

BALKAN JOURNAL OF PHILOSOPHY

Vol. 12, Issue 1, 2020

Special issue devoted to the topic HUMAN NATURE IN THE AGE OF RADICAL BIOTECHNOLOGICAL ADVANCES.

TABLE OF CONTENTS

Note from the Editorial Board / 3

Articles

Invited paper

Challenging Transhumanism: Clutching at Straws and Assistive Technologies / 5

Dan Goodley

Invited paper

The Quantified Self or the Marketized Self? How Data and the Drive to Optimize Lead to Neoliberal Performance Culture / 17

Antonio Maturo, Margaret Shea

Procreative Autonomy Versus Beneficence in Assisted Reproductive Technologies / 25

Sorin Hostiuc

(Post)phenomenological Approach to Homo Sapiens Technicus / 31

Vassil Vidinsky

Transhumanism and the Western Monotheistic Traditions / 37

George Gherjikov

Artificial Evolution in Transhumanism / 51

Ruslan Klymenko

Discussion

Multiculturalism and (Neo)liberalism / 60
Milenko Bodin

NOTE FROM THE EDITORIAL BOARD

The topic of the special issue of the BALKAN JOURNAL OF PHILOSOPHY for 2020 is HUMAN NATURE IN THE AGE OF RADICAL BIOTECHNOLOGICAL ADVANCES

The broad notion of human enhancement refers to a widening array of biotechnological interventions – existing, emerging, and visionary – which can bring improvement (or alteration) to human capacities and characteristics, or even create new ones. This situation is unique since it challenges many key concepts, norms, and values usually taken for granted, as well as political and cultural visions for our future communities. For the first time in human history technological progress seems to really promise to set us free (or to set some of us free) from fundamental constraints imposed by our shared human nature, including characteristics such as our susceptibility to disease, our standard set of cognitive capacities, our sensory equipment, our emotional states, and even our mortality. Briefly, we may be at the threshold of a new age, one in which we will be capable of designing, modifying, controlling, and manipulating ourselves and future generations.

Discourse on human enhancement is split according to the varying degree to which it is accepted: some loathe such a future and warn that it threatens our dignity, values, and authenticity; others enthusiastically embrace it, opining that this is not only the exclusive means of assuring the sur-

vival of humanity, but that it promises less human suffering. These divergent reactions and the broad pro and con ideologies resting upon them notwithstanding, enhancement technologies are already here and are likely to persist and become increasingly prominent variables in human experience. Accordingly, the prospect of human enhancement confronts us with a broad range of new issues to investigate in diverse academic fields, including natural science, philosophy, social and political science, bioethics, future studies, law, etc. The metaphysical, political, social, and moral contradictions that beset the enhancement project and its repercussions have currently made it a hotly debated topic and one of the most significant areas of contemporary philosophical interest.

This forthcoming issue of *Balkan Journal of Philosophy* strives to provide an opportunity for further discussion of the following issues:

- Physical enhancement: merging man and machine?
- Cognitive enhancement: thinking outside of the head
- Mood enhancement: personal identity and authenticity

- Moral enhancement: preventing the ultimate harm?
 - Human enhancement and AI: is the singularity imminent?
 - The boundary between enhancement and therapy: sustained or abandoned?
 - The social implications of human enhancement: dignity and equality
 - Achieving immortality: is living longer living better?
 - Transhumanism: dangerous idea or the new anthropological ideal?
 - Technopolitics: enhancement as a political stake
- The published in the present issue papers are devoted to some of the above listed themes.

Articles

Invited paper

CHALLENGING TRANSHUMANISM: CLUTCHING AT STRAWS AND ASSISTIVE TECHNOLOGIES

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Abstract:

This paper cautiously ponders the offerings of transhumanism. We begin the paper by introducing the transhumanist movement and related transdisciplinary thinking before giving space to the emergence of critical disability studies. We argue that the latter field has the potential to ground a critical and reflexive analysis of transhumanism— not least through a consideration of the contributions of posthuman and green disability studies. Drawing on these two perspectives, two specific areas of transhuman contemplation are offered. First, we consider (in the section titled, ‘The Ban on Straws: Disability prosthetics and the complication of eco-politics’) the relationship between disability advocacy politics and the potential ableism present in popular eco-political discourse. Second, we explore mainstreaming assistive technologies and e-waste collateral. These analytical thematics highlight the complexities of a critical transhuman disability studies, not least, in relation to the clash of disability and green politics. We conclude the paper with some considerations for future theory and research that trouble an uncritical acceptance of transhumanism in the area of critical disability studies.

Key words: transhumanism, transdisciplinary thinking, critical disability studies, eco-political discourse.

Introduction

It is fashionable to describe our times as *transhuman*. Transhumanism is an international movement that celebrates the reality and potential of technologies to enhance the human condition. From

the ubiquitous use of lip-fillers, the continually ‘plugged-in’ state of citizenry in the digital age, and the growing popularity of voice-activated virtual assistants and wearable tech to the development of dignity-enhancing assistive technologies for people with profound physical limitations, the human body and mind are subject to myriad technological interventions. Our lives, from spectacular events to quotidian experience, are marked by the merging of the hardware of tech with the wetware of bodies (Braidotti, 2013). New imaginaries are being constructed in which we are urged to be fitter, stronger, and faster, transcending the normal limits of natural human bodies. On a superficial level one might consider transhumanism a benign movement: the latest expression of our faith in human progress. Yet, a second glance reveals deep-rooted problems. Transhumanism is not without its critics; not least of which include experts from the field of critical disability studies. When we examine the foundational assumptions of transhumanism, it becomes apparent why this is so. Many proponents of transhumanism adopt a perspective positing the prototypical human being as an able-bodied and minded citizen (albeit an imperfect one in search of improvement) whose capacities may be augmented through the addition of biotechnology, implants, or information technology (IT). When disability does appear – and it often does in the transhumanist literature – it is commonly evoked as an exemplar of human deficiency that can and ought to be compensated for or improved upon

through the application of new knowledge and technology. Given the frequent disparagement of mental and physical disability found in transhumanist thought, how might we better understand the essential epistemic and political foundations of transhumanism to critically engage with the claims it makes, and perhaps extract a more nuanced view of disability? A helpful, but inevitably incomplete, introduction to transhumanism is offered by <https://humanityplus.org/>:

Humanity+ — What We Do

What does it mean to be human in a technologically enhanced world? Humanity+ is a 501(c)3 international nonprofit membership organization that advocates the ethical use of technology, such as artificial intelligence, to expand human capacities. In other words, we want people to be better than well. This is the goal of transhumanism.

Humanity+ Advocates for Safe and Ethical Use: Technologies that intervene with human physiology for curing disease and repairing injury have accelerated to a point in which they also can increase human performance outside the realms of what is considered to be “normal” for humans. These technologies are referred to as emerging and speculative and include artificial intelligence, nanotechnology, nanomedicine, biotechnology, genetic engineering, stem cell cloning, and transgenesis, for example. Other technologies that could extend and expand human capabilities outside physiology include artificial intelligence, artificial general intelligence, robotics, and brain-computer integration, which form the domain of bionics, uploading, and could be used for developing whole body prosthetics. Because these technologies, and their respective sciences and strategic models, such as blockchain, would take the human beyond the normal state of existence, society, including bioethicists and others who advocate the safe use of technology, have shown concern and uncertainties about the downside of these technologies and possible problematic and dangerous outcomes for our species.

As Wolbring (2009a) persuasively argues, our understanding of what human enhancement entails often relies on the troubling notion that we ought to improve a failing human condition in order to become more able, ready, and willing to participate and flourish in late capitalist societies. Such a restrictive definition of the human being’s worth (in accordance with the values and logic of late capitalism) has been described as ableism: a preference for an autonomous, independent, and self-governing humanism (Campbell, 2009). It is not coincidental that ableist ideology feeds into the workings of neoliberal societies, which emphasise the private enterprise of individual citizens in a time of rolled back government, austerity politics, and cuts to welfare. This has led Goodley (2014) to argue that we live in neoliberal-able times that raise particular dilemmas for disabled people, many of whom live precarious lives—often at the poverty line. Any analysis of transhumanism must ask to what extent this movement feeds off and into the neoliberal-ableist imperative? Does the transhuman movement have, at its core, the eradication of the deficient (read: disabled) individual? Are the ambitions of transhumanists and disability rights campaigners in conflict or in harmony with one another?

Another trend across the humanities, as well as the health and social sciences, is that of *transdisciplinarity*. As Thomas (2007) has argued, old notions for interdisciplinarity have been replaced by a concern with transdisciplinarity in the disability studies field. While the former sought to work across disciplinary boundaries to engage with the lives of disabled people – for example, through initiating conversations between medicine and the social sciences – transdisciplinarity seeks to bring down hard borders between subject areas and traditions. This blurring of borders – which takes on a particular resonance for these authors writing from Brexit Britain – has a decolonising aspect to it. Indeed, it encourages one to investigate the effects of social and cultural perspectives that challenge the dominant fields of psychology and medicine as they relate to the phenomenon of disability. In accordance with this, we may examine the ways in which these disciplines define and conceive of impairment, as well as the ways in which such views may be altered or attenuated. Consider the following: the diagnosis of autism spectrum disorder has exponentially grown

across the globe. One might explain this in terms of the application of increasingly valid and responsive diagnostic tools that reveal the incidence of this impairment; or, in short, psychiatry and psychology have got better at assessing the phenomenon of disability. This explanation characterizes the project of diagnosing autism as highly rationalistic and essentialist, reinscribing the dominance of the disciplines of psychology and psychiatry. Another explanation for the steep rise in reported autism diagnoses is offered by cultural and social theories from the critical disability studies. Proponents of this latter explanation ask what institutional, professional, and disciplinary discourses and practices are being drawn upon when professionals diagnose autism. Here, is this transdisciplinary move, socio-cultural perspectives enter the field of autism studies to raise wider situational, political, and human questions about the phenomenon of autism. Who benefits from the diagnosis? What is lost when one is diagnosed as autistic? What essential services are accessed by families when their child has a diagnosis of autism? To what extent might a classification of autism lead to a reductive view of that classified young person? When one is labelled as autistic is there a danger that their ontological whole is understood only in terms of autism? Transdisciplinarity thus has the potential to revisit the entrenched starting assumptions of disciplines and kickstart a plethora of debates that destabilise the omnipotence of a discipline to speak solely and with authority about disability. But –and this should be kept in the foreground of our contemplations– transdisciplinarity inevitably raises many difficult, tricky, and uneasy questions. Even so, we should not be afraid of bringing together perspectives that might appear to be in disharmony with one another– a point we return to later.

This paper cautiously ponders the development of a critical transhuman disability studies. We begin the paper by introducing the modes of transhuman and transdisciplinary thinking before giving space to the emergence of critical disability studies. We argue that the latter field has the potential to contribute towards an analysis of transhumanism: not least through a consideration of the contributions of posthuman and green disability studies. Two specific areas of transhuman contemplation are offered. First, we consider (in the section titled, ‘The Ban on Straws: Disability prosthetics and the complication

of eco-politics’) the relationship between disability advocacy politics and the potential ableism present in popular eco-political discourse. Second, we explore mainstreaming assistive technologies and e-waste collateral. These analytical thematics highlight the complexities of a critical transhuman disability studies, not least, in relation to the clash of disability and green politics. We conclude the paper with some considerations for future theory and research that trouble an uncritical acceptance of transhumanism in the area of critical disability studies.

Posthuman disability studies

Critical disability studies is an emergent trans disciplinary field of inquiry that centralises the phenomenon of disability, drawing in historical, social, critical psychological, cultural, economic, artistic perspectives with the express aim of addressing the marginalisation of people with sensory, physical and cognitive impairments (Mallett and Runswick-Cole, 2014; Meekosha and Shuttleworth, 2009; Goodley, 2012, 2014, 2016, 2018; Shildrick, 2012). Critical disability studies has been described as a ‘location populated by people who advocate building upon the foundational perspectives of disability studies whilst integrating new and transformative agendas associated with postcolonial, queer and feminist theories’ (Goodley, 2016: 190-19). Posthuman disability studies is an emerging branch of critical disability studies (e.g. Van Hilvoorde and Landeweerd, 2010; Dolezal, 2017; Gibson, Carnevale and King, 2012; Fletcher, 2014; Goodley, Lawthom and Runswick-Cole, 2014; Lee, 2016; Goodley, Lawthom, Liddiard and Runswick-Cole, 2018; Murray, 2017a, 2017b; Richard and Andrieu, 2019). This work has emerged out of studies of sports, rehabilitative science, sociology, science and technology, philosophical and feminist studies (to name just a few). In such a dynamic and fast-moving area of scholarship it is often difficult to pin down the key contemporary developments. However, for the purposes of this paper we will pull out three considerations. The first relates to the upsurge in interest in materialist social theory as a means of rethinking connections across biology and technology. This epistemological move seeks to address, in part, the loss of the material in a philosophical space swamped by poststructuralist and discursive theory (Feely, 2016). Materialist scholar-

ship turns attention to the potential of human and non-human assemblages, inter-relations and connections (including various aggregations of inanimate objects, technology and non-human animals). The materiality of bodies and our environments – and the ways in which our bodies are materialised within these environmental landscapes – are theorised in ways that reassess the human condition (including the condition of the disabled body and mind) (e.g. Fox and Alfred, 2015; Feely, 2016; Flynn, 2017). Materialist theorisations differ from naive critical realist appropriations of the real by excavating the complex relational entanglements of different kinds of material reality: from the physical reality of the substance of bodies to the material and sociological reality of poverty, from basic physiological articulations to more advanced developments in digital technology, from atomistic formations of human behaviour to more entrenched considerations of human/non-human assemblages.

The second relates to the potential to centralise disability as *the* place and identity from which to start conceptualising possibilities of machinic and fleshy hybridisations (Goodley, Lawthom and Runswick-Cole, 2014). How might disabled people – and their unique engagements with technology – inaugurate new scientific, sociological, and cultural possibilities for human and non-human development? The manifold answers to this question represent what Braidotti (2013) has described as the *affirmative* potential of the posthuman condition: the opening up of new ethical encounters and relationships. Posthuman disability studies is intentionally and characteristically sensitive to the ways in which disability might move in and out of technological debate; hence, if the field and its goal of fostering greater inclusivity are championed largely by technophiles, rather than disabled people, its stands to reason that the transhuman movement may prove to be a valuable ally of the disabled people's movements. A current project that Dan is involved in – the Economic and Social Research Council-funded Living Life to the Fullest – brings together co-researchers of disabled young women with life-limiting and life-threatening impairments. This project has invited a number of opportunities to listen carefully to the relational encounters that disability brings to the world – not least the opportunity to consider the intertwined, knotted and entangled con-

nections that make us human.¹ However, serious misgivings abound in relation to the transhuman condition, especially in posthuman writings.

The third considers the impact of enabling, inclusive and assistive technologies – including Augmentative and Alternative Communication, Environmental Controls and Dignity Enhancing Technologies – to improve the everyday lives of disabled people (O'Keefe et al, 2007; Baxter et al, 2012; Hynan et al, 2015). Disabled users control home devices (including TVs, lights, telephones, doors, curtains and windows) via technologies controlled by speech or movement that is registered or communicated within and across physical and digital communities. Rehabilitative, clinical and assistive engineers and mainstream technologists are increasingly collaborating across technological platforms (Cowan et al, 2015), and recent literature has identified a pressing need to critically interrogate the impact of assistive technologies on a range of people with a variety of impairments (Ravneberg and Soderstrom, 2017); to democratise tech design (Judge et al, 2015); to consider the attitudes of people to the play and presence of robots in the workplace (Law and Maple, 2016; Autor, 2018); to explore the relative match of specialist assistive and mainstream technologies (Judge, 2018); and to enable disabled people to participate as key players in enhancement debates (Grüber and Rehmann-Sutter, 2014). Assistive technologies not only constitute a field of research (and economic market) with enormous growth potential, they also have the potential to position disabled people as the motivating and guiding force driving posthuman design, research and innovation – both as producers and consumers of these technologies.

Our fourth theme relates to posthuman critiques of the normalising influences of transhumanism. Advances in research and development in disciplines such as neuroscience and biophysics are creating new kinds of brain-machine interfaces (BMI) and neuroprosthetics (such as cochlear implants) that are undoubtedly assisting human beings to live their lives in many diverse ways (Lee, 2016). The future

¹ Dan would like to thank and acknowledge the support of the Economic and Social Research Council for their funding of the project on which parts of this paper are drawn – Life, Death, Disability and the Human: Living Life to the Fullest. ES/P001041/1

is ripe with possibilities. However, as Lee (2016) points out, at the heart of these technological applications is the desire for enhanced autonomy, independence, performance and self-sufficiency. This desire, whether or not it is transparently expressed, is the source of a key accusation thrown at the transhumanist movement—namely, that its advocates are deeply ableist. Indeed, it cannot be denied that transhumanism often has an idealised vision of the human-tech cyborg in mind: a new assemblage of flesh and hardware that is not simply one of human empowerment, but of superior human functioning. Disabled athletes and Paralympians are just two well-worn examples of the kinds of exalted transhuman cyborgs the transhumanist movement represents as ‘fantasized models of human enhancement, based on an ableist and heteronormative aesthetics of disabled sporting bodies’ (Richard and Andrieu, 2019: 52). Overcoming this potentially ableist bias is not simply a matter of including individuals with disabilities in the decision making around the development of new technologies. This is because the ableist assumption that increasing individual autonomy and performance is inherently good for humanity (and an unquestionable objective of transhuman research) is so culturally entrenched that it is likely to impact the opinions of even adamant disability activists. Regardless of the demographics of the teams developing transhuman technologies, the overarching transhumanist vision often seems to seek to eradicate disability and replace it with superhuman figurations of post-human excellence (Fletcher, 2014). Driven by a vision of an ideal ‘higher humanity’, transhumanists yearn to transcend and subvert the understood limits of nature, and disability is often rolled out as a prime example of the failings of nature that demand human intervention: cure, rehabilitation or erasure.

The fifth relates to the anthropocene. Proponents of technological advancement – overly represented in the transhumanist community – advocate ‘progress’ against a backdrop of the global reproduction and manufacturing of new technologies that have hugely deleterious impacts on the environment (contributing to ecological threats that include climate change, flooding and forest fire, which can precipitate human crises; for example, the forced displacement of many people across the globe).

Wallin (2017: 1099) describes the anthropocene in chilling terms:

Today, we stand at the precipice of a world undergoing radical climatological and environmental change. Growing consensus suggests we have entered into a new era marked by unprecedented rates of human activity on the planet and planetary ecosystems.

Goodley, Lawthom and Runswick-Cole (2014, p. 345) appropriate the work of Braidotti (2013) to emphasise a posthuman attitude to ‘take to task the human species centering of our own perceived superiority: an anthropocentrism that puts humanist man (anthropos) before other species and the environment’.

Our sense is that posthuman disability studies provides a critical and reflexive space for analysing transhumanism. Imbued with the politics of disability – and responsive theoretical framings such as new materialism – posthuman disability studies permits us to question the assumptions, goals and potentially negative collateral of transhumanism. Technophilia is superseded by the desire (McRuer, 2006) to start with an honest discussion of disability as the entry point into a critical engagement with transhuman discourses and practices; in this way, posthuman disability studies may track the often insidious ways the ideologies of ableism and disablism (under the banner of brave new postmodern movements) influence the transhuman movement. The potential of posthuman disability studies is further enhanced – and necessarily complicated – by the emergence of Green Disability Studies.

Green Disability Studies

This second interdisciplinary space of critical disability studies – Green Disability Studies – recognises those scholars and activists who are working on the edges of the disability, sustainability and climate change movements (Leopold, 2006; Hemingway and Priestley, 2006; Wolbring, 2009b; Lovelock, 2010; Fenny and Snell, 2011; Abbott and Porter, 2013; Fenny-Salkeld, 2016; Pepper, 2007, 2019). Ecopolitical movements such as these centre disabled people in a number of ways, and several key thematics emerge out of this scholarship that are relevant to our appraisal of transhumanism. The first

emphasises the relevance of apprehending the anthropocene through the lens of the lives of disabled people. As Hemingway and Priestley (2006) argue, natural hazards are experienced disproportionately as “human disasters” for disabled people, and most notably for people in poor communities. The World Report on Disability (2011) shows that there are over one billion disabled people in the world, that the majority live in poor, low income countries of the Global South and that many of these nations are the first to be affected by the impact of human-caused climate change (i.e. climate change and weather events caused by carbon dioxide emissions and global warming linked to industrialisation).

The second specifies the potential of eco-political and sustainability movements engaging with the expertise-by-experience of disabled people. Disabled people’s organisations are key to building greater resilience to disasters amongst “vulnerable” communities in both high-income and low-income countries (Hemingway and Priestley, 2006). Indeed, as Abbott and Porter (2013) maintain, concepts of interconnectedness and interdependence that have featured strongly in the field of disability teach us something about our relationship to the environment and each other, and contribute to our thinking about how to live more sustainably.

