Immortality on Earth? Transhumanism through Islamic Lenses

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Author Biography

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Introduction

In 1965, an American scientist by the name of Gordon Moore made a relatively specific prediction about the number of transistors within a dense integrated circuit that would go on to become an accurate projection of technological change as a whole. Moore predicted that the number of transistors within such circuits would double approximately every year.[1] This prediction of exponential growth turned out to be descriptive of much more than mere transistor populations within circuits. Scientific discovery and consequent developments in technology are now widely accepted as growing exponentially, exhibiting acceleration.

This growth has brought with it a pushing of boundaries at an unprecedented speed. Writer and futurist Arthur C. Clarke (d. 2008) famously commented that, "Any sufficiently advanced technology is indistinguishable from magic."[2] Indeed, we appear to be on the verge of witnessing nanotechnological interventions that would have mere decades ago been the stuff of science fiction. Transhumanism is a term coined by British biologist Julian Huxley (d. 1975),[3] brother of renowned novelist and philosopher Aldous Huxley (d. 1963), that now refers to the process of improving the quality and length of human life by way of biotechnological interventions including, but not limited to, nanotechnology, cybernetics, pharmacological and gene therapies. While transhumanists herald this as the beginning of perhaps the greatest chapter in human history, those opposed to transhumanism are warning that all that proverbially glitters is not necessarily gold.

Some scholars, both Islamic and non-Islamic, have suggested that the propagation of transhumanism presents one of the greatest challenges to humanity brought about by modernity. To use human discovery to alter humankind, at as fundamental a level as proposed by transhumanism, provokes numerous profound questions related to theology, philosophy, biology, psychology, and of course, ethics. What is interesting, and might be seen as setting the tone for this discussion,

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[1] Franklin, D. (2017). *Vanishing Point: The rise of the invisible computer*. The Guardian. Retrieved from: https://www.theguardian.com/technology/2017/jan/26/vanishing-point-rise-invisible-computer

[2] Clarke, A. C. (1961). *Profiles of the Future: An inquiry into the limits of the possible.* Gateway Publishing. Huntingdon.

[3] Huxley, J. (1957). *New Bottles for New Wine*. London. Chatto and Windus.

is one of the key points taken from the story of Adam in the Qur'an. He is misled by the devil, in part by the promise that eating from the forbidden tree will grant him immortality (Qur'an 7:20); immortality is very much a part of the transhumanist agenda. This paper attempts to grapple with some of the most significant issues raised by transhumanism that will need to be addressed by Muslims. The main question is: what are the challenges inherent in attempting to reconcile Islam with transhumanism?

Introduction to Transhumanism

A Brief History of Transhumanism

Swedish philosopher Nick Bostrom provided a thorough history of transhumanist thought in his 2005 paper.[4] The following section summarizes and discusses some of the key historical figures to whom he, and other scholars, have attributed the origins and development of transhumanist thought. The Akkadian epic of Gilgamesh, often cited as being the first surviving work of literature, contains within it what might be called the first written account of an individual seeking a transhumanist intervention: the protagonist King of Uruk sets out on a quest for immortality.[5] The quest for immortality is often cited as being one of the end goals of transhumanism.[6] Of course, this king was seeking a magical intervention, rather than one rooted in science and reason, the latter of which is key to the transhumanist movement. However, some would argue that instrumental reasoning, as employed by transhumanists, is not an all-encompassing form of reason,[7] as will be elaborated below. Within Greek mythology we also find potential precursors to transhumanism. As well as Prometheus, who angered the gods by stealing fire from them and delivering it to humans, thus improving the

[4] Bostrom, N. (2005). A History of Transhumanist Thought. *Journal of Evolution and Technology, 14* (1), 1-25.
[5] Sandars, N. K. (1972). trans. *The Epic of Gilgamesh*. London. Penguin.
[6] Bostrom, N. (2005).
[7] Noeri, G., Horkheimer, M., & Adorno, T. W. (2002). *Dialectic of Enlightenment*. Stanford University Press. California.

human condition, we also find the character of Daedalus.[8] Daedalus, the father of Icarus, tasked himself with finding ways to improve human capabilities but without magic, instead opting for engineering-based solutions. The famous demise of Icarus has served as a warning for millennia regarding the tendency of humans to become overly ambitious in this regard.

While the roots of transhumanist thinking might be found in humanity's earliest texts, it is the age of the European Enlightenment that is often credited as ushering in the beginning of transhumanist philosophy.[9] Europe's Enlightenment brought with it a number of intellectual upheavals that changed the course of human history. The impact of the Enlightenment on three branches of knowledge in particular—science, politics and philosophy—led to a revolution in the way in which knowledge was approached and utilised.[10] The rise of secularism, at the expense of the power of the European Church, led to a fundamental difference in how morality was determined and enforced. The replacement of the geocentric theory of our solar system by the heliocentric theory, symbolizes just how monumental the intellectual shifts that occurred within Europe during this time were; the very universe and the way in which it was perceived changed massively.[11]

The scientific revolution of that time brought with it a hope, certainly amongst many of the elite classes of society, that a better world could be built on the back of science and reason. One of the era's heavyweights, the philosopher Sir Francis Bacon (d. 1626), described a utopian island in his novel *New Atlantis*, "where the suffering of humanity has been removed through the development, and indeed perfection, of scientific knowledge and its technical application."[12] This reflected

[8] Bostrom, N. (2005).
[9] Edgar, A. (2009). The hermeneutic challenge of genetic engineering: Habermas and the transhumanists. *Medical Health Care Philosophy*, *12*(2), 157-67.
[10] Bristow, W. (2010). The Enlightenment. *Stanford Encyclopedia of Philosophy*. Retrieved from: https://plato.stanford.edu/entries/enlightenment/
[11] Ibid.
[12] Bacon, F. (1624). *The New Atlantis.* Original publisher unknown. Since printed by Watchmaker Publishing. Oregon.

the optimism felt by many at the time regarding science and its potential to elevate the human condition.

