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Otero i Besolí, Jules; Martín Alegre, Sara , dir. Flesh, Steel and Uncertain Words
: Exploring the Limitations of Posthuman and Transhuman Terms through Dan
Simmons' Hyperion. Bellaterra : Universitat Autònoma de Barcelona: 2024. 35
pag. (Grau en Estudis Anglesos)

This version is available at https://ddd.uab.cat/record/299212

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DEPARTAMENT DE FILOLOGIA ANGLESA I DE GERMANÍSTICA

Flesh, Steel and Uncertain Words: Exploring the Limitations of Posthuman and Transhuman Terms through Dan Simmons' *Hyperion*

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May 2024

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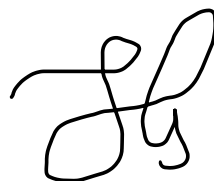
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TABLE OF CONTENTS

Acknowledgements

Abstract

The *Hyperion Cantos* is a critically acclaimed science-fiction saga written by Dan Simmons which takes the reader across the galaxy to experience a plethora of different ecosystems, political structures and ways of life. The first instalment of the saga, *Hyperion* (1989), won both a Hugo and a Locus Award, and the saga itself has attracted its fair share of academic attention. However, even though scholars have talked in depth about the science-fiction aspect of the saga, they have not done so through the lens of posthumanist and transhumanist studies. This dissertation wonders how Simmons' ideas of what the future holds fit into the posthuman and transhuman worries of today. More specifically, its main thesis is that the terms posthumanism and transhumanism prove insufficient to illustrate the methods of transformation and their outcomes within, in particular, *Hyperion* (1989) and *The Fall of Hyperion* (1990), and that new, more specific words must be employed to fully define the future of humanity. As they stand, the terms posthumanism and transhumanism are often confused and used interchangeably in discourse about science, ethics, and the literary study of science-fiction. They are, however, vastly different, and cannot, by themselves, fully explain and contextualise all flavours of evolution within and beyond humanity that *Hyperion* has to offer. This diversity is misrepresented in the post/trans binary and thus requires further terminology. To achieve this, the addition of another axis to the posthumanism and transhumanism spectrum is proposed, a shift which makes the process and method of change as important as the change itself. This axis, which adds the categories "cybernetic" and "biological" to the paradigm, ensures that all variables are observed, and that post- and transhumanist discussion can be effective and concise.

Keywords: Dan Simmons, *Hyperion*, *The Fall of Hyperion*, Transhumanism, Posthumanism, Ethics, Science Fiction, Dystopia

0. Why Words Matter: Introduction

The Hyperion Saga, written by Dan Simmons, presents us with a vivid patchwork of futures Humanity may live. Within the pages of the four novels, these possibilities coexist, but not without difficulty: barely sheltered by the enormous distance between planets, the different factions wage war to decide which is the pinnacle of civilisation and which is a barbaric force, which is human, and which is the Other. And herein lies the question: which faction can claim, in Hyperion, to be truly Human, heirs of the species' worries and values? Which of the modifications on the human condition ameliorate it, and which negate it altogether?

Twenty-seven years after the date of publication of the saga's last book at the time of writing, this debate has crossed the frontier from science fiction to science fact and reached academic discussion. Newfound practices such as nanotechnology, genetic manipulation or bioengineering provide a glimpse into what the future holds for humanity and, in fear of being found unprepared, ethical theories and systems are being written and sprung to action faster than they can be read or debated. Thus, the terminology created to discuss what the Anthropocene's heir may be is used by many to refer to different, and often contradictory, concepts and ideas: within this terminology, the focus will be placed on the paradigmatic pair "Posthumanism" and "Transhumanism", as well as their variants.

This dissertation aims not to add another voice to the deafening chorus around these two concepts, but to fine-tune its harmony so that the quiet listener may understand them. There are no judgements of value to be found on these pages: rather, the intention is to provide a clinical categorisation of future possibilities, with which the all-encompassing debate may be understood. This cannot, nevertheless, be done by looking

at the present state of things; but by using science fiction as a looking glass to the multiplicity of futures that lay waiting, a glimpse of truth may be inferred.

Hyperion has been chosen, over all other alternatives, to fulfil this function of looking glass for its ample choice of factions, all differing in their approach to the modification of the human condition. Where most works of science fiction explore one possible future in depth, Dan Simmons strives to consider all of them and pit them against each other in a war over narrative control.

Simmons has won many awards (eleven Locus awards, four Bram Stoker awards, three Seiun awards, two World Fantasy awards, an International Horror Guild award, a Nocte award, a British Fantasy award, a Hugo award and a BSFA award[1]) and is known for his contribution within science fiction, horror fiction and historical fiction as well as other genres. Regarding the books' previous presence in academia, most of it is concerned with their Chaucerian structure (such as T. S. Miller's "Flying Chaucers, Insectile Ecclesiasts, and Pilgrims Through Space and Time: The Science Fiction Chaucer"), their constant allusion to the poet John Keats and his work, or their impeccable use of fantasy themes within the sci-fi structure. Conversely, little work has been published (such as Marszalski's "Humanity's Transhuman Future and the Ethics of the Other in Dan Simmons' Hyperion Cantos") about the saga's potential in the analysis of the potential effects in human forced evolution, which is a central theme in the story.

In this dissertation, only the two first books (*Hyperion,* published in 1989, and *The Fall of Hyperion*, published in 1990) of the tetralogy are explored, because they are the richest in world-building and political cartography. The following two, *Endymion* (1996) and *The Rise of Endymion* (1997) are set three centuries later, but human evolution

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[1] According to the Wikipedia article: https://en.wikipedia.org/wiki/Dan_Simmons

during these books is not varied enough to warrant scrutiny. Furthermore, due to the nature of the study, the saga's plot will occupy a necessarily secondary role, favouring the web of political, cultural and economic approaches to evolution exhibited by each faction in *Hyperion*'s ongoing conflict. However, this essay would prove difficult to follow without knowledge of the plot, so the next few paragraphs are dedicated to explaining it.

In *Hyperion*, seven pilgrims board a spaceship towards the colonial planet which holds the Time Tombs. These are great constructions which have travelled backwards from the future to release something unknown. They are tied to a creature called the Shrike, which kills indiscriminately and poses a threat to the pilgrims; the other threat is the war with the Ousters, which is waged in space but threatens to turn the planet into a battlefield soon. Unable to do anything to stop these threats, and uncertain as to why they have been chosen, the seven main characters tell their stories to each other while they embark on a pilgrimage which may prove deadly.

