Editorial:
The Transhumanist Fallacy

By M. Ali Lakhani

> And Satan whispered unto him and said: 'O Adam, shall I show thee the Tree of Immortality and a kingdom that fadeth not away?'
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> *— Qur'an, XX: 120*

> '…machines cannot overtake human intelligence, but men surely can relinquish their original condition, repudiate their intelligence and willingly surrender to technology's artifice; they can, indeed, reach such a point of stultification as to reduce their consciousness to the level of computer data, and, on comparing the two machines, there is no doubt, the computer is more capable.'
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> *- Agustín López Tobajas, Manifesto Against Progress*

In the last few decades, our world has been revolutionized by inventions such as the internet, the tablet and the smartphone. According to some claims, it is now bracing for the next, and, it is anticipated, more profound, technological revolution — transhumanism, the convergence of nanotechnology, biotechnology, information technology and cognitive science (NBIC) which is expected to usher in what is being termed the 'Transhuman Era', one that will blur the distinction between man and machine, and radically redefine what it means to be human. In fact it is being asserted that this new era has already dawned. In August 2018, *Forbes* proclaimed its advent and cautioned that its emerging technologies, while 'saving lives, extending lives and even redefining life', will raise many new ethical challenges.

What is 'transhumanism'? Denoted by the sign 'H+', transhumanism can be defined as the ideology which seeks to modify or improve the human race and overcome its biological limitations by, for instance, prolonging human life or otherwise 'augmenting' the human organism through NBIC technologies such as gene therapy and cybernetic engineering. Though the concepts underlying the ideology are older, the term 'transhumanism' itself came to prominence in a 1957 essay by Sir Julian Huxley, in which he outlined its key aim — the 'transcendence' of the human species. In light of possibilities offered by the new technologies, that aim can be summarized in simple terms as the crafting and perfecting of man through technology. Such 'transcendence' (more accurately 'transformation') is, in the view of some transhumanist and posthumanist philosophers (like Nicholas Agar and Nick Bostrom), the logical next step in the evolutionary process or the post-evolutionary growth of the species. The terms 'transhuman' and 'posthuman' overlap to an extent and are often used interchangeably. The distinction is that while the transhumanist's focus is on prolonging and augmenting the human, the posthumanist's focus is on cybernetically eclipsing the human through a systems paradigm that transcends the concept of the human. Transhumanism is in a sense the materialization of the *Übermensch* while posthumanism, which rejects human exceptionalism, projects the replacement of the human by the machine.

Discussions about transhumanism often introduce the concept of artificial intelligence (AI), an idea which grew out of the pioneering work of scientists like Alan Turing. Artificial intelligence can be defined as the adaptation of machines, using NBIC technologies focusing on artificial general intelligence (AGI), to algorithmically replicate intelligent behavior such as learning and to create, for instance, humanoids or non-biological devices that have artificial intelligence (Apple's Siri and Amazon's Alexa are examples). It is claimed by transhumanist gurus like Google's Raymond Kurzweil that AI machines, using auto-learning and other forms of AGI technologies, might in the near future attain a level of intelligence — termed 'superintelligence' — that will surpass all human capabilities. Some machines, such as the IBM computer 'Deep Blue' (which beat Garry Kasparov, a chess grandmaster, in a controversial chess series in 1997) or its relative, 'Watson' (which outwitted human challengers at the game, 'Jeopardy', in 2011, and has subsequently been

deployed to conduct cancer research and diagnosis), are already exhibiting superior intelligence and skills in certain areas, compared to that of human beings. Some futurists predict that machines will eventually be endowed with 'artificial consciousness' and even 'machine spirituality'. The 'inflection point' at which machine intelligence will finally become irreversible, uncontrollable and autonomous has been dubbed by Kurzweil as the technological 'Singularity' — about whose possibility, if not inevitability, modern experts have expressed grave concerns.