The sheer optimism of this position is perhaps better understood when one is reminded that this was before the advent of monstrosities such as the nuclear bomb and other destructive inventions such as germ warfare, and the less dramatic, albeit just as toxic, discovery of carcinogenic substances. The reality that science and its applications can prove to be devastating serves as a sobering grounding of optimism regarding its potentialities. This conflict of potentiality is reflected in the division amongst scientists and philosophers regarding transhumanism and other cutting-edge applications.

In defence of the optimism, it is important to note that it was not exactly technology and science that buoyed these intellectuals, rather, it was the idea of man being governed by knowledge, be it the "pure reason" of the rationalists, or the science of the empiricists.[13] Shedding the religious dogmatism that had bogged Europe down in war, repression, and a neglect of material science, the Enlightenment was a time of intellectual hope. Political philosophers of this era, such as Benjamin Franklin (d. 1790) and William Godwin (d. 1836), believed that inequality and injustice, as well as disease (and perhaps one day, death) could be eradicated through scientific advances.[14] Science was thus seen as an extension of reason, one of its most prominent schools of thought and application.

With the seismic publication of Charles Darwin's (d. 1882) *Origin of Species* in 1859, more than ever transhumanism seemed like a goal within reach. According to the theory, current humans represent merely one stage in an evolutionary process. Therefore, who is to say that we have reached the end of this process? To those who accept Darwin's theory, the idea that we will no longer evolve seems less credible or likely than the idea that we will continue evolving. In 1923, British scientist J. B. S. Haldane (d. 1964) published the essay *Daedalus; or, Science and the Future*, which presented an optimistic view of the benefits that would come

[13] Markie, P. (2017) Rationalism vs. Empiricism, *The Stanford Encyclopedia of Philosophy* Edward N. Zalta (ed.), Retrieved from: https://plato.stanford.edu/archives/fall2017/entries/rationalism-empiricism/.
[14] Hughes, J., J. (2012. The Politics of Transhumanism. *Zygon*, *47* (4), 757-776.

along with mastery of science in general, and genetics in particular.[15] Significantly, Haldane suggested that many new scientific developments are initially seen as blasphemous, and even abominations, initially rejected by the mainstream of people due to the sheer differences they offer being deemed unnatural. Haldane seems to have anticipated some of the significant issues that would arise within this discussion; and discussion certainly did arise as his essay became a best-seller.[16]

Other writers also weighed in, offering less optimistic predictions in the case of Bertrand Russell's (d. 1970) *Icarus: The Future of Science*[17] and Aldous Huxley's *Brave New World*.[18] The latter laid out a dystopian vision of a future in which free will, human drive, and freedom are severely stunted by biotechnology, oppressive psychological practices, as well as sexual and narcotic indulgences. While George Orwell's (d. 1950) *1984*[19] did not explicitly describe biotechnology as a tool of oppression, it made a frightening case f the porotential for science and technology to be misused to enslave "the masses."

It was Huxley's biologist brother, Julian Huxley, who would go on to coin the term transhumanism in 1927, writing in his text *Religion Without Revelation*:

> *The human species can, if it wishes, transcend itself—not just sporadically, an individual here in one way, an individual there in another way—but in its entirety, as humanity. We need a name for this new belief. Perhaps transhumanism will serve: man remaining man, but transcending himself, by realizing new possibilities of and for his human nature.*[20]

The last century has witnessed the exponential development of science and technology, in line with Moore's law. Transhumanism as an applied science has begun on a small scale, within the likes of pharmacology, while more fundamental changes to our being remain on hold due to legislative reasons. Transhumanism is

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[15] Haldane, J., B., S. (1923). *Daedalus; or, Science and the Future*. A paper read to the Heretics, Cambridge, on February 4th, 1923.
[16] Bostrom, N. (2005).
[17] Russell, B. (1924). *Icarus; or The future of science*. London. K. Paul, Trench, Trubner & Co. ltd.
[18] Huxley, A. (1932*). Brave New World*. Harper Brothers. New York.
[19] Orwell, G. (1949). *Nineteen eighty-four, a novel*. New York. Harcourt.
[20] Huxley, J. (1927). *Religion without revelation*. London. E. Benn.

already amongst us, with the theory being argued for within academic circles, while the practice is already present within the pharmacological world, by way of "designer drugs." It looks like this might be just the beginning of a new wave of transhumanist practice; we are all likely to be affected by it in one way or another.

Introduction to Transhumanist theory

Bostrom remains one of the most vocal proponents of transhumanism amongst philosophers. He argues for the position that transhumanism can lead to an improvement of our species, allowing us to evolve into transhumans and eventually post-humans. The benefits of transhumanism include, "radical extension of human health-span, eradication of disease, elimination of unnecessary suffering, and augmentation of human intellectual, physical, and emotional capacities."[21] According to Bostrom, transhumanists will utilize "medicine…economic, social, institutional designs, cultural development, and psychological skills and techniques."[22] Viewing nature as "a work-in-progress, a half-baked beginning"[23] that humanity must improve upon highlights just how radically different the worldview of transhumanists is from the Islamic view, with God saying, "We have indeed created humankind in the best of molds" (Qur'an 95:4). While it would be incorrect to interpret this verse as pitting Islam against the advancement of the human race, it is certainly an indication of how different the two worldviews are in terms of how they view creation and the status of the human. The Qur'an contains verses highlighting that God has eased certain aspects of our lives by allowing us to cultivate nature: "And the grazing livestock He has created for you; in them is warmth and [numerous] benefits, and from them you eat…And they carry your loads to a land you could not have reached except with difficulty to yourselves. Indeed, your Lord is Kind and Merciful." (Qur'an 16:5;7). Improving lives by way of cultivating and gaining a limited mastery over nature, is not fundamentally at odds with the Islamic worldview. However, there is quite some distance between

[21] Bostrom, N. Transhumanist Values. In *Ethical Issues for the 21st Century*, ed. Frederick Adams (2003). Philosophical Documentation Center Press., p. 4
[22] Ibid, p. 3
[23] Ibid, p. 3

controlling livestock and altering the fundamental building blocks of human beings themselves.