The respective stories are the driving force in the narrative, as the war and the presence of the Shrike quickly become secondary. Through them, most of the worldbuilding is established, most notably the state of society, the presence of the Technocore (which is the AI hivemind controlling most aspects of the Hegemony) and their questionable intentions in creating cybrids and predictive algorithms, the way Earth was destroyed, the colonisation of Maui-Covenant, a planet which will be important later in the dissertation, and the failed negotiations with the Ousters, humans which decided to be nomadic after the Earth's destruction and the dehumanised enemy through most of the saga. The novel ends once the pilgrims reach the Time Tombs.

The Fall of Hyperion has two main storylines: the first picks up where the last novel finished and continues to follow the pilgrims as they explore the Time Tombs and

wait for something to happen; the second follows a cybrid with the implanted personality and memories of the poet John Keats as he attends meetings in the Hegemony council and helps the CEO of the Hegemony to unravel the Technocore's secrets. Throughout this novel, the war with the Ousters is a prominent theme, and the reader learns more about their society and their motives to mistrusting the Hegemony.

Hyperion and *The Fall of Hyperion* are, beyond their incredibly colourful word and political cartography, enthralling novels with a beautifully interconnected storyline exploring themes such as paternal devotion, neo-colonialism, demonisation of the other, ethnicity, religion and what it means to be human.

Returning to the matter at hand, the methodology used to navigate these topics is the following: after exploring and contrasting the different uses of the words "transhuman" and "posthuman" in previous academic literature, and having resolved the present contradictions and generalisations, *Hyperion*'s insight will be used to make sense of the limitations of the concepts and to provide illustrative examples. Yet this provides only two defined, strict categories, which soon prove insufficient to describe the plethora of possibilities at hand. A linear spectrum is not succinct either: How does one conceive something that is half-post-half-trans-human?

To resolve this shortcoming, the paradigm is turned into an x-y plane (not unlike the Cartesian coordinate system), which adds another axis into consideration. The second part of the dissertation explores this second axis: what terms it should be constituted by (and what these terms entail), how these terms are used in previous literature, and how they are represented in *Hyperion*. While the Transhuman-Posthuman axis discusses the possible future's relation to humanity, its theoretical goal, this second axis works in the realm of methodology, considering the path taken to differ from humanity and where that path may lead. This is the most basic version of this plane:
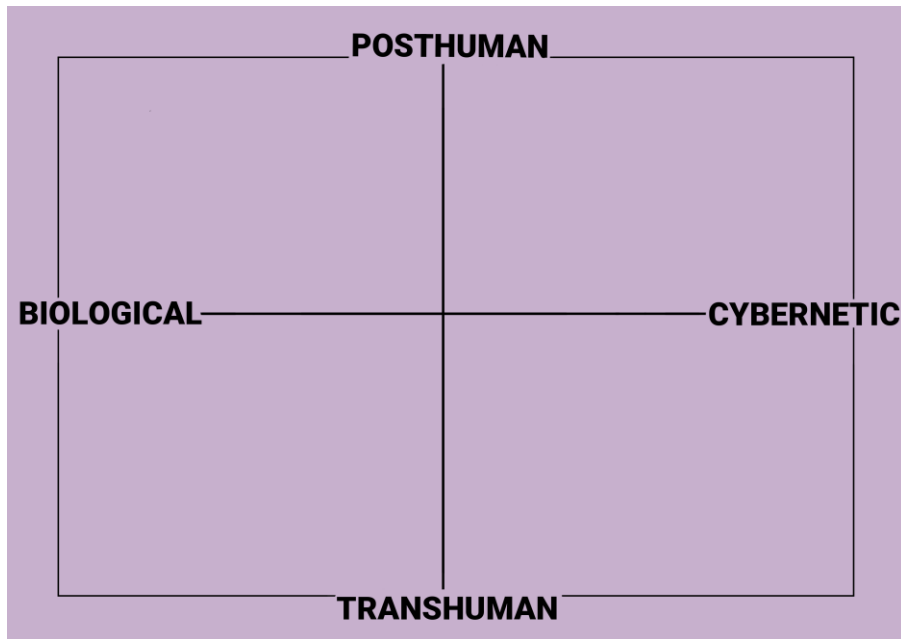
The creation of this x-y plane is an effort to promote effective, clear communication and nuanced use of categories, which in turn aims to favour a divulgative and accessible pathway into the discussion of the plethora of possible futures awaiting the human species. The commonality of miscommunication, misinterpretation, contradiction and confusion in previous discussion makes navigation of the subject a treacherous voyage, and the mistake is often made of forgetting or dismissing the contribution of science fiction as mere speculation or entertainment, even though the warnings contained within their stories are often insightful, astute and incredibly valuable. Through *Hyperion*'s sheer cultural diversity, the organisational power of the proposed paradigm is brought to its limit and put to the test, attempting to prove its efficiency and flexibility.

1. **The Y-axis: Transhumanism and Posthumanism**

1.1. Previous Literature: The Cyborg and the Animal

In previous academic literature regarding posthumanism and transhumanism, the terms are used in a plethora of different ways. Some scholars use them interchangeably, with no discernible difference between the two. Others may use them to establish a relation of causality (transhumanism causes posthumanism), or simply a nominal difference (transhumanists wish for posthumanism). Yet others assign different and even opposite values to the terms, associating them with ethical and political beliefs.

These uses can be divided in three groups: transhumanism and posthumanism are either (i) imperfect synonyms that refer to a vague idea of the future, mostly in older studies which saw a very limited version of the discussion, (ii) semantically related words leading to the same conclusion but in different stages/areas, mostly in studies made by those who consider themselves transhumanists or who criticise transhumanist views (such as the participants of *H+/-: Transhumanism and its Critics*), or (iii) polar opposites that represent a conscious choice for humanity, mostly in studies written by those who consider themselves posthumanists, such as Rosi Braidotti or Derek Ryan.

The first possibility is unproductive: it is entirely unhelpful to the debate to assume that two words mean the same thing, especially when that which is being described requires such nuance and specificity. For practicality's sake, it may be assumed that Posthumanism and Transhumanism are, at the very least, tangentially different. The second possibility, in turn, can be divided into two options which are intrinsically connected: causality or person/situation difference.