In theory and in practice, transhumanism, posthumanism and AI can overlap — as, for instance, where there is a hybridization of man and machine through cybernetic organisms (cyborgs) or bionically engineered creatures and androids. Such creatures, who were once confined only to the realms of science fiction, are now becoming actualized or futuristic realities. Already, we have seen the development of successfully implanted artificial organs (such as hearts) in human bodies and, with anticipated advances in the ability to edit human DNA sequences, to replicate human organs through 3D printing, and to link human brains through cranial implants to external AI devices and have machine-aided human minds (through 'mind boost' technology), some transhumanists are now hubristically contemplating the possibility of human perfectibility (the 'man-god'), if not immortality. As the futurist Yuval Noah Harari, who posits the transhuman ideal of 'Homo Deus', stated in his controversial *Edge* interview with Daniel Kahneman in 2015, 'Death is optional' because 'in principle, people always die due to technical reasons, not metaphysical reasons.' To the extent that death is viewed as merely a mechanical defect within the human organism, the expectation is that science will provide the 'fixes'.

Technological innovations are occurring nowadays at an exponential rate (exceeding Moore's Law) which is far outstripping our ability to address their implications. Bio-conservatives, who call for moratoriums to assess the regulation of innovations, are being opposed by techno-progressives of all stripes (scientific, cultural, political, and industrial) who are sometimes unwilling and often unable to halt the innovations and plans for potentially marketable — and profitable — applications. Given the consumers' appetite for new tech-toys, big business and governments are inclined to press for more commercially viable inventions. Even if some countries are motivated to introduce regulation and 'biopolicies', others,

in the name of freedom and progress, are unwilling to be so restrained. As with the issue of climate change, the political will and ability of humanity to cohere globally in the interest of its own self-preservation is proving dubious. At the same time, the tech-boom which has created modern techno-conglomerates such as Google, Apple, Facebook, and Amazon (GAFA), and transformed the world, has opened new vistas of opportunity for political, commercial and technological interests to converge and to push for more profitable innovations. In fact, the big tech companies are leading the research of transhuman and AI technologies. Google is the industry leader in artificial intelligence and transhumanism through, for example, Calico, a subsidiary which is exploring the science of prolonging human life through biotechnological interventions, or DeepMind, another subsidiary which aims to 'solve intelligence'. The Breakthrough Prize, which is funded by Facebook's Mark Zuckerberg and Google's Sergei Brin, premiates life-extending biotech innovations. As the power of these corporations to shape our lives grows, particularly in areas which seek to remake the human, it is sobering to reflect on recent histories of human exploitation by the large agrochemical and pharmaceutical corporations or cigarette and automobile manufacturers. Their examples are cautionary tales which, while sometimes mentioned in this context, are largely unheeded by the aligning interests of the progressivist proponents of the new technocracies.

While some prominent scientists, industrialists, and humanists such as Stephen Hawking, Sir Martin Rees, Elon Musk, Bill Gates, and Noam Chomsky have called for mitigating the possible existential risks facing humanity from 'strong' AI or 'superintelligent' techno-creations (some of these concerns were voiced in a 2015 open letter signed by various concerned experts including members of the influential Future of Life Institute), there is no clear consensus on the principles required to mitigate or ethically regulate such risks nor is there any agreement on the definition of such basic terms as 'human' or 'intelligence' or 'consciousness'. Lacking such principial foundations, there can be no basis to credibly achieve these goals. As the tech giants press forward in their quest for innovations, there are myriad emerging questions posed by the new technologies and their potential applications. Some of these, and the ethical issues they raise, are surveyed below, illustrating the urgency of the need to identify the principles and values required to guide us in their use.

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A very basic question that must be asked before we presume to tamper with humanity is to enquire what it means to be 'human'. That is a philosophical question which undergirds any moral enquiry of the issues raised by the new technologies and their potential applications. We will address the philosophical premises in the next section, focusing here initially on the ethical questions that are in issue — but it will be useful to keep in mind the broader philosophical perspective as we consider the issues raised below.