Human Limitations

Transhumanists see the human body and mind as limiting our full capabilities. Accordingly, they propose a range of areas that could benefit from transhumanist practice in terms of expanding what is possible for humans. Bostrom proposes that our possible modes of being are limited by our human perspective: "We humans may lack the capacity to form a realistic intuitive understanding of what it would be like to be a radically enhanced human."[24] He argues that on one level we seem to have accepted constraints without questioning their necessity. Furthermore, transhumanists like Bostrom propose that while we might have some idea of what transhumanism will look like, we are incredibly naïve in trying to assess what posthumanism might look like, with posthumanism being the frontier beyond transhumanism.

Transhumanism is often crudely reduced to the idea of living forever. While concern with increasing lifespan is a central focus for many transhumanists, Bostrom elaborates on this goal as being more than merely a desire to live longer. He argues that longer lives would include higher levels of maturation and growth, leading to a more enriched society. The examples he uses to illustrate this are Beethoven and Goethe, considered two of Western Europe's greatest gifts to the world in cultural terms: what might their insights have been, and how might their work have looked, if they were with us today, having lived for hundreds of years.

Beyond lifespan concerns, transhumanists put a strong emphasis on improving human intellectual capacities. Bostrom believes that effective transhumanism can lead to improvement in all of our cognitive faculties, including memory, attention, and problem solving skills. Interestingly, he also thinks we might be able to think more effectively in both philosophical and scientific terms. He writes that, "It is possible that failure of philosophical research to arrive at solid, generally accepted answers to many of the traditional big philosophical questions could be due to the

[24] Ibid, p. 4

fact that we are not smart enough to be successful in this kind of enquiry."[25] He also mentions the Platonic cave,[26] and how it suggests that we might be limited by our current cognitive capacities.

Evoking images of comic book superheroes, Bostrom also believes in the potential for transhumanism to lead to increased sensory capabilities. Perhaps we might adopt some of the sensory gifts of animals, such as magnetic orientation, sharper eyesight, a more effective sense of smell, or sensors for electricity and vibration; he also mentions the possibility of increasing levels of sexual sensitivity and responsiveness. Bostrom also argues for the psychological potentialities of transhumanism, talking in terms of evoking "lasting joy" and increasing well-being, writing that we are at the mercy of our genetic disposition when it comes to these things. Furthermore, Bostrom believes that transhumanism may allow us to determine our own willpower and character, so that tasks such as quitting smoking will be easier, and we can more readily shape our character so that it is "in accordance with our ideals."[27]

Applied Transhumanism

The scientific processes that can be applied towards transhumanist practice, such as nanotechnology, cybernetics, pharmacology, and gene therapy are all already being developed and applied, albeit not always in the service of transhumanist goals.

Nanotechnology, a term used to describe technologies developed at an atomic, molecular, or macromolecular level (1 to 100 nm range) is already being used within areas such as bioengineering, biophysics, and biochemistry.[28] When utilized in the service of transhumanism, nanotechnology offers much to the field, from microscopic implants that monitor our bodily functions, to minuscule diagnostic tools that enter the body and are used to more effectively diagnose illness.

[25] Ibid, p. 7
[26] https://web.stanford.edu/class/ihum40/cave.pdf
[27] Ibid, p. 8
[28] Musa, F. (2008). Ethical Dimensions of Nanotechnology. *Tabah Foundation*, *6*, 1-18.

Cybernetics is a term that is used to describe the study of human control functions, paying particular attention to the ways in which artificial systems can be used to improve, or even replace, them. Accordingly, cybernetics focused on bridging the gaps between human biological processes with technological tools. British engineer Kevin Warwick has famously tested various cybernetic tools on himself, implanting computer interfaces under his skin so as to allow himself to control electrical devices remotely.

Pharmacological approaches to transhumanism are already common, perhaps due to the softening of attitudes towards psychoactive medication, which have long been used to treat psychological illness. Pharmacological transhumanism involves improving an aspect of our cognitive functioning using a pharmacological substance. Crucially, this involves improving something that is not diagnostically ill. A prime example of this is the use of Modafinil, a so-called "smart drug" whose use is on the rise in many countries.[29] It is said to promote wakefulness, memory, and clarity of thought, making it particularly popular amongst students faced with multiple exams and assignments.

Gene therapy involves the process of replacing faulty or ailing genes with healthier ones. Transhumanism would see these processes go beyond treating faulty genes, but also used to "improve" a healthy set of genes, allowing for the selection of desired characteristics. The term "designer babies" has now entered the public consciousness, reflecting the propagation of this once distant idea. While regulations are still in place restricting gene therapies to nonhumans, the last two decades have seen them used to "improve" certain species of plant. Applied to humans, this could hypothetically result in the development of offspring who can jump higher, remember better, grow taller, and so on.

