

## **Narratives on Extending and Transcending Mortality: An Essay on Implications for the Future**

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Humans have long aspired to extend and transcend the boundaries of impermanence. From demigods, to Tolkienesque elves, to vampires, to *Star Trek's Q*; extraordinary beings captivate our imaginations and provide a platform for people to reflect on questions, such as will we ever be capable of escaping death, and what are the implications? To explore insights in this area, one can use futuretypes. Futuretypes exist within the stories that we tell ourselves about the future, and they function to reveal a society's ideological expectations, assumptions, and the biases encoded into our predictions about our evolving world (Brooks et al., 2014). In other words, one can explore a society's narratives to examine and identify our shared expectations about the future. The goal of this provocation is to explore the ways that humans have envisioned the future of mortality through an examination of futuretype tropes. As such, this provocation uses exemplary narratives from both fiction and nonfiction to identify two potential implications that underlie the stories we tell ourselves about extending and transcending mortality.

### **Implication One: Technological Takeover**

In Shelley's (1818) famous work of science fiction, *Frankenstein; or, the Modern Prometheus*, Dr. Victor Frankenstein performs a revolutionary experiment and reanimates expired human flesh through a process of technological innovation. Thus, the physiological merges with the technological to create a new being that inherently transcends the boundaries of life and death. Though the creature attempts to understand his identity as a nonhuman and labors to build interpersonal relationships, he suffers from ostracization, which leads him to eventually supplant and murder his creator.

Ultimately, the philosophical values exposed specifically within the Frankenstein narrative transcend the story itself and function as a warning against the dangers of using technology to manipulate life and death. Rushing and Frenz (1989) argue that the Frankenstein story represents an example of cultural prose that is capable of tapping into our deeply rooted collective fears; essentially, it works as a shadow myth. As outlined by Jung (1951/1959), shadow myths are collections of fears suppressed on a societal level that we attempt to keep hidden. Despite this suppression, buried fears surface in the form of

dreams, artwork, cultural expressions, and media; therefore, the story of Frankenstein functions to typify this genre of shadow myth.

Other fictional narratives within films such as *Blade Runner* (Scott et al., 2007), *The Terminator* (Cameron et al, 2004), and *The Matrix* (Wachowski et al., 1999) communicate a similar warning: Technology will one day destroy us. Coalescing, this collection of narratives has evolved to represent the underlying message that the advanced use of technology will result in the uprising of the machine. This brings us to the crux of the message: If humans merge with machines and transcend mortality, we cease to be truly human, and what remains is monstrous, unnatural, and capable of supplanting our way of life. To avoid this type of dystopian fate, Rushing and Frenz (1989) posit that humans must turn away from technological fusion and return to nature.

Interestingly, humanity is pursuing the opposite course of action. We have already reached an electronic epoch in which technological devices influence our daily lives to function as extensions of our own bodies (McLuhan, 1964/1966). With this rise of technological innovation, human society exists on the precipice of performing scientific breakthroughs previously only imagined. Futurists predict that a fusion of the physiological with the technological will become reality within decades. For example, Michio Kaku (2014) explains that humans will soon have the technology to upload and download consciousness to achieve a type of immortality. Similarly, Ray Kurzweil (2005, 2006) maps out the next 50 years of technological innovation and outlines the impact that technology will have on the human experience: Kurzweil explains that we will soon create artificial intelligence, combine our brain power with our computer power, and we will experience rapid innovation in gene research. These advancements will enable a blurring between biological beings and mechanical beings to extend and transcend our mortal existence.

Though some may welcome the notion of using technology to achieve immortality, others may be wary. The adaptations proposed by futurists present an eerily similar narrative as the one seen in the creation of Frankenstein's monster; thus, these predictions may carry the same connotations and associated fears. Given the prevalence of the Frankenstein myth within stories from the past and present, one must question whether our society is ready to embrace technological advancements capable of life extension. Case in point, when asked whether people are inspired or excited by Kurzweil's predictions, Eckersley (2006) claims that almost no one shares these sentiments. Kurzweil (2006) himself acknowledges that initial reactions from people are often associated with a sense of dread regarding the potential dangers that may accompany the use of new tools. Therefore, these predictions about the future may inherently trigger responses associated with the fear of a technological takeover.

