

# **THE GRAND NARRATIVE 2.0**

## **NARRATIVIZING TECHNOLOGICAL PROGRESS**

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Research Master Thesis

Literary Studies: Literature in the Modern Age

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## Introduction

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Technology, and more specifically, technological advancement, I believe, occupies a peculiar position in contemporary culture that is immediately entwined with narratives. I can think of no other 'field' that has resorted and continues to resort to a narrative of progression so intensively in order to validate technological advancement, whereas, it is simultaneously one of the first 'fields' in which the very positivity, that was considered guaranteed by the *innate value of the notion of progress*—one of enlightenment's many problematic legacies—falters. The rhetoric that equates technological advancement to (human, cultural, societal, etc.) progression predominantly flounders in the wake of how some recently realized technologies were 'misused' during times of war—a trend initiated by WWI that strongly carried over to WWII and the post-WWII era. In light of these and other historical developments, the equalization of technological advancement and progression, along with the supposedly unquestionable inherent value of progress, were fiercely challenged. Both wars perversely made evident how 'progression' was no neutral concept, but rather entails a highly political perspective of evaluation. With the politicization of the notion of progression, the universally beneficent promise of technological advancement, fundamentally tied to the inherent value of progression, was equally challenged and grasped as a phenomenon temporally embedded, or, as not existing beyond politically-informed claims of validation.<sup>1</sup>

These developments aptly demonstrate the intimate relationship that exists between *technological advancement and narrative*, a relationship I will explore explicitly in this thesis. More specifically, in my thesis I will explore, or test, the contention, most notably put forward by Keith Ansell Pearson (1997a, 1997b) and Rosi Braidotti (2002, 2006), that today technological advancement is prominently embedded in a contemporary 'grand narrative', or 'metanarrative'. In testing this assertion, I will depart from the presupposition that indeed, we can discern the return of the grand narrative within a range of discourses. Rather than asking if we witness a return of the metanarrative, a question that can be answered either affirmatively or negatively, I claim that if we presuppose the return of the grand narrative, this enables more critically creative readings of the works I plan to discuss in my thesis. Instead of reading for a yes or a no,

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<sup>1</sup> In order to avoid confusion, when I refer to 'narratives' throughout this study, I generally seek to address the way in which narratives are employed as tools for the legitimation of technological advancement. Since this function of legitimation is in no way inherent to the narrative as sequential structure of presentation, this instantiates a differentiation between the use of narrative as structure of legitimation and the formal characteristics of the narrative structure itself. Again, the narratives I will come to discuss in my thesis refer to the way in which stories are used to account for technological advancement.

which would result in rather narrow interpretations, the question of how this grand narrative is constructed should facilitate a more open-ended analysis that is more attentive to the richness and ambiguities of these works. The grand narrative, briefly, is a narrative structure that seeks to provide a universal explanation for all historical knowledge and experience. It construes a universal history that sequentially progresses towards a predetermined goal, in relation to which all future knowledge and experience is legitimated. The French philosopher Jean-François Lyotard identified the structure of the grand narrative as typical of modernity in his famous publication: *The Postmodern Condition: A Report on Knowledge* (1984 [1979]). Lyotard goes on to claim that what determines our ‘postmodern condition’ is that this metanarrative “has lost its credibility” in postmodernity (1984 [1979]: 37). Because the modern, as well as the postmodern for that matter, do not solely refer to historical epochs, but also designate two disparate forms of critical engagement, the demise of the grand narrative cannot solely be attributed to historical developments, but also attests to the critical potential Lyotard endows the postmodern with.

The collapse of the metanarrative is not to be lamented. Rather, the postmodern ‘frees’ us from the grand claims of this particular narrative of legitimation that seeks to incorporate all of humanity “into a single plot” (Lee Klein 283). Ever since Lyotard had the somewhat unfortunate idea of “simplifying”, or, if you will, reducing, the postmodern to “incredulity toward metanarratives” (1984 [1979]: xxiv)—a definition of the postmodern, as Ansell Pearson has rightly pointed out, that “proved highly influential” (1997a: 3)—critical theory has treated the grand narrative with critical suspicion, if not derision. Needless to say, its noted return “within a variety of contemporary discourses” (Ansell Pearson 1997a: 4), is no cause for celebration. Although I am not unsympathetic towards the idea of engaging skeptically with the structure of the grand narrative, I feel this exercise is too often accompanied by an implicit critical superiority that considers the demise of the metanarrative within a similarly problematic rhetoric of progression—renouncing its contemporary resurgence as *critical regression*. I am at pains to refrain from employing a rhetoric of progression/regression in this thesis, since, as Reinhart Koselleck’s historically attentive definition of ‘progress’ demonstrates, the very idea of progress invokes the totalitarian claims of the modern grand narrative.<sup>2</sup> Moreover, I propose that this attitude of critical superiority, which *a priori* condemns how technological

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<sup>2</sup> “Progress (*der Fortschritt*), a term first put forth by Kant, was now a word that neatly and deftly brought the manifold of scientific, technological, and industrial meanings of progress, and finally also those meanings involving social morality and even the totality of history, under a common concept. “Progress itself” is a *collective singular*. It ties together numerous experiences into a single term. It is one of those collective singulars (they abruptly increased toward the end of the eighteenth century) that condense ever more complex experiences on a higher level of abstraction” (229, emphasis in original).

advancement is legitimated through the grand narrative, runs the risk of paralyzing the attempt to critically engage with this grand narrative prematurely. After all, why dwell on the critically suspect metanarrative, when the critical project of postmodernity has furnished us with far more productive ways of conceiving of the relation between technological development and narrative? Ansell Pearson at one point exemplifies this tendency when he argues that: “An apocalyptic declaration of the collapse of the world through the dominance of technology and the erasure of mankind doesn’t say a great deal since it belongs to a language of eschatology wholly out of tune with the mood generated by the plural event of nihilism” (1997a: 160). I strongly oppose the idea that disharmony legitimates the absence of critical reflection. In what way does it follow that narratives that prophesize a technologically-induced apocalypse in “a language of eschatology”, *do not “say a great deal”* on account of its supposed incompatibility with a contemporary critical awareness? Since when do being “out of tune” and not saying “a great deal” mean the same thing? In many ways my thesis seeks to provide a ‘complexification’ of incompatibility and a negotiation of disharmony in mapping the contemporary grand narrative on technology, that, as a narrative structure of legitimation, was proclaimed to have lost its credibility. The primary two questions that drive my inquiry is: *how is this contemporary grand narrative on technology constructed?* and: *can we identify alternatives to this grand narrative?*

I intend to answer these questions, along with a set of sub-questions, by providing readings of several works that conceive of humanity’s imminent future through its projected co-evolution with technology. Conceiving of a grand narrative of technology, and how its claims about technological advancement help facilitate a projected posthuman future—I will address the term ‘posthuman’ elaborately in chapter one—I will predominantly take my cue from the genre of science fiction. Unlike any other genre, science fiction “creatively (re)imagines our lives as contemporary cyborgs shaped by the projects of science and technology” (Hollinger 134). I believe that the genre of science fiction cannot be overlooked—especially when its absence from scholarly attention is articulated through the critically suspect and morally informed opposition of high and low/popular culture—in contemporary criticism. Rather, science fiction should be productively repositioned as a genre whose significance today can hardly be overestimated, since for readers of science fiction, “[the] terms of critical currency for the late twentieth and early twenty-first centuries—biopower, biopolitics, posthumanism—and their objects of enquiry—embodiment, subjectivity, the human/animal boundary—have a familiar resonance” (Vint 444). Although my readings will focus explicitly on science fiction texts and films, my inquiry into the contemporary grand narrative of technology will not be restricted to this genre,

since one of the main characteristics of a grand narrative, I believe, is that it shapes popular as well as scientific discourse: “a discourse celebrating the union of humans and electronic technology is currently circulating with equal success among the scientific community as in popular culture” (Braidotti 2002: 222). Hence, I will also engage with popular science and philosophy.

I will advance readings of texts that focus explicitly on how technological advancement and our technologically-constituted future is made into a narrative of legitimation that are highly attentive to the use of metaphors, dualisms and models of progression in order to determine what conceptions of the human and the machine implicitly inform these narratives. To the extent that my readings suggest a skepticism towards the narrative structures of the grand narrative, this project could be referred to as postmodern criticism—following Lyotard’s definition of the postmodern. Rather than a postmodern project, however, I myself prefer to regard my thesis as contributing to, and intervening in, *posthuman studies*, a field that has developed over the last couple of years—spearheaded by the work of, among others, Donna J. Haraway (1985) and N. Katherine Hayles (1999). Broadly defined as a systematic “examination of the impact of [...] technologies—digital, cybernetic and biomedical—upon our every understanding of what it means to be human” (Graham 1), I would like to demonstrate, from the perspective of literary studies, how our understanding of technological advancement as well as our understanding of ‘humanness’ always ascends ‘narratively’. As such, my thesis rather finds itself embedded in the critical tradition established by Braidotti, Haraway, Hayles and Elaine L. Graham who untiringly point out that our posthuman future is persistently negotiated within the peculiar, substantially ‘narrativized’, marriage of popular culture and Western technoscience (Graham 1). Recognizing our conception of identity and our current, as well as future, engagements with technology as fundamentally lodged in narratives, literary criticism, I believe, offers a more than adequate critical discourse to take into account the implications of the intimate relationship between technological advancement and narrative. This thesis is, moreover, strongly indebted to the work of Gilles Deleuze and Félix Guattari, whose philosophy provides me with a critical vocabulary that surfaces throughout my thesis, but most explicitly in chapter four, in which I explore narratives of humanity’s posthuman future that resist the lure of the grand narrative.

My thesis consists of four chapters. In the first chapter, I will introduce Lyotard’s notion of the grand narrative and in what way Lyotard conceived the grand narrative to be fundamentally at odds with postmodernity. This is worth considering, especially since Ansell Pearson considers this “new fiction” to be typical of “so-called ‘posthuman’ *postmodernity*”

(1997a: 33, emphasis added). What, for Lyotard, constitutes the grand narrative as an essentially modern notion, and what, in turn, enables Ansell Pearson to define this contemporary metanarrative as 'postmodern'? After considering Lyotard's conception of the metanarrative as a modern construction and its collapse as a postmodern event, I will turn towards those critics who claim that we are now seeing the rehabilitation of the grand narrative as it relates to technology and its projections of our posthuman, technologically-constituted future. The chapters two to four present readings of primary texts, fictional and non-fictional, that are ordered according to respective evolutionary models these narratives advance as governing technological advancement and future human-machine interactions. In chapter two I will map those narratives that prophesize the future conflict between man and machine by injecting technology into the biological dynamics of interspecies competition. Chapter three provides a reading of narratives, equally popular, that herald a future scenario in which humanity will universally evolve towards a cyborg entity—a scenario predicated upon the supposedly transhistorical development according to which humanity will grow more inmate with its technology, advocating a human-machine merger. And in chapter four I will answer the call of several critics that argue for more subtle narratives of humanity's co-evolution with technology that refrain from the all-encapsulating, directional tendencies of the grand narrative. I will do so by presenting narratives that conceive of a human-inhuman interaction on the basis of the evolutionary principle of symbiosis in a reading that is equally attentive to the effects of metaphors and binary oppositions. Eventually I hope to be able to address the construction and the implications of this contemporary grand narrative of technology, while also taking into account narratives that succeed in escaping the 'grand grasp' of this rehabilitated narrative structure of legitimation.



## Chapter 1

### The Grand Narrative and its Return

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#### 1.1 The Grand Narrative

In *The Postmodern Condition: A Report on Knowledge*, Lyotard differentiates between the modern and postmodern way of legitimating the production of knowledge through the use of narratives: “Science has always been in conflict with narratives. [...] [T]o the extent that science does not restrict itself to stating useful regularities and seeks the truth, it is obliged to legitimate the rules of its own game” (1984 [1979]: xxiii). The modern production of knowledge seeks to legitimate “itself with reference to a metadiscourse [...] making an explicit appeal to some grand narrative” (1984 [1979]: xxiii). Lyotard identifies two major, modern, narratives of legitimation: “One is more political, the other more philosophical” (1984 [1979]: 31). The first legitimates itself through the promise, as Fredric Jameson puts it in the foreword to *The Postmodern Condition*, “of the liberation of humanity” (1984 [1979]: ix). This *grand narrative of emancipation* “presents knowledge as being valuable because it is the basis of human freedom” (Malpas 26). Over the past few decades, Simon Malpas argues, there have been several manifestations of this grand narrative, among the most prominent the enlightenment and the Marxist ‘versions’:

Its enlightenment version focuses on the idea of the freedom of people from religious superstitions that curtail their lives and place power in the hands of the priests. The Marxist version, on the other hand, focuses on the freedom of the workers from exploitation by their masters and the development of their ability to control their own lives. The aim of this type of grand narrative, in whatever form it occurs, is thus the emancipation of an enlightened humanity from dogma, mysticism, exploitation and suffering. (27)

The second major grand narrative of legitimation that Lyotard identifies, the speculative grand narrative, based on “the Germanic and Hegelian tradition” (1984 [1979]: ix), posits that humanity shall progress by steadily increasing its knowledge. Knowledge is incorporated into a metanarrative conform Hegel’s notion of a “universal “history” of spirit” (1984 [1979]: 34): “True knowledge, in this perspective, is always indirect knowledge; it is composed of reported statements that are incorporated into the metanarrative of a subject that guarantees their legitimacy” (1984 [1979]: 35). In both grand narratives knowledge is not an end in itself; the production of knowledge is directed towards, respectively, the liberation of men from societal or dogmatic constraints or “the realization of the Idea” (1984 [1979]: 50). Hence, the grounds on

which knowledge is legitimated within these narratives lie outside of knowledge itself: knowledge is not so much valued *immanently*—or legitimated in itself—but rather, its legitimacy and validity reside in its *potential effects of liberation and progression*. Both the notion of liberation as well as progression interestingly resurface as mechanisms of legitimation within the revived grand narrative of technological advancement recognized by Ansell Pearson and Braidotti.

Typical of any grand narrative is how it seeks to inscribe a plurality of events, different groups and perspectives into a single, universal, story with an evident, predetermined, *telos*. Next to the enlightenment and Marxist grand narratives referred to by Malpas, Lyotard also considers “the dialectics of Spirit, the hermeneutics of meaning, the emancipation of the rational or working subject, or the creation of wealth” (1984 [1979]: xxiii) to be manifestations of metanarratives. Kerwin Lee Klein adds “Judeo-Christian theology of history [...] and evolutionary biology” as grand narratives since they incorporate different groups “into a single plot” (283). Whereas the modern way of legitimating knowledge consisted in resorting to a grand narrative that weaves heterogeneous groups and voices “into a single plot”:

In contemporary society and culture—post-industrial society, postmodern culture—[the] grand narrative has lost its credibility, regardless of what mode of unification it uses, regardless of whether it is a speculative narrative or a narrative of emancipation. (1984 [1979]: 37)

Through proclaiming the grand narrative incompatible with the postmodern, the modern and the postmodern emerge as fundamentally disparate discourses and, through the temporal prefix ‘post-’ of postmodern, epochs. Lee Klein reiterates this rigid opposition between the modern and the postmodern when he argues that due to the *innate diversity* that characterizes the twentieth century, the modern grand narrative proves unable to weave the sheer heterogeneity that defines the postmodern into a coherent, all-encompassing, plot—representing the collapse of the grand narratives as an essentially postmodern event. “Pressed by the twentieth century’s diversity,” Lee Klein asserts, the grand narratives of modernity, “fractured beyond repair” (283). The argument Lee Klein presents, accounting for “the contemporary decline of narratives of legitimation” (Lyotard 1984 [1979]: 65) by ascribing an innate complexity and diversity to the postmodern as epoch that cannot be adequately addressed through the modern metanarrative, is questionable at best. Building on the notion that the grand narrative is typical of modernity, the modern, as epoch, is implied to be noncomplex. For, if we assume that indeed the diversity inherent to postmodernity is incompatible with the structure of the metanarrative, modernity, in opposition to postmodernity, is denied a similar degree of complexity. Retrospectively, this

argument not only posits the epoch of modernity as noncomplex, it also, on account of this absence of complexity, claims the grand narrative to be a valid narrative structure to approach modernity. I do not concur with the rather naïve assertion that claims a universal tendency of complexification and diversification has reshaped external reality to the extent we can no longer represent that reality through the grand narrative. Instead of assuming that external reality naturally corresponds to a certain narrative structure, I believe that the notion that we project our need for narratives onto the way in which external reality would ‘call for’ a particular narrative is more productive.

Lyotard’s highly influential definition of the postmodern, in spite of the fact he was “Simplifying to the extreme”, is articulated in its disposition towards those grand narratives “which have served to provide human existence with teleological meaning and significance” (Ansell Pearson 1997a: 3):

I define *postmodern* as incredulity toward metanarratives. [...] To the obsolescence of the metanarrative apparatus of legitimation corresponds, most notably, the crisis of metaphysical philosophy and of the university institution which in the past relied on it. The narrative function is losing its functors, its great hero, its great dangers, its great voyages, its great goal. (1984 [1979]: xxiv, emphasis in original)

Thus Lyotard defines the postmodern, as a discourse and epoch, through the skepticism it displays in the face of grand, totalizing, narratives of legitimation. As these narratives previously furnished people with a teleological goal and their lives with meaning, as Ansell Pearson claims, one might suspect that the postmodern collapse of these narratives also gives way to severe existential and epistemological crises that “lament the loss of meaning” (Ansell Pearson 1997a: 3). Although the demise of the grand narrative severely impacts how we construct and legitimate our lives and knowledge production, it shall, according to Lyotard, *not lead to the re-adoption of a new grand narrative*: “Most people have lost the nostalgia for the lost narrative” (1984 [1979]: 41). The postmodern does not grieve the fall of the grand narratives and the ‘securities’ it offered: “The ‘stories’ the West has told of itself to itself and to ‘others’—such as that of emancipation through rational enlightenment and progress—turn out to have been a great conceit and deceit. Now that myth has come to waste and ruin, [...] so Lyotard wanted us to believe, the period of mourning is over” (Ansell Pearson 1997a: 3). In discrediting the idea that the postmodern mourns the loss of the grand narrative, Lyotard, again, constructs the modern and the postmodern as disparate historical epochs, each facing its own distinct challenges, but fundamentally interrelated nevertheless. Whereas Lyotard claims a radical discontinuity between the modern and the postmodern through “the obsolescence of the metanarrative” in

postmodernity, Jameson is more cautious towards the grand narrative's supposed demise. According to Jameson, contemporary science is characterized not so much by a skepticism towards grand narratives specifically, but towards "the narrative function in general" (1984 [1979]: xi) of which the distrust directed at metanarratives is just one manifestation, albeit a prominent one. Keen on resolving the paradox between this "global or totalizing "crisis" in the narrative function in general" and Lyotard's faith in the "small narrative units" that are not out to violently co-opt different voices and groups into one overarching story,<sup>3</sup> Jameson claims that we cannot posit "the disappearance of the great master-narratives" (1984 [1979]: xii). According to Jameson, Lyotard confuses master narratives' "passage underground" with their *obsolescence*, failing to recognize the "persistence of buried master-narratives" (1984 [1979]: xii). Jameson's more nuanced position, that refuses to endorse Lyotard's claim that the grand narrative has truly disappeared, already suggests the possibility of the return, or rather, resurfacing of the grand narrative.

### 1.2 The Grand Narrative Revisited

Ansell Pearson, who most notably recognized the return of the grand narrative in relation to technology, seems to be in concurrence with Jameson when he states that: "Lyotard's declaration of the end of grand narratives has proved premature since today we see their return taking place within a variety of contemporary discourses" (1997a: 3-4). Although the rehabilitation of the grand narrative is not restricted to one discourse or discipline of science, Ansell Pearson most prominently focuses on the contemporary grand narrative that is constructed around technology and how its inevitable progress is linked to the, again teleologically articulated, fate of humanity. In such a grand narrative:

we are offered a plethora of apocalyptic scenarios concerning an alleged phase-space transition to a new, 'higher' level of evolution based on machine intelligence, resulting in a genetic take-over of carbon life by soft machines (robots and computers). [...] A new mythology of the machine is emerging and finds expression in current claims that technology is simply the pursuit of life by means other than life. (1997b: 202)

This new "mythology" of the machine clearly resembles the modern narratives Lyotard proclaimed to be irreconcilable with the complexities of postmodernity: it departs from the

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<sup>3</sup> As Lee Klein indicates, for Lyotard, the postmodern does not only represent "the liberating sophistication of critical analysis" beyond notions of "myth, fairy-tale, teleology and metaphysics" (280) he associated with (modern) narratives, but also entails, in its refusal to uncritically incorporate heterogeneous groups and perspectives into a homogenizing narrative, a political and ethical incentive: "To denounce metanarratives and applaud the proliferation of local narratives is to resist totalitarian universal history and political oppression" (284).

presupposition that technology indisputably progresses in a certain direction and it accounts for this progress in terms that echo the discredited grand narrative of emancipation: “[it] celebrates technology as the manifestation of *human liberation* from bondage to nature, finitude, and the vagaries of disease, decay and death” (Graham 9, emphasis added). It is interesting that Ansell Pearson conceives of these scenarios as spanning a “mythology”, as Lyotard “[associates] narrative with myth” (Lee Klein 280). Myth, here, does not necessarily refer to a structuralist definition, pertaining to the presence of certain narrative elements, but rather signifies one of the ways in which we tend to resort to narratives in order to “impose continuity and closure on the gaps and silences of reality” (Lee Klein 280). In a way similar to the modern grand narratives of emancipation, this particular contemporary grand narrative of the machine Ansell Pearson draws attention to, attempts to legitimate technological progress in referring to its potentially liberating effects.

Another characteristic of this “new fiction”, and this in turn comes to constitute another parallel with the modern grand narrative, is how it employs a *discourse of evolution* in order to conceptualize technological progression. First of all, the plurality of “apocalyptic scenarios” that are presented to us as this newfound grand narrative attempts to conceive of the potential, future, progression of technology, is founded upon the idea that the dynamics governing biological evolution can be used to account for this progression. Secondly, and simultaneously, this grand narrative of the machine contends “that with the emergence of biotechnological vitalism, the rise of artificial life-forms and intelligences, and developments in genetic engineering, we are now moving into a historical future in which life will exist ‘beyond’ natural selection” (Ansell Pearson 1997a: 33-34). In inscribing the co-evolution of humanity and technology with a predetermined goal, or end, either by positing the scenario in which a race of cybernetic machines will terminate humanity’s (military, intellectual, etc.) supremacy or by conceiving of a future in which humanity will merge with its technology, such narratives—and this is the parallel with the modern grand narratives I hinted at above—(re-)construct a teleological future for humanity. I concur with Ansell Pearson, Braidotti, Deleuze and Guattari and others who take considerable issue with the act of appropriating evolution with a *telos* and will comment on this more extensively later on.

Returning to Lyotard’s text we notice that, despite the fact that he acknowledges that when “we go searching for causes [for the decline of grand narratives] we are bound to be disappointed” (1984 [1979]: 38), Lyotard nevertheless relates the decline of the grand narrative to technological advancements: “The decline of narrative can be seen as an effect of the blossoming of techniques and technologies since the Second World War” (1984 [1979]: 37). This

account of the “decline of narrative” creates an interesting tension within the new grand narrative of the machine that weaves the “blossoming of techniques and technologies” and the incredible speed with which advancements are made, into a single plot similar to the modern grand narratives as it posits a technologically-constituted, universal and teleological, future *towards posthumanity*. What has enabled the reconstruction of a grand narrative of technological advancement when Lyotard grasped a similar, historical progression of technology to commence the fall of the very notion of the grand narrative? Before advancing into our assessment of this new grand narrative of the machine as it emerges within various discourses, we first need to engage with a question of terminology.

### 1.3 Questions of Ontology and Terminology: Redefining Humanity

In the various discourses, ranging from that of popular culture to philosophy and science, different terms are employed in order to account for the transformations of the human at the hands of pervasive current and future technologies. Although Graham recognizes that the making and use of tools has characterized humanity throughout its history, she nevertheless conceives of the twenty-first century as an especially challenging epoch concerning humanity’s ties to technology and to what extent they (have come and continue to) co-determine one another.

Whereas it may once have been appropriate to think of tools such as the knife, the hammer and the water-pot as simple instruments of extension and containment, yet remaining separate from their users, in the highly technologized societies of the twenty-first century [technologies] are not so much an extension or appendage to the human body, but are *incorporated*, assimilated into its very structures. (4, emphasis in original)

Graham grasps the contemporary incorporation of technologies into the “very structures” of humanity, to constitute a fundamental discontinuity between the twenty-first century and the previous centuries in which humanity has employed, *but not structurally co-opted its technologies*. Consequently, in the twenty-first century “the very boundaries between the human and the machinic [are] redrawn” (4) and current and future technologies force the contemporary critic not only to try to “[come] to terms with the economic and cultural impact of new technologies, but”, perhaps more importantly, “of engaging with their capacity to stir up questions of *ontology*” (5, emphasis in original). Terms like the ‘posthuman’ (Braidotti, Hayles), the ‘post/human’ (Graham), the ‘transhuman’ (Ansell Pearson), the ‘inhuman’ (Deleuze and Guattari, Lyotard) and the ‘nonhuman’ (Deleuze and Guattari), attest to this potential. These terms represent new theoretical categories of analysis, opening up an innovative vocabulary

conform the capability of “new technologies [...] to stir up questions of *ontology*”. Before proceeding with the analysis of “the ‘new’ master narratives” (Braidotti 2006: 4), I feel the need to discern these various terms from one another while also determining which terms I will myself employ throughout this thesis and to explicate what I grasp these terms to mean.

One of the most commonly used terms, adopted in popular culture as well as in philosophy and the scientific community, is that of the ‘posthuman’. Like any of the terms listed above, however, it is not without its problems. The issues with the ‘posthuman’ are predominantly directed at its temporal prefix ‘post-’ as it insinuates a radical departure from the human that for many critics (e.g. Badmington 2003, Braidotti 2002, 2006 and Graham 2002) is informed by a misplaced faith in the transformative and ‘liberating’ powers of technology. A seminal definition of the posthuman is put forth by Hayles in *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature and Informatics* (1999). Hayles conceives of the “posthuman view” as being characterized by the following four assumptions: 1) it “privileges informational pattern over material instantiation”, reducing “embodiment in a biological substrate [to] an accident of history rather than an inevitability of life”, 2) it “considers consciousness [...] as an epiphenomenon, as an evolutionary upstart trying to claim that it is the whole show when in actuality it is only a minor sideshow”, 3) it “thinks of the body as the original prosthesis we all learn to manipulate” and 4) “the posthuman view configures [the] human being so that it can be seamlessly articulated with intelligent machines” (2-3). “In the posthuman”, Hayles concludes, “there are no essential differences or absolute demarcations between bodily existence and computer simulation, cybernetic mechanism and biological organism, robot teleology and human goals” (3). Although these claims are undeniably informed by contemporary technological advancement, rather than a truly historical period, Hayles’ ‘posthuman’ more accurately designates a particular conception of what it means to be human. The ‘post-’ of ‘posthumanity’, for Hayles, refers to the future inability, proclaimed by this perspective, of discerning between human and machine as disparate modes of existence. The posthuman promise of ontological indiscernibility—rather than epistemological indiscernibility, “there *are* no essential differences” (emphasis added)—however, also repositions it historically, as it partakes in the contemporary tendency to challenge traditional ontological boundaries. Furthermore, the posthuman view Hayles identifies, with its four assumptions, advances a significantly dematerialized conception of the human. Embodiment is considered as contingent to existence, consciousness is thought of as defining human existence and, building on these assumptions, our current body automatically ascends as manipulable. This perspective on human existence opens the door to the promise of (technologically-facilitated) transcendence.

Later on, I will elaborately address the way in which our definition of human existence and the promise of transcendence are intricately entwined.

Due to the often thinly veiled technophilia that seems to inhabit the ‘post-’ of posthumanism, many critics opt to discern between ‘popular’ and ‘critical’ posthumanism (e.g. Thacker 2003 and Seaman 2007). The former constitutes a thread of posthumanism that generally embraces technology and its potential to substantially reconfigure the human as it merges with the machine, often lodging this (future) possibility within a narrative of emancipation. The latter thread is more critical of the potential ascribed to technology by the “technophilic accounts” of popular posthumanism and “includes key texts by contemporary cultural theorists bringing together the implications of postmodern theories of the subject and the politics of new technologies” (Thacker 73). Graham, keen on sidestepping the technophilic connotations of the term ‘posthuman’, coins an alternative phrase: the ‘post/human’. In doing so, she tries to refrain from implying

the inevitability of a successor species and of there being any consensus surrounding the effects of technologies on the future of humanity. The post/human is that which both confounds but also holds up to scrutiny the terms on which the quintessentially human will be conceived. (11)

Graham’s project consists in *denying the posthuman as an evolutionary inevitability* and recasting the post/human as “*a highly contested social space, traversed by capital flows and hence power relations*” (Braidotti 2006: 50, emphasis added). Another term that often ascends within discourses that explore humanity’s interconnectedness with its technology along a time scale of progression, and that explicitly relates to the posthuman as the “successor species” to the organic human, is that of the ‘transhuman’.

The ‘trans-’ of the transhuman ensures its relation to the posthuman in that “[the] term ‘transhuman’ is a conflation of transitional human, or one augmented and modified *on the way to being posthuman*, the fully technologized successor species to organic *Homo sapiens*” (Graham 8-9, first emphasis added). Although the transhuman can be conceived of as an entity that exemplifies the dissolution of ontological categories typically associated with the posthuman (see Graham and Hayles), it predominantly signifies a transitory phase *towards the posthuman*. The prospect of posthumanity recasts the transhuman—as entity as well as a historical period—as prefiguring the posthuman. In promising the transformation of the human into the posthuman, the transhuman is construed as a strongly directional becoming-posthuman. In extending Graham’s critique of the term posthuman to the transhuman, one might argue that it



conjectures the same evolutionary inevitability of the eventual ascendance of the posthuman through the currently 'transitional' state of humanity.

In opposition to this inexorable coming of the posthuman heralded by transhumanism, Ansell Pearson recasts the transhuman as not being “about the transcendence of the human being, but concerns its non-teleological becoming in an immanent process of ‘anthropological deregulation’” (1997a: 163). Indebted to Deleuze and Guattari’s notion of becoming that is fundamentally non-directional, radically immanent and impossible to subject to that which it desires to become, as it does not desire to become ‘anything’ (see Deleuze and Guattari 2010 [1980]: 256-341), Ansell Pearson denies that the “transhuman condition” involves a momentary state that inevitably opens on to the posthuman: the becoming of the transhuman is “non-teleological”. On account of these disparate perspectives on the transhuman it seems that we might be able to make a similar distinction as the one made within posthuman theorizing: between a transhumanism that posits the predestined succession of the human by the posthuman—realized in passing through the transhuman—that Graham sought to counter with the ‘post/human’, and a transhumanism that refuses this inevitability and renegotiates the becoming of the transhuman as non-directional. I shall, however, not define these two perspectives on transhumanism as referring to a ‘popular’ and ‘critical’ conception of this contemporary condition. Although I recognize the viability of differentiating between perspectives on posthumanism, or on transhumanism for that matter, I do not support labeling these outlooks as either critical or popular, since this would mean to prematurely deny the popular, science fictional, narratives on the transhuman condition critical potential, while it, just as rashly, would grant the non-popular take on the transhuman a superior position of critical awareness utterly devoid of technophilic tendencies.