These developments are at different stages, but they are all relatively early in their life cycles. The pace at which technology moves forward predicts more widespread use in the near future. As we have seen with other scientific advances, we may be less than a year away from any one of these practices becoming not only

[29] Cox, D. (2013). *Is modafinil safe in the long run?*. The Guardian. Retrieved from: https://www.theguardian.com/education/mortarboard/2013/may/31/is-modafinil-safe-in-long-term

widespread, but the norm. Addressing this issue is critical for the Muslim world. Failing to meet the demand for answers, or to provide answers in a timely manner, risks driving a further wedge between scholars and laypeople.

The Transhumanist Religious Order

While all transhumanists are not atheists (as evidenced by the existence of the Christian Transhumanist Association), the majority appear to be so, with one survey reporting that over 75% of transhumanists identify as such.[30] Referring back to the Enlightenment, we can see within it both the roots of contemporary transhumanist movements, as well as arguably the proliferation of atheism, and certainly the proliferation of secularism. However, a closer examination of the themes contained within this branch of science, as well as the language that is employed, suggests that a case could be made that transhumanism is in fact similar to a religious movement.

Academic Steven Goldberg (d. 2010) is one of several scholars who has argued that the transhumanist movement might well be seen as religious. Examining the issue from the perspective of the constitution of the United State's prohibition on requiring students in a public school to take a course on a particular religion, Goldberg asks, "Does transhumanism…address fundamental and ultimate questions?" and, "Is transhumanism comprehensive?," and suggests that the answer to both of those questions is affirmative. While he goes on to say that it is not associated with formal rituals or structure, there seems to be enough evidence to put forward a case that transhumanism is akin to a religion, concluding that it would be dishonest to claim that "the teachings of transhumanism are merely like the curriculum of a chemistry course or a survey course on Western philosophy."[31] With this point, Goldberg highlights the idea that whereas science might be deemed a neutral branch of knowledge, transhumanism contains within it a vision

[30] Hughes, J. J (2007). *The Compatibility of Religious and Transhumanist Views of Metaphysics, Suffering, Virtue and Transcendence in an Enhanced Future*. Institute for Ethics and Emerging Technologies.
[31] Goldberg, S. (2009). *Does the wall still stand? The implications for transhumanism for the separation of church and state*. Georgetown University Law Center.

for how human beings should be that is more akin to a religion than a branch of science.

Beth Singler, of the Faraday Institute for Science and Religion, is another academic who has written on the similarities between religious and transhumanist worldviews, noting some of the commonalities as the presence of, "a god-like being of infinite knowledge…an escape of the flesh and this limited world (uploading our minds); a moment of transfiguration or 'end of days'…prophets (even if they work for Google)," concluding that, "Consciously or unconsciously, religious ideas are at work in the narratives of those discussing, planning, and hoping for a future shaped by AI."[32]Another similarity that can be mentioned is the goal of transhumanism, as well as of many religions and certainly the Abrahamic ones, of reaching a utopia, with the former trying to bring this about on earth, while the latter aiming for it in the next life.

Where these ideas gain particular relevance is in highlighting the reality that transhumanism is not—as it is billed by many of its adherents—a movement away from religious thinking. Viewing it as an alternative religious worldview allows us to compare it to other worldviews. The remainder of this paper compares the transhumanist and Islamic worldviews.

Islamic Analysis of Transhumanism

Despite what some, particularly the New Atheists, might argue, Islam is by no means a religion that is opposed to science.[33] Setting aside Islam's intellectual history, which boasts many great pioneers of science, as well as contemporary examples of Muslim scientists, one can find directly in the Qur'an commandments to seek knowledge: "Are those who have knowledge and those who have no knowledge alike? Only those of understanding are mindful" (Qur'an 39:9). However, the Muslim scientists' profession is seen as an extension of her or his beliefs, and as such, will be governed by certain principles. God-consciousness

[32] Singler, B. (2017). Why is the language of transhumanists and religion so similar?. Retrieved from: https://aeon.co/essays/why-is-the-language-of-transhumanists-and-religion-so-similar

[33] Ali, A. (2017). The Structure of Scientific Productivity in Islamic Civilisation: Orientalists' Fables. *Yaqeen Institute*. Retrieved from: https://yaqeeninstitute.org/en/asadullah/scientism/

should envelop them, a *taqwa* that will have them asking fundamental questions about what they are doing, what they hope to achieve, what the impacts of their research might be, and whether or not it will ultimately benefit their fellow human beings.

While both the Islamic and secular scientist will point to their ethical values, these values can diverge and even contradict each other; perhaps this is unsurprising given that Muslims derive their ethical values from revelation. However, it is not simply on ethics that the two worldviews differ. The Muslim worldview is drawn from revelation which contains a narrative that describes the purpose of life, and also elaborates on the meaning behind human limitations. As transhumanists do not use the Qur'an as a reference point, it is only natural that they would view the world in a significantly different manner.

It is therefore unsurprising to find that the Muslim differing in several key aspects from the secular scientist when it comes to transhumanism. Transhumanism represents humanity's most elaborate attempt to create a new reality for our being; it is befitting that such a monumental change would in certain areas sit at odds with those who believe in a heedful Creator.

