Deconstruction and Excision in Philosophical Posthumanism

David Roden

davidroden7@googlemail.com

Abstract

I distinguish the ethics of transhumanism from a related metaphysical position which I refer to as "speculative posthumanism." Speculative posthumanism holds that posthumans might be radically non-human and thus unintelligible in human terms. I claim that this transcendence can be viewed as analogous to that of the thing-in-itself in Kantian and post-Kantian European philosophy. This schema implies an impasse for transhumanism because, while the radically non-human or posthuman would elude evaluation according to transhumanist principles such as personal autonomy or liberal freedom, it is morally unacceptable for transhumanists to discount the possible outcomes of their favoured policies. I then consider whether the insights of critical posthumanists, who employ a cyborg perspective on human-technology couplings, can dissolve this impasse by "deconstructing" the opposition between the human and its prospective posthuman successors. By exhibiting its logical basis in the poststructuralist philosophies of Derrida and Deleuze, I show that the cyborg perspective is consistent with both cyborg humanism and a modified speculative posthumanism. This modified account treats the alterity of the posthuman as a historically emergent feature of human and posthuman multiplicities that must be understood through their technical or imaginative synthesis, not in relation to a transcendental conception of the human.

Contemporary transhumanists argue that human nature can and should be altered through technological means where such enhancements are likely to lead to the majority of individuals leading better lives. This ethic is premised on prospective developments in Nanotechnology, Biotechnology, Information Technology, and Cognitive Science – the so-called "NBIC" suite. One of the areas of particular concern for transhumanists is the use of such technologies to enhance human cognitive functions such as learning, memory, and attention. For example, such pharmacological agents as Modafinil are currently used to enhance learning and working memory. Transcranial Magnetic Stimulation of areas of neural tissue may, one day, be routinely employed to increase the neural plasticity associated with learning and memorization (Bostrom and Sandberg 2006). More speculatively, micro-electric neuroprostheses might interface the brain directly with non-biological cognitive or robotic systems (Kurzweil 2005, 317).[1] Such developments could bring the day when all humans will be more intellectually capable, whether because of enhancements of their native biological machinery or through interfacing with artificial information processing systems.

However, some transhumanists such as Vernor Vinge, Ray Kurzweil and Hans Moravec argue that a convergence of NBIC technologies will not only enhance human intelligence, but give rise to beings with superhuman intellectual capacities. Since designing intelligence is, itself, a feat of intelligence, a super-intelligence could design a still more super intelligence, and so on through an unbounded series of recursive improvements. Beyond this threshold, there would be an exponentially fast change in the level and quality of mentation. Vinge refers to this point as "the technological singularity," claiming that such a singularity could occur with the creation of a single super-intelligent machine (Vinge 1993; Bostrom 2005, 8). Vinge is sensibly agnostic about the precipitating causes of such a singularity: the super-intelligence in question might result from some targeted biological alteration in human beings, from the use of "human/computer interfaces" of the kind anticipated by Kurzweil, or from an emergent property of large information systems (Vinge 1993).

Since such a situation is unprecedented, the best we can do to understand the post-singularity dispensation, Vinge claims, is to draw parallels with the emergence of an earlier transformative intelligence: "And what happens a month or two (or a day or two) after that? I have only analogies to point to: The rise of humankind" (Vinge 1993). If this analogy between the emergence of the human and the emergence of the posthuman holds, we could no more expect to understand a post-singularity entity than a rat or non-human primate – lacking the capacity for refined propositional attitudes – could be expected to understand such human conceptions as justice, number theory, and public transportation.

Vinge's position nicely exemplifies a generic philosophy of the posthuman that I will refer to as "speculative posthumanism." Speculative posthumanists claim *that descendants of current humans could cease to be human by virtue of a history of technical alteration*. The notion of descent is "wide" insofar as the entities that might qualify could include our biological descendants or beings resulting from purely technological activities (e.g., artificial intelligences, synthetic life-forms, or uploaded minds).

