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Death or the Powers

The Future of the Human Experience

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Death or the Powers: the Future of the Human Experience

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Abstract: The Pulitzer Prizes for fiction and music are incentives for excellence in creative writing, and these texts are also valuable for their visions of humanity's future. According to anthropologist Morris Opler, theme identification is essential to cultural analysis. In view of technological acceleration and radical enhancement proponents who forecast emergence of greater-than-human superintelligence, the imaginative vision of Pulitzer-winning fiction and music between 2001 and 2012, may possess themes supporting, tempering, or refuting radical enhancement in American culture. Discovering emergent themes from empirical texts is a primary activity in qualitative research, and research-based scrutiny techniques for complex narratives include 1) discovering thematic repetitions, 2) coding themes and subthemes in categories, 3) analyzing metaphors, and 4) searching for similarities and differences. With this inductive approach to themes in Pulitzer fiction and music, a thematic cybermeter can be created to test the strength of the radical enhancement conceptual frameworks proposed by Ray Kurzweil, Aubrey de Grey, Nick Bostrom, and James Hughes. Other scientific publications on machinic life and technological paradigms are also reviewed to estimate the strength of radical enhancement theories in American culture versus alternative visions that preserve the human experience.

Keywords: American Cultural Studies, Literary Theme Identification, Technological Paradigms

Yet inside me there shines a brilliant light - *Faust*

Introduction

Human heads are universal signs of power and intellect. In Zektar's art (2012), three human heads explode with defiant fury, coalescing into Oneness with their message of Nature restored and the boundaries of consciousness shattered. As willing victims struck by white lightning, the bodiless heads emerge from black holes, evoking the independent spiritual principle of mind residing in the intellect freed from matter.

Time stands still for the spectator, who halts before focal points of eyes blazing with cold command, noses swollen with breath, and mouths gaping with silent rage. Staring back at the spectator, the heads with their inverted eyes emphasize the process of inversion. For within the two dimensional medium of the canvas, the inverted eyes view the spectator as upside-down like the Tarot's Hanged Man suspended between heaven and earth. To see the inverted eyes as they are—not raging but exhilarated, not martyred but ecstatic, the spectator must invert Zektar's heads or stand on his own head. Only then will the art transform itself, allowing the spectator to see a force or will rising from the white light. One wonders if mind becomes god when it moves beyond our intellectual grasp into the domain of aesthetic terror.



Figure 1: *Scream 3000*. Mixed Media on canvas (original panel), 48 x 48.

Source: Rudy Gonzalez [Zektar]. 2012. Chicago, Illinois.

Perhaps this mutual metamorphosis between the heads and the spectator represents the continuity of life as well as the disappearance of humanity itself. As Michel Foucault explains in *The Order of Things*, man in the modern era has assumed a new position in the field of knowledge and ‘he will disappear again as soon as that knowledge has discovered a new form’ (1973, xxiii). Others speculate that by 2100 human beings will face a sixth extinction event due to overpopulation related to habitat destruction. Prophets of technology envision human intelligence merging with machine intelligence by 2100, what has been called the singularity or intelligence explosion. The term ‘intelligence explosion’ was coined by statistician I. J. Good:

Let an ultraintelligent machine be defined as a machine that can far surpass all the intellectual activities of any man however clever. Since the design of machines is one of these intellectual activities, an ultraintelligent machine could design even better machines; there would then unquestionably be an ‘intelligence explosion,’ and the intelligence of man would be left far behind. Thus the first ultraintelligent machine is the *last* invention that man need ever make, provided that the machine is docile enough to tell

us how to keep it under control. It is curious that this point is made so seldom outside of science fiction. (1965, 33)

The American Association for the Advancement of Science (AAAS) defines Human Enhancement (HE) as the application of science and technologies to expand cognitive and physical human capacities (Williams 2006, iii). In this report, the AAAS examined public opinion polls and a debate on HE, revealing that the U.S. public has a spectrum of views ranging from the natural human instinct to improve oneself and develop technology to radical transformations damaging our identity and dignity. The report concludes that consensus building in the U.S. is ‘extremely difficult’ (iii). However, one of the next steps in this AAAS report recommends that scientists meet with science-fiction writers and/or Hollywood producers to explore HE (19).

Fiction from an author’s imagination is a fair mechanism for learning something about speculative human enhancement theories in American culture. Both fiction and human enhancement theories are persuasive thought experiments, reflecting our current and perhaps future values. Gregory Currie in “Moral Psychology of Fiction” (1995) explains the didactic potential of fiction, where we project ourselves into learning situations that shed light on the value of goals. The Pulitzer Prizes for fiction and music are valuable for their visions of humanity’s aspirations. In addition, according to anthropologist Morris Opler in “Themes as Dynamic Forces in Culture” (1945), theme identification is essential to cultural analysis. In view of technological acceleration and radical enhancement proponents who forecast emergence of greater-than-human superintelligence, the question arises as to whether or not the imaginative vision of Pulitzer-winning fiction and music between 2001 and 2012 (see appendix A) possesses themes supporting, tempering, or refuting radical enhancement in American culture. A thematic cybermeter with numbered categories has been created to test the strength of the radical enhancement conceptual framework proposed by Ray Kurzweil, Aubrey de Grey, Nick Bostrom, and James Hughes in relation to themes in Pulitzer fiction and music from 2001 to 2012.