Do Not Transgress The Balance

One of the most pertinent Qur'anic verses relevant to this discussion is found in Surah Al-Rahman, "And the heaven He raised and imposed the balance. That you not transgress within the balance. And establish weight in justice and do not make deficient the balance" (Qur'an 55:7-9). While these verses have traditionally been understood to be in reference to the balance of justice (Al-Jalalayn, Ibn Kathir, Maududi), some contemporary authors have extended their application to a balance within nature and its laws.[34-35] Of course, the two meanings are not mutually

[34] Masud, I. (2015). Tafsir Surah al Rahman: The Ecosystem of Space, The Earth and Why Mankind Is Imbalanced. Sunnah Muakada. Retrieved from: https://sunnahmuakada.wordpress.com/2015/11/01/tafsir-surah-al-rahman-the-ecosystem-of-space-the-earth-and-why-mankind-is-imbalanced/

[35] Meah, J. (2016). What Islamic Ethics Have to Say in Relation to the Environment? Seekers Hub. Retrieved from: http://seekershub.org/ans-blog/2016/11/30/islamic-ethics-say-relation-environment/

exclusive, and might even be seen as complementary. This verse is particularly relevant to transhumanism when it comes to genetic interventions, as through such interventions we may irreparably undo a delicate balance that exists within nature. We cannot simply dismiss this line of argument as bioconservative fearmongering as the effects of imbalance created by humans are all around us, from global warming, to extinction of animal species at an unprecedented rate, to diminishing natural resources. While much attention goes to fossil fuels, we are now hearing more and more about the impending scarcity of even more crucial resources such as water, and perhaps not too long from now, clean air. Many of these developing crises were at some level initiated by scientific investigations for which scientists had not adequately considered all the consequences. These investigations moved forward before the complete picture could be understood, and by the time the dangers were discovered, much damage had already been done. "And when they are told, 'Do not spread corruption on earth,' they answer, 'We are but improving things!' Oh, verily, it is they who are spreading corruption but they perceive it not." (Qur'an 2:12-13). Playing with human genes is an enormous step into something that might not be fully understood. Errors at this level could lead to catastrophic fallout. Perhaps what is most interesting in these verses is the commandment to "not make deficient the balance." This verse suggests that human beings will reach a stage where they can upset the balance; we certainly seem to be in the midst of that stage.

Reflecting further upon the idea of transgressing the balance, two main themes can be identified as relevant. One of these relates to the ill effects of transgressing the balance. Genetically modified organisms (GMO) used as foods are now becoming more common. GMO processes are based on some of the same principles of transhumanist thought, such as the need to improve creation by way of genetic intervention. While this topic is much too broad and deep to be covered within the bounds of this paper, the point that can be made is that the jury is still out on whether GMO foods are harmless[36] or toxic. Studies have linked GMOs to a range

[36] Entine, J. (2013). 2000+ Reasons Why GMOs Are Safe to Eat And Environmentally Sustainable. Forbes. Retrieved from: https://www.forbes.com/sites/jonentine/2013/10/14/2000-reasons-why-gmos-are-safe-to-eat-and-environmentally-sustainable/amp/

of ailments, including blood toxins,[37] gluten disorders,[38] breast cancer,[39] and Attention Deficit Hyperactivity Disorder (ADHD) in children.[40] It would be premature to delve into genetically modifying humans, when we have yet to get a grasp on the effects of genetically modified plants and animals. On this level, the warning found in the Qur'an could be seen as stemming from a sense of protecting our world and ourselves.

It could further be argued that these Qur'anic verses go beyond a warning of the harms that might come from transgressing the balance; these verses could also be seen as a call to intellectual responsibility and humility. The entire philosophy of transhumanism is predicated on the aspiration for superhuman prowess, deifying the human race, and attaining ascendancy. It involves a worship of our future selves. Additionally, there is an underlying irrational assumption that a limited biological organism can achieve limitless conquest in comprehending matters of the universe and subjecting them to our will. Humanity can reach the heights of being able to transgress the balance, while simultaneously possessing the free will to be able to choose to do so. European fiction is littered with characters who transgressed this balance, from Victor Frankenstein and his ill-thought-out scientific endeavors, to Icarus and his unquenchable drive for more. In the Qur'anic story of Pharaoh and Haman, we see a similar drive to attain supremacy and engage in self-aggrandizement and self-deification:

> *Pharaoh said: "O Chiefs! No God do I know for you but myself: therefore, O Haman! Light me a (kiln to bake bricks) out of clay, and build me a lofty palace, that I may mount up to the God of Moses: but as far as I am concerned, I think (Moses) is a liar!"* (Qur'an 28:38)

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[37] Aris, A. & Leblanc. (2011). Maternal and fetal exposure to pesticides associated to genetically modified foods in Eastern Townships of Quebec, Canada. *Reproductive Technology*, *31*, 1-6.

[38] Smith, J., M. (2013). Can Genetically Engineered Foods Explain the Exploding Gluten Sensitivity? Institute of Responsible Technology.

[39] Thongprakaisang, S., Thiantanawat, A., Rangkadilok, N., Suriyo, T., & Satayavivad, J. (2013). Glyphosate induces human breast cancer cells growth via estrogen receptors. *Food and Chemical Toxicology*, *59*, 129-136.

[40] De Araujo, J. S.A., Delgado, I. F., & Paumgartten, F. J. R. (2016). Glyphosate and adverse pregnancy outcomes: A systematic review of observational studies. *BMC Public Health*, *16*, 472-484.

The story of the Prophet Moses and Pharaoh is one of the most frequently recurring stories in the Qur'an. The Pharaoh can be seen as representing an archetype of the worst type of ruler, using his power to inflict misery on his people, discriminatory, delusional, power-hungry, and narcissistic. The Qur'anic Pharaoh had indeed transgressed many boundaries; therefore, Moses was commanded to, “Go to Pharaoh. Indeed, he has transgressed” (Qur'an 20:24).

This particular transgression seems to have been born from his delusional desire to conquer the Divine; Pharaoh said, "I am your Lord, Most High" (Qur'an 79:24) perhaps due in part to a narcissistic drive. In this account we are given insight in the heart and mind of this despotic ruler. Pharaoh attempted to use the crafts of his age to gain power over what lay before him, and the ancient Egyptians were master builders. We see here a false belief that by way of his craft, Pharaoh believed he could conquer the Heavens, and assume divinity himself. The fate of Pharaoh within the Islamic narrative is well known, and continues to serve as a stark warning to those who pursue the delusion of self-deification.

