‘Transhumanism is the world’s most dangerous idea’ (pp.1–2), at least according to American political scientist, economist, and writer Francis Fukuyama in 2004. This sentiment echoes a time when even Walt Disney and his ideas were considered the world’s most dangerous by German philosopher Theodor Adorno. Adorno was fascinated and concerned by Disney’s animations and how they influenced the cultural industry (especially after World War II), not only by luring people into mindless entertainment, but also by keeping them unmotivated and uninspired to pursue things that really mattered. During the rise of the Disney empire in America in the early to mid-1900s, the majority of the Western world suffered from world wars, colonialist consolidation and accelerating commodification which, according to Adorno, caused people to fall back into the very barbarism that civilization had prided itself in overcoming. It is against this historical backdrop that Adorno criticizes Disney’s culture industry and, more specifically, the ways in which it tried to justify self-numbing as a necessary price of self-preservation during these times of hardship, as opposed to uplifting or challenging people to think about ‘how life could be more than the struggle for self-preservation’ (Adorno, 2003). But regardless of these fears, this entertainment industry and its influences on culture and self-preservation have remained. The industry has increased its foothold in society while evolving to meet the needs and expectations of people and investors alike. What was once considered dangerous is now embedded in the fibres of every society.

In many respects, transhumanism is feared for the same reasons. It is a cultural and philosophical movement which, in essence, aims to enable human beings to transcend the boundaries of their current existence; some may fear its influence on and relationship to society and civilization in general, as well as its function and role in the human condition (Johnson, 2013). Some may see enhancement practices that aim toward transhumanism as a way of luring people towards easy fixes instead of encouraging them to find meaning in their lives by developing a strong character by facing and overcoming personal challenges and struggles (Homiak, 2019). As with the rise and perseverance of the Disney empire, transhumanism is here to stay and is only gaining momentum, especially during equally tumultuous times that include pandemics, environmental disasters brought about by global warming and an increasing push towards the digitalization of everything. In this context, it is easy to see how transhumanism may also be seen as self-preservation, as in Adorno’s criticism of Disney’s culture industry. Instead, transhumanism should serve to secure a life of value, higher in quality than one of mere survival.

This is when Sorgner offers his arguments favouring transhumanism and how it must be viewed as part of the natural evolution of human enhancement. In We have Always been Cyborgs, Sorgner defends a non-utopian version of transhumanism and is very clear that the ultimate goal of any transhumanistic venture should be to enable a person to live a good life and that neither cryonics, mind-uploading or any other technology that promises immortality can promote this goal (p.7). In this book, Sorgner explains transhumanism via two approaches to enhancement: 1) through biotechnology, or what he calls ‘carbon-based transhumanism’, in which enhancement is achieved through gene editing, vaccinations, the selection of a fertilised egg or even through the taking of Adderall; and 2) cyborg technologies, or what he calls a ‘silicon-based transhumanism’, which includes implanted RFID (radio-frequency identification) chips, brain–computer interfaces and even technologies as rudimentary as smartphone interfaces. The persuasiveness and crux of his arguments in favour of transhumanism and the technologies that enable it can be found in the logic
of his explanation of how many of these transformative technologies have been built on, or have evolved from, previous technologies which are taken for granted now, but may have been equally controversial at the time they came into being. In this context, he reframes the ethical debates around the moral appropriateness of parents who wish to genetically enhance their children by comparing this to the act of vaccinating a child or choosing a fit and healthy partner to marry and reproduce or selecting a fertilized egg after IVF and PGD, all of which he considers as variations of bio-enhancement (p.9). In similar vein, he also considers the development and use of language and education to be traditional and widely accepted forms of human enhancement, which enhancement is regularly upgraded when a person pursues further education or learns a new language. Subsequently, he argues that enhancement technology in whatever form ‘is a tool, but has also become a part of who we are’. Hence the title of the book and his belief that we have always been cyborgs (p.13). Sorgner feels strongly that technologies exist to improve the quality of human life. Although he acknowledges that most technologies were developed in response to, and in an effort to eradicate, human suffering, he stresses that technologies alone are not capable of overcoming human suffering entirely. They should instead be applied as resources to help people to deal with suffering. The real danger of transhumanism, or any other culturally transformative intervention, it seems, lies in its continual evolution and the ethical challenges it poses.

