

Reprogramming Destiny: Kant's 'What is Enlightenment?', Evolution, and Posthumanism

Aaron Aquilina

Abstract

This paper explores the idea of a genealogy of posthumanism while stressing the *gene* in *genealogy*. Starting with an analysis of Immanuel Kant's essay on the Enlightenment, among other short works of his, this study examines speculation on the improvement of the human race, and consequently the possible shared concerns of Kantian thought and posthumanism. Because the issues in question hover between conceptualities of "destiny", "progress", and "man", this paper examines the past (and future) progress of humanity in terms of evolution and the techno-biological processes of sexual reproduction and gene expression (specifically, genetic reprogramming). In doing so, the present argument aims to better elucidate Kant's writings and, ultimately, determine if or how Kant may be read as prefiguring the posthumanist ethos.

Keywords: *Kant, Enlightenment, Posthumanism, Foucault, Derrida, Destiny, Progress, Evolution, Genetic Reprogramming, Genealogy*

Introduction

When you think about it, it really is quite odd that a great majority of the organisms walking or scuttling along the face of the planet have the power to create life, something we so often think of, in a slightly different context, in terms of divine power or an attempt to "play God". It is almost unnatural. Just recall the case of Dr Frankenstein, for whom the birth of life at his hands is immediately described as a 'catastrophe'.¹ Granted, for us organisms who are not brilliant if Faustian scientists, such an act of creation always requires teamwork (is this, perhaps, why the doctor is given an Igor in later adaptations?). And yet, however brief or fleeting this conjoining is, it can result in a permanent biological amalgamation which stands testament to this one-time event, a kind of concentrate being created with or without much concentration. We are talking here, of course, of the act of sexual reproduction, and despite its appealing conceptual intricacies one could almost say that there is not much science or philosophy to it—human or animal, anyone can do it. Thinking not necessary.

It remains, however, one of the most enigmatic areas in critical thought; fecundity proves itself fecund. The present approach shall attempt not to construe philosophical or

¹ Mary Shelley, *Frankenstein, or The Modern Prometheus* (Hertfordshire: Wordsworth Classics, 1999), 45.

scientific questions around reproduction, but rather to try and identify such questions as raised by the biological mechanisms themselves. These shall be identified and expounded over the course of this paper, but are essentially rather common enquiries. Chiefly, one is faced with the question of whether the human race is generally improving over the course of many such acts of reproduction, or whether there is in fact a notable decline. Is there a middle ground? And what does “to improve” even mean in this context? More fundamentally, where do we come from—as the human race, certainly, but also as the “I” who asks this in the name of all of us—and where are we going? What is this singular “I” that has, paradoxically, been re(-)produced? Are we headed towards some promised land prophesised to us? And, after all, how do we know if where we are going is ultimately where we are supposed to be?

These are questions that many have attempted to answer. This essay foregrounds one highly influential response that is advanced in a short text by Immanuel Kant. The first section of this paper elaborates on the answers Kant gives to the above concerns, while the second section subsequently reevaluates these by looking at a biological facet of sexual reproduction termed “genetic reprogramming” and its techno-biological resonances. This latter section does not only seek to read Kant, but also simultaneously allows itself to be read by Kant’s essay. The concern around the human that comes after the human—here also in the sense also of the arrival of offspring after its parents—is mirrored by the concerns of critical posthumanism, that culmination of ‘*historical development* that points towards the necessity of new theoretical paradigms [...], a new mode of thought that comes after [...] humanism as a historically specific phenomenon’.² This paper aims to discern whether Immanuel Kant’s answers can be read as proffering apposite links between certain conceptual problems of the enlightenment and those of posthumanism. Ultimately, can these Kantian concerns be considered proto-posthumanist? If so, Kant may accurately be positioned as not only a philosopher concerned with historical development but also as one who is himself part of the historical development of posthumanism. This paper, therefore, primarily asks whether one should acknowledge Kant’s place in the genealogy of posthumanism by stressing the *gene* in *genealogy*.

The reader moves forward, however, with appreciable trepidation: immediately, it seems odd, and even forced, to try and attach the prefix “post-” to a philosopher whose principal concern is the human, the true (objective) knowledge of which would allow no supplementary affixes or addendums of any sort.³

² Cary Wolfe, *What is Posthumanism?* (Minneapolis, MN, and London: University of Minnesota Press, 2009), xv-xvi. My emphasis.

³ One must remember that Kant is one of the founders of that most human-oriented field—anthropology—being ‘one of the first thinkers ever to lecture on anthropology [...] at university level’, though his anthropology differed drastically to what we understand by the discipline today, and holds a controversial place within Kant’s oeuvre. Manfred Kuehn, ‘Introduction’, in Immanuel Kant, *Anthropology from a*

Kant's Enlightenment and Posthumanism

In 1783, the journal *Berlinische Monatsschrift* asked its public a provoking question: *Was ist Aufklärung?*. Kant's reply, published the following year as '*Beantwortung der Frage: Was ist Aufklärung?*', is intriguing to say the least.⁴ In the Franco-Anglophone tradition, it has only relatively recently come under proper critical scrutiny, popularized by Michel Foucault's revisiting of both question and answer. As Foucault writes in his critical commentary, Kant's response is a 'minor text', and yet one that 'marks a discreet entrance in the history of thought [of] a question that modern philosophy has not been capable of answering'.⁵ It is an essay where Kant 'is looking for a difference: what difference does today introduce with respect to yesterday?'.⁶ It would be erroneous, however, to go so far as to claim that Kant's short essay is one that is either groundbreaking or comprehensive in its assessments of the era. On this, Foucault notes:

I do not by any means propose to consider it as capable of constituting an adequate description of the Enlightenment [...]. Nevertheless, notwithstanding its circumstantial nature, and without intending to give it an exaggerated place in Kant's work, I believe that it is necessary to stress the connection that exists between this brief article and the three *Critiques*.⁷

Already, the present argument meets some difficulty. In light of Foucault's words, any attempt to use Kant's essay to demarcate a set of ideas descending from the enlightenment to posthumanism, or vice versa, might appear to be quite ludicrous, not only because of the vast considerations that such a task would necessarily entail but, more importantly, because of the inadequate or even non-representational nature of Kant's essay. This is not an essay of its age. But, ironically, it is precisely because of this that one can pursue this essay beyond the confines of the enlightenment it addresses. It is at once a deficient description of the problems of the enlightenment and, at the same time, a product of these very problems. One is justified in wondering, then, where the essay's questions can find an adequate ethos. It thus becomes crucial for one to acknowledge, alongside Foucault, the unanswered problems that Kant has here quite literally put forward, and to take this one step further in seeing a resonance of these questions with those of posthumanism.

Pragmatic Point of View, trans. and ed. Robert B. Lauden (Cambridge: Cambridge University Press, 2013), vii.

⁴ Immanuel Kant, 'An Answer to the Question: What is Enlightenment?', in Immanuel Kant, *An Answer to the Question: What is Enlightenment?*, trans. H.B. Nisbet (London and New York, NY: Penguin Books, 2009). Henceforth cited in text as (*WE*, page number/s).

⁵ Michel Foucault, 'What is Enlightenment?', trans. Paul Rabinow, in *The Foucault Reader*, ed. Paul Rabinow (New York, NY: Pantheon Books, 1984), 32.

⁶ *ibid.*, 34.

⁷ *ibid.*, 38.

