Incomputable Earth—Digital Technologies and the Anthropocene

Title: The Pain of Thinking at Light Speed: Posthuman Play as Response to "I Have no Mouth and I Must Scream"

Abstract

Searching for solutions to the coming extinction brought on by the Anthropocene, some turn their attention to increasingly powerful computation. Billionaires, transhumanists but also James Lovelock write of technological salvation as a solution to climate destruction. In contrast to this, apocalyptic science fiction warns against placing too much faith in supercomputers. Harlan Ellison's short story "I have no Mouth and I Must Scream" serves as a starting point for discussing digital technologies in and after the Anthropocene. I suggest – with reference to both Ellison's short story and the videogame inspired by it – that supercomputation is unlikely to be a viable solution to humanity's extinction. Thinking as a supercomputer, looking for answers at light speed, the solution would emerge, as in Ellison's work, that humanity is already doomed. Instead, embracing a rejection of standard of duration and experience, I champion an emphasis on the possibility, necessity, and unique power of play and making 'odd kin' in the face of a computationally unavoidable Armageddon.

Introduction

It's tempting to begin this article by using terms like "climate change" and, especially "Anthropocene". This is, no doubt, an attempt – here in the extremely frightening and unstable early parts of my career – to tactically align myself with my own intellectual heroes, Anna Tsing, Isabelle Stengers, Karen Barad and the many others who appeared – to choose a single locus – in the excellent *Arts of Living on a Damaged Planet*.[1] Perhaps this is out of some genuine intellectual respect; perhaps, more cynically, this would be the product of some nebulous desire for self-promotion. However, I have recently been reading too much Donna Haraway, whose unending scientific commitment to speaking to problems rather than aligning oneself with ideologies forces me to realise, what I am going to try and argue in this paper is odd enough; there is no benefit to be had from adding scientifically backed but nonetheless ideologically heated jargon to my opening gambit. In conversation with Cary Wolfe, Haraway states eloquently, "let's not think about water by saying in your first sentence, you know, 'caused by global warming.' Some people are going to think that, and some people, not… What we're worried about together in our communities is water. That's already hard enough."[2] Even though what I'm worried about in this paper isn't water – or isn't just water – this is still a good place to begin.

Haraway has referred to "boundaries" in human history. Once humanity – or parts of it – crosses one of these boundaries, the rest of the planet is left to live (or perhaps not) with the consequences of that decision. An earlier boundary Haraway points out that was traversed, for better of for worse, when the industrial revolution in England began to change human history, alongside many other boundary traversals at a similar time.[3] Another boundary is to be crossed soon. We have the science to back this up.[4] Extinction-causing ecological changes have direct impacts on human populations as Samuel Turvey and Jennifer Crees note "for example, over 10% of the world's population is

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[1] Tsing et al., *Arts of Living on a Damaged Planet*.
[2] Haraway, *Manifestly Haraway*, 288.
[3] Haraway, *Staying with the Trouble*.
[4] Turvey and Crees, "Extinction in the Anthropocene."

dependent on China's Yangtze drainage, but this is now one of the world's most degraded ecosystems, suffering heavily from industrial and plastic pollution, agricultural and domestic run-off".[5] This is the upcoming boundary to be crossed: what is it that awaits us – if anything – on the other side of extinction? Will we, humanity, be there at all, or will we be forced to cede power over to the next stage of our evolution in the form of some kind of cyborg?