The third promotes an awareness of disability issues in policy approaches and activism associated with sustainability and green politics— issues that are often ignored or sidelined (Fenny-Salkeld, 2016). A green emphasis, for example, on walking and cycling as alternatives to car use fails to recognise the reliance that many disabled people have on automobiles. Assuming one can walk rather than drive is also inherently ableist and only has one type of upwardly mobile citizen in mind. Indeed, anecdotally, the redesign of our university campus presumes that staff and students are active pedestrians, ready, able and capable to perambulate around the green landscaped university grounds. The cuts to accessible parking bays risk excluding those colleagues who rely on cars to move around the campus. And, just as importantly, this sends the message that the university is a place only for non-disabled people (Titchkosky, 2011).

The fourth considers the intersections of disability and environmental politics. Fenny and Snell

(2011) suggest that natural alliances have blossomed between the two distinct forms of activism through a shared engagement with social justice. Articulating ideas for a better world might well roll in ideas of inclusion and sustainability. Moreover, research in the field of animal and disability studies supplies further evidence of the unique apprehension and attentiveness of disabled people to non-human others (Taylor, 2011, 2017). This is not to suggest that disabled people – in contrast to the non-disabled – have some kind of supernatural sensory experience of the world around them. Rather, it is to acknowledge that living with disability in the world might engender some profound awareness of the physical environment (and its inhabitants), especially when the physical terrain can be so difficult to navigate.

The Ban on Straws: Disability prosthetics and the complication of eco-politics

European parliament votes to ban single-use plastics

The European parliament has voted to ban single-use plastic cutlery, cotton buds, straws and stirrers as part of a sweeping law against plastic waste that despoils beaches and pollutes oceans.

The Guardian, 27th April 2019 Accessed on 27th April 2019

<https://www.theguardian.com/environment/2019/mar/27/the-last-straw-european-parliament-votes-to-ban-single-use-plastics>

We know from the work of Siebers (2006) and Reeve (2012) that disabled people have always been cyborgs. From the use of a stick as a crutch to the merging of people with life-limiting and life-threatening impairments and complex life-giving and dignity-enhancing hardware, disabled people are deeply entangled with technology. More than that, Goodley, Lawthom and Runswick-Cole (2014: 352), suggest, ‘disability has always demanded to be recognised as more than human; an enhanced humanity, a posthumanity’, and these enhanced disabled humanities envelope the use of low-tech objects. The straw – specifically the plastic straw – is a material object invested with many meanings and controversies. An object of convenience. An aesthetic addition

to cocktails. A mode of access. A posthuman prosthetic. To the ableist eye (and we deliberately employ such an ocularcentric turn of phrase) the straw is nothing but a mundane item that is used as an unnecessary luxury and, due to its chemical make-up, an unsustainable item in post-anthropocentric times. However, from a posthuman and green disability studies angle, the straw is imbued with a number of other meanings often obscured by the ableist green political agenda:

Take the plastic straw debate, and the warning that baby wipes cause fatbergs. Along with many disabled people, I need both. Not as a lifestyle choice. Not as a luxury. I need straws that bend, ones that can handle all drinks, including medication, and all temperatures. I need straws that aren't too fat, that won't cause me to choke or be difficult for me to keep in my mouth (Pepper, 2018, n.p.).

As an established ecopolitical and disability campaigner Pepper lives the contradictions of her everyday engagements with the common or garden-variety plastic straw. She draws attention to her use of straws as an embodied need. This materialisation of the straw as an essential prosthetic contrasts markedly with the figuration of the straw as an unnecessary disposable item of everyday use. The latter is what sustainability campaigners have in mind: a non-essential object unnecessarily used by the regular or excessive consumer (Abbott and Porter, 2013). Such ableist rhetoric risks, yet again, ghettoising the perspectives of disabled people (Wolbring, 2009, 2012). However, the non-biodegradable straw is emblematic of the wider environmental impacts of the over-reliance on plastics by humans across the globe. The straw then is a split sign: caught between the signifiers of disability access and green politics. Pepper reflects:

The irritating thing is that somehow disabled people are tainted as not caring about environmental issues. The truth, in my experience, is that many actually care more. Perhaps it's because those of us who need these things navigate multiple obstacles and negative attitudes on a daily basis, and find ourselves forced to think about things differently. Then there are the health factors. I don't actually want to use harmful chemicals in the interests

of my personal care. Neither do I want the same products and chemicals to destroy marine life – and I was involved in the first wave of the drift-net fishing protests back in the 1980s, I'll have you know. Even if I were to be a lone voice within a large and contrary disability community that didn't care about ecological issues, I would guess that our use of these products is vastly outweighed by those using them as part of a couldn't-care-less attitude, or because they are simply there (Pepper, 2018).

While one might pursue an argument that the manufacturing of straws should embrace a more sustainable mode of production, another more implicit problem is found in the ways in which disabled people's everyday use of straws – as a mundane necessary form of human enhancement – become invisible in wider policy and eco-political debates.

Mainstreaming assistive technologies and e-waste collateral

While we often see it as a series of out-of-the-blue innovations, technology is iterative, a process of successive developments. It's no different when it comes to making products accessible. Think about the braille keyboard that's already inside iOS. Could haptic technology become some form of "Virtual Braille" on an iPhone screen? Perhaps you would be able to take an image with your camera of a boxed item and read what was written on the box in virtual Braille, suggested McCrae. iOS already supports braille tables in over 25 languages, and there is already a braille smart watch that pairs with an iPhone ... It wasn't really so long ago we couldn't ask Siri to open the doors, call the cab, or send an email. It was not so very long ago that we became able to walk through a city using nothing but a Maps app and a few haptic taps on our wrists. These tools are empowering lives (Evans, 2018)

The article cited above, written by self-confessed Apple-holic journalist Jonny Evans, celebrates the ways in which this tech giant has punctured the mainstream in the name of accessibility–

specifically for disabled people. The article discusses numerous accessibility features associated with Apple products ranging from the use of switch controls by users with Cerebral Palsy through the imagined future engagement of blind users. The relationship between mainstream tech and more specialised assistive technologies is a growing area of interest in the field (e.g. McNaughton and Light, 2013; Judge, 2018). But what we are witnessing now is the mainstreaming of technologies historically associated with specialist health and medical applications. Disabled digital users are a rapidly growing community and key consumers of new tech. We know from Goggin (2003, 2012) that mobile technologies – such as the cell phone – offer immersion within new digital communities for disabled people. There are digital divides amongst disabled people (Macdonald and Clayton, 2012), with many people with intellectual disabilities and others with profound impairments left behind. Nevertheless, disabled people are more likely to be participants in the growing transhuman community: where human faculties are augmented through the growing use of everly more available tech. But what is the ecological footprint of disability access (Fenney-Salkeld, 2016)? And what might be the human and non-human collateral of an increasingly inclusive society? What might be the ecological footprint associated with disability access?

One line of argument that we might pursue here relates to the collateral damage associated with technological advances and the use of new technologies. In a ground-breaking critical disability studies paper, Meekosha (2011) draws attention to children living amongst this e-waste who earn a meagre living by setting fire to the computers in order to release the valuable copper fragments. This process releases toxic fumes– in particular, large amounts of lead. For Dwivedy and Mitall (2012) e-waste (as opposed to other municipal waste) is more hazardous as it contains thousands of toxic ingredients– including heavy metals and harmful chemicals, such as lead, cadmium, mercury, arsenic, etc.– with the potential to pollute the environment and damage human health if treated inappropriately using primitive recycling methods or when disposed to unsecured landfills.

According to LeBel (2016), e-waste is the fastest growing waste stream in the ‘developed’ world

(LeBel, 2016). LeBell writes that the total volume of e-waste traded in 2012 was estimated to be over one billion kilograms (Lepawsky, 2014). Computers, laptops, cell phones, and other ICTs are largely responsible for the expanding e-waste stream and contain many toxic materials, elements of which cause serious health and ecological problems. LeBell (2016) asserts that ‘e-waste, and especially the unsafe e-waste reclamation that happens more often in poorer communities, exemplifies a form of slow violence: or the often hidden ecological damage that poor communities are increasingly burdened with over the long term. All people are implicated in the e-waste industry; not least those citizens of Global North countries. While it is important to acknowledge e-waste production within countries – so as not to assume that the only movement of e-waste is from rich to poor countries (Lepawsky, 2014) – we should also attend to the practices of slow violence (Nixon, 2011) especially when poorer countries disproportionately suffer compared with their richer counterparts. LeBell (2016: 305) also states that ‘one region’s waste is another’s raw material. Waste is a leaky category, both materially and conceptually. In its global and spatial reorganizations, rather than being worthless trash, e-waste is revalued as a potential source of raw materials and economic opportunity. The global e-waste trade is perhaps better described as the global electronics recycling trade. The time of ICTs must then include not just speed, simultaneity, and acceleration, but also those longer periods of time needed for ecosystems to regenerate and pollution to be neutralized (LeBell, 2016: 307).

As disabled people become an ever-more central part of the Apple community – as key consumers and users of rapidly developing technologies – do they also become key players in the creation of the dehumanising e-waste industry? On the other side of the argument, do these questions risk characterizing disabled people as major users and abusers of technology, an observation that makes no allowance for individual support and access needs (Abbott and Porter, 2013: 840)? Deborah Fenney-Salkeld (2016: 460) offers the following observation about the relationship between disability and environmental politics:

Disability studies’ concern with the environment has often only extended as far as its po-

tential for accessibility is concerned – implying an anthropocentric viewpoint. Although it may be appropriate for disability studies to remain broadly anthropocentric, an explicit acknowledgement of the value of the environment beyond accessibility would enable engagement with sustainability debates. This might mean explicit recognition of the natural environment as sustaining life, and an understanding of the inter-dependence of humans and nature (2016, p. 460).

Fenney-Salkeld's (2016) preference for social or just sustainabilities permits an approach that combines social and environmental concerns, considering issues of human equity and justice alongside a commitment to ecopolitical concerns for the environment. But, at the heart of this critique is a centralisation of human access concerns. While we might seek to find just sustainability coalitions, there is no doubt that increased disability access through mainstream technology platforms (particularly in the Global North) and the e-waste they produce (disproportionately experienced by those in the Global South) create a conflict between disability and green activism.

Conclusions

So what would a critical transhumanism look like? Crucially, its starting point would be a recognition of the fundamentally ableist ideology of most mainstream transhumanists. An engagement with critical disability studies and ecopolitics ensures a very different framing of the central focus of transhumanism: the application of science and technology to augment human attributes in order to empower disabled people and enable accessibility. It is important to be reflexive about the political economy and geopolitics of transhumanism. At present, both are closely aligned with neoliberalism and the interests of tech firms based in Silicon Valley. So, what, we may wonder, would a critical transhumanism look like if it were located in marginalised communities of the Global South and embedded in sustainable and circular economies?

In order to envision and establish a critical transhumanism that is capable of broad-mindedly addressing questions such as the one just posed, we must find some way of thinking through the politics

of enhancement technologies without falling back on oppressive ideologies. We concur with Abbott and Porter (2013) who call for an ongoing dialogue between disability and green movements. We, in fact, expand upon this position and argue that any compelling and inclusive conceptualisation of critical transhumanism must remain alert to the kinds of troubling collisions that occur between disability and green activism, such as those previously illustrated by our discussions of straws and assistive technology. This imperative leaves us with a number of key questions to address.

First, who benefits from the transhuman movement? If the elite are the sole beneficiaries, one may wonder—with justified concern—what kind of ideologies and aspirations undergird this privileged, powerful community and their unique involvement with transhumanism. Second, how can we foreground the concerns of disabled people in transhumanist debate? We would suggest that a merging of Green and Posthuman disability studies provides a critical and fruitful response. Third, from where are we envisioning transhumanism? This is a geopolitical question. It would appear that, as usual, many of the debates around technological advances and global impacts are taking place in the Global North, despite the fact that the impacts of climate change, e-waste and technological collateral are disproportionately felt in the Global South. Any engagement with the transhumanist movement must, as a matter of urgency, engage with the aspirations and perspectives of (disabled) people in the majority world. This will involve learning from local communities, including indigenous people. Doing so will require we acknowledge the tensions that already often exist between indigenous and white settler environmental movements and, for that matter, the differences that are engendered within indigenous politics (Pickerill, 2018). Any politics, following Pickerill (2018), creates multi-scalar conversations. The point then of multiperspectival political movements and coalitions is to integrate these conversations into any analysis of the desire for and impact of transhumanism. This integration, she argues, will involve recognising at least two concerns: first, the inseparability of environment and people, i.e.. people are an inherent part of the environment; and second, a much more nuanced and complex discussion about economic opportunities, land ownership and

green impacts is required (Pickerill, 2018: 1138–1139). Straws and assistive technologies may be highly visible and symbolically-charged points of contention in contemporary green political debate, but ultimately they are just complicating examples as we bring together the (sometimes divisive) aspirations of disability and green activism and, if we are so inclined, begin to envision a critical transhumanism.

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THE QUANTIFIED SELF OR THE MARKETIZED SELF? HOW DATA AND THE DRIVE TO OPTIMIZE LEAD TO NEOLIBERAL PERFORMANCE CULTURE*

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Abstract:

We show how interest in “human enhancement” and “optimization” is rooted in a broader social phenomenon – the medicalization of life – and argue that the push to enhance and optimize human beings has a distinctively neoliberal character. Indeed, human enhancement and optimization practices reflect a growing tendency to apply market concepts and logic to individuals, who increasingly conceive of themselves as performative subjects. The Quantified Self is, we suggest, the Marketized Self. Moreover, the Quantified Self is not merely a symptom of the marketization of individuals but serves also to perpetuate that marketization: the Quantified Self threatens to become that concept which defines who the individual “really” is. We argue that this metaphysically weighty idea affects how we think about what is good for human beings.

Key words: quantified self, human enhancement, optimization, transhumanism.

Introduction

The productive subject typical of industrial society has been supplanted by the “performative” subject typical of neoliberal society. The repressive paradigm of capitalism is today disguised in more moderate garb, its productive demands shifted onto

individuals’ shoulders – and psyches. Individuals and the workforce can no longer be explained simply in terms of the logic of consumption. They might rather be considered in terms of statistics and score-keeping, terms which, we contend, take hold in individual subjects such that each comes to bear her own productivity ‘standard,’ which she then strives to satisfy. It is the placement of these standards (essentially, performance goals) on individuals’ shoulders, and their internalization of those standards, which renders them ‘performative’ subjects in our sense.

Individuals in neoliberal societies exhibit an amplified tendency toward a particular mode of introspection; indeed, a defining characteristic of the neoliberal subject is this form of inwardness or reflexivity. The performative subject probes her desires and aspirations; scrutinizes her potential, deficiencies, and shortcomings; and, finally, evaluates her own performance (Maturo, Mori & Moretti, 2016). Characteristically, the performative subject evaluates herself in terms of certain quantified standards (*e.g.* hours spent at work, distance jogged, *etc.*) Indeed, much of the performative subject’s introspection, analysis, and evaluation concerns the so-called “Quantified Self.” loosely, the individual *qua* datafied subject.

The clearest account of the “philosophy” of the Quantified Self can be found in a 2010 *New York Times Magazine* article by the term’s inventor, Gary Wolf. Wolf, a contributing editor of *Wired*, is driven by a basic observation: “[h]umans make errors. We

*While this article is the result of several discussions between the authors, Margaret Shea has written the sections “Introduction”; “Fact and Value: the Quantified Self as Moral Subject”; Antonio Maturo has written “Medicalization and Human Enhancement” and “The Quantified Self & Performance Optimization”.

make errors of fact and errors of judgment.” He holds that these errors arise because we make decisions on the basis of incomplete information, and, in his eyes, the solution is clear: “[w]e use numbers when we want to tune up a car, analyze a chemical reaction, predict the outcome of an election. We use numbers to optimize an assembly line. Why not use numbers on ourselves?” (Wolf, 2010, MM38). (Wolf is, as it happens, the co-founder of an online community, also known as the Quantified Self, which is dedicated to the discussion and analysis of self-tracked data.) Our ability to collect data on most any (measurable) aspect of our lives, *e.g.* our physiology, behavior, and diet, indeed entails our ability to compile an enormous data set on ourselves. We can then apply statistical processes to this data, making comparisons and projections and discovering trends and correlations about ourselves – or, more precisely, about our Quantified Selves. The prevalence of smartphones and other wearable devices, and the data-collection they make possible, are shaping human beings in the image of small businesses, each running her own Research & Development unit whose analysis she can consult in maximizing her efficiency and productivity. The Quantified Self embodies the ideals of enhancement and optimization characteristic of a neoliberal society concerned, at its core, with individual performance.

Along these lines, the present essay argues that the rising prevalence of human enhancement and optimization practices (*e.g.* self-tracking) reflects a rising tendency to apply market concepts and logic to human beings. More precisely, we show how interest in “human enhancement” and “optimization” is grounded in a social phenomenon: the medicalization of life. Human enhancement can itself be seen as an exaggerated form of medicalization: while medicalization turns something hitherto normal into something pathological, human enhancement turns something hitherto normal into something that needs to be improved. This push toward optimization is, for its part, bound up with neoliberalism, a phenomenon which is misunderstood if conceived of strictly in economic terms. For, neoliberalism operates on an anthropological level, too, transforming the structure of human actions and relationships. Indeed, many activities and behaviors today are motivated by a market-like interest in competition and performance. The Quantified Self is, we suggest, the Marketized Self.

The Quantified Self and its associated behaviors, *e.g.* self-tracking data collection, are not merely

symptomatic of the increasing marketization of individuals; they also serve to perpetuate it. As individuals focus more and more on their quantifiable metrics and become further and further accustomed to conceiving of themselves in terms of these metrics, the dominion of the Quantified Self expands. Rather than merely a ‘lens’ through which an individual may view herself – or through which, say, scientists or sociologists might discuss her – the Quantified Self threatens to become that concept which *defines* what the self is. We conclude by arguing that this metaphysically weighty assumption affects our thinking about what is good for human beings.

Medicalization and Human Enhancement

“God is dead, Marx is dead, and I don’t feel so well myself.” This amusing quip, variously attributed to Eugène Ionesco and Woody Allen, is, whatever its source, profound, synthesizing decades of philosophical reflection about the explanatory limits of traditional systems of thought. It gestures at the crisis of the subject in the aftermath (“I don’t feel so well myself”), and by extension – if we may be allowed some interpretive liberty – indicates a certain cynicism about rational action theory and individuals’ ability to make good choices based on their evaluation of possible consequences. Not dissimilarly, if more seriously, Francois Lyotard predicted the collapse of the grand narratives – illuminism, idealism, and Marxism – as exhaustive explanations of society (Lyotard, 1979). Postmodern society, Lyotard claimed, can only be understood through partial, contingent, and contextually interwoven narratives. Amid the weakening power of religious doctrine, the abandonment of Marxist critical theories, and the predominance of post-structuralist theories, the biomedical has emerged as a dominant explanatory framework. Biomedical concepts and terms serve as the reference points in much of our everyday thinking, governing our perceptions of the situations and choices we face.

Biomedicine is booming. Not a day passes without some reference to the latest discoveries in neuroscience, genetics, or precision medicine in the news. The biomedical lexicon is an attractive one, for all that it explains complex sociocultural situations in simple and apparently objective terms. (Arguably, medicalization urges us to look to technology for the solutions to problems which in fact have social causes.) The biomedical lexicon is also, of course, automatically pathologizing: “[p]eople have no inner desire to perceive themselves as ill. How-

ever, powerful cultural signals provide the public with a ready-made medicalized interpretation of their troubles. And once the diagnosis of illness is systematically offered as an interpretative guide for making sense of distress, people are far more likely to perceive themselves as ill” (Furedi, 2006, p. 17). Further, as Zola saw in 1972, “the prestige of *any* proposal is immensely enhanced, if not justified, when it is expressed in the idiom of medical science” (Zola, 1972, p. 496). The process of medicalization is encapsulated in a pithy remark of McLellan’s: “[o]nce upon a time, plenty of children were unruly, some adults were shy, and bald men wore hats. Now all of these descriptions might be attributed to diseases – entities with names, diagnostic criteria, and an increasing array of therapeutic options” (McLellan, 2007, p. 627).

In other words, medicalization is the process by which certain aspects of human life, previously not considered pathological, come to be conceived of as medical problems (Conrad, 2007). Indeed, “medicalization occurs when human problems or experiences become defined as medical problems, usually in terms of illnesses, diseases or syndromes” (Conrad & Barker, 2010, p. S74). When medicalization takes hold in affluent societies, a result is that ‘healthicization’ becomes a core value among the better-off. The right to pursue happiness has (if a slight exaggeration be forgiven) collapsed into the duty of being healthy. “The promotion and celebration of health as the paramount value of Western society has encouraged people to interpret a variety of human activities through the vocabulary of medicine.” (Furedi, 2006, p. 14).