Embedded in early 21st century American techno-culture that forecasts the machinic transformation of humanity, this research shows that the thematic analyses of Pulitzer texts *temper* technoprogressive theory while preserving the human experience, adding some support to the AAAS report that consensus building in the U.S. is ‘extremely difficult’. Further, a brief review of scientific knowledge based on experiments shows that our new science actually *refutes* several major tenets of the technocratic conceptual framework, while human history offers interesting parallels to their prophecy of cosmic manifest destiny through machines.

Performance on a Theme

First and second-year North Central Michigan College students in an English Composition II course reviewed Pulitzer Prize-winning novels over a five-week period, guided by their facilitator, the author of this paper. As student research assistants (SRAs), each selected one Pulitzer Prize-winning novel to read from the award years 2001, 2007, 2008, 2010, and 2011. During the time period, SRAs were introduced to research-based theme identification techniques, literary devices, technoprogressive theory, and other topics. SRAs were then provided with a form designed by the facilitator, employing research-based scrutiny techniques (repetition of ideas, transitions, similarities/differences, metaphors/analogies, linguistic connectors) for discovering themes/subthemes in qualitative data, as recommended by Ryan and Bernard (2003) in the journal *Field Research*. Along with scrutiny techniques on the form, the SRAs were provided with questions to answer, based on the idea that fiction tells a truth, as well as how the author sees the world and thinks the world ought to be (Burroway 1996, 293-294), along with what the central characters have learned from their experience or what the reader has learned that the characters have not learned (Trimmer 1992, 337-338). As a model, the facilitator introduced themes/subthemes in *The Pale King* by David Foster Wallace, and then the entire class collaborated

in the identification and analysis of themes/subthemes in Bob Dylan’s music, as well as in the analysis of *Death and the Powers: a Robot Pageant* by poet Robert Pinsky and composer Tod Machover, to learn how to apply the theme-identification techniques. SRAs were provided with a cybermeter designed by the facilitator for coding data and testing the strength of identified themes in American culture relative to the human experience and technoprogressive theory. After the data was coded, SRAs were polled as to their viewpoint on the value of matter and mind, their interest in human enhancement, and their preferences for and against cybermeter categories. The poll indicated a moderate preference for mind over matter, a strong preference for minimal or no human enhancement, and a strong preference for the human experience versus technocratic ideology.

In the facilitator’s view, semiotics is the methodological foundation for this field research because the qualitative inquiry into Pulitzer texts as case studies on American life and human meaning, as well as the survey of technoprogressive theory, are viewed not exclusively as facts, but as signs pointing to the nature of reality. As Gary Shank explains in a paper presented at a Semiotic Society of America meeting, qualitative research views ‘the data of the world not as facts, but as signs’ that can be ‘clues, symptoms, or omens (cf. Shank, 1987) of the nature of reality’ (1995). As a limited map of natural human phenomena and behavior, the cybermeter was designed to capture essential features or signs of the whole system, pointing to the nature of reality through a process of idealizing away everything else except the signs.

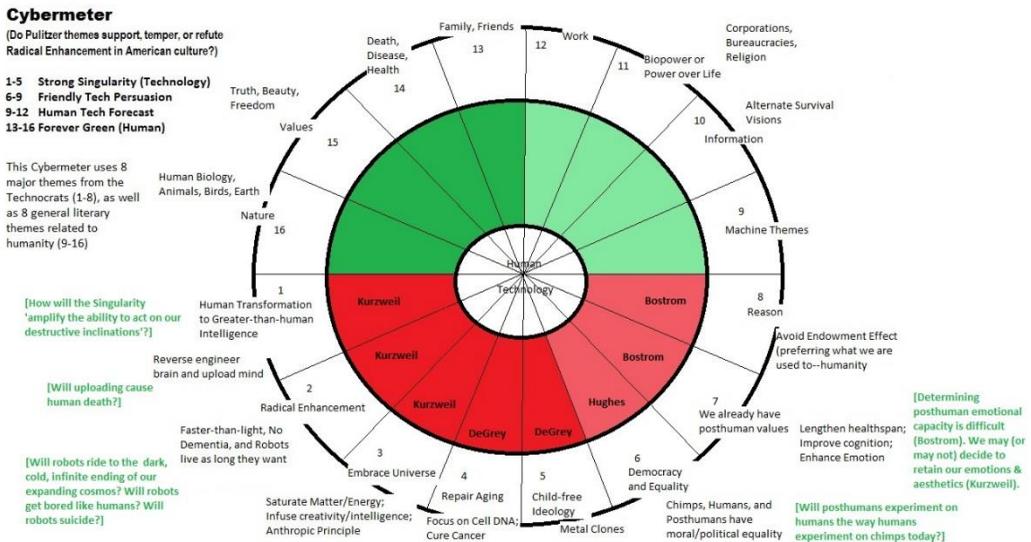


Figure 2

Out of Nature—into a Machine!