Without going into the connections that link this particular essay with the extensive and prolific ground covered by the Critiques (as Foucault suggests one should), it is evident that despite its oft-overlooked status Kant's essay can be perceived as being coherent with his more general philosophy, rather than being treated as some irregularity. According to Foucault, the role of Kantian critique, and also of Kant's short work discussed here, is that of 'defining the conditions under which the use of reason is legitimate in order to determine what can be known, what must be done, and what may be hoped'.⁸ What is to be critically determined is thus rather weightily situated in the realm of futurity—what *must be done*? what *may be hoped*?—and, in this sense, Kant may already be seen as prefiguring posthumanist concerns to a certain degree. This essay is thus not solely concerned with what affects man's socio-political development, but rather, as with Kant's disposition, with the progress of the very 'humanity of human beings'.⁹ On the other hand, however, is not determining 'what may be hoped' a way to tightly fasten a destination that is to be aimed for, a destination that, in its temporality, all too quickly spills into the idea of "destiny" with its multifarious but very humanist connotations? And, at the end of the day, what does one really mean by this ambiguous term, destiny?

According to Kant, if man is to gain any kind of insight into the viability and nature of destiny, he must first of all remove the shackles of immaturity and become a fully rational being. Nonetheless, '[i]t is so convenient to be immature' (*WE*, 1). Maturity is construed by Kant as a natural process ('*naturaliter maiorenes*'), and thus an inevitable development (familarly, destiny translates to inescapability) 'if only the public concerned is left in freedom' (*WE*, 1,2). However, this is unfortunately very often not the case; man is led (at times willingly) by 'guardians'—namely the judiciary, economic, medical, and religious institutions—which condition him to 'consider the step forward to maturity not only difficult but also [...] highly dangerous' (*WE*, 2). Already, one can not only see how the concept of the natural, however vague, is dominated by 'autocratic despotism and [...] power-seeking oppression', but also how this enslavement of the natural is, by the late eighteenth century, properly institutionalized (*WE*, 3).¹⁰ Church and state dogmatism present the individual with 'a certain unalterable set of doctrines', which prevent 'all further enlightenment of mankind for ever' (*WE*, 6). Power, therefore—in the Foucauldian sense of that which is de-individuated—is also extended into a domination of future generations in a system that seeks not to embrace future developments but to eternalize the present, even if

⁸ Foucault, 'What is Enlightenment?', 38.

⁹ *ibid.*, 35.

¹⁰ Is it any wonder that Foucault marks the advent of biopower at this time in history? See Michel Foucault, '17 March 1976', in *Society Must Be Defended: Lectures at the Collège de France, 1975-1976*, trans. David Macey, ed. Mauro Bertani and Alessandro Fontana (London and New York, NY: Allen Lane, The Penguin Press, 2003), 239-264, and Michel Foucault, 'Right to Death and Power Over Life', in *History of Sexuality: Volume 1*, trans. Robert Hurley (London and New York, NY: Penguin Book, 1998), 135-159.

in the spirit of amelioration. As Kant writes, this can be considered ‘a crime against human nature, whose original destiny lies precisely in such progress’ (*WE*, 6).

It may be argued that Kant, in defining human nature and the destined direction in which progress should evolve, is guilty of the same ideological immobility as the institutions which he challenges, or, worse yet, of paradoxically stating that, in freedom, man is still tied to a fixed destiny.¹¹ This could, however, be a potential failure to read through Kant’s implications, who advocates ‘[men] of learning addressing the entire *reading public*’ so that ‘those appointed as guardians for the common mass’ would, through their own achievement of maturity, ‘disseminate the spirit of rational respect [...] for the duty of all men to think for themselves’ (*WE*, 4, 2-3). In exalting freedom of thought, Kant’s analysis of the enlightenment would not ‘nullify [...] man’s upward progress, thus making it fruitless and even detrimental for subsequent generations’, but rather, by giving it a definite form as ‘*man’s emergence from his self-incurred immaturity*’, opens it up to the public use of reason by future generations, as opposed to its despotic control (*WE*, 7, 1). Man’s nature is constituted by Kant as something unfixed, determined not once and for all (of us) but re-determined with every new, necessary “emergence” (*Ausgang*). Destiny is, as such, configured only as that which leaves itself behind.

Such an *Ausgang*, an emergence or exit, is central to Kant’s essay. As Tracy B. Strong explains, the enlightenment, for Kant, is ‘simply the *Ausgang*—the emergence from one condition into another, that of maturity. Maturity will be accomplished through the critique, [...] not [by] achieving something, but leaving something self-imposed behind. It is, furthermore, Kant says, a *Beruf*—a calling’.¹² Moreover, this ‘upward’ and future-oriented progress can be achieved, according to Kant, by humanity as a whole. ‘There is more chance of an entire public enlightening itself’, he writes, than there is ‘for each separate individual to work his way out of the immaturity which has become almost second nature to him’ (*WE*, 2). Recall the English word “exeunt”, a now-archaic plural for exit; it is not an “I” or a “you” that departs, but a “we”. This idea is in fact re-iterated in another related essay by Kant—though a much later one, published in 1798—where it is quickly affirmed that ‘we are not dealing with any *specific* conception of mankind (*singulorum*), but with the *whole* of humanity (*universorum*)’.¹³ Kant’s proposed future is one for everyone.

¹¹ That infamous line by Jean-Paul Sartre comes to mind: ‘Man is condemned to be free’. Although this line is written in an almost entirely disparate context, we see how this misreading of Kant’s essay would eliminate the possibility of Kant being anything but humanist. See Jean-Paul Sartre, *Existentialism is a Humanism* (London: Methuen and Company, 1960), 34. See also footnote 24.

¹² Tracy B. Strong, *Politics Without Vision – Thinking Without a Banister in the Twentieth Century* (Chicago: Chicago University Press, 2012), 28.

¹³ Immanuel Kant, ‘A Renewed Attempt to Answer the Question: Is the Human Race Continually Improving?’, in *An Answer to the Question: What is Enlightenment?*, 67.

Admittedly, in this outline of Kant's argumentation, we have here moved forward rather too quickly: we have not addressed, for instance, the implied emergency of this emergence, the problem of "all for one and one for all", or this dialectical tension between the individual and his race, the singular and the collective. These issues shall be returned to in due course. Before moving on, though, it is important to remember that Kant was not the only respondent to the journal's question.

One of the most prominent of the other contributors was Moses Mendelssohn, a key figure in both German and Jewish enlightenment, and a respected friend of Kant's.¹⁴ Mendelssohn, who was 'a devoted disciple of the leading lights of the *Aufklärung*, Gottfried Wilhelm Leibniz [...] and Christian Wolff', replies to the question with a short essay entitled '*Über die Frage: Was heißt aufklären?*', where he writes that culture and enlightenment—and, for the reading advanced here, it is highly significant that Mendelssohn separates these terms—both have ends in the education of man (again, there is here the separation of man as *man* and man as *citizen*).¹⁵ In turn, education is reinforced when 'the social conditions of a people are brought, through art and industry, into harmony with the destiny of man'.¹⁶ As is argued here, it is this central idea of a 'destiny of man' (*Bestimmung des Menschen*) that reveals the subtle differences between Kant and Mendelssohn, and that simultaneously allows us to perceive Kant as a strong example of what a proto-posthumanist philosophy might manifest itself as.

James Schmidt writes that Mendelssohn's reply 'appropriated the concept "destiny of man" [...] from a book by Johann Joachim Spalding, a fellow member of the Wednesday Society'. Mendelssohn acknowledges the 'ambiguity in the German *Bestimmung*, noting that the word connotes both "determination" [...] and "destination". Ultimately, 'Mendelssohn suggested that *Bestimmung* should be reserved for "determination", while the sense of "destination" is better captured by the German *Beruf* ("calling" or "vocation")'.¹⁷ In his reply, in fact, Mendelssohn greatly favors the more concretizing *Bestimmung*.¹⁸ For him, then, our journey is a determined one: 'I posit, at all times, *the*

¹⁴ In a note to 'An Answer to the Question: What is Enlightenment?', Kant reveals that he had had no knowledge of Mendelssohn's reply, also printed in 1784, and had 'not yet seen this journal, otherwise [he] should have held back' from publishing a reply himself. See Immanuel Kant, 'Notes', in *An Answer to the Question: What is Enlightenment?*, 106.