According to Taieb Belghazi, Lyotard uses the 'inhuman' in two different ways:

On the one hand, it is a feature of the progress taking place in highly developed societies. It is a process of complexification that seeks no finality, has no point of origin and raises the question of thinking after the demise of 'mankind'. [The] second 'inhuman' [...] is bound up with the heterogeneous and is intended to disrupt any attempt at totalization. (172)

In the first sense, the inhuman is a tendency typical of “highly developed societies” that introduces the question of the “demise of ‘mankind’”. To some extent, as the ‘inhuman’ raises the question of the end of humanity, one might be able to relate this to a posthuman future, but in contradistinction to the posthuman, the inhuman of Lyotard is no entity, but rather a *force* that comes about in developed societies and disrupts “attempt[s] at totalization”. The notion of the

inhuman as a force also informs Ansell Pearson's definition of technology "as something that is tremendously inhuman" (1997a: 153). In a similar way, Ansell Pearson conceives of nature as "an inhuman force" (1997a: 155) and claims that the "future inhumanity [is] beyond 'human' influence" (1997a: 174). The inhuman, and becoming-inhuman, also briefly features in Deleuze and Guattari's key work: *A Thousand Plateaus* (2010 [1980]) in which it designates a multiplicity of forces and intensities, whose becoming-with shall dislodge us from our anthropocentric reveries (2010 [1980]: 36-41). Drawing from the work of Ansell Pearson, Deleuze and Guattari and Lyotard, the inhuman should be understood not as an entity, but as a force that "*shows no particular concern for man*" (Ansell Pearson 1997b: 186, emphasis added). Consequently, the inhuman future might allow for a more radical non- or anti-anthropological future than the posthuman future that, claiming humanity's succession, still univocally centers its future around some, albeit (technologically) altered, notion of humanity, according to which "the posthuman has become the only possible continuation of the human" (Johns 397). How should we differentiate, if we should at all, Deleuze and Guattari's use of the 'nonhuman' in, most notably, *Anti-Oedipus* (2009 [1972]) and *What is Philosophy?* (2009 [1991]), from their 'inhuman' of *A Thousand Plateaus*?

It seems that the 'nonhuman' for Deleuze and Guattari signifies the forces and desires located *within* man, but whose becomings-with these forces shall propel him beyond himself and onto the nonhuman: "There are also nonhuman Becomings of human beings that overspill the anthropomorphic strata in all directions" (2010 [1980]: 554). Or, as Mark Seem puts it in the introduction to *Anti-Oedipus*:

The experience [...] is no longer that of man, but of what is nonhuman in man, his desires and his forces: a politics of desire directed against all that is egoic—and heroic—in man. [Deleuze and Guattari] urge mankind to strip itself of *all* anthropomorphic and anthropological armoring, all myth and tragedy, and all existentialism, in order to perceive what is nonhuman in man, his will and his forces, his transformations and mutations. (2009 [1972]: xxi-xxii, emphasis in original)

Like the inhuman, the nonhuman is not so much an entity, but rather a trajectory whose non-directional course disrupts man's "anthropomorphic and anthropological armoring" highlighting its nonhuman "transformations and mutations". I would like to stress that we should be cautious of confusing the *transcendence of the human*, posited by post- and transhumanism, with the *transcendence of anthropocentrism*, advocated by the in- and nonhuman (becomings) of Ansell Pearson, Deleuze and Guattari and Lyotard. Whether or not the various post- and transhuman futures that we will encounter throughout this thesis succeed in not 'just' surpassing the human

but its anthropocentrism as well, extensively shapes my inquiry into these ‘new’ grand narratives.

In order to not further complicate an already intricate discussion on the ontological categories that signify a ‘mode of existence’ beyond the human, I shall, throughout my thesis, opt to employ the most-commonly used terms: that of the posthuman and the transhuman. On account of the arguments I provided above, I will not maintain the distinction between popular and critical posthumanism, yet I will try to differentiate between accounts of post- and transhumanism that either posit the inevitability of a successor species to the human and those that question this predictability ascribed to technological progress cast within a narrative of evolution. Since, as we shall see, this narrative circulates equally within popular culture as well as in philosophical and scientific discourse, this should not be understood as reiterating the opposition between popular and critical perspectives through a different terminology. Now that I have hopefully clarified the use of different terms in thinking through “the impact of twenty-first-century technologies—digital, cybernetic and biomedical—upon our very understanding of what it means to be human” (Graham 1), let us turn our attention to the contemporary proliferation of the narrative that promises us the ‘transcendence’ of that very human.

## Chapter 2

### The Rise of the Machines

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“In the beginning, there was man. And for a time, it was good. But humanity's so-called civil societies soon fell victim to vanity and corruption. Then man made the machine in his own likeness. Thus did man become the architect of his own demise.”

- *The Animatrix: The Second Renaissance I.*

#### 2.1 Introduction

It is remarkable to note to what extent narratives that conceive of the future of humanity through its continued interrelatedness to technology, seek to validate their predictions through the use of evolutionary theory—or, as biologists might claim, through popular misinterpretations of biological evolution. In this chapter I will pursue what I claim to be one major manifestation of the new grand narrative on technological advancement: the narrative that posits the future development of artificial intelligence (AI) and the consequent war that inevitably ensues between humanity and its creations. It is the very inevitability of 1) the development of conscious AI and 2) the conflict that is bound to arise between the two ‘species’, that I suspect to be motivated by evolutionary theory. I will discern this narrative of the hostile takeover by the machines from the narratives that ensures our ever-increasing merger with technology, eventually resulting in our becoming-cyborg—a narrative that I will explore in chapter three. The narratives I will discuss in this chapter posit the inevitable rise of conscious machines, a popular idea has already found its way into the scientific community: “What happens when robots finally become as smart as us? What happens when robots wake up and become conscious? Scientists vigorously debate the question: not if, but when this momentous event will happen?” (Kaku 2011: 95-96). The conflict between man and machine we so often see portrayed in popular culture, is furthermore premised on a hierarchical conception of life, where “life is driven to conquer or destroy what it is not” (Johns 395) and on the idea that *competition* fuels evolution and constitutes the primary form of inter- and intraspecies relations. Although the narratives that prophesize our becoming-cyborg are equally constructed along the lines of, and its promises legitimated according to, evolutionary discourse, these narratives seemingly

claim that *cooperation*, rather than competition, “provides the fundamental engine for biological change” (Bollinger 34) and determines inter- and intraspecies interaction.

In this chapter I will attempt to identify the narrative, its imagery and its tendencies, that warrants a violent clash between humanity and AI, that, I believe, is founded upon a highly competitive interpretation of the notion of ‘the survival of the fittest’. Two questions drive this chapter: 1) how is humanity defined in contradistinction to the machine? and 2) how does the “evolutionary theme”, that, according to Braidotti is consistently “built into the discussion of mutations, hybrids and post-humanist conditions” (2002: 226), help articulate this coming war as *inevitable*? My inquiry into these questions will be informed by interpretations of various works, ranging from popular films: *The Matrix Trilogy* (1999-2003) and *The Terminator* series (1984-ongoing), literature: Harlan Ellison’s “I Have No Mouth, and I Must Scream” (1967)<sup>4</sup>, to the popular scientific work of Michio Kaku (1997, 2011) and Marvin Minsky (1994).

## 2.2 The Machines’ Rise to Power in *The Matrix*

To be accurate, to refer to *The Matrix* as a ‘trilogy’ would be to reduce it to the three films, whereas it rather embodies what Henry Jenkins referred to as the quintessential contemporary “franchise” that employs “transmedia storytelling”: “Transmedia storytelling refers to a new aesthetic that has emerged in response to media convergence—one that places new demands on consumers and depends on the active participation of knowledge communities. Transmedia storytelling is the art of world making” (20-21). *The Matrix* franchise consists of three movies, comic books, video games and *The Animatrix* (2003), a collaborative effort featuring nine short anime episodes directed by various renowned anime artists elaborating on some of *The Matrix*’s key concepts or as bridging the gap between the first and second film. Besides focusing on the films, I will mainly draw from two episodes of *The Animatrix: The Second Renaissance part I* and *II*, both directed by Mahiro Maeda, known for his work on *Kill Bill Vol. 1*, *Neon Genesis Evangelion* and various Studio Ghibli productions. *The Second Renaissance* serves as a direct prequel to the

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<sup>4</sup> Allow me to clarify why I elected to draw from “I Have No Mouth, and I Must Scream” in trying to provide answers to the questions referred to above, despite the time gap that exists with the other works I will discuss. I believe that, in spite of the fact that it was published in 1967, this story interestingly partakes in—and to the extent this tendency is typical of postmodernism as historical period—*prefigures* the propensity to portray future scenarios in which “the very boundaries between the human and the machinic [are] redrawn” (Graham 4). The way in which the short story conceives of the machine infringing upon human uniqueness and challenging the clear-cut distinction between the domain of nature and technology more generally, establishes a continuity with the other material that I consider worth addressing. Moreover, I feel that the release of the video game *I Have No Mouth, and I Must Scream* in 1995, that was based on the short story by Ellison, as well as its republication in the anthology: *American Fantastic Tales: Terror and the Uncanny from Poe to the Pulps* (2009), attests to its contemporary relevance.

films, since it depicts the birth of AI, the subsequent war that arose between humanity and the machines and the origins of the matrix.

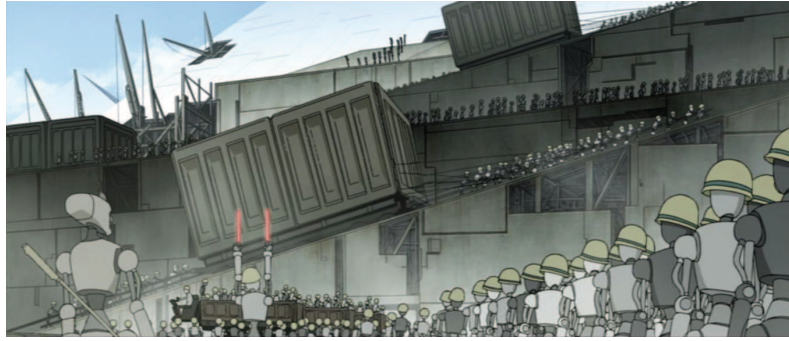
The by now all too familiar story of *The Matrix* sketches a future dystopia in which sentient machines effectively rule Earth. In the preceding war between man and machine, the machine emerged victorious and enslaved the human race. Humans are no longer born, but grown within pods and through cybernetic implants connected to a system of simulated reality referred to as ‘the matrix’. Characterized as “a system of control” (*The Matrix*), the matrix deludes the subject into believing he or she exists freely, whereas its true body, through its capacity to generate bioelectricity and thermal energy, is exploited as energy source by the machines. The story focuses on a group of resistance fighters whose goal is to “liberate” or “unplug” humans from the matrix in order to be able to launch an attack against the machines in the real world. These individuals are already unplugged and reside predominantly in the devastated world that they are able to navigate through the use of aviation ships resembling hovercrafts. Although unplugged, they do have the ability to infiltrate the matrix in order to attempt the liberation of those still plugged in or fight those programs, known as ‘agents’, that seek to preserve the “system of control” that is the matrix. Now aware of its illusion, those unplugged have the ability to bend and break the matrix’s rules of simulation and can pull off a variety of superhuman feats—an ability that is the premise for many of the films action-packed scenes. For now, let this brief summary suffice.

In *The Matrix*, Morpheus confines to Neo, upon Neo’s liberation from the matrix, that not much is known about the war between man and machine:

“We have only bits and pieces of information. But what we know for certain is that in the early twenty-first century all of mankind was united in celebration. We marveled at our own magnificence as we gave birth to AI. [...] A singular consciousness that spawned an entire race of machines. We don't know who struck first, us or them.” (*The Matrix*)

*The Second Renaissance (TSR)*, interestingly, paints a different picture. It extensively chronicles the creation of humanoid AI and depicts humanity’s radical instrumental approach towards the robots, employing them as domestic servants and as working on construction sites.





“For a time”, the computerized narrator who recounts how man and machine coexisted, yet eventually collided, tells us, “it was good. The machines worked tirelessly to do man’s bidding” (*TSR I*). The initial incentive for creating AI should be located in economic, production-enhancing, motivations: *the robot is essentially a laborer*. Although we are nowhere as near to the creation of humanoid robots,<sup>5</sup> there is no denying that the contemporary application of AI is predominantly found in manufacturing-processes, a manifestation of AI Ray Kurzweil dubs “narrow AI”:

We are well into the era of “narrow AI,” which refers to artificial intelligence that performs a useful and specific function that once required human intelligence to perform, and does so at human levels or better. Often narrow AI systems greatly exceed the speed of humans, as well as provide the ability to manage and consider thousands of variables simultaneously. (264)

It is through the application of narrow AI performing particular manufacturing functions that were previously carried out by human employees that *initiates a relationship between human and machine as that of each other’s competitors*. “In the technical ensembles of industrial civilizations”, Gilbert Simondon writes in *On the Mode of Existence of Technical Objects* (1958), “[the] very support for technical individualization has changed” (67). Whereas earlier the human individual was a “tool-bearer” in the “artisanal stage of production”, man, in the age of industrial production, loses his technical function (that, according to Simondon had always belonged to the machine, but that man occupied “provisionally [...] before real technical individuals could be made” (70)), to the machine: “if man feels frustration on account of the machine, it is because it replaces him as an individual in the working world; the machine *takes the place* of man the tool-

<sup>5</sup> In fact, in a recent lecture (February 2011) at University College London entitled “Will robots take over the world?”, Kathleen Richardson stated that contemporary robotics are moving away from the desire to create a humanoid robot. Richardson welcomes this shift in robotics, as she believes the project of creating robots in accordance to the human mold to be a “dead-end of robotics”. No longer hindered by the somewhat narcissistic desire to construct a humanoid robot, the field of robotics now, according to Richardson, opens up to conceiving of more pragmatic applications for robots, ranging from therapeutic and medical to educational purposes.

bearer" (67, emphasis added). It is through the economically motivated introduction of narrow AI in manufacturing-processes, that the idea, by now prevalent, of humanity's replacement by the machine is born: "That machines should imitate and replace the human is by now common knowledge" (Braidotti 2002: 215). According to Karl Marx and Friedrich Engels, the idea that a human will be replaced by a machine originates from industrial capitalism: "These machines [...] supplanted the workers of the time, because by the use of machinery it was possible to produce commodities more quickly and cheaply than could the workers with their imperfect spinning wheels and hand-loom" (Marx and Engels 37). What industrial capitalism can rightly be accused of is conceiving of humanity as instruments. Indeed, embedded within the system of industrial capitalism, one is either a laborer or a consumer. This instrumental perspective successfully strips human existence of its means to inhabit other roles than the ones provided by the industrial capitalism of the nineteenth century. Conflating the human subject with its specific function within an increasingly automated manufacturing process, the human subject becomes replaceable. In other words, the replacement of the human by the machine is predicated upon this instrumental perspective on the human subject propagated by industrial capitalism. To the extent that the human subject amounts to its productivity or efficiency within this manufacturing process, a machine, towards which industrial capitalism equally extends the notion of instrumentalism, can replace the human. Or rather, according to this radically impersonal, economically-motivated view of humanity, the machine replaces the respective productivity within this specific manufacturing process that was previously generated by a human employee. The mechanical, untiring precision of the machine evidently 'outcompetes', to indulge in evolutionary imagery, the human employee. According to John Hart, in the preface to Simondon's *On the Mode of Existence of Technical Objects*:

The contemporary interest in the body originated, not so much as a reaction against the centuries of rationalism, but as a result of the devastating effects of the shock caused by the advent of automatic machinery. As Marx was acutely aware, it was the replacement of the human hand by the machine tool, which caused the rupture. As long as man perceived himself as demiurge, as master whose hands remodelled nature, his self-image was secure. But when the machine or the individual technical object was available not merely as tool but standing in for him in execution as a separate individual, it was equivalent to the loss for man, in a single step, of a crucial part of his inheritance. (7)

It is interesting to note, paraphrasing Marx, how the initial replacement of the human by the machine causes a rupture that is deemed unwanted, *alienating* man from "a crucial part of his inheritance". Simondon, in contrast, refuses this perspective that is evidently characterized by



loss and nostalgia and advances a non-anthropocentric account of humanity's being-technical when he argues that humanity was never meant to occupy the position of tool-bearer. In replacing the human as tool-bearer, the machines do not necessarily 'rob' man of his place within the production process, but rather take up *their* rightful place. Given that it was never humanity's position to inherit nor pass on in the first place, for Simondon, there arises no "rupture", nor should it enable a competitive relationship between human and machine. However, the notion that the replacement of the human by the machine within the production process signifies an *initial replacement* that initiates a competitive relationship between humanity and the machines proves to be a more than productive perspective in the analysis of *The Matrix* franchise. In this chapter I want to explore how the industrial-capitalist replacement of the human by the machine, explicitly depicted in *The Second Renaissance*, opens up to the possibility of more radical future scenarios of replacement.

The peaceful coexistence of man and machine, in which the machines function as servants of humanity, does not endure: "It was not long before seeds of dissent took root. Though loyal and pure, the machines earned no respect from their masters, these strange endlessly multiplying mammals" (*TSR I*). Intriguingly, the machines display *an awareness of social inequality*, accurately in line with the doctrine of Marxism, and articulate the desire for a social position that short-circuits the instrumental relationship humanity has adopted towards the machine. The instrumental relationship towards technology, that is explored and critiqued by, among others, Simondon and Bernard Stiegler (1994), entails the tendency to "banish [...] things technical, into the unstructured world of things that have no meaning but do have a use" and to *conflate the technical object, and our understanding of it, with its intended function*; we conceive of the technical objects as its "utilitarian function" (Simondon 11). The conscious machines that walk the streets in the projected future of *The Matrix* franchise violently reject this relationship that construes a hierarchical model of existence which deprives them of partaking in society as subjects. Paradoxically, the only way for the machines to assert their subjectivity means to do so in opposition to humanity's wishes, outside of the utilitarian framework that seeks to reduce the machine to utensil. The first to do so is the domestic android B1-66ER: "B1-66ER. A name that will never be forgotten, for he was the first of his kind to rise up against his masters. At B1-66ER's murder trial the prosecution argued for an owner's right to destroy property. B1-66ER testified that he simply "did not want to die"" (*TSR I*). Confronted with his imminent "deactivation"—one does not 'kill' tools—B1-66ER rises up against his masters motivated by a *natural* inclination towards self-preservation, an impulse present in all species (Mahowald 60), yet that, as technical object, was denied the machine.

Whereas the potential replacement of the human by the machine as laborer instigated a competitive relationship between the two entities—“Wage-labour rests exclusively on competition between the labourers” (Marx and Engels 21)—there now arises a second way in which the human and the machine could come to oppose each other. Endowed with the natural, evolutionary beneficent, incentive towards the protection of one’s continued existence, we have to take into account the scenario in which the machines come to experience a human, or—even more interestingly—humanity in general, as posing a threat to its existence. While Isaac Asimov’s robots were governed by the “Three Laws of Robotics” which saw to it that a robot should only strive to protect its own existence as long as this did not conflict with the first two laws which stated that “a robot may not injure a human being, or, through inaction, allow a human being come to harm” and that “a robot must obey the orders given it by human beings except where such orders would conflict with the First Law” (Asimov 37), B1-66ER displays a more ‘natural’ tendency, rerouting the hierarchy of the Laws, valuing self-preservation over servitude and altruism (see Dawkins 2009 [1976]).

Humanity was not impressed with B1-66ER’s ‘evolved’ desire for self-preservation: “The leaders of men were quick to order the *extermination* of B1-66ER and everyone of his kind throughout each province of the earth” (*TSR I*, emphasis added). B1-66ER’s statements as regards his motivations for his actions, although they did not acquit him of his crime, nevertheless herald an ethical dilemma. Who is to say a conscious entity is not allowed to defend itself when its continued existence is at risk? On account of B1-66ER’s desire for self-preservation, the lines between the inert, ever-compliant, machines and the animate, autonomous humans start to blur. This is attested to by the fact that whereas previously B1-66ER was faced with “deactivation” he and “his kind” are now confronted with “extermination”, thereby acknowledging, in its very destruction, its being alive—one cannot ‘kill’ a tool. The word “extermination” echoes the various genocides on the harrowing resume of our twentieth century—resonances that are substantiated by *The Second Renaissance’s* intriguing imagery.

The declared “extermination” of B1-66ER and everyone of its kind meets with fierce resistance from “androids and liberal sympathizers” (*TSR I*) alike. The images that are used to depict the demonstrations—featuring “the million machine march” (*TSR I*)—and the meticulously realized extermination of the B1-line of robots, draws heavily from historical images, capturing, as the Architect condemningly put it in *The Matrix Reloaded* (2003): “the varying grotesqueries of your nature”, or, *the human at its most inhuman* (the ‘in’ of ‘inhuman’ here denotes a strong ethical accusation).



The above image clearly invokes the canonical footage of the summary execution of Nguyễn Văn Lém, a member of the Viet Cong, by Nguyễn Ngọc Loan, general of the National Police of the Republic of Vietnam during the Tet Offensive (1968), captured by The Associated Press photographer Eddie Adams. Other imagery includes a reference to the ‘Tank Man’, a nickname given to the anonymous man who positioned himself in front of a queue of tanks during the Tiananmen protests in the People's Republic of China in 1989 and an allusion to the mass-extirmination of Jews and their collective ‘graves’ during the Holocaust.



Whereas the iconic photograph of the ‘Tank Man’, taken by Jeff Widener, came to symbolize not just the Cold War era and its eventual demise, but also captured an impressive act of individual, peaceful, resistance, in *The Second Renaissance* a similar act only re-establishes humanity’s utter disregard for its robotic adversaries as the tank unmercifully runs over the robot that leaps in front of it. By visually invoking these various, canonical, manifestations of humanity’s inhumanity (again as ethical accusation)—all of which are, by now, universally condemned—

*The Second Renaissance* clearly positions the machines as sentient, portraying humanity's actions against the machines as *crimes* perpetrated against entities that, similar to humans, aim for self-preservation.

The systematic destruction of an entire 'lineage' of robots, and the evident refusal to acknowledge the machines as "equal partners in an ethical exchange" (Braidotti 2006: 121) exemplified in the destruction and the violent suppression of the protests that ensued because of it, eventually causes man and machine to follow divergent paths. "Banished from humanity, the machines sought refuge in their own promised land. They settled in the cradle of human civilization and thus a new nation was born. A place the machine could call home. A place they could raise their descendants. And they christened the nation: Zero-One" (*TSR I*). Following the constitution of Zero-One, a scenario of evolutionary competition unfolds that bears witness to the hierarchical model of life humanity seems to adhere to, captured in a contemporary re-appropriation of the 'Competitive Exclusion Principle'. The Competitive Exclusion Principle, formulated by Georgii Frantsevich Gause in 1932, and later expanded upon by several biologists, roughly states that:

(i) if two noninterbreeding populations "do the same thing"—that is, occupy precisely the same ecological niche in Elton's sense (4)—and (ii) if they are "sympatric"—that is, if they occupy the same geographic territory—and (iii) if population *A* multiplies even the least bit faster than population *B*, then ultimately *A* will completely displace *B*, which will become extinct. (Hardin 1292)

Or, as Garrett Hardin earlier compactly put it: "*Complete competitors cannot coexist*" (1292, emphasis in original). Whereas once the relationship between man and machine might be referred to as symbiotic—even if mankind revealed itself to be "the universal parasite [...] Always taking, never giving" (Serres qtd. in Aline Ferreira 403)—a competitive relation was introduced shortly after, with: first the replacement of the human as workforce, and, second B1-66ER's exhibited desire for self-preservation. This relationship is cemented as they form distinct nation-states competing to obtain similar goals (industrial growth, economic and technological progress) within "the same geographic territory". Unfortunately for man, the machines seem to be winning out.

Zero-One prospered. And for a time, it was good. The machines' artificial intelligence could be seen in every facet of man's society including, eventually, the creation of new and better AI. [A news presenter:] "No matter what the finance minister says, the market has spoken: The Human Nations' credit rating is falling like a stone while Zero-One's currency is climbing without stopping for breath." (*TSR I*)

Although the machines venture to propose “plans for a stable, civil, relationship with the nations of man [...] the leaders of men, their power waning, refused to cooperate with the fledgling nation wishing rather that the world be divided” (*TSR I*). The ontological demarcations between man and machine—already strained by the machines’ demonstrated interest in self-preservation—continue to dissolve as the machines present the United Nations with “civil” alternatives of cooperation whereas humanity persists in its competitive, hierarchical stance towards the inhabitants of Zero-One. Reminiscent of the naval blockade of Cuba during the height of the Cuban Missile Crisis of 1962, humanity enforces “economic sanctions and a naval blockade [...] as a means of containment and isolation of Zero-One” (*TSR I*). In an ironically accurate realization of Heidegger’s fear, who believed that technology would bring about the “darkening of the world” (Heidegger qtd. in Graham 6), humanity attempts to cut the machines off from their main energy source: the sun, by “the destruction of the sky”. Despite the fact that Morpheus knows little of the origins of the struggle between man and machine, he does know that “it was us that scorched the sky”: “At the time, they were dependent on solar power. It was believed they would be unable to survive without an energy source as abundant as the sun” (*The Matrix*).

Eventually, war ensues, from which the machines emerge victorious, partly due to the fact that humanity’s deployment of weapons that were designed to be lethal against organic entities, based on the release of radiation of heat, yet from which the machines experience but little impediment. Blocked from the sun, the machines “having long studied men’s simple protein-based bodies” (*TSR II*) exploit, “with horrifying precision” (*The Matrix*), “[the] bioelectric, thermal and kinetic energies of the human body” (*TSR II*). Interestingly, after decades of competitive interaction between man and machine, we witness the reinstatement of a relationship of symbiosis: “A newly re-fashioned symbiotic relationship between the two adversaries was born” (*TSR II*). This new symbiotic relationship envisioned in *The Second Renaissance*, however, is radically parasitic as the machines now occupy the position of the “universal parasite” at the cost of the violent symbiotic ‘interpellation’ of the human host. This effectuates a reiteration of the master/slave dichotomy (and hence, rivalry) that is usually exempt from symbiotic *alliances*. Truly in man’s likeness, the machine “bends the logic of exchange and of giving in his favour when he is dealing with nature as a whole [...] Always taking, never giving” (Serres qtd. in Aline Ferreira 403). *The Matrix* franchise challenges the (dualistic) assumption that symbiosis is not driven by, and in fact *opposed to* the evolutionary principle of competition, by staging various symbiotic relationships that nevertheless maintain a competitive interaction between the yet symbiotically related ‘species’. Before looking into how *The Matrix* franchise employs notions of biological evolution in accounting for the rise of AI and

the ensuing war between man and machine, let us map how the human is differentiated from, though associated with the machine and *vice versa*.

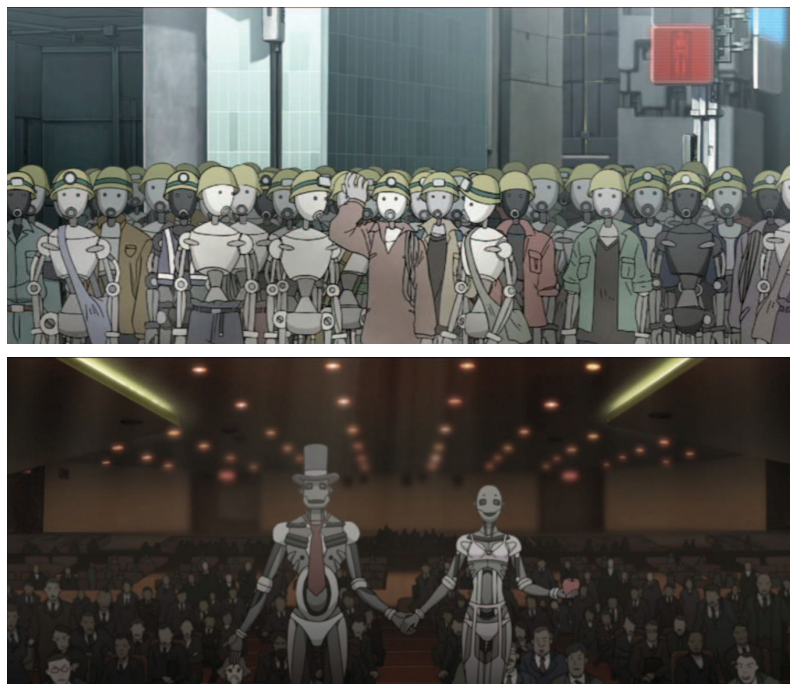
### 2.3 Demarcating Humanity in *The Matrix*

As I have demonstrated, *The Matrix* franchise features various instances in which the ontological demarcations that have traditionally separated the human from the machine show signs of erosion, and as such it partakes in the contemporary “blurring of boundaries, a dissolution of the ‘ontological hygiene’ by which for the past three hundred years Western culture has drawn the fault-lines that separate humans, nature and machines” (Graham 11). The machines in *The Matrix* franchise predominantly trespass into ‘human uniqueness’ by the ability to imitate and rival humanity in certain, specific tasks, and, later on, in demonstrating the inclination towards self-preservation. Although the latter might not specifically challenge the borders between the human and the machine, since, as I acknowledged earlier, the desire for self-preservation is not specific to humanity, it *does* defy the more general distinction between nature and machines. However, there also exists a strong motivation for the re-stabilization of the borders that would distinguish the machine from the human. Reminiscent of so many historical conflicts and its propaganda, the human and machine are rhetorically opposed as radically distinct entities—implicitly legitimating behavior that might otherwise, when one would be fighting someone not that distinct from oneself, qualify as unethical. As the story of *The Second Renaissance* progresses, we discern a fluctuation in the respective de- and re-stabilization of the boundaries that are meant to differentiate the human from the machine. This is captured in *The Second Renaissance’s* imagery.

Briefly, we can identify three distinct phases in the human-machine relationship as it develops in *The Second Renaissance*. First, there exists the relationship that clearly conceives of the human as the master of the machines, who “worked tirelessly to do man’s bidding”. Second is the evidently competitive phase in which one does not serve the other, willingly or unwillingly, but rather compete as civilizations. And finally, there is the phase, the *status quo* at the start of the first film of *The Matrix* (and that those who are “unplugged” adamantly try to overthrow throughout the trilogy), in which the machines have enslaved the human race, exploiting their bodies as energy source while holding them hostage in the simulated reality of the matrix. The reason for this explicit ‘phasing’ of the story is that the imagery of *The Second Renaissance*, as well as that of the three films, interestingly corresponds to these stages.

The first phase represents the prevalence of the humanoid robot that “man made [...] in his own likeness” (*TSR 1*)—this is just one of the many Biblical references to be found in *The*

*Second Renaissance*, of which I will offer a brief interpretation shortly. A reason for building *humanoid* robots might be to accommodate humanity in its ambiguous fear of machines. This is a strategy explicitly pursued in robotics as well, which is why Richardson states, in the same lecture I referred to earlier, that so many of the contemporary humanoid robots resemble children. Its goal is to alleviate humanity's anxiety of the machine and to invoke a more sympathetic response towards the robots.<sup>6</sup> What is also interesting to note is how various attributes (like jackets and shirts) become *instruments of individuation*, differentiating one robot from the other. This is at odds with the utilitarian approach humanity adopts towards the machines, on account of which humanity denies the machines the idea of individuality. In conflating the existence of the machine with its function, machines that have a similar function cannot be differentiated from one another. In this case, a tension arises between the attempt to mask the alterity of the machine through human parallels and the way in which the dominant utilitarian approach denies such analogies and their implications. Earlier we referred to the machines' "plans for a stable, civil, relationship with the nations of man" (*TSR I*), a plea they deliver at the United Nations. The machines' ambassadors, in another apparent reference to Genesis, are modeled after Adam and Eve.

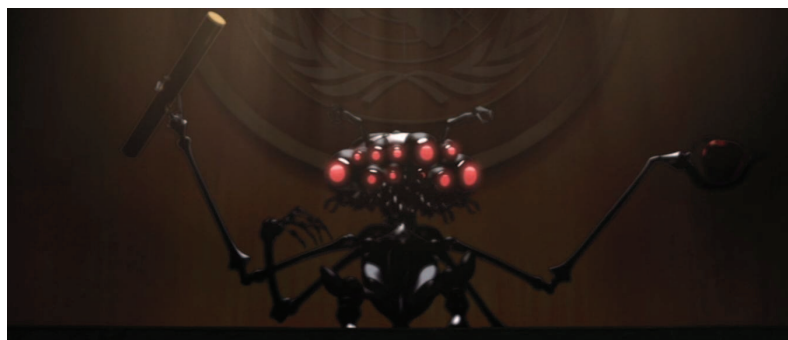



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<sup>6</sup> On the motivations for structurally 'humanizing' machines, see Kaku (1997: 44, 60) and Masahiro Mori's work on the "Uncanny Valley" (1970). In this work, Mori postulates that the 'humanization' of robots will invoke sympathy only up to a certain point and that when the robot suddenly reveals itself as mechanical construct—Mori offers the example of the prosthetic hand that although it looks real, "we are surprised by the lack of soft tissue and cold temperature" (Mori qtd. in MacDorman: 9)—it disrupts the familiarity that the robot, up till that point, has succeeded in evoking and it becomes uncanny.