Just as medicalization pathologizes conditions once considered normal, so human enhancement attempts to improve conditions typically considered normal (and, indeed, satisfactory). In this sense, it prescribes a ‘cure’ or ‘treatment’ for even the healthiest among us: it seeks to make us better than well. Because human enhancement takes many forms and picks out a wide array of behaviors, it is difficult to define neatly. In broadest terms, it refers to the maximization of our capacities, and thus refers to practices ranging from the consumption of caffeine to the selection of embryos for in-vitro fertilization. These apparently disparate acts share the same goal: in each case, one seeks to improve her performance by surpassing natural limits that (would otherwise) restrain her.

For the present purposes, “human enhancement” should be taken in a narrower sense, such that it

refers to processes of biomedical interventions meant to improve certain aspects of our life, especially:

1. Psychological wellbeing
2. Cognitive and physical abilities
3. General extension of lifespan (Maturo, 2012, p. 97)

Let us give a sketch of each category. There are, of course, many means by which people seek to improve their psychological wellbeing. The most common include rest, access to a stable environment (whether economic or social), and the use of certain drugs (Maturo, 2012b). It is hardly a surprise that people want to feel well. What merits scrutiny is the fact that activities are increasingly commended *because* they improve our psychological wellbeing and thus our functioning (‘if I’m well, I’ll be able to get more done’). One striking example lies in contemporary thinking about meditation. Traditionally, meditation was touted as a means of achieving mental and spiritual tranquility (or, indeed, transcendence). Today, meditation is often praised for maximizing focus, efficiency, and productivity, while a number of meditation apps recommend themselves on these grounds.¹ Psychological wellbeing may thus come to be valued instrumentally, desired as much for what it makes possible (greater productivity) as for itself.

Second, when it comes to enhancements of cognitive and physical capacity, the most striking examples lie in drug use. Consider the use of substances like Adderall, a prescription drug popular among American and British university students. With the help of this pill, usually prescribed for attention deficit disorders, one can stay focused and energetic for extended periods of time, without needing to sleep or take a break. Indeed, a student on Adderall can work continuously for several hours without feeling any fatigue. Energy drinks, while a less extreme example, serve the same end, reducing feelings of fatigue and allowing one to remain alert as long as possible (and, presumably, to get more done). Similarly, doping enhances one’s physical abilities. In all of these cases, the relevant drugs do not *cure* a person’s deficiency or illness; they make the user better than well.

Third, the extension of lifespan refers to attempts both to forestall imminent death, and to eliminate death in general – a goal some scholars claim

¹ For a related point, made in the course of a very different argument, see Mark Johnston’s discussion of “spiritual materialism:” Mark Johnston, *Saving God: Religion after Idolatry* (Princeton University Press, 2009), 14–16.

is achievable. Indeed, there is an entire intellectual movement, “transhumanism,”² committed to this possibility. The term was coined by Huxley, who, in a 1950 essay, explained:

“The human species can, if it wishes, transcend itself—not just sporadically, an individual here in one way, an individual there in another way, but in its entirety, as humanity. We need a name for this new belief. Perhaps transhumanism will serve: man remaining man, but trans-cending himself, by realizing new possibilities of and for his human nature” (Huxley, 1950, p. 17).

Transhumanism encapsulates a distinctive cultural outlook, one which valorizes technology and scientific discovery. The transhumanist movement is active around the world and a number of national associations organize annual conferences at which transhumanists trade ideas and opinions about recent technological innovations. In his *Death with Interruptions* (2005), novelist José Saramago imagines a world in which the long-standing transhumanist dream is finally realized: human beings stop dying. Indeed, the transhumanist believes that new technologies (e.g. embryo selection) will make it possible to enhance or “extend” our physical and cognitive capacities so dramatically as to stop aging, and eventually even death, in its tracks.³ Like the student who takes Adderall, transhumanists seek to enhance human beings through the use of technology.

There are, of course, many different and nuanced attitudes one can take regarding human enhancement. Broadly, these fall between two extremes, the “tech-enthusiastic” and the “bio-conservative.” Tech-enthusiasts focus on the numerous benefits human enhancement may make possible (and has already made possible). Bostrom and Savulescu (2009) present one such view, claiming that the widespread use of robotics, as well as the implementation of more advanced software and engineering, would vastly improve the quality and accessibility of healthcare. And in an earlier (evocatively titled) essay, “Why I want to be a Posthuman when I Grow Up” (2008), Bostrom lays out the many advantages he associates with becoming a

posthuman subject, which include improved health and subjective well-being.⁴

Falling somewhere between tech-enthusiasm and bio-conservatism, many authors focus on the ethical and legal quandaries that the use of technology for human improvement introduces. As Amore (2016) points out, the existence of robots and automated, weaponized drones (to take just one example) forces us to consider what and how our ethical codes apply. Does such technology meet ethical and legal standards? Is it capable of doing so? And do those standards, typically formulated with human beings in mind, make sense in this context? A particularly pressing task for our society is to formulate a clear and plausible standard by which moral responsibility and legal liability can be doled out to the various parties (designer, manufacturer, user) involved in the use of certain technologies. Think, for example, of deaths caused by self-driving cars and the media coverage they inspire.⁵

And then there are those like Sandel (2009), who note the cultural dangers that may accompany widespread artificial improvement, including eugenics. As a result of such concerns, Sandel arrives at a decidedly bioconservative position, emphasizing the social and political risks implicit in human enhancement. Beyond concerns about eugenics, human enhancement may also pose significant threats related to social inequality. Sandel claims that in the future there may be two different classes of human beings: “those with access to enhancement technologies, and those who must make do with their natural capacities.” Worse yet, should these divisions hold throughout generations, “the two classes might eventually become subspecies - the enhanced and the merely natural” (Sandel, 2009, p. 75). The very means of human enhancement might become unequally accessible, such that those unable (or unwilling) to enhance themselves begin to suffer from stigmatization (Maturo, 2012).

The Quantified Self and Performance Optimization

In a society like ours, which urges the evaluation and optimization of everyday tasks, self-tracking emerges as a perfectly coherent practice.

² Sometimes referred to as “H+” or “Humanity plus.”

³ The conviction that such advances are immanent, while perhaps not essential to the transhumanist philosophy, is certainly prevalent among transhumanists.

⁴ For Bostrom, “posthuman” refers to a human being whose normal abilities have in some way been optimized – an enhanced human, in our terms.

⁵ See, e.g., “The Ethics of Autonomous Cars” (*The Atlantic*, Oct. 8, 2013); “Self-Driving Cars Will Kill People. Who Decides Who Dies?” (*Wired*, Sep. 21, 2017).

We track how much we eat, how much we sleep, how far we run, how bad our mood swings are, and so on. By quantifying our activities and studying them through graphs and statistics, we are able to study the progress we have made (or failed to make). This gives us a sense of control over certain aspects of our lives (*e.g.* our fitness), as we strive to optimize our physical and mental abilities.

Self-tracking also, of course, produces lots of data about ourselves. This amalgam of information provides us with an ‘x-ray’ image of our own actions and aids us in maximizing our productivity (Morsello & Moretti, 2017). One can keep track of how many steps she takes and, separately, of how many hours she sleeps. One can, moreover, study these two metrics side-by-side, determining whether, *e.g.*, more rest correlates to more physical activity. One can consult her personal dataset to figure out the time of day at which she is most productive, the day of the week on which she will ovulate, the quality of sleep she enjoyed the previous night, and so on. As if before a mirror, she is able to look at “herself.”

When a neoliberal paradigm is applied to personal matters, as if individuals were businesses, the self becomes just another object for corporate management. Principles of corporate management are increasingly applied to areas of life which traditionally stood outside of business and its logic. These include emotions, exercise, health, and interpersonal relationships, all of which are increasingly conceived of as performances subject to appraisal in market terms. For example, individuals are under pressure to make their individuality and rapport with others conform to certain (market-like) standards of productivity and usefulness. In turn, the individual begins to conceive of herself as a body-for-profit, a brand. Just as corporate management maximizes the usefulness of human resources by employing various techniques to facilitate greater efficiency, so, Chicchi and Simone (2017) suggest, self-management molds the individual. The individual becomes entrepreneur of herself.

Self-management is closely linked to *human capital*, a concept Becker introduced in 1964. Becker used this term to refer to a person’s productive capacity, something which can be increased through education (here understood as the process of accumulating knowledge, skills, and abilities), and which determines differences in income. Becker’s idea takes a concept traditionally associated with the market (capital) and applies it to individual human beings. Indeed, he expanded the domain of micro-

economic analysis so as to encompass a wide range of human behaviors and interactions, including those that (apparently) occur outside of the market. On Becker’s picture, for example, whenever individuals make a decision, they do so by calculating the costs and benefits of the available options. Acquiring human capital requires one to cultivate the very same skills necessary for successful economic activity (Chicchi & Simone, 2017). Not only are human beings conceived of in the image of corporations, corporations are concerned with human capital. Indeed, human capital has become a fixture of corporate logic, with the “human factor” considered integral to the success of a corporation. To invest in human capital is to invest in making a company as competitive as possible.

This market-minded valorization of individuals accounts for the rising importance of individual *performance*, as well as the obsessive measuring of that performance (Chicchi & Simone, 2017). The neoliberal subject produces and consults information about herself in just the way one produces and consults information about a business. She analyzes her needs, defines her goals, conceives of the choices she must make in terms of costs and benefits, and, finally, performs a problem-solving analysis. Notably, as we turn now to discussing, she does all of this by reference to a collection of ostensibly objective, “neutral” standards.

The neoliberal subject’s entrepreneurial orientation necessitates a new mode of governmentality. She locates her sense of self in most all of the activities she performs or is assigned to perform, and her self-entrepreneurship is “global” and omnipresent. In order to govern, influence, and control such individuals, it is necessary to exert influence over this wide-ranging, entrepreneurial subjectivity. This, in turn, necessitates new methods of control. Chief among them is the setting of ever-higher, putatively “neutral” standards for individuals’ conduct and achievements (Dardot & Laval, 2013). Call-center operators are assessed, for example, not by individualized, qualitative evaluation by their bosses, but by the percentage of customers who express satisfaction with the help provided. Indeed, techniques for standardization and cooperation today take the form of numerical evaluative practices that monitor the activities of the subject. If one’s performance fails to meet certain standards, she faces penalties, including delayed career progression, reduced salary, and so on (Dardot & Laval, 2013). The subject is thus molded to submit to her own self-governing, which

is guided by numerical, impersonal, and apparently objective standards. Eventually, the subject may become so accustomed to this mode of thinking that she can no longer distinguish between what she should do and what, in the eyes of a company, she should do. The subject is thus governed not from without but from within – or so it appears to her.

The striking effect of entrepreneurial self-governance is that individuals come to reinforce the very socioeconomic structure that has molded them into self-entrepreneurs in the first place. The neoliberal subject is shaped by the standards for her performance that she faces, *e.g.* how many hours she needs to spend at work, or how many calories she is supposed to consume. In holding herself to these standards – in internalizing them as “her own,” and then striving to meet them – she supports and strengthens the socioeconomic structure that subjects her to these standards. How? Entrepreneurial subjects, once produced, come to approach interpersonal relationships competitively. They subject others to the standards to which they subject themselves and take others to conceive of them in these performance-based terms, too. There is thus a sort of “ripple effect,” whereby individuals adapt to, and reinforce, increasingly harsh or demanding conditions they themselves have helped to produce (Dardot & Laval 2013).

In a neoliberal society, every aspect of human life is conceived of in market terms and described in the jargon of investment and competition. It follows that there are few relationships – if any – which are *not* conceived of in instrumental terms (Maturo, Mori & Moretti, 2016). Public and private areas of life are ever more permeated by, and explained in terms of, principles of individuals’ trades and gains (McNay, 2009, p. 75). Relationships and behaviors previously not conceived of in economic terms are valued insofar as they serve business interests.

We have noted that the Quantified Self is a subject who organizes her activities in a managerial fashion. She collects data about herself, makes and relies on graphs and statistics that reflect this data, and measures her own performance against certain benchmarks – the ideal amount to sleep, the best amount to weigh, the right time to arrive at work, and so on. We should now like to point out that this organized and “scientific” approach to introspection perfectly serves the demands of the market. The Quantified Self, we suggest, is the self as shaped by the logic of neoliberalism. Through self-quantification, one turns oneself into a manager, a devel-

oper, and a product. Through quantification, the self becomes a consultant who determines the meaning and value of its various “products.” Like a big corporation, the Quantified Self keeps an eye on her net profits and monitors the progress of her productivity. Her subjectivity is determined by her adherence to entrepreneurial governmentality, which it, in turn, reinforces and disseminates.

In a world dominated by the principle of competition and made up largely of strategic relationships, an identity formed by interpersonal relationships is hard to secure and decidedly unstable. This is not only because we have a lurking suspicion that what others communicate to us about ourselves is tainted by their own interests, but also because, at its most extreme, neoliberal logic cannot account for value beyond that relevant to market interests – that is, for the very sort of value that, in earlier and otherwise structured societies, made relationships valuable (Maturo, Mori & Moretti, 2016). Indeed, the widespread adoption of individual performance standards leaves individuals focused on themselves, suspicious of others, and isolated in their daily lives. Western societies are increasingly characterized by their emphasis on individualism. At the same time, the individual subject in such societies is uncertain of its own boundaries (Lasch, 1979): *am I my subjective experiences? Am I my data? Can I tell them apart at all?*

Fact and Value: the Quantified Self as Moral Subject

Rather than merely a lens through which an individual can view herself – or through which, say, scientists or sociologists can discuss her – the Quantified Self threatens to become that concept which *defines* what the self is. The uncritical (perhaps unwitting) acceptance of this weighty metaphysical notion has far-reaching implications for our everyday moral thinking. The Quantified Self not only reflects a distinctively neoliberal mindset, it further urges us to define what is good for individuals in the terms of that mindset. The more we identify human beings with their quantified parts, the more natural it becomes to identify (a) what is good for human beings with (b) what is ‘good for’ their quantified parts.

After all, a substantive shift in how we think about human beings usually brings with it some shift in our thinking about value. To acknowledge this is not to stake out a position in the longstanding debate about how fact and value relate (if, indeed, they are

distinct at all).⁶ It is merely to point out that much of our moral thinking reflects basic factual assumptions we have made about individuals. At some general level, our everyday moral thinking reflects ‘background’ facts that we assume about ourselves, others, and the world. Some examples illustrate this point. One’s belief that the planet’s resources are not inexhaustible informs her judgment that it is wrong to waste natural resources. One’s belief that normal, adult individuals choose what to do with their limbs informs her belief that, when person A hits person B, person A ought to be blamed. One’s belief that women are not intellectually inferior to men informs one’s belief that women are entitled to participate in academic life. If we understood the planet’s resources to be unlimited, people not truly to choose what they do with their limbs, or women to be cognitively inferior, our moral judgments would shift accordingly. We might not condemn the wasting of a natural resource, or consider hitting blameworthy,⁷ or insist upon women’s place in the university, anymore. The general point here is that, as we go about the world, perceiving the moral dimensions of any given situation, thinking about how the world ought to be, we take into account a number of background assumptions about how the world in fact is.⁸

It is no surprise, then, that the growing tendency to think of human beings *just as* their quantified parts should affect aspects of our everyday moral thinking, including how we approach moral questions in the first place. This indeed appears to be occurring. As individuals come to identify more and more with their tracked metrics, like their exercise and health statistics,⁹ it becomes easier and easier for corporations and governments to think of them – and for them to think of themselves – *just as* the collections of these metrics. (Thus, somebody with clinical depression might, on default, describe her condition by referring to a chemical imbalance, rather than by describing her subjective emotional state.) The reduction of human beings to their Quantified Selves

encourages the reduction of normative questions about human beings (e.g. ‘what is good for human beings?’) to questions about quantifiable metrics (e.g. ‘what maximizes human beings’ lifespans?’). A tendency to run together these two different types of questions is apparent in the very terms “human enhancement” and “human optimization.” These typically refer to the enhancement and optimization of physically observable, quantifiable phenomena. Working backward, the assumption seems to be that human beings are nothing over and above the amalgams of these phenomena – for the enhancement of the human being is taken to consist just in the enhancement of these phenomena.

“Enhancement” is itself an ambiguous notion, straddling the technological and the normative. We speak of enhancing the display of a television screen, but also of the way a friendship has enhanced our lives. This makes it easy to overlook the fact that talk about “enhancing” or “optimizing” human beings is, at bottom, normative talk: it presumes some knowledge and makes some claim about what is good for human beings. It may seem obvious that we have such knowledge: most of us are confident, for example, that pointless suffering should be minimized. But the normative claims made in discussions of human enhancement and optimization move far beyond such obvious claims. Bjorn Hofmann argues forcefully along these lines when he criticizes the widespread Transhumanist assumption that *maximization* (a quantitative concept) is the same thing as *improvement* (a normative concept). To take one obvious counterexample, a longer life is not necessarily a better life (Hofmann, 2018).

The growing tendency to conceive of human beings in quantified terms results in a growing tendency to assume that the good for human beings may be gleaned from, or expressed in terms of, quantified metrics about us. A leap is sometimes made from the observation that some parts of human life are quantifiable to the claim that human beings just consist in those quantifiable parts (or some amalgamation of them). From here, it is but a short step to the idea that the good for an individual can be found in, or secured by somehow adjusting, the metrics of these quantifiable parts. But some – arguably valuable – parts of human life may not lend themselves, in any obvious way, to quantification: will one find moral or spiritual insight in the most thorough collection of empirical facts? Fortunately, we can remain agnostic on this question. Our aim is not to answer it, but to

⁶ See, e.g., Hilary Putnam, *The Collapse of the Fact/Value Dichotomy and Other Essays* (Harvard University Press, 2004).

⁷ As, indeed, some philosophers, urge: Gregg Caruso, “Skepticism About Moral Responsibility”, *The Stanford Encyclopedia of Philosophy* (Spring 2018 Edition).

⁸ One could think, here, of Kant’s distinction between the formal moral law (the categorical imperative) and that law as it applies to the schema of human life, yielding particular duties.

⁹ As opposed to identifying with, say, their first-person experiences.

point out that proponents of human “enhancement” and “optimization” must not (but occasionally seem to) overlook it.

Substantive assumptions about what human beings are, and about how they ought to be, inevitably undergird most any discussion of human enhancement. For, to enhance a human, we must know what ‘better’ for that human would be. The metaphysical belief that a human being is essentially (or somehow ‘truly’) a quantified thing stacks the deck of that normative inquiry in a certain direction – namely, that of quantified metrics. In the previous sections of this essay, we argued that individuals increasingly conceive of themselves in terms of such metrics, and that this mode of self-conception promotes a certain marketization of the self. One becomes increasingly concerned with her own ‘performance’ (and productivity), and measures this in terms of quantitative, ostensibly neutral, standards. We further argued that this mode of self-conception reflects and reinforces a neoliberal fixation on individual performance. In closing, we have pointed out that identifying individuals with their quantifiable parts not only serves certain neoliberal ends (the marketization of ever more parts of life; the application of business logic to interpersonal relationships; increasing emphasis on productivity; *etc.*), but also urges us to conceive of the good for human beings in terms of those metrics. Quantifying the self has far-reaching ramifications not only for what we take ourselves to be, but also, part and parcel, for what we take to be good for us – and, indeed, for how we go about figuring out what the good for us might consist in.

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PROCREATIVE AUTONOMY VERSUS BENEFICENCE IN ASSISTED REPRODUCTIVE TECHNOLOGIES

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Abstract:

Since its beginning, healthcare has focused its attention on helping patients become healthier and live longer. One of the areas in which medical technology has made impressive strides is assisted reproductive technologies. Some bioethical issues are common to most or all of these newer reproductive technologies. The uncertainty of long-term risks posed by reproductive technologies generate potential challenges to the values of beneficence and non-maleficence and strain the already divisive dichotomy between procreative autonomy and procreative beneficence. Procreative autonomy and procreative beneficence are both important values that physicians and prospective parents ought to evaluate when considering the use of assisted reproductive technologies. However, the moral prescriptives associated with each value may diverge and conflict with one another; when this occurs, minute arguments may shift the balance between them. For physicians, prioritizing the value of procreative autonomy or procreative beneficence mainly influences the way in which they choose to present information—that is, whether they are directive or non-directive when consulted about family-planning options. Assisted reproductive technologies have dramatically increased the range of choices available to prospective parents, and this breadth of choice may lead to potential ethical conflicts between the competing values of procreative autonomy and procreative beneficence. In the following article, we will address this friction, focusing our attention on normative considerations related to medical risk management and the telos of the prospective child.

Key words: procreative beneficence, procreative autonomy, assisted reproductive technologies, posthumanism.