About the author, book and timing

*We Have Always Been Cyborgs* is the seventh monograph authored by Stefan Lorenz Sorgner, who teaches philosophy and is the chair of the department of history and humanities at John Cabot University in Rome. His previous monographs all relate to transhumanism in some way, specifically from a Nietzschean perspective. In addition, Sorgner also co-founded the Beyond Humanism Network and the *Journal of Posthuman Studies*, dedicated to analysing what it means to be human in an age of rapid technological, scientific, cultural and social evolution. Sorgner has been studying the concept of transhumanism since 2004, and it is safe to say that he possesses an encyclopedic knowledge of transhumanism. It would be hard to find someone with a better in-depth understanding and appreciation of the various philosophical approaches to this cultural and philosophical movement. Ironically this book was written and published during the global covid-19 pandemic, when the United Nations announced that global warming could cause profound human misery and when Russia invaded Ukraine, causing a massive refugee crisis across Europe. On a more individual level, the publication of this book coincides with debates about the prospects of behavioural genetics, designer babies, brain–computer interfaces and 3D-printed drugs. These circumstances almost mirror the uncertain and sometimes dire circumstances that raged at the time of Adorno’s criticism, which begs the reader of this book to reconsider the technologies it discusses (and the promises and pitfalls they hold) with a fresh and open mind, perhaps with a glimpse of hope for working towards a better life – a better human able not only to survive this world but to thrive in it.

Silicon-based transhumanism

According to Sorgner, silicon-based transhumanism, or what he calls ‘cyborg technologies’, are those that facilitate the digitalization of one’s world via connections with smart cities, the Internet of Things (IoT) and RFID chips. To enable humans to integrate with these digitalized environments and to benefit from them, Sorgner believes that humans will need to be upgraded (p.23). Because he believes that the implanted new human (p.29) is the only realistic option (in addition to genetically improved new humans) for a transhumanistic future, his proposed upgrades seem to be the most viable way of keeping humans connected to their ever-evolving digital environments. In this context, it will not be superintelligence posed by AI systems that will threaten our existence, but rather the slow and steady infiltration of these systems of our private spheres and constant
surveillance by them raise the most daunting ethical issues. The driving force behind Sorgner’s non-utopian but realistic view of transhumanism is thus situated in his belief that silicon-based entities, or computer technologies, may, can and should be applied to increasing the quality of a person’s health span, as opposed to only promising a longer life span; for example, by uploading one’s mind to a computer network without any regard for the resulting quality of life.

Sorgner explains the evolution of technologies (and the title of his book) and why implanting computer chips into our bodies should be viewed as a completely normal development of technologies. He does this by drawing an evolutionary timeline from the use of a mouse and keyboard to operating a computer, to touch-screen and voice-activated controls, to computer implants that will replace the computer–user interface entirely, up to a time when typing will be replaced by mere thinking about the words (p.31). Implanted computer chips will then form interfaces with our nerve cells and organs, continuously collecting a vast array of super sensitive and highly personal data in real-time. This data collection differs from current methods based on informed consent where data collection is usually triggered when users start interacting with digital platforms or interfaces. When implanted, it seems that users of such digital technologies may no longer be able to switch off or temporarily withdraw from data collection, which situation raises important privacy, autonomy and confidentiality issues.

Apart from these affected fundamental rights, this data collection method raises a more important question: who will own this data? Legal and ethical debates about ownership of genetic data are ongoing between those who wish to privatize genetic data ownership for purposes of commercialization and others who oppose such ownership, in part because humans (and some animals) share more than 98% of the same genes. In these circumstances, what exactly does one own? And how do you determine which genes are exclusively yours to sell? The development of other technologies, such as Non-Fungible Tokens (NFT), has provided this problem with a further twist, especially when reputable academics are arguing for the use of NFTs as a tool to facilitate the exchange of healthcare data across institutions (Kostick-Quenet et al., 2022). Although Sorgner’s argument that more available digital data should mean more political, scientific and financial well-being is sound, the debate, given Europe’s conservative data protection laws, is tainting the ideal.

Contrary to their American or Chinese counterparts, Europeans seem to be much more conservative about volunteering their data and disclosing personal details. This may be the result of Europe’s strict data protection laws, or the privacy-sensitive culture from which these laws emerge. The irony is that much, if not most, European digital data are already being collected on a large scale thanks to European participation in social media platforms developed and owned by American technology companies. Computer implants that will connect people to an IoT, or the internet in general, may similarly result in European biomedical and other personal data being sent to other geopolitical jurisdictions. These circumstances make the race for ownership of digital data in general so much more intense, rife with covert agendas and less likely to benefit the people from whom such data are collected.