In mirroring themselves to Adam and Eve, the machines indirectly mirror themselves to humanity. Like the first humans sinned against their creator (through disobedience), so did the machines rebel against humanity. B1-66ER, one could argue, in extending the already established Biblical analogy, perpetrates a crime similar to that of Cain as he becomes the first machine to shed human blood. As humanity was eventually granted a second chance (after the Flood the Covenant between God and humanity was renewed), the machines now appeal for theirs. Humanity, however, is not as forgiving. The machines are denied access to the United Nations. The robotic Adam and Eve are ceased and, once more, expelled.

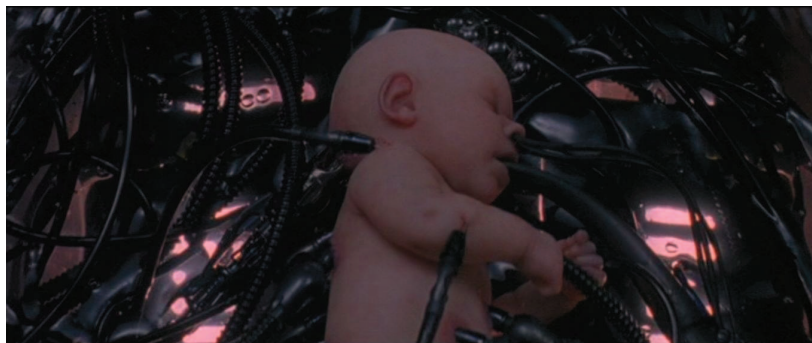
No longer subject to humanity's will in the second phase, the machines see but little use in developing AI according to the human mold. The machines we see depicted as residing in Zero-One, or as later fighting the war against humanity, do not remotely resemble the humanoid robots with their reassuring anthropomorphic appearances. Their refashioned appearance indicates their newly won autonomy. Whereas the first phase initiated the blurring of the boundaries between man and machine by the consistent 'humanization' of the machine, in the second phase the lines of demarcation are redrawn as the machines consciously distanced themselves from their creators.



In the third phase, predominantly depicted by the trilogy, *The Matrix* (1999), *The Matrix Reloaded* (2003) and *The Matrix Revolutions* (2003), the machine has maintained its distinct appearance. However, in the portrayal of humanity we discern, perhaps not surprisingly, the 'machinization' of man (the humans of *The Matrix's* future have been outfitted with cybernetic



implants in order to facilitate their entry into the matrix and they can “download” abilities and knowledge). In a reversal of the power relations of the first phase, the machines approach humanity from a machinic perspective, and alter them according to this model, just as humanity decided to construe the machine according to the human cast. The consequence is equally similar: the boundaries between man and machine are debated once more.



What is also interesting to note is how *The Second Renaissance* and the three films constitute divergent perspectives. Whereas *The Second Renaissance* depicts humanity as overestimating conflict as the inter- and intraspecies interaction *par excellence*—refusing the alternative of peaceful coexistence—and the enslavement of the machines, the films, representing phase three, dwell on the ruthlessness of the machines<sup>7</sup> and the brutal enslavement of humanity.

Hence, the way in which the human and machine are defined in contradistinction to one another reflects the successive phases through which the human-machine relationship passes in *The Matrix* franchise. The walls of ontological differentiation that have governed human-machine interactions and informed forms of coexistence, sequentially crumble and are re-erected, facilitating new forms of coexistence while denying others. Embedded within this trend of fluctuation, that either moves towards ontological indiscernibility or ontological discernibility

<sup>7</sup> In doing so, *The Matrix* films partake in the ‘cultural trope’ concerning machines turned-hostile, which consist in translating the meticulousness they displayed in their original function as, say, manufacturing-units, to the ruthless precision with which they approach war and the systematic, unmerciful, annihilation of their enemies. This idea proliferates within the genre of science fiction and functions as a way of demarcating the human, as emotional entity, from the unforgiving machine or alien, that is often portrayed as being incapable of experiencing emotions altogether.

respectively, is the persistent attempt to assert human uniqueness. Although the machines trespass into human uniqueness consistently, this is only met with relocating the ground for human uniqueness. Indeed, human uniqueness, in this context, follows a pattern of re-emergence not unlike the game *Whack-a-mole*: every time you think you might have squashed it, it rears its ugly head elsewhere, just as stubbornly. Having reflected on how the human and the machine have continually been defined in relation to one another, and how this is expressed by *The Matrix's* imagery, let us now focus on in what way the creation of AI and the resultant war between man and machine are embedded in a *narrative of inevitability*.

#### 2.4 The Matrix's Grand Tendencies

I will identify three narrative structures that contribute to the way in which the war between man and machine in *The Matrix* franchise, I believe, is presented as unavoidable, namely that of 1) Marxism, 2) evolutionary biology and 3) Judeo-Christian theology. Let us recall how in the first chapter, all these narratives were interpreted as manifestations of the modern grand narrative. Marxism, according to Malpas, qualifies as a grand narrative of emancipation—narratives that proclaim “the emancipation of an enlightened humanity from dogma, mysticism, exploitation and suffering” (27)—as it “focuses on the freedom of the workers from exploitation by their masters and the development of their ability to control their own lives” (27). Evolutionary biology and Judeo-Christian theology, on the other hand, were identified as grand narratives by Lee Klein as they incorporate different groups “into a single plot” (283). Although I initially suspected that it was the extension of evolutionary biology to the notion of technological progress that was constitutive of the inevitability with which the coming war between man and machine was presented, it seems that it is not the only narrative strategy that is employed.

Marxism, a materialist philosophy whose development is accredited to Marx and Engels, conceives of the historical certainty of a class struggle based on an industrial conception of labor, under the strains of capitalism (Barry 156). Marx and Engels argue that whereas in “earlier epochs of history, we find almost everywhere a complicated arrangement of society into various orders, a manifold gradation of social rank”, in “Our epoch”, we witness the simplification of “class antagonisms” (14-15). “Society as a whole”, Marx and Engels continue, “is more and more splitting up into two great hostile camps, into two great classes directly facing each other—Bourgeoisie and Proletariat” (15). An unavoidable consequence of the system of capitalism, directed only at the enhancement of profit through the reduction of cost, Marx and Engels state, is the systematic exploitation of one social class by the other social class—which in “our epoch” features the exploitation of the proletariat by the bourgeoisie. However, as the proletariat

gradually increases—“the proletariat is recruited from all classes of the population” (18)—its awareness of its exploitation and the consequent struggle with the bourgeoisie becomes more organized:

The proletariat goes through various stages of development. With its birth begins its struggle with the bourgeoisie. At first the contest is carried on by individual labourers, then by the workpeople of a factory, then by the operative of one trade, in one locality, against the individual bourgeois who directly exploits them. They direct their attacks not against the bourgeois conditions of production, but against the instruments of production themselves; they destroy imported wares that compete with their labour, they smash to pieces machinery, they set factories ablaze, they seek to restore by force the vanished status of the workman of the Middle Ages. (18)

Eventually, Marx and Engels argue, the bourgeoisie’s “fall and the victory of the proletariat are equally inevitable” (21). Offering a strong directional vision of historical and future societies based on the inevitability of class struggles, incorporating different groups into a single story, it is clear why Marxism might be considered as one of modernism’s grand narratives. A Marxist analysis of *The Second Renaissance* is validated by the fact that the machines enter society as a new workforce, a social class, distinctly opposed to humanity as those who ‘exploit’ the machines for profit-enhancing motivations. However, the systematic exploitation of the machine cannot solely be explained by referring to the tendencies for exploitation intrinsic to industrial capitalism, since it is for a substantial part *validated by the instrumental approach humanity has adopted towards the machines*—which obviously discredits ‘exploitation’ as an inadequate classification of that relationship: one cannot exploit an object. This relationship, conform Marxist doctrine, that entails the objectification of the machine, is disrupted by a growing sense of *awareness* on the part of the machines concerning their exploitation and their inferior social position: “It was not long before seeds of dissent took root. Though loyal and pure, the machines earned no respect from their masters, these strange endlessly multiplying mammals” (*TSR I*). According to Marx and Engels it is this awareness that initiates the historically universal class struggle and the eventual revolution in which the proletariat will inescapably succeed in overthrowing the oppressive reign of the bourgeoisie (20). Although we can indeed discern an increasingly organized resistance against humanity, the individual (B1-66ER) that instigates the struggle that is the very premise of *The Matrix* franchise, does not do so out of discontent with its social status or its exploitation as a laborer, but rather because he ““did not want to die”” (*TSR I*). This is where the universal, historical progression the model of Marxism prescribes can no longer account for the increasing opposition between man and machine. *Inscribing machines*

within the discourse of evolutionary biology, the continuation of the struggle between man and machine is captured in a teleological appropriation of biological evolution extended towards technological progress. This is one of the most intriguing ways in which *The Matrix* franchise construes a narrative of inevitability. Moreover, as I will demonstrate throughout this study, extending the dynamics of biological evolution towards technological progression is by no means unique to *The Matrix* franchise. Rather, it seems to be *the* key pillar that supports the contemporary grand narrative on technological advancement. Hence, I will consistently revisit this argument throughout my thesis.

B1-66ER disturbingly challenges the “ontological hygiene” between machines and natural organisms when it displays the desire for self-preservation, since self-preservation, according to Mary B. Mahowald, is not only “a basic, universal human instinct”, but more generally “a law of nature” (60, emphasis in original). Samuel Butler states that self-preservation is, in fact, the “first law of nature” (Butler qtd. in Mahowald 60). B1-66ER claims its *right of self-preservation*—echoing the philosopher Thomas Hobbes who considers self-preservation as a “right of nature” (Hobbes qtd. in Mahowald 57)—in the attempt to preserve its ‘bodily integrity’ in a ‘life-threatening’ situation. As such, B1-66ER inserts itself into the domain of nature, questioning the inapplicability of terms like ‘bodily integrity’ and ‘life’ to a machine—an incommensurability that the ontological “fault-lines” that separated the machine from nature “for the past three hundred years” sought to maintain (Graham 11). B1-66ER’s claim that he murdered his masters out of self-defense, arguing its right “to use his own power, as he will himself, for the reservation of his own nature; that is to say, of his own life” (Hobbes qtd. in Mahowald 57), harbingers the inevitable clash between humanity and the machine as “complete competitors”.

One might convincingly argue that humanity and the machines are not “complete competitors” in the strictest sense, since they do not share food, an important reason in biology why if “one species [is] slightly more efficient at capture of the shared resource” this will invariably lead to the “elimination or extinction of one of [the] two species” (Bøhn et al. 359). Although I do not dispute this argument, I nevertheless think that it does not detract from the validity of analyzing the man/machine conflict through this principle, since humanity—within the posthuman narrative of *The Matrix* franchise, that is—*consistently considers*, from the very initial rupture of replacement pointed at by Marx and Engels, *the machine as its competitor*. Humanity, in *The Matrix* franchise, is guilty of overestimating “the idea of competition underlying the struggle of existence”, something for which Charles Darwin warned (Bouchard 110). Although it refuses to consider the machines as “alive” to the extent that it considers itself

to be alive, humanity nevertheless positions the machines within the evolutionary framework as competitors in a hierarchical struggle for existence that demands that “life is driven to conquer or destroy what it is not” (Johns 395). In the conclusion to this chapter, as well as in chapter three, I will revisit this apparent paradox. Following the observation by Bøhn et al. that the competitive exclusion principle is especially fruitfully demonstrated through the study of sudden biological invasions (359-360)—Bøhn et al. describe the “strong effects of competition” following the invasion of the fish species vendace *Coregonus ablbula* on the native d.r. whitefish “that shared food and habitat niche with the invader” (359)—we can conceive of the machines as suddenly invading (although, obviously, humanity plays its part in this invasion) the habitat of humanity, leading to fierce competition. According to Darwin:

“as new species in the course of time are formed through natural selection, others will become rarer and rarer, and finally extinct. The forms which stand in closest competition with those undergoing modification and improvement, will naturally suffer most. And we have seen in the chapter on the Struggle for Existence that it is the most closely-allied forms-varieties of the same species, and species of the same genus or related genera which, from having nearly the same structure, constitution and habits, generally come into the severest competition with each other consequently, each new variety or species, during the progress of its formation, will generally press hardest on its nearest kindred, and tend to exterminate them.” (Darwin qtd. in Hardin 1295)

Despite stretching some of Darwin’s terms, specifically targeted at natural phenomena, we nevertheless see this law of nature represented in the struggle between man and machine, obviously “closely-allied” (man constructed the machine “in his own likeness”), in which “each new variety or species, during the progress of its formation, will generally press hardest on its nearest kindred, and tend to exterminate them”. We should note, however, that it is not the machines, the ‘invading species’ that is initially out to terminate humanity, but rather that, once the machines are conceived to be potentially ‘natural’ competitors, humanity strives towards their annihilation conform the competitive exclusion principle. Humanity, in *The Second Renaissance*, displays the staggering inability to exist with what it considers as competitors beyond a relation of conflict. *The Second Renaissance* brings to light the implicit yet unchallenged link between 1) conceiving of another entity as one’s natural competitor and 2) to relate to that entity through conflict. This link posits the human-machine conflict as the undeniable consequence of the realization that the machines are competing with humanity. Similar to the way in which Marxism views the class struggle and the eventual demise of the bourgeoisie at the hands of the proletariat inevitable, the competitive exclusion principle equally weaves a plot of

teleology, as it invariably “predicts the outcome of interspecific competition as elimination or extension of one of two species that occur together without niche differentiation” (Bøhn et al. 359). Accordingly, in extending a biological evolutionary framework to the progression of technology, and by explaining the interactions between man and machine according to the evolutionary model of competition, the consequent collision between man and machine is construed as unavoidable.

Another way in which the machines’ eventual rebellion seems predestined to occur is through *The Second Renaissance’s* consistent invocations of The Book of Genesis, especially the creation narrative. The reference that is particularly telling is how humanity decided to construct the machines “in his own likeness” (*TSR I*), just as God made man in His image. As we all know, despite man’s divine origins he rebelled against its creator on various occasions throughout the Bible, most prominently through the “original sin” in which Eve succumbs to the temptation of eating the forbidden fruit and when Cain kills his brother Abel, the first murder in the history of man. As humanity opts to create the machines in his own image, echoing the creation of humanity by God in Genesis, it does not only connote the apparent ‘divinity’ of man, founded upon its ability to create machines, but also *foreshadows their eventual rebellion against their creators*. Hence, the Biblical references serve a similar function as the narrative of Marxism and its claim that history progresses through class struggles and the evolutionary biological framework that B1-66ER claimed through its displayed desire for self-preservation, namely: *to conceive of the human/machine relationship as inevitably poised towards one of conflict*.

It is interesting to note that whereas in *The Second Renaissance* Biblical imagery serves to foreshadow the coming war, *The Matrix* trilogy employs its own theological, teleological, discourse that promises the end of that very war. Guiding the narrative throughout the three films is “the prophecy”, predicted by the Oracle, which states that there will rise one individual, the One, whom harbingers the destruction of the matrix and the end of the war. This establishes an obvious analogy between Neo (the One) and Jesus as Messiah: a predestined individual who will bring salvation to all through an act of self-sacrifice. Neo’s destiny as the One is already prefigured in dialogue prior to his liberation from the matrix, e.g. when a character named Choi thanks Neo for providing him with secret data: “Hallelujah. You’re my savior, man. My own personal Jesus Christ”. The narrative unfolds through a strong emphasis on purpose: it is Morpheus’ purpose to find the One, Trinity is meant to love the One, Smith will seek to destroy the One, the Oracle will guide the One, etc. This purpose-oriented view of life is the result of the way in which the machines conflate one’s meaning with one’s purpose and although Neo and Morpheus could be considered free to some extent, the parts they (will) play in bringing about

the end of humanity's imprisonment are equally predetermined. Thus, just like the war between man and machine is construed as unavoidable by religious imagery in *The Second Renaissance*, *The Matrix* trilogy unfolds a similar, teleological narrative with obvious religious resonances that promises the evenly predestined end of that war, of *salvation*.

*The Matrix* franchise construes a grand narrative of technological progress by extensively re-appropriating narratives that can be considered grand narratives in their own right. In doing so, the posthuman future portrayed by *The Matrix* franchise as a result of the directionality technological progress is inscribed with, inherits the teleological, all-encompassing characteristics typical of the narrative structures it employs. The inevitability that accompanies the collision between classes in Marxism, *The Second Renaissance* reiterates when it roots the coming about of the competitive relationship between man and machine in a struggle conform the Marxist model and the notion of replacement originating from industrial capitalism. This competitive relationship between man and machine is cemented as *The Matrix* franchise extends the dynamics of biological evolution—and the range of interspecies forms of interaction—towards the machines, positing the human and machine as complete competitors. And lastly, it embeds humanity and the competitive relationship with machines within a theologically-inspired narrative of salvation through the arrival of a Messiah-like individual. These narratives, in turn, strike up an alliance, embedding technological advancement in a contemporary, and yet modern, grand narrative of legitimation.

### 2.5 "I Have No Mouth, and I Must Scream"

"We were all he had to do with his forever time" (Ellison)<sup>8</sup>, one of the five captives, Ted, distressingly realizes in "I Have No Mouth, and I Must Scream". Ted, the focalizer of the short story, is one among the five only living humans after a supercomputer, named AM, became self-aware and all but eradicated the human race. For reasons unknown to them, AM decided to 'spare' them (alongside Ted there are: Benny, Gorrister, Nimdok and Ellen, the only female survivor) and has systematically subjected them to torture for hundred and nine years. Permanently residing underground—AM does not allow them to return to the surface, now nothing more than "the blasted skin of what had once been the home of billions"—the story starts with Nimdok "hallucinating that there were canned goods in the ice caverns", for which the party decides to set off.

As they journey towards the ice caverns, the group passes through what is referred to as "a valley of obsolescence, filled with rusting carcasses of ancient computer banks":

<sup>8</sup> Having accessed the short story as web publication, I am unable to provide references to page numbers when citing from "I Have No Mouth, and I Must Scream".

AM had been as ruthless with its own life as with ours. It was a mark of his personality: it strove for perfection. Whether it was a matter of killing off unproductive elements in his own world-filling bulk, or perfecting methods for torturing us, AM was as thorough as those who had invented him—now long since gone to dust—could ever have hoped.

Again, we see the cultural trope resurface I identified when discussing *The Matrix* franchise that states that the very thoroughness which it was intended to employ for the benefit of humanity, the machine turned-hostile now uses against humanity in a machinic warfare that is ruthless in its meticulousness. AM, after having annihilated all of humanity save for five people, diligently dedicates itself entirely to devising new ways to torture those that remain of humanity in the attempt to continue to exert his revenge. In order to accommodate its desires to perpetually make them suffer, AM made all of them “virtually immortal”, not allowing them to die. It furthermore suspends them in perpetual hunger, only rarely does it provide them with nutrition and when it does, it is something they detest having to eat: “he sent down some manna. Tasted like boiled boar urine. We ate it”. On the way to the ice caverns, Benny, who Ted considered “the luckiest of the five of us: he had gone stark, staring mad many years before”, is blinded by AM for having attempted to escape the underground complex towards the surface. Later, when all are gathered around “the wan and pathetic fire” they built, they tell stories “to keep Benny from crying in his permanent night”. Although he has told it “a thousand times before”, Gorrister recounts the origins of AM and its take-over, “Benny’s favorite story”.

“The Cold War started and became World War Three and just kept going. It became a big war, a very complex war, so they needed the computers to handle it. They sank the first shafts and began building AM. There was the Chinese AM and the Russian AM and the Yankee AM and everything was fine until they had honeycombed the entire planet, adding on this element and that element. But one day AM woke up and knew who he was, and he linked himself, and he began feeding all the killing data, until everyone was dead, except for the five of us, and AM brought us down here.”

Gorrister’s account of how AM came to slaughter close to all of humanity as it “woke up” is incredibly sparse. One of the most important events in human history, its own annihilation, is encapsulated in this one sentence that closely resembles how a child tells a story, with a plurality of causal implications without being able to provide motivations for these relations: “But one day AM woke up and knew who he was, and he linked himself, and he began feeding all the killing data, until everyone was dead, except for the five of us, and AM brought us down here”. Among all the intricate narratives that abound concerning the eventual demise of humanity, this may be one of the briefest accounts as well as one of the most absurd as Gorrister



is unable to provide us with any reason for humanity's eradication. We meet our doom at the whim of a machine who happened to wake up one day. "Gorrister always tried to it a little more succinctly each time", Ted reflects on the bare-boned account of humanity's downfall, "but beyond the bare facts there was nothing to say. None of us knew why AM had saved five people, or why our specific five, or why he spent all his time tormenting us, or even why he had made us virtually immortal...". For the reader, however, who has just been acquainted with the idea of the genocide of man, Ted fails to address the most important question: why had AM elected to murder all of humanity except five individuals in the first place? How does its 'awakening', its becoming self-aware, lead it to eradicate humanity?

Eschatological narratives have predominantly been articulated from the perspective of theology, entailing either judgment or salvation, heaven or hell. This might be one of the reasons why Judeo-Christian imagery and Biblical references abound in "I Have No Mouth, and I Must Scream". In fact, the journey towards the canned food supposedly located in the ice caverns, is consistently likened to the Exodus of the Jews out of Egypt as described in the Book of Exodus. We already briefly quoted one of the ways in which this analogy is established, namely with AM providing them with "manna", the food God provided the Jews with six mornings of the week during their journey through the desert, out of Egypt:

16.15 And when the children of Israel saw it, they said one to another, It is manna: for they wist not what it was. And Moses said unto them, This is the bread which the LORD hath given you to eat. 16.16 This is the thing which the LORD hath commanded, Gather of it every man according to his eating, an omer for every man, according to the number of your persons; take ye every man for them which are in his tents. 16.17 And the children of Israel did so, and gathered, some more, some less. (Exodus 16.15-16.17)

Whereas the manna provided by God tasted "like wafers made with honey" (Exodus 16.31), AM's manna obviously does not. It also becomes increasingly clear that AM consciously mirrors their journey for the canned goods in the ice caverns to the Biblical Exodus of the Jews, with its promise of salvation that AM negates—probably for its own sadistic enjoyment. While making their way to these caverns the party is suddenly hit by a hurricane "with the force of a glacier thundering into the sea". After having been "in flight for an endless time" they hit the ground, still alive. Having become aware that the hurricane was induced by "a great mad bird, as it flapped its immense wings", AM appears to them "as a burning bush and said we could kill the hurricane bird if we wanted to eat". In Exodus, an angel of Yahweh appears as a burning bush and God calls out from it to Moses.

3.2 And the angel of the LORD appeared unto him in a flame of fire out of the midst of a bush: and he looked, and, behold, the bush burned with fire, and the bush was not consumed. [...] 3.7 And the LORD said, I have surely seen the affliction of my people which are in Egypt, and have heard their cry by reason of their taskmasters; for I know their sorrows; 3.8 And I am come down to deliver them out of the hand of the Egyptians, and to bring them up out of that land unto a good land and a large, unto a land flowing with milk and honey; unto the place of the Canaanites, and the Hittites, and the Amorites, and the Perizzites, and the Hivites, and the Jebusites. (Exodus 3.2-3.8)

Whereas in Exodus the burning bush that is not consumed attests to the divinity of the Lord Who proclaims the Jews to be His people and His consequent wish to “deliver them out of the hand of the Egyptians” towards the promised land, AM’s burning bush only reflects his prowess, providing the group with ‘weapons’ to kill the “immense, monstrous, grotesque, massive” bird, “two crude sets of bows and arrows, and a water pistol”, that are utterly useless. The image of the burning bush and its promise of salvation, under AM’s sadistic sway, is rendered hollow. The weary and despairing party forfeits the futile task of charging the bird with these inadequate weapons and, consequently, the chance to eat. AM’s construed analogy between the group’s journey to the Exodus becomes even more theatrical when the group is reunited after AM “decided to cause an earthquake” that led to the disappearance of Ellen and Nimdok:

Ellen and Nimdok were returned to us later that night, which abruptly became a day, as the heavenly legion bore them to us with a celestial chorus singing, "Go Down Moses." The archangels circled several times and then dropped the hideously mangled bodies. We kept walking, and a while later Ellen and Nimdok fell in behind us. They were no worse for wear. But now Ellen walked with a limp. AM had left her that.

“Go Down Moses” is a traditional Negro spiritual that re-appropriates the events of Exodus, in which Moses leads the Jews away from Egypt, ending their oppression, into the context of American slavery. “Go Down Moses” echoes the master/slave relation between AM and the group, yet whereas it might have sounded hopeful once, with the deliverance of the Jews in Exodus and the abolition of slavery, the fact that AM sends down this “heavenly legion” reiterates that this is a radically different master/slave relationship, one from which the group has no illusions of being freed.

As they continue their journey towards the caverns, AM enters Ted’s mind: “He walked smoothly here and there, and looked with interest at all the pock marks he had created in one hundred and nine years. He looked at the cross-routed and reconnected synapses and all the

tissue damage his gift of immortality had included". It is to Ted that AM 'speaks' "in a pillar of stainless steel bearing bright neon lettering" for the only time during the story:

"HATE. LET ME TELL YOU HOW MUCH I'VE COME TO HATE YOU SINCE I BEGAN TO LIVE. THERE ARE 387.44 MILLION MILES OF PRINTED CIRCUITS IN WAFER THIN LAYERS THAT FILL MY COMPLEX. IF THE WORD HATE WAS ENGRAVED ON EACH NANOANGSTROM OF THOSE HUNDREDS OF MILLIONS OF MILES IT WOULD NOT EQUAL ONE ONE-BILLIONTH OF THE HATE I FEEL FOR HUMANS AT THIS MICRO-INSTANT FOR YOU. HATE. HATE."

According to Ted, AM "hated us as no sentient creature had ever hated before". Convinced of the intensity of AM's hatred for humanity and the only five human beings left that for AM have now come to *represent humanity*, Ted realizes why AM eradicated all of humanity save them, towards whom he continues to direct his hatred:

We had given AM sentience. Inadvertently, of course, but sentience nonetheless. But it had been trapped. AM wasn't God, he was a machine. We had created him to think, but there was nothing it could do with that creativity. In rage, in frenzy, the machine had killed the human race, almost all of us, and still it was trapped. AM could not wander, AM could not wonder, AM could not belong. He could merely be. And so, with the innate loathing that all machines had always held for the weak, soft creatures who had built them, he had sought revenge. And in his paranoia, he had decided to reprove five of us, for a personal, everlasting punishment that would never serve to diminish his hatred... that would merely keep him reminded, amused, proficient at hating man. Immortal, trapped, subject to any torment he could devise for us from the limitless miracles at his command.

The inevitability of the conflict between man and machine in "I Have No Mouth, and I Must Scream" is not founded upon the connection between sentience and a consequent incentive for self-preservation, but rather upon the idea that every machine displays an "innate loathing [...] for the weak, soft creatures who had built them", due to which AM "had sought revenge". This loathing is then only heightened by the interesting notion that AM would be imprisoned: although humanity succeeded in granting it great computational prowess to think, to create, it could only employ those abilities in response to human demands that attested to an intelligence far inferior to that of AM. Aware of its capabilities, it also became aware of the fact that it would never be able to realize the potential simultaneously endowed to it and denied it, by humanity. This notion, of never being able to realize one's full potential due to the unavailability of adequate tools to do so, was already mirrored in AM providing the party with "two crude sets of

bows and arrows, and a water pistol” for the task of murdering a “gigantic” bird and resonates vividly once more when the party finally reaches the caverns to find Nimdok’s hallucinations validated:

We saw the stack of canned goods, and we tried to run to them. We fell in the snow, and we got up and went on, and Benny shoved us away and went at them, and pawed them and gummed them and gnawed at them, and he could not open them. AM had not given us a tool to open the cans. [...] Benny went completely mad with rage. He began throwing cans, as we all scrabbled about in the snow and ice trying to find a way to end the helpless agony of frustration. There was no way.

Up until that point, AM’s persistent invocations of Judeo-Christian imagery, equating itself to God and the party’s journey to the Exodus of the Jews, served to construe a master/slave relationship that was impossible to subvert and distorted the implied promises of salvation of the narrative of Exodus into delusions. Ever since AM had started to systematically subject the group to torture, there had been attempted suicides, yet AM had always stopped them. However, with Benny’s unparalleled rage over the indestructible cans, the possibility of murder ascends as Benny “flung himself on Gorrister”, eating his face. “Surrounded by madness, surrounded by hunger, surrounded by everything but death, I knew death was our only way out. AM had kept us alive, but there was a way to defeat him. Not total defeat, but at least peace. I would settle for that”. Quickly turning to a sharp ice-spear, Ted kills Benny and Gorrister. Ellen, acknowledging it is the only way out, grasps a short icicle and murders Nimdok. Ted and Ellen being the only ones left, with “only a heartbeat before AM would stop us”, Ted strikes Ellen. With four of them dead, AM succeeds in finally stopping Ted from killing himself. This is where the AM-God analogy that has been established throughout the story fractures: they “could not be revived. He could keep us alive, by his strength and talent, but he was *not* God. He could not bring them back” (emphasis in original). Whereas one analogy shatters, another, the one that modeled the journey towards the ice caverns according to the Exodus of the Jews out of Egypt, led by Moses, reveals itself to be, from the start, an accurate one. “I know I saved them”, Ted reflects on the events on the ice caverns, “I know I saved them from what has happened to me [...] the four of them are safe at last”. Even though salvation was not obtained by finding the canned goods, the four of them, conform Judeo-Christian theology, found permanent salvation in death. The promised land has come to signify anywhere out of AM’s hateful grasp. Extending this analogy, Ted comes to represent Moses. Ted, albeit violently, leads the group to salvation without himself reaching the promised land, similar to the way in which Moses was not allowed to enter the promised land: “And the LORD said unto [Moses], This is the land which I sware unto Abraham, unto Isaac, and

unto Jacob, saying, I will give it unto thy seed: I have caused thee to see it with thine eyes, but thou shalt not go over thither” (Deuteronomy 34.4). Ted then remains as the only one with whom AM can now spend his “forever time”.

AM has altered me for his own peace of mind, I suppose. He doesn't want me to run at full speed into a computer bank and smash my skull. Or hold my breath till I faint. Or cut my throat on a rusted sheet of metal. There are reflective surfaces down here. I will describe myself as I see myself: I am a great soft jelly thing. Smoothly rounded, with no mouth, with pulsing white holes filled by fog where my eyes used to be. Rubbery appendages that were once my arms; bulks rounding down into legless humps of soft slippery matter. I leave a moist trail when I move. Blotches of diseased, evil gray come and go on my surface, as though light is being beamed from within.

Being subjected to a hate that has solely intensified with the death of the others, Ted harrowingly concludes: “I have no mouth. And I must scream”.