Introduction

Since its beginning, healthcare has focused its attention on helping patients become healthier and live longer. However, due to recent developments in biomedicine, artificial intelligence, cybernetics, pharmacology, and genetics (Roden, 2014; Foster, 2005; Pickering, 2001; Hostiuc, Badiu, et al., 2015), we have increasingly come to seek out something beyond conventional standards of “wellness”; indeed, many of us are interested in not only living a long and disease-free life, but also in “improving” our overall quality of life and increasing our standard of wellness through various body and mind alterations. A physician, for instance, might wish to increase her/his mental capacity in order to provide better patient care; a soldier might wish to be able to run better, or to stay sharp longer, or to heal faster; and a priest might wish to be more empathic (Lara, 2017; Rakić, 2017). For all these problems there are pharmacological agents, or software, which interact with the human body, alter it, and improve it, at least from the point of view of the end-user. Sometimes, the enhancement of a certain physical or psychological trait might change, in a negative fashion, another one, potentially leading to physical or psychological morbidity or even mortality. Amphetamine increases alertness but it also has significant cardiovascular consequences, potentially causing vasoconstriction, myocardial infarction, or arrhythmias. Plastic surgery improves the looks of a person, but it may also lead to anesthesia-related risks, hemorrhages, fat embolism, etc (Stoops et al., 2007). Often enhancement procedures do not have a properly-established risk profile; a procedure to genetically engineer a

“superior” trait, such as height, might precipitate a very severe genetic disorder due to a close proximity between neighboring genes.

One of the areas in which medical technology has made impressive strides is assisted reproductive technologies. Since the birth of Louise Joy Brown in 1978 (Shivaji, 2011) to current debates centered on ectogenesis (Murphy 1989; Smajdor 2007), interspecies reproduction (Squier, 2017), in vitro fertilization with posthumous sperm procurement (Hostiuc and Curca, 2010), uterus transplantation (Alghrani, 2016), the use of genetic engineering to screen embryos for physical or moral traits (Hostiuc, Badiu, et al., 2015), only 40 years have passed, and many reproductive technologies that are currently in development might, very soon, be available to physicians and patients. These techniques pose both general and specific ethical issues. For example, ectogenesis might generate debates about the separation of the biology from the sociology of the reproductive act; accordingly, we may consider whether the development of embryos in artificial conditions outside of the uterus may have a detrimental impact on the future mother-child relationship, since we may argue that this social bond may be naturally (and meaningfully) established during pregnancy. We might also wonder whether ectogenesis could industrialize human reproduction, facilitating (and encouraging) the usage of genetic engineering methods and technologies for reproductive purposes (Murphy, 1989; Smajdor, 2007; Takala, 2009; Kendal, 2015); etc. Some bioethical issues are common to most or all of these newer reproductive technologies. The uncertainty of long-term risks posed by reproductive technologies generate potential challenges to the values of beneficence and non-maleficence, and strain the already divisive dichotomy between procreative autonomy and procreative beneficence.

Procreative autonomy can be defined as the right (both positive and negative) of a person to freely choose the way he/she would like to have/not to have offspring. (for details see: Jacobs, 2011; O'Neill, 2002). The negative right of procreative autonomy means that nobody should interfere with a person's/family's wishes to have children (the right to reproduce) or not to have children (the right to contraception). Most countries currently freely allow the positive right to reproduce to all members of society, provided they fulfill some basic conditions (e.g. a very young person might not be allowed to form a family—this can be seen as a limited obstruc-

tion of this right, justified, however, by the duty to protect minors). The negative right not to have children again is seen as implicit in most countries (even though there are some, usually religious, groups who fight against it, with varying degrees of success (Maguire, 2003)).

With the onset of assisted reproductive technologies, various authors have emphasized the need to define a positive right of procreative autonomy. For example, in the Dickson v. UK case of the European Court of Human Rights, the Grand Chamber ruled that a prisoner should be allowed to have children with his spouse through artificial insemination if, by the time he was released from prison, she would be too old to conceive a child (Van der Linde, 2008). Wolfe performed an in-depth study of the positive right of procreative autonomy as it applies to the use of preimplantation genetic diagnosis in selecting for various genetic traits; among other concerns, this study examined the legality and morality of “creating” intentionally disabled children (Wolfe, 2008). Choo analyzed moral arguments weighing the positive procreative right of couples to produce a child using human cloning techniques against the autonomy of future clones (Choo 2012), etc. Unlike the negative right of procreative autonomy, which is largely unrestricted on a global scale (although, as stated briefly above, exceptions exist), the scope of the positive right is limited and its legal and moral status varies widely around the world. . Limits to the positive right are imposed on both moral and financial grounds. Human cloning, for example, is seen as highly morally problematic, and is basically forbidden everywhere, for reasons related to the following topics of concern: the alteration of the human essence; interference with human teleology; the alteration of human dignity and transcendental freedom; and the naturalness of the human being (Hayry, 2003, p. 457). Other techniques are limited on financial grounds. Many are expensive and, consequently, not readily available to patients (who are unable to pay out of pocket); additionally, these techniques may be inaccessible within the healthcare system (even to those who can afford the exorbitant cost), since healthcare policy often tries to optimize resource allocation, including favoring the selection of less expensive assisted reproductive techniques. Moreover, the types of assisted reproductive technologies that are available to a couple differ from country to country. Some countries, for instance, allow surrogate motherhood, or in vitro fertilization for single parents, while others either do not reim-

burse such methods (if there are national programs for them), or simply do not allow them— usually because of strong resistance from various social groups, or because they have not yet been sufficiently tested and deemed feasible and safe for the couple or the prospective child (Hostiuc, Buda, et al., 2015; Wolfe, 2008; Heisey et al., 2015).

The principle of procreative beneficence states that couples (or single parents) should be able to select, from all the possible children they/he/she could have, the one with the best chances of living the best life, or a life at least as good as the other children, based on the relevant information available to him/her/them at the time of conception (Savulescu, 2001 p. 413–426). This concept has been heavily promoted by Savulescu, who argued that procreative beneficence morally requires us to use whatever means medicine and technology have to offer in order to “create” the best product of our reproductive potential, and that moral persuasion could be used to effectively direct parents toward this approach while still respecting three main principles: (1) the right to relevant information, (2) respect for the free will of prospective parents, and (3) access to non-coercive advice from healthcare professionals regarding the best means of achieving this desired “best product” (Savulescu 2001). Jakob Elster has expanded upon this concept, arguing that procreative beneficence should be replaced with a wider concept he calls “general procreative beneficence”, which states that “if couples (or single reproducers) have decided to have a child, and selection is possible, then they have a significant moral reason to select the child, of the possible children they could have, whose life will maximize the expected overall value in the world” (Elster, 2011, p.483). Both the personal principle of procreative beneficence (as defined by Savulescu), and the general principle (that defined by Elster) are considered, by many authors (us included), as strongly connected with an ideology of eugenics and a profusion of flawed moral reasoning, as the following examples demonstrate (Bennett, 2009). To begin, Bennett has stated: “Based on this definition eugenics is a ‘public interest justification for interfering with reproduction’ (...) ‘to promote social goods’. As we have seen the establishment of a moral obligation to bring to birth the best child we can is not built on the private interests of the prospective parents (...) (*but is*) built on an idea of making the world a better place than it could otherwise have been, not in terms of any individual person’s welfare, but in terms of cre-

ating the greatest total score for what is regarded as the goods of life. If a project is not interested in the welfare of particular people but creating what those proposing this project believe is the best world possible, then this is exactly what eugenics is – promoting social and not personal goods. It is true that those proposing this obligation to create only the best children do not advocate coercion at the level of forced sterilizations in order to achieve this end but it is not true that no coercion at all is implied. As we have seen establishing a strong case for a moral obligation to bring to birth the best children we can inevitably puts pressure on people to this end” (Bennett, 2009). Hotke has argued against procreative beneficence based on this premise, saying that it is untenable to support the claim that upholding morality requires us to do the *reasonable* thing: “For instance, if I choose to forgo breakfast rather than eat breakfast, then assuming there was more reason to eat breakfast than not to eat breakfast, I have acted morally wrongly; I ought to have eaten breakfast. This conclusion is absurd” (Hotke, 2014). Sarah Stoller has argued against a purely consequentialist approach to procreative beneficence, noting that, (1) different moral theories potentially lead to significantly different conclusions, and, (2) a purely consequentialist approach cannot be used when the act upon which we apply consequentialist tools is one whose consequences are as uncertain as the process of creating life: “In the area of procreation, then, when we focus solely on consequences, we ignore key components of our sense of morality. In most contexts, when dealing with a person whose identity is already determined, consequentialist accounts may provide moral answers and possibly encompass deontological and virtue ethics concerns along the way. When, however, we engage in the activity of creating life itself, and the question is not how to treat a particular person but which person if any to create, consequentialist thinking fails to capture all the relevant facets of the issue. Indeed, in the area of procreation, acting beneficently may not require the consequentialist demand of creating the best children; it may instead demand recognition of deontological and virtue ethics as an appropriate moral lens” (Stoller, 2008, p.369). As counterarguments to the position that procreative beneficence is consistent with eugenics and morally wrong, Savulescu states: “Procreative Beneficence is different to eugenics. Eugenics is selective breeding to produce a better *population*. A *public interest* justification for interfering in reproduction is different from Procrea-

tive Beneficence which aims at producing the best child, of the possible children a couple could have. That is an essentially private enterprise. It was the eugenics movement itself which sought to influence reproduction, through involuntary sterilisation, to promote social goods” (Savulescu, 2001, p.424).

Both procreative beneficence and procreative autonomy are concepts derived from fundamental ethical principles of biomedicine, according to the principlist theory developed by Beauchamp and Childress (Beauchamp and Childress, 2001). However, they are distinguished from one another by certain characteristics, due mainly to the fact that they apply in practice not only to actual human beings (namely, the reproductive couple, each one of whom has distinct moral obligations/duties), but also to a potential human being (namely, the couple’s prospective child), whose very potentiality is intensely debated in connection with a number of issues, including: the moment of appearance or initiation into existence (what is the nature of this potential to be a human being, and at what precise moment does the potential human being becomes an actual human being?), moral status, specific rights, etc. The importance of both concepts increases when applied to assisted reproductive techniques (as compared with non-assisted reproduction), due to additional complications generated by specific regulations, moral constraints associated with various techniques, and so on. Procreative autonomy and procreative beneficence are both important values that physicians and prospective parents ought to evaluate when considering the use of assisted reproductive technologies. However, the moral prescriptives associated with each value may diverge and conflict with one another; when this occurs, minute arguments may shift the balance between them. For physicians, prioritizing the value of procreative autonomy or procreative beneficence mainly influences the way in which they choose to present information—that is, whether they are directive or non-directive when consulted about family-planning options.

Since the beginning of human life, individuals have chosen when, how, and with whom to have children, exercising independent judgment about significant, life-altering subjects, despite being unable to predetermine anything about their future offspring (except, of course, insofar as they could attempt to select for certain qualities by choosing a partner with particular morphological and intellectual traits). With the introduction of assisted reproduc-

tive technologies, individual preference and will could also manifest in the choice of technique a person selects to maximize the chances of having a child, or maximize the chances that the child will possess particular traits. Both outcomes are highly dependent on the physicians who perform the technique—they not only intervene medically in the conception and birth of the infant, but also intervene biotechnologically to manipulate the genes/genome of the zygote, influencing or selecting for various traits, and potentially modifying the prospective child’s future. A physician who recommends gamete donation and puts a family in contact with a sperm bank already predetermines the fate of the potential child by preselecting the genetic material available to the mother. A physician who performs a sex selection procedure predetermines many aspects of the entire future life of that child; indeed, whoever that child may marry, job prospects, family interactions, etc., are all connected in complex ways with the biological sex assigned to the child at birth, given the complicated social architecture constructed around gender identity/expression, socialized gender roles and gender norms, and cultural beliefs and expectations about the relationship between gender identity and biological sex. Therefore, the magnitude of the physician’s accountability extends far beyond the duration of the pregnancy, a fact which generates some logical follow-up questions: Is the physician prepared to bear the burden of such responsibility? How many obstetricians are knowledgeable about ethical issues surrounding genetic engineering, and how many can clearly foresee the entire range of potential lifelong consequences of specific genetic interventions for the prospective child? Should physicians even be allowed to take upon themselves such a burden? Are they even aware of the gravity of such responsibility?

A non-directive approach to genetic counselling would maximize the procreative autonomy of the parents, but could increase the risks of parents making decisions that are obviously wrong on moral grounds; for example, if a couple would like to have a child with disabilities – an obviously maleficent action, at least from a physician’s point of view – should the physician be prohibited from providing another recommendation? Based on the principle of procreative beneficence, physicians ought to get involved and provide medically and morally sound recommendations to future parents. This would minimize foreseeable risks (including those related to genetic engineering techniques); however, it would

not reduce or prevent unforeseeable risks (those risks that were unknown, or could not be established with a reasonable degree of certainty at the moment of the procedure, such as problems associated with late onset germline mutations, the generation of recessive traits, etc.) (Kaneva and Dimitrova, 2018).

Similar reasoning can be applied regarding the predetermination of the fate of the future child. The *telos* of the child should not be predetermined by external forces (Weber 2010, p.607), as they tend to act consequentialistically, an approach which, as stated above, is not the most appropriate when the end-product of the process is a new human life. The only external forces allowed to interfere with the future of the child for which there is precedent are the wishes of the parents (selecting a spouse, selecting the moment of conception, etc), which do not significantly alter the *telos* of the child, since even the parents' unrestricted freedom to make these choices does little to impact the extraordinary randomness of conception. Thus, unchecked procreative autonomy might significantly alter the biology/psyche of the future child in a way that exceeds the generally accepted aims and norms of medicine. Under such conditions, a physician could not intervene if prospective parents wanted a child with visual impairment, as to do so would contradict the non-directiveness aspect of counselling, a basic aspect of procreative autonomy. The couple's choice and the physician's inability to reject it would, in turn, significantly alter the *telos* of the child, who is predetermined according to his/her naturally occurring genetic makeup to be "a certain way", to appertain to a certain group. Prioritizing the value of procreative beneficence could also lead to a significant alteration of the child's *telos*; however, it is less likely to generate extreme outcomes, which, as we have demonstrated, is a significant risk posed by unconditional procreative autonomy. Procreative beneficence acts as a kind of filter between the wishes of the parents – which can diverge significantly from cultural, social, or medical norms – and the resulting family-planning/medical/biotechnological decisions reached in conjunction with the physician. Although this filter also ultimately leads to alterations of the child's *telos* by influencing key decisions about conception, birth, genetic testing, etc., it does not permit the kinds of drastic unilateral choices that result in significant changes of the way the child will live his/her life. Returning to our previous example: If the prospective child were to be visually impaired, the possibility of his acting independently toward

reaching a desired *telos* would be, on average (based on current studies), lower, as compared to a person who was not visually impaired – in this case, because measures were actively taken to ensure the best chances of producing a healthy and able-bodied child. Therefore, regarding the *telos* of the child, the principle of procreative beneficence allows for an attenuation, "normalization", or "balancing" of the wishes of the prospective parents and cultural norms through an intermediary that has extensive medical knowledge.

Conclusion

In conclusion, both procreative beneficence and autonomy should always be taken into account when discussing issues appertaining to new, unconventional assisted reproductive technologies. Their balancing by the physician should allow for a minimization of the risks associated with these procedures, as well as a decreased interference with the *telos* of the prospective child.

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(POST)PHENOMENOLOGICAL APPROACH TO *HOMO SAPIENS TECHNICUS*

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Abstract:

In this paper I use a (post)phenomenological approach to clarify the objective cultural expansion of our technology. Thus, I establish a conceptual analogy between two different philosophical analyses of human–machine relations – one historical and one phenomenological. I develop the analogy between them and their corresponding concepts in several steps. **(1)** First, I present the *Homo sapiens technicus* tendency and then the phenomenological differentiation between *body schema* and *body image*. All of these elucidate our involvement with machines. **(2)** Then, I conceptualize the term ‘context’, coupling its structural stability with the idea of *distextuality* in order to achieve a better empirical understanding of our technological contradictions. **(3)** I continue to develop and enrich the analogy by illuminating the functional similarities – fluid boundary, automation, complexity – between *contextual structures* on the one hand and *body schemata* on the other. **(4)** Finally, I explore a deeper causal and narrative connection between those strands, shedding light on an interesting twofold circularity: a circular causation and a double narrative within *Homo sapiens technicus*.

Key words: *Homo sapiens technicus*, body schema, body image, context, distext, circular causation.

1. Introduction and basic concepts

I would like to demonstrate the way in which the (post)phenomenological perspective can help us better understand the important cultural-historical tendency of human beings to continuously expand and develop our technology. Methodologically this means that I would like to establish a conceptual

analogy between two very different philosophical approaches to human–machine relations. On the one hand, we have the complicated history of human *τέχνη* (*technê*), of which the development of our contemporary complex technology is just a particular instance. I will name this typical and objective contextual tendency *Homo sapiens technicus*.¹ On the other hand, there is an interesting phenomenological differentiation between *body schema* (*schéma corporel*) and *body image*, which could be a key to understanding the human body’s direct or indirect involvement with machines, especially when some of our technologies are already bionic incorporations. I hope the analogy between these two different descriptions – one historical, one phenomenological – can shed light on our technological future and the inevitable contextual contradictions that lie ahead of us.

1.1. *Homo sapiens technicus* is a concept with which I refer to the historical human being through its *τέχνη* expansion; i.e. a concept that represents neither a biological classification (*Homo sapiens sapiens*), nor a social characterization of humankind (*ζῷον πολιτικόν*),² nor an individual human being as such. Our cultural heritage has developed in complex and nonlinear ways. This fluid historical framework, with its various divergent and interconnected

¹ In this case, *technicus* is a neologism from ancient Greek *τέχνη*, which is a more general concept than our modern understanding of technology, because it also includes poetry, craft, technology, and other activities or skills.

² *Zôion politikòn*.

tendencies, conditions both the present and the future. Appreciating the simultaneous historicity and diuturnity of humanity is necessary for grasping the central meaning of *Homo sapiens technicus* – that is, understanding *Homo sapiens technicus* as a reconceptualization of the Baconian scientific-technological program,³ which indicates that our “contemporariness” is essentially a (re)product of Modernity.

From this point of view, we are not at all ‘post-modern’; quite the opposite – *Homo sapiens technicus*, which was an ancient cultural tendency, became a *modern project* from the 17th century onwards and will continue to frame our common future.⁴ Of course, we are repeatedly puzzled, anxious, or afraid of these coming times, but such a reaction is something quite typical for *Homo sapiens technicus* – we have already experienced similar cultural and contextual contradictions over the last four centuries. At this point what is new is a) the *refined knowledge* we now have about the possible ways in which machines can change or even deform our *body schema*; b) the *objective speeding up* of many cultural transformations and technological innovations; c) the *feeling of fear* that the singularity is possible and near, i.e. the hypothetical moment when technological growth becomes uncontrollable and a powerful artificial superintelligence emerges that qualitatively surpasses all human intelligence, resulting in incalculable deformations to our civilization. I will develop here only the first, more epistemological point, but at the end I will refer back briefly to the other two points.

The most banal thesis, which is implicit in the notion of *Homo sapiens technicus*, is this: **without sapientia, any τέχνη, whether poetic or industrial, could take a monstrous, horrific form.** Therefore, humanity will evade this risk and survive only if both of these components – *sapientia* and *τέχνη* – are present at the same time.⁵ It has always been like

this, so we can call this thesis a **banality thesis**. What we can do philosophically, and what we have partially done here, is try to comprehend and condition the complexity of this statement – both through theoretical critique and reflection, and by taking steps that promote and preserve the respective roles of *sapientia* and *τέχνη* in practice.

1.2. Body schema consists of (1) motor programs, (2) proprioception, and (3) orientational perceptions of one’s own body. These three subsystems (subschemata) are not consciously or reflectively known by the subject, i.e. we need not be aware of them, as they are only tacitly used and understood. On the contrary, the term *body image* is a complex set of intentional states, and this notion refers to a form of explicit perception, conception, or even feelings which we have for our own body; i.e. *body image* involves a reflective intentionality. The philosophical differentiation between *body schema* and *body image* is a crucial one,⁶ but this is not only a useful phenomenological or postphenomenological distinction; it also has a clear non-philosophical application to many normal or abnormal physiological or cognitive conditions – for example, in describing the case of the famous patient IW, who had acute sensory neuropathy and, consequently, an impaired *body schema*.⁷ Because he lacked proprioception, very little of his motor activity was governed by automatic motor schemas. Initially, IW couldn’t move at all, and because of that he felt alienated from his own body. He had to reinvent his movements because he could not re-access them. The way he attempted this (and partially succeeded) was through constant mental concentration on every aspect of his movements and constant visual access to

distextual functions), so it has a regulative rather than constitutive function.

