance in the Cold War.

My point is that the Haldane-Russell debate was pitched to the left of where the debate over transhumanism starts today. After all, the Socialist Haldane debated with the Liberal Russell – and no Conservative was in the room. Notwithstanding the First World War, which the two interlocutors soberly referenced, the mid-1920s had not experienced the horrors of the Second World War, not to mention the global environmental crisis, let alone the myriad ways that science and technology have transformed everyday life, unleashing both new functionalities and new dependencies. Taken together, these developments have enabled a stronger backlash against a transhumanist vision than Haldane had to face a century ago. I have discussed this transformation as a 90-degree rotation of the ideological axis from left-right to up-down (Fuller and Lipinska, 2014). In this context, Bohan fails to appreciate that the very same techno-scientific capabilities developed over the past century, capabilities that inform her own positive transhumanist outlook, are precisely those that lead a large and diverse range of people to want her outlook shut down. The person who has perhaps done the most to foster this 'downwinger' agenda in recent times has been Pope Francis I, especially in his 2015 encyclical, *Laudato Si,* a sophisticated document that aims to reposition the Roman Catholic Church as a defender of both environmental and social justice by linking the two in a stewardship of the vulnerable in nature – as opposed to what the Pope sees as the post-ethical techno-scientific determinism epitomized by transhumanism (Fuller, 2019).

Indicative of Bohan's obliviousness to this relatively recent 'bioconservative' reaction is that, amidst her enthusiastic discussions of the therapeutic promise of stem cell research, she fails to mention the wakeup call that transhumanism received from the report of US President George W. Bush's Council on Bioethics, led by Leon Kass, a medically trained natural law theorist at the University of Chicago. It recommended the banning of federal funding for stem cell research precisely because of its potential to be used to extend human capabilities beyond their 'natural' limits (Kass *et al.*, 2003). Among the members of this committee were Francis Fukuyama and Michael Sandel, who in turn wrote influential anti-transhumanist books

(Fukuyama, 2002; Sandel, 2007). Twenty years later, stem cell research remains hobbled in the US, banned in Germany and restricted throughout much of Latin Europe and America. Bohan's default tendency to argue for transhumanism on utilitarian grounds and then politely project irrationality (aka 'hardwiring') on those who reject such grounds does not make for a winning strategy in this context. She and the emerging generation of transhumanists would be wise to reacquaint themselves with some of the deeper currents of thought – ones that blend the religious and the scientific – that throughout history that have made Humanity 2.0 both an attractive and a frightful prospect. But if Bohan's portrayal of transhumanism suffers from the eternal sunshine of the spotless mind, it also benefits. More widely read books by older people have begun to cite *Future Superhuman* as an authority on the topic (e.g., Farahany, 2023). Clearly, learning from the past continues to be a task worthy of Sisyphus.

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