

# Posthuman Trajectories: Cartesian Logic and Ethical Technoproggressivism

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## Abstract

This article analyses the posthuman trajectories established in René Descartes's 1637 *A Discourse on the Method of Correctly Conducting One's Reason and Seeking Truth in the Sciences*. Moving beyond its references to automata and other 'technological' characterizations of the human body and mindedness, I locate a more forceful philosophical trajectory in the text that informs and sustains the very notion of 'progress' upon which cultural conceptions of subjectivity, technological development, and transhumanist positions continue to evolve. Descartes's privileging of the ideal over the material positions the human self as the locus of enquiry and discourse from which progress originates. This may allow one to perceive a certain transhumanist, eschatological trajectory in the Cartesian text. My reading, however, shifts its focus onto Descartes's desire to see human endeavour as a means of easing human suffering. This, I argue, opens the possibility of an ethical technoproggressivism that can inform our debates over post- and transhumanism today.

**Keywords:** posthumanism, Descartes, technoproggressivism, technology, transhumanism, posthuman ethics, cosmopolitanism

## The Posthuman 'Post-'

The prefix post- seems to make little sense in a contemporary culture. When all is post, post reduces all to a beyond which is both immanently graspable and immanently aspired toward [...]. Post theories establish a future-now. Post is what is to come *and* what interrogates what has been and what is. It is duplicitous of and treacherous to its seeming dependence on time [...]. Post is inspired by many frustrations in philosophy – impatience at the speed with which novelty may be introduced, a need not to further established trajectories but multiply and fracture them, a leap over a chasm from which no paths have yet been built toward a territory with which no one is familiar.<sup>1</sup>

How unfamiliar is the territory from which unbuilt paths have yet to emanate when 'post' precedes 'human'? Frustrated and impatient with our temporally-anchored subjectivity, we, according to MacCormack, invoke a 'future-now' from which we critique our human present and past, and toward which we aspire. Yet it is 'we' who critique, 'we' who continue to aspire, despite the treachery and duplicity of time in the shadow of the Cartesian. We are. The posthuman is. And Descartes is still dead. Reanimating his corpus of liberal humanism is entertaining enough, one would suppose, as it twitches and jerks artificially, its components flailing as we apply oscillating

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<sup>1</sup> Patricia MacCormack, *Posthuman Ethics: Embodiment and Cultural Theory* (Burlington: Ashgate, 2012), 6.

theoretical and critical voltages to its different parts. Calling Cartesian philosophy ‘posthuman’ amounts to the same post-mortem diversion. We can neatly identify Descartes’s technological metaphors and his automaton examples, superimposing the present onto an already-rendered past. Yet, how long must we watch Cartesianism twitch to relieve the existential boredom which accompanies yet another asking of the question ‘What does it mean to be human?’

Posthumanism’s own remedy is – as MacCormack points out – to pose the aforementioned question somewhat differently: suspiciously, aware of ‘our future lives becoming increasingly hybrid’, showing that ‘we have always been and are continuously transforming into posthumans’.<sup>2</sup> A critical posthumanism, then, positions itself between past and future, analysing the conceptualization of subjectivity itself at, within, and from a given point in history, while simultaneously working through how such conceptualizations affect present projections of subjectivities into the future. Posthumanism as a philosophy is both epistemology and ontology, portraying ways of knowing and conceptions of self as mediated through technological artefacts, systems of use, and metaphors.<sup>3</sup>

How, then, do we avoid simply superimposing the present onto and into the past, re-casting that past as ‘technological’ (or posthuman, for that matter)? We could turn our attention to the present and problematize the very Cartesian ‘transhuman’<sup>4</sup> vision of the future through a multitude of philosophical lenses, and conclude that such movements are simply reiterations of past philosophical notions of subjectivity. Descartes gets another jolt, and we nod in agreement as a limb contorts just as we expected it to. To remedy this, I support MacCormack’s call to ‘multiply and facture’ established trajectories but to do so with an eye toward emancipation and transformation. I believe that hidden within plain sight in one of the most ‘obvious’ of historical philosophical works, René Descartes’s *Discourse on the Method of Rightly Conducting the Reason and Seeking Truth in the Sciences*, is a philosophical trajectory that has been effaced by its ‘technological’ references and apparent privileging of mind over body.

These are not static assumptions to be exhumed, but instead are dynamic currents which inform and sustain the very notion of ‘progress’ upon which cultural conceptions of subjectivity, technological development, and transhumanist positions continue to evolve. I will demonstrate that more traditional interpretations of Cartesianism privilege the logical process of reasoning over the phenomena about which (and through which) the mind reasons. This approach gives primacy to the reasoning mind (as process) over the corporeal body in which it is said to be housed and the physical phenomena about which it reasons (the contents or objects of thought). The functioning<sup>5</sup> mind thus

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<sup>2</sup> MacCormack, *Posthuman Ethics*, 1.

<sup>3</sup> For a more in-depth and comprehensive discussion of posthumanism’s ontological and epistemological movements, please see the introduction to my own *Posthuman Suffering and the Technological Embrace*, (Lanham: Lexington Books, 2010), esp. 22-4.

<sup>4</sup> Transhumanist discourse generally characterizes the human body and biological brain as a limitation that can be overcome via technology, whether through implants, prosthetics, ‘biohacking,’ or, to some extent, the development of artificial intelligence or some other technological ‘singularity’ that will help humans transcend their biological limitations.

