The Transhumanist Urge

NATASHA VITA-MORE DOESN'T WANT TO DIE, BUT UNLIKE MOST PEOPLE, SHE IS doing something about it. Together with her husband Max More, and a growing number of transhumanists, Vita-More is promoting the production of "a platform diverse body" that is "a more powerful, better suspended and more flexible . . . body offering extended performance and modern style."[1] She is working to support the development of a "whole-body prosthetic" that will house her personal identity indefinitely. If you can afford it, this body will be equipped with features like solar-protected skin with tone/texture changeability, a meta-brain with nanotech memory storage and error-correction software, wider frequency parabolic hearing, widely distributed sonar and bio-sensors, a cardio flow and function monitor, and an in vivo fiber optic spine. As she sees it, there is no reason why her mind cannot be reduced to an information pattern that can, in turn, be uploaded into limitless avatars suspended in multiverses heretofore unknown. There is no reason why her identity should be mired in, or limited by, an uncooperative and unpredictable body that eventually dies.

Natasha's surname, just like Max's, isn't the one she was born with. She changed it to signal her rejection of the finitude and frailty of her given life, and her embrace of an unbounded future. As a young woman, Vita-More suffered an ectopic pregnancy that nearly killed her. Her baby died. At that moment she realized that her body was a needlessly vulnerable mechanism bound for annihilation. Years later, reflecting on this near-death incident,

[1] My account of Natasha Vita-More and Max More is much indebted to Mark O'Connell's *To Be a Machine: Adventures among Cyborgs, Utopians, Hackers, and the Futurists Solving the Modest Problem of Death* (New York: Doubleday, 2017), 22–41. A central website containing multiple links to many transhumanist resources and statements by Vita-More and More is https://humanityplus.org/.

she says, "our personhood is bounded by this secretive and unknown thing, this body. After my illness, I started seeing things differently. I became very interested in human enhancement, in how we might protect ourselves from this tyrannical onslaught of disease and mortality."[2]

Vita-More believes that there is nothing natural about death. For her, the thought that death can happen at any moment is unnecessary and unacceptable. "As a transhumanist, I have no regard for death. I'm impatient with it, annoyed. We're a neurotic species – because of our mortality, because death is always breathing down our necks."[3] If human beings are to flourish fully, they must, therefore, be committed to the overcoming of mortality and the transformation of our species life. The goal isn't simply life *extension*, which would be restricted to a body's temporal duration, but life *expansion*, which is about the radical enhancement of consciousness, intelligence, and all the body's functions. In "The Transhumanist Declaration" that Vita-More and More helped draft in 1998, its first statement reads as follows: "Humanity will be radically changed in the future. We foresee the feasibility of redesigning the human condition, including such parameters as the inevitability of aging, limitations on human and artificial intellects, unchosen psychology, suffering, and our confinement to planet earth."[4] If people rightly reject living in a diseased condition, and so have developed an enormous and expensive medical complex to fight it, why shouldn't a similar effort be mounted to combat the tyranny of aging and death?

Max More shares Vita-More's impatience with death, which is why he now directs the Alcor Life Extension Foundation.[5] Alcor is a cryopreservation facility located just outside Phoenix, Arizona. Here, at a cost of US$200,000, you can deposit your body, or, more cost-effectively (for US$80,000), your severed head, for preservation until such time as the technology is developed to reanimate you into a new, yet-to-be-realized-but-surely-better body. Hundreds of clients have already done so, or made the financial commitment, including the well-known and highly regarded futurist Ray Kurzweil.

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[2] O'Connell, *To Be a Machine*, 39.   [3] Ibid., 40.

[4] The 1998 Declaration can be found at https://itp.uni-frankfurt.de/~gros/Mind2010/transhumanDeclaration.pdf. The Transhumanist Declaration has subsequently been revised. Its latest formulation begins, "Humanity stands to be profoundly affected by science and technology in the future. We envision the possibility of broadening human potential by overcoming aging, cognitive shortcomings, involuntary suffering, and our confinement to planet Earth" (https://humanityplus.org/philosophy/transhumanist-declaration/).

[5] Information about the Alcor Life Extension Foundation can be found on their web page http://alcor.org/.

If you visit Alcor's facilities, you will find multiple aluminum cylinders that hold the bodies or heads waiting to be reanimated. Called "dewars," these large thermos-like flasks are filled with liquid nitrogen. Each dewar can hold four whole-body "patients," or as many as forty-five "cephalons" (severed heads), all kept at a temperature of -196 degrees Celsius. The key to optimal cryopreservation is to prepare the body as soon after legal death as possible – that is, after the heart has stopped beating but before the body's tissues begin to disintegrate. To do that, blood and body liquids need to be flushed out and replaced by a cryoprotectant fluid that will guard against the formation of ice crystals. The goal is to "vitrify" the body rather than freeze it because vitrification preserves the brain as much as is possible in the condition it was in at the point of death. The best patients are those who know, roughly, when they are going to die. Ideally, they will move to the Phoenix area so that the moment the heart stops beating, the Alcor team can be on the scene to begin its preservation work. If relocation is not an option for you, Alcor has contracted "transport teams" to come to where you are. The worst scenario is for you to die accidentally or unexpectedly, and so without a cryopreservation team nearby.

More does not refer to cryopatients as corpses, because he believes that cryonics "is really just an extension of emergency medicine."[6] The vast majority of medical doctors, however, would refuse the characterization altogether. The science doesn't support the dream of reanimation in the least. Even More admits that cryopreservation is a long-shot effort, which is why he hopes that life extension research will advance so quickly that he does not himself need to be preserved. But his faith in the idea and his hope for a life-extension outcome remain steadfast, even as mainstream scientists think the whole project an exercise in quackery. Alcor's web page describes the cryopreservation effort this way: "Calling someone 'dead' is merely medicine's way of excusing itself from resuscitation problems it cannot fix today. This makes people feel better about abandoning the patient and making the unwarranted assumption that nobody could *ever* fix the problem. Cryonics, in contrast, is *conservative care* that acknowledges that the real line between life and death is unclear and not currently known. It is humility in the face of the unknown. It is the *right thing to do*."

For More, the conversion to transhumanism was not precipitated by a near-death experience. It was a basic contempt for humanity's creaturely condition as marked by finitude, frailty, and need. Why accept the many

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[6] Ibid.

constraints that embodiment places upon individuals and the human species? In "A Letter to Mother Nature," after expressing some gratitude for this world and its life, and after acknowledging that Nature did the best that she could, More writes:

> However, with all due respect, we must say that you have in many ways done a poor job with the human constitution. You have made us vulnerable to disease and damage. You compel us to age and die – just as we're beginning to attain wisdom. You were miserly to the extent to which you gave us awareness of our somatic, cognitive, and emotional processes. You held out on us by giving the sharpest senses to other animals. You made us functional only under narrow environmental conditions. You gave us limited memory, poor impulse control, and tribalistic, xenophobic urges ... What you have made us is glorious, yet deeply flawed ... We have decided that it is time to amend the human constitution.[7]

Our goal, More has stated over and over again, should be to exceed "the limitations that define the less desirable aspects of the 'human condition.' Posthuman beings would no longer suffer from disease, aging, and inevitable death." Like Vita-More, More believes people should enjoy a limitless life span unconstrained by the impediments of current, biologically based bodies. A limitless life, however, should not be confused with a perfect life, because perfection suggests stasis and the termination of enhancement, along with the death of all the creativity and innovation that fuels improvement. Neither More nor Vita-More want the improvement to end. As their names suggest, they want more, and more, and more of it.