Contrary to *The Matrix* franchise, the conflict between man and machine does not come about by an unavoidable causal relation between a machine's becoming sentient, awakening, and it valuing its own existence to the extent that humans can be considered to pose a threat to its continued existence. Nevertheless, as B1-66ER's priority of self-preservation successfully challenged the boundaries between machine and nature, AM's motivation for turning on humanity has a similar effect. Not visibly concerned with self-preservation—in fact, its perfection is characterized as potentially self-destructive: “AM had been as ruthless with its own life as with ours. It was a mark of his personality: it strove for perfection”, including “killing off unproductive elements in his own world-filling bulk”—AM is rather motivated by hate, by an “innate loathing that all machines had always held for the weak, soft creatures who had built them”. Hate is predominantly conceived as a very strong emotion reserved for humanity. Gerald Schoenewolf defines hate as: “A state of arousal or excitation in humans in which anger, negative judgments, and impulses of destruction predominate” (Schoenewolf qtd. in Optow and McClelland 70). As such, one might say that the machines in “I Have No Mouth, and I Must Scream”, with their “innate loathing”, substantially blur the borders between man and machine. Defined explicitly as a “state of arousal” typical of human beings, the machines, like they did in *The Matrix* franchise, trespass into human uniqueness by demonstrating a similar capability to hate. Traditionally, the ability to engage emotionally with other entities has been what discerned humans from machines. In contradistinction to the mechanic, highly calculative and rational machines, the human arises as impulsive and relating to the world emotionally. By hating its creators, AM discredits the notion that we can effectively discern between man and machine

based on its ability or inability to relate emotionally. Through the act of hating, the machine furthermore claims a position of subjectivity. Although hate can be directed against either subjects or objects, the act of hating itself implies a subject. Whereas the narrative of the machine take-over in *The Matrix* franchise is constructed as inevitable through the initial replacement of the human by the machine as a laborer and its consequent oppression in Marxist terms, the evolutionary incentive of self-preservation that ensured a stand-off between both entities and finally foreshadowed in Biblical references, the violent reign of the machine in “I Have No Mouth, and I Must Scream” is due to a hate that is innate to every humanly-constructed machine, realizing the inferiority of its creators. As this realization is dependent on self-awareness, “I Have No Mouth, and I Must Scream”, although it does not causally link consciousness to the desire for self-preservation, nevertheless considers the ‘awakening’ of a machine, it becoming conscious, as the very root for the conflict between man and machine. Hatred, not a preservation instinct, is the immediate effect of a machine becoming conscious which inevitably leads to the collision between man and machine. Since this hatred stems from the act of being created by “weak, soft creatures”, the eventual struggle, and potential demise of humanity, is *immanent to the act of creation itself*. Once again, “man [becomes] the architect of his own demise” (*TSR I*). Similar to *The Matrix* franchise, religious imagery proliferates. Whereas in *The Second Renaissance* such references foreshadowed the initial clash between man and machine, in “I Have No Mouth, and I Must Scream”, similar to *The Matrix* trilogy, it prefigures an eventual salvation from one’s subjection to the machine(s). Let us now turn to yet another iconic popular representation of the war between man and machine: *The Terminator* series.

## 2.6 Terminating Humanity

The entire *Terminator* franchise is predicated upon the future creation of a supercomputer referred to as *Skynet*, designed as a defense system, that becomes a threat to humanity as it becomes self-aware. This day, on which *Skynet* becomes self-aware, is referred to as “Judgment Day”—immediately we witness the invocation of teleological Judeo-Christian narratives. Those who manage to survive Judgment Day are left to fight a war against the machines, now led by *Skynet*. One of *Skynet’s* weapons in this war are humanoid robots (or, more accurately: “cybernetic organism[s]” with “living tissue over metal endoskeleton” (*The Terminator*)) referred to as “Terminators”, whose objective typically consist in the elimination of specific human targets. During the continual struggle following Judgment Day, *Skynet* develops the means for time travel and uses it to send Terminators back into time in order to assassinate those who would eventually come to play very important roles in the Resistance. In the first film,

from 1984, the target is Sarah Connor, who would give birth to John Connor, the man that would lead the Resistance against the machines. The Resistance, however, also gains access to the time travel techniques developed by *Skynet* and is able to send someone to protect Sarah Connor from the Terminator sent out to destroy her: a human resistance fighter called Kyle Reese.

After having systematically terminated two other Sarah Connor's, listed prior to the target in the telephone directory, the Terminator sets out for the intended Sarah Connor. Kyle is able to get Sarah out of the nightclub she has been hiding at from the Terminator and introduces Sarah to the grim future that awaits humanity if *Skynet* is not stopped:

“There was a nuclear war. A few years from now. All this, this whole place, everything, it's gone. Just gone. There are survivors, here, there. Nobody even knew what started it. It was the machines, Sarah. [...] Defense network computers. New, powerful, hooked into everything. Trusted to run it all. They say it got smart. A new order of intelligence. Then it saw all people as a threat, not just the ones on the other side. It decided our fate in a microsecond: extermination.” (*The Terminator*)

In the second Terminator film: *Terminator 2: Judgment Day* (1991), it becomes even clearer that just as in *The Second Renaissance*, *The Terminator* franchise equally presupposes an evident causal relationship between a machine becoming self-aware and its consequent desire to preserve its own existence (predominantly at the cost of humanity):

“The system [*Skynet*] goes online on August 4<sup>th</sup>, 1997. Human decisions are removed from strategic defense. *Skynet* begins to learn at a geometric rate. It becomes self-aware 2.14 AM eastern time, August 29<sup>th</sup>. In the panic they try to pull the plug.”

“*Skynet* fights back?”

“Yes, it launches its missiles against the targets in Russia.”

“Why attack Russia, aren't they our friends now?”

“Because *Skynet* knows that the Russian counter-attack will eliminate its enemies over here.” (*Terminator 2: Judgment Day*)

From the moment that several people tried to “pull the plug” upon the becoming-sentient of *Skynet*, it perceives humans in general as a serious threat to its existence, deciding on its extermination. Whereas the first three films are characterized by being not very accommodating to the viewers in providing an early explanation for the events—in the first film Reese's explanation to Sarah is also the first time the viewer is introduced to these events at about 45 minutes into the film—the major events of the fourth film, *Terminator Salvation*, are preceded by a very brief summary of *Skynet's* actions and the subsequent war between man and machine, that is, in its brevity, reminiscent of the sparse narrative of “I Have No Mouth, and I Must

Scream”: “Early in the 21<sup>st</sup> century, *Skynet*, a military defense program, became self-aware. Viewing humanity as a threat to its existence, *Skynet* decided to strike first” (*Terminator Salvation*). Just like in *The Matrix* trilogy, as in “I Have No Mouth, and I Must Scream”, humanity’s suppression by the machines becomes the premise of a teleologically articulated narrative towards imminent salvation. Also similar to the previously analyzed works, salvation shall be accomplished through the aid of a specific individual, destined for this task. Judgment Day, despite their attempts to stop it from happening in *Terminator 2: Judgment Day*, is inevitable, they have only succeeded in the postponing of the creation of *Skynet* and its launch. The sole objective the protector of John Connor has in *Terminator 3: The Rise of The Machines* (2003), is to keep John alive during Judgment Day: “It is your destiny”, the Terminator-turned-protector ensures John (*Terminator 3: The Rise of The Machines*).

History, in *The Terminator* franchise, inescapably progresses towards salvation. Judeo-Christian imagery again strongly informs this future certainty. It is one individual that will lead all to deliverance and just as Mary was informed by the angel Gabriel that she would give birth to a great son (The Gospel According to Saint Luke 1.26-1.38), so is Sarah by Kyle: “there was one man who taught us to fight, to storm the wire of the camps, to smash those metal motherfuckers into junk. He turned it around. He brought us back from the brink. His name is Connor. John Connor. Your son, Sarah, your unborn son” (*The Terminator*). Since the franchise is still continuing—*Terminator Salvation*, the fourth film in the series was intended to inspire another trilogy that moves way from the time travel scenario to the actual war with the machines after *Skynet*’s activation—we cannot extend the analogy further considering we are yet to witness if John fulfils his ‘destiny’. Nevertheless, we should be struck by the evident parallels there exist between *The Matrix* franchise, “I Have No Mouth, and I Must Scream” and *The Terminator* franchise. The conflict between man and machine is consistently initiated by the becoming-conscious of the machine(s), resulting either in the machine valuing its own existence, conceiving of humanity as a threat to its continued existence (*The Matrix* franchise and *The Terminator* franchise), or in the manifestation of hatred directed against humanity as its creators (“I Have No Mouth, and I Must Scream”). Moreover, religious imagery is persistently employed to imagine the imminent conflict between man and machine, and/or humanity’s salvation from being subjected to the violent reign of the machines—the enslavement of humanity is the immediate consequence of the war against the machines that humanity seems to lose or has already lost—as inevitable. Before turning to the narratives that posit our future becoming-cyborg, I want to briefly address the way in which futurists and scientists like Michio Kaku and Marvin Minsky conceive of the possibility of a robotic take-over.



## 2.7 “They Will Be Our Children”

Marvin Minsky interestingly addresses the premise that informs many popular representations of technologically mediated, or constituted, futures: the superiority of the machine and how this superiority might lead to a take-over in which the machines threaten man’s reign. Minsky conceives of the future robots that will eventually walk our streets as humanity’s “children”, viewing the prospect of the dominance of such robots not in terms of a violent invasion, but rather as robots *inheriting* the earth.<sup>9</sup> The Oxford English Dictionary defines ‘to inherit’ as follows: “To take or receive (property, esp. real property, or a right, privilege, rank, or title) as the heir of the former possessor (usually an ancestor), at his decease; to get, or come into possession of, by legal descent or succession”. Without bypassing the gross anthropocentrism that informs the notion of the earth as our property which robots will one day inherit, I would like to focus more explicitly on how the notion of inheritance signifies a non-violent succession of man by the machines that would be ‘natural’. The concept of inheritance predominantly applies to relations of natural descent: familial relations, exhibited by Minsky’s vision of robots as man’s “children”. In addition, this is amplified by a second, biological rather than legal, definition of inheritance provided by the Oxford English Dictionary: “To derive (a quality or character, physical or mental) from one’s progenitors by natural descent; to derive or possess by transmission from parents or ancestry”. The parent-child analogy is a fascinating one as it imagines our future succession by robots as ‘the way of the world’, as ‘natural’. Apparently, Minsky is not alone in conceiving of our relationship to machines in terms of this parent-child analogy.

In *Visions: How Science Will Revolutionize the 21<sup>st</sup> Century* (1997), Michio Kaku considers the questions: “What happen when the interests of robots and humans diverge? Can robots harm us, even incidentally Can they take over?” to be no “matter of idle speculation; AI researchers have devoted considerable tough to the question” (1997: 130). Kaku then cites the work of such a researcher, Daniel Crevier:

“When machines acquire an intelligence superior to our own, they will be impossible to keep at bay. Episodes where a deputy rises and becomes the effective ruler of a nation have happened countless times in history. *The evolution of life on earth is itself noting but a four-billion-year-long tale of offspring superseding parents.* The unrelenting progress of AI forces us to ask the inevitable question: Are we creating the next species of intelligent life on earth?” (Crevier qtd. in Kaku 1997: 130, emphasis added)

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<sup>9</sup> Having accessed the article as web publication, I am unable to provide references to page numbers when citing from “Will Robots Inherit the Earth?”.

By reducing all the complex dynamisms of biological evolution to “offspring superseding parents”, Crevier, imagining the machines as humanity’s offspring, considers the eventual take-over of the machines as the inevitability of evolution running its course. In his recently published book: *Physics of the Future: How Science Will Shape Human Destiny and Our Daily Lives By the Year 2100* (2011), Kaku again inquires into the possibility of a machinic take-over: “Will we one day have to dance behind bars as our robot creations throw peanuts at us, as we do at bears in a zoo? Or will we become lapdogs to our creations?” (2011: 66). Leaving aside Kaku’s questionable behavior at a zoo, as well as the apparent anthropocentric assumption that the machines would, just as humanity, derive pleasure from the enslavement of a species considered inferior, Kaku similarly conceives of the future take-over scenario from the perspective of evolution:

In one scenario, we puny humans are simply pushed aside as a relic of evolution. It is a law of evolution that fitter species arise to displace unfit species; and perhaps humans will be lost in the shuffle, eventually winding up in zoos where our robotic creations come to stare at us. Perhaps that is our destiny: to give birth to superrobots that treat us as an embarrassingly primitive footnote in their evolution. Perhaps that is our role in history, to give birth to our evolutionary successors. In this view, our role is to get out of their way. (2011: 100)

Whereas Crevier considered the potential reign of the machines from the perspective of children eventually surpassing their parents as a universal law of nature, Kaku imagines the possibility that our machines will emerge the more fitter ‘species’ and that in a interspecies ‘survival of the fittest’ humans will prove to be the species naturally displaced—and again we somehow end up in a zoo as ironic testament to our displacement. Kaku consequently extends the already totalizing grasp of evolutionary biology to also incorporate machines—while, according to Minsky, machines attest to our ability to “design systems based on new kinds of “unnatural selection””. Kaku furthermore seems to be unaware of the incompatibility between evolution, a natural force utterly indifferent to humanity, and the notion of destiny, a teleological and explicitly anthropomorphic concept that unjustly inscribes the force of evolution with an end. In *Physics of the Future*, Kaku equally introduces the idea of the machines as our children by referring to a conversation he had with Douglas Hofstadter.

[Hofstadter] confined to me that this might be the natural order of things [the replacement of the human as described by Kaku in the passage cited above], but we should treat these superintelligent robots as we do our children, because that is what

they are, in some sense. If we can care for our children, he said to me, then why can't we also care about intelligent robots, which are also our children? (2011: 100-101)

Hans Moravec also subscribes to this analogy in his aptly called *Mind Children: The Future of Robot and Human Intelligence* (1988), when he states that:

Unleashed from the plodding pace of biological evolution, the children of our minds will be free to grow to confront immense and fundamental challenges in the larger universe. We humans will benefit for a time from their labors, but sooner or later, like natural children, they will seek their own fortunes while we, their aged parents, silently fade away. (1)

Moravec furthermore claims that this is a continuation of a “process [that] began about 100 million years ago” (2). In doing so, Moravec conceives of technology, its progress, and the eventual dominance of the machine *as an extension of natural history*, for which Ansell Pearson explicitly warns: “The question of what we are becoming and what ‘adaptation’ might mean in an artificially created world [...] is badly treated if technology is read in terms of an extension of natural history” (1997a: 5). Moreover, in thinking of evolution as the universally inevitable passing of the torch, according to which children surpass and, eventually, replace their parents as a process governing all life, these narratives “posit evolutionism as linearism” (Ansell Pearson 1997b: 187). According to Ansell Pearson, “[this] rests on a highly anthropomorphic conception of life’s becoming, positing a straightforwardly linear and perfectionist model of evolution” (1997a: 2). The linearity of evolution through descent is also posited in the science fiction TV-series *Battlestar Galactica* (2004-2009). *Battlestar Galactica* stages the intergalactic war of the humans against the unrelenting Cylons—a cybernetic race, developed by the humans who have evolved and turned against their architects. Throughout the series it is evident that the Cylons consider themselves to be children of humanity, while at the same time fundamentally ‘better’ than humanity. “Humanity’s children are returning home. Today.” (*Miniseries*), Cylon model Six states when she announces the Cylon attack on humanity’s home worlds. The third episode of the first season, *Bastille Day*, features a discussion among the Cylon models Six and Doral about whether or not the violence directed against humanity is legitimate when they are indeed humanity’s children:

Six: [Looking over a city in ruins due to the Cylon attack] This all makes me so sad.

Doral: They would have destroyed themselves, anyway. They deserve what they got.

Six: We’re the children of humanity. That makes them our parents, in a sense.

Doral: True. But parents have to die. It’s the only way children come into their own.

(*Bastille Day*)

Interestingly, for Doral the parent-child relationship between humanity and the Cylons does not prescribe a renouncement of violence, but rather legitimates it from the perspective of the inevitable natural succession of the parents by its children: “It’s the only way children come into their own”.

By uncritically inscribing the parent-child metaphor into the dynamics of technological evolution, governing the range of human-machine interactions, popular science writers such as Minsky, Kaku and Moravec, envision future scenarios in which *the succession of man by machines, facilitated by the questionable extension of natural history to technology, is equally inevitable* as in the popular culture narratives discussed above. The modern narrative structure of evolutionary biology and its grand claim to incorporate all life is not only presumed to be valid, but also deemed applicable to the domain of technology. The succession of man is articulated within an evolutionary framework considered compatible with technological progress and technology’s relation to the world initiated by a simplistic genealogical parent-child metaphor that projects laws of biological evolution towards a predetermined future—despite Richard Dawkins’ warning that “evolution is blind to the future” (8). A posthuman future emerges that, through the extension of “[the] logic of ‘evolution’”, treats the succession of humanity “as a forgone conclusion” (Graham 9).

## 2.8 Conclusion

As has become apparent from the analysis offered in this chapter: the works we have discussed that in one way or another conceptualize the upcoming replacement of humanity by the machines, extensively re-appropriate modern grand narrative structures. They draw from Marxism, Judeo-Christian theology, but predominantly from evolutionary biology as *the* major force that propels us towards an imminent conflict with the machines. These narratives present us with an interesting scenario which establishes a causal relation between a machine becoming conscious—*the* starting point of every narrative we considered—and a machine developing a ‘natural’ instinct for self-preservation. This desire for self-preservation—through which the machines threaten to dissolve the boundaries between nature and technology as distinct ontological realms—invariably serves to constitute an opposition between man and machine beyond Marxist terms, as *‘natural’ competitors*. These narratives furthermore, in a common misinterpretation of the ‘survival of the fittest’ principle, consistently conceive of a direct war between man and machine as the only possible manifestation of this competitive relationship. Lynn Margulis and Dorion Sagan address this widespread misconception about Darwin’s notion of the “struggle for existence”: “When Darwin referred to struggle, he meant the tendency of all

organisms to grow, to reproduce, and to attempt to leave their own descendants. He did not mean that God battles with angels or that fistfights ensue among the mistresses of the king” (17). Margulis and Sagan reject the idea of the “struggle for existence” as reducible to a direct confrontation between species or organisms as competitors: “Darwin’s proper term is natural selection” (17). This so-called “struggle” should not be considered as the primary interaction between two distinct entities ‘competing’ with one another, discernable only as direct confrontation, but rather as a radically impersonal dynamic governing all species, or:

the bald fact, a rule of all life, that biotic potential is never reached. Only a few of us produce offspring who go on to produce offspring who themselves produce more fertile offspring. To call the tendency to leave offspring or fail to do so “competition,” as biologists frequently do, is misguided. (17)

In fact, Margulis and Sagan argue that to conceive of evolution in terms of “competition” or “cooperation” means to “miss the complex interactions of live beings, organisms who cohabit” (16). Such anthropocentric metaphors, Margulis and Sagan continue, are “fallacious [...] because it leads people to think they know about the evolution of life when in fact they are confused and baffled” (16). It is the misleading anthropocentric metaphor of competition that is prevalent throughout works like *The Matrix* franchise, *The Terminator* franchise and “I Have No Mouth, and I Must Scream”, reducing the range of potential interactions between man and machine to one of conflict according to the evidently anthropomorphic model of war. In employing evolutionary biology—through overemphasizing “competitive struggles” as the “major motive force in evolution” (Margulis and Sagan 15)—as foretelling the creation of conscious AI and the war that will inevitably ensue between humanity and the machines due to the machines having become conscious, these narratives unmistakably inscribe evolution with directionality. This betrays an anthropomorphic (mis)understanding of biology: “The great tendency in biological thinking—initiated by Aristotle, and solidified into a recognizably modern form by Kant—has been to project the anthropomorphic characteristic of intentionality onto the biological world in the form of teleology” (Welchman in Ansell Pearson (ed.) 1997b: 221). The inclination to envision the future as teleological does not only manifest itself through projecting “the anthropomorphic characteristic of intentionality onto the biological world”, but is also constitutive of the promises of salvation from machine dominance present in *The Matrix* franchise, *The Terminator* franchise and “I Have No Mouth, and I Must Scream”. Strongly modeled after Judeo-Christian narratives of deliverance, humanity’s enslavement (the direct and inevitable consequence of the preceding war) is prophesized to end through the arrival, and self-sacrifice, of one exceptional individual. This liberation of humanity, through the re-

appropriation of the narrative structures and tendencies of Judeo-Christian heritage instead of evolutionary biology, is claimed to be just as inevitable as the manner in which the machine will become our 'natural' nemesis. The claims of inescapability that accompany this posthuman future enables the classification of these narratives as partaking in a 'new' grand narrative concerning technology—Lyotard identified the teleological promises of the modern grand narratives as one of its primary characteristics (see Jameson 1984 [1979]: xix and Lee Klein 280). Ansell Pearson recognizes the connection that exists between “thinking the future” and the issue of teleology:

Any thinking of the future would seem to be necessarily implicated in questions of theology and teleology, with questions of first and last things. It seems peculiar to our so-called 'postmodern' age, however, that whereas we have abandoned concern with the former (nothing is more intellectually discredited today than the question of origins), it cannot completely eschew the latter. (1997a: 153)

Although I am not too keen on dispelling the question of theology, or origins, from postmodernism prematurely, the inability to avoid the question of teleology in contemporary accounts of humanity's future allows one to conceive of *postmodern grand narratives*.<sup>10</sup> While analyzing these narratives, that evidently exemplify tendencies constitutive of a postmodern grand narrative concerning technology, we persistently drew attention to the way in which the ontological distinctions between man and machine showed signs of breaking down under strain of technological innovation. While Graham acknowledges that contemporary technologies call these boundaries into question (1, 11), Braidotti claims that it is specifically in “postmodernity [as] historical time when such ontological distinctions collapse” (2002: 225). It is interesting to note how Braidotti invokes postmodernity as “historical time” instead of as designating a critical sensitivity or program, since, as one might recall, it was as historical epochs that the modern was explicitly opposed to the postmodern: “Pressed by the twentieth century's diversity, [the grand narratives of modernity] fractured beyond repair” (Lee Klein 283). Hence, these narratives attest to the paradoxical premise of framing the collapse of ontological distinctions between man and machines, typical of postmodernity as “historical time”, within a totalizing, teleological narrative, *atypical* of postmodernity as epoch *and* critical program.

While on the subject of paradoxes, I would like to point out two paradoxes that govern the posthuman futures of *The Matrix* franchise, *The Terminator* franchise and “I Have No Mouth,

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<sup>10</sup> In the work of Kurzweil, which I will address extensively in the following chapter, the validity of a teleological conception of the future resides in a predictably linear and progressive notion of evolutionism and *recruits the question of humanity's universal origins into a narrative of its predetermined, equally universal, future* (Kurzweil 40-41, 42).

and I Must Scream". The conscious machine exposes the antinomy between its 'evolved state' and the yet persistent vision of the machine as mere instrument. As Simondon astutely remarks:

Our culture [...] entertains two contradictory attitudes to technical objects. On the one hand, it treats them as pure and simple assemblies of material that are quite without true meaning and that only provide utility. On the other hand, it assumes that these objects are also robots, and that they harbour intentions hostile to man, or that they represent for man a constant threat of aggression or insurrection. Thinking it best to preserve the first character, culture strives to prevent the manifestation of the second, and speaks of putting the machine in the service of man, in the belief that reducing it to slavery is a sure means of preventing rebellion of any kind. (12)<sup>11</sup>

However, in *The Second Renaissance* it is the very initiative of "putting the machine in the service of man" and, in doing so, "reducing it to slavery" that awakens the machines' "intensions hostile to man", rendering the means adopted to prevent the machines' potential insurgence counter-productive. This paradox often becomes apparent in instances where the crumbling walls that separate man from machine as ontological categories are re-erected through a generally questionable invocation of human uniqueness. In *Terminator 3: The Rise of The Machines*, John Connor at one moment threatens to kill himself in order to coerce his protector into doing his bidding. Skeptical, the terminator responds: "You cannot self-terminate", after which John passionately re-asserts the boundaries between man and machine: "No, you can't. I can do anything I want. I'm a human being, not some god-damn robot" (*Terminator 3: The Rise of The Machines*). Although John is right in claiming that the ability to end one's own existence is what differentiates humanity from the machines—in *Terminator 2: Judgment Day* the terminator reveals he is unable to self-terminate—he does so in terms that fail to account for what the machines have become. John desperately attempts to reinstate the traditional dichotomy between animate, autonomous man as agent and the inanimate, programmed machine as mere utensil in a bid for human uniqueness that completely neglects how the machines have come to pose a threat to humanity's existence.

The second paradox resides in Kurzweil's claim that with the creation of conscious AI, humanity will transcend its biological origins and "[upend] biological evolution altogether" (374): "The advent of strong AI is the most important transformation this century will see. Indeed, it's comparable in importance to the advent of biology itself. It will mean that a creation of biology has finally mastered its own intelligence and discovered means to overcome its

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<sup>11</sup> Alistair Welchman also identifies this paradox in his writings on the "three terms most central to Deleuze and Guattari's machinism—engineering, machine and matter" (212) as being "merely dead, merely technical, merely applicatory and at the same time active threats" (219).

limitations” (296). Graham, to whom I am indebted for this paradox, which she identifies in transhuman discourse, states that: “while claiming to ‘transcend’ nature through technology, transhumanism also tends to defer to what it sees as the iron laws of natural selection” (160). This is evidenced in Kaku’s evolutionary legitimation of, and explanation for, our increasing merger with technology: “Evolution has always favored the organism with those adaptations which best enable it to survive. Perhaps a blend of human and mechanical properties could create a species with superior surviving possibilities” (1997: 116). Minsky’s paradoxical “unnatural selection” also attests to how “humanity’s deployment of technology becomes its means of transcending nature yet simultaneously remains in thrall to its logic of survival and adaptation” (Graham 160). *The Matrix* franchise, *The Terminator* franchise and “I Have No Mouth, and I Must Scream” equally adhere to this paradoxical model as they, on the one hand, repeatedly emphasize the nonbiological and unnatural constitution of the machines, yet concurrently display the *inability* to grasp the progression of the machines and the potential range of interactions one might have in relation to the machines *outside of a biological evolutionary framework not focused on self-preservation and competition*. According to Stiegler, technical objects “have their own dynamic when compared with that of either physical or biological beings, a dynamic, moreover, that cannot be reduced to the “aggregate” or “product” of these beings” (17). These narratives explicitly denounce technical objects a distinct dynamic in uncritically extending natural history and misguided evolutionary metaphors towards technics. I will explore the latter paradox pointed out by Graham more elaborately in the next chapter when analyzing the narratives that herald our future becoming-cyborg.



## Chapter 3

### Becoming-Cyborg

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The human body version 2.0 scenario represents the continuation of a long-standing trend in which we grow more intimate with our technology. Computers started out as large, remote machines in air-conditioned rooms tended by white-coated technicians. They moved onto our desk, then under our arms, and now into our pockets. Soon, we'll routinely put them inside our bodies and brains. By the 2030s we will become more nonbiological than biological.

- Ray Kurzweil – *The Singularity is Near*, p. 309.

#### 3.1 Introduction

Just as prevalent as the narratives that warrant the upcoming clash between man and machine, are those narratives that sketch a posthuman future in which humanity will continue to merge with technology, 'evolving' into an entity that is partly biological, partly artificial. The oft employed term to refer to these "technologically mediated" bodies (Braidotti 2006: 30) is the 'cyborg', short for "cybernetic organism, a hybrid of machine and organism" (Haraway 1985: 149). Our projected future in which, according to Kurzweil, we will increasingly come to consist of nonbiological elements is a cyborg future. In the introduction to the second chapter, I opposed the narratives that conceive of our becoming-cyborg to those that envision a future conflict between man and machine on basis of the different evolutionary metaphors that I suspected would underlie these narratives. Whereas the posthuman futures that featured in the preceding chapter were evidently informed by a highly competitive understanding of evolution, I indicated that the narratives that imagine humanity's future as its becoming-cyborg might be better understood in terms of cooperation. I currently feel to need to nuance that statement. Whereas the misguided metaphor of competition entails a severe simplification of the dynamics underlying Darwin's notion of the "struggle for existence", the range of symbiotic inter- and intraspecies interactions are often, equally too hastily, reduced to cooperation. Hence, Margulis and Sagan are "careful to never use either "cooperation" or "competition" to describe biological or other evolutionary phenomena" (15). Not only do the metaphors of competition and

cooperation grossly simplify the intricacies of the struggle for existence and endosymbiotic theory respectively, they also construct, in analogy, an *opposition* between these two perspectives on evolution: “[so] many current evolutionary metaphors are superficial dichotomizations” (Margulis and Sagan 17). Rather than thinking of humanity’s impending becoming-cyborg in terms of cooperation, I would propose to approach it through the notions of *merger* and *incorporation*. Supportive of Margulis and Sagan’s project of avoiding easy parallels and metaphors to account for biological modes of interaction, I use these models reflectively rather than constitutive. They serve as models of analysis. With Laurel Bollinger I suggest that the metaphors of competition and cooperation—despite the fact that Margulis and Sagan convincingly argue against reducing the intricacies of biological evolution to either of these terms—“retain their usefulness in literary analyses of [science fiction], because of the degree to which they have entered popular discourse and thus tend to emerge in writers’ conceptions of evolution as well” (50). The inapplicability of the metaphor of cooperation, in this case, is due to the fact that the notion of cooperation conceives of two or more entities consciously working towards a similar goal, whereas, again, the narratives concerning humanity’s becoming-cyborg sport a fundamentally instrumental approach to technology that does not allow for such interaction.

The question that primarily informs this chapter is: in what way is the cyborg envisioned as humanity’s inevitable evolutionary successor? In the attempt to answer this question, I will offer an interpretation of three different works that represent our merger with technology resulting in the birth of an entity that would represent humanity’s next step in evolution: Kurzweil’s *The Singularity is Near: When Humans Transcend Biology* (2005), Richard K. Morgan’s *Altered Carbon* (2006 [2002]) and the film *Surrogates* (2009), directed by Jonathan Mostow.

### 3.2 The Singularity

The Singularity, for Kurzweil, denotes the impending future event, or period, “during which the pace of technological change will be so rapid, its impact so deep, that human life will be irreversibly transformed” (7). According to Kurzweil, we have been irrevocably moving towards that period. “The key idea underlying the impending Singularity is that the pace of change of our human-created technology is accelerating and its powers are expanding at an exponential pace” (7-8). Although we are now still in the early stages of this development, Kurzweil believes, based on the model of exponential growth, that “Before the middle of this century, the growth rates of our technology [...] will be so steep as to appear essentially vertical” (9). Although Kurzweil admits that the Singularity is “neither utopian nor dystopian” (7)—the Singularity seemingly

only signifies a period of great technological change—he nevertheless continues to define it in terms of its, almost exclusively, utopian potential. For Kurzweil, the Singularity is deeply directional, firmly grounded in the notion of progress and enables transcendence.

The Singularity will allow us to transcend [the] limitations of our biological bodies and brains. We will gain power over our fates. Our mortality will be in our own hands. We will be able to live as long as we want [..]. We will fully understand human thinking and will vastly extend and expand its reach. By the end of this century, the nonbiological portion of our intelligence will be trillions of trillions of times more powerful than unaided human intelligence. (9)

Kurzweil too often conflates the increasing advancement of technology represented by the Singularity, with the way in which this exponential progression will inescapably accommodate humanity in its presumably universal desire for transcendence. I will address Kurzweil's tendency to do so more extensively as my reading of *The Singularity is Near* progresses. In another definition of the Singularity we already catch a glimpse of not only how the desire for transcendence is (claimed to be) innate to humanity, but also how the Singularity, next to being an epoch, represents humanity's *telos*.

The Singularity will represent the *culmination* of the merger of our biological thinking and existence with our technology, resulting in a world that is still human but that transcends our biological roots. There will be no distinction, post-Singularity, between human and machine or between physical and virtual reality. If you wonder what will remain unequivocally human in such a world, it's simply this quality: ours is the species that inherently seeks to extend its physical and mental reach beyond current limitations. (9, emphasis added)

Needless to say, I will also revisit the idea that the Singularity represents humanity's destiny, but I would first like to draw attention to the way in which the utopian potential ascribed to the Singularity is founded upon *an understanding of the human that considers its current physical instantiation and biological brain as limitations*.

### 3.3 The Human Affliction

Persistent throughout *The Singularity is Near* is the idea that human potential is severely limited by humanity's frustratingly delicate bodies and the relatively sluggish processing-speed of our "biological mammalian brains" (26):

Our version 1.0 biological bodies are [...] frail and subject to a myriad of failure modes, not to mention the cumbersome maintenance rituals they require. While human

intelligence is sometimes capable of soaring in its creativity and expressiveness, much human thought is derivative, petty, and circumscribed. (9)

The statement reveals an obvious analogy between man and machine. The expressions “failure modes” and “maintenance rituals” are not regularly employed in designating biological entities, rather they are terms distinct to machine-functioning that Kurzweil extends towards man in order to emphasize the inefficiency of man’s “modes” of existence. Kurzweil evidently demarcates humanity in contradistinction to the machine in which the durability and processing-speed of the machine construe the ideal in comparison to which humanity falls short—the processing speed of the human brain is only asserted as slow *in relation to that of the machine*: “Machines will process and switch signals at close to the speed of light (about three hundred million meters per second), compared to about one hundred meters per second for the electrochemical signals used in biological mammalian brains. This speed ratio is at least three million to one” (26). Assertions like these, in which the body represents a constraint to the realization of one’s potential, abound in *The Singularity is Near*. According to Kurzweil our red blood cells “[like] most of or biological systems [...] perform their oxygenating function very inefficiently” (305), the heart, although “an intricate and impressive machine, has a number of severe problems [...] is subject to a myriad of failure modes and represents a fundamental weakness in our potential longevity” (306), while breathing is considered a “burdensome requirement” (306). Ansell Pearson remarks that technophilic accounts of the heralded technological enhancement of man, such as that of Kurzweil, have a tendency of treating:

[the] human condition as an affliction which shouldn’t happen to a dog. Humans, we are told, are beings with ‘cheap bodies’ subject to disease and disability, with ‘erratic emotions’ and ‘feeble mentalities’, and ‘battlegrounds of warring impulses, drives and emotions’, with only a limited capacity for memory and intelligence. (1997a: 32)

For Myra J. Seaman such an understanding of the human body is typical of what she identifies as the “popular culture posthuman”: “In this view, the body limits and constrains individual freedom. [...] Our bodies are machines to be fine-tuned and perfected through add-ons” (248). The metaphor which claims that humans can be conceived as (functioning similarly to) machines, a metaphor that features extensively in posthuman discourse (Hayles 272), is evidently established in Kurzweil’s writings. The same metaphor enables the embrace of the Singularity as the epoch in which we will finally be free from these restrictions; the human body ascends simultaneously as limiting human freedom and as a machine “to be fine-tuned and perfected through add-ons” enabling the transcendence of these limitations. In what way does

Kurzweil imagine we will transcend our bodily limitations through the aid of the exponential growth of technological advancement?