<sup>5</sup> My use of the term ‘functioning’ here is loosely informed by philosophical theories of functionalism: ‘the doctrine that what makes something a mental state of a particular type does not depend in its internal constitution, but rather the way it functions, or the role it plays, in the system of which it is a part’ (Janet Levin, ‘Functionalism’, *The Stanford Encyclopedia of Philosophy* (2013), ed. Edward N. Zalta; available

appears to eclipse the phenomenal, material world. This obscures a phenomenal emphasis in the *Discourse* that actually reinforces the importance of the body as more than just a ‘prosthetic’ for the thinking mind.

Logical thinking is characterized by the ability to understand, question, and even doubt relations and associations among phenomena, including one’s ability to know that *one does not know* something. There is always more to be known; for Descartes and subsequent Enlightenment philosophy, one achieves understanding through a logical – or reasoned – progression from premise to conclusion. The self becomes an agent of enquiry and discourse from which this progress originates, based on one’s capacity to understand relations among the mind, the body in which it is housed, the sensations which that body supplies, and the phenomena which (one logically deduces) causes those sensations. By the understanding of phenomena, human beings are rendered the ‘masters and possessors of nature’<sup>6</sup> through a ‘host of inventions which will lead us effortlessly to enjoy the fruits of the earth’ (*DM*, 122). Anything humanity invents to help it understand the relations among phenomena is a by-product of its reasoning.

This is a compelling idea, especially in the transhumanist realm, where the association of functional human reasoning with a much broader (and, as we shall see, myopic) interpretation of ‘progress’ results in a rather eschatological trajectory which maintains that the body is an impediment to progress and must be overcome. Perspectives which view the self functionally (i.e. that which functions as a ‘self’ is a self, regardless of the physical substrate in which that self is housed), and which maintain progress as a ‘central dogma’<sup>7</sup> can easily dominate both post- and transhumanist discourse. The advent of the scientific method and its supporting technologies seemed only to reinforce the notion that progress is inevitable. To maintain the human subject is to maintain progress. And to maintain progress, ‘we *ought to* do what we can to foment and accelerate the creation of [...] “enhancement” technologies’.<sup>8</sup> We reanimate Descartes once again, but this time with a very specific ethical perspective: progress is equated with the enhancement of the human – but the ‘human’ is defined functionally by the processes of thought and the ‘human’ endeavours that might result from them, rather than by the quality of the lived experience itself.

However, a slight shift in attention away from Descartes’s praise of human endeavour allows us to emphasize the often missed point of that endeavour: ‘the preservation of health’ which, Descartes states, is ‘the highest good and the foundation of all the other goods of this life [...] For the mind depends so much on the temperament and dispositions of the organs of the body that, if it is possible to find some way of making men in most cases wiser and more skilful than they have been [...] it is in medicine that it must be sought’ (*DM*, 51). Descartes’s original inference is that the point of all human endeavour is to ease human suffering. This alternative path has always been present in Descartes’s *Discourse*, albeit obscured. While the philosophy of Descartes remains, by and large, very much a humanism that privileges technological

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at <http://plato.stanford.edu/archives/fall2013/entries/functionalism> [accessed 30 July 2016]). In its most simple definition, and as it functions in some post- and transhuman discourse, this means that if a system acts as if it has ‘human’ intelligence, then it is, functionally, human.

<sup>6</sup> René Descartes, *A Discourse on the Method of Correctly Conducting One’s Reason and Seeking Truth in the Sciences*, trans. Ian Maclean (Oxford: Oxford University Press, 2006), 122. Henceforth cited in the text as (*DM*, Page Number/s).

<sup>7</sup> Philippe Verdoux, ‘Transhumanism, Progress and the Future’, *Journal of Evolution and Technology* 20.2 (2009), n.p.; available at <http://jetpress.org/v20/verdoux.htm> [accessed 29 April 2016].

<sup>8</sup> Verdoux, ‘Transhumanism, Progress and the Future’.

development, a critical posthumanist rearticulation of these passages from Descartes's text re-centres the definition of 'human' toward a more aware, embodied notion of selfhood, rather than that of the human-as-function, placing the improvement and enrichment of the embodied human condition and the easing of suffering above the idea of progress for its own sake. This 'ethical technoprogresivism' is characterized by an approach that admittedly 'place[s] ourselves on the side of Enlightenment technological progress', while simultaneously 'critiquing uncritical technolibertarian and futurist ideas about the inevitability of progress'.<sup>9</sup> Re-examining Descartes's philosophy from a posthuman perspective and understanding that progress is neither inevitable nor inherently beneficial, brings forth the possibility of such an ethical technoprogresivism. We do not reanimate Cartesianism. Rather, we – as posthumans – bring forward its often-eclipsed recessive compassion.

## The Descartes-ography of Progress

I had little difficulty in determining those with which it was necessary to begin, for I already knew that I had to begin with the simplest and the easiest to understand; and considering that of all those who had up to now sought truth in the sphere of human knowledge, only mathematics have been able to discover any [...] certain and *incontrovertible* arguments, I did not doubt that I should begin as they had done. Nor did I expect any other usefulness from this, than to accustom my mind to nourish itself on truths and reject false reasonings. Yet I did not, for all that, intend to study all those particular branches of knowledge which habitually go under the name of mathematics; I saw that, although their objects were different, they nevertheless all concurred insofar as they only took into consideration the different relations or propositions to be found among these objects, and I came to think that it was best for me to examine only these proportions in general, without *supposing* their existence except in those areas of enquiry which would serve to make my knowledge of them easier; and moreover, not to restrict them to those areas, in order to better be able to apply them thereafter to everything else to which they might be applied. (*DM*, 18)

It is Descartes's consideration of 'relations or proportions' among objects<sup>10</sup> that enables a transhumanist approach to progress. By no means is Descartes the first philosopher to focus his or her attention on such relations, but in the context of the *Discourse*, this valuation and privileging of relations over objects serves to reinforce the idea that logic and its necessary *incorporeality* has more efficacy because it is *not* tied to specific objects of imagination, experience, or material phenomena. The mind in and of itself is incorporeal and the Cartesian mind/body dualism hinges upon the mind's capacity to create and recognize such relations. Consequently, in Descartes's thought, the self becomes a locus of inquiry from which a certain progression of logic originates. Descartes's characterizations of the mind as being capable of doubting and questioning in his *Meditations* imply a functionalist model of self: our 'humanity' is contingent upon the functions of the mind.