As a child, More was fascinated with the idea of colonizing outer space and other worlds. "I just loved the whole idea of getting off this planet."[8] As a teen, he dabbled in mysticism and occult mysteries that spoke of other worlds and how to get there. As a young adult, he became interested in cryonics and the enhancement of human intelligence. Upon finishing an economics degree at Oxford University, he moved to the University of Southern California, where he wrote a philosophy dissertation on the nature of death and the continuity of the self through time. His dissertation advisor thought the idea that people could be brought back to life, although not objectionable on philosophical grounds, was simply ghastly. Years later, reflecting on his advisor's reaction, More admits that it is hard to know

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[7] Max More, "A Letter to Mother Nature," in *The Transhumanist Reader: Classical and Contemporary Essays on the Science, Technology, and Philosophy of the Human Future*, eds. Max More and Natasha Vita-More (Oxford: Wiley-Blackwell, 2013), 449.

[8] O'Connell, *To Be a Machine*, 39.

how to respond to her revulsion. "Ghastly as opposed to what, exactly? Putting your body in the ground and having it slowly digested by worms and bacteria?"[9]

Transhumanists recognize that their ideas may be frightening to some people. Their fear, in part, has been stoked by dystopian, science-fiction stories and films that have shown what happens when technological pursuits go terribly awry. Moreover, too many people simply lack the imagination for a life other than the one they are currently in. They prefer the comfort of knowing that the boundaries or expectations for a life are set, even if those boundaries and expectations have a number of limitations and frustrations built into them. What these fearful people fail to understand, however, is that human beings have been constantly working at improving their condition, eliminating the barriers that keep them weak, ignorant, and sick. Transhumanists take up and continue several Enlightenment principles in their commitment to progress: trust in reason, science, and technology to improve our condition, and a rejection of superstition and religious belief to solve our problems. They are strong rationalists who put their hope in the scientific method, critical thinking, and constant questioning. If people can get over their fear of "playing god," embrace their creative and technical potential, and commit to radical self-improvement, they will realize that they are free to be the makers of themselves. "By thoughtfully, carefully, and yet boldly applying technology to ourselves, we can become something no longer accurately described as human – we can become posthuman."[10]

Transhumanists believe that the desire to be posthuman is simply the next stage in a long evolutionary process. For centuries people have worked to overcome the limitations to growth and development that they have faced by improving their intellectual, physical, and psychological capacities. Now, with greatly improved technologies, the possibility exists that they can redesign and rebuild human beings so that unprecedented lives of freedom, creativity, and richness can be enjoyed.

HUMANITY'S DISCONTENT

In describing the worldview of More and Vita-More, my aim is not to give a full description of the wide range of transhumanist commitments that its various exponents champion – nor is it to reject all the Enlightenment principles they extend. It is, instead, to put into view the underlying

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[9] Ibid., 35.   [10] Moore, "The Philosophy of Transhumanism," 4.

discontent with this world and this life that their transhumanist positions represent. As More put it in his letter to Mother Nature, people have inherited a "deeply flawed" world, and unnecessarily limited personal bodies that are punctuated with too much vulnerability, weakness, ignorance, sickness, and death. Our goal ought to be to overcome all of these flaws and limits, and live an unbounded, ever-expanding, improved life.

It isn't hard to sympathize with their aspirations, especially if we consider the countless number of people through the ages who have either endured or been broken by lives of unremitting misery, suffering, and abuse. It is simply compassionate and humane to seek a healing remedy for people who are sick or in pain. It is a matter of justice to rescue people from the contexts and relationships that abuse them. And it is understandable that we should wish that the lives of people who are still active and creative not be cut short. When facing a wounded and unjust world, it is entirely right to long for a better, more just world. These are not alarming aspirations. They are natural and caring responses to a world permeated with too much pain. Transhumanist desires, in other words, are not new. If anything is distinct about them, it is the proposed technological means that aim to exceed the human conditions that cause such discontent.

The roots of this worldly discontent dig deep into the ground of human experience. To see what I mean, we can look to ancient Athens. In what is one of Western philosophy's most memorable scenes, Socrates sits in a prison cell, waiting to die (he has recently been sentenced to death by the Athenian jury for, among other things, impiety and corrupting the minds of the youth). He is not afraid or anxious. Instead, he is calm, writing poetry. His disciples, along with countless, subsequent fans, are amazed by his tranquility and courage. They want to know the source of his strength, and the reasoning behind his quiet resolve. How can a man facing his own imminent death be so serene?

Upon engaging Socrates in conversation, they soon discover his disdain for embodiment to be the crux of his calm. He reminds his followers that his entire life has been devoted to the extrication of his mind from his body, because it is the immaterial mind – what he calls "pure thought alone" (*Phaedo*, 66a) – that is open to the eternal, unchanging truth of reality.[11] The practice of philosophy, Socrates famously says, is the practice of dying (64a), because in death the soul is finally liberated from the constraints and vulnerabilities of its body. Bodies are impediments to the search for a good

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[11] Translation by G. M. A. Grube, in *Plato – Five Dialogues: Euthyphro, Apology, Crito, Meno, Phaedo* (Indianapolis: Hackett Publishing Company, 1981).

and blessed life because they keep us mired in pursuits that are bound to frustrate and sadden us, which is why souls must already in this life refuse as much association with them as is possible. The best human life, philosophically achieved, is a disembodied life. Paradoxically, the fulfillment of a human life requires that people learn to resent, turn against, and ultimately seek to escape from the material, physiological contexts that make their living possible.

Why this contempt for embodiment and, more generally, for materiality? It is worth quoting Socrates at length:

> as long as we have a body and our soul is fused with such an evil we shall never adequately attain what we desire, which we affirm to be the truth. The body keeps us busy in a thousand ways because of its need for nurture. Moreover, if certain diseases befall it, they impede our search for the truth. It fills us with wants, desires, fears, all sorts of illusions and much nonsense, so that, as it is said, in truth and in fact no thought of any kind ever comes from the body. Only the body and its desires cause war, civil discord and battles, for all wars are due to the desire to acquire wealth, and it is the body and the care of it, to which we are enslaved, which compel us to acquire wealth, and all this makes us too busy to practice philosophy. (66b–d)

It isn't hard to feel the attraction of Socrates's position. The desires and pains of the body are clearly the source of many large and small troubles. Think of the millions of people who have suffered embarrassment, pain, and violation because their bodies were deemed too fat, too thin, or the wrong shape, color, gender, or sexual orientation. Think too of the vanity, lust, and insecurity that often lead to sexual violence, the objectification of others, pointless acquisition, or simply self-loathing. It is as though being in a body is also to be in a constant state of shame.

In addition, bodies regularly fail us and get us into trouble. The longer we live, the more we encounter the body's pain. Youthful vigor gradually succumbs to geriatric debility. Bodies that may have once been fertile and virile slowly become incontinent and fall apart. Pleasures in life may be real, even intense, but they are also ephemeral, and frequently outweighed by the immensity of suffering and violence going on all around us. Given the misery of so much life, why put one's emphasis and trust in a body that is bound to disappoint and fail? Even short visits to a hospital, prison, or nursing home are enough to conclude that life must be better elsewhere, and in some other, disembodied state. This is why Socrates's advice, although perhaps only followed by relatively few people, has been appealing to many: "if we are ever to have pure knowledge, we must escape from the body and observe matters in themselves with the soul by itself" (66d). Since bodies are

mortal and bound to decay, we are much better served if we put our effort and focus on improving souls that, by their very nature, are immaterial and eternal.