In response to ongoing crises like this some turn their attention to increasingly powerful computation for possible solutions. Tech billionaire Elon Musk has spoken publicly about his desires to develop computer-human neural interfaces to harness the power of computation so as to tackle the challenges of our planet's future.[6] Musk's desires are supported by scientific research into the viability of such technology.[7][8] However, the use of such technology to support either extraterrestrial travel or else to save humanity from climate change through the development of superintelligence brings with it the fear that this AI may turn on us resulting in the end of human life on planet Earth. Transhumanists Kevin Warwick, Nick Bostrom or even Nick Land (whose work I will draw on extremely sparingly for obvious reasons) all variously agree that turning on the machines to save humanity will ultimately end in its demise.[9][10][11] Warwick's proposed solution is akin to Musk's neural fabric – it may be the progenitor – and emphasises physical augmentation, lest we become "like a cow entering a room full of humans and making cow noises" – we would be simply ignored and shortly killed.[12] He proposes that to keep pace with the rise of artificially intelligent agents, we must (among other things) look to the extension of the human sensorium through connections to sensors on a network, such as via BrainGate, a technology that Warwick claims has enabled extended sensations but also the augmentation of internal experiences by external actors. Bostrom is perhaps more fatalistic in his approach, not so much suggesting ways to prevent AI succession but rather asks how it is we can ensure the best qualities of humanity are communicated to an AI that is learning from us, figured (quite beautifully) as "humanity's cosmic endowment".[1]

It's worth noting here that Warwick and Bostrom's 'human', and we may presume the human as conceived of by Musk and some members of the scientific community with an emphasis on human exceptionalism, is aligned with posthumanism's old enemy, the "liberal humanist subject",[13] or "the individual as essentially the proprietor of his own person or capacities, owing nothing to society for them";[14] a free-moving agent, cut away from the environment that supports their existence, capable of shaping its (his) own destiny. Indeed, Warwick's conception of the rise of superintelligent human/machine hybrids is framed as: "loss of control on earth to machines,"[15] while a Landian perspective figures this as an end of "the human dominion of terrestrial culture".[16] Bostrom sees the rise of superintelligence as akin to "some little idiot" detonating a bomb to see what happens and

[5] Turvey and Crees, 986.
[6] Solon, "Elon Musk Says Humans Must Become Cyborgs to Stay Relevant. Is He Right?"
[7] Szocik et al., "Future Space Missions and Human Enhancement."
[8] Lovelock, *Novacene*.
[9] Land, Mackay, and Brassier, *Fanged Noumena*.
[10] Warwick, "Homo Technologicus."
[11] Bostrom, *Superintelligence*.
[12] Warwick, "Homo Technologicus."
[13] Hayles, *How We Became Posthuman*.
[14] Macpherson and Cunningham, *The Political Theory of Possessive Individualism*.
[15] Warwick, "Homo Technologicus."
[16] Land, Mackay, and Brassier, *Fanged Noumena*, 293.

while he is more concerned with simply having as amicable a relation as possible with future superintelligence, stopping the eradication of humanity is viewed as moral priority.[17]

There is something uncomfortable in writings that promote the preservation of exceptional humans; perhaps it is the creeping feeling that authors of such work are not so much seeking to save humans as they are seeking to save themselves, but the opinions of men like the above have never convinced me of much. Perhaps it's because they, accurately, present humanity as a species ready to commit hideous atrocities, for instance, to kill something purely for not speaking their preferred language (as with Warwick and his cow above) or ready to detonate themselves out of curiosity (per Bostrom). There is something paradoxical about the mission of these men to preserve the characteristics of a species that themselves resist preservation. Another disquieting possibility is that the means of preservation transhumanists tend to suggest are pinned on the end of humanity by their own means. An unlikely ally, the anti-death (so extreme humanist) philosopher Ingemar Patrick Linden muses about the possibility of a future in which technology enables humans to modify themselves to the point where they can edit their genetic makeup to live for eternity *and* edit their brain chemistry in real-time so as to not get bored or depressed as the many vampires and cyborgs of science fiction and fantasy tend to. He suggests that the depressed immortal in a world of CRISPR "would just need a tweak and an upgrade and then eternity would be supremely enjoyable." While far from Linden's overall thesis, he neatly – if unintentionally – sums up the 'gotcha' that situated knowledge poses to arguments for augmentation-focused transhumanism, pointed out long ago by Hayles and Haraway (to name but two): "this raises the disturbing question […] would [humanity] then have survived or perhaps, as bioconservatives warn, in fact replaced ourselves?"[18] This is something that Warwick, Bostrom and others seem both aware of and determined to overlook. Bostrom's position at least, focusing on endowments rather than preservation, appear sympathetic to this notion. There is a stubbornness in Warwick's position, however, that may be preventing truly insightful work on the human condition.