<sup>9</sup> James Hughes, 'Problems of Transhumanism: Belief in Progress vs. Rational Uncertainty', *Institute for Ethics and Emerging Technologies*, (2010); available at <http://ieet.org/index.php/IEET/more/hughes20100301> [accessed April 29, 2016].

<sup>10</sup> It is interesting to note here that 'objects' for Descartes also means objects of thought: that is to say, imagined figures, numbers, or distances which rely upon the imagination to be brought before the mind.

It is important to note that Descartes is aware that the functionality of the mind and its resultant scientific endeavours are intrinsically dependent upon the body in which it is housed. As Descartes's *Meditations* continues he emphasizes the importance of the body as an integral factor for maintaining a mind and allowing for the progression of reason-based scientific endeavours. However, while Descartes advocates support for and maintenance of the physical body, he also inevitably draws attention to the body's susceptibility to physical maladies and other general limitations that could – potentially – serve as impediments to reason (and to the progress that results from it). As a result, Descartes inadvertently sets the stage for an eschatological discourse that advocates the *overcoming* of the physical body as a way of maintaining human progress, if not human mindedness. This leads to the transhumanist assumption that the body is an impediment to logical thought. To understand this justification of technological augmentation more fully, we must first examine how Descartes separates the process of thought from the content which informs thought.

The incorporeal and *a priori* logic which demonstrate the workings of the functional mind are most clearly described by Descartes in the sixth Meditation from his *Meditations on First Philosophy*: 'I will first examine the difference between imagination and pure understanding. When I imagine a triangle, for example, I do not merely understand that it is a figure bounded by three lines, but at the same time I also see the three lines with my mind's eye as if they were present before me; and this is what I call imagining'.<sup>11</sup> Imagination, as an aspect of *sensation*, is by its nature limited. Descartes continues: 'But if I want to think of a chiliagon, although I understand that it is a figure consisting of a thousand sides just as well as I understand the triangle to be a three-sided figure, I do not in the same way imagine the thousand sides or see them as if they were present before me' (*M*, 77). The imagination works in a material, sensory capacity when thinking of 'corporeal things', but cannot be relied upon to effectively represent more complex phenomena. To imagine a thousand-sided figure, we could, potentially think of it as looking a lot like a circle, but we cannot see each side in our 'mind's eye' with the same clarity that we would a simpler figure. What operates as an *a priori* for Descartes is not mathematical formulas as concepts in and of themselves, but a basic awareness of the causal/ logical *operations* that make the math work. A thousand-sided figure *could exist*, but we do not need to see one to know that it can. In this sense, content which can be rendered phenomenally becomes secondary to the processes that make its rendering possible. The function of the mind transcends the phenomena which surround it, but that does not mean that the functioning of that mind is independent of phenomena.

The *ability to relate* ideas to each other and to other things (i.e. cause and effect, addition), to render physical phenomena into objects of the mind, and, conversely, to transform abstract thoughts and imagined entities into physical artefacts, is essential to Cartesian humanism. Although *cogito ergo sum* seems most often to be recognised as the *élan vital* of Cartesianism, it is actually the mind's capacity to recognize, utilize, and render *relations among things* that separates humans from other species, at least in the cultural context of Descartes's writings. Different animals may use objects in different ways: an otter uses rocks to break open shells, beavers use branches to create dams, various simians use sticks and rocks. But it is only humans who are logically *aware* that

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<sup>11</sup> René Descartes, *Meditations on First Philosophy with Selections from the Objections and Replies*, trans. John Cottingham (Cambridge: Cambridge University Press, 1996), 77. Henceforth cited in the text as (*M*, Page Number/s).

the tools we use allow us to achieve better results (i.e. to achieve progress) and, conversely, that we are 'limited' without them. Humans learn and are aware of that learning. When Descartes speaks about automata in the *Discourse*, the two criteria he uses to distinguish between humans and – collectively – automata, animals, and 'brutes' are: 1) 'they are incapable of stringing together different words, and composing them into utterances, through which their thoughts be known'; and 2) 'although such machines might do many things as well or even better than any of us, they would inevitably fail to do some others, by which we would discover that they did not act consciously, but only because their organs were disposed in a certain way' (*M*, 117-8). The 'disposition' of organs mentioned here implies the automatic, reflexive, or otherwise 'programmed' physical responses to specific stimuli that occur without any awareness of these responses. Descartes continues:

For, whereas reason is a universal instrument which can operate in all sorts of situations, their organs have to have a particular disposition for each particular action, from which it follows that it is practically impossible for there to be enough different organs in a machine to cause it to act in all of life's occurrences in the same way that our reason causes us to act. (*M*, 118)

There is little doubt that Descartes bases his conclusion on the available, observable mechanisms of automata that gained popularity at the time. The arrangements of their gears, cams, and cogs allowed for a variety of very complex – yet mechanized – movements limited by their physical configurations. More advanced machines could be 'programmed', so to speak, by switching out the cams or by setting various buttons, keys, or switches to alter the machine's actions. Descartes saw the bodies of animals working in the same materially-based fashion, albeit in a less accessible way: as providing immediate, direct, and *unreasoned* responses to stimuli.