A very fundamental question for transhumanists is this: what moral right is there to manipulate biology to alter a human life or to influence natural outcomes such as disease, senescence and death? If there should be regulation in this area, what ethical firewalls should be built to limit bio-technological 'improvement' to human life through, for example, the use of human embryonic stem (hES) cells and induced pluripotent stem (iPS) cells or gene therapies? In the context of embryonic research, when exactly does human 'life' begin? In the context of cellular and gene manipulation, what in fact constitutes 'improvement', and who has the right to decide if and when to allow it? To what extent should governments be involved in matters pertaining to an individual's right to govern his or her own body? Since iPS cells can replicate embryos, should cloning, for example, be considered ethical or should it be regulated, and perhaps even banned?

Many transhumanists object to the term 'improvement', preferring to speak instead of human 'augmentation', thereby avoiding the value-laden questions raised by it. Consider, for instance, the issue of life extension. Even if some touted new technologies like chromosomal telomeric manipulation and blood serum modifiers or cellular regeneration through nanomedicine can make the prolongation of life possible, would it in fact be 'better' to live longer? Some transhumanists predict that humans will soon be able to technologically enhance their bodies and to live for centuries if they so wished. But is 'life' qualitatively reducible to its mechanical perfectibility or longevity? Would more leisure offer us a greater purpose?

While there may be fewer objections to disease-reducing vaccinations or to life-saving organ transplants, would the same hold true for other forms of medical intervention through regenerative medicine? Hovering

over the transhumanist project of human 'augmentation' is the spectre of eugenics which is said to be the ugly reality that the euphemism of transhumanism conceals. What are the moral objections to negative eugenics? Is it always unacceptable to eliminate 'undesirable' genetic traits? By what criteria is desirability to be judged, and who should decide this? Prenatal screening can lead some parents to terminate pregnancies in order to avoid, for example, the births of babies with three sets of chromosome 21, the predictor of Down's Syndrome, and in some cultures which prize only male children, to abort females — but just because the technologies might permit such selections to be made, are they justified? Should pregnancies be terminated if prenatal testing indicates the presence of genes that have a probability of someday mutating into cancer cells or present a future risk of diseases such as Parkinson's? How high a risk should exist before such a termination is morally justified, and in assessing such a risk what account should be taken for the probability of medical cures being found before the disease is viable?

Similar moral questions arise in the case of positive eugenics. Beyond merely indulging personal preferences, such as a boosted IQ level or desired physical features, what is the moral basis for such selections? It is anticipated that future innovations in gene editing and DNA sequencing ('DNA scissors') may offer parents the possibility to 'design' their own children (in fact a Chinese biologist claims to have gene-edited the first CRISPR babies, and in June 2019 it was reported that a Russian scientist intends to use CRISPR technology to genetically edit infants, despite objections from, among others, the Russian Orthodox Church which prohibits genetic interference.) To what extent would this be this morally acceptable? If some naturally infertile or homosexual couples can now have children through modern technologies (for example, through mitochondrial replacement techniques which permit 'three-parent babies', or 'IVG' — 'in vitro gametogenesis' — which anticipates making babies out of reverse-engineered muscle or liver or blood cells), rendering sexual reproduction redundant, what are the moral implications of this? These are complex questions and are likely to be answered differently by bio-conservatives than by techno-progressives.

Before we examine some of the criteria governing responses to these questions, let us consider a few more examples of the emerging

issues. One of the technologies used to improve humans is prosthetics. Cochlear implants can aid the deaf and soon it is expected that retinal implants will help cure the blind. These will likely be regarded as valuable inventions that may become commonplace (similar to hearing aids or eyeglasses), but would — and should — the same hold true for self-regulating implants, or subcutaneously installed receptors, chips or biosensors, which modify the functions of the brain and the nervous system, allowing certain controls of human functions to be determined by artificial intelligence? To what extent should this be allowed? Would we be compromising human free will by permitting this, and at what cost? Might man become increasingly dependent on his technologies, and is there a danger that he will eventually cede control to them as some futurists fear? Might the transhumantist goal of mechanistically perfecting the human qualitatively erode what it in fact means to be human and so bring about the posthuman reality?