¹⁵ Allan Arkush, *Moses Mendelssohn and the Enlightenment* (Albany: State University of New York Press, 1994), 1.

¹⁶ Moses Mendelssohn, 'On the Question: What is Enlightenment?', trans. James Schmidt, in *What is Enlightenment?: Eighteenth Century Answers and Twentieth Century Questions*, ed. James Schmidt (Berkeley, CA: University of California Press, 1996), 53.

¹⁷ Mendelssohn claims this in *Gesammelte Schriften*. James Schmidt, 'Notes' to Mendelssohn, 'On the Question: What is Enlightenment?', 56.

¹⁸ Here the original German text is analysed. See Moses Mendelssohn, 'Ueber die Frage: Was heißt aufklären?'; accessed 31 July 2016, http://www.deutschestextarchiv.de/book/view/mendelssohn_aufklaeren_1784?p=1.

destiny of man as the measure and goal of all our striving and efforts, as a point on which we must set our eyes, if we do not wish to lose our way.¹⁹

The difference between Kant and Mendelssohn's idea of destiny might not be immediately apparent. However, as Strong has earlier reminded us, Kant's use of the two terms varies in the essay.²⁰ The term *Beruf*, with its more religious undertones, is used always in conjunction with free thinking,²¹ whereas *Bestimmung* (used only once in this sense) is discussed in terms of progress.²² Crucially, for Kant, free thinking *is* progress—one cannot happen without the other, and neither comes first—and so determination and destination are not as easily set apart as they are for Mendelssohn. Here, destiny's signification is not equivalent to Mendelssohn's defined 'point'; it is, rather, a more ambiguous indicator of *direction*. Destiny is not presented as an end-point that lies ahead waiting for man to reach it (as Mendelssohn writes) but as that which is already there *in* man, in one's 'own understanding', 'freedom', and in the (public) use of one's ability to reason (*WE* 1, 3). Crucially, then, it appears that Kant never prescribes where we should be or where we are going, but simply emphasizes that we are always going somewhere, other than the here and now, through our own 'upward progress' that is the inner destiny of 'human nature'. In fact, in '*Was heisst: Sich im Denken Orientieren*'—a slightly later essay than *WE*—Kant re-stresses how free thinking and, with this, enlightenment, is located not outside of the individual but within: '*To think for oneself* means to look within oneself (i.e., in one's own reason) for the supreme touchstone of truth; and the maxim of thinking for oneself at all times is *enlightenment*'.²³ Destiny, therefore, is not understood as a set destination, but as a sequence of continual and progressive exits from a state of immaturity into a state of ripening (and one here recalls G.W.F. Hegel's later use of the term to connote the developing stations of the Spirit). Subsequently, there should then follow an *Ausgang* from ripening to the state after that (itself a maturation): destiny as a continuous progress towards an unfixed destination, a transformation of the noun into a verb, destiny to destination.

What surfaces from all this is a certain potential *configurability* of what "destiny" is—not only in terms of its varying conceptions across cultures or critical thought, but even in Kant's own view of destiny as an erupting progress towards maturity, whatever or

¹⁹ Mendelssohn, 'On the Question: What is Enlightenment?', 54.

²⁰ Here the original German text is analysed. See Immanuel Kant, 'Beantwortung der Frage: Was ist Aufklärung?'; accessed 31 July 2016, <http://gutenberg.spiegel.de/buch/beantwortung-der-frage-was-ist-aufklarung-3505/1>.

²¹ *ibid.* Cf. '*des Berufs jedes Menschen selbst zu denken*'; '*Aber als Gelehrter hat er volle Freiheit, ja sogar den Beruf dazu, alle seine sorgfältig geprüften und wohlmeinenden Gedanken*'; and '*nämlich den Hang und Beruf zum freien Denken*'. My emphasis.

²² *ibid.* Cf. the above quoted crime against humanity: '*Das wäre ein Verbrechen wider die menschliche Natur, deren ursprüngliche Bestimmung gerade in diesem Fortschreiten besteht*'. My emphasis.

²³ Immanuel Kant, 'What is Called Orientation in Thinking?', trans. H.B. Nisbet, in *Kant's Political Writings*, ed. Hans Reiss (Cambridge: Cambridge University Press, 1991), 249.

whenever that may be. Insofar as posthumanism looks at both the contemporary (de)construction of the human as well as its emergence into its futurity, Kant's view of human progression awaits (at) the posthuman's arrival. One asks, however, whether Kant would agree, for is not the exit into maturity the last leg of the journey? When the human race has matured, what possible next destination can destiny have?

An answer may be found in yet another essay by Kant: the 1786 'Conjectures on the Beginning of Human History'. Going back to Genesis, chapters II through VI, he considers the development of man (and, subsequently, woman—and of course there is and has been an overt problem of gender here and throughout this essay, at its most obvious in the linguistic elision of "(hu)mankind" and "man") and claims progression and development as the innate dispositions of the human; one cannot halt development lest man cease to be man. The post-lapsarian fig leaf symbolizes, for Kant, 'the first stage of rationality' which separated humankind from the 'purely animal desire to love'; the fall from Eden is equated with innocence given way to reason, where the pastoral becomes the agricultural and the moral replaces the natural. A natural existence 'became unworthy of [...] a species whose destiny was to rule over the earth', and thus edenic stasis gave way to progress.²⁴ Kant, therefore, can be seen as looking at the human not only in its futurity but in its historicity, at what separates the human from the non-human. In its historicity, we see how man is demonstrated to have already matured once before—from animality to rationality. This makes the idea (and the possibility) of maturing from a state of maturity—i.e., rationality to "beyond", to that unfixed destination—not only tenable but already thought through by Kant. Not only, then, is maturity *not* the end, but indeed it *can never be* the final destination, for, according to Kant, to be human is to mature. Once more, Kant's breadth of analysis is echoed by posthumanism which attempts to look both forwards and backwards at what "man" is and is not, and which considers multiple emergences from the state of man.²⁵ But this linking is certainly not enough, and overlooks the worrying implications of what has just been argued: if man is that which progresses, what status is to be ascribed to

²⁴ Immanuel Kant, 'Conjectures on the Beginning of Human History', in *An Answer to the Question: What is Enlightenment?*, 92.

²⁵ Here I follow Wolfe's understanding of "posthumanism" as that which takes as its basis the instability of the human, rather than being a set of ideas that *a priori* assume some concrete configuration of the posthuman, one *already here*. I understand posthumanism as being not the study of the posthuman but 'a mode of thought [...] engaging directly the problem of anthropocentrism and speciesism'. Wolfe, xviii-xix. It is of note that Wolfe also engages with Kant's (and Foucault's) enlightenment essays in his 'Introduction', in a reading similar to the one put forward here (Wolfe, xiv, xvi). It might be useful to recall a statement by Günther Anders, which typifies Wolfe's approach to posthumanism as utilised in this argument, and foregrounds the links read here between Kantian thought and freedom as intimated in footnote 10: 'to put it paradoxically, *artificiality is the nature of man and his essence is instability*'. Günther (Stern) Anders, 'The Pathology of Freedom: An Essay on Non-Identification', trans. Katherine Wolfe, *Deleuze Studies*, 3:2 (2009): 279. For a general overview of Anders's links with posthumanism, see Christopher Müller, 'We are born obsolete: Günther Anders's (Post)humanism', in *Critical Posthumanism Network*; accessed 31 July, 2016, http://criticalposthumanism.net/?page_id=433.

he who is not allowed maturity, as when under the despotic guardians of society? What of Adam and Eve in their edenic stasis prior to the lapse? Must one conclude, shakily, that the posthuman is only that which is edenic or immature, coming before the human?