Reasoned learning in humans adds a layer of self-awareness to this process that allows the human being to know that it does not know something, and to be aware of itself being aware of the process of learning – which in itself allows humans to understand that there is more to know about the world. Although formal behaviourist models would not appear for another two and a half centuries, Descartes's model anticipates a behaviourist critique by suggesting that human beings conditioned to certain behaviours can be made aware of that conditioning and potentially overcome it. Habits can be knowingly acquired and knowingly broken. In this way, the human being is not limited by the 'disposition of its organs'. Such a limited reliance on the physical arrangement of the organs within the body would mean that a human being would, like an automaton, have to have a physically pre-programmed response for every possible situation that it might encounter. While an animal or an automaton is able to perform a few specific tasks well (even better than humans in some instances), these tasks are 'domain specific' and cannot be applied to other situations.<sup>12</sup> By contrast, humans learn and improve themselves based on their capacity to relate and apply reasoning to a multitude of 'objects' (as defined by Descartes). In this way, the functioning of the mind transcends the perceived limitations of the body. Recognizing the self as something which is capable of knowing, but also limited in what it knows (and able to create things

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<sup>12</sup> I am indebted to neuroscientist Danko Nikolić and his theory of 'practopoiesis' for his concept of 'domain specificity' in relation to artificial intelligence. See Danko Nikolić, 'Practopoiesis: Or How Life Fosters a Mind', *Journal of Theoretical Biology* 373 (2015): 40-61; available at <http://www.sciencedirect.com/science/article/pii/S002251931500106X> [accessed 3 June 2015].

that will help it learn), becomes the engine of progress: to understand the relation of ourselves to the world is to maintain that progress.

In the Cartesian tradition, it is human awareness of the self as this *res cogitans* that defines the human for itself, by itself. And, for Descartes, it is the only thing of which we can be absolutely certain. This becomes the base logic upon which all other knowledge is founded and created. Descartes's philosophy implies that an intuitive, innate awareness of the self as a thinking entity is the basic logic through which the human not only distinguishes the mind from the body, but distinguishes the embodied mind from the rest of the world around it, rendering it something *known*. The ability to relate, when considered in this way, allows the human to privilege itself in the face of physically stronger forces and things. The capacity to relate to the world via representational thinking (and the logic which supports it) also places the human in a supposedly dominant position over physical objects – even the objects it itself creates – because an object cannot *think* in the same way that a human being can. The automaton's inability to act beyond the 'programming' of its gears and cams shows that its 'arrangement of organs' does not support an awareness of self upon which a capacity to volitionally act upon the world would be based. The animal or automaton cannot anticipate certain environmental factors, nor can it be aware that there are things that it does not know but could find out. Thus, neither can desire progress. Descartes's philosophy consequently presents the human self, distinct from the animal or the mechanical other, as an entity of potentiality rather than one of material presence. If humans are characterized by potentiality, then progress becomes our implied *telos*.

## An Infinity of Arts

Descartes's faith in human endeavour has a profound effect on the trajectory and interpretations of the *Discourse* as a whole. In Part VI of *Meditations*, Descartes maintains that reason provides an opportunity for us to be 'masters and possessors of nature' through an assumed 'host of inventions' that result from human innovation. Descartes continues:

This is [...] desirable for the discovery of a host of inventions which will lead us effortlessly to enjoy the fruits of the earth and all the commodities that can be found in it [...]. I am certain that there is no one, even among those whose profession it is, who will not admit that what is known about it is almost nothing compared to what remains to be known, and that it would be possible to be free of innumerable illnesses of both body and mind, and perhaps even the decline of old age, if we knew enough about their causes and the remedies with which nature has provided us. (*M*, 122-3)

Human reasoning and 'invention' are intimately connected for Descartes. The technological artefacts with which he was familiar, such as astrolabes, automata, clockwork models of the solar system, telescopes, and the first compound microscopes, made accessible a plethora of phenomena for the mind to contemplate. Although thought and the objects of thought remained separate for Descartes, this did not mean that they were mutually exclusive. Quite the contrary – determining the causal relationships among phenomena was a function of the logical human mind. The existence and purpose of the mind was made manifest via both the objects of thought

and the physical artefacts which the embodied mind (using the body as its prosthesis) could create. As more discoveries were made using these artefacts, more questions arose about the nature of universe, creating the desire for better artefacts to more fully understand its nature. This cycle of discovery and technological improvement only reinforced the relationship between reasoning and progress: one could apply reason more effectively with better instruments.

Descartes thought it possible that, through reason, humanity could become as intimately familiar with the mechanisms of the physical world as it was with the ‘crafts of our artisans’. Further reinforcing the equating of human reason and progress, artisans were responsible (acting in a similar fashion to an Aristotelian efficient cause) for crafting the aforementioned technological devices by which human beings were aided in their understanding of the physical world. Thus, for Descartes, there was a fundamental connection between the human and the technological advancements of the day. Astrolabes and automata were not mass-produced on a production line, but were attributed to a singular designer and/or fabricator. The very human efficient cause was knowable and real, rather than being far removed in the design process or buried in an unknown sea of engineers, production lines, factory workers, etc. For Descartes, any artefact which could help ‘render’ these physical causes became a physical extension of human reason.