### **Implication Two: Disparity in Access**

Given prevalent societal differences in power, class, money, and control, it is necessary to examine a second implication: a class disparity is likely to limit who is actually able to access the technological tools capable of extending and transcending mortality. Fictional stories within this genre exemplify this issue. For example, *In Time* (Niccol, 2011) is a film that presents a scenario in which futuristic human engineering allows people to extend their normal lives for centuries. However, people live

by using time credits traded as currency; this facilitates a gap between the rich, who are able to live with an endless stockpile of time-credits, and the poor, who scarcely make enough time credits to survive the week. Similarly, *Elysium* (Bloomkamp, 2013) is a film that presents a scenario in which the wealthy live on a space station near Earth and have access to advanced medical technology, but the poor labor back on Earth in despair and suffer from preventable maladies and comparatively painful shorter life spans. Stories in this vein present familiar class conflicts between the haves and have-nots, in which the affordances granted by technology are limited to the powerful and elite.

Inequality in access to needed technological tools and resources is not a new phenomenon. For centuries, impoverished countries have suffered while others have prospered; and within even prosperous countries, wide gaps in class differences prevent access to tools designed to enhance one's quality of life and well-being. Today, leaders in the area of developing life-extending technological tools are primarily the powerful and elite. Case in point, a Russian multimillionaire, Dmitry Itskov, is one of the most prominent figures in this area. Dmitry is currently working to bring together scientists, tools, and resources to create a holographic avatar body that is capable of using an uploaded human brain. By the year 2045, he hopes to enable the mass-production of low-cost avatars (Segal, 2013). However, given existing differences in resources based on inequity, one most wonder: What exactly is a low cost, and who will be among the first to benefit from such technology?



**Figure 1. [Trailer, In Time \(2011\). \(Niccol, 2011\).](#)**

[Ctrl+Click title for video clip.]

Similarly, a multitude of affluent magnates have long supported projects related to research on health and general life extension (Corbyn, 2015). In 1997, the CEO of Oracle, Larry Ellison, founded Ellison Medical Foundation, a nonprofit organization designed to fund studies on aging and biomedical research. As financial support for this organization decreased in 2013 (Leuty, 2013), the CEO of Google, Larry Page, announced the creation of a new independent start-up research company called Calico. The goal of Calico is to increase knowledge regarding biology in an effort to improve life-span extension and

control. In an article that appeared in *TIME* magazine (McCracken & Grossman, 2013), it was stated that Calico was working to cure death.

Though it may be necessary for the powerful and elite to fund pivotal projects on life extension, it raises questions regarding access. If scientists are able to engineer the tools needed to create an immortal existence, who will be able to use this technology? How quickly can life-changing technologies be useable to all humans? How much will people have to pay to be among the first to benefit from the affordances of these technologies? Futuretypes within narratives of the past have already predicted class wars and rampant disparity. Therefore, we must consider discussing and reflecting on how to avoid dystopian narratives of this type from becoming our actualized future.

### **In Closing**

Ultimately, the stories we tell ourselves from both fiction and emerging examples within nonfiction herald the advancement of human longevity in the form of transcending and extending mortality. As to whether we will actually be able to fuse the physiological with the mechanical to achieve an immortal life is a problem scientists are currently working to solve. Thus, it is critical that scholars continue to examine our predictions and the implications for these events. If humans fear a technological takeover and class disparity in access is likely to persist, we must be prepared as a society to find solutions to these problems. Through envisioning our futures in the form of narrative representations, we can better work to engineer real-world critical solutions.

### **Response by Adam Rottinghaus**

Brie's insightful provocation elicited an interconnected pair of responses. I want to position futuretypes of transcending immortality on two spectrums to create philosophical and political coordinates to my response. The first positions immortality as a spectrum between the individual and the species, and the second between a singular event or an evolutionary process. Taken together, a number of potential points could be mapped between those two axes. I am going to focus on representations of technology that cut across the individual/species and singular event/evolutionary axes in posthuman dystopias.