A wide assortment of spiritualities have been sympathetic to or influenced by this Socratic impulse ever since. Their underlying assumption is that for people to be maximally happy and achieve their ultimate end, they must escape Earth and be freed from their bodies, because, in the end, bodies don't really matter. What matters most about a person is his or her soul. Insofar as people are concerned about enhancing the human condition, the focus of their effort should be the soul's improvement. As Socrates understood it, the point of practicing philosophy is to liberate people from "the regions of earth as from a prison," and to lead them up into "a pure dwelling place" more beautiful than we can currently describe (114c). He knows that he cannot prove definitively the existence of an immortal soul and immaterial paradise, or explain the mechanics of the soul's transport (although he made several valiant attempts). Nor can he give a detailed description of what a completely disembodied human existence looks like or entails. All he can say is, "I think it is fitting for a man to risk the belief" (114d).

Socrates took the risk. He bet his whole life on it. His conviction of the soul's immortality, and its eventual release from embodiment and Earth, was the source of his courage and calm in the face of death. When it came time to drink the cup of poison, he did it cheerfully and quietly. He instructed his friends that it didn't matter what they did with his corpse, because whatever the body was, it wasn't him. What he wanted his disciples to believe is that *Socrates did not die*. The frailties and suffering of bodies did not defeat him. Even his body's death couldn't stop him. Socrates lives on as a soul that will forever enjoy a state of bliss with the gods.

By any account, this is an inspiring portrait of a human being facing life's limitations and struggles square in the face. Like many people before and after him, Socrates is aware that a human life is saturated with pain and suffering, which is why he longs for an ethereal life with the gods. His response to the vulnerabilities and limits of humanity's creaturely condition is to practice daily the philosophical art of dying so that when bodily death finally does come, there is no trepidation or fear. Death may signal the end of a body's life but for Socrates it signals the beginning, or more accurately (given that a soul preexists the body it resides in), the resumption of his eternal life. A human being's true end, meaning by this "end" its fulfillment and best realization, is to escape its embodied condition altogether. The goal of a human life is to exceed its creaturely finitude, frailty, neediness, and mortality, and live among the gods.

The path Socrates forged is not identical with that of transhumanists. Whereas Socrates sought release from embodiment and materiality of any kind, transhumanists seek to transform their inherited biological bodies into cyborgs that are a blending of machine and organic elements. More calls the ability to infuse mechanical components and prostheses into a biological frame "morphological freedom," because it gives to people the freedom to choose how much of their biological inheritance (if any) they seek to retain.[12] Materiality as such is not the problem for transhumanists – biological limitations are. This is why transhumanists also long for a redesigned planet, one which greatly expands the range of possible environments by creating virtual worlds and colonizing space. If Socrates sought to escape to an ethereal heaven among the gods, transhumanists seek to engineer new worlds and species that can enrich their newly created selves. Ancient Socratic immortality and hypermodern posthumanism thus serve as chronological bookends that witness a longstanding, despairing discontent with the limits and frailties of this given world.

The desire to escape Earth is not confined to people on a lunatic fringe. It is endorsed by scientists and cultural elites, and it is gaining significant funding from governments and financial investors. As the physicist Michio Kaku argues, over its long history, Earth has shown itself to be an inhospitable planet to the 99.9 percent of species that have already gone extinct on it. It is only a matter of time before the human species is next. "Nature will eventually turn on us, as it did to all those extinct life-forms."[13] And what nature doesn't do to us, we will eventually do to ourselves by polluting, poisoning, burning, and wasting Earth. Kaku thinks people have three choices: either leave, adapt, or die. The last option is simply grim. The second is unfeasible, because sooner rather than later conditions on Earth will become so difficult that adaptation is not a viable option. That leaves us with the first option. "Either we must leave the Earth or we will perish. There is no other way."[14] The hope of futurists like Kaku is that the fourth wave of science and technology – which centers on artificial intelligence (AI), nanotechnology, and biotechnology – will enable us to genetically redesign humans to travel to and succeed on other planets, and, at the same time,

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[12] Moore, "Philosophy of Transhumanism," 4.

[13] Michio Kaku, *The Future of Humanity: Terraforming Mars, Interstellar Travel, Immortality, and Our Destiny beyond Earth* (New York: Doubleday, 2018), 3. Kaku, a professor of physics at the City University of New York, acknowledges that many of the threats to humanity's long-term survival on Earth are self-inflicted. Even so, it is only a matter of time before a catastrophic event of some kind (a massive volcanic blast or a meteor strike, for instance) comes our way.

[14] Ibid.

engineer planetary landscapes like Mars into a new, human-friendly paradise. Major governments agree, which is why they are developing the technological means and working on the political agreements – the Artemis Accords, for instance – that stipulate how the Moon is going to be fairly and safely mined in preparation for an eventual settlement on Mars.[15]

This vision of interstellar travel and the colonization of other planets has clearly captured the imaginations of millions of readers and movie-goers. But does it rest on a fundamental confusion about what a human being is, and what the inescapable ecosocial conditions for a human life are? Are people solitary or singular creatures that exist independent of places and fellow creatures? As we will see in Part II of this book, they cannot be neatly extricated from a soil biome or from constellations of organic life because both circulate endlessly *inside* and *through* our bodies. People simply cannot live or perform the various functions of a human life (like digest food or maintain an immunological system) apart from the trillions of microorganisms that reside in their bodies and in the soil. To think that a person can be permanently severed and lifted out of its ecological context, and then relocated to a moon or another planet without also bringing with it *all* the biochemical processes, microbes, plants, animals, and atmosphere that have rooted and sustained its life for hundreds of thousands of years is a flight of fancy. Creaturely life is grounded in the soil of this earth and stitched into a vast fabric of interlaced, multispecies life, which is to say that it is generated out of and daily sustained by millions of years of complex evolutionary processes, and unfathomably dense networks of relationships and co-becoming that have produced the life we see and depend upon.

Kaku admits that "we may have to genetically engineer our bodies to flourish on distant planets with different gravity, atmospheric composition, and ecology."[16] It is unclear, however, if he understands what he is asking for. After long periods of scientific study of Earth's ecosystems, we still lack a detailed understanding of the many ways human bodies are finely tuned to and dependent on fellow creatures large and small, and upon the geo-bio-chemical processes that operate from ground to atmosphere and everywhere in between. Why should we think that scientists will quickly understand another planet's ecosystems, and then be able to design and engineer

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[15] See the Reuters' news report, "Trump Administration Drafts Pact For Mining the Moon" (www.theguardian.com/science/2020/may/05/trump-mining-moon-us-artemis-accords). NASA is investing tens of billions of dollars in the Artemis program in hopes of settling humans on the Moon by 2024.

[16] Kaku, *Future of Humanity*, 14.

humans to fit and thrive within it? The COVID-19 pandemic is but one painful disclosure of the arrogance in thinking that people can know quickly or enough, and can take control of an ecosystem so as to facilitate human flourishing. If a single virus can bring a global economy to its knees and frustrate the ability of the world's best medical scientists to find a quick treatment, why should we think engineers will be able to design, in a timely manner, a human body to prosper in a desolate environment devoid of organic life? The plight of thousands of technologically equipped scientists struggling to understand and defend human life from a recently discovered pathogen should make anyone pause before thinking that a people-friendly paradise can be constructed on an unknown planet in a timely manner. If Kaku thinks it unfeasible for people to adapt to a degraded but still hospitable Earth, a planet to which our bodies are finely tuned, what makes him think we can adapt to clearly inhospitable conditions somewhere else?