⁶ Merleau-Ponty, *Phenomenology of Perception*. Unfortunately, there is a long tradition of ambiguous terminological usage or misuse. Sometimes these terms are used interchangeably as synonyms and sometimes they are swapped – *body schema* is treated as a conscious representation of the body, while *body image* as a non-conscious possession. So, recently there have been articles trying to clear up the confusion that has resulted from substituting one term for the other.

⁷ IW had no proprioceptive function (sense of posture or limb location) and no sense of touch below his neck. He could not localize his limbs unless he saw them, but even seeing them was not enough to put his intentions into action, and initially he was not able to move (see Gallagher and Cole, “Body Image and Body Schema in a Deafferented Subject”).

³ Bacon, The Oxford Francis Bacon. Volume XI.

⁴ The most typical forms of *τέχνη* are mediation and abstraction. This includes a huge part of our culture: languages, practices, institutions, technologies, all of our tools, etc. In turn, the most typical forms of *sapientia* are some forms of finitude comprehension and, of course, universality; it should be noted that universality will always contain contextual contradictions.

⁵ In a way, we can rephrase it dialectically: the only way ‘*Homo*’ can contain in a sustainable way its ‘*technicus*’ is through the mediation of ‘*sapientia*’. This ideal is not universally achievable (see below the remarks on

his own body. This entailed continually monitoring the positions of his limbs relative to each other and to all other external objects; hence, it was much easier for him to drive a car than to walk. IW thus used his *body image* plus a set of conscious judgments (commands) to move or to correct and even slowly redevelop his *body schema*. In the end, he was able to partially reconstruct the feeling of his own embodiment, which once again, illustrates the interesting relation between (conscious) control and (unconscious) ownership.

We have now established some kind of general outline of our three main concepts: *Homo sapiens technicus* and the distinction between *body schema* and *body image*, and introduced an important practical example of how one can correct one's *body schema* through one's *body image*.

2. Establishing the conceptual analogy

If we want to explicate this analogy in a meaningful way, it is useful to find common ground between these descriptions and their corresponding functions. At first glance it is difficult to find something identical to *schéma corporel* in our culture, but we can safely assume that at least part of it is structurally stable, engendering its own continuous development or differentiation; i.e. there are supposedly some stable relations both in the diachronic and synchronic cultural plane. From a philosophical point of view all of this means that analyzing the nature of these relations is in fact a matter of analyzing the contexts in which they are embedded.

By context I refer to all *cultural conditions of possible or actual emergence or existence*. This approach to understanding 'context' may be termed transcendental-historical.⁸ The conditions of possibility and actuality designate spatiotemporal (amorphous or rigid) fragments of possible cultural worlds – e.g. events and circumstances, values and models, conditional historical varieties, institutionalized procedures (or even routine and typically communicative situations), and abstract, formal multitudes. Within the network of relations necessarily included within a context, we can detect various subjects, structures, causal explanations, analogies,

distinctions, opinions, situations, etc. The variety and variability of relations that exist within a culture lead us to pose the question: are there any stable relations within our historical contexts? The obvious empirical answer is affirmative – there are, indeed, many stable relations. Some of them appear typical or natural for human beings, and some may slowly become habitual over time – such that they even become institutionalized (as evidence of this, consider that we often talk in a *longue durée* fashion about particular customs or traditions – complex patterns of social actions or situations). We can call this temporal and dynamical stability "*contextual structure*". Each and every context has some form of a rudimentary structure. And the more complex the context gets, the more explicit its structure becomes and the more mediated its relations are. We are not necessarily aware of this contextual structure, although it somehow conditions our behavior. Despite potential blindspots when examining our cultural context, contextual structure lends itself more readily to general representation than our individual *body schema*. So, the analogy is built on the conceptual parallel between our *contextual structure* and our *body schema* – they have similar functions in our contexts or bodies, respectively. I will now proceed to list some of these functions: **A) Boundary**. Both of them introduce a flexible boundary that can be slowly transformed by adopting new practices, objects, or relations. The idea of a fluid boundary is a necessary one when we conceptualize cultural contexts.⁹ **B) Automation**. Both lead to certain cultural or physiological automation.¹⁰ And when we say automation, we mean gaining speed, and we imply that less attention is required for certain repetitive tasks (i.e. institutional procedures or bodily movements). Besides, things can feel as if they have become easier to process or to accomplish, and people report that automatic actions seem normal and even

⁸ One may suggest an analogy (without establishing identity) with Foucault's approach, more specifically with his concept of the *historical a priori*, which is repeatedly employed and theoretically developed in Foucault, *L'Archéologie du savoir*, 166–73. In Foucault's earlier texts from the 1960s this concept appears along with the notion of the *concrete a priori* [*l'a priori concret*].

⁹ It is partly science – or more specifically research, and partly art – or more specifically the avant-garde, that always transform these conditional boundaries. In turn, science and art must (preserve or) establish other or entirely new types of boundaries. Such a contextual transformation serves to expand understanding, along with the possibilities of individual contextual models, and could ultimately be considered a significant expansion of human sensory and speculative nature. One particular aspect this expansion is manifested in is the history of human beings and their culture as *Homo sapiens technicus*.

¹⁰ Automation is not taken as a purely technological and engineering process (because this would be only a particular instance of a more general problem), but as a bodily and cultural function.

natural, although they are artificially developed. **C) Complexity.** The complexity of a certain context and the complexity of a certain body is directly proportional to the complexity of its structures or schemata. We could list even more functional similarities, but these are more than enough for our present task.

Clearly, stable relations do exist within cultural contexts. However, we should not focus exclusively on these well established and more stable relations within the predominant and complex cultural contexts, nor should we focus too much on the postphenomenological idea of multistability¹¹ as a necessary description. Multistability implies that technologies are ‘stable’ in multiple ways (they have no ‘essence’, i.e. they are identical without remainder to their usage). But this multiplicity is not enough to explicate the chaotic relations we sometimes encounter within our contexts. It has been stressed time and time again that there are many contextual disruptions, painful contradictions, and sometimes even incommensurability within our culture or between cultures. There are many philosophers – Thomas Kuhn, Michel Foucault, Hans-Georg Gadamer, Ludwig Wittgenstein, Bruno Latour, etc. – who have pointed out such anomalies in very different domains and concerning very different problems, but what is really important from a conceptual point of view is that all of them have been implicitly or explicitly analyzing – at least in abstract terms – the notion of *context*. Thus, we need much more precision when using the concept of contextual structure, because without *distexts* we cannot describe transcendently or empirically the functions or relations which we encounter. By *distext* I mean any given state in which we observe a *break in the cultural conditions of possible or actual emergence or existence*. A *distext* can violate boundaries, disrupt certain forms of automation, and even fragment the complexity of its internal or external relations. A context may contain *distexts*. Of course, this is not a necessary condition; yet *distexts* are an extremely important part of the more intricate real contexts in which we exist and which we attempt to understand. *Distext* is not necessarily a sign of incommensurability or contradiction; it is only a rupture in certain cultural conditions. Indeed, a culture can contain such discontinuities, just as a *body schema* can, as evidenced by the previous discussion of patient IW. Hence, the analogy goes in both direc-

tions – it may trace the stability of certain structures and the possibility (or actuality) of breaks in them.

In the end, these two different descriptions – the first one historical and the other phenomenological – are philosophically complementary and display functional and structural similarities.

3. Causal and narrative characteristics

What we have now is a certain parallelism between *contextual structures* and *body schemata*, but I would like to develop a deeper causal, and subsequently narrative, connection. In order to establish these connections, we may look back at IW’s case to illustrate two interconnected ideas.

(1) First, this case offers insight into the possible causal interactions between our body image, which is definitely influenced by our cultural context, and our body schema, which seems to be less dependent on contextual structures. That is not to say that our body schema is completely independent of the historical tendencies that shape our contemporary context. Indeed, I am not only claiming that human consciousness is at least partially a historical product,¹² but emphasizing that to some unspecified degree our body schema is also a historical product. I illustrate this point by referring to various types of bodily transformations due to our technological advancement, and follow Welton in classifying them in ascending order.¹³ **(A) External integration.** First, we have the simplest form of external augmentation of the body schema; i.e. a tool that is placed “outside” the body, which slowly becomes integrated into the body schema through its use. This could be an extension of bodily perceptual schemata.¹⁴ **(B) External modification.** Second, we can have a stronger and more dynamical relation – a modification of the body schema as a result of an image or representation that intervenes in the body’s own sensing of itself – here we can refer precisely to IW’s case. Welton¹⁵ points out that this is the deepest level of schematic transformation that mere images can produce. **(C) Internal integration.** Third, this type of integration may create possible schemata that might

¹² See introductory remarks on the contemporary philosophy of history in Little, “Philosophy of History.”

¹³ Welton, “Body and Machines.”

¹⁴ Compare this to the position expressed in Merleau-Ponty, *Phenomenology of Perception*.

¹⁵ Welton, “Body and Machines,” p. 206. See also Rosenberger and Verbeek, *Postphenomenological Investigations: Essays on Human-Technology Relations*; Olsen, Selinger, and Riis, *New Waves in Philosophy of Technology*.

¹¹ Ihde, *Experimental Phenomenology*.

otherwise be missing from the body schema as a whole. When we introduce this kind of machine, we consider possibilities related to schematic integration and kinesthetic elaboration. We have already engineered devices which are physically integrated with our bodies, so this form of bodily transformation represents our near future. (D) *Internal incorporation*. Finally, this is the highest possible level of interaction between human and machine: we can call it *internal bionic incorporation* – a full assimilation of the machine into the central nervous system, which leads to a radical and deep transformation – even transmutation – of perception itself. We are neither aware of how we might develop technologies to achieve such an incorporation without jeopardizing the individual human being, nor are we completely sure what kind of wider cultural consequences could emerge.

What is more interesting about this causal connection is that it is actually circular. Just as contexts partially determine our body schema through complex causal interaction, so *schéma corporel* partially determines our cultural conditions. But, we must be careful here: causal circularity does not imply mutual ontological dependence or something like a structural coupling – an embodiment-specific and dynamical congruence between the system and its environment. Of course, some contextual structures depend on our body schema, at least in that sense that we try to augment externally and culturally what we already have physiologically. But our body schema is not *necessarily* and causally dependent for its existence on our contextual structures. So, this causal dependence is not symmetric. On the other hand, although there is nonsymmetric relation and although modifications in our body schema are not necessarily caused by contextual structures, there is still a minimal causal relation. We should not be epistemologically bothered by this circularity – it is neither circular argumentation, nor circular definition. It seems that such a type of heuristic circularity emerges quite often when people try to analyze different varieties of *contexts* and their causal or mutually dependent structures – be it epistemological circularity, as was the case for Friedrich Schleiermacher, Hans-Georg Gadamer, or Thomas Kuhn; or ontological circularity, as was the case for Heidegger. Further analysis of this particular circularity between *contextual structures* and *body schemata* is needed; all we can say now is that it is an important part of the objective contextual tendency of *Homo sapiens technicus*.

(2) **Second**, the case of IW can be used in a completely different way – as a conceptual metaphor, as an example of possible individual breaks within our cultural context where certain people feel deeply alienated by the advancement of our technology. Such people either lack the necessary awareness and proprioception of the general structure of our technological world, or they have such awareness, but are highly skeptical or outright critical of the ontological foundations of this project,¹⁶ and consequently place themselves *as if* outside the contextual structure. If we use the concept introduced above, we can say that they feel dis-textualized within the *Homo sapiens technicus* tendency, although they are an integral part of it. The last point is crucial because this tendency is not a uniform, progressive, and uninterrupted narrative of our technological advancement. Quite the opposite, *Homo sapiens technicus* contains in itself a critical position of its own development and it has always been that way: *it has a distext within its context*. Indeed, it contains at least a double narrative: (a) the narration of the factual and empirical advancement of our *τέχνη* and (b) the narration of how to handle the dynamics of the narrative itself, which in a particular scenario becomes a criticism of the (a)-narrative. Moreover, the (b)-narrative is not a homogeneous one because it is self-referential and – much more importantly – because we do not have any universal rule of how to practically apply *sapientia* in every possible context. This double narrative is actually *a subtle refinement of the banality thesis* expressed above.

Now, this whole remark obviously emphasizes *historical narrative* rather than *historical causation* – it is important we bear this in mind if we want to understand and interpret our most interesting contexts. We know from well before Reinhart Koselleck and Hans-Georg Gadamer that causation is only one partial lens we consider when attempting to interpret and comprehend history (or, more specifically, it is only a part of the objective contextual tendency which I refer to as *Homo sapiens technicus*). In the end, we find that causality and narration are constantly interacting on multiple levels, and are left

¹⁶ I say ontological, because there are plenty of justified philosophical positions which point out the socio-economical contradictions that have already emerged within the frenetic technological capitalism we are living in. But this social criticism is something different than the problem I am pointing to. Even if we build a just society, from a socioeconomic perspective that in itself is not a solution to the discrepancies between *sapientia* and *τέχνη*.

with a double nonsymmetrical circularity: a **circular causation and a double narrative**. Thus, however tempting it may be to conceive of our historical relationship to τέχνη as the progressive development, refinement, and proliferation of increasingly complex technologies, we must remember that the story of *Homo sapiens technicus* is far more complicated than this – with human beings, cultural contexts, distexts, and technology conditioning one another in myriad, frequently inscrutable, ways.

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TRANSHUMANISM AND THE WESTERN MONOTHEISTIC TRADITIONS

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Abstract:

The article offers an overview of the (dis)continuities between the major Abrahamic religions (especially Christianity) and transhumanism, as well as some possibilities envisioned by scholars for their ongoing dialogue. Important points that come up along the way include: ecology vs. space exploration; the neglect of injustices suffered by past generations; the importance of bodily and mental imperfections for the development of culture; and our all-too human expectations for what posthumans may desire.

Also presented is a review of various possible criticisms against wildly ambitious projects, such as Frank Tipler's attempt to fuse transhumanism with Christian eschatology. It is argued that process theology and James Gardner's "Biocosm hypothesis" offer a more intriguing view: a salvation which is not predestined but merely possible, and whose details are being negotiated through specific historic events and even through our day-to-day decisions and deliberations. Such a view overcomes Nietzsche's notion of eternal recurrence by stressing the importance of rethinking, redaction, and creating variations of what already exists.

Key words: Transhumanism, Western Monotheism, Omega Point Theory, Biocosm Hypothesis.

1. Who Will Save Us?

The future of humanity and the universe, the path to salvation from all evils, and the possibility of eternal life are subjects that have inspired hope and motivated entire lives for millennia. Western mono-

theistic traditions are the source of some of the most widespread views on these questions. But, they are now being overtaken by transhumanism as it gains ever greater public prominence through the efforts of a few highly vocal adherents. The present article offers an overview of the (dis)continuities between the major Abrahamic religions and transhumanism, as well as some possibilities envisioned by scholars for their ongoing dialogue.

Most transhumanists tend to distance themselves from theological notions, although they do consciously pick up some classical religious themes: the expectation of an end to suffering, the hope for immortality, and a penchant for eschatological thinking. Several monographs and collections of articles on the relationship between various religions and transhumanism have already been published, and many of them will serve as the main sources for the present overview.

To avoid terminological confusion, here we shall adopt sociologist Steve Fuller's distinction between "**transhumanism**" and "**posthumanism**". Transhumanism is the notion that future human evolution depends on scientific and technological enhancements and will possibly lead to humans *leaving* the Earth. Although some transhumanists envision the creation of a new species, the "posthuman", Fuller nevertheless reserves the term "posthumanism" for the opponents of both traditional humanism and transhumanism. Posthumanists thus claim that humans are merely one species among others and

should *remain* on Earth, preserving its natural environment (Fuller 2013, pp. 19, 40–49).

2. Transhumanism and Islam

Compared to Jewish, and especially to Christian scholars, the Islamic scholars who tend to contemplate the meaning of transhumanist projects are few. This, however, will probably change as new developments in human enhancement become more widespread. The general attitude Muslims are likely to have in the face of these oncoming changes is succinctly summarised by Hamid Mavani. According to him, “extending healthy human life indefinitely could be accommodated within the Islamic religious system” (Mavani 2014, p. 78.) due to the importance that Islam places on the body. Gaining greater control over nature may also appear acceptable, since it is compatible with the view of the human being as God’s deputy (*khalifah*) on Earth (Mavani 2014, pp. 68–74). However, “discarding the physical body or embracing the idea of ‘true immortality’ would be hard to sustain, for this would challenge Islam’s deeply anchored and accepted eschatological doctrines related to death, resurrection, and the afterlife” (Mavani 2014, p. 78).

At the same time, the cultural diversity among Muslim communities is likely to be a major factor that will lead to diverging positions. Twelver Shi’is for example are likely to praise beneficial advancements, drawing on the Mu’tazilis’ rationalist-naturalist theology. Sunni Islam has also come to accept human reason as significant in legal and ethical decisions (but within certain limits). However, ultraconservative Sunnis, such as the Salafis, are expected to offer tremendous resistance against any innovations. Their puritanical, ahistorical and anti-intellectual position is the official creed of present-day Saudi Arabia. And while Arabs constitute only 18 percent of the global Muslim population, Saudi Arabia houses the city of Mecca and also possesses enormous oil wealth, giving it a disproportionately large cultural and economic influence worldwide (Mavani 2014, pp. 76–78).

3. Transhumanism and Judaism

Jewish scholars offer both positive and negative assessments of transhumanist goals. Professor of

modern Judaism Hava Tirosh-Samuelson stresses the dangers of attempting to make humans obsolete, and also insists that humanity’s search for transcendence should not be reduced to individual enhancement by technological means (Tirosh-Samuelson 2017; 2018). Furthermore, she criticizes transhumanist claims to know and control the future, contrasting it with Jewish views of the future as open-ended and unknown (Tirosh-Samuelson 2014, p. 176).

Other scholars point out that Judaism generally values efforts to improve health, longevity, and intelligence (though it does not approve of increasing strength and happiness just for their own sake; see Dorff 2014, pp. 112–113). Perfecting the world is also quite acceptable when it does not violate halakhic prohibitions (Tirosh-Samuelson 2014, p. 169).

The ethics of 20th century Jewish philosopher Hans Jonas could help ground the debate. Jonas extended Kantian principles to all of nature, viewing nature as an end and not merely as a means. He believed that the structure of nature itself grounds human responsibility toward all life and the whole of humankind, including future generations (Tirosh-Samuelson 2014, pp. 172–174).

4. Transhumanism and Christianity

4.1. Christian Origins of Transhumanist Ideas

Christian scholars have had the most to say about transhumanism. Some of them trace its origins further back than does transhumanist Nick Bostrom, who attributes the first use of the term “transhumanism” to Julian Huxley (Bostrom 2011, p. 7). In the *Paradiso*, written centuries earlier, Dante is guided through Paradise by Beatrice, but at the very highest stages Beatrice is replaced by the abbot Bernard of Clairvaux, who, through his asceticism, has “transcended the human” (*trasumanar*). Dante here builds upon Christian ideals of improving humanity that go back to the apostle Paul (Cole-Turner 2017, pp. 37–40).

It has also been pointed out that the earliest proponents of science-based enhancement have all been Christians, if rather heretical ones. Francis Bacon in the 17th century hoped that scientific and technological development could undo the effects of original sin; Nikolai Fyodorov in the 19th century believed

human technologies could complete the divine plan by enabling eternal life and the resurrection of the dead; and Pierre Teilhard de Chardin (1881–1955) similarly saw future technology as a means for humanity to gain control of the world’s development and guide it towards its divine goal (Burdett 2011; Wolyniak 2014). Bacon’s writings inspired the creation of the first scientific academies, Fyodorov’s followers influenced the development of Russia’s space program (Young 2012, p. 151), and Teilhard’s ideas, though generally rejected by theologians and scientists alike, have inspired a few controversial contemporary physicists (see section 5).

4.2. Commonalities and Divergences

Transhumanist Micah Redding (executive director of the Christian Transhumanist Association, <https://www.christiantranshumanism.org/>) insists that authentic Christianity has always been about transforming the world, and boldly declares that “Christianity is transhumanism” (Redding 2017). But most scholars see the relationship between Christianity and transhumanism as far more nuanced. It has frequently been noted that Christianity teaches the unity of mind and body (Keenan 2014, p. 157), ever since the apostle Paul preached the resurrection of the body (Romans 8:11). In contrast, the transhumanist notion of “uploading” the mind is based on Cartesian dualism (Thweatt-Bates 2012, p. 73) which, though influential for many believers, has been rejected by contemporary Christian anthropologists (Thweatt-Bates 2012, p. 139). James Keenan summarises the discrepancy thus: “Where transhumanists leave the human body behind, they leave all Christians behind” (Keenan 2014, p. 162).