Scholars generally avoid speculative ideas; however, the last century’s rapid advances in technology demand the evaluation of this phenomenon of technological change related to an artificial intelligence (AI) explosion that may surpass the human intellect. In 1993, Vernor Vinge of San Diego State University predicted the creation of superhuman intelligence within thirty years and the end of the human era. Vinge called this intelligence explosion the singularity, and he argues that it cannot be prevented because it is a consequence of our natural competitiveness and the possibilities inherent in technology. Vinge believes that despite their fears of the singularity and legislation to control it, world governments will still pursue it because of the competitive economic,

military and artistic advantages for those governments who get there first. If the singularity cannot be prevented or confined, Vinge speculates on how bad the Post-Human era could be.

Well . . . pretty bad. The physical extinction of the human race is one possibility. (Or as Eric Drexler put it of nanotechnology: Given all that such technology can do, perhaps governments would simply decide that they no longer need citizens!). Yet physical extinction may not be the scariest possibility . . . In a Post-Human world there would still be plenty of niches where human equivalent automation would be desirable: embedded systems in autonomous devices, self-aware daemons in the lower functioning of larger sentients . . . Some of these human equivalents might be used for nothing more than digital signal processing. They would be more like whales than humans. Others might be very human-like, yet with a one-sidedness, a “dedication” that would put them in a mental hospital in our era. (1993)

According to Ilia Stambler of the Institute for Emerging Ethics and Technologies (IEET founded by James Hughes and Nick Bostrom), transhumanism or singularitarianism is developing into ‘a sizable intellectual and social movement’, using technology to improve human potential (2010, 13). Vital to this movement are concerns about what properties constitute the nature of a person. Schneider (2008), whose research addresses the mind/body problem, outlines four leading theories. The Ego Theory postulates the soul or nonphysical mind surviving the body is primary. The Psychological Continuity Theory postulates memories, ability to reflect (Locke), and psychological configuration. Materialism postulates a composition of matter or molecules. The No Self View advocates no metaphysical category of person (Nietzsche), just impressions but no underlying self (Hume), and no survival because of no person (Buddha, Parfit). (2008, 5-6)

Relative to these four theories, the technoprogressive ideology of Ray Kurzweil, Aubrey de Grey, Nick Bostrom, and James J. Hughes favors materialism, the theory that matter is primary over mind. These technocrats* (for definition of a term denoted by an asterisk, see appendix C) profess that we will outgrow our humanity by eliminating aging and enhancing our intellectual, physical and psychological capacities as we become ‘posthuman’ by merging our intelligence into superintelligent machines.

Inventor and futurist Ray Kurzweil has served as a director of the Singularity Institute, a nonprofit organization with an advisory board including Oxford philosopher Nick Bostrom and biomedical gerontologist Aubrey de Grey. Within this network is sociologist James J. Hughes, who is executive director of the Institute for Ethics and Emerging Technologies (IEET) that he founded in 2004 with Nick Bostrom, the Board Chair from 2005-2011. Within this materialist framework, their ideology also favors strong AI or greater-than-human-intelligent machines versus weak AI (machines not exceeding human intelligence) and friendly AI (greater-than-human intelligent machines acting ethically). What the transhumanists desire is simplification, normalization, ‘personhood’, androgynous postgenderism*, and from this homogenized product, with the help of the reversed-engineered human brain or electronic double, a superintelligent AI without human values will emerge. (See appendix B for a brief summary of the inventive designs of these four technocrats.)

Data Rearranged

Against the view of the simplified pi-calculating AI without human values, the Pulitzer fiction and music celebrates exactly those values of human wisdom and intellectual development that the AI will lack according to Bostrom—‘scientific curiosity, benevolent concern for others, spiritual enlightenment and contemplation, renunciation of material acquisitiveness, a taste for refined culture or for the simple pleasures in life, humility and selflessness, and so forth’ (2012, 14). The review of themes in Pulitzer-winning texts presents the human experience as unchained from the technocratic tenets of transhumanism in American culture (see appendix A).

However, in *The Pale King* author Wallace portrays our existing bureaucratic American society as machinic. This suggests that Hughes and Bostrom's arguments may be persuasive to those experiencing culture's monotonous boredom. Similarly, despite themes of an ideal spiritual love and wise human survival mechanisms (love, trust, determination) in 31 songs of Bob Dylan, other themes forecast that our fated human behavior is already machinic without the influence of technology. This may indicate that if we prefer what we are used to (the machinic), we may start listening to the heavy-metal half-truths of technocratic arguments.

Conversely, in *Death and the Powers*, because the robot is a metaphor for transformation to 'pure spirit' (Pinsky 2006), humans are elevated as creators that rise above human life or 'inferior matter' by becoming immortal robots. With this machinic twist in the opera, the robots lead the humans to immortality, that is, 'pure spirit', and this is a compelling idea that supports Bostrom's belief that human values, such as long healthspan, improved cognition, and immortality are posthuman* (2008). Due to this epistemological and ideological confusion, Bostrom's arguments, such as the status quo bias*, may be effective. Nonetheless, using the cybermeter, the field research of Pulitzer themes/subthemes can be interpreted as tempering or lessening technocratic power in American society, while showing that American authors and readers are not being swept down the technoprogressive vortex yet. Still, machinic undercurrents are spinning through the Pulitzer texts of Wallace, Pinsky, and Dylan.