In addition to this technical problem, major philosophical issues lurk within this kind of futurist speculation. To start, why should anyone think that the habits of greed, presumption, and abuse that have ruined Earth and necessitated our escape from it, will be overcome simply be relocating greedy, presumptuous, and abusive people to a far less hospitable planet? Having already degraded and destroyed one paradise, will they not simply do the same thing again somewhere else? If people cannot live justly and sustainably on a planet that is ideally suited for them to thrive, it is wildly unrealistic to think that they will live responsibly or well on another planet that is clearly unsuited for human life. Must people not first undergo a profound moral or spiritual transformation if they are to live peaceably anywhere at all? The focus and goal of our efforts, in other words, should not be to seek *transportation* to another world, but the *transformation* of the desires and habits that are rendering our only world uninhabitable.[17]

This sort of questioning presumes that the goal is to remain recognizably human. But what if that isn't the goal? What if the goal is to become

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[17] As will become clear later on, my criticism of futurists applies also to religious believers who pin their hope on an escape to an otherworldly heaven. Besides being a rejection of God's own affirmation of creaturely, embodied life, and a denial of the "resurrection of the body" (which assumes a logic directly opposed to Socratic "immortality of the soul"), the longing to escape to somewhere else mistakenly substitutes relocation for redemption. The point of faith, at least from a Christian point of view, is not simply to get somewhere else but to participate in and experience God's transforming presence in every place. Heaven, in other words, is not "up beyond the blue." It is wherever the love of God is at work. For development of this idea see my *Way of Love: Recovering the Heart of Christianity* (New York: HarperOne, 2016), especially parts IV and V.

something other than human – namely a posthuman? Such a being may not share all of the features of a divine being as Socrates imagined it, but it might, nonetheless, reflect some of the qualities commonly associated with the gods, qualities like enormous power, unparalleled intelligence, and immunity from suffering. As we have already seen, transhumanists believe that so much of the pain and suffering we experience is the result of people and places not having been adequately designed and engineered. This is why they argue for the redesign of the human being into something else, something smarter and stronger and better equipped to maximize performance and minimize frailty. If human beings have evolved from primitive states with far less intelligence and ability, they can also evolve into something with far more of each.

In *Homo Deus: A Brief History of Tomorrow*, the historian Yuval Noah Harari argues that human beings have long exhibited an irrepressible urge to conquer every place and dominate every form of life. Although it took some time to emerge, the Anthropocene was inevitable, because what people most want is the ability to live *as they want* and *on the terms of their own choosing*. To accomplish this goal, they have worked to construct and control worlds that are more comfortable and convenient. But not only worlds. The development of AI, genetics, and nano- and bio-technology demonstrate that the next frontier is to remake human beings themselves so that they are healthier, stronger, and smarter.[18] The aim is radical transformation, which is why some (although not all) futurists believe that immortality must be included on the list. Death is the ultimate limit, even a "crime against humanity," which is why scientists and engineers should wage "total war against it."[19] On Harari's telling of humanity's history, the pursuit of power has created a world in which the technologies and machines invented to further prosperity

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[18] Although I will not give much treatment to the topic here, the editing of the human genome is another powerful technology that is changing the way people think about what it means to be human. In her book *Altered Inheritance: CRISPR and the Ethics of Human Genome Editing* (Cambridge, MA: Harvard University Press, 2019), Françoise Baylis gives an excellent treatment of the multiple objectives (ranging from medical treatment to specific trait enhancement) and ethical concerns (ranging from health risks to social inequality) related to the editing of the human genome. Especially helpful in her analysis is a foregrounding of how changing a human being's biology changes more than this or that feature of an individual. Human relations change as well, as new ways of perceiving and evaluating what a human being should be come into play. Baylis is also clear that, "With time and experience, the express goal of human genome editing would become one of human transformation" (72).

[19] Yuval Noah Harari, *Homo Deus: A Brief History of Tomorrow* (New York: HarperCollins, 2017), 21. It is worth noting that Google, through its company Calico, and with major financial investments, is actively working "to solve death."

and well-being require people to shed feature after feature until what is left is no longer recognizably human. In other words, the conveniences of machines and devices, and their abilities to make life simpler and more comfortable for us, means that we are slowly becoming functional transhumanists. "Having deciphered the mute laws of physics, chemistry and biology, humankind now does with them as it pleases ... When biotechnology, nanotechnology and other fruits of science ripen, *Homo sapiens* will attain divine powers ... Scientists will upgrade us into gods."[20] If Socrates trusted the philosophical arts of soul development as the means by which to attain a divine life, here we see a trust in technological innovation as the preferred means to a similar divine end.

To illustrate how this process might unfold, consider the development of AI. When discussing AI, it is important to distinguish different kinds of machine intelligence. "Weak AI" refers to the technologies that are already widely deployed in instruments like calculators, robots, computer games, and self-driving cars. These technologies take a particular skill like computation or motor dexterity and refine and enhance it. "Strong AI" develops when diverse human capacities – computing, reasoning, remembering, planning, problem-solving, creativity, learning from experience – are unified into one coordinated machine or platform. The ultimate form of AI, however, is "superintelligence" (SI). At this stage, machines, platforms, and programs become so sophisticated that they no longer resemble the capacities as we now know them. To get to this stage, imagine a self-learning, self-improving machine that becomes so sophisticated that it now reflects a qualitative, and not simply quantitative, advance over what people now are. To move into the realm of SI is to move into the unknown. We cannot understand SI any more than a rat, with its primitive level of intelligence, can understand Albert Einstein.

So far, engineers have only been successful at the level of weak AI. But they are fairly confident that some version of strong AI will be created soon, perhaps as early as within a few short decades. What happens after that is hard to predict, because if "recursive self-improvement" in a machine can be achieved, which is the ability for a machine to enhance its capacities *on its own*, then something like an "intelligence explosion" might occur, resulting in SI. Nick Bostrom, a philosopher and the founding director of the "Future of Humanity Institute" at Oxford University, suggests that this would mark the origin of an "extremely alien" mind that will reflect "very different

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[20] Ibid., 97, 98.

cognitive architectures than biological intelligences," and "very different profiles of cognitive strengths and weaknesses."[21] Until such time, however, scientists are hard at work developing a variety of technologies that will (hopefully) at least get us to strong AI. These technologies include: (1) whole brain emulation, where software is developed to scan and then model the computational structure of biological brains or parts of brains; (2) enhanced biological cognition through the use of improved learning techniques, drugs, and genetic manipulation; (3) brain-computer enhancements that install chips, sensors, and processors in human brains so as to make cyborgs; and (4) network and organization enhancement so that individual minds can be joined to other minds, artifacts, and bots. Bostrom identifies pros and cons with each of these technologies, and he acknowledges that there will be many bumps, detours, and pitfalls along their courses of development. But what they present is an opportunity to create faster and more complex computational abilities, improved storage capacities, and more reliable functioning. Moreover, as hardware and software develop, there will be multiple ways to edit, duplicate, and refine these improved capacities.