The German philosopher Friedrich Nietzsche declared—on the lips of his famous protagonist Zarathustra—that human beings should embrace their own self-sufficiency as an *Ubermensch* (super-man), declaring the death of God.[41] But does a declaration of independence from God empower the human being or shackle him to a delusional pursuit for greatness and conquest? Human beings come together on a basis of mutual cooperation and filling each other's needs, thus establishing norms for social conduct. Perhaps the most dangerous men in human history have been those who thought they needed no one.[42] The Qur’anic story of Pharaoh provides a key reminder of this lesson.

Another verse from the Qur'an serves as an even more direct warning against the potential dangers of transhumanism, with Iblis saying:

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[41] Adrian Del Caro. *Grounding the Nietzsche Rhetoric of Earth*. (De Gruyter 2004). p. 349.

[42] Consider for instance the review of the atrocities of anti-theistic communist regimes of Soviet Russia, Maoist China, and Pol Pot’s Khmer Rouge. A review of some of the relevant historical details can be found in Khan N. ‘Forever on Trial - Islam and the charge of Violence.’ Yaqeen Institute 2016. https://yaqeeninstitute.org/nazir-khan/forever-on-trial-islam-and-the-charge-of-violence/

"I will mislead them, and I will create in them false desires; I will order them to slit the ears of cattle, and to deface the (fair) nature created by Allah…"

And the verse continues:

"...Whoever, forsaking Allah, takes Satan for a friend, hath of a surety suffered a loss that is manifest." (Qur'an 4:119)

Here we are warned against defacing the nature of creation. There is a discussion to be had here: does transhumanism represent a defacing or a correction of creation? Amongst Islamic scholarship, the use of procedures and prosthetics to correct a defect is generally encouraged, given the narration of a companion who the Prophet ﷺ instructed to obtain a nose made out of gold after his nose was cut off in battle.[43] Contemporary scholars have ruled positively on the permissibility of having corrective laser eye surgery.[44] The key difference between corrective and transhumanist procedures may lie in their objectives; whereas surgical procedures attempt to correct something that has gone wrong (due to the presence of a biological abnormality, injury, defect, or illness), the transhumanist goal is to improve what is seen as a "half-baked" creation by way of giving us more than we as humans are born with, be it a longer life, more sensory perceptions, and so on. Their starting point is that even a healthy human being is trapped within the bounds of what they have been given, with transhumanist practice offering to give them more. Going back to the example of GMOs, one can easily see where this can lead to more harm than improvement.

Scientific Intervention vs. *Jihad* of the Self

Key to the transhumanist worldview is the process of improving humankind by way of scientific intervention, be it increasing memory through psychoactive substances or editing genes in order to eradicate an unwanted facet of a person's physical or psychological makeup. German philosopher Jürgen Habermas has raised several critiques of such interventions. He objects to instrumentalizing human beings, and takes issue with imposing a subjective opinion on how humans

[43] Jami al-Tirmidhi 1770. https://sunnah.com/tirmidhi/24/54
[44] http://www.islamweb.net/emainpage/index.php?page=showfatwa&Option=FatwaId&Id=119765

"should be" and the resultant violation of autonomy. He has also opined that if one attempts to improve or increase one aspect of a human being, it is natural that another will suffer.[45] Certainly, Habermas' ideas about violation of autonomy and instrumentalizing human beings would readily find a home within Islamic thought. Islam places a strong emphasis on autonomy: "And no bearer of burdens will bear the burden of another…he who grows (in goodness), grows only for himself…" (Qur'an 35:18). The Qur'an goes further, "O mankind, fear your Lord and fear a Day when no father will avail his son, nor will a son avail his father at all…" (Qur'an 31:33). Muslims are taught to be responsible for their own actions, and to hold themselves to account, for they will alone be answerable to the Almighty for what they have done.

This area of inquiry highlights that transhumanist interventions may work against free will. Free will is a responsibility that opens the door to individuals choosing to engage in behavior that is harmful to themselves, those around them, and society as a whole. Islam is certainly not against eradicating undesirable thoughts and behaviors; engaging in the struggle to do this is one of the core aspects of being a Muslim. But it calls people to do this by way of a struggle against oneself (*jihad*). Having the potential to do evil is part and parcel of having a truly free will. This is not viewed as a flaw in our designs, as the transhumanist posits; rather, Islam views this as being an integral part of the Divine design.

The recognition of our human deficiencies may in fact be hard-wired to our motivational drives as human beings—we act because we have needs to fulfill, hopes, goals, and aspirations. Imagine a utopian world where human beings were so technologically sufficient that they didn't need to move or exert any effort at all, their brains electrochemically stimulated to be in a constant state of endorphin-induced pleasure, their bodies technologically equipped to require no conscious intake of food or output of waste. In such a state they would find their lives entirely bereft of value or purpose—why exist at all with no ultimate goal or quest, no obstacles to overcome, no aspirations to achieve? Is that really a desirable endpoint for human existence? Nietzsche's Last Men, devoid of challenge, robbed

[45] Habermas, J. (2003). *The Future of Human Nature*. Cambridge. Polity Press.

of aspiration, contented in their small world, "ineradicable as the flea," believe themselves to have found happiness.[46] Leon Kass's words are even more scathing, "in his moment of triumph, Promethean man will become a contented cow."[47] Coming from the psychological perspective, Mihaly Csikszentmihalyi popularized the notion of "flow"; his thesis centres on the idea that humans are at their happiest when they are immersed in a challenge which is within their level of efficacy.[48] Without challenge, this would never be possible. More anecdotally, it is common to hear an individual describing the sheer feeling of pleasure and worth that is derived from overcoming an obstacle.