As has been hinted at through the terms used above (“configurability”, “awaiting (at) the arrival of”), this study shall briefly turn to Jacques Derrida in order to further elaborate on the question of whether Kant’s conception of progress offers a rethinking of humankind that can be called posthumanist, or whether it remains firmly anchored to a prescribed and definite humanism; that is, man as the progressively rational animal.

In *The Animal That Therefore I Am*, Derrida, like Kant, goes back to Genesis when speaking ‘of the nude in philosophy’, and problematizes the humanist conceptualization of a definitively configured nature.²⁶ Through reference to Friedrich Nietzsche, he points out that nature is said ‘to have given itself the task of raising, bringing up, domesticating and “disciplining” (*heranzüchten*) this animal that promises’.²⁷ This is similar to Kant’s conception of the guardian institutions which keep man from *Ausgang*, where the teleo-natural is despotized in order to keep man within immaturity. This disciplining of man, a limiting of man for a determined destiny (*Bestimmung*) rather than a continually renewed calling (*Beruf*), denies the authentic glance backwards to see ‘[w]ho was born first, before the names’ and ‘[w]ho will have been the first occupant, and thus the master’.²⁸

In this respect, this paper’s claim of Kantian affinities with posthumanism is once again put into question. Kant writes of how rationality raised man ‘completely above the animal society’, and allowed man to realize ‘that he is the true end of nature’. Thus, he concludes, all humans are equal, as they are all ends; there is ‘equality with all rational beings’, although rationality is something from which, for Kant, animals are excluded.²⁹ The problem is not the severe disjunction between man and animal (or at least, not only), but rather the teleological end, no matter how indefinite its configuration, prescribed by the retention of destiny as *Bestimmung* (for the consideration of *Beruf*, as evidenced above in *WE*, did not completely entail the omission of *Bestimmung*). In referring to the ‘true end’ of man, Kant does not speak only morally. Man is the beginning and the end of rationality, and any departure from mankind would be a step taken against this development of historical, civilized progress of mature reason. Development cannot be halted “lest man cease to be man”, as was stated above, and consequentially the posthuman thus understood

²⁶ Jacques Derrida, *The Animal That Therefore I Am*, ed. Marie-Louise Mallet, trans. David Wills (New York, NY: Fordham University Press, 2008), 1.

²⁷ *The Animal That Therefore I Am*, 3. This is taken further when Derrida talks of the first and second narratives of the Genesis, where Jehovah allows man to ‘take power over all the other living beings’ by naming the animals, i.e. by subjecting them to his authority. *The Animal That Therefore I Am*, 16.

²⁸ *ibid.*, 18.

²⁹ ‘Conjectures on the Beginning of Human History’, 94. There is here, of course, an echo of that famous concluding line: ‘All animals are equal, but some animals are more equal than others’. George Orwell, *Animal Farm* (Harlow: Pearson Education Limited, 2006), 114.

would only be a development of the human—an *Ausgang* from immaturity, but not from humanism, and so “posthuman” in only the most superficial of meanings. While Kant does not determine the future of man, neither does he allow space for the de-centering of rationality as an inner call for progress, something which proves problematic when taken into consideration by posthumanist discourse.

This is what Derrida rightly questions in his essay ‘The Ends of Man’. In an epigraph, Derrida quotes Kant from *The Foundations of the Metaphysics of Morals* (1785): ‘Man [...] exists as an end in itself, and *not merely as means*’.³⁰ Although the essay features Kant only marginally, Derrida disparages Kant’s positing of ‘the infinity of *telos*, the infinity of end’ (in other words, destiny’s ever-changing destination), writing that such ‘criticism of empirical anthropologism is but the affirmation of transcendental humanism’.³¹ Kant is acknowledged by Derrida as one who, like Edmund Husserl or Hegel, depicts man as rational animal, and for whom ‘there is no history except that of reason’.³² Nonetheless, Derrida proposes that a return to philosophy is still needed for the current anti-humanist episteme.

After the humanist and anthropological wave swept over French philosophy, it might have been expected that the anti-humanist and anti-anthropological reflux which was to follow, and in which we now are, would come to rediscover the heritage of thought which had thus been disfigured, or rather in which the figure of man had been too quickly recognized.³³

This, Derrida claims, has not happened. Although Derrida specifically questions France’s relation to the concept of man, the philosophy he revisits is principally German—namely Kant, Hegel, Husserl and Martin Heidegger. While delving into the problematics of ‘The Ends of Man’ would be to risk digression, Derrida’s analysis of the ‘*we* in the metaphysical dimension’ (the principle of the *universorum*) will prove very relevant to the discussion of genetic reprogramming in the following section.

It is necessary to recapitulate before moving ahead. So far, we have seen that Kant is ‘looking for a difference’ between yesterday, today, and tomorrow. Depicting the progress of humanity as the *Ausgang* from immaturity to maturity, Kant also demonstrates that this is: (i) an urgent and collective emergence, lest man remain bound to immaturity forever, and (ii) not a one-time event. In ‘Conjectures’, one reads Kant’s description of a past *Ausgang* from the state of animality; it would be fitting to say that another exit from the mature state of man into what may be termed the “posthuman” (whether we are there yet is another question altogether) would not at all be a crude appropriation of Kantian

³⁰ Jacques Derrida, ‘The Ends of Man’, trans. Edouard Mort-Sir, Wesley C. Piersol, et al., *Philosophy and Phenomenological Research*, 30:1 (1969): 31.

³¹ *ibid.*, 44.

³² *ibid.*, 43.

³³ *ibid.*, 38-39.

ideas against themselves. In Kant, destiny is understood as configurable and ever-changing, (an inner call for) destination rather than extrinsic determination. This is all rather happily aligned with the ethos of posthumanism. However, the problem that the above argument has begun to reveal is that, through these readings, one also observes Kant's positing of a teleological end of man, one that cannot escape the gravity of reason and its essentialization. If man is that which continually exits itself (an idea that may appear to gesture towards posthumanism), what it can never exit, for Kant, is its own humanity. Rational man in himself 'marks a limit' and has 'finitude that is fitted to it', and so the posthuman for Kant can only be: (i) what came before the advent of reason, i.e. edenic stasis, or (ii) not human at all.³⁴ To return to one of the primary questions of this paper, then: can Kant be considered proto-posthumanist, or not?

Kant's later essay 'A Renewed Attempt to Answer the Question: Is the Human Race Continually Improving?' provides us with some vital information. Here, Kant looks both forwards (as in 'What is Enlightenment') and backwards (as in 'Conjectures') at what he interestingly calls 'a history of future times', a '*predictive* history' which might be termed '*prognosticative* or *prophetic*'. Unsurprisingly, Kant is 'concerned not with the natural history of mankind'—there was no reason before man—nor with 'whether new races of man might emerge in future times', but rather with the '*history of civilization*'.³⁵ Human rationality, therefore, still reigns supreme (over animals? over the world? is there a difference for Kant?) in a historical continuum reaching to the future. This is why Derrida critiques Kant as being anchored to 'transcendental humanism', and why he writes that 'the hypothesis of a *third era*, an era to come that would require a redistribution of the whole logic of this anthropocentrism' (a calling back/forth of the animal, as well as the posthuman) must do away with 'Kant's whole work'.³⁶ However, in Kant's notion of 'predictive history', this paper reads a rejoinder to these reservations around Kantian links with posthumanism (reservations due to the retention of teleological destiny and the ultimatum of reason). A brief analysis of it shall lead us into the second section of this paper.