Speculative posthumanism claims that an augmentation history of this kind is metaphysically and technically possible. It does not imply that the posthuman would *improve* upon the human state or that there would exist a scale of values by which the human and posthuman lives could be compared. If radically posthuman lives were very non-human indeed, we could not assume they would be prospectively evaluable. For example, Vinge suggests that a super-intelligent machine might lack awareness of itself as a persistent "subject" of experience. For a modern tradition exemplified in the transcendental philosophy of Kant and later phenomenological philosophers, this possibility is problematic. For Kant, this is because the subject is not a "bare locus" of identity but has a transcendental function of synthesizing or "unifying" sensory information given under the subjective forms of space and time into experiences of a common, objective world.

However, Kant allowed that there could be thinkers whose mental life does not entail the synthesis of sensory representations. In the *Critique of Pure Reason*, he speculates about non-sensory "intellectual intuition" that produces objects rather than, as in humans, imposing a synthetic unity on their sensory affects (Kant 1787, B 307). A being with intellectual intuition could have unmediated knowledge of things as they are-in-themselves (*noumena*) rather than as represented under the sensory forms of space and time (*phenomena*).

If Kant is right, then the presence of first-person subjectivity in humans does not preclude a radically non-subjective phenomenology in non-humans. Most of Kant's successors in the idealist and phenomenological traditions have rejected both the in-itself and the possibility of intellectual intuition, claiming that a thing is *nothing other* than an object for a possible subject. Subject and object would then be indissociably related (Meillassoux 2006). "Correlationism," as the philosopher Quentin Meillassoux christens this position, has dominated post-Kantian European philosophy, morphing into a slew of postmodern idealisms. However, as Meillassoux argues, correlationism has the absurd consequence that the cosmic emergence of subjectivity or language becomes inconceivable; for, since nothing exists outside the correlation, it has no history. If we reject correlationism, however, we must hold that reality is not exhausted by any system of correlations: the

unconditioned thing-in-itself must be admitted and so must the possibility of different modes of access to it. Thus even if our way of accessing the real requires a subject, others may not. Given this minimal realism, Vinge's speculations about posthuman non-subjective intelligence are conceptually coherent, irrespective of their technical possibility.

It seems, then, that a posthuman reality could be, as Vinge (1993) avers, "too different to fit into the classical frame of good and evil." Our public ethical frameworks arguably presuppose that candidates for our moral regard have phenomenologies similar to humans, if only in the sentient capacities for pain, fear, or enjoyment. Moral conceptions such as autonomy or responsibility would be inapplicable to a subjectless posthuman. The central value that modern liberal theory places on liberty and democratic legitimacy would be likewise unintelligible.

How should transhumanists respond to this possibility? Should they simply discount it, confining their attention to the evaluable outcomes of transhumanist intervention? Discounting the posthuman is morally irresponsible, though, given the possible role of transhumanist intervention in producing it. Thus transhumanists should try to evaluate the emergence of an incommensurate *posthuman alterity*. However, if we recognize evaluation as a non-starter, any attempt to do so would be incoherent. Thus it appears that transhumanists are morally obliged to evaluate the unevaluable. We can refer to this impossible demand as the "posthuman impasse."

However, this formulation of a transhumanist *aporia* invites a critical riposte from a position distinct from speculative posthumanism or transhumanism: critical posthumanism.

Vinge's formulation of the singularity hypothesis is, as we have seen, reflexively anti-prognostic. We can at best anticipate the antecedent conditions of the singularity, not the form of a post-singularity dispensation. In that sense, the singularity is formally analogous to Kant's thing-in-itself. Just as a representable thing could not be a thing-in-itself, so an anticipatable future could not be a post-singularity future. In each case, we are confronted by a logically conceivable reality that transcends the principled limits of human cognition and knowledge.