The pursuits of AI and SI are so enticing, even intoxicating, because with intelligence comes power. As the popular blogger Tim Urban puts it:

> If our meager brains were able to invent wifi, then something 100 or 1000 or 1 billion times smarter than we are should have no problem controlling the positioning of each atom in the world any way it likes, at any time – everything we consider magic, every power we imagine a supreme God to have will be as mundane an activity for the ASI [SI] as flipping on a light switch is for us. Creating the technology to reverse human aging, curing disease and hunger and even mortality, reprogramming the weather to protect the future of life on Earth – all suddenly possible.[22]

Urban's description may sound like a science-fiction or fantasy world, but already in 1959 the Nobel prize-winning physicist Richard Feynman argued that there is no reason that we can't eventually make any substance we want. Nanotechnology, which Feynman envisioned, and now 3-D printers promise

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[21] Nick Bostrom, *Superintelligence: Paths, Dangers, Strategies* (Oxford: Oxford University Press, 2017), 35.

[22] Tim Urban, "The AI Revolution: The Road to Superintelligence, Parts 1 & 2" (https://waitbutwhy.com/2015/01/artificial-intelligence-revolution-1.html). Urban believes that AI represents an unprecedented opportunity to give to humanity the gift of a "painless, everlasting life . . . Nothing in existence is as important as getting this right." He also recognizes that AI is dangerous because the intelligences scientists and machines create may not be benign but may turn against human flourishing and precipitate humanity's demise.

to revolutionize what we understand the work of creation to be. Like gods, human beings stand at the threshold of the making and unmaking of life forms, the creating and destroying of worlds.

Numerous people, scientists and politicians among them, have expressed serious concerns about AI and the quest for SI. As these technologies develop, they will clearly give their owners and controllers a tremendous advantage over those not similarly technologically advanced. Will people without these technologies be consigned to a rubbish heap, or will they be conscripted to do the bidding of those holding the power? These technologies may also threaten human life itself, because just as we can't anticipate the *capabilities* of SI, nor can we anticipate its *motivations* or *objectives*. Will these machines turn against us because they perceive people to be either threats or a stockpile of material resources to exploit? That human beings play a major role in the development of these machines (at least until they become self-improving) does not mean that they will have a concern for the welfare of others, a capacity for humility or selflessness, or a desire to achieve contentment or wisdom. Moreover, machine intelligence does not enhance every human capacity. So far, much of the research has been centered on developing what might be called instrumental forms of reasoning that excel at computation, prediction, analysis, problem-solving, and means-ends calculations. Will human beings become a mere means to the ends selected by a self-organizing, self-improving machine?

Bostrom argues that AI researchers should adopt "The Common Good Principle," which says, "Superintelligence should be developed only for the benefit of all humanity and in the service of widely shared ethical ideals."[23] But will this principle be followed? In his sobering assessment, Bostrom suggests that people working toward SI are like children playing with a bomb. At present, they lack the wisdom and the protocols to make sure that these technologies are safe and do not get into the wrong hands. Moreover, AI research is happening in an environment where most or all of the financial incentives encourage experimentation rather than risk mitigation. The risks are certainly enormous, especially when we appreciate that these technologies will enable forms of power unlike anything we have ever seen before. A growing amount of financial investment, along with steady advances in engineering capabilities, mean that the bomb will eventually go off. We just don't know when. "The chances that we will *all* find the sense to put down the dangerous stuff seem almost negligible. Some little idiot is

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[23] Bostrom, *Superintelligence*, 312.

bound to press the ignite button just to see what happens."[24] The best path forward would be for AI developers and AI safety researchers to be on the same side, because then the lure of unprecedented power will, perhaps, be tempered by the necessity of restraint. Bostrom acknowledges that the SI intelligence explosion may still be decades off into the future. Meanwhile, the challenge we face is, "to hold on to our humanity: to maintain our ground-edness, common sense, and good-humored decency even in the teeth of this most unnatural and inhuman problem. We need to bring all our human resourcefulness to bear on its solution."[25] This is an odd admonition. Why work to "hold on to our humanity" when the SI explosion is all about exceeding the human condition?

Toward a Friction-Free Life

The number of avowed transhumanists is relatively small. Humanity+, the leading online forum for transhumanist education and advocacy, has only 6,000 followers.[26] But the paths of technological development that travel through weak AI, and then find a climax in transhumanist ideas, are populated by billions. Why? Because the comfort, convenience, and other benefits that come from giving ourselves to devices and algorithms are too hard to resist. If you use a computer or smartphone, for instance, you are living a life that is unimaginable to the countless generations of humanity that have preceded you. Never before have people had at their fingertips so much information, power, and choice. If you have the money, the click of a button can mobilize forces across the world and deliver to your door most or all of the things that you want.[27] The short of it is that people don't need to be professing transhumanists to share in the ambition to overcome multiple

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[24] Ibid., 319.

[25] Ibid., 320. In Nick Bostrom, "Why I Want to Be Posthuman When I Grow Up" in *The Transhumanist Reader*, 28–53), Bostrom argues that there can be continuity of identity in the movement from human to posthuman, because memories, goals, and skills will be retained. But why think basic desires and dispositions will carry forward, especially if an SI being "exists" on a less-biological or entirely machine platform body that now charts its own future?

[26] Humanity+, https://humanityplus.org/about/.

[27] Peter Sloterdijk argues that "The primary fact of the Modern Age was not that the earth goes around the sun, but that money goes around the earth" (*In the World Interior of Capital: For a Philosophical Theory of Globalization* [Cambridge: Polity, 2013], 46). This is because a new money economy emerged that used debt, investment, and insurance mechanisms to create an imperial age of global exploration and development that would, in turn, render the world's many places and creatures available for purchase. Money becomes the mediating power that brokers a person's access to and enjoyment of life: "we have access to places first and foremost

kinds of limitations by increasing humanity's cognitive abilities and its material powers. For functional transhumanists of this sort, the drive may not be to amass the powers of a god. It may simply be to make life as amenable as possible.

But isn't this a banal observation? Would we not look askance at people that didn't want to improve their condition by whatever technological means possible?

A great deal depends on what people intend by "improvement." To see what I mean, consider Nicholas Carr's claim that a number of recently developed technological devices and apps eliminate from our skill sets the very things that make us human, skills like wrestling with a complex and ambiguous world, or navigating complicated personal relationships. Some examples: Global Positioning Systems enable people to get almost anywhere without having to know where they are; apps of varying kinds give you access to every kind of plant or animal without you having to commit to a process of observation and discovery; Mark Zuckerberg advocates for a Facebook world of "frictionless sharing," thus taking as much effort, tension, frustration, and trouble out of socializing as possible; and architectural software can create a blueprint for your house without you understanding the physics or mechanics of what you are designing. These inventions are not, in and of themselves, evil, but they do show that, "As individuals . . . we almost always seek efficiency and convenience when we decide which software application or computing device to use. We pick the program or gadget that lightens our load and frees up our time, not the one that makes us work harder and longer. Technology companies naturally cater to such desires when they design their wares. They compete fiercely to offer the product that requires the least effort and thought to use." As Google executive Alan Eagle once said, "We make technology as brain-dead easy to use as possible."[28]

as buyers of transport titles; we have access to data first and foremost as users of media; we have access to material goods first and foremost as owners of means of payment; and we reach people predominantly to the extent that we can afford admittance to the sites of possible encounter with them. These seem to be trivial observations; but the memory – by now a scarce one – of times in which money was not yet an all-pervasive factor proves that they are not. In pre-monetarily defined conditions, virtually all access to people and things depended on belonging to a group and its environment of things; before modernity, belonging was the price of the world" (207–208). In other words, to be deprived of money is to be deprived of all of the technological means that increasingly broker the diverse points of access to life.

[28] Nicholas Carr, *The Glass Cage: Automation and Us* (New York: W. W. Norton & Company, 2014), 176.