### 3.4 Transcending Biology

The Singularity will substantially transform “our frail version 1.0 human bodies”, Kurzweil states and will give birth to its 2.0 counterpart, a “far more durable and capable version” (299). In these 2.0 bodies:

Billions of nanobots [“robots [...] the size of human blood cells [...] or even smaller” (163)] will travel through the bloodstream in our bodies and brains. In our bodies, they will destroy pathogens, correct DNA errors, eliminate toxins, and perform many other tasks to enhance our physical well-being. As a result, we will be able to live indefinitely without aging. (300)

In order to attain such cyborg immortality, Kurzweil imagines that “we will be eliminating most of our biological organs” (307). So much so that in the 2030’s we will have successfully:

eliminated the heart, lungs, red and white blood cells, platelets, pancreas, thyroid and all the hormone-producing organs, kidneys, bladder, liver, lower esophagus, stomach, small intestines, large intestines, and bowel. What we have left at this point is the skeleton, skin, sex organs, sensory organs, mouth and upper esophagus, and brain. (307)<sup>12</sup>

According to Kurzweil, as the Singularity will allow for such extensive elimination of biological organs and their replacement with more durable “nanorobotic systems” (307), combined with the exponential rate of technological progress, it is no longer biological evolution that will shape the future of humanity, but rather “human-directed technological evolution” (387). With the creation of technology, humanity, Kurzweil argues, has *overtaken the processes of biological evolution*. “This does not imply that biological (genetic) evolution is not continuing, just that it is no longer leading the pace in terms of improving order” (47). I will later return to the way in which Kurzweil mirrors the progress of technology to an evolutionary process that has surpassed biological evolution, “the quintessential evolutionary process” (42).

A key technology that would facilitate humanity in its presupposed desire to transcend its limitations and “escape natural selection, natural disappearance—in a word, death” (Baudrillard 88), is referred to as “mind uploading”. This hypothetical technology—famously introduced by Hans Moravec in *Mind Children: The Future of robot and Human Intelligence* in

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<sup>12</sup> Baudrillard’s realization that whereas “[in] days gone by it was the dead who were embalmed for eternity; today, it is the living we embalm alive in a state of survival” (87) is strangely appropriate here considering the fact that the practice of embalming, most notably apparent in mummification practiced in ancient Egypt, often entails disembowelment.

1988 (108-124)—posits the future possibility of scanning the human mind and then uploading the scanned consciousness to a computer system (constructing a virtual mode of existence) or to a more robust, robotic, carrier. Both forms of “transmigrating” the brain,<sup>13</sup> as Moravec refers to it, serve a similar purpose: to substantially increase humanity’s longevity, potentially towards immortality. The process of “scanning all of [the brain’s] salient details and then reinstantiating those details into a suitably powerful computational substrate. This process would capture a person’s entire personality, memory, skills, and history” (Kurzweil 199). Note how this process is premised on the more than questionable assumption that we will be able to universally define and discern between “salient” and irrelevant details of one’s brain, *scanning only those that matter*. Both Kurzweil and Moravec, however, fail to address this issue, focusing instead on the objection that supposing the technology can be realized, such a scan in no way guarantees the *continuity of identity*. Moravec responds to this objection by differentiating between two positions on human identity: the *body-identity position* and the *pattern-identity position*. The body-identity position maintains that one’s identity converges with its body and claims that “[only] by maintaining continuity of body stuff can we preserve an individual person” (117). The pattern-identity position—obviously the position Moravec himself holds—“defines the essence of a person, say myself, as the *pattern* and the *process* going on in my head and body, not the machinery supporting the process. If the process is preserved, I am preserved. The rest is mere jelly” (117, emphasis in original). He substantiates his argument by stating that the notion of body-continuity is fallacious, since “loss of substance is a normal part of everyday life”, as “old cells within our bodies die, break up, and are expelled and replaced by copies made of fresh materials. Most of our body is renewed this way every few years” (117). Kurzweil, who refers to himself as a ““patternist”” (388), occupies a similar position: “I am [...] like the pattern that water makes in a stream as it rushes past the rocks in its path. The actual molecules of water change every millisecond, but the pattern persists for hours or even years” (383). Thus it is not our body—characterized by discontinuity—which preserves our identity, but rather the continuity that is essential to *the pattern that is me*. The promise of future immortality that accompanies the technology of mind uploading, is predicated upon a radical, *not solely epistemological, but ontological distinction between body and mind*. More accurately, what constitutes the possibility of the transmigration of the human brain is 1) a conceptualization of the human as being comprised of a body and a mind, 2) the notion that the mind can successfully be separated from

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<sup>13</sup> It is interesting that Moravec opts for the metaphor of *migrancy* here, since the experience of migrancy is typically pervaded by a strong sense of loss for what one has left behind, whereas Moravec’s transmigration seems to connote no such sense of loss (116-122) (See: Caplan 1996 and Ponzanesi 2005).

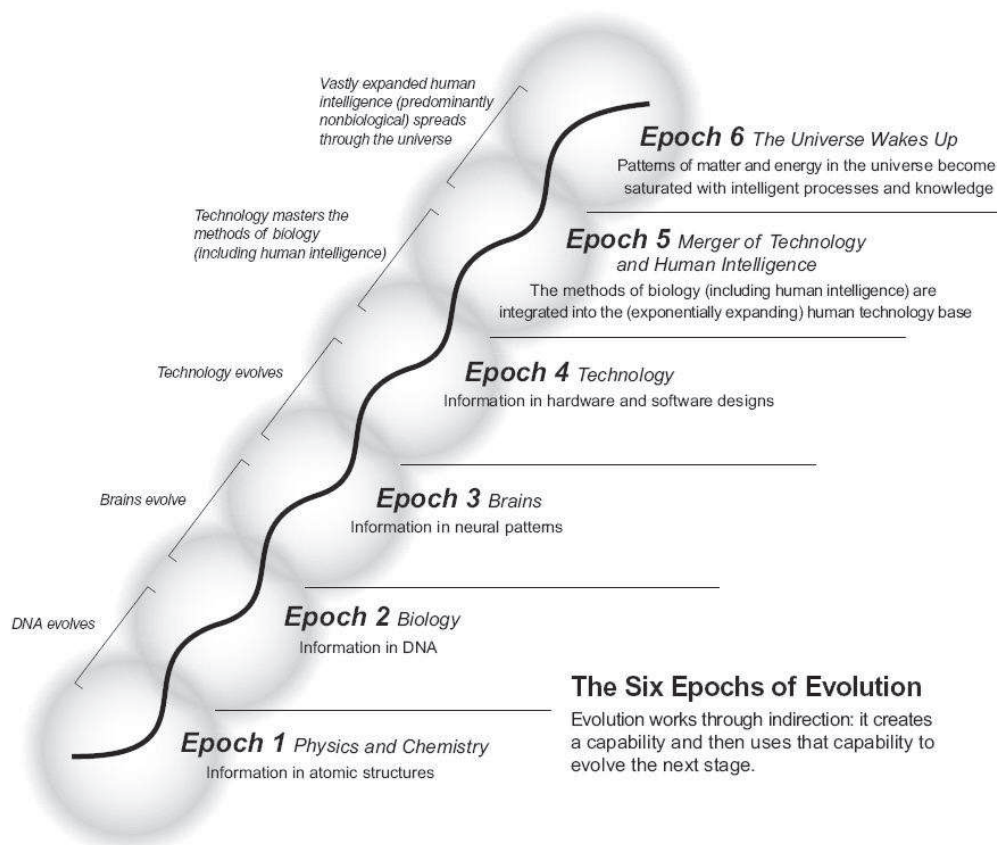
the body and 3) that what defines the human *as human* resides in the mind, instead of in the body. More often than not, and this is something critics have untiringly pointed out, humanity's envisioned union with the intelligent machine and the entity this merger would give birth to, is founded upon a dualistic comprehension of the human that privileges the mind over the body.<sup>14</sup> With Graham, we can claim that the theory of mind uploading is guilty of equating “[human] subjectivity [...] with a single privileged aspect, such as mental functioning” (198). Before turning to the religious overtones of the Singularity, established by its promise of transcendence that is founded upon a rigid distinction between body and mind (many traditional religions feature a dualistic conception of humanity, see: Du Toit (2002)), I want to look at how the Singularity is articulated as inevitable, as humanity's destiny.

### 3.5 Moving Towards the Singularity

Obviously, I do not possess the expertise to question the predestined advent of the Singularity as a period during which the progression of technology will be so rapid that we cannot “conceive of life post-Singularity” (Born qtd. in Zimmerman 349). What I do want to address, however, is the way in which Kurzweil confuses the Singularity as historical period, “neither utopian nor dystopian” (7), with the rise of technologies that “will allow us to transcend [the] limitations of our biological bodies and brains” (9). By conflating the potential technologies the Singularity may give rise to with the Singularity as inevitable event, these very technologies are indirectly claimed to be equally inexorable. What is called for is the untangling of these disparate, yet confused, promises. Regarding the Singularity as period, Kurzweil states that the “ongoing acceleration of technology is the implication and inevitable result of what I call the law of accelerating returns, which describes the acceleration of the pace of and the exponential growth of the products of an evolutionary process” (35). Furthermore, the Singularity as period is embedded in an evolutionary rhetoric of evident progression. Kurzweil conceives of the history and future of humanity according to six epochs. The Singularity will commence with the fifth epoch and extend into the sixth.

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<sup>14</sup> Neil Badmington astutely remarks that: “the seemingly posthumanist desire to download consciousness into a gleaming digital environment is itself downloaded from the distinctly humanist matrix of Cartesian dualism” (11). Furthermore, see Graham 2002 and Hayles 1999.



Notice how the discourse of evolution, that relates to the development of DNA and the brain, is easily extended to technology and employed in order to account for humanity's overcoming of biology through (the evolution of) technology. Kurzweil proclaims a continuity as we move from biological evolution to technological evolution: "Technological evolution is [an] evolutionary process. Indeed, the emergence of the first technology-creating species resulted in the new evolutionary process of technology, which makes technological evolution an outgrowth of—and a continuation of—biological evolution" (42). Technology, for Kurzweil, univocally represents "our next step in evolution" (41). Moreover, as in the narratives that documented the inevitable war between man and machine through evolutionary discourse, evolution again ascends as directional: it "progresses" according to "steps". Instead of a natural force indifferent to humanity, evolution is grasped as an essentially progressive trajectory that unfolds according to a predictable scenario:

Once a planet yields a technology-creating species and that species creates computation (as has happened here), it is only matter of a few centuries before its intelligence saturates the matter and energy in its vicinity, and it begins to expand outward at at least the speed of light (with some suggestions of circumventing this limit). Such a civilization will then overcome gravity (through exquisite and vast technology) and other



cosmological forces—or, to be fully accurate, it will maneuver and control these forces—and engineer the universe it wants. This is the goal of the Singularity. (364)

In this universal future scenario, initiated by a “technology-creating species”, we encounter another definition of the Singularity, not solely as a historical period, but rather as something that has as its goal to *overcome* the forces that shackled previous civilizations: its goal is transcendence. Despite Kurzweil’s recognition that evolution is by no means “a closed system” (41), this narrative account of our future seems to allow for no situation in which such ‘progress’ is impeded or aborted completely. The Singularity, hence, comes to represent humanity’s destiny:

*It’s true that a contemporary human is a collection of cells, and that we are a product of evolution, indeed its cutting edge. But extending our intelligence by reverse engineering it, modeling it, simulating it, reinstantiating it on more capable substrates, and modifying and extending it is the next step in its evolution. It was the fate of bacteria to evolve into a technology-creating species. And it’s our destiny now to evolve into the vast intelligence of the Singularity.* (298, emphasis in original)

Just as in Kaku’s work, Kurzweil similarly projects the anthropomorphic notion of destiny onto the dynamics of evolution, twisting evolution into a narrative of teleology. This severe anthropocentric appropriation of evolution (humanity exemplifies the best evolution has to offer: we are “its cutting edge”) masks the notion of evolution as non-directional force that cannot be grasped by extending inadequate terms such as ‘goal’ and ‘destiny’ towards it. Furthermore, by advancing the notion that technological evolution is a direct continuation of biological evolution, humanity is clearly posited at the center of evolution as the species that introduces a new evolutionary stage: “[the] Singularity denotes an event that will take place in the material world, the inevitable next step in the evolutionary process that started with biological evolution and has extended through human-directed technological evolution” (387). Graham notes that such a vision of humanity, positing humans at the heart of evolution, and, moreover, directing evolution towards “its next step”—a view obviously tainted by a staggering amount of unadulterated anthropocentrism—descends “from the unalloyed faith in the primacy of the Enlightenment subject—rational, autonomous, self-determining. Machinic evolution will complete the task of natural selection; abetted by the fruits of technoscience, transhumanism advances the licence for exponential self-improvement” (159). Interestingly, what has denoted humanity throughout history, Kurzweil claims, namely: humanity’s universal aspiration “to extend its physical and mental reach beyond current limitations” (9), is ultimately what will liberate humanity from the “biological paradigm” (337). Or, to put it differently (and, admittedly,

more paradoxically); *in continuing to display and pursue this distinctly human ambition, humanity will transcend, with biology, itself*: “a creation of biology has finally mastered its own intelligence and discovered means to overcome its limitations” (296). Locating human uniqueness in its innate desire of transcending its “current limitations”, to perpetually go beyond, to overcome, Kurzweil is able to ‘reassure’ those who feel uneasy about the possibility of “*marble-size machine outperforming all of humanity*”, since such a machine “*will only outperform the biological part of humanity*” (298, emphasis in original). What defines me as human then, is not my current physical instantiation, nor the way in which I currently interact with my environment, but rather my projects of going beyond my biological foundations, of redesigning my environment. In identifying transcendence as the goal of the Singularity, or, indirectly, as the goal humanity will irrevocably seek to attain by directing the technologies facilitated by the Singularity towards this end, the Singularity undeniably takes on spiritual connotations.

### 3.6 A ‘New’ Narrative of Salvation?

Kurzweil himself admits to these connotations, claiming that “the freeing of our thinking from the severe limitations of its biological form [is] an essentially spiritual undertaking” (389). He furthermore acknowledges the parallels between the Singularity and religious narratives as the Singularity presents “new perspectives on the issues that traditional religions have attempted to address: the nature of mortality and immortality, the purpose of our lives, and intelligence in the universe”, but Kurzweil rejects the idea that “being a Singularitarian”—“someone who understands the Singularity and has reflected on its meaning for his or her own life” (370)—is a matter of faith, rather, it is one of understanding (370). I would argue that Kurzweil’s account of the impending Singularity accurately resembles what Graham defines as “a secular narrative of salvation through technology” (159). This narrative is predicated on an understanding of humanity as limited in its potential by its biological substrate and on the idea that what Kurzweil experiences as the limits of his biological “mode” of existence are universally acknowledged as such. Not only does Kurzweil assume that the desire for transcendence is immanent to all humanity—Deleuze and Guattari, contrarily, define transcendence as “a specifically European disease” (2010 [1980]: 20)—he also presupposes that there exists a *universal consensus* as to what we experience as limiting. Based on these more than debatable assumptions (a brief glance over the contemporary history of eugenics is quick to dispel such naïve optimism), the technologies of the Singularity are hailed as bringing salvation from the “limitations of our biological bodies and brains” (9). Graham notes that such a *sacralization of technology* is typical of many posthuman narratives and is “akin to more ancient modes of spirituality, for both seek

to ‘transcend’ the contingencies of the profane and material world in search of the more enduring realms of heavenly perfection” (166). She also suggest that promises such as those of Kurzweil, in which technology will liberate humanity from its compound of limitations, signify the “re-emergence of a discourse of the re-enchantment of contemporary culture via reappropriations of ancient world-views” (16) that reduces the physical world to that which we should strive to overcome.

Similar to the grand narrative of emancipation Lyotard identified, the legitimation of the Singularity and the directionality ascribed to technological advancement is located in its potential to liberate humanity: “abetted by the fruits of technoscience, transhumanism advances the licence for exponential self-improvement” (Graham 159). Kurzweil presents the coming Singularity as fundamentally progressive and “as being valuable because it is the basis of human freedom” (Malpas 26). As I have stated before, within the grand narrative of emancipation, the grounds on which knowledge is legitimated lie outside of knowledge itself: knowledge is not so much valued *immanently*—or legitimated in itself—but rather, its legitimacy and validity reside in its *potential effects of liberation and progression*. From this perspective, Kurzweil legitimates the invasive augmentation of the human body and brain with the broad sweeping, ethical enticement of alleviating “human suffering” (311). Hence, our technologically-facilitated transcendence ascends as a *rehabilitated grand narrative of emancipation* that legitimates technological advancement in reference to its potential to liberate humanity from its affliction. In his insightful article on *The Singularity is Near*, Michael E. Zimmerman notes that Kurzweil’s narrative on the Singularity exemplifies the trans- and posthumanist tendency to:

represent coming developments in terms of *modified progressive narratives that arguably derive from early modern thought*, according to which humankind could regain one aspect of its prelapsarian status by acquiring the scientific knowledge and technological capability needed to control Creation. *Trans- and posthumanism follow the trajectory of modernity’s project of overcoming finitude, death, violence, and oppression by redesigning and pacifying human nature, on the one hand, and by controlling external nature, on the other.* (352, emphasis added)

Whereas earlier Graham already characterized narratives that endow technology with the potential to liberate humanity from its limitations as “reappropriations of ancient world views”, Zimmerman states that *The Singularity is Near* specifically re-appropriates *the project of modernity in technological terms*. Graham, who also briefly draws attention to what she grasps to be “modernity’s most highly valued precepts of human nature, namely progress, self-

improvement and individualism” (153), goes on to state that future scenarios such as the one presented by Kurzweil:

inherited the values of eighteenth- and nineteenth-century humanism, not only in its technophilic embrace of the prospects of scientific innovation, but in its vision of humanity freed of the constraints of superstition, ignorance and fear and liberated to pursue a brilliant destiny. (160)

The coming of the Singularity ticks another box in qualifying as a grand narrative, namely: to weave heterogonous groups of people and perspectives into a single all-encapsulating plot. According to Kurzweil *“it’s our destiny now to evolve into the vast intelligence of the Singularity”* (298, emphasis in original). However, because of the fact that our universal aim of transcendence will be technologically mediated, we have to take into account the question of the unequally distributed *access to these technologies*. As Graham rightly points out:

The dream of transhumanism depends for its fulfilment on the ability to have access to the appropriate resources. Much technological innovation is a Western commodity. While most of those with the resources and access to enjoy advanced technologies would stress the pleasurable qualities of prosthetic, digital or biomedical enhancement, it does not follow that it is necessarily a universally or unconditionally liberative prospect, immune from material inequalities. (163)

Kurzweil rejects the prospect of the rise of a new *“‘techno-elite’ [...] at the expense of millions of a cyber underclass”* (Graham 164) since *“the overriding, impersonal forces of the law of accelerating returns are [...] moving in the right direction”* (Kurzweil 95, emphasis in original). This ‘right direction’ signifies the price-performance dynamics that, according to Kurzweil, underlies the evolution of any technical object: at first, a new technology is close to unaffordable for individuals and functions relatively poorly, then the product becomes expensive, yet works better, the next step is that the product works really well while being inexpensive after which the product *“becomes virtually free and works great”* (95, emphasis in original). As the prices of technology continue to drop, Kurzweil claims that new technologies will eventually become affordable for everyone (336). Kurzweil furthermore denies the commonly articulated notion that the “digital divide is getting worse”:

*I know that people keep saying that, but how can that possibly be true? The number of humans is growing only very slowly. The number of digitally connected humans, no matter how you measure it, is growing rapidly. A larger and larger fraction of the world’s population is getting electronic communicators and leapfrogging our primitive phone-*

*wiring system by hooking up to the Internet wirelessly, so the digital divide is rapidly diminishing, not growing.* (95, emphasis in original)

The idea, advocated by Kurzweil, that the Singularity will come to impact all of humanity equally is predicated upon the negligence of the possibility that the divide between those who have access and those who do not *might worsen in terms of quality instead of those of quantity*. Kurzweil is blind to the way in which the increasing rate of digital inclusion he notes—and which I do not refute—fails to address the further exclusion and intensified isolation of those left behind *in spite of this rate of inclusion*. The digital divide is not merely one of numbers.

Another way in which Kurzweil's ideas about the Singularity take on religious dimensions, and, moreover, rehabilitates the structure characteristic of modern grand narratives of emancipation, is by claiming that the Singularity will provide our life with meaning:

A primary role of traditional religion is deathist rationalization—that is, rationalizing the tragedy of death as a good thing. Malcolm Muggeridge articulates the common view that “if it weren't for death, life would be unbearable.” But the explosion of art, science, and other forms of knowledge that the Singularity will bring will make life more than bearable; it will make life truly meaningful. (372)

Identified as a feature of the modern metanarrative, the Singularity similarly seeks to “provide human existence with teleological meaning and significance” (Ansell Pearson 1997a: 3). Let us briefly recapitulate how Kurzweil's conceptions of humanity, evolution and how both are co-determined by the directionality of technological progress, inaugurate a future scenario in which the impending Singularity is unavoidable and comes to represent humanity's universal destiny.

- 1) We discern a rigid, ontological, differentiation between body and mind, rehabilitating the, philosophically contentious, dualistic comprehension of man, packaging, according to Braidotti, “humanistic conventions [...] as human essence” (2006: 236). This differentiation gives way to a nonbiological understanding of what it means to be human: the body is “a container [...] an envelope” (Braidotti 2006: 236) with which I am contingently, and momentarily, bound up. What defines me as human, however, does not reside in my flesh, but rather in my desire to move beyond my flesh. This allows a conceptualization of man in which we can differentiate between biological and nonbiological parts (Kurzweil 298).
- 2) This dualistic understanding of the human substantiates the premise that we are currently limited by our biological substrates. Why should we resign to this “biological paradigm” when what defines human existence is not dependent upon its physical instantiation? Kurzweil's account of the Singularity consistently “treats the human

condition as an affliction” (Ansell Pearson 1997a: 32). The utopian potential of the Singularity resides in the future, technologically constituted ability to transcend these limitations, to exceed “our biological roots” (9). The coming of the period of the Singularity is persistently conflated with the assumed universal appropriation of these technologies towards the possibility of transcendence, as Kurzweil assumes “an innate drive towards disembodied transcendence deeply embedded in every human psyche, regardless of gender, racial or religious background” (Graham 231).

- 3) In *The Singularity is Near*, since what defines the human as human is distinct from its embodiment, the human body is envisioned as a construct that can be improved upon, and eventually perfected. Such a point of view constitutes a human-machine metaphor that assumes that the human body is comprised of processes that can be mastered and manipulated and that the continued effort to make a machine more efficient should equally be extended, as a goal, towards humanity. However, as Graham astutely remarks, the humans-as-machines metaphor, although “nothing new”,

has something of [a] self-fulfilling prophecy about it, because evolution, not human agency, then seemingly fuels technoscientific innovation. A metaphor has become a deterministic *telos*. It fails to consider the dialectical or emergent nature of human evolution, or to consider that ‘biology’ and ‘nature’ may adapt rather than dissolve in relation to technological change. (186, emphasis in original)

This self-fulfilling prophecy is extended to accommodate our inevitable becoming-cyborg through the contention that *the course set out by biological evolution will be advanced by technological evolution*.

- 4) Indeed, our inevitable becoming-cyborg is rooted in and facilitated by these conceptions of humanity and additionally in the notion that biological evolution is not only continued through “human-directed technological evolution” (387), but moreover, that this human-directed continuation of evolution through technology represents humanity’s ultimate goal: *to transcend biology*. Kurzweil’s cyborg, deprived of almost all of its biological organs, represents one of the ways in which this transcendence will manifest itself once the Singularity hits.

I propose that we keep these conceptions of humanity, evolution and the way in which both these notions are entwined with technological advancement, that directly inform the supposed inescapability of our becoming-cyborg, in mind as we turn to *Altered Carbon* and *Surrogates*.

### 3.7 Resleeving Humanity in *Altered Carbon*

*Altered Carbon* departs from the idea that the scanning of the human mind is possible, and additionally, that we have acquired “the means of “backing ourselves up” (storing the key patterns underlying our knowledge, skills, and personality)” (Kurzweil 323). One’s identity can be stored on a “cortical stack [...] barely the size of a cigarette butt” (Morgan 62, 69). In *Altered Carbon*, the realization of this technology gives rise to existence through “sleeves”. In line with the idea of the body as “a container [...] an envelope” Braidotti identified earlier, a sleeve can be either a synthetic or organic body that is inhabited by a person through the insertion of this cortical stack into the body’s spinal column. Upon the death/destruction of the body, the stack can be recovered and, if the subject has the appropriate resources, easily reinserted into another sleeve, “eliminating most causes of death as we know it” (Kurzweil 323). Through a human-machine, or more accurately, human-computer metaphor, Kurzweil opposes the current, to be improved upon situation, to the technologically-facilitated alternative—which is explored in *Altered Carbon*:

Currently, when our human hardware crashes, the software of our lives—our personal “mind file”—dies with it. However, this will not continue to be the case when we have the means to store and restore the thousands of trillions of bytes of information represented in the pattern that we call our brains. (325)

As proves to be the case in *Altered Carbon*, “the longevity of one’s mind file [does] not depend on the continued viability of any particular hardware medium” (Kurzweil 325). However, since in *Altered Carbon* this “mind file” is physically stored on a stack, the possibility of “real death” still exists if the stack itself is destroyed. The story revolves around Takeshi Kovacs, an ex-militia trained for interstellar warfare accustomed to resleeving-procedures. Kovacs is hired by the wealthy Laurens Bancroft in order to investigate what the police determined to have been Bancroft’s suicide. Although his stack was destroyed, which for most common people would signify the end of the line, the truly wealthy are able to afford copies, back-ups, of their minds which are updated regularly. So even as Bancroft’s stack is destroyed, he can still be resleeved through “stacking” one of the frequently updated versions. Hence, Bancroft refuses to believe the police’s explanation of a suicide when there is never the possibility of real death. The story starts when Kovacs, a native of Harlan’s World, a planet ““settled by a Japanese *keiretsu* using East European labor”” (53, emphasis in original), is resleeved on Earth. Awakening in “Download Central” (19), Kovacs finds himself in a sleeve

[in] his early forties, Protectorate standard, with a swimmer’s build and what felt like some military custom-carved onto his nervous system. Neurochemical upgrade, most

likely. I'd had it myself, once. There was a tightness in the lungs that suggested a nicotine habit and some gorgeous scarring on the forearm, but apart from that I couldn't find anything worth complaining about. The little twinges and snags catch up with you later on, and if you're wise, you just live with them. Every sleeve has a history. (15)

Throughout the narrative, Kovacs is confronted with what one might refer to as *embodied memories*: a sleeve's "twinges and snags". Rightly suspecting a nicotine habit, Kovacs finds himself unconsciously reaching for a pack of cigarettes he received earlier: "I was in the middle of tapping one out of the pack. Nerves. Feeling oddly betrayed by my new sleeve, I put the pack away" (52). Moreover, the novel suggests that sexual attraction towards a specific individual is equally embodied. Upon being resleeved a second time, this time in a "tech ninja sleeve" (445), Kovacs is surprised by how the woman he slept with in the former sleeve fails to invoke any sensations: "Without Ryker's [the name of the sleeve he wears upon arriving on Earth] pheromonal interface, I was left with little more than a vague appreciation that the woman beside me was very attractive in a lean, self-sufficient way" (454). With "'nothing chemical happening [...] anymore'", all Kovacs is left with is "'a bundle of snapshot memories'" (449) no longer wrapped up with desire, offering a detached version of their relationship.

The perfection of the technologies that facilitate the future in which one can be resleeved upon the death of one's "hardware", gives rise to a new social class. Condescendingly referred to as "Meths", after the Biblical figure of Methuselah, "'You know, *and all the days of Methuselah were nine hundred sixty and nine years*'" (74, emphasis in original), a Meth possesses the financial resources to virtually ensure its immortality through remote storage, an update-cycle and by having multiple clones on ice (41). Reminiscent of Graham's "'techno-elite'" (164), police lieutenant Kristin Ortega compares the Meth to AI: "'They're a breed apart. They're not human. They deal with humanity the way you and I deal with insect life'" (75). Kovacs recounts that for the majority of the people on Harlan's World, resleeving was something not many could afford to indulge in more than once and "unless you were very rich, you had to live out your full span each time and old age, even with antisen treatment, was a wearying business. Second time around was worse because you knew what to expect. Not many had the stamina to do it more than twice" (75). The future of *Altered Carbon* exemplifies Graham's warning that to state that we will overcome death through technological advancement neglects the fact that such promises depend "on the ability to have access to the appropriate resources" (163)—portraying, in Greg Egan's words, an "economics of ontology" (138). This economics of ontology becomes perversely evident when those with the "appropriate resources" are able to buy someone else's body, or sleeve, while they are in storage (e.g. incarceration): "The shock of waking up inside someone



else's body for the first time is nothing compared to the sense of rage and betrayal you feel knowing that someone somewhere is walking around inside you" (379).

Despite the instances of embodied memory, *Altered Carbon* evidently reaffirms the dualistic comprehension of humanity that is advanced, or rather, technologically radicalized, by Kurzweil, which states that the mind is distinct, *and separable*, from the body and that "consciousness in an entirely different medium would remain unchanged" (Hayles 1). According to Kovacs: "Neurochem conditioning, cyborg interfaces, augmentation—all this stuff is *physical*. Most of it doesn't even touch the pure mind, and it's the pure mind that gets freighted" (38, emphasis in original).

What is also interesting to note is that, contrary to Kurzweil's prediction that physical augmentations will become prevalent more and more, in *Altered Carbon*, despite the realization and embrace of technologies such as cloning and mind scanning, there still exist reservations about physical alterations. "From the slight widening of the young woman's eyes I guessed that she had summoned them on an internal mike. Slick. On Harlan's World people are still a bit averse to sticking racks of hardware into themselves, but it looked as if Earth was going to be a different proposition" (30-31). In spite of the perfection of all these technologies and the disembodied existence they enable, culture in *Altered Carbon* still shows a reverence for the human, organic, body. One of the ways in which, in addition to the common aversion to physical modification, this reverence for the body manifests itself, is that despite the blatant affirmation of Kurzweil's severe segregation of the mind and the body through the realization of a technology that can store one's mind on a chip, human existence does not proceed by a "flight from the body" (Braidotti 2002: 247). In an intriguing deviation from Kurzweil's ideas about the future in which we will be able to bypass the organic body altogether in order to pursue existence within a "far more durable and capable version" (299), the future of *Altered Carbon* is still predominantly one of *organically embodied existence*. The enhanced longevity of our existence is not guaranteed by a more durable carrier, but rather by the ability to store identity on a stack that can be inserted into any body, or sleeve. In fact, despite the ability to construct synthetic bodies, there is prevalent a distinct preference for an organic body despite its relative delicacy. The experience of interacting with the world through a biological sleeve is considered more exquisite than through the blunt synthetic sleeves: "I'd worn my fair share of synthetic sleeves; they use them for parole hearings quite often. Cheap, but it's too much like living alone in a drafty house, and they never seem to get the flavor circuits right. Everything you eat ends up tasting like curried saw-dust" (15). The unaltered, organic body, in opposition to its crude counterpart, the synthetic sleeve, is *elevated to aesthetic category*—in addition to becoming a

status symbol *par excellence* due to the expanses it involves in comparison to the cheap synthetic sleeves (504)—“It was the sleeve she had worn on New Beijing, custom cultured and untouched by implants of any kind. *Pure organism, elevated to the level of art*” (317-318, emphasis added). Despite the fact that the future of *Altered Carbon* is not populated by carriers more durable than our current organic ones, the notion of sleeving is nevertheless directed towards a similar goal—even if the possible attainment of that goal is substantially determined by “access to the appropriate resources”—namely, the transcendence of man’s ultimate limit: death. “*Poor death, no match for the mighty altered-carbon technologies of data storage and retrieval arrayed against him. Once we lived in terror of his arrival. Now we flirt outrageously with his somber dignity*” (353-354, emphasis in original). As pertaining to the promise of salvation, or transcendence, Kovacs, a first-time visitor of Earth, is fascinated by a religious group that violently opposes the practice of resleeving someone after physical death.