Kant writes that '[w]e can obtain a prophetic historical narrative of things to come by depicting those events whose *a priori* possibility suggests that they will in fact happen. But how is it possible to have history *a priori*?'³⁷ The problem of progress, he states, is that it cannot be solved directly from experience but must nonetheless start from it. And so, looking to the past to trace the history of the future, Kant proposes an examination of the 'history of former times so as to show that mankind has always been progressing', but in such a way that the chosen example 'would not in itself be the cause of progress in the past,

³⁴ *The Animal That Therefore I Am*, 96.

³⁵ 'Is the Human Race Continually Improving?', 67.

³⁶ *The Animal That Therefore I Am*, 98.

³⁷ 'Is the Human Race Continually Improving?', 68.

but only as a rough indication or *historical sign* that might then ‘serve to prove the existence of a tendency within the human race as a *whole*’. Kant thus again conceives of the *universorum*, ‘a body distributed over the earth’ as opposed to ‘a series of individuals’.³⁸ In attempting to do so, he looks at the moral character of the publicity of politics (indirectly referring to the contemporaneous French Revolution), concluding with the moral optimism that the ‘political prophet’ will have ‘to admit that the human race must soon take a turn for the better, and this turn is now already in sight’.³⁹

Instead of looking at the revealing tendency of revolution, this last section shall look at these questions, and Kant’s prophet, through a consideration of the process of genetic reprogramming. Effectively, revolution shall here be substituted with evolution, even though these two concepts might not be as far apart as may be first assumed. As Joshua D. Lambier writes:

In the *Idea for a Universal History from a Cosmopolitan Perspective* (1784), written in the interval between two great revolutions, Kant speculates that rebellion itself is a visible sign of an unconscious, purposive “plan of nature” underwriting universal history. Nature’s hidden plan operates as a regulative idea that he reads into the seeming absurdity of history to discern a narrative, or guiding thread [*Leitfaden*] for the evolution of human life from a state of nature, to civic society, to a cosmopolitan federation of republican states.⁴⁰

This turn to genetic evolution, ‘Nature’s hidden plan’, is here undertaken in order to hone and elucidate the above discussion which, looking back, is quite staggeringly broad: the progress of humanity, the (re-)configurability of destiny and destination, the non-human animal and the rational one. A sharper focus is thus necessary. Reading such a technological process serves in effect to transpose the concept of “progress” onto that of “evolution”—while not claiming that they are equivalent—and this is done in the hope that such a maneuver (in a manner already covered by Kant, to a certain extent, with the first

³⁸ *ibid.*, 75.

³⁹ ‘Is the Human Race Continually Improving?’, 86. It is here important to note that Kant’s views on revolution are disputed, especially considering that, despite the enthusiasm he showed for the American and French Revolutions, he expressed insistent renouncement of the right to revolt. Some would even argue that ‘there is no inconsistency in Kant’s denial of a right to revolution’, with ‘ethical, teleological, and juridical strands of argumentation’, despite the weight of studies claiming otherwise. This essay identifies Kant’s view as one which condemns revolution, but which simultaneously condones the outcome of potential progress. Katrin Flikschuh, ‘Reason, Right, and Revolution: Kant and Locke’, *Philosophy and Public Affairs*, 36:4 (2008): 376, 380. See Flikschuh’s Footnote 1 for a comprehensive list of arguments which do observe inconsistencies in Kant’s dismissal of the right to revolution.

⁴⁰ Joshua D. Lambier, ‘A Capacity to Resist: Kant’s Aesthetics and the Right of Revolution’, *European Romantic Review*, 27:3 (2016): 395. Lambier quotes Immanuel Kant, ‘Idea for a Universal History from a Cosmopolitan Perspective’, in *Toward Perpetual Peace and Other Writings on Politics, Peace and History*, ed. Pauline Kleingeld, trans. David Colclasure (New Haven, CT: Yale University Press, 2006), 4.

Ausgang) will reveal whether Kant’s work does, in fact, need to be done away with in order for proper posthumanist expression to be achieved.⁴¹ Perhaps not.

If after all, as Michel Foucault writes, the general movements of the enlightenment and humanism are indeed ‘in a state of tension’, then posthumanism may understand itself in the enlightenment aspects of Kantian philosophy, as discerned from the humanistic, without playing between ‘dialectical nuances’ or ‘seeking to determine what good and bad elements there may have been in the Enlightenment’.⁴²

Evolution, Reprogrammed

A look at genetic reprogramming illustrates what is at stake when thinking of the simultaneous but divergent nuances of Kant’s engagement with *Bestimmung*.⁴³ The tensions described above, such as yesterday/tomorrow, immaturity/maturity, and *singulorum/universorum*, come to the fore when reading the techno-biological processes of genetic destiny, and why these problematic relations are not resolved with a simple transformation of “destiny” to “destinies”.

DNA, contained within the cell nucleus, encodes within it the genetic information of an organism. Human DNA is made up of four specific nucleobases—A, G, C, and T—which pair up in the familiar resemblance of rungs on a ladder along the two strands of the double helix. The sequence of these nucleotide-groupings, termed codons, can be analysed to decipher the genetic code which holds within it indicative data of our genetic inheritance. However, DNA is not completely determinative of the organism but rather, in many aspects, only conditional. Although DNA is a generally stable store of information, it is, essentially, context-specific. It is sensitive to what goes on in its micro-environment (essentially, as we shall see, methyl-groups and histones), and, when presented with the appropriate stimuli, genes change in their expression. It is thus a bidirectional process—

⁴¹ It is, of course, problematic that Kant not only comes long before “posthumanism”, but also before Darwin’s popularisation of the theory of evolution. Although some scholars view Kant’s ideas as being in line with those of his contemporary, Jean-Baptiste Lamarck, others claim that Kant disagreed with such ideas that appeared mechanistic in their understanding of nature—see, for instance, Arthur O. Lovejoy, ‘Kant and Evolution I’, *The Popular Science Monthly*, 77 (1910), and Lovejoy, ‘Kant and Evolution II’, *The Popular Science Monthly*, 78 (1911).

⁴² Foucault, ‘What is Enlightenment?’, 41, 42.

⁴³ This is not the first study to link Kant and epigenetics. A recent publication—the English translation of which came out this month—is that of Catherine Malabou, where the main concerns there are very close to those in the present argument, although not overtly posthumanist. See Catherine Malabou, *Before Tomorrow: Epigenesis and Rationality* (Cambridge: Polity Press, 2016).

DNA influences the cell and its environment, and vice versa.⁴⁴ Inherited genes are not all that we are.

While the genotype is essentially the codon sequence for each organism, determining elements such as hair or eye color, each organism subsequently develops the phenotype—the observable, measurable characteristics expressed from the genes, which may differ from the genotype. Thus, although organisms of the same species have very similar genetic structures—not accounting for mutations—they are different from each other in their expression (apart from the composite nature of the genes themselves). We are more (or less) than our inheritance, therefore, in two significant ways: (i) our (molecular) environment affects what genes are expressed and passed on, as well as (ii) how they are expressed. The analysis of gene expression lies within the relatively new scientific field of epigenetics, the Greek etymology of which already suggests a systematic move away from what is determined—configured teleologically, destined—to what is conditioned.⁴⁵

In inheriting chromosomes from both the male and female parent, the nascent organism's genes need to undergo a process called “reprogramming”. The inherited chromosomes are ones that come from adults, and are therefore cells whose function is already controlled, the opposite of the stem cells needed to develop a new organism. The adult cells possess molecular memory to direct them in their functioning—manifested as a methyl group compounded with the C-nucleobase of parent DNA strands—and thus these already methylated adult cells need to be “cleaned” in order for the offspring to start from its full potential (totipotency), i.e. for the older adult cells to once more become stem cells. Reprogramming, or demethylation, is the erasure of most molecular memory in order to produce a totipotent organism. Although inheriting methylated and memory-possessing DNA, then, reprogramming allows the new organism's DNA to be wiped clean (to be, effectively, de-methylated) and thus no longer differentiated. Thereby, the cells regain the ability to develop—through the process of methylation started anew—into any kind of cell. In short, then, upon fertilization, de-methylation or reprogramming needs to occur to ensure that a nascent totipotent organism is produced.⁴⁶

⁴⁴ This idea of “bidirectionality” is of course a challenge to the “central dogma of molecular biology”, which states that ‘[o]nce information has got into a protein it can't get out again’, as formulated by Francis Crick in 1956. This highly influential idea has been challenged within the scientific sphere from as early as the 1970s but it became widely unaccepted only more recently. For an elaboration on Crick's notion, see Francis Crick, ‘Central Dogma of Molecular Biology’, *Nature*, 227 (1970): 561-3. The quotation in this footnote is taken from early draft by Crick, ‘Ideas on Protein Synthesis’, Oct. 1956, accessed 15 September, 2016, https://profiles.nlm.nih.gov/SC/B/B/F/T/_/scbbft.pdf.