Sorgner tries to explain this conundrum using the sanction theory of privacy, that we value our privacy because we fear whatever sanction may befall us if private information about us becomes known (pp.40–1). This theory indirectly confirms people’s distrust of the legal system. Suppose the legal frameworks and systems sufficiently protect people from those regulations that may sanction them in some shape or form when private information about them is disclosed. In that case, people should theoretically have faith that the law will come to their aid. However, this is hardly the case in every corner of the globe. Like the problem with privacy conservatism, trust in the law and how it interacts with people is mainly dependent on, and deeply rooted in, societal experiences, beliefs and cultures. Cultural values were what Adorno feared would be impacted most by Disney’s entertainment empire; the same values may come under fire with the implementation and harvesting of sensitive personal data via implanted technologies. To allow for the utopian political application of digital data envisioned by Sorgner, changes to societies’ values and culture will be needed. These changes will be brought about only by creating a government and legal system that people will trust.
However, I support Sorgner’s notion that Europe needs to develop new ways of using data democratically (p.42).

Sorgner is a massive proponent of negative freedom based on the fiction of autonomy. This view becomes critical in the context of emerging technologies that constantly find themselves in the process of becoming, with ethical discourses raging in ebbs and flows before moving on to the next technology coming of age. Sorgner explains autonomy not as a right or ethical principle, but rather as an ability that increases with a person’s enhancement through acquisition of new skills, such as languages, education and learning how to draw conclusions (pp.47–8). This view of autonomy ties in nicely with his argument in favour of transhumanism, where enhancement is not only a natural evolution, but also serves as a support for gaining a better ability to exercise autonomy, which ability will ultimately aid adaptation to technologies.

**Carbon-based transhumanism**

Although the innovative new CRISPR Cas 9 gene-editing technology was made public as far back as 2012, continental Europe is still reluctant to embrace this and related technologies, unlike American and East Asian counterparts (p.61). Sorgner argues that gene editing is not only morally defendable, but wholly appropriate and compares it with some of the traditional decisions parents make for the education of their children, which Sorgner sees as an earlier and more primitive form of both moral and cognitive enhancement (p.62). In keeping with his belief that enhancement must promote the living of a good life, Sorgner emphasizes the importance of each person’s individual psychological demands when it comes to making enhancement choices, arguing that individuals are shaped by their own unique drives, fantasies, instincts and hopes, which differ enormously from those of other individuals (p.67). Sorgner enters into existing philosophical debates and engages with such thought leaders as Habermas on what he considers to be the essence of being human, Nietzsche’s concept of the übermensch and how humans can become a higher form of being, and Darwin’s theory on survival of the fittest (which does not necessarily mean the most intelligent or most robust) and how these theories and philosophies contribute to his own non-utopian philosophy of transhumanism (pp.63–6).

It is in this context and after his careful analysis of these different philosophical influences that Sorgner comes to the critical conclusion that ‘any strong concept of the good is paternalistic and violent, especially when its validity has legal implications because it does not adequately consider the great plurality of possibly flourishing lives’ (p.67). This further leads to Sorgner’s opinion that ethical nihilism must naturally follow from any form of formal good as a result of its implausibility. He exemplifies this by explaining how formal concepts of good which are embedded in legal constitutions actually infringe upon the autonomous decisions that parents should be allowed to make with regards to the gene editing of their children. Sorgner then lists the following as consequences once ethical nihilism is acknowledged: 1) the demand for constant criticism of encrusted totalitarian structures; 2) the rejection of the necessity to transcend a nihilist society to establish a new culture; and 3) the promotion of institutional changes so that plurality is acknowledged, recognized and considered appropriately on legal, ethical and societal levels (pp.67–8). Considering the large-scale collection and use of digital data discussed above in the context of silicon-based transhumanism, this concept of ethical nihilism and the consequences foreseen by Sorgner pave a realistic way toward the necessary changes that have to be effected by laws, governance structures and society to allow humans to reap the benefits of enhancement technologies.