The issue isn't simply that the adoption of some technologies can create a simplified and superficial impression of the world we believe ourselves to inhabit. They also can have the effect of altering what we believe about ourselves (in part by revealing what technology companies believe about us). "Taking the misanthropic view of automation, Google has come to see human cognition as creaky and inexact, a cumbersome biological process better handled by a computer." Ray Kurzweil, Google's director of engineering and a leading transhumanist, said, "I envision some years from now that the majority of search queries will be answered without you actually asking," because Google will "just know this is something that you're going to want to see." Google's goal, says Carr, is "to fully automate the act of searching, to take human volition out of the picture."[29] This way of speaking assumes that human cognition and volition should only be linear and logical, because then people will be standardized and predictable. It has little regard or patience for the sometimes chaotic, sometimes contradictory impulses that are at work within a person's interior life. What philosophers like Blaise Pascal and Soren Kierkegaard called "reasons of the heart" are simply excised from consideration. The automation of human life goes hand in hand with the elimination of its freedom.

Is a human life "improved" by technological innovations that erode or erase the capacities that make us human, capacities that can only develop *in the exercise* of skills like willing, thinking, sympathizing, deciding, caring, and making? Does a growing reliance on machines have the effect of reducing human life to a machine existence, insofar as what you desire and what you do are increasingly determined by the marketers that promote devices and the algorithms that drive them? As more and more people move into "smart environments" populated by connected appliances and security systems, health and fitness monitors, self-driving cars, and always-watching retail spaces and work environments, the risk increases that the machines invented to serve us turn the tables by having us serve them, or at least the companies that market them and the bosses that deploy them. As Brett Frischmann and Evan Selinger describe it, "As we collectively race down the path toward smart techno-social systems that efficiently govern more and more of our lives, we run the risk of losing ourselves along the way. We risk becoming increasingly predictable, and, worse, programmable, like mere cogs in a machine."[30]

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[29] Ibid., 181.

[30] Brett Frischmann and Evan Selinger, *Re-engineering Humanity* (New York: Cambridge University Press, 2018), 1.

To see how this works, consider Amazon's popular smart speaker Echo, now in its second generation. Amazon markets this device on its website as "a hands-free speaker you control with your voice. Echo connects to the Alexa Voice Service to play music, ask questions, make calls, send and receive messages, provide information, news, sports scores, weather and more – instantly. All you have to do is ask."[31] Insofar as you live in a smart home with multiple connected appliances and heating/cooling/lighting systems, you can turn on lamps and coffee makers, lock doors, start your car, adjust the room temperature – "all without lifting a finger." You can play games, set up a meditation practice, or Skype with friends anywhere in the world simply by asking. To speak to Echo is to create an echo of your commanding voice in the form of a reorganized world that has been mobilized to do your bidding. Moreover, Echo is programmed to constantly improve itself as Alexa "adapts to your speech patterns, vocabulary, and personal preferences." Because Echo is connected to the Internet of Things (IOT), information is constantly being collected that tracks where you go, what you tend to do, what foods you like to eat and when, and what you have bought or are considering buying (based on your surfing/searching patterns).[32]

It isn't hard to see why these smart speakers are so popular (nearly a quarter of households in the United States have a smart speaker of some kind in their homes, with both Google and Apple selling competing versions). They give to its users a kind of power and convenience that would have been unimaginable to people even one generation ago. Simply giving a voice command brings about the desired effect. Power that was previously reserved for a god, is now at the disposal of anyone who can afford to spend as little as US$39.99.[33] Equally significant, however, is the power that an Echo gives to Amazon. In 2014, Amazon acquired a patent for "anticipatory

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[31] https://amzn.to/32P3iNr.

[32] In *The Internet of Things* (Cambridge, MA: MIT Press, 2015) Samuel Greengard is clear that the aim of IOT is to connect everything with everything else. "The Internet of Things will introduce new products and services and make many existing offerings completely obsolete. The technology will eliminate jobs but introduce new lines of work. Connected systems will ripple through education, government, and business and fundamentally remap and rewire actions, behavior, and social norms. The technology will affect everything from the way people vote to the way we eat at restaurants and take vacations" (xv). This is why some commentators believe IOT is an Industrial Revolution 2.0 because, like the first, this second revolution will change in fundamental ways how people relate to each other and to their world.

[33] The first biblical creation account in Genesis 1 describes God creating the world through speech: "And God said, "Let there be . . ."" and light, sky, dry land, waters, plants, animals, and human beings are created.

shipping," a system that by having gathered data on what you might buy – Echo is constantly monitoring your preferences and what you do – anticipates your next purchase and ships it to you before you even buy it. This makes Echo, along with many of the devices populating IOT, a central tool in the development of what Harvard Business professor Shoshana Zuboff calls "surveillance capitalism." If earlier forms of capitalism succeeded by mining nature, surveillance capitalism succeeds by mining human nature.

> Surveillance capitalism unilaterally claims human experience as free raw material for translation into behavioral data. Although some of these data are applied to product or service improvement, the rest are declared as a proprietary *behavioral surplus*, fed into advanced manufacturing processes known as 'machine intelligence,' and fabricated into *prediction products* that anticipate what you will do now, soon, and later. Finally, these prediction products are traded in a new kind of marketplace for behavioral predictions that I call *behavioral futures markets*. Surveillance capitalists have grown immensely wealthy from these trading operations, for many companies are eager to lay bets on our future behavior.[34]

Zuboff is clear that the aim in the invention of these technologies is not simply to know more about people but also to shape their behavior by tailoring advertisements, coupons, and opportunities to each specific shopper. Imagine walking down a grocery store aisle equipped with "smart shelves" that feed shoppers instant price analysis, and then a coupon for an item, simply because you paused long enough to look at it. As is already happening, viewing a product online means that you will receive a steady stream of pricing deals for that product while visiting other websites. This is a world in which always-monitored shoppers are slowly being programmed as a means to another's commercial ends.[35]

IOT runs on the massive collection and communication of data. For it to connect machines and devices, however, it must also reduce all that it encounters to a stream of digitalized bits. As Samuel Greengard describes it,

> The Internet of Things [IOT] isn't just about locating objects and using them to sense the surrounding environment – or accomplish automated

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[34] Shoshana Zuboff, *The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power* (New York: Public Affairs, 2019), 8.

[35] "Surveillance capitalism operates through unprecedented asymmetries in knowledge and the power that accrues to knowledge. Surveillance capitalists know everything *about us*, whereas their operations are designed to be unknowable *to us*. They accumulate vast domains of new knowledge *from* us, but not *for* us. They predict our futures for the sake of others' gain, not ours" (ibid., 11).

tasks. It's a way to monitor, measure, and understand the perpetual motion of the world and the things we do. The ability to peer into the spaces between objects, people, and other things, is just as profound as the objects themselves. The data generated by the IoT will provide deep insights into physical relationships, human behavior, and even the physics of our planet and universe. Real-time monitoring of machinery, people, and the environment creates a model for reacting to changing conditions and relationships – faster, better, and smarter.[36]

This is a world in which people register as information patterns, and as one data set interacting with other data sets. Capacities like thinking, willing, and loving that organize a person's life are little different from algorithms that organize and direct flows of data. As an algorithm-driven data set, your life and your relationships lose their distinctive qualities and the formal coherence that distinguishes you from someone else. Your life is neither good or bad, noble or demeaning, important or trivial. Having been reduced to the flow of various functions, its primary point, when viewed from a quantitative perspective, is to extend and increase the flow: do more, have more, and live longer. A person is thus forever wanting and discontented because there is little ability to imagine what a complete or whole life might be, a life that respected limits and could be satisfied with *enough*. Within a strictly quantitative framework people have great difficulty determining what constitutes a good or decent life, since goodness and decency are qualitative, evaluative terms that depend on respecting the form of a particular life. According to quantitative ways of thinking, death cannot be understood as an appropriate end to a life well-lived. It is an enemy that must be resisted, at whatever cost and with whatever means, as long as possible. Here we can see how the puruit of a limitless life, or a life devoted to the maximization of flow, dissolves the form that give each life its coherence.