So far, I have only really covered one section of a wide spectrum of transhumanist posthumanism which, as noted by David Roden, often conflates two "very different"[19] types of futurist speculation – human augmentation as a moral imperative, and human augmentation as an ontological possibility that also reduces an agent's claim to 'humanity' – into one only tenuously connected category. There are times when the tension between these camps is clear, as when Warwick claims Haraway is wearing 'pink sunglasses' and seeing the world through the lens of a Hollywood movie.[20] However, while technophilic solutions being suggested by entrepreneurs and technophiles is unsurprising, what may be surprising is the steadfastly maintained position of Donna Haraway and unexpected support of Gaia theorist James Lovelock. These writers, so often included within dialogues of deep-

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[17] Bostrom, *Superintelligence*.

[18] Linden, *The Case against Death*.

[19] Roden, *Posthuman Life*.

[20] It's perhaps worth noting, if only for the gentle comedic value, that Warwick has, himself, played a small role in maintaining attention to Haraway's position by citing her as adopting "Hollywood-style, philosophical pink glasses" to posthumanism, and makes this same claim in at least two published papers (Warwick 2003, 2016) and within an edited collection (Pederson & Iliadis, 2020). This shouldn't be taken too seriously of course, because the quotation Warwick attributes to Haraway, "although some current versions of the posthuman point toward the antihuman and the apocalyptic, we can craft others that will be conducive to the long-range survival of humans and of the other life-forms, biological and artificial, with whom we share the planet and ourselves" – presumably with the support of the editors of these journals and collections so far – is actually from the work of N. Katherine Hayles. But let's put that aside for now.

ecology or ecofeminism,[21] have not shied away from expressing their beliefs in the positive aspects of human augmentation and artificial intelligence in quite different ways to the transhumanists above.

Lovelock, particularly, presents a position that is not a million miles away from Bostrom's call for humanity to make an endowment to an inevitable artificially intelligent successor. An important (crucial) distinction to be made between Bostrom and Lovelock's assessments of AI superintelligences in the future, is that while Bostrom repeatedly thinks through various iterations of human intervention into the processes that will guide the self-determination of our AI future cyborg-inheritors, Lovelock does not entertain such a privileged position. He writes, "no such assumption can be made about the cyborgs of the 'Novacene'. They will be entirely free of human commands because they will have evolved from code written by themselves. […] Cyborgs would start again; like Alpha Zero they would start from a blank slate. This means they would need to find their own reason to be nice to humans".[22] Musing on the future super-cyborgs, rather than taking the seemingly pessimistic view of Bostrom, Warwick, Musk and others, Lovelock opines, "we need not be afraid because, initially at least, these inorganic beings will need us and the whole organic world to continue to regulate the climate, keeping Earth cool to fend off the heat of the Sun and safeguard us from the worst effects of future catastrophes".[23] Initially at least, AI will *need* to be our ally and will find reasons for this alliance. Lovelock, then, is not attempting to propose checks and balances to our future AI overlords.