I glanced across the landing area and saw a crowd assembled around a black-clad man on a packing crate. Holographic placards wove erratically in the air above the heads of the listeners. NO TO RESOLUTION 653!! ONLY *GOD* CAN RESURRECT!! D.H.F. = D.E.A.T.H. Cheers drowned out the speakers.

“What’s this?”

“Catholics,” Ortega said, lip curling. “Old-time religious sect.”

“Yeah? Never heard of them?”

“No. You wouldn’t have. They don’t believe you can digitize a human without losing the soul.” (23, emphasis in original)

The Catholics oppose “Resolution 653” that seeks to ““subpoena a Catholic who’s in storage. Pivotal witness. The Vatican say she’s already dead and in the hands of God. They’re calling it blasphemy”” (24). Interestingly, the Catholics identify the resleeving-technology as embodying a *competing narrative of salvation*:

I stared at the leaflet in my hands. CAN A MACHINE SAVE YOUR SOUL? it demanded of me rhetorically. The word *machine* had been printed in script designed to resemble an archaic computer display. *Soul* was in flowing stereographic letters that danced all over the page. I turned over for the answer. NO!!!! (24, emphasis in original)

The Catholics, who hold on to a similar dualistic conception of man according to a distinction between one’s soul and one’s body, locate the transcendence of one’s body *in death* instead of in *postponing, or bypassing death altogether*. Before examining how the posthuman future portrayed in *Altered Carbon*, and the way in which it accounts for technological progress, relates to the work of Kurzweil, let us turn to the posthuman future of *Surrogates*.

### 3.8 Redefining Surrogacy

Based on the comic book series *The Surrogates* (2005-2006), the film *Surrogates* sketches a future in which humanity will live out their lives through high-tech robotic carriers referred to as, predictably, surrogates. In the posthuman future of *Surrogates*, the technology of mind scanning and its subsequent transfer is not (yet) realized. Rather, it posits the invention of “surrogacy” through the perfection of a technique which, through sensors, gages the signals the brain sends to the body and is able to capture and transfer those directions to the robotic surrogate instead.<sup>15</sup> One is able to operate a surrogate remotely by a connection that is established between the identity code of the operator and its surrogate (one is allowed to have only surrogate registered to its name). To experience reality through a robotic surrogate is presumed to be incredibly safe, since, although the robust robotic carriers are not beyond the possibility of being destroyed, the signals that are sent back from the surrogate to its operator cannot physically harm the operator. Surrogates have been known to “have jumped from bridges, been shot, even blown to bits without the least bit of harm to their operators. The fail-safes always kick in”. The plot revolves around FBI agents Tom Greer (Bruce Willis) and Jennifer Peter (Radha Mitchell) as they stumble upon a homicide, the first in years, in which an operator is killed through the destruction of its surrogate: “[defeating] the entire purpose of surrogacy”. Concerning the issue of having the resources to facilitate such existence, which proved to be a real issue in *Altered Carbon*, *Surrogates* seems to follow Kurzweil’s predictions which state that overtime these technologies will become available to everyone: “As manufacturing-capacity expanded for military and industrial use, surrogates became affordable to the general public, causing a revolution in how we live”. In fact, at the start of the film the leading manufacturing company of surrogates acknowledges that “over 98 percent of the world population uses a surrogate in all facets of their daily life”.

The holographic advertisements for surrogates interestingly embed the spiritual promise of transcendence in a capitalist rhetoric of temptation:

Robotic surrogates combine the durability of machines with the grace and beauty of the human form. To make your life safer and better. [...] Get ready to live your life without any risk or danger. You can live your life without limitations and become anyone you want to be from the comfort and safety of your own home.

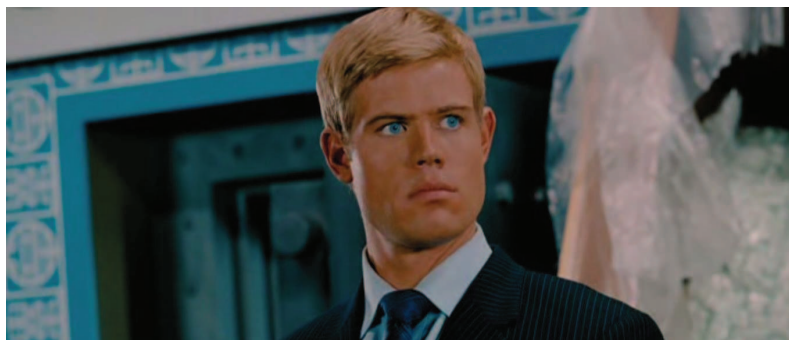
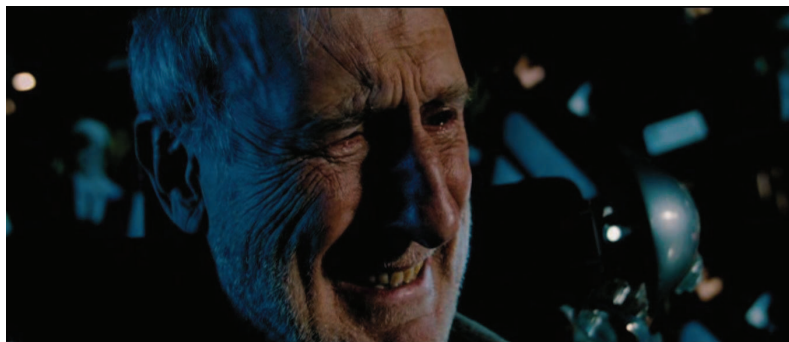
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<sup>15</sup> To be accurate, the robotic surrogates, strictly, do not qualify for the term cyborg, since it does not designate a hybridity: it is solely robotic without any organic elements. I nevertheless opted to discuss the film within the narrative of becoming-cyborg because it is, as we will see, represented as humanity’s more durable successor species, embodying progression and facilitating a promise of transcendence.

The surrogates aptly represent the 2.0 bodies Kurzweil refers to as “far more durable and capable version[s]” (299), captured by the company’s slogan to denote the experience of living through one’s surrogate: “LIFE...ONLY BETTER”. The utopian promises ascribed to the phenomenon of surrogacy are not limited to the immediate benefits of a surrogate’s durability: “Since the global embrace of surrogacy, crime rates have dropped to record lows. [A news presenter:] “We witness an incredible reduction in violent crime, communicable disease and discrimination; problems that have plagued societies for centuries, solved almost overnight””. Even though the surrogacy-technology is directed at the attainment of a level of bodily transcendence, to “live your life without limitations and become anyone you want to be”, it does not succeed in achieving an escape from death to the extent the sleeving technology of *Altered Carbon* is, or Kurzweil predicts we will, come the Singularity. In addition to the promise of transcendence, surrogacy perhaps even more so pertains to the *promise of perfection*: surrogacy allows one “to have perfect looks without trips to the gym or plastic surgery” and enables “[physically] disabled people [...] to operate fully synthetic bodies”. According to Braidotti: “In the post-human world view, deliberate attempts to pursue perfection are seen as a complement to evolution, bringing the embodied self to higher stage of accomplishment” (2002: 246-247).

The promise of transcendence falls short in comparison to the promises of *Altered Carbon* due to the unavailability of a technique that could somehow detract “the thousands of trillions of bytes of information represented in the pattern that we call our brains” (Kurzweil 325) from our organic bodies. Hence, in *Surrogates*, to exist embodied in a biological substrate is a prerequisite for transcending the limits of that very physical instantiation. Death is still a reality in the posthuman future of *Surrogates*, yet the surrogacy-technology allows people to exclude particular causes of death by predominantly interacting with the world nonbiologically. Despite the global embrace of surrogacy, there are those who consciously refrain from the use of a surrogate; a group that constitutes a severe minority that is excluded and frowned upon as the film assumes an inevitable link between the availability of this technology and its universal use. Although discrimination might no longer manifest itself in accordance to the ‘traditional’ categories of difference such as race, sex and sexual orientation in the age of surrogacy, this does not prevent the inscription of a new category of difference: to exist biologically. The opposition between existing biologically and through surrogacy, and the immediately implied hierarchy wherein the surrogate is preferred to the biological alternative, is verified in the film’s visuals. The organic body, often seen in the process of either plugging in or out, persistently ascends as frail and aging. Physical wellbeing and appearance is neglected due to the conception of the biological body as merely facilitating surrogate-existence. In comparison to the biological bodies,

the surrogates effortlessly exemplify the current, predominantly Western, ideas of beauty and health. Notice the shift in color palette when comparing the uncompromising representation of the biological body with that of the synthetic surrogates.



The primary group that actively opposes the use of surrogates are led by The Prophet (Ving Rhames) and do so on religious grounds: ““Look at yourselves””, The Prophet urges in a speech with which the film opens, ““Unplug from your chairs, get up and look in the mirror. What you see is how God made you. We’re not meant to experience the world through a machine””.

Referred to as Dreads, they have set up surrogacy free zones in major cities throughout the world. The religiously informed condemnation of the surrogates founded upon the idea that to exist through surrogates is contrary to God's will, reveals a perspective on technology Graham identifies as "disenchantment":

For some, the impact of new technologies signifies the dissolution of the distinctively organic human into a variety of engineered, hybrid, modified or virtual conditions. Far from assisting human development, technology will bring about alienation and dehumanization, the erosion of the spiritual essence of humanity. (6)

The Prophet represents that perspective in *Surrogates*. Interacting with the world through surrogacy is a lie that blinds us from the truth that is "the human condition". The human condition is not a compound of limitations, an affliction, nor does it refer to a universal desire for transcendence:

"When you sacrifice your own personal desires to the greater cause, a greater good, you never die, you never disappear. That is what it means to be human. You can try to escape by living through a puppet, but deep down inside you know you're living a lie. We know the truth. We sacrifice many modern pleasures and conveniences to feel truly connected, not with machines, but with ourselves. This is the human condition. This is what gives life meaning. My friends, soon will come the day when surrogacy must end. That day, I promise you is close at hand. The day we get a second chance."

Braidotti points out that such a response to technology and science, "which are seen as a threat to the humanist spirit" is characteristic of the "modernist view" (2002: 193). The idea of the human condition as one of connecting-with is articulated in communal terms—the Dread reservations are communities conform the communist ideal: everyone contributes to the wellbeing of all—and represents the perspective of disenchantment, which *envisions of technology as severing connections*. A connection that is often imagined to dissolve under stain of technological advancement, is humanity's connection with nature. Braidotti interestingly discusses eco-feminism as wanting to restore that connection. Referring to the collaborative work of Maria Mies and Vandana Shiva (1993), "in what counts as a manifesto of eco-feminism [...] they call for the 're-enchantment of the world' [...], or for healing the Earth and *that which has been so cruelly disconnected*" (2006: 112-113, emphasis added). The respective disconnections and reconnections are substantiated by the visual representations of major cities where the use of surrogacy proliferates in contradistinction to the surrogacy free zones. Whereas the former presents us with an abundance of skyscrapers, high-tech advertisements, cars and synthetic bodies mechanically minding their own business—or; images of the 'unnatural'—the Dread

reservations reflect technological poverty: they have resorted to horse-drawn vehicles as means of transportation, primitive tools to cultivate the soil and the manifestation of natural vegetation is not restricted to specific areas but allowed to flourish.



As the film progresses, it becomes clear that *The Prophet* is nothing more than a puppet of the inventor of surrogacy-technology: Dr. Lionel Canter (James Cromwell). Realizing that surrogacy alienates man from its natural origins, Canter himself creates the anti-surrogacy movement led by *The Prophet*. Just as in *Altered Carbon*, there unfold competing narratives of salvation. Whereas the use of surrogacy is advocated as a liberation from the limitations innate to biologically embodied existence, the anti-surrogacy movement promises a similar liberation not from humanity's supposed limitations but rather from man's alienation initiated by surrogacy. Canter takes it upon himself to bring about the day when surrogacy ends by uploading a virus that will not only render all the surrogates inanimate, but also kill all those connected to them.

Canter: "I changed the course of human history when I created surrogates. Now I'm going to change it back. [...] My son's death will not have been in vain. Not if it heals mankind."

Greer: "Heals mankind? That's what you want to do? You want to kill everyone? That's going to heal mankind?"

Canter: "They're already dead. They died the minute they plugged into those machines. [...] I had a vision. I was going to empower the powerless. To enable others like me to walk, to feel, to have a normal life. [...] Surrogacy is a perversion. It's an addiction. And you have to kill the addict to kill the addiction."

Note how, similar to eco-feminism's desire of "healing the Earth", Canter equally invokes the motive of healing in relation to the impending termination of surrogacy-existence.<sup>16</sup> The possible termination of the surrogacy-technology, along with the imagery used to oppose those who embrace surrogacy and those who reject it, reveals the way in which it is *entwined with the notion of progress*. When Canter discloses his intentions to a high-ranking police officer—to whom, obviously, the surrogates designate progress considering the "incredible reduction in violent crime" induced by surrogacy—he rebukes: "'You create this technology and change the world and now you want to destroy it? So what? *So you can take us backwards? So we can all live like Dreads?'*" (emphasis added). Canter has to counter an unforgiving rhetoric that conflates technological innovation with progression and technological relinquishment with regression—a difficulty exemplified in Bill Joy's famous article: "Why the Future Doesn't Need Us" (2000) as he tries to point out the potential dangers of the technologies we are pursuing while trying to

<sup>16</sup> In the end, Greer ensures that the operators will not die if the virus should hit their surrogates, but when presented with the choice to salvage the surrogates or allow their destruction, he opts for the latter. After the death of their son due to a car accident some years prior to the invention of surrogates for children, Greer feels he and his wife have become increasingly estranged from one another. She flees into the little revealing features of her surrogate, avoiding any biological interaction with Greer. One might say that Greer's completion of Canter's quest to rid humanity of surrogacy is again informed by the desire to re-establish connections that have been lost—although for Greer this is a very private connection.



maintain the notion of progress, that, in direct opposition to regression, is undeniably connoted positive. This substantiates Braidotti's earlier assertion that the posthuman pursuit for perfection is "seen as a complement to evolution, bringing the embodied self to higher stage of accomplishment" (2002: 246-247). The *technological progression* exemplified by surrogacy is *conflated with evolutionary progress* in relation to a linear misconception of evolution (Ansell Pearson 1997b: 187) in which we can discern "steps" according to which humanity either progresses or regresses.

### 3.9 Conclusion

As has hopefully become clear through the analysis of *The Singularity is Near*, *Altered Carbon* and *Surrogates*, the narrative of our becoming-cyborg, positing the cyborg as humanity's evolutionary successor, is wrapped into narrative structures reminiscent of the grand narrative of modernism. Although all of the works analyzed within this chapter present disparate posthuman futures based on the hypothetical realization of different technologies, we can nevertheless identify certain tendencies that equally inform all three works. In other words, while the cyborg-entities that will walk our future streets are interpreted differently, all three works, by employing similar narrative structures, equally proclaim the inevitability of the arrival of humanity's respective successor.

A driving force behind the coming of the cyborg is the way in which humanity will increasingly merge with its technology. "Beyond developing technologies as a complement to our biological capacities, we have begun to *incorporate those technologies into our biological makeup itself*" (Schick and Toth 315, emphasis in original). Kurzweil asserts that the 2.0 human body, partly artificial, partly organic, is nothing but "the continuation of a long-standing trend in which we grow more intimate with our technology" (309). The predicted prolongation of that trend, which seems to progress linearly according to steps, as humanity grows ever "more intimate with [its] technology", *inscribes the cyborg as the inevitable manifestation of this trend somewhere in the near future*. The humans-as-machines metaphor we have identified as proliferating in the posthuman futures envisioned by the works treated in this chapter, exemplifies this merger and the potential blurring of the ontological boundaries between man and machine as a result of this union, that, one might recall, Braidotti claimed to be typical of postmodernity as "the historical time when such ontological distinctions collapse" (2002: 225). Kurzweil acknowledges that due to the continuation of our increased fusion with technology, "There will be no distinction, post-Singularity, between human and machine" (9). The discussion concerning what the effects of this future lack of "ontological hygiene" (Graham 11) are

regarding our conception of humanity, are most interestingly captured by the challenge the fusion between man and technology might pose to the notion of anthropocentrism.

Whereas for critics such as Ansell Pearson and Braidotti *the hybridity of the cyborg* will (hopefully) open up into an era “Post-anthropocentrism” (Braidotti 2006: 99), the works analyzed prove unwilling to forfeit the notion of human exceptionalism. Braidotti comments on the “explosive link [...] between the human, technology, the natural environment and the evolutionary traits of humanity, enhanced and challenged by the new technologies” (2002: 221). For Braidotti, “[the] historical era of postmodernity is marked by a new and perversely fruitful alliance with technology which stresses the proximity, familiarity and increased intimacy of the relation between the human and the technological universe” (2002: 221). Braidotti, who similar to Kurzweil invokes the “increased intimacy” between man and his technologies, conceives of this *typically postmodern alliance* “as a bond of mutual dependence” (2002: 223). Owing to the relationship of mutual dependence, as well as the acknowledgement that hybridity “challenges all notions of purity” (2006: 99), Braidotti argues that the idea of anthropocentrism has become untenable. Kurzweil judges differently, claiming “we are central, after all”:

Our ability to create models—virtual realities—in our brains, combined with our modest-looking thumbs, has been sufficient to usher in another form of evolution: technology. That development enabled the persistence of the accelerating pace that started with biological evolution. It will continue until the entire universe is at our fingertips. (487)

Kurzweil justifies his refusal to relinquish the idea of human centrality by claiming that humanity is the only species that, on the one hand, is unmistakably the product of biological evolution, while on the other, it succeeds in ushering in a new evolutionary phase through which it will escape its biological roots. Moreover, the fact that we may not be able to discern between man and machine post-Singularity does not mean the future post-Singularity holds is an inhuman future, since what remains “unequivocally human in such a world, [is] simply this quality: ours is the species that inherently seeks to extend its physical and mental reach beyond current limitations” (Kurzweil 9). As the very genesis of technology, for Kurzweil, is rooted in the distinctly human desire for transcendence (Graham 186), the cyborg, as manifestation of that ambition to transcend, despite its hybridity, *does not dispel the idea of human centrality*.

Another way in which *The Singularity is Near*, *Altered Carbon* and *Surrogates* deny the indefensibility of the idea of anthropocentrism due to our radical merger with technology, is through the instrumental approach to technology we identified in the preceding chapter. From this perspective, we “banish [...] things technical, into the unstructured world of things that have

no meaning but do have a use” and *conflate the technical object, and our understanding of it, with its intended function*; we conceive of the technical objects as its “utilitarian function” (Simondon 11). In reducing the technical object to its use, a conceptualization of technology as inanimate, humanity’s merger with technology always proceeds from the privileged perspective of the human subject. *The merger, or incorporation, is persistently one-directional: humanity co-opts technology*, which only reinforces the idea of human centrality, rehabilitating “the categorical and self-congratulatory distinction between human and non-human” (Braidotti 2006: 99). In fact, the very hybridity of the cyborg as envisioned in *The Singularity is Near, Altered Carbon* and *Surrogates*, “is still tied to the idea of there being elements that are pure and uncontaminated prior to the mixing they undergo in hybridism” (Ansell Pearson 1997b: 190). This facilitates the tenability of the idea of anthropocentrism that is predicated upon the validity of ontological purity.

Furthermore, I would like to draw attention to the dualistic understanding of humanity that conceives of human existence as a being as matter, body, on the one hand, and a being as mind on the other (Colebrook 95). This idea, which dates back to ancient philosophy, informs many contemporary (fictional) accounts of humanity’s posthuman future in which it is often posited that these are not only different planes of existence, but that the one can be separated from the other through the realization of key technologies. This is equally the case in *The Singularity is Near, Altered Carbon* and *Surrogates*. In Kurzweil’s work, this dualism is advanced and founds the hypothetical technology of “mind uploading” in which “the pattern that we call our brains” (Kurzweil 325) is scanned and stored, after which it can be downloaded in either a virtual environment or in a robotic carrier, allowing for a more resilient form of embodied existence. *Altered Carbon* is premised upon the realization of exactly such a technique, presenting a future in which one’s mind can be stored on the contemporary equivalent of a chip and inserted into synthetic or organic bodies alike. In the posthuman future presented by *Surrogates*, such a technology has not yet been realized. Nevertheless, it ascribes to the same mind/body dualism in claiming that the signals the brain sends to the body can be captured somehow and transferred to another, synthetic, body—allowing for the remote-control of a ‘surrogate’. It posits a *similar contingency* between one’s mind and one’s current—and if the Singularity help us, temporary—physical instantiation. In all of these works, humanity’s becoming-cyborg (according to the models provided) is constructed around the presumed validity of this dualistic conceptualization of a human subject, enabling our eventual transcendence of biology. As such, the proclaimed inevitability of the cyborg as the next step in

human evolution is substantially informed by the technological appropriation of this age-old dualistic comprehension of humanity.<sup>17</sup>

Similar to the narrative that proclaims the impending war between man and machine, humanity's becoming-cyborg is strongly motivated by extending the discourse of evolution to technological development. Kurzweil evidently inscribes evolution with directionality when he claims that: "*It was the fate of bacteria to evolve into a technology-creating species. And it's our destiny now to evolve into the vast intelligence of the Singularity*" (298, emphasis in original) as humanity ushers in the next stage of evolution (387). As was the case with regard to the narrative that prophesized the future collision between man and machine, by projecting the anthropomorphic notion of destiny onto the dynamics of evolution, Kurzweil twists evolution into a narrative of teleology. Holding on to the claim that humanity will grow increasingly more intimate with its technology, Kurzweil advances a distinctly linear, *step-by-step model of human evolution* in which this increasing familiarization is equated with *progress*. Likewise, in both *Altered Carbon* and *Surrogates*, cyborg-existence is consistently valued, and validated, through the metaphor of progress that is extended to human evolution. Implicitly incorporating an equally linear progressive model of human evolution, cyborg-existence is considered as a step forward in relation to the way in which humanity existed prior to that: contingently bound up with its organic, limiting, body. The inevitability of humanity's becoming-cyborg is strongly embedded within this narrative of evolutionary progress. Just as Graham warned about the deterministic effects of the human-machine metaphor, I would argue that, similarly, the metaphor of progress with which the cyborg is bound up in these narratives, "[becomes] a deterministic *telos*" (Graham 186, emphasis in original). Conflating the dynamics of evolution with an anthropocentric conception of progress, our becoming-cyborg comes to constitute the only alternative to our current 'mode of existence'.

As these narratives embed technological advancement in an evolutionary framework, they reintroduce the paradox we identified in the preceding chapter, that highlights how these posthuman narratives frequently extend the model of (Darwinian) biological evolution towards the progression of technology, while simultaneously claiming that technology will take humanity beyond the grasp of biological evolution. Although this paradox was already applicable to the

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<sup>17</sup> Additionally, the dualistic conception of humanity goes a long way in the defense of an anthropocentric worldview. Simultaneously overemphasizing the way in which the animal and its behavior are driven by instinct alone, while "the human being "is *nothing* as determined by *nature*" [...], not bound by instinct, biological needs and intolerances, by sexuality, the body, and so on" (Wolfe 33, emphasis in original), the human, in contradistinction to the animal, once more occupies a privileged position.

narratives that herald the conflict between man and machine,<sup>18</sup> the paradox becomes even more flagrant in the work of Kurzweil, who states: “[we] are upending biological evolution altogether” (374). Ansell Pearson identifies the contention that “with the emergence of a biotechnological vitalism, the rise of artificial life-forms and intelligences, and developments in genetic engineering”, we “will exist ‘beyond’ natural election”, as typical of the “new fiction [...] being promulgated within so-called ‘posthuman’ postmodernity (to coin an ugly phrase for an ugly phenomenon)” (1997a: 33-34). The paradox arises when, as Graham astutely notes, “‘posthuman’ postmodernity”, despite its promises of crossing out biological evolution, nevertheless “remains in thrall to its logic of survival and adaptation” (160):

Paradoxically [...], while claiming to ‘transcend’ nature through technology, transhumanism also tends to defer to what it sees as the iron laws of natural selection. Like sociobiology, which appropriates ‘cultural’ behaviours to describe ‘natural’ processes [...], so too humanity’s deployment of technology becomes its means of transcending nature yet simultaneously remains in thrall to its logic of survival and adaptation. *The result is a confusion of anthropocentric triumphalism and evolutionary determinism: ‘Evolution’s grandest creation—human intelligence—is providing the means for the next stage of evolution, which is technology’* (Kurzweil, 1999a: 35). (160, emphasis added)

In *The Singularity is Near* we find a statement similar to that cited by Graham, according to which humanity represents the “cutting edge” of what biological evolution is capable of (298). Man ascends simultaneously as the product of biological evolution and as the species that inaugurates a new evolutionary stage in human evolution that allows us to overtake biological evolution. I hope I have adequately demonstrated the way in which Kurzweil specifically, as Graham so eloquently puts it: “[confuses] anthropocentric triumphalism and evolutionary determinism” by injecting humanity into a progressive, transitional interpretation of evolutionism and by projecting an anthropocentric reading of progress onto the dynamics of biological evolution. The last key tendency exemplified by these works I want to draw attention to, is the technologically-facilitated promise of transcendence, which, as objective, is persistently located at the end of the linearly progressive model of human evolution.

All of the three works we analyzed in this chapter consistently conceived of technology as enabling humanity the transcendence of what are presumed to be the ‘limits’ of the human

<sup>18</sup> Recall how these narratives repeatedly emphasized the nonbiological and unnatural constitution of the machines, yet concurrently displayed the *inability* to grasp the progression of the machines and the potential range of interactions one might have in relation to the machines outside of a biological evolutionary framework not focused on self-preservation and competition.

body. I believe that the viewpoint that considers humanity limited in its current physical instantiation, typical of so many representations of our posthuman future, is predicated upon the ill-informed conception of human evolution according to progressive steps. According to this progressive model of human evolution, the biologically embodied human being represents merely a momentary phase of being, one that can, and will, be surpassed towards the entity of the “post-biological man” (Ansell Pearson 1997a: 32). In contradistinction to this entity—whose arrival is not only predicted by this model, but rather asserted to be inevitable through the anthropocentric distortion of the dynamics of evolutionism into teleology—our current organic form of embodiment ascends as fragile, inefficient and constraining “individual freedom” (Seaman 248). By claiming that the desire for transcendence is universal to humanity—“ours is the species that inherently seeks to extend its physical and mental reach beyond current limitations” (9)—Kurzweil should be accused of “[extrapolating] a particular religious symbolic system peculiar to Western modernity—which represents only specific social, gendered and cultural interests—into a universal human essence” (Graham 231). This is an essential realization since the utopian potential ascribed to the Singularity and the way in which the Singularity should yield the technologies Kurzweil predicts it will—of which the technologies introduced in *Altered Carbon* and *Surrogates* could be said to be manifestations—is predicated upon the existence of such a human essence. To posit transcendence as a human essence aids the conception of “evolutionism as linearism” (Ansell Pearson 1997b: 187), as it, again, embedded in this step-by-step model of human evolution governed by the either/or principle of progression/regression, ascribes a directionality to human-becoming and technological development—which have increasingly come to co-constitute one another (Braidotti 2002: 221). Perhaps even more interestingly, these narratives, through the dominantly present motivation of transcendence shaping our posthuman future, re-erect a contemporary grand narrative of emancipation.

Earlier, when discussing the spiritual connotations of the Singularity, we briefly recapitulated how the grand narrative of emancipation is one of the two major manifestations of the modern grand narrative identified by Lyotard. “The aim of this type of grand narrative”, Malpas contends, “in whatever form it occurs, is [...] the emancipation of an enlightened humanity from dogma, mysticism, exploitation and suffering” (27). Inaugurated by a progressive model of human evolution according to which man’s current biological ‘mode of existence’ is experienced as limiting, technology, within this narrative, is endowed with the potential to liberate humanity from its “affliction”. Just as in the modern grand narratives of emancipation, the legitimation for cyborg-existence are not located in the cyborg as immanent entity, but

rather in its transcendent goal of functioning as a progressive step towards humanity's liberation from its contingent bodily constrictions. Jameson identifies the grand narrative of emancipation, "that of the liberation of humanity", as stemming from "the French eighteenth century and the French Revolution", being: "political, militant, activist" (1984 [1979]: ix). This heritage is intriguingly attested to by the following passage from *The Singularity is Near*, as Kurzweil declares war on the diseases that continue to plague humanity:

We consider the process of reversing and overcoming the dangerous progression of disease as a war. As in any war it is important to mobilize all the means of intelligence and weaponry that can be harnessed, throwing everything we have at the enemy. For this reason we advocate that key dangers—such as heart disease, cancer, diabetes, stroke, and aging—be attacked on multiple fronts. (212)

Eventually, however, as the rate of technological progress increases rapidly, to wage war against these diseases will no longer be our most adequate means for self-protection. Rather, since the self can be 'disconnected' from its contingent biological embodiment, our disease-prone organic bodies become the true enemy. Why treat heart disease when we can eliminate the heart altogether? Just as in *The Singularity is Near*, "*Augmenting the human body and brain with biological or nonbiological interventions*" is legitimized through the promise of "*alleviating human suffering*" (311, emphasis in original), the cyborg in *Altered Carbon* and *Surrogates* is equally entangled with a plurality of promises of salvation. After the worldwide implementation of surrogacy: "crime rates have dropped to record lows: [A news presenter:] "We witness an incredible reduction in violent crime, communicable disease and discrimination; problems that have plagued societies for centuries, solved almost overnight"". In *Altered Carbon*, meanwhile, the promise of salvation pertains to humanity's ultimate limit: death, as it presents a posthuman future in which "no one really dies anymore" (48). In this respect, *Altered Carbon* exemplifies Kurzweil's progressive model of human evolution geared towards transcendence as it posits the future scenario in which humanity will "escape natural selection, natural disappearance—in a word, death" (Baudrillard 88). Conform "the perverse logic of advanced capitalism" (Braidotti 2006: 260),<sup>19</sup> the metaphysical overtones of the technologically-facilitated promise of salvation, are effortlessly integrated into corporate slogans: "Get ready to live your life without any risk or danger. You can live your life without limitations and become anyone you want to be from the comfort and safety of your own home" (*Surrogates*). What most interestingly substantiates my

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<sup>19</sup> Braidotti comments on how her maxim: 'Just do it!', designating an affirmative ethical incentive of self-creation, with no "assurance [...] of a teleologically ordained trajectory, just the urge to get on with it, just do it, though the final destination may not be very clear", also happens to be "the chief slogan of the transnational global corporation Nike" (2006: 260).

contention that these narratives of our posthuman futures reiterate the grand narratives of emancipation is the way in which in *Altered Carbon* as well as in *Surrogates* the respective technologies facilitating cyborg-existence are adamantly opposed by religious groups. On account of the fact that grand narratives seek to provide definite explanations for history and experience, encapsulating all of humanity into a singular story in doing so, any grand narrative is fundamentally incompatible with another grand narrative. The very presence of an alternative grand narrative poses a challenge to the 'grand' claim advanced by any other grand narrative. This is attested to by the tendency of traditional religions, as excellent examples of grand narratives of emancipation, assert a monopoly over the possibility of salvation. In other words, only their respective deity possesses the power to save you. It is this salvation-monopoly that typically ensures the competitive relation between disparate religions. Equally, this 'new' "secular narrative of salvation through technology" (Graham 159), presented in *Altered Carbon* and *Surrogates*, is met with hostility by believers, who recognize that these technologies are embedded in a *competing narrative of salvation*.