In a smart world, human life also loses its spontaneity and mystery – all the characteristics that were once attributed to a person's freedom – because the effect of data collection is to present people as simple, uniform, and predictable things that blur the lines between human and machine, and between physical and virtual reality. If you are not free, then you can't really be an individual person capable of responsible and self- or other-directed agency either. All action is morally equivalent or, more precisely, morally irrelevant, because the metrics for handling data are all numerical. Quality distinctions that enable us to speak of people, places, and things in terms of

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[36] Greengard, *Internet of Things*, 169.

their aesthetic, moral, or spiritual value are meaningless.[37] Poets, philosophers, and priests may continue to use value language, but in speaking it they are fooling themselves and others.

Wendell Berry argues that what is fundamentally at stake in this reduction of persons to data flows is the erosion of human dignity, and the erasure of life's miraculous nature. To want to make persons fully understandable and predictable is to make them conform to a general set and deprive them of their unique characteristics. "The practical point is that *if* I believe life is a miracle, I will grant it a respect and a deference that I would not grant it otherwise. If I believe life is a miracle, then I cannot believe that I am superior to it, or that I understand it, or that I can own it."[38]

The lures that draw people into smart environments and compel them to give themselves to algorithms are strong and, in multiple instances, compelling. It isn't simply the ease and convenience they promise. It is also the case that sophisticated machines and programs are so much smarter than individual people, and can do more precise, accurate, and efficient work. One could argue that to shun them altogether is to be irresponsible. Why, for instance, trust the judgment of a single, fallible medical doctor if by wearing or having inserted the appropriate sensors, you can connect your body and mind to (constantly updated) medical data banks that hold information about every disease and treatment, and then have algorithms come up with a diagnosis and treatment? If you and family members, along with neighbors in your community, are all uploading their genetic information, medical history, daily eating and exercise habits, and recent travels, then the moment you feel the slightest bit sick you can get access to the most thorough and precise diagnostic process ever seen. Moreover, there is no reason why this

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[37] In an internal memo, Andrew Bosworth, a Facebook executive, wrote to his colleagues to say that the success of Facebook depends on refusing the distinction between good and bad connections. What matters to Facebook's success is connecting people, no matter what kind of connection results. "Maybe it costs a life by exposing someone to bullies. Maybe someone dies in a terrorist attack coordinated on our tools. And still we connect people. The ugly truth is that . . . anything that allows us to connect more people more often is de facto good. It is perhaps the only area where the metrics do tell the true story as far as we are concerned" (quoted in Zuboff, *The Age of Surveillance Capitalism*, 505–506).

[38] Wendell Berry, "Is Life a Miracle?" in *Citizenship Papers* (Washington, DC: Shoemaker & Hoard, 2003), 183. As we will see, the recognition that life is a miracle entails the cultivation of what Berry calls a "sympathetic mind," a mind that honors and works within creaturely limits. "The Sympathetic Mind, as the mind of our creatureliness, accepts life in this world for what it is: mortal, fallible, complexly dependent, entailing many responsibilities toward ourselves, our places, and our fellow beings. Above all, it understands itself as limited. It knows without embarrassment its own irreducible ignorance, especially of the future" ("Two Minds," in *Citizenship Papers*, 100).

superior diagnostic process should be confined to medical decisions. Given sufficient data inputs, algorithms can also be trusted to pick better friends, spouses, and teachers, along with better places to live, work, and vacation.

Naomi Klein argues that in addition to convenience and power, crises like the COVID-19 pandemic are being used to add public and personal safety as major lures.[39] Given widespread fears about how this virus infects people and makes them carriers of disease, the implication is clear: humans are potential biohazards, while machines are not. To make people as safe as possible, it is, therefore, imperative that societies install a human-less, no-touch technology infrastructure as soon as possible. This is why tech billionaires like Google's Eric Schmidt and Microsoft's Bill Gates lobbied elected officials for massive amounts of government money so that they can install their technologies, make them indispensable, and also build an infrastructure for online learning, expanded automation, vast biotech and AI development, and telemedicine across society's major institutions. These efforts, it hardly needs saying, greatly enrich the private companies in Silicon Valley that Schmidt and Gates represent. It also reinforces the misanthropic idea that, when compared to machines, teachers, doctors, accountants, manual workers, musicians, and cooks are either lacking, inefficient, expensive, unreliable, or expendable.

Carr observes that, "There is something repugnant about applying the bureaucratic ideals of speed, productivity, and standardization to our relations with others."[40] This is not to say that every technological device is evil. It is to warn us that an unqualified pursuit of techno-utopia runs the risk of reducing people to neurobiological machines, which is another way of saying that humanity itself is something to be despised and left behind.

It would be inaccurate to describe the aims at work in the construction of smart environments as entirely sinister. The data gathered by countless sensors can give people more detailed and accurate information about the places in which they work so that a farmer, for instance, can minimize water waste when irrigating fields, or a manager can know more exactly how much demand there is for a particular product or service, or a meteorologist can provide more accurate forecasts of weather systems. The introduction of robots can also remove forms of drudgery from work and save people from having to perform in dangerous environments. Even so, it is important to

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[39] Naomi Klein, "Screen New Deal," in *The Intercept*, May 8, 2020, https://theintercept.com/2020/05/08/andrew-cuomo-eric-schmidt-coronavirus-tech-shock-doctrine/.

[40] Carr, *Glass Cage*, 181.

appreciate how IOT changes the ways people live in the world, and how certain classes of people will be treated.

This is a future in which, for the privileged, almost everything is home delivered, either virtually via streaming and cloud technology, or physically via driverless vehicle or drone, then screen "shared" on a mediated platform. It's a future that employs far fewer teachers, doctors, and drivers. It accepts no cash or credit cards (under guise of virus control) and has skeletal mass transit and far less live art. It's a future that claims to be run on "artificial intelligence" but is actually held together by tens of millions of anonymous workers tucked away in warehouses, data centers, content moderation mills, electronic sweatshops, lithium mines, industrial farms, meat-processing plants, and prisons, where they are left unprotected from disease and hyperexploitation. It's a future in which our every move, our every word, our every relationship is trackable, traceable, and data-mineable by unprecedented collaborations between government and tech giants.[41]

As Harari sees it, we have entered a new religious phase called "data religion" that promises salvation through algorithms and engineers, rather than from priests and gods. In this religion, people cannot be trusted to handle the immense volume of data being collected and turn it into useful (often saleable) information. This is why sophisticated computers and algorithms need to take over. From a dataist point of view, humans are superior to chickens because humans are more sophisticated processing systems. Since far more sophisticated algorithms have been invented, the time of human superiority has come to an end. "According to Dataism, human experiences are not sacred and *Homo sapiens* isn't the apex of creation . . . Humans are merely tools for creating the Internet-of-All-Things, which may eventually spread out from planet Earth to pervade the whole galaxy and even the whole universe. This cosmic data-processing system will be like God. It will be everywhere and control everything, and humans are destined to merge into it."[42] Dataists believe in the free flow of data. The value of an experience is that it can be distilled, recorded, uploaded, and shared. Your individual existence doesn't matter. What matters is that you are part of something much bigger, namely an all-encompassing algorithm organizing everything.