The causality relation uses the word posthumanism to mean 'beyond the current limits of humanity' and the word transhumanism to describe the process by which these limits are transcended. According to Tirosh-Samuelson, the word transhumanism may

derive from "transitional human" (26), thus suggesting that the step into post-humanity is a lengthy one which may take slow deliberation and trial and error. Until the posthuman stage is achieved, humans succumbing to change are to accept the transhuman label. This raises many questions: how does one decide when post-humanity has been reached? And were it to be reached, would that signify an end to forced evolution? If there is a long, arduous process and static success that requires no further change, the conclusion must be that there is a final, perfect state of (post)humanity, a man-made return to Eden.

It is this idea that Tirosh-Samuelson criticizes in her chapter within *H+/-: Transhumanism and its Critics* (a book in which she very clearly inhabits the latter category). In this same chapter, she also uses the person/situation difference, stating that "those who welcome the posthuman phase are known as transhumanists" (Tirosh-Samuelson, 20). This conceptual separation is necessarily correlated with causality as well, insomuch as posthumanist thinkers cannot exist as long as post-humanity is not within our grasp. However, what then is the difference between a transhumanist and a transhuman person?

One must necessarily consider how the words are to be used: in this dissertation, "post-humanist" and "transhumanist" are used to refer to an individual who supports or theorises about the movement, and the words "posthuman" and "transhuman" are used to refer to both the hypothetical future and the individual subjected to pertinent changes. Thus, a cyborg is transhuman, but may not be a transhumanist. Despite this, the theory defended by post-humanists has long been referred to as "posthuman theory" and will thus keep the misnomer. However, in keeping with these definitions, are thinkers not to use the words "posthuman" and "posthumanist" until they are unlocked through scientific advancement, until the doors to Eden are opened?

In her staunch criticism of transhumanist thinkers, it is unclear whether Tirosh-Samuelson has a preference between the employment of causality or person/situation difference, as she herself states that cultural critics are uncertain of the difference and have not reached an agreement on how these words should be used (28). Nevertheless, it is interesting to note that she is only ever criticizing transhumanism as a movement, as posthumanism seems not to be an opinion but a distant possibility that is not aligned with any political or moral inclination. Yet there are, indeed, self-proclaimed posthumanist thinkers whose criticisms of transhuman progress are very similar to her own.

It is precisely this fact, the existence of posthuman theory, which makes the third possibility the most semantically productive one, the one capable of producing the most meaningful distinctions and definitions. If a posthuman and a transhuman future have different outcomes, and they prove to be different both morally and procedurally, being able to distinguish them has great discursive value. It is imperative, nonetheless, to define them meticulously. In his article "Following Snakes and Moths: Modernist Ethics and Posthumanism" Ryan states the following:

> Unlike contemporaneous philosophies such as "transhumanism," which strives to use technological advance to form a greater, more perfected humanity, posthumanism urges humans to respect and respond to nonhuman worlds and to reject essentialist and hierarchical divisions between culture and nature. (Ryan 299)

Although he is a defendant of posthumanism, Ryan does not hold a particularly negative view of its opposite. On the other hand, Braidotti, a major posthumanist thinker, whose research has been vital for the movement she represents, very much does, denouncing transhumanists' "contempt for the flesh" and their "fantasy of escape from the finite materiality of the enfleshed self" (91). Conversely, transhumanist criticism of posthuman theory chastises it for being unscientific: Merzlyakov argues that "while posthumanism

draws attention to the crisis of humanism, transhumanism is the latter's heir" (480), yet he does so intending to prove transhumanism's practical superiority.

Overall, transhumanist and posthumanist thinkers who make a point of differentiating themselves from each other seem to agree on what the difference is, yet they are often hostile toward the opposite's claims. The first, in its aim to perfect humanity and its search for a Cyborg identity transcending human realities, is necessarily anthropocentric and driven by progress, and dismisses the latter as naively idealistic and dismissive of humanity as a force and as a species. This focus on linear progress, as well as the accompanying disregard for non-human creatures, can be seen as early as in Julian Huxley's "Transhumanism", an article where he first coined the word and where he declared things such as the idea that humanity may have a "responsibility and destiny - to be an agent for the rest of the world in the job of realizing its inherent potentialities as fully as possible" (73). This superiority is, to him, inherent and undeniable.

Conversely, the posthumanist ideology strives to perfect humanity's relationship with the world, to deeply explore and make peace with the Animal identity within humanity which indicates a non-hierarchical place in the world, meanwhile mistrusting scientific processes that do not take this relationship into consideration. Furthermore, they are preoccupied with fairness: how can unchecked changes in humanity affect the relationships between humans? How are they able to facilitate injustices, further the divide between communities, and create new forms of oppression that humanity may not be ready for? And yet, can post-humanists provide a better future alternative? How does an anti-anthropocentric world fare for humanity? What wonders is the human species giving up, if it gives up on transhuman enhancement? Is caution justified, or cowardly?

These are questions that are yet unanswered and remain unanswered within this dissertation. Nevertheless, by voicing the enigmas posed by the uncertainty of the future,

the practicality of the third semantic usage of the terms can be appreciated. Both the first and second usages fall short in the task of debating whether certain modifications to the human condition should or should not be attempted, and they do not appropriately represent the various factions of the discussion either, as they do not account for the ethical and philosophical disagreements regarding how humanity must interact with the rest of the world, how individual freedom liberates and endangers, and how the human condition can be defined. In the next part of the dissertation, the third (and, from now onwards, considered definitive) usage is considered in the context of the science fiction world of Hyperion, to assess if any changes need to be made for it to properly hold up to scrutiny.

1.2. *Hyperion*'s insight: Ousters, the Hegemony, A.I. and Dolphins

In Dan Simmons' *Hyperion*, transhumanism and posthumanism are not discussed, but lived. The societal structure inhabited by the protagonists, named The Hegemony, is a neoliberalist democracy entirely built upon and sustained by transhumanism: chips inserted in the skull, called *comlogs*, make every citizen a cyborg and becoming so vital to the way they perceive the world that one of the pilgrims at one point says that being in a planet where her *comlog* is not connected is " like being blind and deaf. I don't know how colonials stand it" (Simmons, 1989:237). These facilitate long-distance communication and access to the Web (which is simply the internet), but also enhance vision, serve as identification and credential accesses, and provide military advantage in the form of heat, infrared, and movement detection (when narratively necessary)[2].