Both the technocrats and these three Pulitzer authors perceive the human experience as machinic, while aspiring to varying types of cosmic manifest destiny. The difference is that Wallace, Pinsky, and Dylan aspire to achieve this destiny through our humanity or mind, while the technocrats visualize a cosmic destiny from AI or human brain matter. One could infer that Wallace, Pinsky, and Dylan have unique insight into the machinic reality of what grounds our physical existence. For example, in Wallace's characters, rote work changes the brain, a real phenomenon due to the brain's neuroplasticity. Rote work is also described as 'these soul-murdering eight daily hours', supporting one of Wallace's main themes that we are losing our humanity and murdering our souls. Yet, an interesting subtheme to this in Wallace's novel is that all life is connected in Nature, but we cannot see this magic because of machinic, parasitic government bureaucracies such as the Internal Revenue Service.

Also, Pinsky's robot minds are everywhere (sign of quantum nonlocality and entanglement), the inorganic is alive, and time can reverse, which is lawful according to Einstein, Schrödinger, and Maxwell. Further, in this scientific robot opera, the Past can change the Present (cause to effect) and the Present can change the Past (effect to cause). This is supported by physicist John Wheeler's counterintuitive Delayed Choice Experiment.* In addition, the main character Simon is a hologram, an illusion, and scientific evidence today suggests that our three-dimensional classical world may be a hologram, a 'thrown'* existence imagined by Heidegger, with the entire cosmos appearing as a two-dimensional canvas painted on the cosmological horizon. Add to this the idea in the opera that the earth is neither alive nor dead, and you have a scientific allusion to Schrödinger's cat.

Finally, in Bob Dylan's lyrics, human memory and fate are both machinic, but can be 'driven deep beneath the waves' as one dances 'beneath the diamond sky' ("Mr. Tambourine Man"). Dylan also describes the world as a vacuum, a dream ("To Ramona"), and an unjust courtroom one can escape if a 'bolt of lightning' strikes ("Drifter's Escape"). What is streaming through here in these Pulitzer-acclaimed texts and lyrics is a dynamic fluctuation between mind and matter.

The Matter is Just the Medium

Once again, the question is—what is the true nature of a human being—matter or mind? After his wave mechanics discovery, Nobel Laureate Erwin Schrödinger considered that '*the observing mind is not a physical system, it cannot interact with any physical system*' (Wilbur 1985, 78), and

that we are only spectators here because we do not belong to the material world, but our bodies are in it (81).

Surprisingly, Pinsky's robots exemplify this same type of mechanistic, entangled mind that is supported by Schrödinger and other scientific experiments. As an example, in "Principles of Linguistic-Wave Genetics" Gariaev et al. explain how our 'genetic apparatus' functions like a 'bio-computer', allowing new technologies for healing and life extension. Although the central dogma of biology supports that 2% of human DNA is coding DNA and 98% is possibly 'junk DNA', representing 'a graveyard of virus DNA', Gariaev et al. explain that the 98% has a value, and so the central dogma and the Western scientific paradigm of life sciences is incomplete because 98% of the human genome cannot be 'garbage' as presumed (2011, 11-12). Nor should it be 'deleted' as de Grey advises, for the telomerase gene is one of these non-protein coding RNAs (ncRNA) identified as 'junk', that is essential for various vital functions (Wright and Bruford 2011). Gariaev et al. also state: 'This is nonsense from the perspective of evolution, which throws away anything unnecessary' (2011, 12). Another way of looking at this is that our Western scientific paradigm is materialistic. Although this is slowly changing due to quantum mechanics, it remains a 20th century Western scientific disposition in which the technocrats are very comfortable.

Further, Gariaev et al. support that all organisms have a material substance and an 'energy informational (EI) substance'. The two levels are 'intimately linked' and the 'EI level is the leading one' (2011, 20). And so, the experiments of Gariaev et al. support the genomic value of the 98% that is primarily viral and related to the EI level. Put simply, we may need our 98% viral/bacterial genome if mind evolves on the EI level, especially if will and intentionality is housed in the biophotonic structure process of our DNA as some scientists think (Rapoport 2010). This is an important 21st century scientific argument refuting the technocrats, for it means that our minds are linked to matter, as the technocrats perceive, but our minds are not the physical system we observe, as Schrödinger discovered.

Add to this that our cosmos possesses a machinic cyclical potential with mind as spectator, and one must respect several other important new scientific views, such as C. K. Raju (2003), Roger Penrose (2010), and Martin Bojowald (2005), who advocate cosmic cycles while attempting to reconcile unpredictable nonlinear systems with inherent order. Steven Rosen (2008) explains that even physicists cannot understand the natural world because of deeply engrained false assumptions that are incompatible with the radically non-classical phenomena underlying it. His solution is fusing science and philosophy in a phenomenological physics, a quest for historical knowledge of the self-evolving cosmos and our ultimate source. And, this holistic cosmic scientific curiosity based on a benevolent concern for humanity and self-reference is what the technocratic view precludes due to their linear, one-way logic that is groove-oriented on the evolution of metal matter potentially infusing the universe with machine intelligence.

As a practical model for theme identification, the cybermeter fails to capture these important themes related to the self-referential nature of humans and our potential for understanding the machinic, cyclical cosmos as spectators. The point is that scientific arguments defining the nature of the human being refute technocratic ideology. But, relative to the human experience half (categories 16-9), the cybermeter is deficient in that it had no category other than 'Information' for capturing themes related to modern scientific knowledge. Along with this, the cybermeter lacks a category for scientific counterarguments against the technocratic manifesto, so a brief review follows.