Creating a ‘host of inventions’ is possible because the mind itself is only functionally limited by the objects it can know. The greater the number of objects that can be known, the more effectively the mind can apply itself. Human invention (powered by reason) has as many opportunities to expand itself as there are ‘objects’ to which it can be applied. It would seem, then that the body is not necessarily an impediment to the mind, but a means by which it can be enriched. This is supported by Descartes’s remarkable contention that one of the reasons for human mastery over nature is

the preservation of health, which is without doubt the highest good and the foundation of all other goods in this life. For even the mind depends so much on the temperament and disposition of the organs of the body that, if it is possible to find some way of making men in most cases wiser and more skilful than they have been hitherto [...] it is in medicine that it must be sought for. (*M*, 122)

Limitations of the senses (and by proxy the imagination) are not the same as limitations of the body as a whole. Descartes’s emphasis on the mind’s dependence on the body shows that the body itself (and its preservation) is an integral part of his philosophy. An effective mind depends upon a sound body. Furthermore, when the body is characterized as a distinct object which the mind can consider, this reinforces a certain mind/body dualism while simultaneously implying that the body-as-object can enhance the application of the mind. ‘What remains to be known’ about that body, Descartes hopes, *might* allow us to ‘be free of innumerable illness of both body and mind, and perhaps even the decline of old age’ (*M*, 122-3). Preservation of health allows for the continued functioning of the mind, upon which progress toward a deeper understanding of the body (and the ‘inventions’ by which it can be maintained) is contingent. The Cartesian ethics presented here is based on a desire to ease human suffering by preserving human health. The body, as an object of reason, *enhances* the application of reason as any other object that can be contemplated, thus enriching the

mind. Yet, it is not like any other object because the mind depends upon the body for its health and preservation.

However, inferred in Descartes's hopefulness for a future devoid of malady and debility is the implication that – due to the mind's dependence upon the body and the health of its organs – a failure of that body does not just constitute a blow to the survival of the mind, it also endangers progress itself. Descartes believed that following a logical path as presented in his *Discourse* would eventually lead toward this optimistic future devoid of sickness, but such a course would still be hindered 'by the brevity of life or the lack of *empirical information*' (M, 123). Descartes's only hope is that men of greater ability will take up where he has left off and that successive generations might collectively be able to invent and apply all of the 'arts' by which such longevity might be attained. From a contemporary standpoint, no doubt influenced by later enlightenment philosophies and more contemporary, but not insignificant, science fiction narratives, these passages can all too easily be read as a call for cyborg intellectual augmentation and transhuman immortality – specifically if one emphasizes *progress* over the embodiment necessary to maintain such progress: freeing oneself from the body altogether then, *ipso facto*, frees oneself from any maladies from which that body might suffer. Alternatively, achieving immortality of the mind (housed in what would presumably be an artificial or semi-artificial body) would make possible infinite progress.

## Transhuman Progress

Descartes's philosophy allows for a particularly transhuman view of the mind/body relationship that privileges the mind and views the body in which that mind is housed as a potential impediment to *progress*. To mistake the body in Cartesian thought as presenting an impediment to the mind (and its related reasoning) is understandable, given the centuries of Platonic dualism and its influence on the course of Western philosophy. But, clearly, Descartes saw the embodied mind as just that – a mind that functions *within* and *through* a body. In addition, the embodied human is recognised as functioning within a material world (aware of itself functioning within the world as an embodied mind), and is perceived to be progressing, hopefully, towards a future free from the ailments which might threaten this very progress. It is the function of embodied mindedness which defines human reason. An automaton is not human – and can never be human in Descartes's historical context – because the material substrate of clockwork gears and their arrangement cannot support the functionality of the human mind. No arrangement of gears, cogs, and cams could ever catch up to the myriad and seemingly infinite amount of phenomena and objects of thought that constitute the human. It is the mind, *functioning within and through the body*, that makes us truly human.

From a transhuman perspective, even though Descartes does emphasize the mind's dependence on the body, this dependence is seen as being purely biological. This homuncular interpretation of Cartesianism presents the mind as a *component* of the body, utilizing the body only as a prosthetic through which to interact with the phenomenal world, rather than as an integral part of its functioning. This point creates a compelling and influential model of human agency which easily lends itself to the

transhuman interpretation that, *if the mind is a functional component of the body, and if those functions could be supported by another substrate*, then it is possible that a) human minds could be ‘uploaded’ into machines (or other people); and/or b) machines could have anthropomorphic reason,<sup>13</sup> or ‘general artificial intelligence’. Regardless of the path such an interpretation takes, it stems from a particularly strict functionalist point of view that de-emphasizes the importance Descartes places on the body itself. As David Roden states: ‘Mind and intelligence would be substrate-independent if they could be exhibited by arrangements of matter very different from human bodies. In particular, it would have to be possible for artificial systems, such as computers, to have mental states and experiences; not merely biological, non-manufactured systems like humans and nonhuman animals’.<sup>14</sup> To define the human only by what it *does* rather than its intrinsic properties is to open up the definition of humanity in ways which make possible the view that the body is something that can be (and for some, should be) overcome, especially as it stands as an impediment to progress. That is to say, even though Descartes does mention that the senses can be deceived, embodied reasoning itself overcomes any distortions for which the senses might be responsible. Just the fact that Descartes can search for certainty with an awareness that the senses can be deceptive shows that his reasoning is intact. However, the maladies of age, mind, and body stand to shorten one’s lifespan, and thus impede the (human-powered) progress toward science.

Transhumanist visions of immortality are a direct reaction to Descartes’s stated limitation, but very few address the quality of that extended life, other than vaguely assuming that the maladies of age will be cured, or ‘solved’ based on the inevitable progress we will achieve. The line between progress and mindedness here is blurred, if not completely effaced. Progress itself is still tied to human reasoning. An impediment to progress of any kind becomes, by default, an impediment to human reasoning and vice-versa. The fusion of progress and reason creates a ‘perfect storm’ of epistemological, metaphysical, and ontological assumptions that privilege a strictly functional model of consciousness (read: ‘humanity’) allowing for certain post- and transhuman points of view.

