

## PRODUCTION OF THE POST-HUMAN: POLITICAL ECONOMIES OF BODIES AND TECHNOLOGY

Jon Seltin

### INTRODUCTION

The post-human and cyborg are now very familiar figures, both in popular culture and the academy. Representations of en fleshed machines, technologically augmented bodies and artificial intelligences are a cornerstone of contemporary science fiction, from Fritz Lang's robot Maria in *Metropolis*, to the Replicants of Phillip K Dick's novel *Do Androids Dream of Electric Sheep*, and more recently in the post-cyberpunk novels that have proliferated in the wake of William Gibson and Neil Stephenson. The canonical figures of The Borg in *Star Trek* and Darth Vader in *Star Wars* have become pop-cultural signifiers of the dehumanising effects of technology, while simultaneously the *Six Million Dollar Man*, and Major Motoko Kusanagi in *Ghost in the Shell* offer emancipating and transcendent visions of technological prosthesis.

Parallel to their appearance in fiction and myth, the cyborg and post-human appear in a range of academic disciplines as symbols of radical change, signifying a range of breaks with past bodies, past modes of subjectivity and past Humanisms. The post-human and cyborg metaphors have been deployed by theorists occupying a range of (often antipodean) political positions, from Donna Haraway's famous "Cyborg Manifesto", in which her 'cyborg myth' represents an opportunity for a radical new brand of socialist-feminism, to Francis Fukuyama's bio-conservative invocation of the post-human to argue for tighter legislative regulation of biotechnologies which he perceives as corruptive threats to 'our human nature'.

At one end of the spectrum we find the technophilic or hyperbolic post-humanists. This brand of post-humanism is both a popular movement and body of literature which encompasses figures such as Nick Bostrom

(Director of Oxford University's Future of Humanity Institute), Ray Kurzweil, Hans Moravec, Max More and groups such as Humanity+ (formerly the World Transhumanist Association), the Institute for Ethics and Emerging Technologies (IIEET) and the now-defunct Extropy Institute. Although taking different approaches, these authors and groups address the post-human in positivistic and dyadic terms; it is understood as the ultimate techno-evolutionary *telos* of the Human. According to this perspective the post-human represents the next stage in evolution, in which the haphazard turns of "fumble-fingered Nature"<sup>1</sup> are displaced by deliberate biotechnological evolutionary choices exercised through precise genetic modification and technological augmentation. Hyperbolic post-humanist texts are often deeply hubristic; death, disease, abnormality, and even embodiment are seen as barriers that can be overcome through technological innovation and intervention. In the most extreme accounts, bodies are abandoned and 'the human' gives way to transcendental omnipotent and omniscient super-beings, until "ultimately, the entire universe... [is] saturated with our intelligence."<sup>2</sup>

While there is a common tendency for hyperbolic post-humanism to posit itself as an entirely new phenomenon or historic rupture which completely displaces the human, it becomes clear that it is in fact shot through with Enlightenment humanist values and ideals. Indeed the teleology implicit in these accounts of the post-human is distilled directly from Enlightenment discourses of progress and perpetual self-improvement towards an end-state of perfection. Far from displacing the discourses, subjectivities, epistemologies and ontologies of Humanism, hyperbolic post-humanism relies on and ultimately rearticulates them—repackaging discourses of imperialism, Cartesian dualism, unitary and rational subjectivity and neo-liberal political-economic relations for the new millennium.

On the opposite side of the spectrum there exists a range of apocalyptic, conservative reactions to the threat the post-human poses to essentialist understandings of the human and human nature. This apocalyptic mode of post-humanism encompasses authors such as Francis Fukuyama, Jürgen Habermas, Bill McKibben, and Paul Virilio<sup>3</sup> and includes many religious and social conservatives who view technological intervention and augmentation of bodies as eroding some essential component of human nature. The apocalyptic and hyperbolic modes of post-humanism share a common view of technology as heralding a new historical epoch, however instead of eagerly anticipating this future, the apocalyptic mode views it as a dire threat to be avoided, retreated from, or legislated against. Apocalyptic post-humanism recuperates essentialist notions of a fixed, natural Human Nature with definite, sacrosanct limits. Transgenics, xenotransplantation, genetic engineering, neuropharmacology and machine/flesh cybernetic amalgams are all understood as threatening the ontological purity of the human, where the essence of humanity is understood in biologically essentialist terms.