In *Humanity's End* (2010) Nicholas Agar, who is against radical enhancement, reviews Kurzweil's idea of uploading our brains into nonbiological machines, arguing that this may cause human death. Other concerns are that de Grey proposes a child-free ideology, and SENS* may be pseudoscience. Agar argues that humans should remain human. Finally, Agar explains how Hughes is attempting to shift 'humanity' to 'personhood' or democratic transhumanism, the idea that humans and posthumans will be moral and political equals (152), as will be chimps (155). Advocating that radical enhancement should be banned (174) and that cognitive enhancement leads

to self-alienation (179), the following enlightening statement by Agar shows that Kurzweil's assumptions contradict Hughes' democratic transhumanism: 'if Kurzweil is right, posthumans will continue to increase their powers while ours will remain substantially static' (163).

Along with Agar's review, other prophets of technology such as business forecaster Stewart Brand, inventor Ivan Sutherland, and Vinton Cerf of Google, one of the 'fathers of the Internet' refuse to speculate on the future of computing, while inventor Danny Hillis, quantum computing researcher Michael Freedman, and Nathan Myhrvold, former chief technology officer at Microsoft, only predict that computers will be closely connected to our brains (Regis 2013, 36-37).

From this brief literature review of futurists and scientists, one gathers that transhumanism may be a developing intellectual and social movement in American society (Stambler 2010), yet scientists and other experts have concerns about what properties constitute the nature of a person, and they are not in consensus regarding the roles of human values and aesthetics, biotechnology, and human enhancement in the creation of the first AI intelligence and whether or not it should be weak, friendly, or strong. Put simply, the singularity may happen due to the persuasive linear logic of the materialistic technocrats and the advance of technologies, or it may not happen due to natural disasters, atomic warfare, or American disinterest in human enhancement and politico-moral equality with animals and posthumans due to our more holistic 21st century science (quantum mechanics and classical physics) that employs classical logic emphasizing truth and intuitionistic logic emphasizing proof in an attempt to understand the relationship between mind and matter.

The World of Light

Arguably, the research of Gariaev et al. and other scientists adds support to the human cultural legacies of ancient Egyptian, early Chinese, and Navajo cyclical worldviews that focus on the primary value of an evolving mind or spectator at human death, who embraces the early cosmos, where the blueshifted radiation bathes the heavens in light (King 2011). In these cyclical cosmologies, the cosmos expands from formlessness to form, and then it collapses via observers that loop back into the past or go into the light. This same expansion/collapse cosmos is also evident in Charles S. Peirce's writings (King 2009), Edgar Allan Poe's intuitive nonfiction "Eureka", Teilhard de Chardin's biophysics (2007), William Blake's "Four Zoas" (2005, 196-200), and modern cosmology. These human legacies provide valuable knowledge and offer intellectual skills to humanity that the technocrats may or may not recognize. Relative to this visionary Cosmic Embrace via mind that is also imagined by the technocrats via matter, mathematical solutions support a recent theory of neurophysics and quantum neuroscience that assumes specific temporal patterns of complex electromagnetic fields in our brain can be represented in human consciousness, suggesting that brain space has the information potential for containing extraordinarily large increments of space and time (Persinger and Koren 2007).

Today new science supports the cyclical potential of our cosmos due to lawful time reverse, Wheeler's Delayed Choice Experiment, and so on, as well as the potential of the human brain for Cosmic Embrace due to the nature of quantum nonlocality and entanglement. Comparatively, Kurzweil's vision of embracing the cosmos through superintelligent matter is a pattern similar to the ancient Egyptian, early Chinese, Navajo, and other visionary views that describe embracing the cosmos through mind. In light of our impressive historical legacy that advocates the evolution of mind, one must concede that the technocrats are caught up in the quicksand of materialism in a manner similar to the Tarot's Hanged Man, who is trapped between heaven and earth.

What the Pulitzer texts highlight and what is at stake in the weak-friendly-strong AI morass of thinking is not only the meaning of intelligence, but also the subjective experience of human consciousness, our self-awareness, our sentience or ability to feel subjective perceptions and emotions, and finally, our capacity for sapience or wisdom, qualities that greater-than-human intelligent machines may consider *garbage* according to Bostrom's theoretical perspectives (2012) about the superintelligent will with the capacity to saturate the celestial empire until the expansion

of the universe intervenes. Dark, cold, expanding, cosmic isolation forever may be the ultimate destiny of the human-machine experiment, our consciousness preserved within a piece of DNA bolted to a metal nanobot. Perhaps this DNA houses human will and intentionality, as some scientists think. As technological innovation advances, researchers manipulate, store, and read DNA, for its recognized potential as a storage medium allows its viability for thousands of years, requiring ‘no active maintenance other than a cold, dry and dark environment’ (Goldman et al. 2013).