Considering the Cartesian privileging of relations, coupled with the faith in an ‘inexhaustibility of the perceivable’,<sup>15</sup> it is no wonder that the promise of progress has become inextricably linked with the technological: the means by which we extract information from the world and transform it into reasonable ideas becomes further distanced from us as we consider human reason to be a functional entity in and of itself, rather than a process which requires a specific embodiment in order to apply itself. Despite Descartes’s suggestion that the mind is intrinsically dependent upon the body, a perceived promise of inevitable progress has fuelled the notion that a functional human need not be limited by flesh. Posthuman and transhuman discourses tend to approach this issue in slightly different ways. A critical posthumanist approach questions the

<sup>13</sup> I use the term ‘anthropomorphic reason’ here to distinguish a specific kind of reasoning that is recognizable to humans. The term ‘general artificial intelligence’ is often used to signify an AI with which a human could interact ‘naturally’, generally passing a Turing Test. I find the designation to be problematic given that an ‘artificial intelligence’ could be a-human, in that human beings may not be able to understand or relate to such an intelligence.

<sup>14</sup> David Roden, *Posthuman Life: Philosophy at the Edge of the Human* (New York: Routledge, 2015), 23.

<sup>15</sup> Jean François Lyotard, *The Inhuman: Reflections on Time*, trans. Geoffrey Bennington and Rachel Bowlby (Stanford: Stanford University Press, 1991), 17.

nature of the Cartesian human when consciousness or reasoning is characterized as a particular, and thus portable, component of a human being. It generally remains dubious of any speculation that the mind could be uploaded or reproduced in a non-biological substrate: the mind is contingent upon the proprietary wetware of the brain. Transhumanism, on the other hand, seeks ‘the perfection of human nature and the cultivation of human personal autonomy by technological means. Transhumanism thus puts forward an ethical claim to the effect that technological *enhancement* of human capacities is a desirable aim’.<sup>16</sup> There are several different, informal subdivisions within transhumanism. Almost all anticipate radical – and in most cases, indefinite – life extension, but what unites them is a general faith in progress. That faith is more reasoned in some subsets of transhumanism than others.

As an ethical stance, transhumanism itself is not necessarily uncritical. In many ways, it contains the same hope for the progress of humanity as Cartesian philosophy does. The difficulty is in certain transhumanist points of view that assume and are fuelled by a fundamental and absolute faith in the inevitability of progress: the literal interpretation that – either by human endeavour or via artificial intelligence – technology *will* advance to a point where all of humanity's problems, including death, will be solved. Whether through an eschewing of the body via the uploading of consciousness to an artificial substrate, or through indefinite life extension, transhumanism envisions transcendence beyond the human condition that would still somehow maintain a recognizable, human subjectivity.<sup>17</sup> This leap is so great, that the question of an easing of suffering is assumed but is only rarely directly addressed. James Hughes, an avowed technoprogressivist, points out this tension: ‘Today transhumanists are torn between their Enlightenment faith in inevitable progress toward posthuman transcension and utopian Singularities, and their rational awareness of the possibility that each new technology may have as many risks as benefits and that humanity may not have a future’.<sup>18</sup> Such a ‘transhuman fundamentalism’, as I like to call it, is characterized by an uncritical inevitablism that interprets progress as ‘fact’: progress has happened, is happening, and will continue to happen, rendering our positive speculations on the future (particularly Cartesian speculations) immanent. Like a god that is created by humans out of a very human need, but then whose origins are forgotten, progress stands as a disembodied entity separate from humanity, taking on a multitude of characteristics rendering it ubiquitous and omnipotent: progress can and will take place. It has and it always will, regardless of human existence; humanity can choose to embrace it, or find itself doomed.

Evidence for the inevitability of transhuman progress comes by way of pointing out specific scientific advancements and then falling back on speculation that x advancement *will lead to* y development. Philippe Verdoux presents this as a ‘historical’ critique of faith in progress, holding a “progressionist illusion” that history *is* in fact a record of improvement’.<sup>19</sup> Transhuman fundamentalist positions point to small (but significant) technological advancements as evidence that an AI will rise

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<sup>16</sup> Roden, *Posthuman Life*, 15. Some of the most notable critical posthumanists include N. Katherine Hayles, Neil Badmington, and Cary Wolfe. As a critical posthumanist myself whose work tends to be in the tradition of Hayles and Badmington, I do think that critical posthumanism is sometimes unfairly dismissive of technoprogressive points of view.

<sup>17</sup> The possibility of *non-human* subjective entities is one which Roden discusses at length, but remains unexplored in most transhuman discourse.

<sup>18</sup> Hughes, ‘Problems of Transhumanism’.

<sup>19</sup> Verdoux, ‘Transhumanism, Progress and the Future’.

(Singularitarianism) or that death itself will be vanquished (Survivalist Transhumanism).<sup>20</sup> It is important to note that neither position is in itself fundamentalist in nature. However, these two particular frameworks lend themselves more easily to a fundamentalist interpretation, due to their more entrenched reliance on a specifically homuncular interpretation of Cartesian subjectivity, Enlightenment teleology, and eschatological religious overtones (i.e. we must transcend the body in order to be technologically redeemed, transformed, or otherwise enlightened).

Out of the two, the singularitarian point of view most forcefully distinguishes anthropomorphic reasoning from the content of such reasoning in its ‘outsourcing’ of the very capacity to address humanity’s embodied limitation: we will build machines smarter than we are, and they will solve our problems for us. Reasoning, and the progress which results from it, is thus disembodied and outsourced to the machines we create. Humans will not have to imagine what the future will be because our machines will imagine it for us. Like the human-built automata that, in Descartes’s day, were proof of humanity’s seemingly limitless potential and ‘infinity of arts’, the creation of machine consciousness would be nothing more (and nothing less) than a continuation – and proof – of the inevitability of our progress. Such discoveries are contingent on some scientific advancement that always seems to be just out of reach.