⁴⁵ ‘Epi-’ connoting ‘on, upon, above’. See *Chambers Dictionary of Etymology*, ed. Robert K. Barnhart (Edinburgh: Chambers Horrap Publishers, 2008), 335. Epigenetics, which goes beyond the tyranny of genetics, may be defined as ‘a change in phenotype that is heritable but does not involve DNA mutation’. See C. David Allis, *Epigenetics* (Cold Spring Harbor, NY: CSHL Press, 2007), 2.

⁴⁶ DNA methylation is one of the most intriguing and complex processes of the epigenetic field. Cf. the online DNA Methylation Society journal; accessed 31 July 2016; <http://www.researchgate.net/journal/1559-2308-Epigenetics-official-journal-of-the-DNA-Methylation-Society>.

Reprogramming is thus essentially a process of leaving behind, where the methyl group that dictates cell function is deleted; the zygote must be made to forget that it is only a sperm and an ovum in order to produce kidneys, eyeballs, fingernails. It is the generative process of generations, and can thus be read as a cycle of erasure and reconstruction, or re-emergence, of the human. In many ways, it is the techno-biological *Ausgang* into a new phase or stage of man, birthing a literally incarnate posthuman which from totipotency must subsequently and accordingly methylate or remind itself of what it should be, i.e., human.

This does not in itself mean that a new generation is necessarily the maturity or ripening of its immature parents—for here the *post*-human is reminded to lose its affix and become rationally human; furthermore, immaturity in the Kantian sense can be perpetuated over an indefinite number of generations. This focus on genetic reprogramming and evolution does, however, illuminate a different way of looking at Kant's delicate idea of destiny as that which reconfigures or reprograms itself. Ironically, what comes out of this perspective is that the posthuman is better exemplified by the de-methylated zygote, the proto-human, rather than by Kant's idea of rational maturity. However, all this may have nonetheless already been accounted for in Kant's history of the future, as is here argued. Let us think, then, reprogramming on Kantian lines.

If reprogramming is an evolutionary process which 'refutes the old dogma that development is an irreversible process', and highlights its revisional nature, then we know that, at least biologically, there is no teleological end of man.⁴⁷ Progress and evolution will go on indefinitely, or at least until that final end of species extinction. Destiny is programmed as the reprogrammable (not a paradox here, just like Kant's freeing of free thought from institutionalization); it is the infinite call for development (progress, evolution). Although institutions of power can control it, with man made to embrace its rejection, it remains a *Beruf* outside the grasp of the man-made. In fact, only slightly more than a century after the publication of Darwin's *Origin of Species*, evolutionary biologist Theodosius Dobzhansky—who writes that destiny 'is still a matter about which speculation abounds and positive knowledge is disconcertingly meagre', and who conceives of it as a

In recent years, however, the efficacy of de-methylation has been contested across the scientific sphere, where some believe that specific codons escape re-programming, and consequently epigenetic markers (i.e. things that should not be passed on) are nonetheless traceable in the offspring. However, this is as of yet unclear—especially when it comes to human subjects or to the debatable sphere of whether the womb is the environment of an organism or a pre-organism—and thus this paper is not taking into consideration this rather Lamarckian idea. For more information on this, see, for instance: Moshe Szyf, 'Nongenetic inheritance and transgenerational epigenetics', *Trends in Molecular Medicine*, 21:2 (2015): 134-144; or, Bastiaan T. Heijmans, et al., 'Persistent epigenetic differences associated with prenatal exposure to famine in humans', *Proceedings of the National Academy of Sciences* 105:44 (2008): 17046-17049.

⁴⁷ Konrad Hochedlinger and Rudolph Jaenisch, 'Nuclear Reprogramming and Pluripotency', *Nature*, 441 (2006): 1061.

dark, moving force *outside* of mankind—writes that ‘the process of evolution has created its own directing centre’.⁴⁸

Aside from highlighting the ‘animal-machine elicited during the Enlightenment’, reprogramming also brings into tension the “I” and the “we”, the *singulorum* with the *universorum*; as Derrida writes, ‘Kant comes to reaffirm the difference constituted by the human as rational animal’, and he does so ‘on the basis of an “I”’—and one quickly recalls the above quote from ‘*Was heisst: Sich im Denken Orientieren*’.⁴⁹ Reprogramming does nothing if not constitute an “I”. It erases the molecular memory carried over from the parents in order to start anew, wiping the slate clean so that totipotent embryonic stem cells can develop into an individual—a new self, a re-produced “I”. Reprogramming occurs to cut us off, on a fundamental molecular level, from what came before us. However, the fact that the “I” is re-produced, and the fact that DNA is nonetheless an enormously conditioning factor that is inherited (and that, probably, not all methyl groups are removed), accordingly ‘implies the “I” to be an other that must welcome within itself some irreducible hetero-affection’. Therefore, ‘the question of the “I”, of “I am” [...] would have to be displaced toward the prerequisite question of the other: the other, the other me that I am (following) or that is following me’.⁵⁰ Indeed, genetic inheritance may not solely be something one follows but also, and simultaneously, a following of myself. Hetero-affection is found in the futurity of the zygote as past-affection.

We thus seem to end up with two shortcomings (an unkindler but no less correct term would be “failures”) in reading links between Kantian ideas and those of posthumanism; perhaps Kant and the posthuman is a coupling (coupled to talk about coupling) that should not have been. The first of these shortcomings is that, even if the idea of a fixed destiny recedes in front of destination open to change, and to some degree reveals non-teleological thought, does not the idea of destiny going on *ad infinitum* itself become in a way an ontotheological assertion no different from its predecessor? Does not this kind of assertion, one of self-directing evolution (as Dobzhansky words it), firmly belong to humanism? Secondly, the Kantian dichotomy between the *singulorum* and the *universorum* deconstructs: it is not a question of the ‘whole body’ as opposed to a ‘series of individuals’, but of both the “I” and the “we” following each other simultaneously. This is why this paper has adhered to the term “destiny” rather than the perhaps more appealing “destinies”: destiny in this way is already configured as a multiple singular, as (with) multiple individuals within a single line of genetic inheritance. Despite these apparently severe incompatibilities, this paper’s closing remarks seek to make a few final points that might demonstrate how Kant’s essays progress *out of* humanism rather than *from* it.

⁴⁸ Theodosius Dobzhansky, ‘Genetics and the Destiny of Man’, *The Antioch Review* 19:1 (1959): 57, 68.

⁴⁹ *The Animal That Therefore I Am*, 92.

⁵⁰ *The Animal That Therefore I Am*, 95.