Jeanine Thweatt-Bates also points out an unresolved philosophical contradiction enshrined within the upload scenario itself: it combines materialistic monism with Cartesian dualism by reducing the mind to biological activity *and* assuming that the mind can be dis-embodied and re-embodied. Not only are both positions un-Christian, but they also contradict each other (Thweatt-Bates 2012, p. 77).

However, there have been attempts to overcome these incompatibilities. Mormon transhumanist Lincoln Cannon insists that the upload scenario reduces the mind not to biological activity, but to *information*, which is separable from specific instances of embodiment, but *not* from embodiment generally.

The line between software and hardware is in practice blurry; information cannot exist without being embodied (Cannon 2017, pp. 57–58). Calvin Mercer further reminds us that for Paul the resurrected body would be different from the original one: Paul calls it “imperishable”, “powerful”, “glorious”, and *soma pneumatikon* (spiritual body). And regardless of what Paul thought, the resurrected Jesus is portrayed in the Gospels as walking through doors and appearing unexpectedly in remote places. Therefore, the resurrected body may be quite different from the mortal body. So prior to the resurrection, the mind need not be immutably associated with the original human body (Mercer 2017, p. 91).

In this context, Allison Hepola examines medieval notions of pygmies, dog-headed saints, and other monstrous beings, inherited from the accounts of authoritative ancient scientist Pliny the Elder. According to some distinguished medieval Christian scholars, if these “monsters” are found to exist, they may well be considered human, because to be human is not a matter of inhabiting a certain sort of body, but a matter of disposition, of virtue. However, medievals also claim that to count as human, a creature must be descended from Adam. For us today that could mean that we should consider how closely connected a post-human creature is biologically or genetically to the rest of the human species (Hepola 2018, pp. 50–51).

4.3. Christ as Cyborg

A different challenge to the fusion of Christianity and transhumanism comes from Jeanine Thweatt-Bates’ frequently cited book, *Cyborg Selves*. Thweatt-Bates argues that Christian thought, especially in its contemporary feminist and post-colonial manifestations, is far more compatible with Donna Haraway’s idea of the cyborg than with transhumanist goals.

Christians advocate the human stewardship of creation, and transhumanists similarly see (post-)humanity as the caretakers of the nonhuman. But, while Haraway considers nonhuman animals to already be “persons” (meaning creatures with whom relationships are possible and, indeed, evident), transhumanists tend to see animals as “potential persons” who have yet to achieve equivalent moral status and must be transformed in order to do so (Thweatt-Bates 2012, pp. 101–106).

Contemporary Christian disability studies showcase the theological value of different experiences and forms of embodiment, including suffering and impairment. This is more compatible with Haraway's flexible notion of cyborgs than with the transhumanist accent on the strong and the normatively "healthy" (Thweatt-Bates 2012, pp. 152–161).

Liberal Christians have begun to embrace feminism and respect for LGBTI individuals. But, whereas Haraway similarly invites a continuing renegotiation of the reality of gender, transhumanists envision a transcendence or negation of gender: they see gender as a bodily attribute that is non-binding and non-defining, and sometimes imagine its elimination altogether (Thweatt-Bates 2012, pp. 85–87). Furthermore, when considering feminism, transhumanists show little appreciation for the diversity and historicity of feminist movements, for example, citing both Haraway and Shulamith Firestone, while ignoring the blatant differences between the two (Thweatt-Bates 2012, p. 89).

Thweatt-Bates also argues that the biblical Adam and Eve can be viewed as cyborgs: "Adam is not born of Woman but is manufactured of material elements not unlike those of the flesh of humanity's monstrous cousin the golem, and [...] Eve [...] is manufactured out of superfluous flesh in a strange foreshadowing of our own emergent biotech capabilities" (Thweatt-Bates 2012, p. 172). Similarly, even Christ can be interpreted as a kind of cyborg or hybrid figure. Jesus is from a land of different peoples (Galilea), becomes broken and suffering, yet still divinely significant, and, as Christ, combines a human and a divine nature. Although Christianity has traditionally viewed the human and divine as separate natures in Christ (ever since the Council of Chalcedon, 451 CE), Thweatt-Bates advocates a more hybrid notion in which the two natures are ambiguously intermixed. All of this brings Jesus near to the trickster figures favoured by the secularist but Catholic-raised Haraway (Thweatt-Bates 2012, pp. 176–187). Finally, Thweatt-Bates suggests that we may interpret Christ as the "ultimate human" (as opposed to merely trans/posthuman), or "the expression of humanity to which we aspire as the fulfillment of the potential and longing for goodness that characterizes us as creatures of God" (Thweatt-Bates 2012, p. 191).

Although it is highly imaginative and stimulating, Thweatt-Bates' work can be (and has been) criticised on several important points. Specifically, her distinction between the cyborg and the transhuman has been questioned. If physical matter is understood as information, then a cyborg is not all that different from an uploaded mind; indeed, the cyborg may be an evolutionary precursor to the upload (Fisher 2014, p. 28; Mercer 2017, p. 98).

Thweatt-Bates' theology can also be questioned, not so much because it is heretical from the viewpoint of traditional Christianity, but because it embeds all theological speculation within a Christian framework to begin with. Her open-minded position strives for the inclusion of women, non-whites, LGBTI minorities, people with disabilities, and non-humans. But this admirable open-mindedness vanishes when it comes to theology; she completely ignores the theological ideas that other religions can develop in the face of transhumanist projects, effectively equating theology with Christian thought.

4.4. *Attitudes within Specific Christian Denominations*

Let us now briefly examine how the major branches of Christianity have reacted or may react to proposed scientific innovations.

Catholicism tends to eschew transhumanism in favour of what we termed "posthumanism" in Section 1, i.e. the association of humans with Earth and the call to maintain existing forms of life and ecological equilibrium. This is largely based on the 2008 instruction *Dignitas Personae* (Vatican 2008) and also on Pope Francis' pro-ecological stance (Vatican 2015). Such a position limits human interventions into nature, based on the view that humans are part of Earth's nature and should not (indeed, *cannot*) detach themselves from it. The notion that material groundedness is evil and should be transcended has been rejected with the 4th century condemnation of the Manichean heresy (Keenan 2014; Labrecque, 2017). However, the Catholic Church proclaims that the whole of visible creation participates in the divine life, and it can be argued that "visible creation" could encapsulate more than just Earth. Humans may therefore be encouraged to broaden their stewardship of nature, extending it beyond their original planet. But, if leaving the Earth

becomes necessary for our survival, the Church is likely to view it as another expulsion from Eden rather than as a liberation – an intriguing counterpoint to transhumanism’s optimism and frequent neglect of ecological considerations (Labrecque 2017, pp. 148, 152).

Protestantism. Protestant denominations are too numerous to examine in detail, but a general attitude can be derived from the Protestant authors quoted in section 4.2. Especially influential is the view of the human as “created co-creator”, promoted by Lutheran theologian Philip Hefner, which is increasingly used in theological reflection upon biotechnology and emerging digital technologies (Garner 2014, see especially pp. 232–233). However, particular importance should be placed on the split between Fundamentalist and Liberal denominations, with the latter embracing new technologies as a means to achieve God’s plan, and the former rejecting them (Goss 2018, pp. 86–87, 90–91). Yet, ironically, some conservative Christians uphold a dualistic anthropology, believing that salvation would mean liberation of the soul from the body. They may therefore embrace the upload scenario despite being generally sceptical towards science (Mercer 2014, p. 148).

The denomination most receptive to transhumanist ideas appears to be **Mormonism**. (There has been a Mormon Transhumanist Association since 2006, see <https://transfigurism.org/>.) Mormons reject the usual interpretation of the biblical Tower of Babel story, according to which ambitious human technological projects are hubristic. Instead, Mormons believe that through the Babel story God advocates applying ethics in the use of technology (Cannon 2017, p. 55). Adam S. Miller cites foundational Mormon texts that include the image of a God weeping at the sight of misery and destruction, and concludes that for Mormonism, everything is limited and suffers, including the eternal God:

I am free to act, but because everything is free to act, I am also continually acted upon in ways that I did not choose and cannot control. Agency is a strength whose inseparable condition is that each agent is also available to suffer. Salvation depends on learning to work with such suffering in a way that blesses ra-

ther than curses the compounding web of interdependencies that make agency possible (Miller 2014, p. 122).

Therefore, Mormons are likely to embrace innovations that enhance human agency, relieve suffering, heal bodies, and extend family relationships (which are considered most important by Mormonism), but would disagree with the belief that such innovations can ultimately solve all problems. From this standpoint, enhancements that substitute the fantasy of satisfaction for the reality of divine joy ought to be rejected (Miller 2014, pp. 131–132).

However, some other Mormons argue against such readings of their foundational texts and insist that their faith is not compatible with transhumanism (Smith 2018). Mormon communities tend to be conservative, so their attitude towards future innovations remains hard to predict.

Eastern Orthodox Christianity has so far rarely engaged with transhumanist ideas, but at least one knowledgeable Russian Orthodox philosopher and theologian has condemned them as utopian and anti-religious (Katassonov 2014). Despite that, some thinkers may begin to support transhumanism by drawing on the Eastern Orthodox notion of *theosis*, or transformation leading to union with God. The Orthodox saint Athanasius of Alexandria famously stated that God became incarnate so that we might be made God (Mercer 2017, p. 97). Eastern Orthodox Christianity also reverses Augustine’s view (influential for both Catholics and Protestants) that sin leads to the fear of death. Instead, Orthodox theologians insist that fear of death leads to sin (Herzfeld 2017, p. 292; cf. Hebrews 2:25). Such a view may prove favourable towards attempts to indefinitely enhance longevity and health.

4.5. Objections and Warnings

Some Christian scholars raise interesting objections to transhumanist assumptions and warnings against their dangerous implications. Such objections need not undermine the transhumanist agenda, but should lead us to question specific ways envisioned for its implementation.

To begin with, doubt has been cast on transhumanist Nick Bostrom’s opinion that parents will find it easier to love their children if those children are enhanced to be “bright, beautiful, healthy

and happy” (Bostrom, “Human Genetic Enhancements: A Transhumanist Perspective”, quoted in Dickson 2018, p. 111). In the words of one Christian scholar:

True parental love does not diminish in the face of a lack of beauty and health. Indeed, is it even possible for most humans to develop such true love of children, love that would withstand sorrow and pain, if there never were sorrow and pain? (Dickson 2018, p. 112).

Another scholar recalls the proclamation that in Jesus’ wake the blind receive sight, the lame walk, the deaf hear, the dead are raised, and good news is brought to the poor (Matthew 11:2–6). The developments toward *techno sapiens* do indeed cause the blind to see, the lame to walk, the deaf to hear, and the dead to be (at least virtually) alive, but what about bringing good news to the poor? Who is going to benefit from new technological developments and who is going to pay the price for them? We should not stop asking how high-tech science can be pursued without widening the gap between rich and poor (and also between men and women, etc.; see Jackelén 2002, p. 294).

Finally, some Christian thinkers question the transhumanist assumption that living longer is always better: “from a traditional Christian perspective, the *value* of a human life does not depend on its length” (Dickson 2018, p. 100). Technologies can give us more time, but, unlike religions, they do not tell us what to do with our time (Herzfeld 2017, pp. 294–295). Surpassing current biological limitations cannot be a goal in itself; it is only a means toward other goals. “Without some other meaning, goal, or belief, even a posthuman could sit around bored, depressed, or awash in angst” (Hopkins 2005, p. 14). Existential anxiety will surely change form if we can upload our minds, but if they are indeed *our* minds, this anxiety will inevitably remain (Fisher 2014, p. 34). Also, human history has shown us that having lived in scarcity throughout most of our evolution, we’ve become primed to always desire more than we already have; however much we acquire, our desires remain unsatisfied. And yet, transhumanists only promise us “more”: more life, more health, more power, more knowledge, more security (Hopkins 2014, p. 75). It is not clear what posthumans will regard as flourishing; we can only

envision creating possibilities for the kinds of health, beauty, and knowledge that we presently value, reflecting our all-too-human perspectives (Waters 2017, p. 115).

However, what Christian authors offer as an alternative is lamentably vague. They usually advocate adapting technological innovations to the doing of God’s work, but hardly ever offer any specific details of what such work might entail. Ron Cole-Turner admits with admirable sincerity that no theological text and no creed spells out which uses of technology fit within God’s plan and which don’t. But he adds that we *have* been given communities where we can discuss these topics, overcoming the narrowness of our individual opinions (Cole-Turner 2018, p. 251).

5. Scientific Resurrection?

There is one area in which monotheistic religions still go far beyond what scientific projects have to offer. Christianity, Islam, and some versions of Judaism envision an end time in which not only will the living gain eternal life, but the dead will be resurrected to share in that eternal life and to receive what they justly deserve. Transhumanists usually promise indefinite extension of the lives of those not yet deceased, while completely ignoring the injustice of innumerable generations having caused or suffered evil and then having disappeared forever.

A proto-transhumanist project in the 19th century overcame this limitation. The Russian Christian thinker **Nikolai Fyodorov** insisted that humanity’s “common task”, which would ultimately unite all peoples, believers and non-believers alike, was to create scientific ways to grant eternal life and resurrect the dead to share in this eternal life. Fyodorov also believed that faced with overpopulation, humans would eventually colonise space. Thus God’s plan would be completed by humanity through technological means. Fyodorov’s “cosmist” ideas are overambitious, eccentric, and notoriously patriarchal, but they did inspire Russian philosophers, writers (including Dostoyevski) and scientists alike, and indirectly influenced the Russian space program (Burdett 2011, pp. 25–28; Young 2012, see especially pp. 76–87). His greatest misconception seems to be the belief that science would eventually be able to resurrect *physically and mentally* persons who died

before the necessary scientific methods could be developed. No contemporary scientist shares such a hope.

However, the physicist **Frank Tipler** has developed (following Christian thinker Teilhard de Chardin and scientist Freeman Dyson) a theory that attempts to reconcile contemporary physics with traditional eschatology. Tipler believes that progress, defined as an increase of information transmitted between generations (Tipler 1997, p. 122), must ultimately lead to living persons spreading throughout the universe. Living beings are defined as entities which code information that is preserved through natural selection, and “persons” are defined as computer programs capable of passing the Turing test. Thus, even if carbon-based life forms are destroyed, machines that count as both “living” and “persons” could survive to continue our legacy (Tipler 1997, pp. 124–127). Life will then incorporate more and more material into itself, while the universe expands to a maximum size and then retracts into a singularity (in accordance with the predictions of late 20th century physics). Tipler calls this ultimate state of the universe the Omega Point (a term borrowed from Teilhard de Chardin) and equates it with God, because: a) in the Omega Point all instants of time collapse into an infinite unity, and b) the expansion of life will have turned the universe into an information processing system whose subprograms are capable of passing the Turing Test, i.e. into a *person* who, when all instants of time are unified, will become omniscient (Tipler 1997, see especially pp. 153–158).

Equipped with omniscience and infinite information processing capabilities, the Omega Point will be able to recreate every individual person as a computer simulation and grant them eternal life, since time contained in the singularity will be infinite. The Omega Point would choose to do this because “His/Her” self-interest would coincide with perfect altruism. According to game theory, personal utility is maximised by behaving altruistically towards all other individuals if the cost of such altruism is sufficiently inexpensive. And according to economist Gary Becker, the altruist has their utility increased by increasing someone else’s utility. Thus, Tipler concludes that the subprograms of the Omega Point, to maximise their own happiness (=utility), would

offer eternal existence and an infinite number of ever new pleasurable experiences (i.e. Heaven) to everyone who has ever lived (Tipler 1997, pp. 245–247).

All this of course relies on the idea that creating a virtual simulation of someone (based on all the information about their life) is the same as resurrecting them. Tipler insists that if the essential personality is simulated, that is good enough to identify it with the original person (Tipler 1997, p. 226). Also, in keeping with religious people’s expectation of final justice, Tipler believes that before being admitted into Heaven, persons will go through a kind of Purgatory where all the evil in them will be eliminated. Only the Omega Point in His/Her transcendence knows whether some persons will be so incorrigible as to merit being sent to a Hell (Tipler 1997, p. 257).

Tipler offers a theodicy based on the idea that the history of the universe, with its inevitable evils, is logically necessary for the Omega Point to come about and to be able to resurrect us for a heavenly eternal existence. He also accepts the multiverse interpretation of quantum mechanics and claims that all worlds which lead to the Omega Point are logically necessary. If the Holocaust or a baby’s suffering are logically possible, then they *must* occur in some history, by logical necessity. But the happy afterlife will go on forever, and therefore the good experienced in the afterlife will be infinitely greater than the finite evils endured in the present (Tipler 1997, pp. 259–265).

Finally, Tipler admits that the Omega Point theory is not yet proven to be true, so he doesn’t necessarily ascribe to it, but it does seem *probably* true. He also doesn’t believe in divine revelation. Where certain religious writings are in accordance with the Omega Point theory’s predictions, he considers that a mere coincidence (Tipler 1997, pp. 305–308).

Tipler’s theory is shared by a few scientists (see for example Deutsch 1997), but has been ridiculed by many others (Ellis 1994, Krauss 2007, Garner 2008). Most significantly, the prediction that the universe will ultimately contract into a singularity has fallen out of favour among contemporary physicists, which is why transhumanists such as Nick Bostrom reject the Omega Point theory (Bostrom 2011). Tipler and Christian transhumanist Micah

Redding reply that intelligent life will eventually find a way to bring about a final singularity, even if unguided physical tendencies are currently leading the universe into infinite expansion (Redding 2016).

In addition to scientific objections, we may also question aspects of the theory from a broader cultural perspective. Firstly, Tipler violates the prohibition popularised by Eric Voegelin against “**immanentising the eschaton**”, i.e. trying to prove that salvation can come from within the universe. While Tipler insists that God should not be viewed as wholly transcendent or “other”, this goes against the intuitions of most Muslims and such influential scholars as the Jewish philosopher Levinas and the Protestant theologian Karl Barth. Are all their insights and arguments to be completely ignored? (We leave aside various criticisms that can be raised against Tipler’s interpretations of non-Western religious ideas.)

Secondly, Tipler correctly identifies **the doctrine of eternal recurrence** as the greatest challenge to his notion of inevitable progress, but then dismisses eternal recurrence too carelessly. His objection to Camus’ *The Myth of Sisyphus* is basically that Sisyphus would be happier believing in a future Heaven (Tipler 1997, p. 82); but this does not make such a belief necessarily true. And his objections to Nietzsche’s and Heidegger’s philosophies are based on these philosophies’ racist and fascist implications (Tipler 1997, pp. 83-86), which again doesn’t necessarily disprove them. Tipler also fails to notice the differences between Nietzsche and Heidegger, attributing the doctrine of eternal recurrence to both of them. However, Heidegger instead offers an alternative to both progressivism and the belief in recurrence. Heidegger proposes that we cannot save ourselves, even through science, but that a God *can* save us (Heidegger 1981), which implies belief in unprecedented events. An interesting view along similar lines is presented by Heidegger’s Jewish contemporary Walter Benjamin. Benjamin dismisses both progressivism and eternal recurrence in favour of a more nuanced position, according to which history undergoes **repetitions with slight variations** that slowly build up, causing revolutionary changes which ultimately lead beyond immanent history (Benjamin 1999, pp. 101–119). (Arguments that repetition inevitably entails variations have also been offered by the Protestant philosopher Kierke-

gaard and by Heidegger’s student Karl Löwith, see Löwith 1997, pp. 171–172.) Benjamin is inspired by the same ancient Gnostic beliefs that Tipler dismisses merely because orthodox Christianity declared them to be heretical (Tipler 1997, p. 13). Finally, a fourth option (apart from progressivism, recurrence, and Benjamin’s combination of the two) has recently been proposed by contemporary philosopher Markus Gabriel. He criticises transhumanism from a neo-existentialist posthumanist standpoint (Gabriel 2017), and proposes the view that reality is not reducible to a single world (or even a multiverse). Instead, objects inhabit **an infinite number of fields of existence** which partially overlap, but do not all share the same temporal direction, so they do not all progress and/or recur (Gabriel 2015). When simply opposing “eternal recurrence” in favour of “progress”, Tipler ignores all of these other (equally speculative, but therefore *no less* probable) possibilities.