Data religion posits an odd salvation because the climax of human ingenuity and engineering results in the dissolution of the human beings it is meant to serve. Harari describes the paradox this way: "We are striving to

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[41] Klein, "Screen New Deal."   [42] Harari, *Homo Deus*, 386.

engineer the Internet-of-All-Things in the hope that it will make us healthy, happy, and powerful. Yet once the Internet-of-All-Things is up and running, humans might be reduced from engineers to chips, then to data, and eventually we might dissolve within the torrent of data like a clump of earth within a gushing river."[43] If the posthumanity of transhumanist aspirations retains some continuity of personal identity, data religion erases it. What remains is the unending torrent of data.

Should people invest in a project that eventually (and necessarily?) eliminates the human beings it intends to make more healthy, happy, and powerful?

Zuboff argues that IOT and surveillance capitalism erode a person's right to a future tense, meaning your right to imagine and implement a future of your own choosing. Your life is not your own. It is a stream of data to be managed and harvested by someone else. Matthew Crawford phrases it as your right to focus your attention. More and more the public and private spaces of people's lives are saturated by media that want your attention: watch this, buy this, vote for this, be outraged by this, have you heard this, don't you want to be like this? Even when alone, you are still being "colonized by hassle" insofar as you are connected through your phone or tablet. It takes a great deal of energy and resolve simply to get away from the stream of notifications that are constantly coming your way. This puts people in a perpetually reactive, distracted mode. "Without the ability to direct our attention where we will, we become more receptive to those who direct our attention where *they* will … To the extent that the power of concentration is widely attenuated, so too is the power of self-regulation."[44]

Just as people need clean air to breathe, so too do they need clear and quiet headspace to think and engage their complex interior lives. If people are to develop into the unique beings that they can become, and be more than cogs in a machine or the means to someone else's commercial ends, they need to resist the modes and worlds of distraction, along with the convenience and ease they promise, and focus instead on developing the disciplines that promote genuine encounters and engagement with others. Genuine encounter depends on patient and sustained attention over time, so that the details and complexities of what I have been calling their "form" can come clearly into view. Genuine engagement presupposes the refined skills that enable people to know how best to come alongside others in modes of

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[43] Ibid., 400.
[44] Matthew B. Crawford, *The World beyond Your Head: On Becoming an Individual in an Age of Distraction* (New York: Farrar, Straus and Giroux, 2015), 16.

discovery and help. The *interior* work of self-development and self-understanding, in other words, can't really happen apart from this deep involvement in an *exterior* world. It is as people work with others in various projects of exploring, making, fixing, and nurturing that the profundity of the world and the prospects for character development in individuals can come into view.

The more people give themselves to IOT, the more superficial they risk rendering their engagements with the world and each other. Rather than emphasizing attention and skill development, or fostering the arts of questioning and reflection that lead people more deeply into the mysteries of existence, the aim of smart environments, it seems, is to make life simpler and less demanding by handing decisions and tasks to algorithms. The goal is to create a world in which the points of friction that might cause people to feel pain, puzzlement, frustration, displeasure, or delay can be removed. "Sunny, smooth, clean: with Silicon Valley at the helm, our life will become one long California highway," is how Evgeny Morozov describes it.[45] Why deal with a world that puts up resistance if you can turn to devices and apps that air brush, block, or redesign a *virtual* world more to your liking?[46] One possible response: contexts of struggle, difficulty, and confusion are fertile ground for the growth of insight, appreciation, and wisdom. Put another way, attending to and wrestling with the complexity of this world and the mystery of its life are preconditions for the discovery of the sanctity of either.

My intention is not to deny the many benefits to human health and performance that Silicon Valley engineers have given us. I want, instead,

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[45] Evgeny Morozov, "The Perils of Perfection," in *The New York Times Sunday Review*, March 2, 2013, www.nytimes.com/2013/03/03/opinion/sunday/the-perils-of-perfection.html. In *To Save Everything, Click Here: The Folly of Technological Solutionism* (New York: Public Affairs, 2013), Morozov develops his case against the idea that for every human problem there is a technological solution. The fundamental issue at stake is the nature of our humanity. "Imperfection, ambiguity, opacity, disorder, and the opportunity to err, sin, to do the wrong thing: all of these are constitutive of human freedom, and any concentrated attempt to root them out will root out that freedom as well" (xii).

[46] The development of virtual world technologies has exploded in recent years. In *Experience on Demand: What Virtual Reality Is, How It Works, and What It Can Do* (New York: W. W. Norton & Company, 2018), Jeremy Bailenson, who is a communication professor and director of the Virtual Human Interaction Lab at Stanford University, describes the many training, therapeutic, and entertainment benefits that these technologies provide, and some of their dangers, like addiction to seductive fantasy or violent worlds, and the more mundane risk of people banging into walls while wearing headsets. "It's an entirely new medium, with its own unique characteristics and psychological effects, and it will utterly change how we interact with the (real) world around us, and with other people . . . Consumer VR is coming like a freight train. It may take two years, it may take ten, but mass adoption of affordable and powerful VR technology, combined with vigorous investment in content, is going to unleash a torrent of applications that will touch every aspect of our lives" (11, 12).

to ask if too much of a good thing brings about significant harm. While not exactly an example of the "progress trap" that Ronald Wright describes, where a good idea at one scale (bow and arrow) turns out to be a terrible idea at an intensified scale (a nuclear missile), might it be the case that the sensible idea of removing some of life's frustrations and friction points (specific pains or maladies) becomes a bad idea when extensively or indiscriminately applied (overcoming death)?

To see what I mean, consider how the application of the Golden Rule – do unto others as you would have them do unto you – sheds a helpful light on our situation. Imagine that in their relating to you, people said that they wanted to encounter as little friction as possible. Their intent is to walk away the moment you act in a frustrating, confounding, uncooperative, or unexpected manner, ask too many questions, reveal complexity that they can't handle, or simply become a problem. Your rightful response would be to say that love does not only accept others as they are but commits to exploring and learning all of the things that make them the unique beings that they are. Isn't one of the tests of genuine love whether or not the beloved can be embraced in all of his or her complexity, limitations, and mystery? If individuals want to be treated with love and respect, and engaged in patient and sympathetic ways, should people not extend the same treatment to others?

To ask for a friction-free relationship is, in effect, to choose superficiality, if not falsification, over genuine encounter. Deep relationships take time and effort. They require detailed attention and patient commitment. As relationships grow, it becomes apparent that persons are not simply instances of a general category or cogs in a machine. They are each distinct and developing beings that are constantly navigating their own limits and potential. Insofar as people forego this kind of relationship building, they will also more likely miss a deep appreciation of the people they are with. They will likely be unable to respect who you are because they want you to be something else, less frustrating, more predictable, perhaps even perfect.

The prospect of creating a "friction-free" world in which weakness, resistance, delay, and ambiguity are removed is very enticing. But what if "fiction-free" engagements with people, things, and places weaken rather than strengthen our relationships with them? What if the understandable desire for convenience and comfort has the effect of so reducing the complexity and mystery of things that they cease to be the kinds of things that are sympathetically known, and thus held as worthy of being cherished?