However, the claim that there are principled limits to human cognition is philosophically objectionable on a number of grounds. In the present context, the most significant of these is that the strong incommensurability claim presupposes: a) a fixed set of cognitive forms proper to a fixed human nature; and b) that there is no such fixed form and no human nature. For a significant cohort of intellectuals in the academic humanities – so-called critical posthumanists such as Katherine Hayles, Donna Haraway, and Cary Wolfe – the claim that human thought has a fixed form is belied by what might be termed "the inner logic of transhumanism," which insists on the improvability of human nature. What this narrative of progress ignores, according to Hayles, is the possibility that technology does not merely express an independently constituted human nature, but actively forms and is co-original with it:

> This assumption, known as technogenesis, seems to me compelling and indeed virtually irrefutable, applying not only to contemporary humans but to *Homo Sapiens* across the eons, shaping the species biologically, psychologically, socially and economically. (Hayles 2008.)

Technogenesis sits comfortably with the view that humans are, in Andy Clark's words, "natural born cyborgs" – cybernetic organisms whose mental life promiscuously extrudes into culturally constructed niches such as public symbol-systems, industrial megamachines and computer networks (Clark 2003). This claim that our minds are as much in our tools and environments as in our crania is expressed in a principle of "parity" between processes in the head and functionally equivalent processes outside of it:

> Epistemic action, we suggest, demands spread of *epistemic credit*. If, as we confront some task, a part of the world functions as a process which, *were it done in the head*, we would have no hesitation in recognizing as part of the cognitive process, then that part of the world *is* (so we

claim) part of the cognitive process. Cognitive processes ain't (all) in the head! (Clark and Chalmers 1998.)

For example, I make numerical marks on paper to *keep in mind* a lengthy calculation. The parity principle states that my mental activity includes this inscriptional process in addition to the skilful operation by which I track each stage of the computation and determine when the result is returned. For Clark, our minds are as much constituted by the cultural and technological niches we inhabit as by the neurocomputational processes that occur beneath our skins.

Hayles' seminal study *How We Became Posthuman* showed how the possibility of re-describing humans as cyborg assemblages emerges historically with information theory, cybernetics and symbolic theories of computation. These allow us to conceive mental operations in a wholly substrate-neutral manner. Cyborgian thinking, Hayles writes, "challenges the human-animal difference; explaining the behaviour of thermostats and people through theories of feedback, hierarchical structure and control, it erases the animate/inanimate distinction" (Hayles 1999, 84). It implies that mental powers of deliberation, inference, consciousness, etc., are *already* distributed between endogenous biological networks, actively-sensing bodies and a range of increasingly clever artefacts (Hayles 1999, 239).

Thus speculations about humanity being *transcended* by disembodied post-mortals or swarms of super-intelligent droids are naïve since, as the title of Hayles' work suggests, we are witnessing the philosophical dereliction of the humanism that warranted these fantasies of transcendence. The posthuman, according to Hayles, does not signify the "end of the humanity" but the end of a conception of the human as a self-present, autonomous agent that "may have applied, at best, to that fraction of humanity who had the wealth, power and leisure to conceptualize themselves as autonomous beings exercising their will through individual agency and choice" (1999, 286). Clark endorses the same inference from cyborgianism to the impossibility of posthuman transcendence:

> The promised, or perhaps threatened, transition to a world of wired humans and semi-intelligent gadgets is just one more move in an ancient game. … We are already masters at incorporating nonbiological stuff and structure deep into our physical and cognitive routines. To appreciate this is to cease to believe in any posthuman future and to resist the temptation to define ourselves in brutal opposition to the very worlds in which so many of us now live, love and work. (2003, 142.)

So does critical posthumanism blunt the promise/threat of a posthuman alterity, obviating the posthumanist impasse?