There are signs that humans are unlikely to resist the lure of the new technologies, but this cultural cupidity will come at a cost. The modern cell phone culture, the addiction to social media, and internet dependency, have all exacted a heavy toll on relationships, community, privacy and dignity. Would we be able to resist, and should we resist, the arguably anodyne effects of technologies such as virtual reality simulators that promise to artificially enhance and distract our senses while numbing our minds from experiencing the sensations and relationships of the natural world? If one can relate to a machine, particularly a compliant one in a virtual world, some might well be tempted to forgo the efforts of relating to 'real' people in the 'real' world. And when we consider how the internet has become a refuge for sexual perversion and predation, harming healthy relationships, what should we expect from the new technologies of cybersexuality, of sex androids and sexually gratifying exoskeletons? How might they affect human relationships? Will the pleasures and ersatz companionships that the new technologies offer indeed advance the goal of improving humanity? Can human-computer relationships ever truly replace human intimacy?

More fundamentally, where does man end and machine begin in a world that is evolving to combine both? Some futurists predict that humans will one day have brain prostheses, cerebral implants deploying neural nanorobots that will link our minds to the internet. More

far-fetched perhaps are predictions of collective mechanical consciousness and integrated thought mediated through machines (similar to a Borg hive-mind), of cryogenetic memory storages, and of consciousness transfers or 'mind-melds' that would enable us, as some claim, to eventually outlive biological life. These possibilities no doubt raise — beyond the obvious privacy and security concerns about the vulnerability of shared digital mind-platforms to abuses such as bio-hacking, neuro-piracy and sabotage — profound moral questions about the value and dignity of what it means to be human.

This brief survey, which has highlighted a few of the emerging issues and concerns, underlines the need to examine the philosophical premises and goals of the transhumanist movement and the ethics of its proposed technological applications — a topic we turn to next.

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From the standpoint of traditional thought, transhumanism — as is the case with its sibling, posthumanism — rests on the fallacy of materialism. It reduces man to matter and humanity to its mechanisms, thereby rejecting their true spiritual foundations. The transhumanist goal of transcendence is based on the profane belief that man is the measure of all things, consequently regarding him as absolutely free to determine his own fate. This outlook also assumes that man is perfectible (which is of course understood in a materialistic sense), consequently viewing human transcendence in quantitative and progressivist terms which assume that any and all extensions of life and of freedom are desirable. Such a perspective does not critically examine qualitative virtues such as dignity and humility which would place philosophical limitations on life and liberty, and the principle of integrity and the principle of measure on which they are based, and by which their 'limits' are sublimated. Such virtues and principles — which are traditionally considered central to being 'human' — derive from an integrated view of man. By denying those spiritual foundations, transhumanism dehumanizes man, devaluing his true stature, substance, heritage and purpose, and deprives him of the humility of his creaturehood, the dignity of his spiritual status, and his capacity for the grace of transcendence. Without a vertical conception of reality, the only remaining possibility for transhuman self-transcendence becomes horizontal 'augmentation' — as though human perfectibility

could be mechanically attained!

At its core, the error is epistemological. Transhumanism rejects the possibility of any reality beyond its own limited ways of knowing and the methodologies of its materialistic science. It seeks thereby to reduce the world to its material elements, and consequently the human to merely the biological body and the material mechanisms of the mind. Both these elements, once regarded as purely mechanical, are conducive to its materialistic science of empirical analysis and technological engineering. By limiting its worldview in this way, it is thereby able to focus on the metabolic biology of the physical organism of man and on the algorithmic neuroscience of the mind, and to see the human simply in these mechanistic way. Once man is reduced to a machine, any epiphenomena such as ontological awareness and consciousness are not within its purview and are therefore conveniently either dismissed as externalities or explained away in pseudo-scientific jargon such as 'neural resonance', 'synaptic reaction' or 'cortical feedback'.