In thinking with Kant through reprogramming, the idea of the possibility of the posthuman as the proto-human changes. Previously, it seemed as if the only proto-human, proto-rational position was the edenic state, where one could not be a rational human because there was no progress (consequently and troublingly, one could also say there was no free thought because there was no need of it, and because, for Kant, there cannot be one without the other). You could be Adam or Eve, or you could be human. But the posthuman need not be the proto-human that does not progress; as we have seen, the proto-human can be that which possess the infinite potential of totipotent progress, the de-methylated or reprogrammed zygote. This second version does not contradict Kantian thought as outlined above—it embodies unfixed progress and destination, and understands the *universorum* ‘on the basis of an “I”’—and reveals a reach in Kant’s ideas that is in line with that of posthumanism. Thought of in this way, reprogramming highlights ‘[t]he posthuman subject [as] an amalgam, a collection of heterogeneous components, a material-informational entity whose boundaries [in this case temporal, physical, and subjective] undergo continuous construction and reconstruction’.⁵¹ The methylation process reveals that the retention of all information (eternalizing the present) is very often not the biological priority, hence allowing for Kant’s advocacy of embracing the upwards progression of the *Ausgang*. Therefore, although ‘[t]here is a pervasive feeling that DNA decrees destiny, that the future of humanity is indelibly written in our genes’, it would be ‘totally inappropriate to think of DNA as destiny’.⁵² Katherine Hayles, in fact, takes this materiality of the body into account (a materiality which, as she points out, cannot be separated from consciousness), and, as the process of reprogramming testifies, shows that the biological should not be considered a problem for the emergence of the posthuman. This is precisely because biology itself allows for an *Ausgang* from the traditional concept of destiny and into the idea of configurable destination. Destiny can thus be reconstructed precisely because we are biological, as ‘even a biologically unaltered *Homo sapiens* counts as posthuman’. After all, posthumanism’s ‘defining characteristics involve the construction of subjectivity, not the presence of nonbiological components’.⁵³

Kantian thought has thus quite consistently moved this paper away from ‘the discourse on molecular biology’ which ‘treats information as the essential code the body expresses’ (the “central dogma”), and consequently the wider teleological implications of this. Reprogramming embodies informational transformation, and does not promote ‘the belief that information can circulate unchanged among different material substrates’.⁵⁴

⁵¹ Katherine Hayles, *How We Became Posthuman* (Chicago, IL, and London: Chicago University Press, 1999), 197.

⁵² R. Grant Steen, *DNA and Destiny: Nature and Nurture in Human Behaviour* (Boston, MA: Da Capo Press, 2001), 261, 277.

⁵³ Wolfe, 3-4.

⁵⁴ *ibid.*, 1. In this reading, reprogramming clearly ‘opposes the fantasies of disembodiment and autonomy’. Wolfe, xv.

Instead, it highlights the feedback loop within the human body, which ‘flow[s] not only within the subject but also between the subject and the environment’, similar to the interrelation between DNA and its molecular environs. As Hayles rightly claims, ‘feedback loops [have] been associated with the deconstruction of the liberal humanist subject’ and hence, because of the centering of progress and processes—not necessarily non-biological—of construction, the posthuman emerges as an entity which embodies Kant’s idea of prophetic history of *Ausgang*, where ‘*the human is giving way to a different construction called the posthuman*’.⁵⁵

This is where the inexplicable stubbornness of this paper in pursuing Kant as a proto-posthumanist hopefully becomes clear. Kant’s predictive history, which is situated both within and without experience, enacts a similar gesture that is fully observable in the techno-biological process of gene reproduction. It is ‘prophetic’, and not just predictable, because it is not simply *a future that comes from the past* but also *a future that has no past*—it stems from experience without being essentialized or rooted within it. It is in this mode of Kantian thought that one can glimpse the ongoing futurity of the posthuman, one that is neither an “I” nor a “we”.⁵⁶ In spite of Kant’s belief in the *universorum*, not only does he affirm rationality on the basis of the *singulorum*, as explained above, but he also gives this “I” a role: that is, the political and moral ‘prophet’ at the end of ‘Is the Human Race Continually Improving?’

The posthuman, then, can be envisaged as that prophet who comes from the future while having both a past (he emerges from immaturity, just as he has inherited DNA) and, simultaneously, no past (his prophecies belong to a future that is not determined, that is unfixed; he is the reprogramed zygote, that amalgam of past and non-teleological future). The prophet’s will does not further his own interests, but those of civilization—it is a posthuman will, where ‘there is no a priori way to identify a self-will that can be clearly distinguished from an other-will’.⁵⁷ Posthumanism’s “we” is not one with clear lines of demarcation and is not necessarily all-inclusive; it is an envisioning, as Hayles puts it, of ‘a posthuman collectivity, an “I” transformed into the “we” of autonomous agents operating together to make a self’.⁵⁸ Thus the process of genetic inheritance blurs the line between the individual’s novel and future-oriented individuality and his continuity with external and past others, an I who speaks in the name of a non-metaphysical “we”. At the same time, this highlights the element of embodiment that it is so crucial to foreground (as opposed to other modes of thought, such as the transhumanist single-mindedness of doing away with

⁵⁵ *ibid.*, 2. This does not mean however, as Hayles points out, that posthumanism need be defined as anti-humanist.

⁵⁶ Cf. Wolfe’s assertion that the future can be ‘forecast [...] because “we” are not “we”’. Wolfe, xxxiv.

⁵⁷ Wolfe, 4.

⁵⁸ *ibid.*, 6.

as much biology as we can). An embodiment of the posthuman, then, can be said to be Kant's zygotic prophet, prophesizing itself.

Granted, the gestures by which the posthuman is here imagined have been heavily directed by Enlightenment epistemology, and carry with them troubling concepts such as that of "posthuman will". But perhaps these gestures reveal not an error in thought but, retroactively, the closeness between both conceptual attitudes. Despite the fact that this paper has arrived at a conceptualisation of the posthuman through a genealogy of thought, what ultimately emerges from reading Kant in this way, and from reading the techno-biology of reprogramming on Kantian lines, is that the posthuman may be envisaged as the prophetic: that is, as *progeny without ancestry*.

Cary Wolfe writes that posthumanism's 'roots go back, in one genealogy, at least to the 1960s', at which point he cites that well-known line from Foucault's *The Order of Things*: 'man is an invention of recent date. And one perhaps nearing its end'.⁵⁹ This paper has foregrounded that, in Kant, invention gives way to continual re-invention, one apparent in both his philosophical writings and in a Kantian reading of techno-biological processes. Thus, it is not only credible to state that the philosophical genes that encode posthumanism may go as far back as the late eighteenth century (or even beyond that), but also that reprogramming and (bio-)technologizing Kant's views on mankind and its progress into the ethos of posthumanism is a move inherent to his very conceptualizations.

If destiny is thus taken as a series of progressive, reprogrammable ends which act as a multiple *Ausgang*—as Kant, consistently and throughout his many works, allows us to posit even 'without the aid of experience'—and if it is furthermore understood as advancing not the human subject but the decentering and non-metaphysical "we" which moves beyond the singular and the universal, then posthumanism may appropriate such an idea.⁶⁰ In some particular but extremely impactful aspects, then, Kant and his prophet are proto-posthumanist because they reveal how, both philosophically and techno-biologically, the human reprograms itself into something other than itself, erasing the human and the anthropocentric to methylate itself into what is posthuman, regardless of whether or not the posthuman is subject to a biological system. This is a future-oriented destiny which need not solely be recognized out of the past; indeed, it is subsequently born from rebirth, from re-conception and re-conceptualization away from liberal humanism and into what the enlightenment philosophy of Kant prefigures.

⁵⁹ Wolfe, xii. See Michel Foucault, *The Order of Things: An Archaeology of the Human Sciences* (New York, NY: Pantheon, 1971), 387.