I want to begin by recalling Samuel Butler's 1872 Victorian satire *Erewhon* (Butler, 1872, 1974). In *Erewhon Revisited* (Butler, 1872, 1920), the traveler/narrator discovers a hidden civilization that resembles a utopian society. Much to the surprise of the traveler the citizens of Erewhon use no more sophisticated technologies than simple machines and garden tools. Butler dedicates three chapters to examining technological development in terms of Darwinian evolution. In "The Book of Machines," the traveler describes the civilization's fears of technology in which simple machines lead to more complex machines until machines eventually become lifeforms unimaginable by the technologies that preceded them. Citizens of Erewhon reasoned that if one looked at the first single-celled organisms, one could scarcely imagine the diversity of life forms and intelligences that arose over the course of evolution. The same could be true of machines. One could scarcely imagine what forms of life might evolve from the monstrous industrial machinery commandeering urban spaces. Fears of artificial intelligence, robotics, and biotechnologies dominate contemporary narratives of technology run amuck. These dystopian narratives

often contain a species level fear that Butler first articulated a century and a half ago. *The Terminator* franchise, *The Matrix* trilogy, and *Battlestar Galactica* are landmark science fiction in which Butler's unimaginable fears of technological evolution have come to pass. Most recently, Marvel's blockbuster franchise film *Avengers: Age of Ultron* features a psychotic artificial intelligence that wants to force a species-level "evolutionary leap" from the chaotic multitude of human consciousness to a single unified machine consciousness via an extinction-level event. I want to emphasize the evolutionary component of these techno-dystopias because it adds another set of philosophical and political coordinates in addition to the individual-driven accounts Brie uses to provoke.

In the above narratives, humans and machines are battling for the highest stakes possible—species existence. Yet these narratives present themselves less as human attempts at techno-immortality gone array, but instead as machine intelligence seeking to preserve or extend its own life. Mortality, knowledge of mortality specifically, becomes the key point of machine sentience. The narratives escalate Shelley's monster-kills-creator motif to a techno-parricidal complex transposed onto the entire human race. Though, perhaps, in *Battlestar Galactica* it might be better described as a techno-Oedipal complex! Yet the blunt all-or-nothing species destruction is on one end of the individual species spectrum and suggests that we need to consider a more subtle treatment that examines how AI extends from human consciousness—an issue pointedly, artfully, and intelligently made by the recent Alex Garland film *Ex Machina* (Macdonald & Garland, 2015).

In *Ex Machina*, the reclusive and super-rich genius Nathan creates a female AI, named Ava, who attempts to escape the confines of the research facility by seducing Caleb, the programmer brought in to perform a Turing Test. After several days of testing Ava, Caleb asks Nathan why he made her. Nathan explains with condescension—and contraction—that "why" is irrelevant. He did it because he could. It has always been a question of when strong artificial intelligence would emerge in the timeline of technological development. With resignation, Nathan explains to Caleb that the AI will look back on us (humans) like we look at dinosaur fossils. From Nathan's perspective, AI is the continuation of the evolution of consciousness in which humanity is only a stepping-stone to new forms of intelligence in nonorganic beings. Most importantly, in his post-posthumanist descriptions of AI, Ava represents an evolution of consciousness analogous to humanity's evolution from a primate (and primordial) past. The implication is, as in the film *The Matrix*, that a single consciousness would spawn an entire race of artificially intelligent machines. Ava would be the unthinkable tipping point in the nightmares of the citizens of Erehwon.

I want to raise a more metaphysical question about the nature of technology, mortality, and time. Reading Brie's questions through the phenomenology of Martin Heidegger (1996) and Bernard Stiegler (1998) reveals a technological paradox. For Heidegger, the gestalt, or the technological enframing, creates the clearing through which a Being experiences finitude. Technology merely reveals the relationship between Being and its finitude. However, Stiegler places technology further back in the evolution of human consciousness by arguing that early human ancestors had to first free their hands from walking to create the condition for tools and technologies to be present or ready to hand as Heidegger conceptualizes. Thus, for Stiegler, the specific technologies that constitute our phenomenological experience of being and temporality reveal a contingent relationship to finitude. There is no time—no understanding of finitude—without technology. In both issues Brie has presented—the

technological takeover and access disparity—she rightly emphasizes the more individualized accounts of discrete acts of humans becoming immortal through technologies; self-aware Beings that recognize their own finitude and use technology to understand and mitigate it. From that perspective, our current life spans and medical technology developments, such as robotic limb replacements, neural-screen interfaces, and cochlear implants that restore hearing, are medical realities that were the stuff of sci-fiction even a few decades ago. Globally, the average human life spans have doubled in the last 100 years. The world average in 1900 was 31 years and by 2010 it was 67.2. The real-life advancements in biomedical technologies have made life spans and health considerably longer than even a few generations ago. The recent splurge of personal health data attempt to reveal the clearing of our own finitude through quantitative measures. Stiegler argues that technologies are necessary to experience finitude (and time more broadly), while Heidegger argues technologies merely reveal but do not create finitude. But, what is revealed through stories in which technology becomes aware of its own finitude in the form of artificial intelligence?