I will argue that the insights of critical posthumanism – cyborg theory and technogenetic anthropology – leave open the possibility of a posthuman alterity while allowing us to displace the terms in which the impasse is formulated in a more ethically productive way. To see why, we need to recognize the profound philosophical debt critical posthumanism owes to post-war French deconstruction and anti-humanism: a debt acknowledged explicitly or implicitly in its formative texts. For example, Hayles argues that "deconstruction is the child of the information age," crediting its main philosophical proponent, Jacques Derrida, with the insight that speech is a cyborg act, never simply present or absent but dependent on operations and contexts that exceed the consciousness of the speaking subject (Hayles, 44). Likewise, Donna Haraway's widely cited "Cyborg Manifesto" revels in the cyborg's metaphorical power to destabilize binary oppositions between entrenched political identities, even as it gestures beyond the deconstructive obsession with the divided subject (Haraway 1989). However, as I hope to show, Derrida and other poststructuralists, such as Gilles Deleuze, have been more scrupulous in elaborating the philosophical consequences of treating subjectivity as an effect of mutable systems or assemblages, and they furnish us with a more nuanced account of human and posthuman conditions.

The humanism interrogated by Francophone anti-humanists such as Louis Althusser, Derrida, Foucault, Jean-François Lyotard, and Deleuze envisages the human subject as a source of meaning and value and as

the basis for historical explanation. Its invariant nature legitimates progress through the scientific control of nature and the construction of institutions that fully realize its moral powers (Soper 1986).

In deconstruction and poststructuralism, humanist narratives of progressive self-understanding and mastery are challenged by ontologies which, like cyborg theory, resist any description of the human subject as a self-present source of meaning or self-authenticating source of value. Instead, these new ontologies characterize the human as an effect of "generative systems" whose character is complex, changeable and inaccessible to conscious reflection. Two philosophically current examples of such systems are Derrida's general textuality and the Deleuzean ontology of the virtual.

Derrida's notion of a "general text" refers to a highly abstract set of conditions for the production of "sense" or "meaning" which any signifying item must satisfy. For example: any semiotic or semantic theory must assume a distinction between sign tokens and ideal types which each repetition or "iteration" of a sign instances. But, Derrida argues, iteration cannot be reinstantiation of an abstract object, for any significant particular can always be detached from its context and "grafted" into a new one in which it means otherwise.

Thus repetition is not the repetition of the self-same, but is constantly divided by differences that no theory can program in advance. In Derrida's later work this undecidable logic assumes a broader ethical significance. Iterability implies that the text is *both* context-bound *and* transcends any *given* context, supposing "both that there are only contexts, that nothing exists outside context … but also that the limit of the frame or the border of the context always entails a clause of nonclosure. The outside penetrates and thus determines the inside" (Derrida 1988, 152). Any application of a moral or legal principle is thus potentially an act of reinterpretation or invention: "Each case is other, each decision is different and requires an absolutely unique interpretation, which no existing, coded rule can or ought to guarantee absolutely" (Derrida 2002, 251). If iterability is a feature of general textuality (a condition of thought or meaning as such) it implies an open-textured temporal structure. The subject of thought, experience and intentionality is, accordingly, an "effect" of a mobile network of signifying states structurally open to modification or recontextualisation. Derrida's neologism *différance* captures this essential openness by capitalizing on the homonymy between the French verbs for differing and deferring. The identity or stability of the system of traces is differed-deferred because "vitiated by the mark of its relation to the future element" (Derrida 1986, 13–17).

Analogously, as Paul Patton observes of the work of Derrida's philosophical coevals Foucault and Deleuze: "a distinction is drawn between present reality, which can be understood as a product of history, and 'what we are in the process of becoming that is to say, the Other, our becoming-other' which can only be understood in relation to the virtual, the untimely or, in Foucault's case, the actual" (Patton 2007, 47).