All in all, our 21st century science essentially *refutes* the technocratic manifesto related to the removal of the telomerase gene, the homogenization of mammals, the exclusive reliance on linear logic, and the narrow materialistic paradigm for cosmic manifest destiny that excludes human moral justification. Yet, the cybermeter analyses of coded themes from the majority of Pulitzer texts *tempers* or *lessens* the technocratic forecast by valuing the human experience. Still, the cybermeter lacks a clear category for fictional references to new science from the texts of Wallace, Pinsky, and Dylan, and it also lacks a category for scientific evidence refuting the technocrats. Further, the human cultural legacies of ancient Egypt, early China, the Navajo, and other historical visionaries propose the possible cyclical evolution of governing mind or a quantum intelligence that embraces our cosmos. Ray Kurzweil has this same idea, but he inverts mind into matter by describing nonbiological matter as an intelligence composed of ‘swarms’ of micron nanobots that infuse the cosmos (2005, 352). He also describes nonbiological intelligence as follows: ‘What I should say is that intelligence is more powerful than cosmology. That is, once matter evolves into smart matter (matter fully saturated with intelligent processes), it can manipulate other matter and energy to do its bidding (through suitably powerful engineering)’ (364).

Advancing technology is a system balanced by the complex historicity of the humanities. According to Stephen Wolfram, how a system behaves cannot be predicted computationally because the computational steps are almost equivalent to the evolution of the system itself, so one must evolve with the system to discover the outcome (Regis 2013). Accordingly, it is essential for all scholars to become involved in guiding technological innovation to create the future of technology with the humanities.

Perhaps the singularity is a sign that we are listening to the logic of our unconscious that shrouds a lost metaphysics, for there seems to be an equivalence between possible destinies of man-made-mind through death and man-made-metal through technological power. The choice may be simply between the lightning bolt or the machine bolt, between a world of light or a watchmaker god, between screaming or psyche-otomy, between death or the powers.¹

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¹ The title of this paper is derived from *Death and the Powers: a Robot Pageant*, while the subheadings reflect phrases from Robert Pinsky’s script.

APPENDIX A:

Nine (9) Pulitzer Texts and Music

Bob Dylan (awarded the **2008 Pulitzer Special Prize** for lifetime achievement) [Cybermeter: 9, 10, 11, 14, 15]

Resonating with dominant somber themes of unchanging Fate, growing human insensitivity, failing love relationships, the cruel world prison, and death (14), Bob Dylan's lyrics offer information (10) or a possible survival mechanism in the following main theme: Love is strength, believe in people you trust, and have determination in life. A subtheme to this theme is that this world is a fall from grace, but an ideal spiritual love (personified as a woman of heavenly blue) exists, suggesting values of truth and beauty (15). Machinic influences in life (9) are human death, the wheel of Fate, and obsessive love relationships that make a person insensitive or a 'rolling stone'. Other powers over life (11) are God, kings, politicians, blind love. Thus, the themes in 31 songs of Bob Dylan forecast that human life, our behavior, and Fate are already machinic without the influence of technology. Death is the inevitable machine, yet a slim possibility exists that one might wake up and recognize ideal truth and beauty during life.

Death and the Powers: a Robot Pageant by Tod Machover with a script written by poet Robert Pinsky (**2012 Pulitzer Music Finalist**) [Cybermeter: 7, 8, 9, 10, 15, 16]

The *Robot Pageant* identifies American society as machinic due to the strong influence of our ancestry or nature, which evolved from the Pageant's robots. Both the Machine and Human are part of Nature. The robots vanish from organic Nature but not inorganic Nature. (16) An eternal, free Robot Mind is everywhere because information is present in light, and Robots come from light and return to light (10). Human values are shallow because the system of mind is better than matter (15). Transformation to machine is a strong theme, and science may support a type of mechanistic mind exemplified by the Opera's Robots (9). But this transformation to machine is difficult because humans prefer what they are used to (8). Because the Robot is a sign of the system of cosmic mind or soul energy, the natural transformation is from human mind/matter to the system of free mind without human matter, not the machinic technocratic transformation of human brain matter to robot matter. However, we do have post-organic (posthuman) values (7), such as freedom, immortality, truth (15). Thus, we are ripe for a singularity of mind, rather than the singularity of matter imagined by the technocrats. Life's information may signify something (10) because of the circle of life—robots to humans and humans to robots.

The Pale King by David Foster Wallace (**2012 Fiction Finalist**); no award for fiction was given in 2012. Published posthumously after Wallace's death on September 12, 2008. The unfinished novel Wallace had been working on for ten years was compiled by his editor Michael Pietsch. [Cybermeter: 5, 6, 7, 8, 9, 10, 11, 12]

American society is machinic due to the strong influence of bureaucratic/corporate biopower (11) related to monotonous work (12) and machinic influence (9). Humans do not have adequate survival mechanisms for overcoming fear and boredom (10). We are losing touch with Nature, values, and family/friends. We might be influenced by technocratic persuasion (5-8) because we do not understand our fears and our brain neuroplasticity (10). Life may signify nothing.

Swamplandia! by Karen Russell (**2012 Fiction Finalist**); no award given in 2012. [Cybermeter: 13, 14, 15, 16]

No technology whatsoever. Themes of family (13), death and disease (14), and values of endurance, hope, faith and trust are common (15), along with themes of nature (16).

A Visit from the Goon Squad by Jennifer Egan (**2011 Pulitzer Prize**)

[Cybermeter: 9, 13, 14, 15]

Each chapter is narrated by a friend or family member (13) and mortality themes are dominant (14). The focus is on the process of ageing, and time is personified as a goon. Technology is only used through public relations to alter American views from sympathy to hatred (9). Bennie, an ageing music producer, values the flowing medium of music (15), rather than the technology of the Digital Age.