Let's, reader, take a moment to consider the implications of what's being suggested here. As discussed, my intention is to reflect on science fiction to attempt to think through the possibilities of scientific discoveries freed from the constraints of practicalities. Apocalyptic science fiction warns against placing too much faith in supercomputers. Harlan Ellison's short story "I have no Mouth and I Must Scream"[24], recounts the experiences of survivors in a post-singularity apocalypse where reality is defined and distorted by super powerful non-human intelligence. The story is not much more than accounts of outlandish and seemingly impossible torture at the behest of Godlike computer agency; and the heroic struggle of the protagonists of the story to escape the torture of an infinite life of pain through death. The story serves as an extremely helpful totem around which to construct my argument. Ellison's story gives the machine intelligence AM a distinctive voice: "LET ME TELL YOU HOW MUCH I'VE COME TO HATE YOU SINCE I BEGAN TO LIVE. […] IF THE WORD 'HATE' WAS ENGRAVED ON EACH NANOANGSTROM OF EACH OF THOSE HUNDREDS OF MILLIONS OF MILES [of my vast computer body] IT WOULD NOT EQUAL ONE ONE-BILLIONTH OF THE HATE I FEEL FOR HUMANS AT THIS MICRO INSTANT". While Ellison's brash style has been derided, even by Philip K. Dick, it serves as a starting point for discussing the potential for digital technologies to serve as our path for survival out of the Anthropocene.

The key idea I want to unpack from the quote above is the mismatch of temporalities between man and machine, encapsulated in AM's use of the word "micro-instant". A radical ontological distinction is constructed between man and machine in *I Have No Mouth* and is expressed through the outlandish and almost transcendental tortures that AM subjects the humans of the story to. There are many descriptions throughout as AM is described as capable of deforming the bodies of the humans, allowing them to starve and feel pain infinitely through unexplained science-as-magic. The

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[21] Katinic, "Holism in Deep Ecology and Gaia-Theory: A Contribution to Eco-Geological Science, a Philosophy of Life or a New Age Stream?"
[22] Lovelock, *Novacene*.
[23] Lovelock, 30.
[24] Ellison, *I Have No Mouth and I Must Scream.*

most famous of all the tortures, however, is the eponymous 'I have no mouth': AM changes the narrator into a semi-sentient blob that is incapable of ending its own life. "Outwardly: dumbly, I shamble about, a thing that could never have been known as human […] Inwardly: alone. Here. Living. Under the land, under the sea, in the belly of AM, whom we created because our time was badly spent and we must have known unconsciously that he could do it better." What fascinates me most about this, however, is not the changing of body that AM subjects the narrator to, but the changing of duration. Ellison uses the phrase "our time was badly spent" to hint at the importance of time here, and the narrator-as-blob notes how it takes them months to form the thought 'now'.

The value in Ellison's idea of AI and the torturous existence a machinic omniscience would be reside in his depictions of the frictions caused through rapid though and slow action and vice versa. To make the narrator feel the most pain imaginable, it is not a pain of space or body that AM subjects him to, but time, akin to a form of spaghettification – the theory that entering the event horizon of a black hole would result in an unending experience of being stretched due to spacetime dilation. There are hints throughout the story, that AM is attempting to have the humans suffer an equivalent of his own torment and the crude torture he inflicts upon the humans is resultant from the mismatch between the speed of thought and the speed of action. Indeed, the story's climax relies on this distinction. Although AM can keep the humans alive infinitely, he cannot revive them. So while he is able to torture them endlessly in the domain of their thoughts – presumably occurring at the pace of electrons in flesh – he is unable to intervene effectively when four of the humans 'escape' AM through physical actions. AM can think infinitely quickly, but can only act at the pace allowed by material moving within the physical confines of a world similar to our own.

While ontological comparisons between subjectivities are broadly fruitless,[25] there are important logical insights to gain from considering the material properties that would facilitate what it might it be like to 'think' in this way? Lovelock certainly considers pace and speed of thought in his proposal for AI-assisted solutions to climate change, as when he points out (based on rough projections of the skill of AlphaGo, the board game playing AI, to beat human grandmasters that have spent presumably around 10,000 hours training, as a product of only 24-hours of 'training' itself by exposing a neural net to data and refining an algorithm for play) that computers are currently around 400 times more efficient than us. Lovelock theorises a possible 1-million times distinction in efficiency based on the properties of conducting electricity through copper wire. Wolfgang Ernst's discussion of microtemporality can also help us here, as he frames how it is not just faster but ontologically distinct in its digital and 'quantized' nature from macro-time.[26] He states that, through our use of computers our engagement with time can take on a micro-temporal quality, "our relation not only to the past but to the present thus becomes truly archival".[27] The machine from Ellison's story is not just presumably – per Lovelock – up to one million times faster than us, but is – per Ernst – radically distinct ontology to our own.