Deleuze, like Derrida, emphasizes forms of open temporality and non-identical (or differential) repetition. The "virtual" refers to tendencies inherent in different kinds of system: potentialities for re-integration or migration into new contexts and couplings. However, whereas Derrida understands these as abstract conditions of thought or meaning, and is relatively unconcerned with their realization, Deleuze explicitly locates this open-textured temporality in the dynamics and constitution of bodies and the various "assemblages' from which they are composed or within which they operate in turn. Particularly relevant for our purposes is Deleuze's conception of a "line of flight." In Deleuzean ontology, this designates an abstract potential for the transformation of a non-unified and heterogeneous system or "multiplicity" into a new state or new mode of functioning. A multiplicity is a system that is not bound together by a common essence but is, Deleuze writes, "an organization belonging to the many as such, which has no need whatsoever of unity in order to form a system" (Deleuze 1994, 182). Many philosophers of biology hold that the interpretation of biological taxa most consonant with Darwinian evolution is that they are individual populations differentiated from other populations by reproductive, ecological and symbiotic relationships rather than a common essence. A population (not an essence or kind) can be differentiated and variable and, in consequence, can undergo the self-organizing feedback processes required by Darwinian Theory. Thus understood, a species is a good example of a Deleuzean multiplicity. The transformation of

the "wild type" in a species, under the selection pressures of a new environment allows the emergence of an ecologically or reproductively distinct species. This is illustrative of the virtual potential for "becoming other" and actualizing new forms of individual that inheres in a multiplicity by virtue of variations and differences between its elements (Deleuze and Guatarri 1988, 8, 55; DeLanda 2009, 9-41).

Formally, these poststructuralist philosophies introduce a *logic of excision* into their accounts of generative systems such as texts and virtual multiplicities. As a consequence of its dependence on generative systems the subject must be susceptible to "becoming other" – to transformative lines of flight – and, as Derrida's analysis implies, there must be constitutive limits on the capacity of practical rationality to determine the value of a particular process of transformation into the other, since such lines of flight will be liable to reframe or reinvent any practical principles that we might bring to bear on them.

Now, we can see that both Derrida and Deleuze agree with proponents of cyborg ontology that humans are not unified subjects but effects of generative systems that can be grafted or iterated onto other systems when material conditions allow, generating new kinds of subject-effects. This implies one version of what the Deleuzean philosopher of science Manuel DeLanda calls a "flat ontology" in which there are no superior organizing principles such as essences; in this case, no hierarchy between the transcendental realm in which the modality of entities is bestowed by their mode of appearance and an "ontic" sphere describable by empirical science (DeLanda 2009, 58; Roden 2006). A flat ontology dissipates the transcendental subject underlying the correlationist theses criticized by Meillassoux: those of Kant and Husserl, as well as its ostensibly anti-Cartesian avatars such as Heidegger's *Dasein* (Derrida 1986, 124-126). However, it is easy to show that this de-transcendentalized world leaves in place a range of mundane, empirical subjects, many of which are perfectly conducive to the humanist project.

To begin with, does it matter for liberal conceptions of autonomy that embodied approaches to cognition relocate many cognitive processes outside the skin-bag to interactions between bodies and environments? Let's suppose, along with Hayles and other proponents of embodied cognition, that the skin-bag is an ontologically permeable boundary between self and non-self (or exo-self). However, given the principle of parity between bodily and extra-bodily processes, this need not make the business of thinking and deliberating less evaluable in terms of the standards of rationality that humans currently apply to their actions. Even if the humanist subject emerges from the cumulative activities of biological and non-biological agents, this metaphysical dependence (or supervenience) need not impair its capacity to subtend the powers of deliberation or reasoning the liberal theory requires of it.

What about the effects of the iterability, difference and repetition on the stability of meaning that arguably underlies the exercise of rational deliberation and reasonable discourse? Derrida's deconstruction of the constitutive power of the subject, like Deleuze's metaphysics of difference, certainly emphasizes the way a conceptually irreducible or differential repetition escapes a formalist conception of thought as a tokening of concepts of intentional contents (see Bearn 2000 for a refined comparison of Derrida's and Deleuze's theories). I have argued elsewhere that we can read Derrida's arguments in a naturalized/secular way or in a quasi-mystical fashion formally analogous to the structures of transcendence discussed earlier. The mystical interpretation holds that the iterable mark is not merely indeterminate but implies a "trace" of radical otherness that ultimately eludes theoretical articulation (Roden 2006, 81). However, this mystical otherness implies a superior organizing principle that it radically eludes, which is incompatible with the flat ontology outlined here. The secular reading treats Derrida's argument as a more modest interrogation of the limits of any metaphysics of content or meaning which makes it depend on finite contexts or systems (Roden 2006, 82).