Further objections to Tipler’s theory arise from his concept of “**utility**”, which he never defines, leading to a pretty fuzzy idea of what God would have to offer resurrected persons. This is evident in Tipler’s rather unimaginative example of heavenly bliss. In answer to his students, “mainly young unmarried males”, asking about whether there would be sex in Heaven, he replies that since some people desire sex, they will indeed experience it. In fact, the Omega Point can find the best possible mate for a given person (indeed, the most attractive mate logically possible) and simulate them in the same environment. Tipler calculates that the impact from such an encounter would go beyond what the human nervous system can withstand, but that the resurrected body could be modified to withstand it (Tipler 1997, pp.256–257). Let us attempt to limit our criticisms of this idea to just three: 1) As noted near the end of section 4.5, humans are programmed to never feel quite satisfied, however much stimulation they receive. Of course, resurrected humans could be reprogrammed to be capable of achieving complete satisfaction, but then why would they require the most attractive partner possible, or any partner at all? And would they still want an endless life of pleasant experiences once they have achieved complete satisfaction? Again, we are unduly projecting all-too-human desires onto posthumans. 2) There may be no such thing as a “perfect” mate for some-

one, since one could like and/or be paired with different persons for different reasons. We may here recall the question posed to Jesus in Matthew 22:23–28, about a woman who married seven brothers in succession as her husbands passed away one by one; *whose wife would she be after the resurrection?* Jesus, quite adequately, replies that at the resurrection people will *not* marry, for such a need contradicts the angelic perfection they will have attained. This implies that sexual desires are an expression of a person's incompleteness, the same incompleteness which leads them to seek salvation in the first place. 3) Throughout his example, Tipler speaks of male-female couples. This rather conservative notion of sexual unions could tie his "theology" to very closed-minded views on LGBTI rights.

Finally, Tipler's claim that an infinite afterlife of happiness would make up for any finite amount of suffering is questionable. What if the "finite" time of that suffering is infinitely divisible? Then a greater infinity would have to make up for a smaller one, which may be acceptable to the sufferer, but it also may not be. A God more worthy of being hoped for could be able to retroactively erase the suffering from ever having happened, even if this defies all logic, which is another idea found in Kierkegaard and Walter Benjamin.

So what should we take away from Tipler if we fail to be persuaded by his theory? Perhaps the objections listed above point to an interesting possibility: thinking about **redactions and variations**. Tipler's theory is already a variation of Freeman Dyson's theory, but while the latter relies on an infinitely expanding universe, the former requires a final singularity. All the problematic points of Tipler's theory may thus prompt us to think about what redacted versions of them could be more acceptable. Shouldn't we desire a God capable of retroactively eliminating suffering rather than one who merely compensates us for it? Shouldn't we contemplate more sophisticated attainments for a perfected person than just finding a highly stimulating sexual partner? Shouldn't we include LGBTI and other marginalised persons in the salvation we desire, and perhaps even all non-humans? (See for example Bruno Latour's article "Will Non-humans Be Saved?", Latour 2009. Latour is notably a source of

inspiration for *posthuman* philosophies like Object-Oriented Ontology.)

Theories such as Tipler's are therefore open to rethinking and redacting, especially if we suppose that the future is not determined, but open-ended and dependant on what outcomes intelligent life may, after arduous deliberation, consider to be most just and meaningful.

6. Several Outstanding Ideas

The encounter between monotheism and transhumanism has produced some perceptive ideas that go further than those reviewed in sections 2-4 and that seem promising for the future of both theology and philosophy. We will conclude with an overview of them.

6.1. Theodicy and Process Theology

Much of modern theology relies on the notion of progress rather than of an all-powerful deity who can make the world perfect instantaneously. Jesuit-trained sociologist Steve Fuller embraces transhumanism and sees in scientific progress some possibilities for a 21st century theodicy. He argues that improvement of the universe can be derived from past achievements (such as technological breakthroughs), even if they were historically accompanied by evil and suffering. Progress therefore offers us more ways to "recycle" evil in the name of good, which can at least to some extent justify God having allowed the evil in the first place (Fuller 2011, pp. 216–247). Like Tipler, Fuller is inspired by Teilhard de Chardin, but similar ideas can also be found in contemporary process theology, based on the work of Alfred North Whitehead. In its extreme form, process theology claims that there is no God, but there eventually *can be* as a result of the universe's gradual development (Hopkins 2011).

6.2. The Simulation Argument and the Biocosm Hypothesis

Nick Bostrom has argued that if using computer technology to create entire virtual universes is achievable, then we are probably living in one such simulated universe, which could explain our universe's imperfections. Simulated universes can be stacked: it is possible to simulate one universe in which simulations of other universes are created,

and so on. That suggests a multi-level reality where imperfect universes are created by more perfect beings, who are in turn designed by even more perfect beings, and so on ad infinitum. The fundamental universe (if there is one) could be said to house the “gods”, i.e. the most perfect intelligent beings who create other, less perfect ones (Steinhart 2010, pp. 24–26). This also enables resurrection: after we die, our simulators, having recorded our lives, might recreate us in another simulation, or give us artificial bodies to interact with them in their civilisation (Steinhart 2010, p. 31; see also the sources listed there in note 25). Eric Steinhart points out that the Simulation Argument doesn’t present a picture of a Judeo-Christian creator, but is instead quite similar to different versions of Neoplatonism.

A variation of this idea is James N. Gardner’s Biocosm hypothesis. Gardner suggests that our descendants in the far future may develop the means to program a new universe and design its fundamental physical laws. If this is possible, then our own universe may be designed in just such a way. This would explain why our universe seems physically fine-tuned to create life. According to Gardner’s hypothesis, the cosmos recreates itself multiple times, each time developing intelligences that attempt to design a more perfect variant of the cosmos. In this view, the deliberations of intelligent life are important for how the next cosmos will be designed; thus, biology determines physics, rather than the other way around. Not only that, but culture could form part of the structure of the universe (Gardner 2003; for a brief overview see Douglas 2014).

Such a notion also provides guidelines for human activity. Our generation has the responsibility to lay both the ethical and technological groundwork for the intelligent beings who will come after us. This implies the need for reflection on transhumanist projects, but also on each individual’s own life choices: “each living creature, at each juncture in the cosmic life cycle, is responsible for a small but possibly indispensable contribution to the overall process of cosmic growth, evolution and eventual renewal” (quoted in Douglas 2014, p. 129).

6.3. Duplicating a Person

The upload scenario offers us another way to consider the issue of repetition with variation: up-

loading someone’s mind without destroying the original brain creates two (or more) variants of *the same person*. After the uploading, their personal histories begin to diverge (Mercer 2017, p. 95). This is obviously unacceptable to religions that believe in the unique individual soul. But, as Nick Bostrom points out, it also creates numerous philosophical, ethical and legal challenges: “Tricky cases arise [...] if we imagine that several similar copies are made of your uploaded mind. Which one of them is you? Are they all you, or are none of them you? Who owns your property? Who is married to your spouse?” (“The Transhumanist FAQ”, quoted in Thweatt-Bates 2012, p. 54).

Ray Kurzweil hopes to recreate his late father’s personality as a computer simulation by collecting as much DNA and other information about him as possible and feeding it into an AI. This is a far less ambitious and perhaps more realistic variation of Fyodorov’s and Tipler’s notions of complete resurrection through simulation. Kurzweil admits that the result wouldn’t exactly be his father, but it would still be a comparably valuable person, a kind of “Father 2.0” (Kushner 2009).

Such non-identical simulation of persons might sound creepy to many of us – ghostly doubles are a classic example of the “uncanny” – but Wittgenstein has already stated that this uncanny vibe is the *only* difference between an “authentically” conscious person and a simulation (*Philosophische Untersuchungen*, §420). And if Kurzweil can overcome such misgivings, then they can in principle be overcome. So what would stop us from creating multiple copies of the same person, with different variations from the “original”, to see which changes in a personality would be improvements? Based on one’s point of view, such a possibility can be terrifying or exhilarating, or maybe both.

6.4. The Value of Imperfection

We already saw Thweatt-Bates’ objections to creating perfectly “healthy” transhumans: some so-called “disabilities” can produce forms of experience that are valuable in their own right. Jewish scholar Tirosh-Samuelson raises a similar point about perfect mental “health”. Culture (especially art and philosophy) would be impossible without insecurity, anxiety, and uncertainty. If we engineer persons to constantly enjoy themselves, what would be the

source of their creativity? Religious authors insist that many would not want to live without imperfection and finitude. “With perfection comes boredom, lifelessness, and loss of creativity, whereas the relevance of disturbance and error for constructive developments has been recognized in various areas of knowledge” (Tirosh-Samuelson 2018, p. 208).

Similarly, some argue that to indefinitely prolong one’s life can become a source of suffering and anguish, as exemplified by mythical figures like the vampire (Miller 2014, p. 133) and Ahasuerus the wandering Jew (Jackelén 2002, p. 297). Mormon scholar Adam S. Miller sees this problem optimistically. According to him,

transhumanism may be doubly beneficial with respect to the work of redemption. It does what can be done to heal, strengthen, and enhance what it means to be human while, perhaps despite itself, simultaneously revealing the limits of that very project. (Miller 2014, p. 133)

It is worth noting that Miller is possibly the only figure to endorse both transhumanism and posthumanism in Steve Fuller’s sense. While praising transhumanism, Miller also participates in the Object-Oriented Ontology movement, which is generally pro-ecological and anti-transhumanist. He has even proposed an Object-Oriented Theology (Miller 2013). This joining of opposites stems from Miller’s Mormon-based belief that everything is limited and that any improvements we make to anything will inevitably reveal new limitations that only an ultimate salvation can overcome. Adopting such a view would allow believers to accept our transhumanist future, comfortable in the knowledge that the salvation promised by religion would be something entirely “other”, and infinitely superior. *If* it comes.

7. Conclusions

Our overview of Western monotheist traditions and their engagement with transhumanism has revealed many discrepancies between and within those traditions themselves. An issue such as human enhancement can highlight divisions between fundamentalist and progressive Muslims, or Protestants and Catholics, or Protestants and Protestants. Any notion of a perfect, immutable God who has given

us an *unambiguous* revelation about a predestined salvation seems greatly undermined by such diverging positions among believers.

At the same time, more recent strands of thought such as process theology and the Biocosm hypothesis offer a highly intriguing view: a salvation which is not predestined but merely possible, and whose details are being negotiated through specific historic events and even through our day-to-day decisions and deliberations. A point that comes up over and over again in these contemporary accounts is the importance of rethinking, redaction, and creating variations. If Nietzsche is right that a pointless universe eternally recurring is the most unbearable idea we have ever conceived, then these newer ideas may be a way to overcome it.

Finally, one doesn’t have to be any kind of religious believer to recognise the valuable insights that the scholars cited above have to offer. Ecology may be no less important than improving humans. Past generations may deserve no less attention than future beings. Living longer may not cure existential angst. Certain bodily and mental imperfections may be important for the development of culture. Posthumans may want different things from what we currently hope to leave for them. Transhumanists should consider redacting and improving their own aspirations based on these insights, just as monotheists need to continue considering the wide disagreements they have with each other.

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ARTIFICIAL EVOLUTION IN TRANSHUMANISM

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Abstract:

Transhumanism is a contemporary philosophy based on the belief that human nature is evolving over time not only because of Darwin's natural evolution¹, but also because of the impact of social movements and technical innovations. The philosophy has been shaped by many historical forerunners, for example, Nietzsche's famous idea that the human being is a mere rope tied between animal and posthuman (i.e. Übermensch), or Fedorov's reflections on the possibility of immortality.

In this article, the author will show that – from a current technological perspective – in the not-so-distant future humans will be able to choose their own personal way to evolve, “upgrading” themselves with electronic or organic devices that will modify, improve, or simply introduce new forms of sensation and experience to their being. Included in the analysis of this potential are the historical preconditions of such revolutionary social and technological change.

Key words: Transhumanism, homo sapiens, artificial evolution, cyborgization, bodyhackers, bioethics.

The invention of language, the wheel, the printing press, and many other historical examples assure us that humans are a unique species—one that is capable of accelerating its own evolution. Some representatives of the transhumanist movement recognize their social and philosophical mission in the contemporary global commitment to technological progress that has transformed culture and facilitated or “sped up” the evolution of humanity. Among the adherents of this school is Ray Kurzweil, who has in fact stated that “the meaning of life – is evolution”.

Over billions of years, life on the planet evolved according to natural laws—and specifically, Darwin's law of natural selection—which applies to all species

of varying complexity in the natural world. However, for the human species, much has changed in the last ten thousand years, and given our increasingly complex and targeted ability to intervene (bio)technologically in natural systems, it appears that human beings have achieved a certain independence from natural law.

Beginning with the discovery of fire through to the neolithic, urban, and industrial revolutions, knowledge and innovation have transformed human life and civilization, drawing human beings out of the wild and leading to the establishment and flourishing of community and culture, including the proliferation of artistic, scientific, social, political, and technological achievements that we identify as distinctly “human”. These cultural changes are unprecedented, and therefore give reason to believe that species evolution according to the law of natural selection cannot keep pace with the modern needs of man. Given the unique needs, preferences, abilities, obligations, opportunities, and threats that define the contemporary human experience, one may argue individual human beings have the right to choose how they specifically will transform to meet the demands of postmodern existence—that is, how they, as individuals, will “evolve” within the social, rather than natural world.

From a historical perspective the idea of artificial evolution is not new; indeed, it is rooted in the earliest human cultures.

For a brief overview of humanity's evolutionary history, consider the following:

1) The Quaternary Period – extends from about 2.6 million years ago to the present day; several species that belong to the genus *Homo* appeared and disappeared.

2) The emergence of the species *Homo sapiens* – about two hundred thousand years ago.

3) The appearance of the Cro-Magnon – about one hundred and fifty thousand years ago.

4) The termination of biological evolution of the only extant human species, *Homo sapiens sapiens* – thirty to fifty thousand years ago.

This rough timeline provides a couple of important facts. First, like other species, human beings have a long evolutionary history over which adaptations that promote survival in the fiercely competitive natural world have gradually become characteristic features of the species and changed the way we (on the whole, as a species) interact with our environment—as is consistent with Darwin's theory. Second, this pattern appears to have been interrupted—that is, members of the species *Homo sapiens sapiens* are biologically indistinguishable from those who lived thirty to fifty thousand years ago. Biologically we are the same; but does this mean the evolution of humanity has ceased altogether? Such a query raises a related question, one that is important among transhumanists:

Does the intellect have any bearing on the evolution of a man ?

In other words, has the development of the human faculty of reason allowed human beings to direct or influence the trajectory of the evolution of the species? It is unclear how we ought to answer this question. N.N. Moiseyev, for example, responds negatively to it. However, in the milieu of transhumanists, it is commonly believed that man does influence his evolution (through the application of his faculties, but especially of his rationality), and this situation is so important that it is even called “The first axiom of transhumanism”. As proof of this claim, transhumanists cite the fact that there is a recorded difference in the frequency of violations of color vision between hunter-gatherer populations and subsequent agricultural societies. Hunter-gatherers, whose life expectancy was still largely tied to the vagaries of nature on a day-to-day basis, may have relied on enhanced color vision (e.g. to locate edible plants and distinguish them from non-edible plants, etc.) in order to survive to a higher degree than was necessary for early farmers, whose access to food was more predictable and planned for—in other words, facilitated by human reason and organization (i.e. intellect) rather than sensation (e.g. vision). Since farming permitted more reliable access to food for entire communities (and since this access was less dependent on superior vision), all of the members of these early agricultural communities could enjoy higher life expectancy (including those with anomalies in their visual sensation, e.g. color perception). This form of social organization—the beginnings of culture—thus ensured a greater

chance of survival for community members that were perhaps “less fit” for survival in nature, allowing individuals carrying genes for traits that may have jeopardized survival—both individual survival, and the survival of populations with whom the individual shared a symbiotic relationship—to survive and pass these genes on. In this sense, the achievements of the human intellect – the inauguration of culture—managed to subvert the law of natural selection. This Neolithic-era triumph of intellect and culture over the bare facts of nature signals, according to transhumanists, the deeper human capacity to escape the fatalities of natural law and influence both the composition of human populations (i.e. the evolution of the human species) and the character and progress of human civilization. How does rational intelligence affect the evolution of people? The most powerful factor stemming from human reason that shapes human evolution is the capacity for innovative activity, which includes creativity, invention, and planning related to technologies of food production, political, economic, cultural and humanitarian technologies, health care, transportation, etc. All of these have influenced demography and, consequently, natural selection (in the sense described above, which conceives of sociocultural circumstances as aspects of an entire context to which individuals may be more or less well-adapted for survival). Indeed, the relationship between reason, culture, and biology is clear: the rational, innovative activities listed above (as well as other activities not listed) that comprise culture have contributed to an increase in the average human life expectancy of twenty-two years during antiquity to seventy-five today. Reason and culture, therefore, have measurable impacts on the biological (and psychosocial) “fitness” of the species.

These and other observations allow transhumanists to assert that man continues to evolve – not by virtue of natural laws, but rather thanks to the fruits of our rationality, and in particular, the intellectual boon they prize above all others: scientific knowledge. Man, they declare, is the first species capable of independently influencing its evolution.

To bolster this claim, transhumanism provides a rich arsenal of technological innovations (both actual and theoretical) that support the goal not only of achieving artificial evolution—that is, evolution of the human species which is facilitated one-hundred percent by the intervention of human reason, rather than shaped by the external exigencies of natural law—but of allowing individual human beings to control the particular trajectory of their biotechnological enhancement, development, transformation: evolution. These technologies include:

genetic manipulation
nanotechnology
cybernetics
cyborgism
pharmacological enhancements

To illustrate the potential of these scientific developments to transform the human subject (and species), let's consider the effects and capabilities of a couple specific examples of technologies that may be integrated with the organic body. Available today are prosthetic hands that may be controlled by a person's thoughts.¹⁰ Also in the works are dentures equipped with thought-controlled technologies and prototypes of artificial eyes.¹¹ These devices are generally created with the intention of compensating for lost or missing sensory functions and abilities in people with disabilities, but transhumanists offer a more controversial view: they claim that at some point artificial devices will become more efficient, durable, and reliable (i.e. more functional) than human organs, and consequently, many individuals will choose elective surgeries and procedures to technologically modify and improve their existing natural bodies. In the long run, biotechnology will become so efficient (and presumably so widely available) that it will eliminate human beings' dependence on the organic body altogether. When this occurs, human consciousness may be supported under artificial conditions (divorced from any recognizable human body); i.e. consciousness may be stored as data (in computers). If this occurs on a totalizing scale, then entire persons (understood as the totality of factual content about a unique individual) will come to exist within digital networks; this digital self, then, will continue to exist as long as the network exists, an idea referred to as "Digital Immortality".

Today the so-called "bodyhackers" movement – people who are ready to experiment with their own body for the purpose of its technical improvement – is gaining in popularity.

The movement's representative, Lept Anonym, has inserted the following devices under his skin in the name of personal enhancement: neodymium metal disks that enable physical control of electromagnetic fields, internal compasses providing a physical understanding of the northern and southern magnetic poles, a Bluetooth device that controls various home appliances.

Another famous bodyhacker is Neil Harbisson, an artist from Barcelona who suffers from Achromatopsia, an extreme form of color blindness. In 2004, doctors implanted a Cyborg Antenna in his head that functions as a sensory system for perceiving color. This implanted and osseointegrated device

detects colors and decodes them as audible vibrations. As a result, Harbisson experiences color much as other people might experience a series of musical notes. Harbisson's operation has thus allowed him to have the synesthetic sensory experience of "hearing color" for which human beings are not naturally biopsychologically equipped. Given the controversial political questions surrounding issues of identity, choice, and technology, it is noteworthy that the Committee on Medical Ethics in Europe refused Harbisson the operation, and he was forced to find a doctor who, on terms of anonymity, agreed to perform the operation.

Harbisson has noted many times that he has been repeatedly exposed to social pressure and prejudice following his surgery. This indicates that society is not ready to accept such innovations. In fact, cyborgism poses a major social dilemma. If transhumanists are right that human beings will increasingly be able to modify their bodies and sensory experience through the integration of various electronic devices, then the current social order will also undergo radical change as it is forced to adapt to the needs, rights, and concerns of "trans-species", or cyborg individuals. This scenario presents a kind of futuristic "Tower of Babel", and may lead us to question the ways in which human beings and trans-species individuals will interact.

For now, to protect his own rights and rights of other cyborgs, Harbisson has founded the nonprofit Cyborg Foundation. He believes that in the future, many people will want to improve or enhance their sensory faculties, or introduce new ones as he has done; moreover, he believes these body modifications will be readily available on demand. Humans will then be patched as a computational device in both ways: hardware and software.

Although surgical procedures that transform human beings into posthuman cyborgs remain controversial, technology is still an important tool of disability intervention, and many body-enhancing technologies are currently under development. One class of devices gaining in popularity is ultrasonic sonar, which is especially relevant to blind people. This type of device helps the user to hear the distance between the device (often, a walking cane) and the obstacle (for example, the closer the interference is, the more often the sound signal occurs). This technology thus allows blind people to move about safely and independently, provided they have sufficient auditory capability.

Another example of technology that may improve the quality of life for some people is an implant located along the spine that receives pain signals and

blocks their spread to the brain. This results in pain insensitivity, and could prove especially beneficial to those who, due to chronic pain, cannot live

fully. One might also imagine other practical applications of this device—by the military, for example, although this (or a similar) application naturally raises other, potentially ethical, concerns.