Although Sorgner has been a life-long proponent of morphological, cyborg and pharmaceutical enhancement, he does acknowledge the more pessimistic views held by Persson and Savulescu. They are worried about the possibility of human destruction that some technologies may cause, and that only slight moral improvement has been seen compared with the degree of technological advancement, which confirms their scepticism about the effectiveness of traditional ways of promoting morality (p.71). For purely practical reasons, Sorgner also remains sceptical about moral
bio-enhancement, more specifically when applied as a tool to deal with problems posed by emerging technologies. Beyond these constraints, which serve as a fail-safe against the possible destructive powers of new technologies, Sorgner again views moral enhancement from the perspective of sanction theory – people may decide to undergo moral enhancement to avoid punishment (p.74). However, Sorgner does find some common ground with Persson and Savulescu and their argument in favour of obligatory moral enhancement; for example, if everyone could be safely gene-edited with such virtues as having regard for freedom, equality and solidarity (p.77). This argument applies to Sorgner’s structural analogy between compulsory education and obligatory moral bio-enhancement through gene editing. Regardless of whether such a gene can ever be conceptualized, it must be noted that genetic enhancement, via gene editing or any other form of genetic intervention, merely creates the potential of performing in a more enhanced way than non-enhanced human beings. The realization of this potential, much like one’s intelligence, will still be up to the effort and time spent by the enhanced individual. Neither moral nor cognitive enhancement will automatically produce prodigies or virtuous individuals. The effects that an individual’s environment and lifestyle have on their physical, moral and cognitive development must never be underestimated.

The growing scientific field of epigenetics is proof enough of the interdependency between genes and the environment. Sorgner acknowledges this interdependency (specifically between body and mind) when he criticizes Habermas for believing that genetic changes are irreversible. Sorgner, rightly argues that intelligence and related phenomena that can be enhanced genetically are properties of both the body and the mind, and that a rigid separation between the body and mind is no longer plausible (p.86). Just as it is questionable whether education will have a particular desired outcome, genetic enhancement must similarly be met with the same margin for error. To refute Habermas further, Sorgner provides several possible methods through which genetic enhancement may be reversed, including surgery or siRNA therapy, which may silence the effects of an undesirable gene (pp.87–8).

One of the stickiest ethical points in the enhancement or transhumanism debate revolves around the concept of autonomy. Habermas insists that genetic enhancement influences a person’s identity, or possibly that of an entire species – if gene editing brings about an entirely new species. Many transhumanists agree that transhumanism aims to bring about a new species, the individuals of which will be ‘transhuman’ or ‘posthuman’. These developments directly affect the fundamental ethical principle of autonomy, which Sorgner believes to be fiction. Habermas argues that human beings must be able to make decisions about their own future, free from outside influences, and that the act of genetic enhancement limits a person’s ability to exercise such choices in that they will be bound by the predestined effects of the genetic enhancement. Sorgner refutes this claim by stating that, although every human being is fated with a particular genetic make-up, the decision of how that genetic make-up is compiled can, with the help of genetic enhancement technologies, be tailored according to parental wishes or be left up to the chance meeting of partners and the subsequent chance of naturally conceiving a baby without the intervention of any such technologies. This argument, together with Sorgner’s explanation about the reversibility of genetic enhancement, seems sound enough against the backdrop of theoretical certainty about the outcome, consequences and control of genetic interventions – in practice, these technologies still have a long way to go.

Conclusion

Like Disney and the entertainment industry, enhancement technologies that prod us closer to transhumanism (or maybe even beyond) are not only a reality, but are here to stay. But, as so eloquently explained by Sorgner, technologies with enhancement capabilities have always been with us. They have become part of us. They are nothing to be feared, but are rather to be understood, appreciated and embraced.

Sorgner’s book provides an all-encompassing review of the development of enhancement technologies, including the philosophical debates that shape these developments. This book is a
treasure trove for anyone wishing to gain a realistic and well-informed understanding of transhumanism. This is an outstanding contribution to a fiercely debated and controversial research field, written by a specialist who has dedicated his entire professional life to researching every aspect of transhumanism and its philosophical underpinnings. In putting forward his arguments, Sorgner engages with all the relevant voices in transhumanism, philosophy and enhancement technologies in a neatly structured and logical format. This book will engage and enlighten both seasoned academics and laypersons looking for insight into the philosophies that shape the transhumanism culture. It does not often happen that an academic text is a page-turner, but I must confess that I was thoroughly invested in every page of this book. This is an immensely insightful book, filled to the brim with impactful and thought-provoking references It is also highly entertaining, a must-read, especially for people who still doubt whether they have been cyborgs all along.

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