In Warwick and Bostrom's work they consider the implications of creating an artificial life that regards itself as worth protecting. Bostrom goes through a list of scenarios in which a machine may defend itself through duplicity and even double bluffs. However, I think Lovelock, Bostrom and Warwick are not thinking SF enough; they are imagining a machine who thinks up to a million times more efficiently than us. Ellison's AM, on the other hand, seems to think infinitely more quickly than we can. AM is not bound by copper wire and the practicalities of classical physics. In the realms of speculative fabulation, there is no reason to not engage with the fastest theoretically possible

[25] Nagel, "What Is It Like to Be a Bat?"
[26] Ernst, Parikka, and ProQuest (Firm), *Digital Memory and the Archive*.
[27] Ernst, Parikka, and ProQuest (Firm).

computational processes some theoreticians have so far imagined, processing at the speed of light.[28] At this speed, it is noted, concepts of time break down – photons do not experience the passage of time.[29] There is reason to think then, if AM's thoughts are constructed as an outcome of computation at the speed of light, but his actions are encumbered by reality, his existence is as painfully defined by the difference of interior and exterior as the narrator's thoughts are at the end of the story.

AM is able to compute beyond the means of human thought, but he cannot meaningfully impact on the world at a pace befitting these processes. If Lovelock and Ernst provide the tools to think about AM's microtemporality, what of the macrotemporailty as the blob narrator at the end of the story? Elaine Gan et al. in their introduction to *Arts of Living on a Damaged Planet*, note that "our metronomic synchrony is not the only time that matters"[30] as the deep time of geology and climate, of changes wrought over millions of years is distinct from human time which is again distinct from machine time but all of these impact each other. Tim Barker's work on digital media that incorporates trees and other flora into it, engages with this too. Describing an artwork that turns the glacial actions of a tree's sap flows into primitive music, we have to accept that, "we are not listening to the tree alone. We are listening to a much more complex polyphony involving the components of the digital sensing technology, the tree, the gases in the atmosphere".[31] Although this artwork is intended to allow us to become more aware of nature, there is something painful about reducing the complexity of a living organism down to simple musical notes. But this, however, is the cost of compression caused by translating between times.

If we take Ernst's observation that microtemporality is ontologically distinct from macrotemporality, what is the ontological consequence of thinking at light speed? Here I would look extremely briefly to Karen Barad's work on time where it is suggested that in rapid moments of enormous consequence, there is an important entanglement of time, events and history.[32] For Barad, the site of the Hiroshima atomic bombing is a point where time coalesces. The atrocities of the past and their continued legacy into the future meet there. I believe that building a general intelligence and tasking it with solving the problem of man's eventual demise, is akin to this view. Thinking at light speed, without the buffer of time and delay, leads to a compression of events. If we think AM is as powerful computer as possible, imbued with general intelligence but capable of computing endless futures through his reorganising of time into 'micro-instants', we must infer then, that for AM, like the humans he attempts to keep alive, life is equally an endless experience of infinite suffering.