This means, essentially, that persons without this crucial piece of hardware cannot access information that is public to everyone else, communicate effectively, or even access most areas which require proving their identity, being thus unable to travel between planets and use almost any vehicle. Any society that refuses to cooperate or adapt is an insignificant threat in terms of warfare and at a disadvantage in any other term. Yet many do not have access to these innovations: on the colonial planet Hyperion, which gives its name to the saga, a large amount of "indigenies" wait in a refugee camp, as they are not allowed to evacuate during the war: the Consul, one of the protagonists, talks about the planet's inhabitants with the terms "millions of indigenies and thousands of Hegemony citizens" (Simmons, 1989:5), and another later describes these same

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[2] Other modifications besides the *comlog* are, of course, available to the population of the Hegemony: from functional to purely aesthetic, the modification of the human condition is a given, and the height of luxury is ever-escalating. The methods by which these modifications are applied are discussed in more detail in the x-axis category, but the Hegemony's central modifications are notably technological and pharmaceutical.

indigenies as "simple natives" (1989:21). These are unidentified, unnamed people, treated like cattle, on account of their non-transhuman, or plain human, status.

The Hegemony's most notable enemies, the Ousters, are also transhuman in nature: having adapted themselves biogenetically to a life of space nomadism, they embody a plurality which contrasts with the Hegemony's rigidness, providing a form of modification of the human condition which seems not to be breeding grounds for marginalisation or societal divide: although never made explicit, it is understood that their society does not contain unmodified humans, as they would not survive the harsh conditions. Moreover, the Ousters do not exploit the alien races they encounter, and appear to have a deep respect for animals, while the Hegemony exterminates all alien species it comes across, with one of the pilgrims explaining that "it is no accident that in six centuries of interstellar expansion the Hegemony has encountered no species considered intelligent" (Simmons, 1990: 457). The Hegemony also commodifies animals as tourist attractions, since after making most species extinct during the destruction of the earth and terraforming of other planets, the animals are cloned and modified for the amusement of people.

It could thus be argued that Ousters, in their respect for other species and for the environment, are posthumanists, though they are certainly not posthuman; in fact, the meaning of the word must necessarily be reimagined in the context of science fiction: in a genre where human narratives are not the sole focus, not all words can be employed to describe humans. Thus, while posthumanist thinking belongs to Academia and to human ethical concerns, the condition of being posthuman (and the posthuman futures themselves) must belong to those which, in fiction, can persevere after humanity does: animals, to be sure, but also alien species, and emancipated artificial beings.

This is where things become complex: science fiction provides a meaning of the word "posthuman" which cannot be found or used (outside of the discussion of fiction) in the world as it is known today. If one accepts that a posthuman future belongs to non-humans, they are also accepting that they will not be the one writing about it if it ever becomes reality. The addition of this meaning of "posthuman" into the paradigm means the hypothetical relinquishing of narrative control, in at least one of the potential futures that await. That is not a pessimistic or anti-humanist claim: it is simply necessary to have words for things that are unpleasant.

There is, incidentally, much of the unpleasantly posthuman in *Hyperion*: the TechnoCore, an AI hivemind with its own factions and goals (which are unbeknownst to humans), is responsible for many of the technological advances and allows the Hegemony to become dependent on its council and predictive prowess in all matters. The TechnoCore, comfortably implanted in the heads of all citizens, ruling over their houses and their means of transport, and with the power to end humanity with negligible resistance to be found, is a posthuman force of control and oppression created by humans. Similarly created yet powerless, though, Androids capable of feelings and "bred for colonization purposes" (Marszalski, 651) are enslaved and used to terraform, man ships, and create settlements. The posthuman subject is not, it seems, safe from exploitation.

To complete the picture, and to push the boundaries between post- and transhumanism, cybrids are created: made of flesh and blood yet linked to the Technocore, with artificially modelled minds made from biomatter that are an imitation of a human persona, cybrids are "ontologically closer to conscious artificial intelligences than to contemporary humans" (Marszalski, 650). How does this creation fit into the previously established categories? It would be terribly far-fetched to believe that a being which has been bioengineered by AI can be human; yet the imitative persona is using real

feelings from someone long gone (in the case of Hyperion, the most prominent cybrid is modelled after John Keats' poetry, personal diaries, and biographical information). How should this creature be considered?

Among others, the case of the cybrid is why, in this dissertation, the proposed paradigm is a plane, and not four neat categories: in a genre which so often pushes the limits between what is and what isn't, most of the area is grey. Many words are spent debating if this John Keats persona deserves rights: if he can be owned, if his termination constitutes a crime of murder, and if he has a right to know about his purpose or to choose a different one. It is clear throughout the novels that ethically, to its AI creators, this cybrid constitutes "merely another appendage, a remote, somewhat more complex but otherwise no more important" (Simmons 1989:324).

The TechnoCore, the Androids and the Cybrids are, nonetheless, one side of the posthuman coin, arguably the worst one. In the words of Rosi Braidotti: "advanced capitalism and its bio-genetic technologies engender a perverse form of the posthuman" (Braidotti 7). The other side is the future posthumanists advocate for: non-human (and non-artificially engineered) species which either rule their home planet undisturbed or coexist with humans nonhierarchically. Apart from the many alien species (mostly slaughtered by the Hegemony during terraforming), a notable example is the dolphins in Maui-Covenant,[3] which communicate with the humans through rudimentary translation technology and live harmoniously with them. Although humans are present in Maui-Covenant, the sacredness of dolphins and how central they are to the culture and ecosystem provides grounds to argue that it is, in fact, a posthuman arrangement.

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[3] One of the colonial planets which are able to maintain an independent government due to their distance from the WorldWeb.

Of course, in true Simmons' fashion, Maui-Covenant is eventually added into the WorldWeb,[4] turned into a tourist destination and gentrified, ultimately causing the dolphins to commit mass suicide, something which the Consul remembers vividly, explaining how "in the morning, the waves were gray with the bodies of dead dolphins" (Simmons 1989:456). The idea that the transhuman and the posthuman cannot coexist is perpetual in *Hyperion*'s portrayal of the Hegemony: non-human races are either enslaved or enslavers, and cooperation is never an option in the highly competitive economy which permits steady yet meaningless progress. The alternative, then, the proverbial Eden, is of Ouster origin; but what is it that separates the two, and makes one moral and the other immoral?