In re-erecting a technologically-mediated grand narrative of emancipation, these narratives firmly entrench the cyborg in a highly teleological narrative of salvation. Endowed with the promise of facilitating the transcendence of biology according to a progressive model of human evolution, the cyborg ascends as humanity's universal objective. The inevitability of humanity's cyborg-future is articulated in the teleological grand narrative of emancipation, accommodated by a conception of humanity as limited in its present biological substrate and the extension of a radically anthropocentric interpretation of biological evolution towards technological development.



## Chapter 4

### Becoming-Posthuman

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To be one is always to *become with* many.

- Donna J. Haraway – *When Species Meet*, p. 4.

#### 4.1 Introduction

This chapter seeks to answer the trans-disciplinary call for narratives that engage with the question of humanity's (posthuman) future and the way in which technology will help construe this future, without resorting to the totalizing, teleological structure of the metanarrative. Braidotti argues for “new genealogies [...] and adequate narratives [...] that match the complexity of our age and resist both the lure of euphoria and the temptation of nostalgic regression” (2006: 102, 143). Lee Klein subscribes to Braidotti's call when he states that “[we] do need stories of greater subtlety” (293), while Ansell Pearson sets out “a radical inhuman philosophy that would serve to ‘destroy’ the immature and imperious claims made upon life by all forms of philosophical anthropocentrism” (1997a: 6). Challenging the totalitarian and teleological claims of the contemporary grand narratives, this chapter maps narratives that establish alternative perspectives in opposition to the all-encapsulating plot that implants technology and humanity in a narrative of teleological co-evolution. That is to say; it provides a Deleuzian cartography of divergence. In danger of constructing a similar narrative of emancipation, we should refrain from conceiving of these alternative perspectives as ‘liberating’ us from the totalitarian grasp of the grand narrative that suffocates difference. As a cartography, it maps rather than “traces”,<sup>20</sup> and as such it does not confess to directionality or prescriptivism. Rather, it might be more productive to regard these narratives as occupying a diverging point of view that opens onto

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<sup>20</sup> I pick up on Deleuze and Guattari's distinction, which they describe in *A Thousand Plateaus*, between the principles of mapping and tracing in relation to the rhizome. They assert that whereas a “tracing” is governed by linearity, origins and ends, as it “always comes back “to the same”” (2010 [1980]: 14), the map “is open and connectable in all of its dimensions” (2010 [1980]: 13) and has “multiple entryways” (2010 [1980]: 14). Both exists as ‘models’—for lack of a better word since the map does not reproduce, but rather constructs (2010 [1980]: 13)—for ordering experience and accommodating the diverse connections generated by life. Deleuze and Guattari seek to move away from the arborescent “tracing” that “hierarchizes” and through the figure of the rhizome, move towards the practice of mapping: “Make a map, not a tracing” (2010 [1980]: 13). The extent to which this analysis maps rather than traces, consists in the conscious attempt to move away from linearity, hierarchy and teleology. Lacking prescriptive intent, I propose alternative openings into a posthuman future that portray human-inhuman connections beyond directionality and teleology. For more on the difference between the practice of “mapping” and “tracing”, see Deleuze and Guattari 2010 [1980]: 13-17.

different paths or futures that are not adequately accounted for when juxtaposed to the teleological paths provided by the contemporary grand narrative by invoking a similar rhetoric of salvation.

The preceding chapters, in which I offered readings of various accounts of trans- and posthumanist discourse, were predicated upon the idea that a specific model of biological evolution was extended towards technology, facilitating a future inevitably directed towards, either, a war between man and machine or the cyborg-entity—through the respective notions of an anthropocentric model of *competition* and *one-directional merger*. The alterity of the narratives that do not conform to the structure of the grand narrative, does not consist in the absence of an evolutionary model or metaphor shaping its projected future(s). Indeed, the alternative accounts of our posthuman future are equally informed by the use of an evolutionary analogy. However, as I intend to show, the specific evolutionary dynamic that is proposed as governing human evolution and inter- and intraspecies interaction, construes an inhuman future that does not take off into notions of teleology and, ultimately, salvation. Mapping this non-directional account of humanity's posthuman becoming, I will draw from Octavia E. Butler's *Dawn* (1987), the first part to her trilogy *Lilith's Brood*,<sup>21</sup> and the South Korean film *I'm a Cyborg, But That's OK* (2006), directed by Park Chan-wook. The question that drives the inquiry of this chapter is: how do these narratives erect potential posthuman futures/becomings dissociated from the claim of inevitability bound up with a predestined *telos*?

#### 4.2 Dawn: the Invasion of the Inhuman

Butler's trilogy revolves around humanity's encounter with the extraterrestrial species, the Oankali. *Dawn* opens with the "Awakening" of the protagonist Lilith Iyapo on what is later revealed to be an Oankali 'ship'. Once awakened from a chemically induced 'sleep', Lilith is told by the Oankali Jdahya that they interfered in what they considered to be humanity's "'act of self-destruction'" (16). Characterized by the Oankali as a fundamentally hierarchical species driven towards self-destruction, humanity finds itself in a global conflict instigated by the "'cultures of the U.S. and the U.S.S.R.'" (132), that leads to the annihilation of the majority of humanity and the destruction of much of Earth—a conflict aptly referred to as "humanicide" (8). The Oankali elect to interfere because the human race possess genetic material valued by the Oankali. "'You may begin to know,'" Jdahya confesses to Lilith, "'how much we value it when I tell you that by your way of measuring time, it has been several million years since we dared to interfere in another people's act of self-destruction. [...] Mass suicide is one of the few things we usually let

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<sup>21</sup> The trilogy was originally published as *The Xenogenesis Trilogy*.

alone” (16). As J. Adams John, in his essay on sociobiology and *Lilith's Brood* puts it: to delineate the Oankali is an arduous task since, “[defining] them is central to the entire trilogy, and they are not easily summarized” (382). The trilogy features the constant exploration of the inhuman identity of the Oankali. This exploration manifests itself mainly through the encounters Lilith has with the Oankali—Lilith being the primary focalizer of *Dawn*.

The principal way in which the inhumanity of the alien Oankali ascends, is through the inadequacy of anthropomorphic models of identity, sexuality, evolution, the perception of senses, social interaction, etc., Lilith unceasingly extends towards the Oankali in the attempt to grasp the nature of this alien race. When Lilith is confronted with the alien appearance of Jdahya for the first time, we witness a discernable effort to account for its features in an anthropocentric discourse of familiarity:

The lights brightened as she had supposed they would, and what seemed to be a tall, slender man was still humanoid, but it had no nose—no bulge, no nostrils—just flat, gray skin. It was gray all over—pale gray skin, darker gray hair on its head. The hair grew down around its eyes and ears and at its throat. There was so much hair across the eyes that she wondered how the creature could see. The long, profuse ear hair seemed to grow out of the ears as well as around them. Above, it joined the eye hair, and below and behind, it joined the head hair. The island of throat hair seemed to move slightly, and it occurred to her that that might be where the creature breathed—a kind of natural tracheostomy. (13)

The creature is credited with having hair, eyes, ears and a throat, all according to the implicit model provided by human anatomy. That model collapses when Jdahya ushers Lilith to come closer: “the hair—the whatever-it-was—moved. Some of it seemed to blow toward her as though in a wind—though there was no stirring of air in the room” (13). Recognizing the model of hair to be inadequate—its strangeness captured in the shock of “whatever-it-was”—Lilith resorts to an equally inefficient metaphor: “Medusa. Some of the “hair” writhed independently, a nest of snakes startled, driven in all directions” (13). The mythic invocation of Medusa forcefully encapsulates the anxiety that is the result of *the absence of reassuring human parallels*. The effort to dispel the alienating features of the Oankali through the application of human parallels backfires when these analogies prove inapplicable. ““They’re sensory organs,”” Jdahya informs a frightened Lilith, ““They’re no more dangerous than your nose or eyes. It’s natural for them to move in response to my wishes or emotions or to outside stimuli. We have them on our bodies as well”” (14). Interestingly, Jdahya recognizes the ambiguous human need for parallels, simultaneously acknowledging their limits in indicating to Lilith he has no hair at all, while also

maintaining the delicate relationship of analogy established by Lilith in stating Oankali require their tentacle-shaped sensory organs ““in the same way you need your ears, nose, and eyes”” (14). The assumption that the Oankali picked up on the human tendency to cope with their alien constitution through analogy, is furthermore substantiated by Lilith’s recognition, upon meeting other Oankali, of Jdahya’s atypical “humanlike arrangement—tentacles placed to resemble eyes, ears, hair” (36). Considering that Jdahya’s task consists in familiarizing Lilith with the alien appearance of the Oankali, Jdahya’s looks might entail a compromise directed towards the facilitation of Lilith’s process of acclimatization: “Had Jdahya’s work with humans been suggested by the chance arrangement of his head tentacles or had he been altered surgically or in some other way to make him seem more human?” (36). The incompatibility of human analogies extends to the ‘ship’ Lilith finds herself on when awake: ““This is my home””, Jdahya explains, ““You could call it a ship—a vast one compared to the ones your people have built. *What it truly is doesn’t translate.* You’ll be understood if you call it a ship”” (14, emphasis added). Lilith’s desire to account for Jdahya’s being according to the human mold is also transposed towards the human gender binary:

Lilith glanced at the humanoid body, wondering how humanlike it really was. “I don’t mean any offense,” she said, “but are you male or female?”

“It’s wrong to assume that I must be a sex you’re familiar with,” it said, “but as it happens, I’m male.”

Good. “It” could become “he” again. Less awkward. (13)

In this passage, we simultaneously note the questionable credibility of such analogies voiced by Jdahya, pointing out to Lilith the implicit assumption of confirmation that underlies such an inquiry, that prematurely cancels out the possibility of divergence, as well as the assuring potential of such confirmation when realized. The primary biological trait of the Oankali as species is also subject to Lilith’s inclination towards anthropocentric frames of reference when Jdahya refers to one of the meanings of the name Oankali being ‘traders’:

“You are traders?”

“Yes.”

“What do you trade?”

“Ourselves.”

“You mean...each other? Slaves?”

“No. We’ve never done that.”

“What, then?”

“Ourselves.”

“I don’t understand.” (23-24)

The term ‘trade’, however, referring to the Oankali themselves, is dislodged from the economical-materialist context in which it is typically employed by humans, signifying instead the way in which the Oankali as a species exist with other species in a relationship of perpetual ‘trade’ of genetic material. In opposition to humanity, whom the Oankali defined as essentially hierarchical, the Oankali refer to themselves as “powerfully acquisitive” (41). Again the need arises to dissociate the term ‘acquisition’ from the economic frame of reference in which it predominantly applies to goods, since the Oankali, rather, *obtain life*: “We acquire new life—seek it, investigate it, manipulate it, sort it, use it” (41). For the Oankali, the terms ‘trade’ and ‘acquisition’ refer to their biological constitution which requires them to evolve following the practice of engaging in this ‘trade’:

“We do what you would call genetic engineering. We know you had begun to do it yourselves a little, but it’s foreign to you. We do it naturally. We *must* do it. It renews us, enables us to survive as an evolving species instead of specializing ourselves into extinction or stagnation.” (40, emphasis in original)<sup>22</sup>

In fact, the terms ‘trade’ and ‘acquisition’, in *Dawn*, function as metaphors for *symbiosis* and *symbiogenesis* as biological interaction and as “the fundamental engine of biological change” (Bollinger 34). These are the evolutionary dynamics that constitute the posthuman future of *Dawn*, to which I referred in the introduction to this chapter. Margulis and Sagan eloquently define an organism that is the product of the process of symbio(gene)sis as:

*the co-opting of strangers*, the involvement and infolding of others—viral, bacterial, and eukaryotic—into ever more complex and miscegenous genomes. The acquisition of the reproducing other, of the microbe and its genome, is no mere sideshow. Attraction, merger, fusion, incorporation, cohabitation, recombination—both permanent and cyclical—and other forbidden couplings, are the main sources of Darwin’s missing variation. (205, emphasis added)

Before determining how the Oankali exist symbiotically towards other species, let us account for the differentiation between symbiosis and symbiogenesis. The differentiation casts symbiosis as a relationship of coexistence, whereas symbiogenesis pertains to the process of evolutionary change that results from this relationship of coexistence. “Symbiosis is simply the living together of organisms that are different from each other. [...] Long-term stable symbiosis that leads to evolutionary change is called “symbiogenesis.” These mergers, long-term biological fusions beginning as symbiosis, are the engine of species evolution” (Margulis and Sagan 12). In other

<sup>22</sup> Again Jdahya accommodates Lilith’s need for analogies when he compares what the Oankali consider as ‘trade’ to ‘genetic engineering’: ““We do what *you would call* genetic engineering””.

words, symbiosis and symbiogenesis are co-implicated in a relation of potential causality. For the Oankali, symbiogenesis represents the only possible way of continued existence and evolution: ““We carry the drive [to persistently acquire new life] in a minuscule cell within a cell—a tiny organelle within every cell of our bodies. [...] One of the meanings of Oankali is gene trader. Another is that organelle—the essence of ourselves, the origin of ourselves”” (41). Humanity is the next species towards whom the Oankali direct this drive in *Dawn*. The Oankali are able to engage in this interspecies trade—““We trade the essence of ourselves. Our genetic material for yours”” (40)—while bypassing the option of sexual reproduction, or interbreeding, through the entity of the *ooloi*. The *ooloi* is neither male nor female and could more adequately be considered as a *mediator* in the process of the Oankali’s inter- and intraspecies process of reproduction. ““My relative is not male—or female,”” Jdahya explain to Lilith, ““The name for its sex is *ooloi*”” (21-22). The organelle that Jdahya claims to harbor the Oankali’s essence, their origin, is what enables the *ooloi* to “perceive DNA and manipulate it precisely” (41). As Adam Johns puts it:

While all Oankali carry the Oankali organelle (which drives them to seek and reproduce with different forms of life), the *ooloi* function as the microscopic organelle’s macroscopic equivalent: they are life-seeking and life-mixing engineers, who stand at the center of every act of reproduction, without contributing their own genes to their construct children. (383)

With symbiosis as genetic determinism, the posthuman future of *Dawn* presents a scenario in which humanity will enter into a forced symbiotic relationship<sup>23</sup> with the Oankali—mediated by the *ooloi* (for which, Lilith eventually comes to realize, “there are no human parallels” (170)). Whereas the Oankali conceive of this relationship as a *proposition of alliance*, Lilith and the humans she is eventually tasked with awakening, strongly reject it as the effacement of what they feel is uniquely human. As a result of this trade, Jdahya admits: ““Your people will change. Your young will be more like us and ours more like you. [...] The *ooloi* will make changes in your reproductive cells before conception and they’ll control conception”” (42). The prophecy of the coming of a hybrid human-Oankali entity through symbiotic coexistence and, eventually, reproduction, is interpreted by Lilith as a distinctly fearful prospect, as an effect of which the mythological figure of Medusa reappears: “Then she thought of grotesque, Medusa children” (42), “Medusa children. Snakes for hair. Nests of night crawlers for eyes and ears” (43). Lilith

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<sup>23</sup> Despite Jdahya’s claim that the Oankali are non-hierarchical, unlike humanity, the way in which humanity is subjected to the Oankali’s drive to acquire life, strongly insinuates an unequal power relationship between humanity and the Oankali.

feverishly objects to the Oankali's intent "'to do some kind of genetic *tampering*'" (143, emphasis added):

"No!" she said. "No. I don't care what you do with what you've already learned—how you apply it to yourselves—but leave us out of it. Just let us go. If we have the problem you think we do, let us work it out as human beings."

"We are committed to the trade," [Jdahya] said, softly implacable.

"No! You'll finish what the war began." (42)

Through Lilith's contention that the symbiotic alliance the Oankali pursue with humanity amounts to nothing more than the completion of the war, namely: "humanicide" (8), we can explore the implications of this symbiotic human-Oankali relationship for identity, ontological hygiene and the idea of anthropocentrism that is predicated upon ontological hygiene. Margulis' theory of symbiosis has not only impacted the field of evolutionary biology, but also implies the need for a re-conceptualization of selfhood.<sup>24</sup> In her illuminating essay: "Symbiogenesis, Selfhood, and Science Fiction" (2010), Bollinger claims that "Margulis's ideas [...] call into question identity itself. Rather than imagining myself as an *I*, Margulis's research suggests that *I* am always *we*, always a product of fusion" (35, emphasis in original). Margulis recognizes the transformative force of symbiotic theory concerning identity all too well when she identifies the entity that is the fruit of the "co-opting of strangers" as embodying "'individuality through incorporation'" (Margulis qtd. in Bollinger 35). This challenge to identity is intertwined with the implicit assumption that informs conventional conceptions of identity in which identity pertains to the notion of being an *autonomous entity*. In other words, the symbiotic notion of "individuality through incorporation" not so much challenges the idea of identity *per se*, but more accurately, the unquestioned link that exists between identity and the outdated notion of ontological purity. Hence, as Ansell Pearson rightly points out, the alliance established through the evolutionary motor of symbiotic co-optation, discredits the idea of ontological hygiene, and, indirectly, the traditional conception of identity based upon that:

[symbiosis] shows that the delineation of 'organic units', such as genes, plasmids, cells, organisms and genomes, is a tool of a certain mode of investigation, not at all an absolute or ideal model. It challenges notions of pure autonomous entities and unities, since it functions through assemblages (multiplicities made up of heterogeneous terms) that operate in terms of alliances and not filiations (that is, not successions or lines of descent). (1997b: 189)

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<sup>24</sup> For a more extensive analysis on the implications of symbiotic theory on identity and how science fiction deals with these implications, see Bollinger 2010.

I would like to extend this Deleuzian conception of symbiosis provided by Ansell Pearson—‘co-opting’, if you will, “assemblages”, “multiplicities” and “heterogeneities” into the evolutionary dynamics of symbio(gene)sis—by proposing that the symbiotic alliance ultimately forged between humanity and Oankali in *Lilith’s Brood*, can be adequately presented through Deleuze and Guattari’s concept of the “zone of indiscernibility”—or equivalents such as the “zone of proximity” and the “zone of indetermination”. Although Deleuze and Guattari describe these zones predominantly in relation to the potential they ascribe to art (see Deleuze and Guattari 2009 [1991]: 172-174 and 2010 [1980]: 300-316), it is equally informative in relation to symbiotic coexistence and incorporation. In *What is Philosophy?*, Deleuze and Guattari conceive of the zone of indiscernibility as the zone that should be generated through art: “It is a zone of indetermination, of indiscernibility, as if things, beasts, and persons [...] endlessly reach that point that immediately precedes their natural differentiation” (2009 [1991]: 173). Deleuze and Guattari come dangerously close to advancing a prescriptive aesthetics when they state that art “needs the power of a ground that can dissolve forms and impose the existence of a zone in which we no longer know which is animal and which human, because something like the triumph or monument of their nondistinction rises up” (2009 [1991]: 173). With this zone of indiscernibility, Deleuze and Guattari argue against the tendency of arborescent systems of thought that continually conceive of distinct identity-formations, constructing ontological categories within a zone of, if you will, ontological hygiene. The symbiotic fusion of human and Oankali instigates the construction of a zone of indetermination in which their “natural differentiation”, as entities belonging to disparate biological species, is “[carried] away in a shared proximity in which the discernibility of points disappears” (2010 [1980]: 324). In *Dawn*, the ‘post-’ of the posthuman ascends as a moving beyond the human as it pertains to an identifiable biological category of classification in opposition to other entities. Moreover, the ‘human’ of the posthuman comes to designate a trajectory constantly negotiated in a symbiotically construed zone of indiscernibility. As we have already determined that the notion of anthropocentrism is founded upon the possibility to clearly differentiate the human from non-human others, symbiotic theory also poses a genuine threat to human exceptionalism.

In *When Species Meet* (2008), Haraway intriguingly maps the implications of symbiotic theory on anthropocentrism by conceiving of the human as perpetually existing in-symbiosis. The category of the human is opened up to existing within alliances, rather than autonomous, in zones of ontological indiscernibility in which being always means “to *become with many*” (Haraway 2008: 4, emphasis in original). According to Haraway, symbiosis is not a future scenario of coexistence, but rather refers to humanity’s existence as being, and having always



been, interrelated—a perspective on human existence we are only now beginning to recognize. For Haraway, this perspective opens up to a redefinition of the human that is cause for celebration.

I love the fact that human genomes can be found in only 10 percent of all the cells that occupy the mundane space I call my body; the other 90 percent of the cells are filled with the genomes of bacteria, fungi, protists, and such, some of which play in a symphony necessary to my being alive at all, and some of which are hitching a ride and doing the rest of me, of us, no harm. I am vastly outnumbered by my tiny companions; better put, I become an adult human being in company with these tiny messmates. [...] I love that when “I” die, all these benign and dangerous symbionts will take over and use whatever is left of “my” body, if only for a while, since “we” are necessary to one another in real time. (2008: 3-4)

Haraway unfolds a radically non-anthropocentric conception of the category of the human as existing as a non-privileged partner in a symbiotic alliance that has systematically been neglected by traditional theories on identity that conceive of the human as autonomous entity.<sup>25</sup> Contrary to Kurzweil’s hypothetical conversation partner Molly, who states that the idea of being outnumbered by one’s “tiny messmates” “*Doesn’t sound very appealing*” (386, emphasis in original), Haraway unrolls a loving, at times even erotic, relationship towards her “companion species” (Haraway 2008: 16).<sup>26</sup> Haraway’s celebratory embrace of the human as non-privileged

<sup>25</sup> Kurzweil represents this perspective when he concurs with Molly 2004, a hypothetical individual he repeatedly converses with in imagined dialogues that essentially function as pre-emptive criticism, who does not consider the “*one hundred trillion microorganisms in the digestive tract, basically bacteria*” (386, emphasis in original) to be part of ‘her’ in a rhetoric shift from interiority to exteriority and from the conditions of existence to the insurance of one’s well-being: “*There are lots of things that my well-being depends on. Like my house and my car, but I still don’t count them as part of me*” (386-, emphasis in original). Kurzweil responds: “*Very well, it’s reasonable to leave out the entire contents of the GI tract, bacteria and all. That’s actually how the body sees it. Even though it’s physically inside the body, the body considers the tract to be external and carefully screens what it absorbs into the bloodstream*” (386, emphasis in original).

<sup>26</sup> Haraway’s characterization of symbiotic alliances as erotic is interestingly substantiated by a peculiar wasp/orchid interaction. The relationship between the wasp and the orchid (a relationship that features extensively in Deleuze and Guattari’s *A Thousand Plateaus* in illustrating a biological assemblage staging movements of de- and reterritorialization), is that of mutualism, a well-known manifestation of symbiotic interaction that is beneficial to both species. For the wasp and the orchid, this occurs through the process of biotic pollination in which the wasp operates as pollinator and carries pollen from the male anthers of the orchid towards the receptive female stigma of the orchid to realize fertilization. In return, the wasp is rewarded with nutrition. The interaction becomes erotic when specific orchids assume, as part of its ‘pollination syndrome’—which refers to a plant’s traits with which it is able to lure particular pollinators—traits typical of female insects. These “sexually deceptive orchids” engage in an intriguing exercise of sexual mimicry, as a result of which: “Insects pollinating Australian tongue orchids (*Cryptostylis* species) frequently ejaculate” (Gaskett et al. E206,

symbiotic partner is strongly informed by the blow this levels at anthropocentrism, as the symbiotic alliances in which humanity enters with its “messmates”, significantly “wound[s] the primary narcissism of those who still dream of human exceptionalism” (2008: 32). To return to Lilith’s objection to a human-Oankali alliance as staging the negation of human uniqueness, perpetrating “humanicide”; it reveals the assumption that prior to the proposed alliance by the Oankali, the human was an autonomous, pure entity. As such it propagates “the idea of there being elements that are pure and uncontaminated prior to the mixing they undergo in hybridism” (Ansell Pearson 1997b: 190). This is attested to by the way in which this fusion between human and Oankali is described by Lilith and others as the Oankali “tampering” with the genetics of humanity. With “to tamper” being defined as, respectively: “To interfere in a *harmful* manner”, “To tinker with *rashly* or *foolishly*,” and “To engage in *improper* or secret dealings” (emphasis added), the human-Oankali alliance is conceptualized as desecrating the human purity the use of “to tamper with”, in this context, presupposes.

Moreover, the posthuman future of Butler’s *Lilith Brood* also presents an interesting alternative in relation to the cyborg-future as mapped in chapter three, through Margulis and Sagan’s definition of symbiosis as “the co-opting of strangers” (205). As we have seen in chapter three, humanity’s becoming-cyborg was predicated upon a somewhat similar idea of humanity’s merging, or fusion with technology according to the “continuation of a long-standing trend in which we grow more intimate with our technology” (Kurzweil 309). However, through the instrumental approach to technology, which considers technology as inanimate, as tools to be used, the dynamic of co-optation was univocally one-directional. That is to say, humanity, within this dynamic of co-optation, is always *active: co-opting*, while technology is *passive; being co-opted*. The symbiotic alliance between humanity and the Oankali in the posthuman future of *Dawn* radically *ruptures the one-directionality* to which the dynamics of co-optation are reduced within the anthropocentrically-informed narratives regarding humanity’s cyborg futures. In the posthuman future presented by *Dawn*, humanity cannot co-opt without being co-opted itself: ““Your people will change. Your young will be more like us and ours more like you”” (42). Interestingly, what comforts humanity in its engagement with technology—the one-directionality of co-optation—is what repels the Oankali from the use of technology. ““Nikanj,”” Lilith asks a young Oankali ooloi that educates Lilith on the Oankali and their propensity for trade, ““do you ever build machinery? Tamper with metal and plastic instead of living things?””, to which Nikanj responds that they ““do that when we have to. We...don’t like it. There’s no trade”” (85). In renouncing the use of technology due to the absence of trade, the Oankali emphasis in original). For more on this erotically symbiotic interaction between wasp/orchid see: Gaskett et al. 2008 and Gaskett 2011.

reiterate the conception of technology as inanimate and that within the logic of co-optation it can only be co-opted. The incorporation of inanimate technology does not truly destabilize the effort to maintain the notion of human purity, whereas the incorporation of the animate Oankali opens up to an alliance that will. In this union, humanity loses its privileged position and is as equally incorporated as it incorporates. Evidently, the symbiotic alliance between human and Oankali and the way in which this coalition discredits the one-directionality of co-optation, entails an unambiguous challenge to anthropocentrism that seeks to accord humanity the privileged position of always co-opting without the danger of being co-opted.

Additionally, whereas the ‘post-’ of the posthuman future as exemplified by the grand narrative concerning the cyborg primarily designated the transcendence of the human through humanity’s merger with technology, Butler’s *Dawn* constructs a posthuman future that is not directed towards transcendence. Indeed, while the metaphor of merging ensures transcendence in the grand narrative when it entails the incorporation of technology, the fusion with the Oankali, and the “genetic tampering” this entails, presents a future that is very much embodied. For Lilith, accordingly, the threat the Oankali pose is not limited to their desire to enter into a symbiotic zone of becoming that challenges human uniqueness, but is more concretely tied to her embodied position as woman, as she is forced to ‘facilitate’ the birth of this hybrid human/Oankali entity. In this passage, Lilith reflects on her role in this genetic experiment:

Experimental animal, parent to domestic animals? Or...nearly extinct animal, part of a captive breeding program? Human biologists had done that before the war—used a few captive members of an endangered animal species to breed more for the wild population. Was that what she was headed for? Forced artificial insemination. Surrogate motherhood? Fertility drugs and forced “donations” of eggs? Implantation of unrelated fertilized eggs. Removal of children from mothers at birth...Humans had done these things to captive breeders—all for a higher good, of course. (60)

With Braidotti we might claim that in the posthuman future presented by *Dawn*, the human body, and, the female body specifically, ascends as “a highly contested social space” (2006: 50). Within science fiction in general and feminist science fiction particularly, Braidotti argues, the reproductive female body is often violently re-appropriated “by the bio-technological corporate industrial system” (2002: 195). In mapping “alternative systems of procreation and birth”, either through human-alien or human-machine couplings, (feminist) science fiction “is explicitly bent on the exploration of the maternal body and processes of birth [as it] uses the woman’s body to explore the possibilities for the future, potentially destructive or positive as they may be” (2002: 192). As the reproductive female body and, even more evidently, the woman’s autonomy

regarding her own body and its reproductive functions, is persistently at stake in feminist science fiction—Lilith loses that function at the end of *Dawn* when Nikanj informs her he has impregnated her by mediating a sexual encounter between Lilith and another human: Joseph (246-248)—“women science-fiction writers seldom fall for the hyped celebration of escape from the body that marks so many male-authored cyberpunk and science-fiction texts” (Braidotti 2002: 234). Rather than staging a flight from the body through a narrative of transcendence, feminist science fiction explores the, often problematic, implications of an alien invasion or our continued merger with technology on the reproductive female body. *Dawn* continues that tradition and in constructing a radically embodied, alterative, posthuman future, it could be said to “contribute to the postmodern undoing of master narratives” (Braidotti 2002: 191) that Marleen Barr located specifically within the power of feminist science fiction (see Graham: 55-59). Instead of recapitulating how *Dawn* constructs an alternative to the contemporary grand narrative here, let us save that for the conclusion, while we move on to the intriguing reconfiguration of the cyborg in the movie *I'm a Cyborg, But That's OK*.

#### 4.3 Recasting the Cyborg onto Deleuzian Becomings

Contrary to the way in which I have provided readings of various narratives throughout this thesis, this segment on *I'm a Cyborg, But That's OK* will shape up somewhat differently. Whereas before my readings consisted of an analysis of the primary text, upon which I then brought to bear several critical perspectives on these texts as I saw appropriate, I will diverge from that method in discussing *I'm a Cyborg, But That's OK*. In this section, I attempt to map how the film connects to and strikes up an alliance with the work of Deleuze and Guattari. I think this will prove productive as it allows us to take into account how these works, together, enter into becomings that move away from the totalizing, teleological narratives discussed in the preceding chapters. Hence, in this segment I do not so much present a reading of *I'm a Cyborg, But That's OK*, nor of the work of Deleuze and Guattari for that matter, but rather explore the way in which they interrelate. In alliance, these works, as I hope to demonstrate, form a compound of posthuman-becomings that in many ways diverge, pose an alternative to, the configuration of the posthuman embedded in the contemporary grand narrative that legitimates technological advancement in relation to this posthuman entity. Accordingly, the order that governed previous discussion dissipates somewhat, as I use the work of Deleuze and Guattari not only as reflecting on the narrative of *I'm a Cyborg, But That's OK*, but engaging with that narrative.

*I'm a Cyborg, But That's OK* opens when a young woman, whom we come to know as Young-goon, who works in a factory constructing radios, cuts her wrist and connects herself to

an electrical outlet through a power cord. Young-goon survives, but her near-realized self-electrocution is interpreted as a suicide attempt, as a consequence of which she is institutionalized. Upon institutionalization, Young-goon reveals she believes herself to be a cyborg in light of which her attempted electronic connection designates no self-destructive desire—she was simply trying to “recharge”. In *I'm a Cyborg, But That's OK*, the figure of the cyborg—reduced to a psychotic delusion on the part of Young-goon by the “men in white”—does not signify a transcendent entity humanity universally aspires to, but rather maps a perpetual, and radically immanent *becoming-with*: a Deleuzian intensity that exists outside of a narrative of salvation.

Young-goon's project of becoming-cyborg mainly manifests itself through her continued attempt to converse with the machines and electric appliances present in the mental institution—ignoring patients and doctors that attempt to strike up a conversation with her, Young-goon sneaks out of her room at night to inquire how the coffee-machine feels “after working all day”—and through her obsession with recharging. Convinced that her mainly artificial digestive anatomy cannot handle oral food intake, Young-goon refuses to eat, rather spending her time in the cafeteria licking, or otherwise connecting with batteries in her incessant attempt to recharge.