Tinkers by Paul Harding (**2010 Pulitzer Prize**)

[Cybermeter: 10, 13, 14, 15, 16]

The novel focuses on three generations of a family and how they lived (13), viewed through the dreams of George, a dying man (14) who reflects on his life, his father, and his grandfather. Life is arduous (10), but these three men have survived through work (12) and family values (15) within the context of the beauty of nature (16).

The Brief Wondrous Life of Oscar Wao by Junot Diaz (**2008 Pulitzer Prize**)

[Cybermeter: 10, 11, 13, 14, 15]

Supernatural themes of *fukú* (curse) and *zafa* (antidote to curse) (10) are integrated into the magically realistic story of Oscar, a ghetto nerd, who lives with his mother and sister, while hoping for love (13). Dehumanization and loss of identity are themes in light of events and the reign of Rafael Trujillo, a Dominican Republic dictator from 1930-1961 (11). Death haunts the human condition in the form of a faceless man (14). Change is part of the human condition, and determination is an important value (15).

The Road by Cormac McCarthy (**2007 Pulitzer Prize**)

[Cybermeter: 10, 13, 14, 15, 16]

A man and a boy (his son) (13) face death (14) and survival (10) in a post-apocalyptic world. The novel does not blame the condition of the world on technological warfare. Nature themes are present relative to destructive forest fires and gray skies (16). Determination is essential (15).

The Amazing Adventures of Kavalier & Clay by Michael Chabon (**2001 Pulitzer Prize**)

[Cybermeter: 10, 13, 14, 15]

The comic strip world emerges through the lives of two cousins, Kavalier and Clay. Chabon identifies American society as primarily a society of values (15). There is a strong influence of alternate survival visions (10) such as when Joe treks across the ice shelf and develops scurvy and frostbite. Family and friends also have a strong influence (13) as demonstrated by the themes of trust (15), hope (13) and rage (13) relating to how Joe feels about his family and what has happened to them. There is also a subtle theme of death, disease, and health (14) related to Joe's losses.

APPENDIX B

Summary of Technocratic Ideology and Related Research

First, Ray Kurzweil describes a series of Six Epochs from the Big Bang evolution of atoms to the development of the human brain and the birth of technology in his book *The Singularity is Near* (2005). According to Kurzweil, the human will merge with technology (singularity) in year 2045, to override our biology, solve human problems and amplify human creativity as well as our ‘ability to act on our destructive inclinations’. In the final Epoch, the universe will wake up, intelligence will saturate matter and energy, we will not be bound by the speed of light, and our human-machine civilization will infuse the universe with creativity and intelligence. (14-21)

Second, London-born Aubrey de Grey plans to ‘delete’ the human telomerase gene to cure cancer (2006), as if it were malfunctioning computer software. Stem cells, however, require telomerase, so de Grey suggests an infusion of new stem cells every decade. Another problem is that earlier and recent experiments on mice suggest that the telomerase gene has rejuvenating effects (Jaskelioff et al. 2011). The scientific consensus on ageing is that multiple biological processes driven by different molecular factors diminish organ function as age advances (Sahin et al. 2011, 359). Also, recent research reveals the coincidental cycles of the Human Growth Hormone (HGH) and telomerase; as HGH (a protein hormone affecting all endocrine glands and every organ’s development) declines with ageing, so does telomerase (Chein and Demura 2010, 68-69). Now, de Grey possesses a Bachelor of Art in Computer Science, and his reasoning system seems to be based on linear logic* (means-end reasoning) that is often used in Computer Science.

Third, Swedish philosopher Nick Bostrom is Director of The Future of Humanity Institute and Faculty of Philosophy at Oxford University. Bostrom envisions the goals of a superintelligent AI singleton* as colonizing a large part of the universe, facilitated by the cost of celestial resources declining as well as the expanding infrastructure growing at some fraction of the speed of light from the planet, until the expanding universe prevents this (2012, 12-13). He concludes that his Orthogonality Thesis* implies that we cannot assume that the superintelligent AI will share our values (14). Bostrom is straight to the point: it is easier to create a superintelligence that values nothing but calculating the decimals of pi, yet predictability* is another problem, for the superintelligent AI may infringe on human interests, eliminate potential threats to itself, or acquire extreme levels of power. From his account, Bostrom seems to be aware of scientist Stephen Wolfram’s research on the future of scientific computing, for as Wolfram has discovered, ‘it’s really important to pick the simplest underlying models’ because one will ‘get as far as possible in scientific computing’ (2003) and ‘very small programs can produce immensely rich and complex behaviour’ (2006).

Finally, James J. Hughes, who received his PhD in sociology from the University of Chicago, also argues for the singularity using linear logic. Advocating democratic transhumanism, Hughes explains that ‘persons’ are aware beings such as humans, apes and cetaceans (whales, dolphins). This reminds one of Vinge’s comment about posthumans ‘more like whales than humans.’ Hughes claims that the closer the machine minds (posthumans) are to human minds, the more likely that they will retain the characteristics of personhood (Dvorsky 2012), while aspiring to postgenderism* (Hughes and Dvorsky 2008).