Although the Hegemony's proclivity to slavery and marginalisation certainly does not help, an enormous part of the difference resides within the methodology used for evolution: one side has technologically brute-forced the environment to obey humanities' rule, while the other has modified themselves at a genetic level, adapting their bodies to the fragile environments space has had to offer. It is significant, if nothing else, to note how the two factions regard technology and genetic adaptation: the techno-crazed Hegemony uses genetic modification only for aesthetic and entertainment purposes, which can be exemplified by the concept of an "ARNist" (Simmons 1990:4), a word which is used in the novels to describe sculptors which work using RNA, (Ribo-Nucleic Acid) and which derives from artist. Conversely, the Ousters seem to use raw technology mostly for warfare. In the next part, the importance of the methodological difference will be explored in detail and contextualised within our paradigm.

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[4] The web on interconnected planets which are a part of the Hegemony, and thus can indiscriminately be visited by its members.

2. The X-axis: the Cybernetic and the Biological

2.1. Previous Literature: Carbon, Silicon, and Punks

The first part of this dissertation has dealt, in depth, with the first axis which constitutes the paradigmatic plane, that of posthumanism and transhumanism. The concepts, which have been defined, clearly separated and contextualised within *Hyperion*, deal only with one aspect of the possible future: its finality (more specifically, whether this future will be anthropocentric or not). The other axis, which is necessary to complete the categorisation, deals with the procedural method used to either force human evolution (in the case of transhumanism) or misplace humanity from the centre of the narrative (in the case of posthumanism).

On one side of this x-axis, the Cybernetic is found. This responds to practices such as the addition of cybernetic implants (protheses or otherwise), most nanotechnologies and the insertion of chips of any kind[5], and to the creation of AI and similar sentient beings which are made from inert matter. On the other side of the Axis, the Biological accounts for imagery such as the concept of wetware[6] and practices such as bioengineering, biochemistry, genetic modification, selective or mutation breeding, transgenesis, cloning and many more.

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[5] Such as the Neuralink project (https://neuralink.com), a transhumanist initiative that has moved on to human trials after its experimentation on animals was mostly unsuccessful and allegedly criticised by the FDA (according to the Consumer News and Business Channel (CNBC) in "https://www.cnbc.com/2024/02/29/musks-neuralink-brain-implant-company-cited-by-fda-over-animal-lab-issues.html" and deemed by the Physicians Committee for Responsible Medicine to be cruel and invasive (in "https://www.pcrm.org/ethical-science/animals-in-medical-research/cruel-brain-experiments")

[6] Concept related to computer terms such as "hardware" and "software" but applied to the human mind and nervous system; it elicits the idea that bodies can be "programmed" like an appliance can be.

The transhuman creature created by cybernetic means is the Cyborg, a portmanteau of cybernetic and organism[7]. A cyborg must derive from a human, although it is an entirely different ethical discussion to assess if humanity remains after the procedure in extreme cases where little to no organic matter remains. Cyborgs range from a person with a pacemaker to a human brain encased in a body of steel: as long as the creature's origin is human and its modification is technological, it constitutes as a cyborg and a transhuman (rather than posthuman) entity.

To Donna Haraway, however, the Cyborg can also be of biological (animal) origin, as she argues in *A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century*, the cyborg "appears in myth precisely where the boundary between human and animal is transgressed" (11). However, as this dissertation bases itself on the principle that new words must be used to separate concepts effectively, the paradigm proposes revisiting this idea: a transhuman biological creature, and thus a biologically (genetically) enhanced creature, such as the Ousters in *Hyperion*, should not be considered within the realm of cyborgs—but what word, then, can be used? During this dissertation, the (previously non-existent) term GMOrg[8] will be employed: it means, as the acronym already does, Genetically Modified Organism, but keeps the -org suffix aiming for a cohesive word which feels natural to use both in Sci-Fi settings and within academic discussion. Thus, the Oncomouse[9] would be a GMOrg.

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[7] According to the Wikipedia article: https://en.wikipedia.org/wiki/Cyborg

[8] Word created for the purpose of this dissertation, by its author.

[9] Type of mouse (*Mus Musculus)*, genetically modified to be more susceptible to cancer (for research purposes). Controversy surrounding it stemmed from the creator's choice to patent it, yet hardly any criticism focused on its creation. More information can be found in "Bioethics and Patent Law: The Case of the Oncomouse" (https://www.wipo.int/wipo_magazine/en/2006/03/article_0006.html)

Within the realm of posthumanism, the cybernetic side is quite clear-cut: it must necessarily include either an Artificial (or somehow transferred) Intelligence within a mechanical creature. This intelligence cannot, however, belong to a human, because it has been established that a human brain inside a machine is a cyborg of the later-stage nature, as long as that brain is self-aware and capable of exercising agency (one could wonder how that can be measured—how can it be ascertained whether the brain is controlling or powering a mechanical body, and the implications of both; yet this dissertation lacks room to answer to these questions).

Biological posthumanism is, in turn, incredibly varied: it may come in the form of an emancipated animal species which evolves beyond humanity's scope, an alien species, or even creatures which are created by biological means, either by humans or by someone else. The latter, these artificial biological creatures, can be divided in two groups: those that are not subject to any modification, which are called Clones (such as, for example, Dolly the sheep[10]), and those that are either modified or created from scratch. For these, a word is needed: this dissertation suggests a term borrowed from Simmons and previously mentioned: the Cybrid (which is, one must assume, itself a portmanteau of the words Cyborg and Hybrid). A Cybrid would thus be a being created by biological means which differs in a significant way from that which it is moulded from, a cybernetically created mind which resides within an organic body: in *Hyperion*, a cloned human body is controlled by an AI persona which, although cybernetically inserted,

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[10] Finn-Dorset sheep cloned from mammary gland cells, but not otherwise genetically modified. While the cloning was successful, and she had six lambs, she died prematurely (reaching half the average lifespan of her species) due to pulmonary adenomatosis. This, as well as the fact that she suffered from arthritis, lead some researchers to believe that cloned animals may age faster than those born naturally. This information is taken from the National Museum of Scotland's website (https://www.nms.ac.uk/explore-our-collections/stories/natural-sciences/dolly-the-sheep/), as she is displayed in the Science and Technology Gallery.

resides in an organic brain with natural neuron connections, engendering a biologically created (by a non-human creator) and necessarily posthuman subject.