Survivalist transhumanism takes a similar approach in terms of technological inevitablism, but fastens hope to soon-to-be developed advancements in *human* augmentation via nanotechnology, biotechnology, information technology, and cognitive science, that will allow humans ‘unprecedented control over their own nature and morphology’.<sup>21</sup> More fundamentalist interpretations of survivalist transhumanism, especially those that seek ‘radical life extension’, hint that death itself could be overcome, allowing the self (whether bioengineered or uploaded to a new material – or immaterial – substrate) to live on indefinitely. Rather than pass on the mantle of progress to successive generations as per Descartes’s vision, an immortal (functional) human could unlock those secrets him- or herself.<sup>22</sup> Even if humans were to remain embodied in flesh (or mostly flesh), the enhancements needed to keep those bodies functioning indefinitely would defy the known laws of physics. Hence the faith that our machines – or our artificially enhanced brains – will discover a few *unknown* laws of physics for us. Although such cyborg narratives may seem to indirectly address an enhancement of *embodied* reason, survivalist transhumanist speculation tends to present mind-enhancement as a means to unending progress, rather than focusing specifically on an enhancement – or enrichment – of one’s quality of life.

Singularitarianism and survivalist transhumanism are by no means representative of the entirety of the transhumanist movement, but their extreme positions are informed by their emphasis on Cartesianism’s progress. These subsets of transhumanism view technology as the means by which a radical alteration of humanity, contingent upon

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<sup>20</sup> To quote Hank Pellissier, ‘Singularitarianism believes the transition to a posthuman world will be a sudden event in the “medium future” – a Technological Singularity created by runaway machine superintelligence. They believe actions should be taken to ensure that the Singularity benefits humans’. Survivalist Transhumanism, on the other hand, ‘[...] is perhaps the most populated of all transhumanist categories. Anyone who espouses radical life extension as the most important goal of transhumanism belongs in this camp’ (Hank Pellissier, ‘Transhumanism: there are at least ten different philosophical categories; which ones are you?’, *Institute for Ethics and Emerging Technologies* (2015); Available at <http://ieet.org/index.php/IEET/more/pellissier20151213> [Accessed April 29, 2016]).

<sup>21</sup> Roden, *Posthuman Life*, 18.

<sup>22</sup> One wonders here if gender will even be relevant to an immortal transhuman.

either a direct or indirect disembodiment, can be expected to occur; that alteration is characterized as an advancement, or progression, of humanity itself. But in varying degrees, longevity seems to be the operative goal, with survivalist transhumanism – at the extreme end of the spectrum – predicting immortality as the logical resolution to the limited progress of humanity given its current embodied condition. Living forever would provide infinite time to uncover infinite possibilities and thus make infinite progress. Fundamentalist interpretations of transhumanism are contingent upon the assumption that progress is inevitable, and to a certain degree, a kind of external force which drives humanity forward. Regardless of whether or not the body is completely rejected for a mechanical or virtual substrate, or whether it is somehow ‘upgraded’ to the point where – again, defying the laws of physics – it simply will not break down, both positions characterize our *current* embodied state as something to be overcome. It is a body which will be redeemed by progress. As Verdoux states, ‘most transhumanists today [...] accept progress as a ‘central dogma’ of their technocentric views’.<sup>23</sup> Even when the wellbeing of the body is put forth as a goal, the acquisition of that goal falls away in service to technological progress itself:

[...] using a kind of medical metaphor, progressionists very often focus exclusively on the treatment of problems impeding the acquisition of human well-being rather than on their etiology. By fixating on only one half of the story – that of treating or solving the well-being-impeding problems of history – a pattern of technology-driven progress does indeed emerge from the historical mist. In other words, from this treatment-oriented historiography the past takes the form of a series of problem solving episodes in which unsolved but technologically solvable problems are given increasingly technological solution.<sup>24</sup>

In this fashion, Verdoux concludes, history appears more progressive as innovation increases, since progress ‘is intuitively measured in terms of the number of problems solved in a given increment of time’.<sup>25</sup> The ‘evidence’ of progress upon which certain transhumanist factions base their optimism is myopic at best, and wrong-headed at worst: eschewing the very body which Descartes hoped would reap the benefits of science. Progress, however, is far from inevitable. As Hughes points out, various historical events, including – but not limited to – the rise and fall of various fascist regimes and the dangers and unintended consequences of certain technologies, have eroded faith in inevitable scientific progress. ‘The transhumanist community,’ Hughes states, ‘is a community where many still have such a faith’.<sup>26</sup>

David Roden does present a middle ground between critical posthumanism’s scepticism and transhumanism’s often sensationalist claims by proposing ‘Speculative posthumanism’. This position makes a ‘metaphysical claim about what [the future] could contain,’ viewing posthumans as ‘technologically engendered beings that are no longer human’ and which may not ever come into being.<sup>27</sup> Speculative posthumanism stands as a kind of balance, presenting progress as something that *could* occur, speculating as to what posthumans *might* become, and finally proposing a ‘politics of invention’ in a spirit of ‘speculative engineering’ which ‘best exemplif[ies] an ethical becoming – not the comic or dreadful arrest in the face of something that cannot be

<sup>23</sup> Verdoux, ‘Transhumanism, Progress and the Future’.

<sup>24</sup> Verdoux, ‘Transhumanism, Progress and the Future’.

<sup>25</sup> Verdoux, ‘Transhumanism, Progress and the Future’.

<sup>26</sup> Hughes, ‘Problems of Transhumanism.’