This paper seeks to interrogate some of these popular positions on the post-human, in particular the ways in which technophilic and apocalyptic understandings of the post-human function with an internally contradictory logic, reliant on the subjection and production of bare life. The paper is structured in three broad sections. The first offers a critical overview of the technophilic/hyperbolic and apocalyptic accounts of the post-human. The second section of the paper looks at some of the ways the post-human has been deployed as a critical/deconstructive metaphor or theoretical tool. The final section then looks to the material processes of production through which these understandings of the post-human are instantiated. Throughout the paper I will be relying on a kind of methodological phase-shifting, switching between symbolic and material modes of critique in an attempt to underscore the inextricability of figural/metaphorical imaginings of the post-human and the economic and material basis which underpins their production. While past studies have focussed on the political, ethical, technical and philosophical dimensions of the cyborg and post-human, few have specifically linked these with the networks of labour, capital, trade and geopolitics that allow for post-humanisms material and discursive instantiation. To understand 'post-human' simply in terms of a fictive subgenre, critical metaphor or futurist fervour would be to obscure these global networks of labour, capital and power which produce the conditions for its formation.

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## I. HYPERBOLIC AND APOCALYPTIC POST-HUMANISM

In *Mind Children* Hans Moravec describes mind-uploading made possible by a future armamentaria that includes robot-surgeons, atom-by-atom scanning techniques and technologies that allow for the digital capture and virtual reconstitution of an entire brain. Once uploaded, Moravec envisages the original body as superfluous flesh to be discarded, as the subject now exists in an eternal digital domain, free from not only senescence and disability, but also from the prison-house of corporality and limitations of time and space. Technological intervention presents us with the possibility of being “rescued from the limitations of a mortal body.”<sup>4</sup> Moravec’s futurism serves as provocation and point of departure for N. Katherine Hayles’ *How We Became Posthuman*, which deals exhaustively with (dis)embodiment in hyperbolic and technocentric post-human literature. Hayles identifies Cartesian dualism as the foundational axiom of hyperbolic post-humanism. The four conditions she identifies as defining hyperbolic post-humanism warrant quoting here at length:

First, the posthuman view privileges informational pattern over material instantiation, so that embodiment in a biological substrate is seen as an accident of history rather than an inevitability of life. Second, the posthuman view considers consciousness, regarded as the seat of human identity in the Western tradition long before Descartes thought he was a mind thinking, 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. Third, the posthuman view thinks of the body as the original prosthesis we all learn to manipulate, so that extending or replacing the body with other prostheses becomes a continuation of a process that began before we were born. Fourth, and most important, by these and other means, the posthuman view configures human being so that it can be seamlessly articulated with intelligent machines. In the posthuman, there are no essential differences or absolute demarcations between bodily existence and computer simulation, cybernetic mechanism and biological organism, robot teleology and human goals.<sup>5</sup>

Hayles highlights how the hyperbolic post-human seems to offer a thoroughly postmodern escape from Enlightenment-humanist conceptions of subjectivity, and from the tired binaries of human/machine, nature/culture etc. In some of the more creative hyperbolic accounts, the post-human does not necessarily elevate human agency or dominance, but rather reconfigures ‘human’ within a web of cybernetic relationships with its environment and machines. However Hayles resists the seduction of this postmodern iconoclasm, and focuses instead on problem of disembodied information as the basis subjectivity. While all modes of signification, theorising and mediation necessarily involve abstraction, Hayles demonstrates how cybernetics and bio-informatics assert the *primacy* of the abstract over the material. That is, theories which conceptualise consciousness, subjectivity, DNA-code, molecular and cellular function purely in terms of *disembodied information* do so by strategically downplaying the importance (or even necessity) of material instantiation. This disavowal or downplay of materiality and embodiment can be traced, according to Hayles, to Platonic idealism and its modern mirror-image operating in informatics, in which disembodied information (e.g. the digitised human-genome) is understood as the “originary form, from which the world’s multiplicity derives.”<sup>6</sup> Far from representing a structured break or rupture, this erasure of embodiment can be understood as an *extension* of Enlightenment humanism, with its universalising claims also based on the dualistic nature of rational consciousness. The normalising and colonising power of Enlightenment humanism rests on this erasure of bodily difference, especially markers of race and gender. Thus the very idea of ‘mind-downloading’ is, in the words of Neil Badmington “...itself downloaded from the distinctly humanist matrix of Cartesian dualism.”<sup>7</sup> Badmington highlights this “problem of what remains... [as] a problem of [human] remains;”<sup>8</sup> persistent humanist residue within what is meant to be a thoroughly post-human future.