The Cybernetic and the Biological are by no means a new concept: in his visionary book titled *Biopunk Dystopias: Genetic Engineering, Society and Science Fiction*, Lars Schmeink uses the science fiction categories *Cyberpunk* and *Biopunk* to present his musings about the differences between the two, and their relationship with the suffix "-punk". He concludes that the Cyberpunk genre is a fantastic tool to ponder "cyborg-enhanced and genetically engineered humanity and the social implications both technologies bring with them" (21) and that biopunk should provide the same insight, with the slight difference in method that "bio" implies (24). However, the idea that these advancements may be pioneered by the Punk movement is relegated to fiction, as most cyber- and bio- transhumanist initiatives are either academic or corporative, whereas the Punk movement is firmly anti-establishment. Thus, as it stands, neither cyberpunk nor biopunk can be extrapolated into the real world to predict future scenarios.

Another way the cybernetic and the biological can be considered is by its core materials: according to Latorra, transhumanism can be carbon-based, referring to any alterations of the human body which come from the body itself, and silicon-based, referring to cyberspace and artificial bodies (533). Of course, many more ingredients are needed in the alchemy of forced evolution, but carbon and silicon are the most succinct by metonymy. This label is also productive regarding posthuman futures in science fiction, in which case silicon would mean an AI or robot centred future, whereas carbon would indicate the presence of a non-human species (either animal or alien), cybrids, or clones.

Method and material aside, a final consideration is added as Hayles provides, in *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics,*

another brilliant binomial value, when she rejects and criticizes the "ability to dominate or substitute the flesh" (251). The parallelism is clear: where the biological method aims to stake dominion over the flesh, to morph it into its desired form, the Technological method refuses the flesh, and opts for replacing it with more perennial creations. The flesh, in this case, may mean part of the human body, its entirety or, in posthuman cases, the concept of organic life itself. What are humans, but flesh that has named itself king?

Thus, having considered all productive categorisation (procedure, material and relation to the flesh) the x-axis is constituted as having, on one side, the cybernetic, the use of silicon (and other inorganic matter) and the replacement of the flesh and, on the other, the biologic, the use of carbon (and other organic matter) and the dominion over the flesh. As with post- and transhumanism, there is great thematic overlap "between the organic and the inorganic, the born and the manufactured, flesh and metal, electronic circuits and organic nervous systems" (Braidotti, 89). In the next part of the dissertation, the x-axis is contextualised within *Hyperion*'s modifications of the human condition and their purposes.

2.2. *Hyperion*'s Insight: Shrikes and Satyrs

Dan Simmons' *Hyperion* falls, according to W. A. Senior, in the "cyberpunk" category (215). Nevertheless, there is very little "punk" in its cybernetic universe- especially because all the "cyber" elements in the Hegemony are controlled and administered by corporations, which are supported and endorsed by a government so neo-liberal that, instead of having a Prime Minister, chooses to label its Governor with the title "Senate CEO" (Simmons, 1989:2)

This highly competitive system does not seem to produce any organised non-conformity beyond aesthetic counter-movements based on biological body modifications, even though it does create its fair share of marginalised communities and individuals.

Opposition to the Government instead comes from beyond the Hegemony's borders: in colonial planets such as Maui-Covenant, revolution comes in the form of people who refuse the Anthropocene's cybernetic progress and instead embrace a natural, environment-conscious perspective. Within the interplanetary void, in-between stars, revolution comes in the form of the enemy, the thematic opposite: the Ousters. Ostensibly, across the different methods and layers of performativity, guerrilla warfare and interstellar conflict, opposition is always biological.

It can thus be surmised that it is not posthumanism and transhumanism which are diametrically opposed, but the cybernetic and the biological: after all, the Hegemony is allied to the Technocore throughout most of the story, and the Ousters seem to fiercely respect the animals which they strive to imitate as well as the alien species they encounter. One can then further guess at Simmons' own preferences: in his fiction, after all, the cybernetic represents societal control, violent neo-liberalism and neo-colonialism, and the destruction of the natural world, whereas the biological is the social underdog: at its absolute best, it is the protector of those who cannot protect themselves and, even at its worst, it is hedonism and the fretful search for a sense of artistic individuality.

Even within a work of fiction, this is a belief, a voiced choice between two sides, which must be listened to: it is a dreadful habit to forget how the words of fiction writers may contribute to the conversation and tip the proverbial scales. Before academia, and beyond it, SF writers are "storytellers exploring what it means to be embodied in high-tech worlds. […] Theorists for cyborgs" (Haraway 52). Simmons' views will not be explored here, within this text, but it requires further consideration. For now, however, the ways Simmons explores the modification of the self (and the creation of a non-human self) through various methods take centre-stage, to push and test the boundaries of the

linguistic paradigm which remains the centre of this dissertation. These next pages focus mostly on the transhuman side of the coin, which is most subject to nuance and confusion.

The primary use of cybernetic enhancement in Hyperion is, as previously stated, functional and aimed at better (or faster) production. Work in the Hegemony is mostly manual or bureaucratic, an effort to terraform all planets they can reach and to have a diplomatic human behind all endeavours. Notably, having readily available knowledge of everything does not make the citizens of the Hegemony more knowledgeable, it simply makes knowledge a commodity with hardly any real value. Skills such as memorising or researching are lost, as is physical reading. To support this fact, the story of one of the pilgrims starts with the following words:

> In the beginning was the Word. Then came the fucking word processor. Then came the thought processor. Then came the death of literature. And so it goes. (1989:175)

Effectively, what this means is that there is no reason for anyone to sit down in front of a piece of paper—if one can learn while doing manual labour, why would they not work constantly? Even when focusing on the production of art, efficiency ensures that no one is idle for too long, that there is no time for any reflection which is not immediately useful.