The warnings from *Ex Machina*, *Blade Runner*, *Terminator*, and *The Matrix* do not represent the pitfalls of humanity's quest for immortality through technology. Instead, they describe the problems for humans when machines become self-aware and conscious of their own mortality. The replicants in *Blade Runner* know they will eventually die and are actively seeking a cure. In the climactic rooftop scene, Roy saves Deckard because Roy finally accepts his own mortality and understands the fragility of life. Skynet preemptively strikes in an attempt for self-preservation. So what are we telling ourselves about our own mortality in these evolutionary stories about machines becoming immortal in lieu of the human species? How are the political realities of class and power that are obscured by dissolving individual agency into the abstractions of species-level evolution the Kurzweilian Singularity discourses, or Nathan's technological fatalism in *Ex Machina*? I'll end by saying that the question concerning technology and immortality brings us, at last, to the moment of truth wherein the fundamental flaw is ultimately expressed and the anomaly revealed as both beginning and end.

### Response by Ryan Wallace

*The Upper-world people might once have been the favoured aristocracy, and the Morlocks their mechanical servants: but that had long since passed away. The two species that had resulted from the evolution of man were sliding down towards, or had already arrived at, an altogether new relationship.*

H. G. Wells, *The Time Machine* (1895, p. 78)

As with Shelley's *Frankenstein*, Henry Wells's (1895) *The Time Machine* may provide an interesting point of consideration in the broader constellation of science-fiction representations exploring futuretypes—especially as they relate to extending and/or transcending mortality. *The Time Machine* story may not be as directly apropos to transcending mortality as *Frankenstein*. Nonetheless, it was a pioneering effort in science fiction's dealing with time travel—reflexively implicating futuretypes. It's one of the first works of the genre to suppose the long-term potential and future implications of an intractably stratified society—a stratification permitted and perpetuated by technology. In the story, The Eloi—facilitated by having all their physical needs taken care of—degenerate over the eons into a decadent futile

existence, whereas the subterranean Morlocks—who have existed to service the machines and needs of the above-ground society—over time completely stop challenging the premise of their below-ground existence/subjugation.

*The Time Machine* can be interpreted as presenting a thought experiment. Imagine that in the future some event or condition arises whereby an elite segment of society acquires the means to look after all their material needs, via machines, in perpetuity. So, what's the catch? These machines, responsible for enabling the decadent lifestyle of these *elite* people, require maintenance to be performed by others; enter the have-nots. What's important is that at some point mobility between the classes stops. The Eloi lead a life in which their material needs are furnished by technology; Morlocks service that technology. After many generations, separate human societies are the result, and seldom is there any interaction between the two. So, perhaps, technological advancement itself may create, facilitate, and entrench the dystopian future feared.

So, how does this story relate to transcendence and immortality? As you discuss in your provocation, Brie, and as supported in your secondary research, the tendency is for people to imagine, and prepare for, the worst. There seems to be a remarkably consistent thread in these narratives in that they are often cautionary tales. But as your Kurzweil, and Rushing and Frenz analyses support, like the nightmare scenarios envisaged by science-fiction authors, the future is something to think about, prepare for, and maybe fear, in the present. The example of *The Time Machine* represents an advanced future state, but there are many ways we could potentially arrive at this future. Indeed, either or a combination of the "Implications" you explore seems as though they could conceivably arrive at the future supposed in this novel. Maybe it's the implications of a technological takeover, and/or disparity of access to transcendence/immortality technology, that will be the crux of fate determining a potential divergence of humanity into an Eloi- and Morlock-like dichotomy.

### ***(Potential) Additional Framework***

*The Time Machine* is, of course, a narrative about future innovation, but it also aptly facilitates a consideration of the tandem roles played by innovation *and* repair. The innovation considered in science fiction is somewhat obvious. However, acknowledgement that the future also, inexorably, has to deal with lots of repairs is—perhaps—less obvious. This approach:

There are two basic components of the approach advocated here. The first is an appreciation of the real limits and fragility of the worlds we inhabit—natural, social and technological—and a recognition that many of the stories and orders of modernity . . . are in the process of coming apart, perhaps to be replaced by new and better stories and orders, but perhaps not. (Jackson, 2014, p. 221)

Whatever technology promises to bring us in the future, it's important we keep in mind, that now—as well as in the future—"like every generation before, we live in the aftermath" (Jackson, 2014, p. 239). We don't live *in* innovation, rather we exist in what it is has wrought. Consequently, the maintenance that occurs in the future must be at least as interesting as the innovation. *The Time Machine* focuses centrally on how future maintenance is fraught with difficulty.