According to the secular reading, Derrida's insight that language and thought (insofar as the latter is textual) is always "cut off. …from its 'original meaning' and from its belonging to a saturable and constraining context" implies a materialism for which the production of sense is a transformative event within a complex system sensitive to variations that no formal theory can wholly capture (Derrida 1988, 12; Roden 2006, 84). However, this reading is consistent with the relative invariance of interpretation over

contexts whose intrinsic variability is small and requires us to differentiate these "mundane" contexts from singular contexts – including *singularities* - whose novelty calls for the inventive iteration of principles or categories.

Critical posthumanism – drawing on deconstruction, poststructuralism and theories of embodied cognition – thus complicates and nuances the metaphysics of autonomy and personhood characterizing traditional humanism. However, a distributed subject, "smeared" in both space (extended cognition) and time (*différance*, the virtual) can exercise normal capacities for deliberative rationality required by liberal theory just so long as its world is relatively stable and singular contexts rare or infrequent.

Thus the deconstructive implications of cyborg ontology are far narrower than commonly appreciated. The fact that the demise of the transcendental subject is so routinely confused with that of the liberal subject, say, can be attributed to a failure to heed Derrida's precautionary distinction between transcendental and anthropological humanisms (Derrida 1986, 118). Transcendental humanisms, such as Hegel's and Husserl's phenomenologies, furnish arguments against the relativist claim that reason or thought is bounded by particular historical or cultural constructions of reason; exhibiting these as phases in the history of a universal reason that is, at the same time, a "human" reason stemming from the structure of first person subjectivity (Derrida 1986, 122).

However, the deconstruction of transcendental humanism (and the consequent rejection of the claim that the limits of cognition or reason are co-extensive with invariant forms of subjectivity) is consistent with a cyborg humanism that attributes a shared cognitive nature to humans.

For example, it is possible that the refined cognitive powers that allow humans to make promises, think about non-existent or merely hypothetical entities, enter into contracts, and consider the coherence of scientific theories depend on a capacity to frame thoughts with a compositional and recursive symbolic structure. Complex symbols such as sentences and predicate expressions are composed according to grammatical rules. Rules governing logical connectives or embedded clauses, for example, allow symbols of arbitrary complexity to be composed recursively by reapplying them to their own output (Bermudez 2002). Terrence Deacon (1997) has hypothesized that the emergence of proto-languages produced selection pressures favouring good symbolic cognizers, even as limitations on symbolic cognition imposed constraints on the form of culturally transmissible languages. Extended mind theorists cite current research in cognitive psychology suggesting that these capacities "co-opt" the public representational resources of syntactically structured symbol systems (Clark 2006; Carruthers 2002).

Presaging this line of enquiry with a purely conceptual analysis, Donald Davidson has argued that the possession of propositionally structured beliefs – such as the belief that Lima is capital of Peru – requires a grasp of what belief is and thus of the possibility of being mistaken. However, evaluation requires a common medium or representation in which to evaluate and interpret the beliefs of both ourselves and others. Public language, by virtue of its compositional structure, and especially its capacity to embed sentences as grammatical complements in more complex sentences ("John believes that Lima is capital of Peru"), provides this indispensable medium (Davidson 1984). This shows that cyborgianism is compatible with the claim that there are shared forms of cognition that distinguish humans from non-humans. If so, it is conceivable that conditions which are the technogenetic result of our cyborgian past could be fundamentally altered by a sufficiently radical cognitive augmentation.