Silicon and metal are practical: outsourcing decision-making to the predictive AI, outsourcing information retrieval to an algorithm, outsourcing pregnancy and birth to incubators so no mother is ever kept away from work, with methods cited in Hyperion which include "*ex utero* fertilisation, […] a clonal surrogate, a gene-spliced virgin birth" (1989:177)**,** etcetera. Rarely is any technology used recreationally (apart from the viewing of movies, which is more of a distraction), and when it is, the reader is to understand that it is an underground and frowned upon practise: it is the case of the only mildly cyberpunk aspect of the Hegemony's society, aptly called *Cyberpuke* in the novels, which uses high-tech implements to temporarily upload one's consciousness into the Technocore, for

seemingly no other reason than the risk involved and a wish to reach for the posthuman and be integrated in it. This begs the question: can one become posthuman by willingly giving up their ties to humanity, or by losing their will and being enslaved by a posthuman entity? How mobile are factions within the paradigm? There is terrible promise tied to the idea that one can leave their humanity behind and become "one of the others".

Cyberpuke adventures aside, accessible recreation comes from the pharmaceutical field: a panoply of recreational substances, most of them addictive, are ever-present in everybody's downtime, such as "erotic stimsims" (Simmons, 1989:25), "ultra-morphine" (1989:94), "Flashback […] and autoimplants" (1989:197), "endorphins, […] orgasm derms, shunt primers, cannabis inhalers, non-recom tobacco cigarettes, and a hundred less identifiable drugs" (1990:46). These are not necessarily cybernetic or biological but, as substance abuse often does, are capable of severely altering the brain's chemistry. The last recreational practise, reserved for those who can afford it and symbolic of a hedonist lifestyle, is aesthetic change through genetic manipulation and bioengineering: drastic modifications with no function other than to stand out from the crowd and morbid beauty carved by ARNists. This is something one of the main characters has closely experienced, as "Martin Silenus actually refers to his 'satyr period' in which he had himself bioengineered to have the body of a satyr" (Senior 219). These never seem to have practical use beyond wealth flaunting.

Conversely, the biological efforts of the Ousters have an entirely practical function, which is to adapt to all environments without having to modify or tarnish them. It is not explained, in the novels, how the Ousters entertain themselves. However, their only verified uses of technology are warfare and transport, the latter being disguised aesthetically by means of biodiversity, as their ships contain organic elements. Ouster

society is presented as an idyllic way of life, an Eden created from the harshest of conditions.

There is, within *Hyperion*'s transhumanist use of Carbon and Silicon, two notable outliers: the first are the Templars who, initially, seem to refuse the Hegemony's way of life by promoting a naturalist perspective. They can quickly be dismissed, however, as their political position does not negate their reality: they do have *comlogs* and other modifications, and willingly participate in Transhumanism and the Hegemony even though they are reticent regarding terraforming. The other outliers are the Bikura; a tribe on the planet Hyperion which has been modified through a complex version of selective breeding which includes an intradermal parasitic entity which the protagonists come to know about through the diary of Father Paul Duré, a Catholic explorer who writes "It lay there as if it were part of my flesh. I pulled, scraped, and tore […] *It did not come off*" (Simmons, 1989:79). This is effectively a form of biological transhumanism, albeit a non-consensual one: it is later revealed that the entity was created by the Technocore. The Bikura (and Father Paul Duré) thus constitute a form of biological transhumanism brought about by a cybernetic posthuman entity.

Posthuman entities are almost entirely clear-cut in their placement: androids and AI are technological, while alien species and animals, both natural or cloned/recreated post-extinction, are biological. Cybrids, such as the Keats persona, which have been established to be posthuman-leaning but ambiguous, are also mostly biological in nature even if they are created by cybernetic entities, because they are organically constituted.

There is one last notable outlier, a Creature which every character in the book tries to make sense of unsuccessfully. Made from chrome and cartilage, sent from the far future, the Shrike continues to be an enigma. It is created by the Technocore, using the DNA and personality of a man long dead. It is organic, yet not. It is engendered yet forged.

There is no question whatsoever as to its posthuman origin, but the method is non-discernible. Thus, it benefits from the paradigm being in a plane, because it can be placed in the middle (atop the Posthumanism line) rather than being unceremoniously shoved within a static category which is only partially correct. The paradigm's flexibility accounts for mixed media in creation as well as dilemmas regarding a subject's humanity.

3. The War on Flesh: Conclusions and Further Research

This conclusion must necessarily start by reviewing the visual aspect of the paradigm, with the addition of the decided upon definitions and the examples provided by Hyperion:
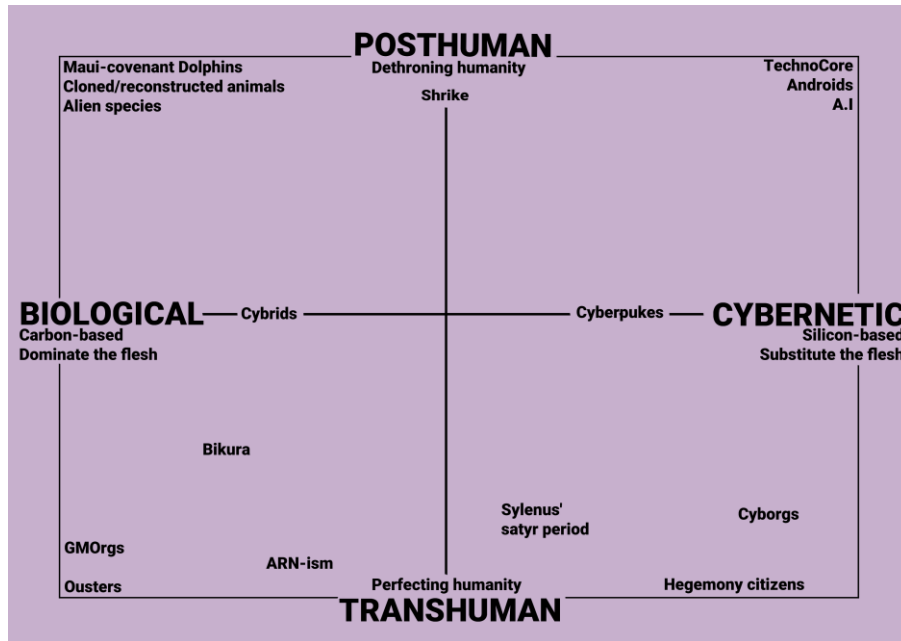
As can be seen in the plane, all examples have a place which explains their relation to humanity as well as the methods by which they have been created. To complicate matters further, directional arrows are added to make sense of each example's point of origin:
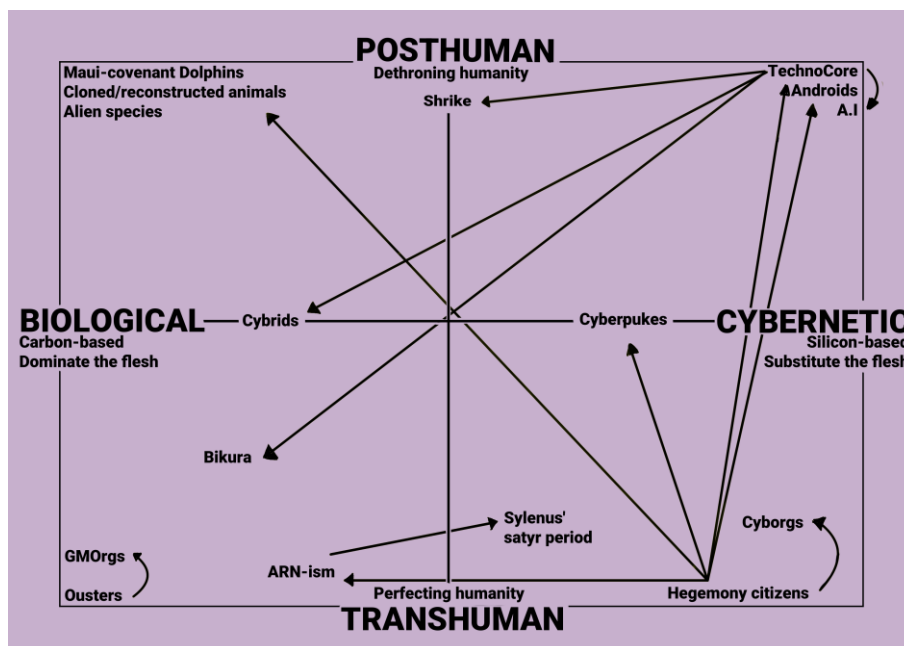
Having examined all the variables present in Simmons' *Hyperion* and *The Fall of Hyperion*, the plurality and diversity within their narrative is undeniable. One cannot but wonder whether this multiplicity of futures is something humanity can achieve and look forward to; and yet beyond the childlike wonder it may arouse there is a call for caution. If humanity is to transcend and achieve evolutionary self-reliance, every step must be carefully planned and, most importantly, it must be self-aware. There is enormous danger in doing things simply in the name of action, or to prove that they are possible. Theory must always lead, and it must lead by example: academic obscurity is malpractice when the topic of discussion is as universal as being incarnated, or rather enfleshed, within modernity.