⁶⁰ Immanuel Kant, *Critique of Pure Reason*, trans. by J.M.D. Meiklejohn, (Mineola, NY: Dover Publications, Inc., 2003), p. 354.

List of Works Cited

- Allis, C. David. *Epigenetics*. Cold Spring Harbor, NY: CSHLPRESS, 2007.
- Anders, Günther (Stern). 'The Pathology of Freedom: An Essay on Non-Identification'. Translated by Katherine Wolfe. *Deleuze Studies*, 3:2 (2009): 278-310.
- Arkush, Allan. *Moses Mendelssohn and the Enlightenment*. Albany: State University of New York Press, 1994.
- Chambers Dictionary of Etymology*. Edited by Robert K. Barnhart. Edinburgh: Chambers Horrap Publishers, 2008.
- Crick, Francis. 'Central Dogma of Molecular Biology'. *Nature*, 227 (1970): 561-3.
- . 'Ideas on Protein Synthesis'. October 1956; accessed 15 September, 2016, https://profiles.nlm.nih.gov/SC/B/B/F/T/_/scbbft.pdf.
- Derrida, Jacques. *The Animal That Therefore I Am*. Edited by Marie-Louise Mallet. Translated by David Wills. New York, NY: Fordham University Press, 2008.
- . 'The Ends of Man'. Translated by Edouard Mort-Sir, Wesley C. Piersol, et al.. *Philosophy and Phenomenological Research*, 30:1 (1969): 31-57.
- Dobzhansky, Theodosius. 'Genetics and the Destiny of Man'. *The Antioch Review* 19:1 (1959): 57-68.
- DNA Methylation Society journal; accessed 31 July 2016; http://www.researchgate.net/journal/1559-2308_Epigenetics_official_journal_of_the_DNA_Methylation_Society.
- Flikschuh, Katrin, 'Reason, Right, and Revolution: Kant and Locke'. *Philosophy and Public Affairs*, 36:4 (2008): 375-404.
- Foucault, Michel. '17 March 1976'. Translated by David Macey. In *Society Must Be Defended: Lectures at the Collège de France, 1975-1976*. Edited by Mauro Bertani and Alessandro Fontana. London and New York, NY: Allen Lane, The Penguin Press, 2003. 239-264.
- . *The Order of Things: An Archaeology of the Human Sciences*. New York, NY: Pantheon, 1971.
- . 'Right to Death and Power Over Life'. In *History of Sexuality: Volume 1*. Translated by Robert Hurley. London and New York, NY: Penguin Book, 1998. 135-159.
- . 'What is Enlightenment?'. Translated by Paul Rabinow. In *The Foucault Reader*. Edited by Paul Rabinow. New York, NY: Pantheon Books, 1984. 32-50.

- Hayles, Katherine. *How We Became Posthuman*. Chicago, IL, and London: Chicago University Press, 1999.
- Heijmans, Bastiaan T., et al.. 'Persistent epigenetic differences associated with prenatal exposure to famine in humans', *Proceedings of the National Academy of Sciences* 105:44 (2008): 17046-17049.
- Hochedlinger, Konrad, and Rudolph Jaenisch. 'Nuclear Reprogramming and Pluripotency'. *Nature*, 441 (2006): 1061-1067.
- Kant, Immanuel. 'A Renewed Attempt to Answer the Question: Is the Human Race Continually Improving?'. In Immanuel Kant. *An Answer to the Question: What is Enlightenment?*. Translated by H.B. Nisbet. London and New York, NY: Penguin Books, 2009. 67-86.
- . 'An Answer to the Question: What is Enlightenment?'. In Immanuel Kant. *An Answer to the Question: What is Enlightenment?*. Translated by H.B. Nisbet. London and New York, NY: Penguin Books, 2009. 1-11.
- . 'Beantwortung der Frage: Was ist Aufklärung?'; accessed 31 July 2016, <http://gutenberg.spiegel.de/buch/beantwortung-der-frage-was-ist-aufklarung-3505/1>.
- . 'Conjectures on the Beginning of Human History'. In Immanuel Kant. *An Answer to the Question: What is Enlightenment?*. Translated by H.B. Nisbet. London and New York, NY: Penguin Books, 2009. 87-105.
- . *Critique of Pure Reason*. Translated by J.M.D. Meiklejohn. Mineola, NY: Dover Publications, Inc., 2003.
- . 'Idea for a Universal History from a Cosmopolitan Perspective'. In *Toward Perpetual Peace and Other Writings on Politics, Peace and History*. Edited by Pauline Kleingeld. Translated by David Colclasure. New Haven, CT: Yale University Press, 2006. 3-17.
- . 'Notes'. In Immanuel Kant. *An Answer to the Question: What is Enlightenment?*. Translated by H.B. Nisbet. London and New York, NY: Penguin Books, 2009. 106-121.
- . 'What is Called Orientation in Thinking?'. Translated by H.B. Nisbet. In *Kant's Political Writings*. Edited by Hans Reiss. Cambridge: Cambridge University Press, 1991. 249.
- Kuehn, Manfred. 'Introduction'. In Immanuel Kant, *Anthropology from a Pragmatic Point of View*. Translated and edited by Robert B. Lauden. Cambridge: Cambridge University Press, 2013. vii-xxix.
- Lambier, Joshua D.. 'A Capacity to Resist: Kant's Aesthetics and the Right of Revolution'. *European Romantic Review*, 27:3 (2016): 393-403.
- Lovejoy, Arthur O.. 'Kant and Evolution I'. *The Popular Science Monthly*, 77 (1910): 538-553.
- . 'Kant and Evolution II'. *The Popular Science Monthly*, 78 (1911): 38-51.

- Malabou, Catherine. *Before Tomorrow: Epigenesis and Rationality*. Cambridge: Polity Press, 2016.
- Mendelssohn, Moses. 'On the Question: What is Enlightenment?'. Translated by James Schmidt. In *What is Enlightenment?: Eighteenth Century Answers and Twentieth Century Questions*. Edited by James Schmidt. Berkeley, CA: University of California Press, 1996. 237-249.
- . 'Über die Frage: Was heißt aufklären?'; accessed 31 July 2016, http://www.deutschestextarchiv.de/book/view/mendelssohn_aufklaeren_1784?p=1.
- Müller, Christopher. 'We are born obsolete: Günther Anders's (Post)humanism'. In *Critical Posthumanism*; accessed 31 July, 2016, http://criticalposthumanism.net/?page_id=433.
- Orwell, George. *Animal Farm*. Harlow: Pearson Education Limited, 2006.
- Sartre, Jean-Paul. *Existentialism is a Humanism*. London: Methuen and Company, 1960.
- Schmidt, James. 'Notes' to Mendelssohn, Moses. 'On the Question: What is Enlightenment?'. Translated by James Schmidt. In *What is Enlightenment?: Eighteenth Century Answers and Twentieth Century Questions*. Edited by James Schmidt. Berkeley, CA: University of California Press, 1996. 56-57.
- Shelley, Mary. *Frankenstein, or The Modern Prometheus*. Hertfordshire: Wordsworth Classics, 1999.
- Steen, R. Grant. *DNA and Destiny: Nature and Nurture in Human Behaviour*. Boston, MA: Da Capo Press, 2001.
- Strong, Tracy B.. *Politics Without Vision – Thinking Without a Banister in the Twentieth Century*. Chicago: Chicago University Press, 2012.
- Szyf, Moshe. 'Nongenetic inheritance and transgenerational epigenetics', *Trends in Molecular Medicine*, 21:2 (2015): 134-144.
- Wolfe, Cary. *What is Posthumanism?*. Minneapolis, MN, and London: University of Minnesota Press, 2009.