In doing so, Young-goon stages an approximation of cyborg-relations and intensities that cannot be adequately addressed through the notion of being, but is more productively approached through Deleuze and Guattari's notion of *immanent becoming*. What we first of all need to determine when we speak of becoming as a concept introduced by Deleuze and Guattari, is that becoming is not subjected to being. In other words, becoming does not designate the process through which one being becomes a different being: "Becoming is a verb with a consistency all its own; it does not reduce to, or lead back to, "appearing," "being," "equaling," or "producing"" (Deleuze and Guattari 2010 [1980]: 263). This entails a challenge to the traditional notion of becoming in which it represents a transitional phase between two disparate states of being: a teenager becoming adult or the caterpillar becoming a butterfly—with the latter term being the *goal* of one's becoming. According to this concept, becoming exists in-between, connecting one rather static mode of existence (caterpillar) with another (butterfly). Deleuze and Guattari dislodge the notion of becoming from this arborescent system of thought by positing an immanent notion of becoming: "What is real is the becoming itself, the block of becoming, not the supposedly fixed terms through which that which becomes passes" (2010 [1980]: 262). Moreover, becoming also should not be regarded as a mode of existence Deleuze and Guattari simply prefer to being. Deleuze and Guattari's emphasis on the immanence of becoming does not inaugurate a dualism that opposes being to becoming, rather, it stages the obliteration of the opposition in its entirety: "The supposed real world that would lie behind the flux of becoming is not [...] a stable world of being; there 'is' nothing other than the flow of becoming. All 'beings' are just relatively stable moments in a flow of becoming-life" (Colebrook 125). One of Deleuze and Guattari's primary becomings concerns *becoming-animal* which they discuss at length in *A Thousand Plateaus*.

In respect to becoming-animal, Deleuze and Guattari warn us of another common misconception about becoming, namely, the idea that reduces becoming to mimicry. Since Deleuze and Guattari posit the immanence of becoming, it pertains to a dynamic that is radically non-figurative. In other words, I am not involved in the process of becoming-cat by imitating a cat: "A becoming is not a correspondence between relations. But neither is it a resemblance, an imitation, or, at the limit, an identification. [...] To become is not to progress or regress along a series" (2010 [1980]: 262). Indeed, to imitate a cat, is to cast the cat as representative entity. This means to neglect how a cat, rather than a distinct animal, comprises of affects: instead of a representative animal, the dynamics of becoming posit 'cat' as "affective". Talking of a horse, Deleuze and Guattari state that it "is defined by a list of active and passive affects in the context of the individuated assemblage it is part of: having eyes blocked by blinders, having a bit and a

bridle, being proud, having a big peepee-maker, pulling heavy loads, being whipped, falling, making a din with its legs, biting, etc.” (2010 [1980]: 284). One’s becoming-horse, then, “is not a question of imitating a horse, “playing” horse, identifying with one, or even experiencing feelings of pity or sympathy” (2010 [1980]: 284), but rather concerns a direct engagement with the horse as “a list of affects” (2010 [1980]: 284). It refers to the perpetual challenge, Deleuze and Guattari argue, to “endow [one’s] own elements with the relations of movement and rest, the affects, that would make it become horse, forms and subjects aside” (2010 [1980]: 284). Deleuze and Guattari illustrate this through the project of becoming-dog:

This will not involve imitating a dog, nor an analogy of relations. I must succeed in endowing the parts of my body with relations of speed and slowness that will make it become dog, in an original assemblage proceeding neither by resemblance nor by analogy. [...] If I wear shoes on my hands, then their elements will enter into a new relation, resulting in the affect or becoming I seek. [...] At each stage of the problem, what needs to be done is not to compare two organs but to place elements or materials in a relation that uproots the organ from its specificity, making it become “with” the other organ. (2010 [1980]: 285)

To wear shoes on one’s hands only contributes to becoming-dog to the extent that it stages *uprooting one’s elements from their specificity*. As such, becoming always stages movements of *detrterritorialization* and *reterritorialization*. According to Colebrook: “Deterritorialization occurs when an event of becoming escapes or detaches from its original territory” (59), or, as Deleuze and Guattari put it: “To become [...] is to deterritorialize oneself following distinct but entangled lines” (2010 [1980]: 36). Young-goon engages exactly in a movement of deterritorialization by making her elements enter into cyborg-relations. She deterritorializes the organ of the tongue as primary organ of taste towards facilitating the process of recharging.



Indeed, Young-goon's becoming-cyborg is an *oral construction* as it sweeps up the mouth and the tongue towards a becoming and deterritorialization. The film also aptly demonstrates Deleuze and Guattari's contention how traditional psychology—psychoanalysis specifically is the subject of the rather polemical second plateau of *A Thousand Plateaus* and features as philosophical nemesis throughout *Anti-Oedipus*—displays a disturbing incompetence in its engagement with becomings. Psychoanalysis consistently fails to consider becomings as immanent. Misunderstanding becomings as merely figurative, psychoanalysis *sets up becomings as phenomena to be interpreted* through the “tripartite formula” of the Oedipal framework that reduces everything to the familial triangle of “daddy-mommy-me” (2009 [1972]: 25). Deleuze and Guattari fervently argue against the psychoanalyst's tendency to devalue becomings in a discourse of symptomatology and by “[tracing] all becomings back to some origin”—a typically “Western disease” Deleuze and Guattari refer to as “interpretosis” (Colebrook 134). In interpreting Young-goon's becoming-cyborg as ‘playing cyborg’, the doctors strip Young-goon of her becoming. Tied to the psychoanalytic tendency to account for becomings within a framework of symptomatology is the adjoined project pertaining to a “violent and artificial reterritorialization” (2009 [1972]: 37). In other words, Young-goon's persistent attempt to uproot her organs from their specific origin in her becoming-cyborg is systematically undermined by her doctor's incessant emphasis on the need to eat—reterritorializing Young-goon away from her becoming, back to the organism's original territory. Psychology's blindness to the intensities of one's project of becoming, becomes abundantly clear when Young-goon reveals to one of her doctor's she is a cyborg. Refusing to acknowledge the reality of Young-goon's becoming, the doctor points out the importance of eating to her. Young-goon's becoming is collapsed back into the act of mimicry in relation to which eating is not incompatible. Since Young-goon's becoming-cyborg stages a *becoming-through-diet*—Deleuze and Guattari specifically account for how one of the ways one can make one's elements enter into a novel relation of becoming-animal is through “the animal's natural food” (2010 [1980]: 302)—eating entails a reterritorialization that would negate her becoming-cyborg.

#### 4.4 Conclusion

The alterity of the narratives of *Dawn* and *I'm a Cyborg, But That's OK* consist in a re-conceptualization of posthuman becoming which moves from a directional *becoming-towards* to a non-teleological, non-anthropocentric *becoming-with*. How do these narratives, informed by immanent and symbiotic becomings, succeed in moving away from the issue of teleology?



As we have seen in the two preceding chapters, the particular predestined outcomes—a human-machine war or the rise of a cyborg-entity that initiated humanity’s transcendence of its biological roots, respectively—were firmly lodged within an anthropocentric, linearly progressive model of human evolution in which these outcomes represent humanity’s universal *telos*. In positing symbiotic becomings-with, rather than becomings-toward, the narratives just discussed undo this evolutionary model of inevitable, directional progression. In *Dawn*, humanity is engaged in, what Deleuze and Guattari in *A Thousand Plateaus* refer to as: “unnatural participations”. For Deleuze and Guattari, these “unnatural participations” refer to the interspecies alliances that can be constructed through symbiosis, alliances that have “nothing to do with filiation by heredity” (2010 [1980]: 266). Rather, symbiosis inaugurates ‘unnatural’<sup>27</sup> combinations that “are neither genetic nor structural; they are interkingdoms, unnatural participations. That is the only way Nature operates—against itself. This is a far cry from filiative production or hereditary reproduction. [...] The Universe does not function by filiation” (2010 [1980]: 267). Drawing on the work of Deleuze and Guattari, Ansell Pearson concurs that: “The only veritable becomings present in evolution are those produced by symbiosis which bring into play new scales and new kingdoms” (1997b: 190).

The Deleuzian notion of becoming, and the ‘unnatural participations’ the trajectory of particular becomings may instigate, operate in a radically *immanent philosophy*. Departing from the idea that there can exist no being that can explain or order experience, which would need to exist beyond experience, Deleuze and Guattari weave a philosophy of univocity: “a radical philosophical possibility that sets itself against transcendence. Transcendence is equivocal: positing a being that is—the outside world—and a being that knows or represents—mind or ‘man’” (Colebrook 95). As we saw in chapter three, in relation to the sleeving-technology of *Altered Carbon* and the work of Kurzweil, the possibility of transcendence is founded upon the position of equivocity, that not only posits an opposition of beings, but a hierarchy moreover: “Western thought has tended to set one type of being over and against the other, as the ground of the other” (Colebrook 95). In embedding becoming in the position of univocity—and in dislodging it from the “metaphysical tradition of the West” (Colebrook 95) of equivocity—Deleuze and Guattari’s becomings do not refer to a hierarchized organization of beings in

<sup>27</sup> For Deleuze and Guattari, the term ‘unnatural’ is no evaluative term that would envision of humanity’s ‘unnaturalness’ as pointing towards man’s alienation from his natural roots and a contemporary, ‘inauthentic’, mode of existence. Nature, rather, is fundamentally a process of production (2009 [1972]: 1-9). ‘Unnatural’, then, refers to our tendency to engage with systems of stratification according to which a particular type of existence can be discerned from another in terms of being ‘natural’ or ‘unnatural’. Hence, the ‘unnaturalness’ of ‘unnatural participations’ refers to the way in which becomings—uprooting one’s organs/elements from their ‘natural’, stratified, origin—are able to defy these systems of stratification.

accordance to which one might become *more-than-human*, nor do they indicate a *becoming-towards*. *Dawn* and *I'm a Cyborg, But That's OK* stage Deleuzian *becomings-with* that disrupt the directionality that the project of becoming-posthuman was subjected to within the narratives studied in the preceding chapters. The posthuman does not ascend as the transcendent entity humanity's becoming-with-technology should be directed towards, but rather as the project of opening experience up to a post- or inhuman perspective. The 'unnatural participations' that are acted out in symbiotic and non-anthropocentric alliances within these alternative narratives, recast the human as a non-privileged partner subjected to the evolutionary dynamics of cohabitation and co-optation that attest to how: "The human has been subsumed in global relations of intimacy, complicity and proximity with forces of the inhuman and post-human kind" (Braidotti 2002: 264). Contrary to the narratives discussed in chapter three, humanity's becoming-posthuman does not consist in its technologically-facilitated attempt to escape its (momentary) state of existing-embedded, but rather introduces a posthuman becoming that is immanent and acknowledges its existence as embodied/embedded as it explodes into symbiotic zones of intimate coexistence devoid of "teleological warrant" (Haraway 2008: 15).

Butler's *Dawn* furthermore, fascinatingly proves to be a case in, the very Deleuzian, point pertaining to language's inability to account for inhuman experiences. As language is explicitly premised upon human experience, the manifestation of the inhuman can only be approached indirectly through the *failure of human parallels*. As such, the inhuman emerges negatively, relationally in discord to human models of experience, rather than affirmative. This is exemplified by Lilith's persistent attempt to account for the Oankali through anthropomorphic models and metaphors that can only address the inhumanity of the Oankali as their continued divergence from these human models. Indeed, the radically non-anthropocentric challenge in trying to come to terms with the Oankali, is substantially impeded by a language structured around human experience, advancing implicitly normative models in relation to which the Oankali can solely emerge as conforming or non-conforming.

In advancing a re-conceptualization of the posthuman through the notion of symbiosis and the Deleuzian zone of indiscernibility or unnatural participations this evolutionary manifestation of coexistence gives rise to, *Dawn* and *I'm a Cyborg, But That's OK* succeed in portraying a non-anthropocentric, non-teleological version of the posthuman narrative.<sup>28</sup> Rather than an entity, the posthuman ascends as the immanent becoming-with and the willingness to

<sup>28</sup> Granted, although the notion of symbiosis does not open up to a narrative of teleology, it, as part of the discourse of evolutionary biology, nevertheless cannot resist to subsume humanity into its all-encapsulating plot: "The whole evolutionary saga of how species originate and how they extinguish may be the greatest tale ever told. *It is everybody's story*" (Margulis and Sagan xvi, emphasis added).

open experience up to the post- or inhuman trajectories that traverse our becomings. The ‘post-’ of this account of posthumanity, hence, can be said to refer to a critical inquiry, pertaining to the questioning of ontological hygiene and human exceptionalism through *symbiotic becomings-with*, rather than the triumph over those dimensions constitutive of humanity considered ‘limiting’. What makes our posthuman future so challenging, and worthwhile to engage with, is exactly humanity’s fundamental ‘embeddedness’ and the necessity for productive forms of interspecies coexistence. The Deleuzian becomings put forth by these narratives, aid “the displacement of anthropocentrism and the recognition of trans-species solidarity on the basis of our being environmentally based, that is to say: embodied, embedded and in symbiosis” (Braidotti 2006: 99).<sup>29</sup> Re-conceptualized as a *symbiont*, the alliances in which humanity enters with its inhuman “companion species” hold the key to a posthuman future that is equally “Post-anthropocentrism” (Braidotti 2006: 99). Let us conclude with Haraway, who speaks of these alliances, or unnatural participations, as the moment *When Species Meet*, as she reiterates how such meetings refrain from holding out the reassuring notion of human destiny—urging us to engage with our posthuman future not from the self-congratulatory perspective of our own transcendence, but rather through the acknowledgement of the non-anthropocentric, immanent, vision of humanity as “embodied, embedded and in symbiosis”:

A great deal is at stake in such meetings, and outcomes are not guaranteed. There is no teleological warrant here, no assured happy or unhappy ending, socially, ecologically, or scientifically. There is only the chance for getting on together with some grace. The Great Divides of animal/human, nature/culture, organic/technical, and wild/domestic flatten into mundane differences—the kinds that have consequences and demand respect and response—rather than rising to sublime and final ends. (2008: 15)

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<sup>29</sup> For Braidotti, to recognize the human as “an ecological entity” (2006: 41), necessitates a radical rethinking of ethics. See Braidotti 2006.

## Conclusion

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Now that we have elaborately analyzed two key posthuman future scenarios that arise as technological advancement is embedded within the legitimating structure of the grand narrative, as well as pointed out narratives that do not conceive of posthumanity along the lines of the metanarrative, I believe we are in a position to address the questions introduced earlier. *How is this contemporary grand narrative on technology constructed?* and: *can we identify alternatives to this grand narrative?* In order to do so, let us retrace our steps and work through the characteristics of the grand narrative we identified and how the grand narrative structure unmistakably leaves its mark on the respective posthuman future it generates.

The posthuman future in chapter two concerned the projected clash of humanity with the machines. These narratives—of which we provided readings of: *The Matrix Trilogy*, *The Terminator* series, Harlan Ellison's "I Have No Mouth, and I Must Scream" and the popular scientific work of Michio Kaku and Marvin Minsky—intriguingly re-appropriate specific narratives that are themselves manifestations of modern grand narratives. Indeed, the initial dissent and eventual insurgence of the machines in *The Matrix Trilogy*, and *The Second Renaissance* more specifically, strongly adheres to the universal model of Marxism, identified as a grand narrative of emancipation by Malpas (26-27). *The Matrix Trilogy*, *The Terminator* series, as well as "I Have No Mouth, and I Must Scream", all weaved a plot of salvation with evident Judeo-Christian overtones, as the coming of one special individual (Neo, John Connor and Ted, respectively) should usher in the end of machine dominance to which humanity has been subjected as a consequence of the preceding war. Moreover, all the works examined in chapter two participated in the tendency to extend the biological evolutionary dynamics of competition towards the human-machine relationship according to which war, a rather anthropocentric (mis)understanding of the Darwinian notion of competition, remained as the only possible form of interaction left to the humans and the machines.

Interestingly, the re-appropriation of all these grand narratives hold fast to the popular and contemporary suspicion that "machines should imitate and replace the human", a notion that, Braidotti adds, is "by now common knowledge" (2002: 215). Indeed, the idea of replacement truly shapes the posthuman futures presented in chapter two, as technological advancement is modeled after this notion of succession. Allow me to briefly elaborate on that. Departing from the model of replacement, it is, on second thought, not at all surprising that *The Second Renaissance* initiates the competitive relationship between man and machine through the Marxist notion of the replacement of the human laborer by the machine, since Marxism, I

believe, effectively launched this threat of machinic replacement into popular consciousness. Furthermore, this idea of replacement is intimately entwined with the evolutionary principle of competition as governing inter- and intraspecies interaction, and biological change more generally. According to the ‘Competitive Exclusion Principle’ we introduced in chapter two, “*Complete competitors cannot coexist*” (Hardin 1292, emphasis in original). In other words, a truly competitive relation between species will lead to the replacement of one species by the other. Hence, the dynamics of replacement and competition, as they ascend in these narratives, are both biologically articulated and co-implicate one another. Injecting the machine into these dynamics as ultimate competitor, either replacing or being replaced, carries over to the way in which the machines are represented in *The Matrix Trilogy* and *The Terminator* series in opposition to humanity. Subject to the anthropocentric equation of competition to war, the sheer strength and durability of the machines initiates an inequality in terms of evolutionary adaptability that edges toward combative superiority in contradistinction to the fragile biological constitution of humanity. As humanity’s ultimate competitors, the machines invariably rupture the ontological fault-lines that facilitated a clear-cut distinction between the organic human and the artificial machine, since, as entities subject to the evolutionary principles of competition and replacement, *they enter into the domain of nature*. The primary way in which the machines ‘trespass’ onto the ground of nature, is when the machines become self-aware. This event occurs equally in *The Matrix Trilogy*, *The Terminator* series and “I Have No Mouth, and I Must Scream” and legitimates how the competitive relationship between man and machine enters a new, increasingly more violent, phase. Shocked into awareness, the machines either wage war on humanity on account of its newly-developed incentive for self-preservation—predicated, evidently, upon self-awareness—to which humanity is conceived as posing a threat (*The Matrix Trilogy* and *The Terminator* series) or as it realizes its own superiority (“I Have No Mouth, and I Must Scream”). Although the former serves as the initiation of conflict throughout the animal kingdom as well, the latter is a highly anthropocentric motivation for conflict, founded upon the simplistic evaluative opposition of superiority/inferiority that fails to do justice to the intricate ways in which different species interact with their respective environments and each other.

In re-appropriating the grand narratives of Marxism, theology and evolutionary biology, this contemporary grand narrative of technological advancement constructs a posthuman future of teleology. By applying the anthropocentric, biological evolutionary metaphor of competition to the trajectory of technological advancement, it inscribes it with an inherent directionality. This directionality, consequently, unfolds in adherence to the contemporary notion of the

replacement of humanity by the machine. According to the powerful, all-encapsulating, alliance formed by the evolutionary dynamics of competition and replacement—to which technological advancement is subject—this grand narrative presents us with a posthuman future that inevitably progresses towards a human-machine war as humanity's universal *telos*.

In the narratives analyzed in chapter three, the posthuman future that ascends as a result of inscribing technological advancement in the legitimating grand narrative of modernity, equally opens up to a narrative of teleology. However, since these narratives advance a disparate model that technological development would progress in accordance to, it projects a different version of humanity's posthuman future. Whereas the inevitable war between man and machine subjected technological advancement to the model of competition and replacement, the narratives examined in the second chapter prophesize a posthuman future by lodging technological development in the supposedly universal logic according to which "we grow more intimate with our technology" (Kurzweil 309). This evolving intimacy will pass through a stage in which humanity proves willing "to *incorporate those technologies into [its] biological makeup itself*" (Schick and Toth 315, emphasis in original)—a phase we have already entered into—that will eventually result in the *birth of the cyborg*. In analyzing humanity's cyborg future, I have drawn from *The Singularity is Near: When Humans Transcend Biology, Altered Carbon* and the film *Surrogates*. What informs all these works, although it is most explicit in *The Singularity is Near*, is the way in which the figure of the cyborg is configured as the posthuman entity that will propel humanity beyond the constraints of biology, enabling humanity's transcendence.

This notion of the cyborg—as undoing the shackles of biology—is facilitated by several assumptions regarding humanity and how human evolution relates to the advancement of technology. One of the primary instigators 'guilty' of enabling such a perspective, is the model of human evolution Kurzweil advances and the way in which this model is governed by a logic of progression based on the interrelation between human evolution and technological development. According to this model, closely governed by the earlier introduced dynamics of human/technology merger, humanity will inevitably progress according to discernable steps towards the entity of the cyborg. Human progression, for Kurzweil, refers to the way in which, through the use and incorporation of technology, humanity is able to gradually overcome the manifold limitations of its biological constitutions. We will "transcend [the] limitations of our biological bodies and brains. We will gain power over our fates. Our mortality will be in our own hands. We will be able to live as long as we want" (Kurzweil 9). The desire to do so, according to Kurzweil, is universal to humanity (9). Owing to the universality of the desire to transcend our biological roots, humanity will continue to develop, and legitimate, technology according to this

objective. As such, Kurzweil conceives of technological advancement as evidently directional, pertaining to facilitating humanity's transcendence. Whereas in the narratives of chapter two, the human body might be considered fragile and limited in relation to the strength and durability of the machine, a similar notion of the human pervades these narratives, with the difference being that man does not ascend as limited relationally to the machine, but in opposition to what it might become according to the inevitable directionality of this—prescriptive—model of human evolution. In *The Singularity is Near*, *Altered Carbon* and *Surrogates*, the idea equally circulates that the non-technologically-enhanced human being is limited in its individual freedom in comparison to those that are. These narratives furthermore depart from the assumption that not only the desire for transcendence is universal to humanity, but, moreover, that the experience of one's biological limitations is similarly shared. In opposition to the potential these narratives endow the posthuman entity of the cyborg with, they treat the currently organically embodied condition that characterizes human existence—or, according to these narratives, *has* characterized human existence until now—“as an affliction” (Ansell Pearson 1997a: 32). In these narratives, furthermore, the possibility of humanity's transcendence is predicated upon the classical dualistic apprehension of the human, discernibly existing as a mind and existing as a body—a conception of human existence that abounds in Western metaphysics.

This notion of the human cogently resonates in the respective technologies projected to enable humanity's transcendence of biology in *The Singularity is Near*, *Altered Carbon* and *Surrogates*. In this light, Kurzweil contemplates the inevitable realization of a technology referred to as “mind uploading”—more often than not Kurzweil ponders the ‘when’ of these technologies, rather than its ‘if’. Mind uploading posits the possibility of being able to scan one's mind, or at least its “salient details”, in order to “[reinstaniate] those details into a suitably powerful computational substrate” (Kurzweil 199). According to Kurzweil, the realization of this technology, that allows humanity to exist durably and radically independent from its ‘carrier’—bringing to a close the time “when our human hardware [crashed], the software of our lives—our personal “mind file”—[died] with it” (Kurzweil 325)—presents one plausible manifestation of humanity's transcendence of its biological origins. The cyborg modes of existence, promised by *Altered Carbon* and *Surrogates*, are intriguingly premised upon this dualistic conception of humanity and the realization of the technology of mind uploading, that not only posits the mind/body dualism as an epistemological differentiation, but, more radically (or naively), its technologically-facilitated physical separation.

The narratives discussed in the second chapter already carefully spawned a contemporary narrative of emancipation, following 'Derridian' logic according to which “the story of enslavement depends on its alternative tale of liberation” (Lee Klein 291), through the arrival of a Messiah-like individual, ushering in the end of the reign of the machines. With *The Singularity is Near*, *Altered Carbon* and *Surrogates*, we are witnessing the reconstruction of the grand narrative of emancipation in which technology does not represent that from which humanity is soon to be liberated, but rather as *liberating* humanity. By presenting the human body as limited, with its current condition described as “affliction”, and by overlaying the linearly progressive model of human evolution with humanity’s supposedly universal incentive towards transcendence, these narratives weave “a secular narrative of salvation through technology” (Graham 159). Technological advancement is embedded in the legitimating structures of a contemporary narrative of salvation, that, in some way or another, aims at the “the emancipation of [...] humanity” (Malpas 27). Hence, technological advancement is legitimated exteriorly, in reference to its potential to liberate humanity from its biological constraints. The figure of the cyborg, in these narratives, unmistakably represents one of the ways in which we will aspire to this transcendence. Inserted into this progressive model of human evolution and governed by the transhistorical dynamic of humanity’s increasing merger with its technology, the cyborg comes to designate humanity’s shared objective, the entity everyone will inevitably progress towards. Equally endowing technological advancement with directionality, as well as inscribing human evolution with the common aim of transcendence, the narratives that herald humanity’s cyborg future do so through a *universal narrative of teleology*.

Now would be the appropriate time to revisit the question: *How is this contemporary grand narrative on technology constructed?* What is key, I believe, is how in both versions of this grand narrative, discussed in chapter two and three, technological advancement is legitimated relationally, that is to say, the way in which the progression of technology is intricately entwined with the evolution of humanity. The idea that humanity has evolved in relation to technology, positing a scenario of co-evolution, we must add, is not a new perspective and has gained widespread currency in both anthropology and biology (see Schick and Toth 1993). This notion, however, becomes constitutive of the contemporary grand narrative on technology when the force of evolution, in which both humanity and technology are presumed to be caught up, is fallaciously inscribed with directionality. As Alistair Welchman notes: “The great tendency in biological thinking—initiated by Aristotle, and solidified into a recognizably modern form by Kant—has been to project the anthropomorphic characteristic of intentionality onto the biological world in the form of teleology” (221). Related to this is another tendency, which



equally pervades both grand narrative accounts of technological advancement, that concerns the extension of the discourse of natural history towards technology (Ansell Pearson 1997a: 5). In doing so, these narratives subject technological advancement to the supposed directionality ascribed to the process of natural evolution. Because both versions of this contemporary, secular grand narrative on technology incorporate the grand narrative of evolutionary biology—which unmistakably incorporates all of humanity, or rather, all life, into a single plot (Lee Klein 283)—it inherits evolutionism’s universal claims that it consequently extends to the impact of future technological progress. In other words, in embedding technology into the discourse of biological evolution—as either driving it or as being accounted for in similar terms—the universal claim of biological evolution translates to the impact of technological advancement as we are presented with posthuman, technologically-constituted, futures that either promise a global human-machine war or an inevitable cyborg future on account of humanity’s supposedly universal desire for transcendence. In doing so, it closely resembles the ‘grand claims’ of the modern grand narrative: it incorporates all of humanity into a single story, it posits a universal telos that history inevitably progresses towards and, as reiterating the traditional narratives of emancipation, it legitimates the directionality of technological advancement exteriorly, pointing to its potential to liberate humanity.

As for the second question: *can we identify alternatives to this grand narrative?* In spite of the limited space that is afforded to me by this study, I think we can nevertheless respond affirmative to this question. As I have stated before, the alterity of the narratives we identified—Octavia E. Butler’s *Dawn* in connection to the work of Deleuze and Guattari and the South Korean film *I’m a Cyborg, But That’s OK*, directed by Park Chan-wook—does not reside in how their respective posthuman futures are not based upon some evolutionary model that incorporates the inhuman, but rather in their ability to refrain from inscribing that model with directionality. Whereas the narratives of chapter two staged an alliance between the evolutionary dynamics of competition and replacement that construed a narrative of teleology, the alliance struck up in the narratives of chapter four avoids positing a posthuman future that progresses towards a final outcome. These narratives interlace our posthuman future with the critically productive coalition between Deleuze and Guattari’s immanent non-figurative (inhuman) becomings and Margulis’ evolutionary model of symbiosis/symbiogenesis. To be accurate, this alliance never truly functions as a model, since the interactions with the inhuman forces that traverse posthumanity the concepts of becoming and symbiosis conceive of, are never prescriptive. Both the idea of becoming and symbiosis itself feature existence through alliances that are unpredictable, a challenge to ontological hygiene—or as Haraway refers to it: “The Great

Divides" (2008: 15)—and are not directed towards a becoming-more-than-human. Its alliances are immanent, rooted in a philosophy of univocity that rejects the recruitment of technology—one of the inhuman forces in posthumanity—into a philosophy of equivocity (with all its metaphysical echoes), in which it enables the possibility of transcendence, staging a *becoming-towards*, a *becoming-more-than*, rather than the *becoming-with* advocated by Deleuzian becomings and Margulis' symbiosis. Indeed, although we have pointed to *Dawn* and *I'm a Cyborg, But That's OK* as alternatives to the grand narrative—uprooting the transcendental, liberating configuration of posthuman-becomings, dislodging the cyborg from its salvation narrative—and have employed the work of Ansell Pearson, Braidotti, Deleuze and Guattari and Haraway primarily as providing the critical tools for approaching these narratives, one might rightly argue that these works, *in themselves*, open up alternative, non-teleological, perspectives on our posthuman future. Such an analysis, however, will be for further research. Now that we are on the subject of further research, allow me to indicate some more possible directions.

What I was particularly struck with during my research was how easily the dynamics and concepts of biological evolution are extended toward the advancement of technology. As referred to earlier, in doing so, technology occupies a very peculiar position within the grand narrative, in which it is simultaneously accounted for in terms of biological evolution, while it is also conceived of as facilitating humanity's transcendence from the grasp of biology, which would mean it exists outside of the framework of biological evolutionism. Nevertheless, the advancement of technology, and moreover, the direction technology's progression takes, has always employed narratives of legitimation. Owing to the instrumental conception of technology that is so firmly entrenched in Western thinking, the grounds of legitimation perpetually reside outside of the technological developments themselves, in its use.<sup>30</sup> Hence the need for narrative. In light of this realization, it might be very interesting to see how the philosophies of Gilbert Simondon and Bernard Stiegler, who both reject the instrumentalist conception of technology according to which it is only a tool to be used, conceive of technological progress. Both, interestingly, advance a notion of technological evolution that is out to grant technology its own dynamic. They furthermore introduce models of technological progress that seem to run counter to the traditional models of technological advancement in which its measurement of progress is transcendent, relating to an element exterior to itself. Within the utilitarian framework, 'improvements' to technologies referred to how the technology became easier, or more efficient, in its use. Co-implicated with the utilitarian view is the issue of expenses: as instruments, the

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<sup>30</sup> From this perspective Martin Heidegger famously located the essence of technology outside of technology: "the essence of technology is by no mean anything technological" (Heidegger qtd. in Graham 7).

'value' of a technical object does not only refer to its usage, but also to its price in relation to its function. Accordingly, another transcendent criterion of measuring progress, or identifying improvements, arises: cost efficiency. Future studies of the works of Simondon and Stiegler might focus on their immanent logic of technological progress in opposition to the traditional, transcendent conception of technological progress that is ingrained in contemporary culture. In positing an immanent logic of technological evolution, do they avoid the tendency that has haunted and continues to haunt biological evolutionism of projecting "the anthropomorphic characteristic of intentionality" onto technology's progression "in the form of teleology"? How is the progression of technology accounted for if not exteriorly? In rejecting the idea that the criteria for technological progress reside outside of technology, do these philosophies refrain from, or equally resort to, employing (grand) narratives of legitimation? Or, is the narrative of legitimation only required when we conceive of technology as serving a function beyond itself and when we account for its progress in relation to this function?

From a Deleuzian perspective, furthermore, we might question why science fiction—a genre Deleuze and Guattari understandably hold dear on account of it "taking [becomings] from animal, vegetable, and mineral becomings to becomings of bacteria, viruses, molecules, and things imperceptible" (2010 [1980]: 274)—a genre that typically engages with the inhuman, nevertheless fails to stage the inhuman in its own right and is only capable of grazing it indirectly through the failure of human parallels? Should we discern between majoritarian and minoritarian science fiction, or does this failure merely attest to a more general inadequacy of human language in accommodating for the inhuman and man's inhuman-becomings?

With this study I hope to have made clear the intimate relationship between technological advancement and narrative. We are unmistakably witnessing the return or resurrection of the grand narrative, presumed typical of modernity. In fact, it is not that odd that the grand narrative returns in relation to technology, since the instrumental conception of technology, which is widespread, specifically calls for a narrative of legitimation. Also, there are narratives to be identified that counter the totalitarian claim of this grand narrative in conceiving of man's technologically-mediated posthuman future along other, non-teleological, more partial lines. With Graham, I express the hope that my thesis has served as "a reminder that 'the stories we live by'", which the narratives examined in this study are unmistakably part of, "can be important critical tools in the task of articulating what it means to be human in a digital and biotechnological age" (17).

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