Materialistic science simply does not have the capability to answer questions of an ultimate nature — questions such as why (in Leibniz's famous phrase) there is 'something rather than nothing', or why there is 'life' and not just matter, or why there is 'intelligent consciousness' and not just life. Its attempts to address these philosophical issues are inadequate because it approaches them through a lens which is epistemically clouded and confined. Its science cannot operate outside the fragmented and contingent postulates of matter, space and time — unlike metaphysics which is experientially open to the integral and absolute reality of the Spirit, which transcends both space and time by the integral Presence of the 'eternal now'. Neo-Darwinist theories that seek to answer questions of an ultimate nature become inevitably mired in the materialistic ideology of science — scientism — and cannot accept the worldview of traditional science — scientia — which regards material phenomena as manifestations of noumenal reality. Core questions about the origins and deep structures of the universe, life and consciousness all point beyond physical, mechanistic and rationalistic explanations to the intellectual domain of metaphysics — something that quantum physicists are increasingly discovering and acknowledging. Answers to these questions are rooted in the transcendent and sacred order of Being, in its metaphysical reality and planimetric structure,

the knowledge of which resides not merely in rationality but in intellection and its engagement with revelation and theophany. From that perspective life is not merely matter but is the ever-renewing theophany, the Self-disclosure of the transcendent Spirit in the created world of archetypal forms and matter, whose Being originates and infuses all of existence. In this understanding the 'human' is not simply a machine but is a reflection of that spiritual reality. This is a vital distinction that can shape very different ethical approaches and outcomes to the issues under consideration.

In traditional thought the human is not 'Homo Deus' but 'Imago Dei', intrinsically one with the reality it terms 'the ground of being', and bearing thereby the dignity or imprint of his spiritual origin and form. It is only profane man who perceives this reality dissociatively, forgetting his essential unified nature and arrogating to himself a Promethean stature. That stature, however it might be glorified by transhumanists, is in reality no more than that of a machine. But unlike mechanisms which are merely atomized parts fitted to cohere as an efficient and functional whole, humanness is an aspect of ontological and integrating transcendent wholeness For example, the Catholic philosopher, Jacques Maritain has emphasized in his classic study *The Person and the Common Good* that 'It is a fundamental thesis of Thomism that the person as such is a whole'. This view of man and God is central to the notion of the 'holy' (related to the idea of the 'whole') and of 'homo religiosus', of man who seeks to be one with his transcendent Source. This transcendent binding is the basis of human dignity, and is expressed through the consecrating beauty of prayerful contemplation and virtuous action, which connects us as human beings to each other and to the whole. It is only through the grace of spiritual wholeness that transcendence is to be attained, not through grasping human 'augmentations' or the mechanical tinkering of Silicon Valley technicians on the metabolisms and algorithms of the body and mind.

An indicator of the divide between the traditional and transhuman can be seen in their different understandings of 'intelligence'. The transhuman focus is on statistical or rational intelligence (what the Future of Life Institute's Open Letter on AI terms 'statistical and economic notions of rationality') or other quantifiable data (like IQ measurements) while the traditional focus is on spiritual intelligence (the 'eye of the Heart',

which can read the 'signs' of the sacred) or its qualitative aspects (such as the human capacity for wonder or the symbolist spirit of its Intellect). This divide reflects the epistemological schism that became apparent in Enlightenment philosophy between the sacred knowing of the transcendent Intellect (which is ontological and integrating) and the profane knowing of discursive Reason (which, cut off from its ontological roots, can be described as 'logic without Logos'). So too, 'consciousness' is not reducible to simply neural activity or other measurable outputs. Rather, it is an ontological awareness which in humans is not mere egoic self-awareness but an integrating transcendent awareness that has been attested to by mystics as well as ordinary people in moments of spiritual elevation.