The Islamic position could be described as seeing the human being as being born into a good state ("We have certainly created man in the best of stature" Qur'an 95:4), who is then challenged with the realities of the world and the human condition; it is this struggle that causes some of humanity to "fall" ("Then we return him to the lowest of the low" Qur'an 95:5). It is adhering to God's guidance, as laid out in revelation, that allows humans to succeed: "Except for those who believe and do righteous deeds, for they will have a reward uninterrupted" (Qur'an 95:6); "He has succeeded who purifies it, and he has failed who instills it [with corruption]" (Qur'an 91:9-10).

This places the Islamic worldview in conflict with that of the transhumanist school in regards to what constitutes human nature. Man's nature and creation is not "half-baked" as Bostrom writes; rather, humanity is created from a divine source with divine purpose. The task then falls to each human being to struggle and preserve their goodness, by way of inner struggle (*al-jihad al-nafs*), rather than biotechnological intervention. This struggle is rooted in humanity's unique position of possessing free will, as opposed to other forms of creation that operate within a more limited scope of what we might define as choice. Muslims see this bestowing of free will as being one of the divine secrets. God responded to the angels, when they asked him why He would create a species who can fall to corruption, "Indeed,

[46] Nietzsche, F., & Kaufman, W. (1995). *Thus spoke Zarathustra: A book for all and none*. New York. Modern Library. pp. 21
[47] Kass, L. (2002). *Life, Liberty, and the Defense of Dignity*. San Francisco. Encounter Books.
[48] Csikszentmihalyi, M. (1990). *Flow: The Psychology of Optimal Experience*. New York: Harper & Row.

I know that which you do not know" (Qur'an 2:30). On reading the transhumanist goal of eradicating humanity's ills, such as rape, lying and cheating, by way of biotechnological or genetic intervention, one must ask how this can be done while preserving free will. It is difficult to reflect on this and not find oneself thinking of Huxley's dystopia.

Eradicating Inequality

Bostrom argues that transhumanism can be utilised to eradicate inequality, listing equal access to transhumanist technology as being one of the significant goals of the movement. The latter concern for transhumanists is due to the inevitable inequality associated with new technologies. One cannot separate a science from the context within which it is developed. The biases that are inherent to the wider governing worldview of a society are likely to be replicated and imprinted upon the knowledge and practice that is developed within it. In his writings on Islam and nanotechnology, Musa Furber describes unequal access to nanotechnology between nations as leading to a "nano divide."[49] Furber also mentions concerns regarding the directions that such research takes. This point is particularly pertinent as we are already witnessing the effects of biases on what is researched within the medical community; tropical diseases that affect more than 1 billion people are understudied due to the fact that the majority of sufferers are impoverished. This makes the disease relatively non-lucrative for pharmaceutical companies, as well as less pressing, due to the psychological distance between those who make key decisions within the field and those who suffer the effects of the ailment.[50]

Aldous Huxley once wrote, "Science in itself is morally neutral; it becomes good or evil according as it is applied."[51] It seems likely that any inequalities present within our societies today would naturally be extended to any new scientific or technological developments. The prediction that transhumanist developments will help to eradicate inequality seems deeply mistaken. Observing what is currently going on within transhumanist practice reveals a clear pattern of it being the

[49] Furber, M. (2008). Ethical dimensions of nanotechnology. *Tabah Foundation*, *6*, 1-18.
[50] World Health Organization (WHO). (2017). Neglected Tropical Diseases. Retrieved from: http://www.who.int/neglected_diseases/diseases/en/
[51] Huxley, A. (1974). *Texts and Pretexts (The collected works of Aldous Huxley)*. London: Chatto & Windus.

playground of the rich. Leading figures such as Elon Musk are often millionaires if not billionaires (with Musk commanding a fortune of 15.6 billion U.S. dollars), while the laymen and women interested in cryogenic freezing have to part with a sizeable $20,000, making such technologies unavailable to the majority of the world's inhabitants. Far from being an eradicator of inequality, it seems likely that transhumanism will involve the rich developing tools for the rich, leading to even higher levels of inequality within society. Keeping wealth within certain circles, and not distributing it amongst wider society, is advised against in the Qur'an; Muslims are instructed to distribute wealth to those in need, "...so that it will not be a perpetual distribution among the rich from among you…"(Qur'an 59:7).

Prolonging Life and Enriching It

Many transhumanists include amongst their goals the pursuit of immortality. While attaining eternal life is a goal shared by most religious faithful, including Muslims, trying to achieve it in this world (*dunya*) is foreign to the Muslim mind. The Islamic narrative is clear: this life is but one part of the journey of the human and success does not involve prolonging it, rather, it is found in emerging from it, by way of death, having lived a life of goodness and repentance.

The Prophet ﷺ told his companions:

> *Be in the world as if you were a stranger or a traveler along the path. If you survive till late afternoon, do not expect [to be alive in] the morning. If you survive till morning, do not expect [to be alive in] the late afternoon. Take from your health before your sickness and your life before your death.*[52]

Prophetic sayings such as this paint a picture in which the life of this world is not meant to be perfect, nor is it something Muslims should cling to. It is only by taking the concept of the afterlife out of the equation, as many transhumanists have, that the pursuit of longer (and perhaps everlasting) life seems worthwhile.

However, Islam should not be seen as a body-denying religion. Shaykh Abdal Hakim Murad highlights this point in the context of transhumanism; while

[52] Bukhari – 170.

elements of Christianity, and some of the core ideas behind Buddhism, center around the denial of the body, Islam gives the body its due, and its owner has a responsibility over it.[53] It must be cleaned at least a few times per day, and nourished with food that is not only *halal* (permissible) but *tayyib* (good and pure) as well; it should be kept well-groomed, perfumed, and clothed in clean clothes. Even after death, when the soul has departed, the body is washed, clothed, and prayed over. Islamic opposition to transhumanist thinking does not stem from a denial of the body, nor this life as a whole. Muslims believe that Islam treads a fine balance between the extremes of body denial and the quest for bodily immortality.