If propositional thinking is predicated on the use of linguistic vehicles of content, then the emergence of a public non-linguistic medium capable of implementing refined cognitive processes of some kind could spell the end of a propositional attitude psychology shared by otherwise disparate human cultures and historical epochs. What is envisaged here is not theoretical eliminativism of the kind mooted by Paul and Patricia Churchland, but the *instrumental elimination* of human minds through the technological erosion of their cultural preconditions. This hypothetical medium might consist of a complex form of virtual reality

that provides the kind of capacities for reflection and self-monitoring which extended mind theorists attribute to language in a non-symbolic form. One of the requirements of a symbol system such as a language is that it is possible to determine unambiguously what symbol type a particular token symbol belongs to (finite differentiation). A continuous system of representations, each of whose infinitesimal variations were semantically significant, would thus fail the finite differentiation test and count as non-symbolic according to this criterion.

The computer scientist Brian MacLennan has argued that such continuous systems – he refers to them, in terms reminiscent of Plato, as *simulacra* and their representations as *images* – could have analogues of the grammatical composition and reflectivity that we find in languages (MacLennan 1995, 2002). For example, it is possible to represent a program for transforming any arbitrary image with another image (MacLennan 1995, 9-10). Such a shared cognitive workspace could generate a new class of hybrid thoughts embodied in an immersive virtual reality. If this were done, an entirely new type of cyborgian thinker might emerge whose thoughts could defy ready translation into a far more restrictive symbolic medium.

Such a cognitive hybrid could qualify as posthuman not by failing to instantiate a timeless human nature, but by actualizing a line of flight relatively inaccessible to unaugmented humans. Whether this new multiplicity was posthuman or transhuman would be contingent upon whatever possibilities of political and personal engagement it afforded those who did not participate in the workspace.

This scenario presupposes controversial positions in cognitive science, anthropology, and the theory of computation. These may well turn out to be incorrect. However, the philosophical importance of these speculations does not lie in their prognostic reliability (which is limited) but in their capacity to displace the sense of "speculation" itself. They are not speculative in the way that Kantian claims about the transcendence of the noumenon are. There, "speculation" denotes the positing of an absolute that exceeds the limits of human cognition. If human cognition arises from a fixed cognitive nature, the human subject can know what transcendence means insofar as it can reflect upon transcendental conditions for subjective experience – e.g. through phenomenological investigation. If the extended mind theorists and critical posthumanists are correct, however, there is no invariant cognitive nature in this sense and thus no way to delineate the character of posthuman difference a priori. This shows that *even if we accept the core tenets of critical posthumanism*, we cannot exclude, a priori, the possibility of a posthuman alterity. We can only preclude an *a priori conception of what that possibility entails*.

This reframing of the speculative character of speculative posthumanism suggests how transhumanist ethics can negotiate the posthumanist impasse without the morally dubious recourse of discounting the possibility of radically non-human posthumans. If the genuinely posthuman would be, like the human, a historically emergent multiplicity, there can be no a priori "posthumanology." We can understand the posthuman only in the process of its emergence or line of flight from the human. Thus understanding the posthuman is not rendered impossible by imaginary limitations on human understanding, but nor will it be achieved by armchair speculation on the essential nature of the human and the posthuman. It can be achieved only through participating – to a greater or less degree – in the excision of the posthuman from the human.

The posthuman is thus the idea of a speculative transformation of the human that can be developed through a range of synthetic activities: say, by developing and testing enhancement technologies, the development of cybernetic art forms or the fielding of imaginative possibilities in philosophy or literature. In Derridean terms, these productive activities occasion singular judgements in which we re-invent our understanding of anthropocentric concepts. In Deleuze's, more materialist, terms they are the "untimely becomings" in which posthuman entities acquire profoundly new capacities to act and to be affected, eventuating lines of flight that might conceivably weaken affiliations to preceding forms of bio-political organization such as liberalism or capitalism.