<sup>27</sup> Roden, *Posthuman Life*, 15-16.

grasped'.<sup>28</sup> Although Roden's idea of an 'ethical becoming' posits a critical and somewhat more mindful development of technology itself, the nature of its speculation is more centred around technology than the human element that would develop it, or the necessity of embodiment. Roden states: 'Perhaps, then, the transhuman future that I am sketching here will be inhabited by beings whose aspirations, values and achievements would be recognizable to ancient and modern humanists. These transhuman descendants might still value autonomy, sociability and artistic expression. They will just be *much better* at being human'.<sup>29</sup> The question that remains to be answered from a critical posthumanist standpoint is, how does one become 'better at being human' when the parameters of that humanity are not satisfactorily defined? Roden continues: 'Perhaps, also, these skills repose in bodies that are technologically modified by advanced biotechnologies to be healthier and more resistant to ageing or damage than ours. But the capacities that define the humanist tradition here are not obviously dependent on a particular kind of human form'.<sup>30</sup> The operative and telling word in both of these selections is 'perhaps.' Granted, the very nature of Roden's posthumanism is speculative, but its ethics still seems more outsourced to, and dependent upon, an externalized and technologized other rather than on the embodied human.

What, then, is the alternative? The technoprogresivism at the heart of transhumanism need not be so literal. A more critical technoprogresivism can stay true to the often-eclipsed aspects of its Cartesian roots: the easing of human suffering (i.e. the enrichment of the embodied human condition, with an eye toward eliminating ailments but not necessarily overcoming aging itself). Life extension is not the same as life enrichment. Overcoming death is not the same as overcoming suffering. Combatting disease and realistically mitigating the pain associated with the physical and mental degradation which often accompany aging can and should become the parameters of technoprogresive movements. According to Hughes, technoprogresivism should 'critique uncritical libertarian and futurist ideas about the inevitability of progress'.<sup>31</sup> Technoprogresivism should address, philosophically, the *meaning* of technological progress itself in relation to the embodied human condition

Among myriad transhumanist views, a 'cosmopolitan transhumanism' seems to be able to most effectively balance notions of progress with a critical awareness. Coined by Steven Umbrello, this category combines the philosophical movement of cosmopolitanism<sup>32</sup> with transhumanism, creating a technoprogresive philosophy that promises to 'increase empathy, compassion, and the unified progress of humanity to become something greater than it currently is'. This advancement can only be achieved, Umbrello maintains, via an abandonment of 'nationalistic, patriotic, and geopolitical allegiances in favour [of] global citizenship that fosters cooperation and mutually beneficial progress'.<sup>33</sup> While more concerned with the political implications of technological progress, cosmopolitanism provides a critical framework through which to examine the nature of progress itself. This approach could easily be applied to bioethics and issues regarding the wellness of the embodied mind. I believe that a technoprogresive ethics must remain true to the effaced trajectory found in Descartes's

<sup>28</sup> Roden, *Posthuman Life*, 167-8.

<sup>29</sup> Roden, *Posthuman Life*, 21.

<sup>30</sup> Roden, *Posthuman Life*, 21.

<sup>31</sup> Hughes, 'Problems of Transhumanism.'

<sup>32</sup> This is the general philosophical idea that all human beings belong to a singular human community.

<sup>33</sup> Pellissier, 'Transhumanism.'

own discourse, one that firmly associates any kind of technological progress with the mitigation of human suffering. While such a mitigation may bring forward enhanced – or even disembodied – humans, the temptation to ameliorate the problems of the body by eschewing that body, or by outsourcing the responsibility of advancing our knowledge of the embodied human to phantasmagorical and benevolent artificial intelligences, only reinforces technological eschatologies that require transcension.

A commitment to *enriching* life rather than simply creating it (as an AI) or extending it (via radical life extension) should ethically shape the leading edge of a technoprogressive movement, if only to break the cycle of characterizing embodiment as an impediment to progress. Descartes is still dead but, as he had hoped, we can still continue in the spirit of an embodied and meaningful compassion. If, as Patricia MacCormack states, ‘our future lives may be becoming increasingly hybrid’ and ‘we have always been and are continuously transforming into posthumans’,<sup>34</sup> this does not mean that we must do so uncritically. The posthuman territory we occupy may be unfamiliar, which is why it is that much more important to proceed mindfully, paying respect to the corpus of Descartes’s work, rather than attempting to reanimate it.

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<sup>34</sup> MacCormack, *Posthuman Ethics*, 1.

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## Traectorii postumane. Logica carteziană și tehnoprogresivismul etic

### Rezumat

Acest articol analizează traiectoriile postumane stabilite de opera lui René Descartes *A Discourse on the Method of Correctly Conducting One's Reason and Seeking Truth in the Sciences*, redactată în 1637. Dincolo de a sublinia referințele acestuia la automate și alte caracterizări „tehnologice” ale corpului uman și ale minții umane, scopul articolului este de a localiza o traiectorie mai ancorată filosofic în textul care ne informează și care susține noțiunea de „progres” din care își au originea concepțiile culturale ale subiectivității și ale dezvoltării tehnologice ale direcțiilor transumane. Articolul subliniază că Descartes a privilegiat idealul dincolo de materialitatea umanului ca loc unde începe investigația filosofică și discursul. Aceasta ne poate permite perceperea unei traiectorii transumaniste, escatologice în textul cartezian. Lectura mea insistă asupra dorinței lui Descartes de a vedea acțiunea umană ca mijloc prin care suferința umană poate fi redusă. Acest aspect, în accepțiunea mea, deschide posibilitatea unui tehnoprogresivism etic care stă la baza discuțiilor din zilele noastre despre post și transuman.