While transhumanists claim to be on the path towards enriching lives, the Islamic position might deem their focus to be hollow; focusing on prolonging life rather than giving it meaning, focusing on crudely improving the mind's faculties rather than organically purifying it, and focusing on giving us more avenues of sensory perception, rather than better utilizing the senses that we have already been given. Dr. Nazir Khan makes a strong case for the existence of a form of transcending human limitations already present within the Islamic tradition. While one would not employ the term transhumanism due to the philosophical and ideological baggage of that term, there exists an idea within Islam regarding the improvement of one's sensory perceptions, as well as one's heart and mind, not altogether different to the transhumanist goal of improving these faculties. Khan writes that the enemy of improved sensory faculties is being in a state of heedlessness (*ghafla*). He quotes the great Islamic scholar, Ibn al-Qayyim (d. 1350), "If heedlessness dominates most of someone's time, the tarnish on his heart grows in proportion. And if the heart is tarnished, it ceases to reflect things as they are…and if the tarnish builds up, blackens and envelops the heart completely, the heart's reflective quality and perception will be totally lost…" This connection between one's heart and the rest of one's body is ever-present within the Islamic worldview, but seems to be completely ignored by secular approaches. Khan uses the famous *hadith*, when the Prophet ﷺ quoted the Almighty, to further back up this line of thought; "My servant continues to draw closer to Me with voluntary acts of worship until he becomes beloved to Me. And when I love him, I become the

[53] Murad, A. H. (2010). Our Role – Exclusive. Retrieved from https://www.youtube.com/watch?v=_bJGDbGcPm4

hearing with which he hears, and the seeing with which he sees" (Nawawi 38). He also quotes Imam al-Shawkani (d. 1250 H) who wrote, "God supports a servant's faculties with His Divine Light such that the paths of guidance become intuitively obvious and the allure of worldly seductions vanishes." Here we see what might be called Islamic transhumanism, characterized by the link between one's devotion to the Almighty and how well one can perceive the world around them.[54] While it proposes that an individual's faculties can improve, it is a different form of improvement than that proposed by secular transhumanism, and the difference reflects the difference between the two worldviews. The Islamic endgame is a better hereafter and a more spiritually and morally enlightened human; improvements to the self brought about by "Islamic transhumanism" lead to an ease in performing good, by being better placed to perceive the world as it is. The atheistic endgame is a maximization of this life, in terms of length and enjoyment, and so this brand of transhumanism aims to increase human experience in this world.

Discussion and Conclusion

Both Islamic and secular transhumanists see the human being as a flawed creature. Muslims are taught in the Qur'an that there is a Divine reason for this. While humans are seen as being created by God in an excellent mold, it is also part of their nature to think and behave in negative ways. Transhumanists also point to the state of humanity as evidence of its need for interventions. While they agree on this point, there are significant differences in the ways in which they feel this should be addressed. Central to the Islamic view is the idea of struggling against one's lower self to overcome maladaptive impulses, to do justice to one's higher self, and more crucially, to live in a way that is true to the path that has been ordained by the Creator. The transhumanist idea of fundamentally changing our creation so as to remove the possibility of committing errors does not readily find a home within Islamic thinking. The responsibility for improving one's conduct is placed squarely on the individual; it is each individual who will ultimately be responsible for their

[54] Khan, N. M. (2015). Dhikr – Awakening from Illusion. *Spiritual Perception: Academic Answers to Spiritual Questions.* Retrieved from: http://spiritualperception.org/dhikr-awakening-from-illusion/

own actions. In relation to this, one of the key questions that as yet remains unanswered by transhumanists is how they will strive for the elimination of wrongdoing without compromising free will. Free will and individual autonomy are key to the Islamic narrative. The fact that human beings commit errors is not seen as the result of a "half-baked" creation, as some transhumanists believe; rather, this is the fault of the individual, and to a lesser extent, can be the fault of the societies hosting the individual. It is not only Muslims who raise concerns regarding the violation of free will that is likely to ensue with transhumanism, as evidenced by the writings of scholars such as Habermas.

Is it possible to formulate an "Islamic transhumanism"? It would be short-sighted to reject this possibility. Islamic scholars need to grapple with questions around the permissibility of intervening at a genetic level to incline an individual to act in a "better" way; if transhumanists were to offer the possibility of modifying a human's genes so that they would be less likely to lie, would that be forbidden? Less controversially, certain transhumanist practices might find a home within Islamic biomedical sciences. Taking the example of improving memory, such an intervention might be deemed favorable so long as it brought about no harm. Philosophers such as Leon Kass have posited that improving faculty *x* will likely lead to a decline in faculty *y*,[55] highlighting how even this relatively benign example needs much more deliberation. The example nonetheless serves to highlight that not all transhumanist practices touch on controversial issues such as free will and irreversible genetic alteration.

Rephrasing the previous question a little, and asking, "Is there an Islamic transhumanism?," one might argue that something similar already exists. However, this is a transhumanism that is distinct from that of the contemporary secular branch of transhumanism. While the modern movement towards transhumanism aims to improve sensory perception by way of scientific intervention, Islamic transhumanism calls on believers to improve and purify their perceptions by way of God-consciousness, brought about deliberately increasing in remembrance of God. It might be argued that a Muslim's transhumanist goals are

[55] Kass, L. (2003). Ageless bodies, happy souls. *The New Atlantis*, *1*, 9-28.

directly tied to their devotion to God, rather than mastery of secular science. This then embodies the fundamental difference between an Islamic transhumanism and secular transhumanism.