These outlooks lead to fundamentally different conceptions of human value. For Harvard-MIT professor George M. Church, the founder and director or the Personal Genome Project, and a leading proponent of AI, 'the ultimate "value" ... is the survival of genes and memes.' Contrast this with the traditional understanding of life as a brief moment in the soul's eternal trajectory, and not as an end in itself. So too suffering and privation can be viewed as openings of the outer husk of life to its inner kernel, and as aspects of human dignity, not as mere evidence of its imperfections. They can be approached with an awareness of grace rather than rigidly resisted. When seen in a spiritual light, life is imbued with meaning and purpose, with the capacity to transcend its limitations through the kind of moral dignity exemplified by Jesus or Antigone or Martin Luther King, and countless others. Life is made perfect, not by transhuman or posthuman metamorphoses, nor by an unremitting quest for immortality or unrestrained freedom, but through our awakening into the Presence that cradles all souls and through the transcending compassion that enriches our relationships with all who grace this world. Denied the light of that spiritual perfection, life is narrow and self-serving, undignified and demeaning, and ultimately meaningless and nihilistic.

The transhumanist ideal of immortality and perfection is hollow. It cannot serve humanity, only the egos who seek to 'augment' themselves. What would be the point of extending life universally within a dying cosmos which is — as science predicts — subject to inevitable entropic destruction? Even if we could do so, what would be the effect of pro-

longing life forever in an overcrowded planet that we cannot presently sustain, let alone expect it to sustain us? How would we address the inevitable conflicts as resources become scarce? Futurists predict that humans (or presumably their transhuman or posthuman variants) will colonize space and that science will eventually — through technologies yet to be invented — solve all the problems of this planet. They claim that once man has mastered immortality through science, he will focus on cosmogenetic repair. A moment's reflection on the sorry state of the modern world should serve to reveal the futility of these expectations. What is urgently needed instead is to focus on developing a true appreciation of the gift of life, and of the wonder of the world that has been created for us to live in, not only so that their values can be conserved, but that they can manifest and reflect the true beauty of Presence — of the 'inner man' that is our veritable humanity — and thereby inspire us with hope and the wisdom to understand our human stature and its intrinsic beauty. As tradition teaches, science (as is the case with all forms of knowledge) is providentially gifted to humanity through time to test it in the unfolding drama of its spiritual destiny. Its purpose is to reveal to us the wonders of the theophany and to enable us to better serve creation and our fellow man and to be good stewards of our world. It is not a gift to be usurped or used to subvert our spiritual nature in the name of human aggrandizement.

The moral choices posed by the new technologies are complex are and not amenable to easy answers. However, it is best to consider the difficult ethical issues they raise through a spiritual lens — to recognize that human beings are more than the sum of their constituent material parts. Human life is imbued with dignity because it reflects the qualities of the divine — qualities that are given to each creature in a limited measure to remind us that although neither man nor the world is divine, yet they partake of the divine. It is this dignity that should make us cautious of any tendency to atomize the 'human', to treat it as a mere mechanism or to equate it with human robots like 'Sophia' (an AI creation which has even been accorded legal personhood and citizenship rights, revealing the extent to which our modernistic notions of the human 'person' have fallen) or with 'animal-human chimeras' that the new science is boasting. Our human limitations are reminders of our human dignity, and our ultimate acceptance of them through

'spiritual surrender' is ennobling. Far from being a call to quiescence or passivity in the face of life's challenges, this is intended as a cautionary reminder that in pursuing our technological quests to ameliorate the human condition, we should do so in a spirit of humility and openness to grace, realizing that human perfection is to be attained not by our outward technological enhancements, but by our inward sublimation of human limitations.

The technological capacity to extend life and to prosthetically enhance or shape it is becoming an undeniable reality, but it is critical that the vision which guides our new technologies and their applications be rooted in sound conceptions of what it means to be human, and of the purpose and meaning of life. These are ultimately questions that cannot be answered by science but by metaphysicians. It is important therefore that the emerging ethical issues are viewed through the lens of those metaphysical principles which are universal within the wisdom traditions, and that the technicians of the body who seek to shape the future of humanity engage with these issues in ways that are guided by the technicians of the Soul.