### **(Potential) Additional Example Narrative**

*Ghost in the Shell* (Oshi, 1995) is an Anime science-fiction universe; perhaps especially, *The Ghost in the Shell: Stand Alone Complex* television series, may be a great way to explore some additional concepts as well as further developing your existing implications. I'll leave it to you to look up a series synopsis, but suffice it to say, it deals with many issues, such as transcending the physical body, a digital self/agency, cyberization (becoming a cyborg), and so forth. The episode titled "Affection" (Kamiyama & Kamiyama, 2004, Season 2, Episode 11) may provide particular insight into your implications; it deals with a segment of the principle character's origin story that may be pertinent. (I'd be happy to go into more detail on this matter upon request.)

### **Implication One: Technological Takeover**

I think there is a basic dramatic concept being explored in these narratives—which precede even the advent of science fiction. As the subtitle to *Frankenstein* alludes, it's a retelling of the story of Prometheus. It asks, are the proverbial deus ex machina reserved for the gods; or, can humanity steal fire from Mt. Olympus?

Your provocation is replete with support for how we have a tendency, and/or imperative, to consider negative future outcomes in our future thinking. Humanity seems eminently—and perhaps aptly—concerned with imagining, and managing, the risk of future scenarios. However—as you point out—“interestingly, humanity is pursuing the opposite course of action.” Our actions belie our apparent concern. (I'd be very interested in reading more about the relationship between the stories we tell about the future vs. what we actually do to usher it in.)

### **Implication Two: Disparity in Access**

I think the bigger question is not if, but to what degree, will there be a disparity in access. The films *In Time* and *Elysium*, the television show *Ghost in the Shell: Stand Alone Complex*, and the novel *The Time Machine* all depict societies with a high degree of entrenched stratification. So, that this is a negative eventuality, worth trying to avert, seems well agreed upon. On the other hand, those advancing the technology of the future seem oddly disconnected from those imagining it. It remains to be seen if we will end up on a path that leads to the eventual divergence of our species despite our knowing the danger. Will we heed our own warnings, or will we myopically head down a path that leads to our species' divergence; are we headed on the path to become Eloi and Morlock?

The *Ghost in the Shell* example provides an interesting and nuanced presentation of how such future technology may be implemented. The television show supposes that the cost of technology that allows a sort of digital immortality would be expensive to be sure. Perhaps some individuals will gain access out of needs, arising variously from traumatic injury, congenital defects, and so forth. Some of these needs will be met through mechanisms we can currently grasp, such as insurance, veteran's benefits, medical testing, and the like. But eventually, the newest and best technology will undoubtedly



become available first to those who can afford it. It remains to be seen whether this technology may someday provide sufficient competitive advantage as to effectively split the species.

*Ghost in the Shell* suggests that agents of the government, such as military/civilian Special Forces, may also enjoy high-quality augmentation. The ensuing culture could thus be composed of a limited, but nonetheless somewhat heterogeneous, societal elements. What's more, the show explains how those who adopt prosthetic augmentation at an earlier age will better adapt to their cybernetic state of being. It also would be interesting to explore the critical implications of such stratification. What are the implications of having an advanced semi-immortal group of cybernetic individuals, and what are the implications of who is not able to participate? Who has to clean up for and maintain the cyborgs?

How a narrative is presented matters. Often, science-fiction narratives glance over details related to how their future world is maintained; it'd be interesting to continue to unmask some more of these assumptions and interrogate the consequences. Science fiction seems to be a genre adept at considering what cannot be presently considered. Perhaps it'd be interesting to see if science fiction can be anywhere near as adept at implementing as cogent a solution.

One lingering question I'm left with is, why is there such a disconnect between the natural cautionary proclivities we reflect in the stories we make up—such as in the futuristic science-fiction narratives—while at the same time actual research and advancement in the field—that promises to someday transform our imagination into science fact—proceeds unconcerned (and unprepared) for as-creatively-imagined negative eventualities?

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