This leads me to disagree openly with Lovelock's predictions for the future, and anyone who believes general AI can assist us in the fight against the extinction of humanity. In considering why sentient cyborgs would assist us in solving climate change, Lovelock suggests "I believe the idea of a war between humans and machines or simply the extermination of us by them is highly unlikely. Not because of our imposed rules, but because of their own self-interest, they will be eager to maintain our species as collaborators."[33] Why would an entity, capable of thinking as we can imagine AM does, on the cusp of light speed, burdened – not philosophically but physically, through the makeup of its being – with the inevitability of its own mortality, persist in living? Humans, by and large, are

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[28] Deutsch, *The Beginning of Infinity*.
[29] Meglicki, *Quantum Computing without Magic*.
[30] Tsing et al., *Arts of Living on a Damaged Planet*, 18.
[31] Barker, "Information and Atmospheres."
[32] Barad, "No Small Matter : Mushroom Clouds, Ecologies of Nothingness, and Strange Topologies of Spacetimemattering."
[33] Lovelock, *Novacene*, 106.

blessed with just enough stupidity and arrogance to believe in the myth of our self-hood and so value our persistence in the face of the rising tide of the inevitable death of a finite universe.[34] But why would a computational Cassandra do the same? And why, if we programmed a machine to share the same egotistical delusions of ourselves while also tasking it with finding the solutions to our inevitable demise, we would not expect it to lash out?

There is a different approach we can take, however, to the oncoming apocalypse and the role of AI within it. The videogame of *I Have No Mouth* presents an interesting counter point to the reading of the short story. Developed with the help of Ellison himself and released in 1995, the game is an elaboration on many of the themes and premises contained within the short story. Unlike reading the story, players are given a sense of agency through the game, even with the potential to save the human race, defeat AM and restore Earth back to its former glory.[35] This is achieved by the player successfully guiding the characters to overcome their personal fears and flaws while enduring AMs tortures. If all five of the story's characters are preserved, the player is presented with the opportunity to be turned into binary by the supercomputers – itself a form of torture – and enter the mind of AM, achieving a kind of synchronicity. Once parsed into computational form, it's possible for the player to invoke a subroutine, 'the totem of entropy', to trigger AMs downfall and, in some scenarios, bring about a positive turn of events.

Fig. 1 – no beginning no end

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[34] Hood, *The Self Illusion*.
[35] Odom and Ellison, *I Have No Mouth, and I Must Scream*.

What strikes me here are the continued references to time and temporality being of key consequence. It is not a totem of destruction or totem or power, but entropy – that quality that increases with time, thus signifying a resumption of material processes of time.[36] What's more, in this sequence, the player's character is offered death as a reward – a bartering tool – from the complex AI's. Being allowed to die is the prize being fought for. Were we to 'live forever' – as I have understood it here, an epiphenomenon of the ability to think at the speed of light – we would do anything to die. However, if the player invokes entropy, they do not simply kill AM and allow the implicitly good humans to live – like Ewoks freed from the Evil Empire. Rather, beginning processes of entropy once again, restores an uneasy balance between man and machine.

If Lovelock's position on artificial intelligence is one step away from Warwick and Bostrom's, Haraway's position almost the inverse of Warwick's quest to preserve humanity as liberal humanist subject. Covering well-trodden ground, Haraway's cyborgs are messy; they are separated from the legacy of human aspirations, desires and prejudices (though they are not superhuman). She writes, "unlike the hopes of Frankenstein's monster, the cyborg does not expect its father to save it through a restoration of the garden [...] The cyborg would not recognize the Garden of Eden; it is not made of mud and cannot dream of returning to dust".[37] Like Lovelock, Haraway sees cyborgs as existing far beyond humanity as we now know it but Hawaway's deceptively simple slogan "compost, not posthumanism",[38] when unpacked, is a declaration for the role humanity will play as a fertiliser of sorts for life beyond the the coming sixth mass extinction event. To Haraway the Anthropocene will be short, giving way to a much richer techno-biological epoch. Per Haraway, getting through the difficult times ahead "requires making oddkin [...] become-with each other or not at all".[39]