Currently, neurotechnology is an important category of biotechnology research and innovation. Researchers are experimenting with the design of implants that stimulate the brain, and may significantly accelerate mental activity and increase concentration. DARPA (Defense Advanced Research Projects Agency) is also working on a “mind-control” implant (and considering its relationship to other theoretical projects, such as thought-controlled weapons). A detailed study on this controversial technology was published in the journal, *Nature* in 2017.

In 2015, at the epicenter's office, the largest technological hub for Stockholm, several hundred employees implanted a rice grain chip into their hands. With its help, they were given the opportunity to open the door to the office, gain access to corporate equipment, and make calculations. Hans Slobjæd, one of the company's representatives, explained his reasoning for agreeing to the use of this technology:

“We use technology every day, and we need to constantly use pin codes and passwords. Is it easier to immediately implant a device that verifies permission on your own?”

We can conclude that there are many people nowadays who have already “improved” themselves—some of them transhumanists, some of them are not. But the fact that the human species—and, therefore, human nature—is not a stable form is obvious; in this respect, the transhumanist movement is both accurate and prescient.

Unfortunately, medical research that confirms the long-term safety of most of these devices is not yet available. But transhumanists believe it is only a matter of time before their views are vindicated, and regard artificial body modification as an overwhelmingly positive trend with a thrilling future ahead.

In conclusion, we note that in the long run as technology continues to develop, an ever greater variety of choice of body modifying devices and procedures will become available to us. The choices that we make in funding, researching, innovating, and consuming biotechnologies will shape us as individuals, as a society, and as a species. Hence, biotechnology and the transformation of the human mind and body (via reason, rather than the untempered law of natural selection) reveal a crucial insight: humanity

has reached a stage of development in which it may independently plan and implement its evolution.

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Discussion

The next article is a continuation of our discussion from the previous issues on the topic of multiculturalism.

MULTICULTURALISM AND (NEO) LIBERALISM

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Abstract:

Questions related to the politics and practice of multiculturalism remain hotly debated, even though it is unclear what generally is meant by the term “multiculturalism” and how multiculturalism fits into the politics of liberalism. To many proponents of identity politics movements, ‘normative multiculturalism’ represents an unquestioned good, and collective identities are seen as a primary subject of democratic deliberation and national policy. Liberal activists, however, may be justifiably concerned that this interpretation of multiculturalism impinges on the foundations of liberalism itself, including the core value of perfect equality between autonomous rights-bearing subjects.

We respond to these concerns by interrogating the philosophical nature of liberalism and multiculturalism, respectively, and fleshing out the complex relationship that exists between these concepts. Using discourse analysis we find that the discourse of normative multiculturalism corresponds to the broader concept of liberalism – *neoliberalism*. We argue that the discourse of neoliberalism integrates the model and empirical sense of the classical concept of liberalism and that the goal – normative neutrality towards cultural and other identities – is more efficiently achieved..

Introduction

Questions related to the politics and practice of multiculturalism remain hotly debated, even though it is unclear what generally is meant by the term “multiculturalism” and how multiculturalism fits into the politics of liberalism. Public figures frequently comment on multiculturalism, understood as an ideology and social movement (consider, for example, Chancellor Angela Merkel’s statement (announced 2014) that multiculturalism in Germany

is dead), but rarely offer any clarification about the substance of this ideology. Less than a year after declaring the end of multiculturalism in her nation, Merkel expressed the most liberal attitude towards the mass entry of migrants, mainly Muslims, into Germany, an action that appears to belie her previous statement. Many believe that Merkel’s controversial actions in the name of multiculturalism have “sealed the fate” of her political career. To understand why this is so, we must better understand the complex relationship that exists between liberalism and multiculturalism as overarching dominant political ideologies.

The debate about multiculturalism began some forty years ago when Pierre Trudeau (also prime minister of a liberal-democratic country) announced that Canada needed multi-cultural access to the inner life of society, instead of a bi-cultural arrangement. Trudeau explained that biculturalism is not an adequate description of Canadian social reality in the context of political necessity¹. A bi-cultural description of Canadian social identity implies that Quebec’s Francophone culture and the Anglophone cul-

¹ Schwartz & Unger (2010) trace several definitions of biculturalism while offering comments on the scarce literature on this topic. Thus, following Schwartz & Unger (2010) one of the most general accounts of biculturalism can be stated as follows: “[biculturalism] may also apply to individuals living in ethnic enclaves, where the heritage culture is likely to be maintained across generations, as well as to individuals from visible minority groups, who may be identified as different from the majority ethnic group even if their families have been in the receiving society for multiple generations”.

ture characterizing the rest of Canada represent the constitutive foundations of Canadian social consciousness, and consequently, the locus of values and goals that bind the (Francophone or Anglophone) individual to the nation-state and sustain a common sense of national pride, kinship, and patriotism. In my estimation, it is not mere coincidence that profound discussion of multiculturalism appeared at a time when the referendum on possible secession of (Francophone) Quebec from Canada was the subject of great debate.

The examples taken from Canada and Germany offer an important introduction to our analysis of the connection between liberalism and multiculturalism. These ideologies and the points of connection between them are not only politically relevant, but also philosophically charged, as they impinge on the basic assumptions, norms, and policies of political liberalism—the dominant ideology and guiding force behind global and domestic policy in the world today. (For the present discussion, it suffices to understand political liberalism in the most general sense as an ideology based on three core beliefs: (1) the law preserves individual liberty; (2) the state derives its (coercive) power through the consent of the governed; (3) all individuals are considered equal before the law.) Beyond the obvious political issues raised by any interrogation of multiculturalism and liberalism, there are deeper questions related to the nature of freedom and identity, topics that are thrown into relief by (inter-)cultural relations that shape our understanding of the world as a complex and integrated human community.

Investigating Liberalism and Multiculturalism

The predominance of philosophical liberalism represents an important starting point for recent discussions of liberal democracy and cultural diversity in the renowned philosophical periodical, the *Journal of Southeast Europe*. Many of the editorials on these themes appear to take inspiration from a short piece by Richard

Robson and a much longer work by the prominent Serbian philosopher, Slobodan Divjak, on the relationship between multiculturalism, communitarianism, and liberalism. If these ideologies and the relationships between them have been clearly and repeatedly articulated, why, we may ask, is there still so much confusion among political philosophers and other theorists regarding the meaning and implications of contemporary multiculturalism?

Multiculturalism—which according to any standard definition entails the coexistence of a multiplici-

ty of ethno cultural, religious, social, etc. groups within a given society—offers an alternative to the standard concept of assimilation, which typically involves individuals adopting the norms of behavior, belief, appearance, etc. of the dominant (majority) group in society. *Prima facie*, multiculturalism and assimilationism are antipodes; however, the effects of both are very similar to the reasonable requirements of the (neo) liberal political process. Many theorists of multiculturalism (Kymlicka, Miller, Dolmer, etc.) are faced with the problem of defining what exactly multiculturalism is, which indicates that it is a complex and multi-layered phenomenon, that is difficult to define on a theoretical, methodological, and conceptual level. The concept of multiculturalism is based on two fundamental principles: (1) recognition of diversity and, (2) recognition of identity. In practice, multiculturalism serves as a suitable ideological foundation for state policy that seeks to maintain harmonious relations between different ethnic groups and promote the recognition and acceptance of diversity in general. Thus defined, multiculturalism is linked to the diversity of national and ethnic groups, as well as to other non-ethnic (e.g. religious, or other group identities) groups and communities that foster specific cultural identities, and prescribes how we should treat cultural diversity in society. This normative multiculturalism is linked to notions of “identity politics”, or the “politics of recognition”, meaning multiculturalism (by its intrinsically normative dimension) implies political action, which is implemented through different models of multicultural policies².

While liberalism prescribes in a largely formal (although not entirely value-neutral) way the complete equality of all subjects before the law, normative multiculturalism appears to suggest that specific (value-laden) political goals and facts about group membership/personality identity outweigh the liberal imperative of perfect equality. Given all that has

² Historical changes, for example, in the area of what is today Serbia, have to a great extent created this diverse picture, by engendering migrations of various ethnic and confessional groups (even during Austro-Hungarian monarchy). Socio-historical demographic changes have led to the adoption of policies that specifically address minority/immigrant communities and/or their rights or political status, which may initially look like the implementation of state-sponsored multiculturalism. The facts do not support this narrative, however, as the development of intercultural communities and the policies they have inspired are much older than the relatively new ideology of political multiculturalism.

been said, it would appear that multiculturalism diverges from liberalism. But is this the case? If the establishment of morality is founded on a purely rational basis, then the principle of negatively determined freedom points to the primacy of individual rights; accordingly, one who claims that individual choice by itself represents the greatest political good elevates that sort of choice (by its form alone, and irrespective of its content) above any notion of what is good for (and morally ought to be chosen by) the collective. By prioritizing individual choice in this way, the notion of a “collective good”, “greater good”, or “good of a community” is rendered legally superfluous. Of course, we recognize that this rationalist argument is directed against any substantialism—mostly against the moral status of such a notion as (collective) “goodness”. However, this begs the question of the very notion of morality. If we act morally in general, we act in a manner that transcends the private interest of individuals or groups. Acting for the good of the community following the transcendental imperative indicates not only the greater good of one’s private interest but also the interest of the empirical subject of acting. Morality is, in general, an ability to act upon the demands of transcendence, overcoming private self-centered interests.

Multiculturalism as an element of liberal societies distinguishes at least two meanings of collective rights. First, it implies a notion of collective right as limiting the personal freedom of its members in the name of group solidarity, or even “cultural purity”. The second meaning refers to the right of a minority group to limit the economic or political power of the majority or to provide such allocation of resources and functions of institutions that existing societal imbalances putting minorities at a disadvantage are compensated for and counterbalanced.

Contrary to the apparent conclusions reached in the discussion above, some philosophers contend that multiculturalism is compatible with the principle of the primacy of individual rights, that is, with individual freedoms.

Historically, proponents of liberalism have often been outspoken advocates of the rights of minority groups; however, the dominant influence of US-led debate, practice, and policy has reframed the political narrative, such that it appears there is a strict incompatibility between (1) the advocacy of liberalism and, (2) representation of minority rights based on multiculturalism.

Liberalism, thus, has an important relationship to the culture that is worth exploring. This relationship, indeed, holds the key to understanding the liberal proponents of multiculturalism, of whom perhaps the most famous is Will Kimlycka. He claims (2004, pp. 122-123) that liberal society “not only allows people to follow their way of life but at the same time allows them access to information about different ways of life (...) It also allows people to engage in a radical revision of its objectives (including apostasy) without the threat of legal punishment”. Thus, the primacy of individual rights is not only *not jeopardized* by a plurality of perspectives operating within a single social sphere but is *achieved* through a multilateral (often multicultural) approach. Since Kimlycka is arguing from the perspective of liberalism, he may justify the philosophical primacy of individual rights by positing a formal abstraction of the political subject as a hypothetical bearer of individual qualities, concerns, and rights, rather than having to provide a thorough discussion of specific categories of identity that serve as the architecture of concrete selves in the world. Kimlycka, therefore, concludes that an individual realizes free choices within a specific *societal culture*; *this culture serves as the context* within which the individual exercises independent choice—including the choice to remain within that culture, allowing it to condition one’s choices, or to leave, and thereby expose oneself (and one’s power of choice) to other contextual influences³.

Multiculturalists believe that a “progressive” attitude of openness towards culture—based on a purely formal understanding of citizens as rights-bearing subjects—is possible in the context of the liberal advocacy of freedom of choice, or as an act of individual autonomy. Indeed, they believe that the pursuit of cultural belonging (insofar as it expresses an individual choice) already “belongs” to the very definition of liberalism. This means that individual choice understood as a political right depends on membership to a particular society, which is always already characterized by certain cultural forms. This also means that within liberalism, an individual can demand equal treatment based on cultural identity and immutable liberal values (i.e. liberty and equality of all individuals before the law), rather than appealing

³ This stance mostly leads to the closeness of multiculturalism and communitarianism stances, which should not be surprising because we point out exactly the family character of discussions within liberalism that make of it a paradigmatic basis for these discursive branches.

to historically contingent facts, such as the cultural heritage/political origin history of the state territory.

The liberal theory of minority rights under the multiculturalists cannot allow the limitation of basic civil and political freedoms of members of minority groups. Accordingly, if certain minorities tend to carry out non-liberal practice (as compared to society in general, or their community of origin in a more narrow sense), that raises the question of the legitimacy of extending liberal norms to such a minority group. Contrary to fears that the representation of minority rights with the preservation of their cultural and political identity to some extent could threaten the integrity of the social, and even political, system of a country, multiculturalists believe that the opposite is true. According to them, finding a new common denominator that binds both minority and majority communities facilitates a kind of civil integration that nonetheless allows for the preservation of (at least some of the) norms espoused by both the majority and minority groups (as opposed to the dissolution of the minority group's cultural forms, which one would expect in cases of cultural assimilation). Multiculturalists thus believe that the creation of a global civil society naturally occasions the development of a pluralistic society that does not deny, but rather encourages a liberal geopolitical system.

If we also agree that the characteristics of multiculturalism (examined below) determine the predominating attitude towards liberalism, this still would not suffice to support the multiculturalists' conclusion without further analysis based on a clearly-defined distinction between theoretical models and an empirical level of understanding of the so-called *comprehensive doctrine* of liberalism. With these caveats, we may begin to gain a clearer understanding of how multiculturalism participates in liberalism, and the ways it does not. This is because, as will become apparent, at the empirical level, or level of "practice", multiculturalism is not only a theoretical concept, but also a political, and action-prescribing, one.

Model analysis of the problem

Distinguishing between the two previously mentioned conceptions of Mind-procedural and substantial—as they exist within a framework of deontological liberal concepts he has developed (2012), Divjak articulates a criticism of the model of multiculturalism as incompatible with liberalism. In establishing the differences between these two con-

ceptions of Mind, Divjak also begins to discern the difference between the formal (and procedural) and substantial understandings of democracy. From there, he concludes that social life can only be rationally limited by formal and universal rules of the game of procedural democracy as the core of the modern state, with the same restrictions equally applicable to all of its citizens.

As part of the consideration of this issue, Divjak develops an original and critically centered interpretation of multiculturalism—positing a rigorous conception of substantial pluralism as the weft of post-modernism. Since multiculturalism insists on the primacy of the group, minority rights, according to Divjak, necessarily rest on a substantial interpretation of democracy, since they are founded on a cultural, ethnic, linguistic, and/or religious group identity. Generally speaking, multiculturalism is taken to conceive of different ethnic groups as the primary, or most fundamental, political units in society and to advocate the intra-cultural coexistence of these groups, rather than advancing the intra-cultural coexistence of individuals qua bearers of different ethno cultural identities (cf. Divjak 2006). This understanding of multiculturalism, which models society according to the speculative dynamics of hypostatized groups, is in tension with a purely formal understanding of democracy in which only the rights of the individual—purely formal and de-substantialized—are valid.

By this interpretation of multiculturalism, he criticizes it as a quasi-liberal movement that treats minority rights as a necessary condition of the civil state and therefore has an uncritical attitude towards *all* forms of minority rights (even allowing for the ironic—and self-undermining—possibility of extending the protections of liberalism to anti-liberal views). Divjak's critique of multiculturalism via this model implies that, at the level of pure logic, liberalism and modern conceptions of multiculturalism are in contradiction with one another. Indeed, while liberalism seeks to ground civil society on a value-neutral, non-culturally specific foundation of formal rights, multiculturalism seeks to impose its values, and what is more, to do so hierarchically, with the recognition of diversity and equality of all cultural traditions at the top.

This philosophical discussion indicates a divergence between these two approaches to the problems surrounding the existence of a cultural majority and minority in a given society. However, multiculturalism and liberalism converge in social and political

discourse, at the empirical level, or level of performance. How is that possible?

Discourse analysis of the model and empirical level controversy

To answer this question we have chosen another approach—a meta-logical analysis of discourse performance—which takes into consideration not only conceptual contents but also the levels (model-theoretical and empirical) of their articulation. K. O. Apel inaugurated this kind of philosophical approach, which in the context of the philosophy of language, is called Transcendental Language Pragmatics (cf. Apel 1970). Such a philosophical approach reframes the debate on liberalism and multiculturalism, advocating a form of pragmatic analysis that goes beyond the discursive logic (syntax and semantics) of arguments, and locates their normative (political) force (i.e. their social meaning) within a shared cultural and semiotic context; hence, it focuses on how the intentionality of statements (and significance of concepts) is embedded in and draws meaning from, the empirical social “lifeworld” that forms the context of their utterance.

This approach represents a kind of “specialized” hermeneutics—in focusing on the logic of discourse it aligns with the tools and insights of *linguistic pragmatics*. Within this wider framework of analysis, the so-called *model level* of concepts is understood as a form of empirical discourse (set in an intersubjective context of “lived reality”). At the same time, this empirical level of analysis is understood to be shaped by a conceptual (model level) discourse. This means that analytical focus is put on the ultimate reason behind the spoken. Pragmatic analysis of the discourse of liberalism frames questions related to the status of cultural minorities as embedded within an empirical context that informs other topics of political and philosophical debate, such as assimilation or interventionism. Thus, at the model level, liberalism and multiculturalism are perceived through the functional effects of the mutually-influencing relationship between discourse and empirical reality. Given this, the relationship between multiculturalism and liberalism comes into greater focus: liberalism may facilitate and legitimate multiculturalist arguments by creating “new realities”—that is, by reframing political discourse (and thus, the dialectics of discourse and empirical reality)—in societies and independent nations that “ought to be liberalized”. Liberal praxis may operate similarly in the service of other political goals, as well (e.g. in

the case of the Canadian example mentioned above).

In the context of our overarching question—that of the representation of, and dynamics between the cultural majority and minority, or minorities, within liberal society—it seems that the strategic goal behind the discourse performance of multiculturalism (as a function of liberalism) is to neutralize the dominant (traditional) culture as the backbone of national identity. *In this way, in the end, the empirical ratio of multiculturalism practice is equal to the model assumption of liberalism. Identity becomes culturally value-free.* This can be achieved through tactics of “dissecting” society into smaller and, of course, legally equal cultural identities. Over time, the effect of this seems to be the so-called *equidistance* of all (sub) cultures to an alleged paradigm of liberal civic identity. In this way, *liberal, as well as multicultural, discourse* perpetuates the predominance of “*un-national*” identity, a concept that greatly resembles the idea of (civic) *constitutional patriotic identity*, which is especially favored by philosophers who define themselves as *left-liberals*, such as Jürgen Habermas (Habermas 1995). A sort of *cunning by liberal Mind* enables this meta-logical relationship between liberalism and multiculturalism and precipitates the strategic approach to liberalism as a political doctrine. This discursive analysis serves as the basis of the broader approach to liberalism as a philosophical phenomenon, as well as to its contemporary, *postmodern* form—the concept of *neoliberalism*.

One important hallmark of the philosophical discourse analysis of liberalism is that the definition of neoliberalism cannot be reduced to the standard one, a concept that is dominated by economic content. Neoliberalism (which includes the tenets of multiculturalism) became a candidate for ideologically or conceptually supporting the politics of interventionism in the name of creating a new world, and thus an empirical reality that justifies and legitimates multiculturalist ideology (Bodin 2019). So, the reason why multiculturalism in philosophical discourse analysis appears to be a branch of liberalism lies in the very nature of the broader concept of liberalism—i.e. liberalism as an ideology, and liberalism as a political force which creates its own (ideological) context of justification.

Contrary to the dictums of neoliberal ideology, one may say without propagating bias or exclusion that a specific cultural tradition serves as the historical and political foundation of national citizenship because of its internal (non-ideological) democratic

component. This means that viewed through the prism of this tradition's cultural norms, it is quite reasonable to communicate with various cultural entities (identities) for the benefit of individuals, society, and the state. This tradition, rather than a "new reality" established through outside intervention, is special for its members precisely because it is affirmed and cherished as one tradition among many by people who do not live in fear of diversity and contact with the plurality of cultures across the globe. A tradition based on freedom even encourages transcultural contact, as well as transcultural exchange, respect, and interest among communities. A Nation that respects its tradition, respects the rights of cultural minorities as well as the rights and cultural identity of the majority, whose history, beliefs, and practices serve as a foundation of national identity. Minority or majority, individuals, people, and nations identify themselves in various ways—often identifying the influence of many cultural traditions—without thereby ceasing to identify a particular tradition as the bedrock of national identity. In our (Divjak and mine) case, the Serbian tradition is highlighted as part of the European tradition of au-

thentic democratic countries. Acknowledging this allows for a deeper appreciation of the myriad cultural influences that shape postmodern thought and contemporary geopolitics; enables individuals to perceive the significant relationship between culture and politics, and restores from within a stable sense of authentic selfhood that multiculturalists have attempted to establish from without.

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