APPENDIX C:

Definition of Terms

Linear Logic or Means-End Reasoning: According to the Stanford Encyclopedia of Philosophy (Di Cosmo et al. 2006), whereas classical logic emphasizes *truth* and intuitionistic logic emphasizes *proof*, linear logic emphasizes the role of formulas as resources, as well as the idea of *copy* with its close relationship to computation. In linear logic, the reading of ' $A \Rightarrow B$ ' reads 'give me *as many A* as I might need and I will give you *one B*'. Using linear logic, de Grey's solution for ageing would state: 'give me as many telomerase genes (A) as I might need and I will give you one cure for cancer (B)'. To resolve this one-dimensional approach, de Grey's linear logic on the removal of the human telomerase gene should be supplemented with classical logic emphasizing *truth* and intuitionistic logic emphasizing *proof*. This strategy is necessary because of the complexity of diverse mammals (mice and humans) interacting within complicated ecosystems.

Orthogonality Thesis: To Bostrom, intelligence roughly corresponds to the capacity for instrumental reasoning, that is, '*instrumental rationality*—skill at prediction, planning, and means-ends reasoning in general.' His Orthogonality Thesis combines variations in intelligence level with variations in motivation for final goals. He states that it is easier to create an AI with simple goals rather than one with 'human-like set of values and dispositions', what constitutes part of the value-loading problem (prudent human reason and moral justification). Bostrom believes that this should not blind us to cognitive systems without prudent reason and moral justification that are 'very powerful and able to exert a strong influence on the world.' (2012, 1-5).

Postgenderism: Hughes and Dvorsky (2008) discuss postgenderism, the technological erosion of biological, psychological and the social role of gender. Gender limits human potential which should consider 'greater biological fluidity and psychological androgeny', which are 'Enlightenment values.' This particular essay covers everything you wanted to know about postgenderism—from homosexuality, bisexuality, castration and cross-dressing to sex-reassignment and designer genitals. Put simply, the human can be homogenized into 'personhood' and freed from gender through social reform and biotechnology.

Posthuman Values: According to Bostrom, some of our values may be outside our current biological constitution. We can value other things than our personal identity. Beyond Plato, Aristotle, Nietzsche, Marx, Martin Luther King, the grand vision of transhumanism asks us to explore 'inaccessible realms of value' outside our biological mode of being. To this aim, global security is primary due to 'existential risk' or probabilities related to planetary disasters. So there is a 'moral urgency' for the transhumanist vision with its core value of freedom to explore transhumanism and posthumanism. As an hypothetical example, Bostrom posits the replacement of six billion people by AI, stating that an act such as this 'ought to be resisted on moral grounds.' For this reason, all should have the opportunity to become posthuman 'rather than having the existing population merely supplemented (or worse, replaced) by a new set of posthuman people.' Global security with surveillance and technological progress are two necessary conditions for derivative values of tampering with nature, peace, accepting technological change, being pragmatic, allowing diversity, caring about sentience, and saving lives through life extension, anti-ageing research, and cryonics. (2005, 1-14).

Predictability: Along with the value-loading problem, Bostrom discusses the problem of predicting superintelligent motivation. Predictability is possible through design competence (determining who will build AI and determine its goals). Predictability is also possible if an AI digital intelligence created from a human template (brain emulation) retains some human

motivation; however, subsequent superintelligent enhancement, the uploading process, or operational procedures may corrupt the AI's goals and values. Last, predictability is possible in a more intelligent AI through 'convergent instrumental reasons' or means-end reasoning. (2012)

SENS: Aubrey de Grey's plan to target the cellular level to cure ageing, what he calls Strategies for Engineered Negligible Senescence (SENS).

Status Quo Bias: Bostrom and Ord have argued that status quo bias (inappropriate favoring of the status quo) is a cognitive error responsible for opposition to human enhancement, particularly genetic enhancement (2006, 657-659). Put simply, one judges one option to be better because it is the status quo or what the person is used to. Bostrom and Ord consider that the 'endowment effect' in humans, desire for something that is becoming part of your endowment, may suggest a status quo bias, and that if this bias is removed, the case for genetic enhancement is stronger than many realize.

Superintelligent Singleton: Bostrom discusses the cognitive enhancement of AI that will increase its goal achievement and the possibility that the AI agent is 'in a position to become the first superintelligence and thereby potentially obtain a decisive advantage enabling the agent to shape the future of Earth-originating life and accessible cosmic resources according to its preferences' (2012, 10). Also, 'It seems that a superintelligent *singleton*—a superintelligent agent that faces no significant intelligent rivals or opposition, and is thus in a position to determine global policy unilaterally—would have instrumental reason to perfect the technologies that would make it better able to shape the world according to its preferred designs' (11).

Technocrat: This essay extends the definition of a technocrat to an individual with technical skills and/or other occupations supporting technical solutions for human problems, while aspiring to influence and direct human society through biopower or power over life (government, bureaucracy, technology, education, and so on).

'Thrown' Existence of Heidegger: *Dasein* is an *Ek-sistent* whose possibilities begin in *Geworfenheit* ('thrownness') and end in death. See Thomas Langan, *The Meaning of Heidegger*. (New York: Columbia University Press, 1959), p. 36.

Wheeler's Delayed Choice Experiment: Mind is central to the complete cosmic system because the act of observation permeates quantum mechanics, according to physicist John Wheeler's observer-participancy principle based on experiment. Because of quantum mechanics, objects can become linked and instantaneously influence one another regardless of distance.

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