I have argued that the concept of the posthuman as the excision of the human escapes the posthumanist impasse. Whereas the impasse entailed a vacillation between equally untenable options, the logic of excision forces us to accept that there is no rigorous or pure demarcation between theoretical and practical

thinking. Judging the value, or the nature, of the posthuman becomes possible on condition that we are already engaged in becoming just a little posthuman! The speculative posthumanist cannot rest content with pure speculation.

Note

1. For a rather less sanguine commentary on the state of the art in non-invasive scanning see Jones 2009 (with thanks to Jon Turney).

References

Bearn, G. (2000). Differentiating Derrida and Deleuze, *Continental Philosophy Review* 33: 441–65.

Bermudez, J. L. (2002). Domain generality and the relative pronoun, *Behavioural and Brain Sciences* 25, 676-77.

Bostrom, N. and A. Sandberg (2006). Converging cognitive enhancements, *Annals of the New York Academy of Sciences* 1093: 201–227.

Carruthers, P. (2002). The cognitive functions of language, *Behavioral and Brain Sciences* 25: 657-726.

Clark, A. (2003). *Natural born cyborgs*. Oxford: Oxford University Press.

Clark, A. (2006). Material symbols, *Philosophical Psychology* 19(3): 291-307.

Clark A. and D. Chalmers (1998). The extended mind, *Analysis* 58(1), 7-19.

Churchland, P. (1981). Eliminative materialism and the propositional attitudes, *Journal of Philosophy* 78(2): 67-90.

Davidson, D. (1984). Thought and talk, in *Inquiries into truth and interpretation*, 155-70. Oxford: Clarendon Press.

Deacon, T. (1997). *The symbolic species: The co-evolution of language and the human brain*. London: Penguin.

DeLanda, M. (2009). *Intensive science and virtual philosophy*. London: Continuum.

Deleuze, G. (1994). *Difference and repetition*, Paul Patton (trans.). London: Athlone Press.

Deleuze, G. and F. Guattari (1992). *A thousand plateaus*, Brian Massumi (trans.). London: Athlone.

Derrida, J. (1986). *Margins of philosophy*, Alan Bass (trans.). Brighton: Harvester Press.

Derrida, J. (1988). *Limited inc.* Samuel Weber (trans.). Northwestern University Press.

Derrida, J. (2002). *Acts of religion*, Gil Anidjar (ed.). New York: Routledge.

Haraway, D. (1989). A manifesto for cyborgs: Science, technology, and socialist feminism in the 1980s. In *Coming to terms,* ed. Elizabeth Weed, 173-204. London: Routledge.

Hayles, K. (1999). *How we became posthuman: Virtual bodies in cybernetics, literature and informatics*. Chicago: University of Chicago Press.

Hayles, K. (2008), Wrestling with transhumanism, *The Global Spiral* 9(3): http://www.metanexus.net/Magazine/tabid/68/id/10543/Default.aspx, accessed 12 April 2010.

Jones, R. (2009). Brain interfacing with Kurzweil, http://www.softmachines.org/wordpress/?p=450, Accessed 8 September 2009.

Kant, I. (1787). *Critique of pure reason*, Norman Kemp-Smith (trans.). London: Macmillan (1978).

Meillassoux, Q. (2006). *After finitude: An essay on the necessity of contingency,* Ray Brassier (trans.). New York: Continuum.

Patton, P. (2007), Utopian political philosophy: Deleuze and Rawls, *Deleuze Studies* 1(1): 41-59

Roden, D. (2006). Naturalising deconstruction, *Continental Philosophy Review* 38(1-2): 71-88.

Soper, Kate (1986). *Humanism and anti-humanism*. London: Harper Collins.

Vinge, V. (1993). The coming technological singularity: How to survive in the posthuman era, http://www.rohan.sdsu.edu/faculty/vinge/misc/singularity.html. Accessed 24 April 2008.

Wolfe, C. (1995). In search of posthumanist theory: The second-order cybernetics of Maturana and Varela, *Cultural Critique* (Spring): 33-70.