The paradigm proposed in this dissertation makes it its goal to be as transparent and intuitive as words can be in such a complex subject. Further grounded by Hyperion's examples, it represents a matter-of-fact approach which can be used both in science-fiction and in reality (as the line between the two blurs and dissipates), and which does not take sides or make value judgements: to start an effective ethical discussion, first an understanding must be reached of what everything means, where each side stands, and what exactly is being placed under scrutiny.

This is often the most confusing aspect of the modern conversation about posthumanism and transhumanism: as posthumanist thinkers denounce transhumanism, and transhumanist thinkers declare themselves defenders of the posthuman future, neither acknowledging the other or the confused passerby, the latter feels overwhelmed, hearing only a dissonant chorus made by a million voices preaching panicked warning, defeatist mourning, illusioned promise and fanatic psalm, while the orchestra plays quicker and quicker by the minute. It is harrowing, and terrifying, and certainly does not make one enthusiastic about the future of humanity.

Regarding further research, it is clear that the *Hyperion* saga has much to offer in relation to the consequences of certain futures. The books contain a plethora of unanswered questions which may be answered through analysis and could prove useful for facing the gargantuan task of untangling the future. One could wonder, for example, about the nature of the cybrid and its humanity, about the limits of transhumanity and whether it can wilfully step into the posthuman, about the ethical considerations regarding bodily modifications as a mean of streamlining production, etcetera.

Furthermore, since *Hyperion* was published in 1989, and discussion has evolved, this dissertation is unavoidably outdated, and the science fiction genre has no doubt progressed in the exploration of humanity's possible futures. Future research could focus on using this paradigm to account for new examples of human evolution, both on the transhuman and posthuman fronts, as well as analysing the more recent discourse regarding how humanity should proceed.

However, there are more pressing matters: before hurling *Hyperion*'s or any other science fiction novel's insight into the conversation with the hope that it may stick, it should be seriously pondered if this dance of death is doing as much of a service as it is doing harm. How are the newer generations emotionally and cognitively affected by these terrible uncertainties? How can hope persist? How may science fiction provide respite, now that escapism cannot be its main business? How can the ever-present discussions about the future be morphed into something constructive, amicable, and safe for anyone that wishes to learn and give their opinion without being whisked off onto the dance floor?

Future research should continue to explore the plausible futures which may be encountered, that is a given, but some thought should be spared for the nature of the research, its accessibility, its purpose… And its overall reception. The most prominent transhumanists have taken to Twitter (now X) to rally the masses about a discussion they

only have one side of. The posthumanists occupy activist spaces, conference rooms and near-undecipherable essays. Science-fiction stories cry wolf at anyone who stops to listen, and their cries become muffled as they slowly but surely lose themselves to an industry which has become formulaic and self-serving.

And while endless chatter is emitted from all fronts, the flesh is dominated and replaced all around, and academic outrage is limited by how fast it can be edited and published, how much prestige it can attain. The criticism which does get published must be perfectly formal, and terribly witty, and sufficiently insightful, and cautiously respectful. The corporate-backed scalpel, cruel as it may be, must be fought against with utmost politeness, and always impersonally.

The writer of this dissertation is not an impersonal entity. The writer of this dissertation, trapped within a third person sentence and a carefully planned essay structure which they cannot bend or break, looks upon the future and is scared. Reader, I am so scared. Scared enough to break the pretence of formal academic discussion in what can only be defined as a cry for help.

How can we raise alarm without discarding hope? How can we find the time to have this discussion in a way that is accessible, positive and assertive, when those things that we would discuss are already happening, beyond any scrutiny? How can we keep up or, rather, how can we stop it? How can we (those without audience or megaphone, without a platform, those whose voices are not heard) participate in decisions concerning our future and our bodies, when the outcome depends on unreachable ivory-tower academics and unstoppable mega-corporations and has (probably) already been decided? Further Research, the Sequel: someone ought to figure out the magic words to stop this dying planet from speeding off into the precipice. Any takers?

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