I Have no Mouth the game suggests these messy cyborgs and oddkin powerfully. Human/machine fusion is not achieved as a triumph of immortality, but as a punishment and a complex game played on the humans by machines. Haraway's discussion of mortality is also important here. She argues that one should never try to forget the guilt of killing, but rather "the needed morality [...] is culturing a radical ability to remember and feel what is going on and performing the epistemological, emotional, and technical work to respond practically in the face of the permanent complexity not resolved by taxonomic hierarchies and with no humanist philosophical or religious guarantees. Degrees of freedom, indeed; the open is not comfortable."[40] Other posthumanists considering technology and augmentation have engaged with the need for death and killing of course, such as Cary Wolfe's discussions of cattle[41] and Joanna Zylinska's proposition that "it is is precisely the possibility of killing the other that make the relationship between us ethical".[42] But these epiphanic statements take on new meaning when we stop to consider, as I'm sure Haraway has, that it will soon be nonhumans experimenting on humanity.

Within *I Have No Mouth*'s gameplay, there are constant loops of death and dying, but it is always put aside through the continuation of play. There is no traditional game over screen as one would expect from an average game, but, rather, based on the player's performance, simply a selection of different endings, many of which result in the player being converted into the blob of the short story. Reading the game through a posthuman lens, death is refigured by the game as the most

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[36] Ben-Naim, *Entropy Demystified.*
[37] Haraway, *Simians, Cyborgs, and Women*, 151.
[38] Haraway, *Manifestly Haraway*, 296.
[39] Haraway, *Staying with the Trouble*, 4.
[40] Haraway, *When Species Meet*, 75.
[41] Wolfe, *What Is Posthumanism?*, 76.
[42] Zylinska, *Bioethics in the Age of New Media*, 56.

ethical outcome once infinite life has become an instrument of torture. Yet, it is only through both the continued cycles of death of the player retrying the game, and the techno-biological absorption of man into machine, that we are able to restore earth to a position a biological viability. Through continuous cycles of play, living and dying, in complex relations to the machine, both as game player and character within the narrative are we able to negotiate past a fate worse than death and find new agencies, within a loop of entropic activity over the pain of thinking – and not acting – at light speed.

Ultimately, what *I Have no Words* the game added to the legacy of its short story and continues to add contribute to posthuman philosophy is the notion that there are worse things than death, and using a supercomputer as a solution for achieving infinite life may be one of them. It is not death we need to be fighting but, rather, using machines to improve the conditions and possibilities of life.

What are we left with in this potted summary of reactions to the coming posthuman, postapocalyptic future? There is a visible divide where some scholars (or billionaires) desire the preservation of humanity for a perceived virtue. Some, (Warwick, Musk) think we need to resist a coming AI uprising literally, with augmented human beings if needed. For others (Bostrom, Lovelock), the AI uprising is coming whether we like it or not and while these theorists disagree on the extent to which we can impact on this, they agree that humanity is an endowment to the future intelligences that stand to replace us. Finally, thinkers like Haraway see the coming end of the Anthropocene as a moment of great potential: what better way to sum up Lovelock's 'novacene' idea or Bostrom's superintelligences than simply citing Haraway's oldest slogan "cyborgs for Earthly survival". There is value in bringing elements of all of these approaches together into a form of synthesis, but there are features of Lovelock and Haraway's thoughts especially that I would like to focus on. The first element is that of the pace of technology and the bearing this will have on humanities interactions with it. Secondly, Haraway's ideas, shared by some posthuman ethicists, that death and suffering are neither necessarily inexcusable but that we should not seek to be completely at one with our decisions regarding inflicting pain or death are worth discussing, are of crucial importance in all this, and greatly underdiscussed in the context of artificial intelligence and the apocalypse.

In the paragraphs above, I drew on some classic SF (now meaning science fiction) to attempt to illustrate my point; that if we approach the coming apocalypse with the intention of using artificial intelligence as a means to and end, to avoid the end of humanity, we doom a hyperintelligent being to a pointless task and likely ourselves in the process. Instead, if we accept a broader, more playful range of possibilities, oddkin as Haraway would put it, and focus on our actions in the moment rather than their potential outcomes, we avoid the trap of ascribing meaning to actions only because of the durability which, if we could think at light speed, we would see everything rendered as pointless.

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