Badmington’s article highlights a common tendency in critical literature on post-humanism to write as if this humanist residue lay latently hidden under the surface for critics to uncover.<sup>9</sup> However the majority of hyperbolic post-humanists are overt about their dedication to the project of humanism. For Nick Bostrom, Director of the University of Oxford’s Future of Humanity Institute, and co-founder of Humanity+, transhumanism<sup>10</sup> is:

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[T]he intellectual and cultural movement that affirms the possibility and desirability of fundamentally improving the human condition through applied reason, especially by developing and making widely available technologies to eliminate ageing and to greatly enhance human intellect, physical and psychological capabilities.<sup>11</sup>

Freedom, rationality and constant self-improvement are acknowledged by Bostrom as the ideals upon which the transhumanist movement is founded. According to Bostrom, “Transhumanism can be viewed as an extension of humanism, from which it is partially derived.”<sup>12</sup> Thus the task is not to uncover some hidden extension of Enlightenment-humanism (which was blatantly declared from the start), but rather to think through the political and economic implications of such a rearticulation.

A suitable metaphor for thinking through the hyperbolic post-humanist’s conceptualisation of the body is that of *possession*. Here possession takes on the double meaning of being-possessed (in the supernatural sense) and possession-as-owning. The technophilic post-humanist possesses *his* body in the same way a disembodied spirit would; the flesh is rendered subordinate to an abstracted consciousness, which sits comfortably on the other side of a Cartesian ontological crevasse issuing orders. Simultaneously the body is possessed in that it is an *owned possession*; the very concept of the liberal humanist subject is contingent on a possession-of-self articulated by Hobbes, Locke, and John Stuart Mill. In their political philosophy, Hobbes and Locke conceive of society as a set of market relations between individuals, who wholly *own* themselves and the products of their labour. The materialist analysis developed in the final section of this paper will examine a very different understanding of the post-human, in which this presupposed possession of oneself is violently inverted.

By *possessing* a body, technophilic post-humanists such as Moravec see no political, ethical or ontological hazards in upgrading, augmenting or simply abandoning them. However this configuration of bodies as infinitely malleable and disposable is available only to a specific subset of humanity, namely to those privileged subjects who already possess transparent, normalised bodies. This understanding effaces the daily situation of those many millions of people who currently rely on embodied labour for subsistence, and whose lives are structured by racism, sexism, homophobia and other forms of violence which function through bodily inscription.<sup>13</sup> Further, this fixation on the liberating potential of emergent technologies effaces the often illiberal and exploitative commodity chains, labour relationships and material processes of production through which these commodities are instantiated.

Liberal post-humanists reassure those who possess sick, disabled, female, non-white, intersexed or other supposedly sub-prime embodiments that they will be welcome in the post-corporeal age, since issues of embodiment will no longer matter. In attempting to transcend the body and its associated politics, liberal hyperbolic post-humanists effectively (re)inscribe their vision of normalcy on the deficient bodies of their others.

Bostrom’s *Transhumanist FAQ* offers the following reassurance to those who may be wary of the dangers of genetic modification:

[If] a would-be parent wished to undertake a genetic modification that would be clearly harmful to the child or would drastically curtail its options in life, then this prospective parent should be prevented by law from doing so.<sup>14</sup>

The normalising logic of this legislative oversight could presumably be used to eliminate queer, autistic, non-white and other ‘marginal’ offspring on the grounds that each of these categories would undeniably “curtail options in life”.

The need for legislation governing our techno-evolution is, however, understood as only necessary during these transitory stages as we move beyond the transhuman present into the boundless post-human future. Transhumanist movements readily acknowledge the normative nature and ethical dimensions of their project, however their ultimate *telos*, the post-human, would require no politics or ethics because it will have simply

transcended them. The post-corporal post-human is imagined to exist in a digitised cornucopia where issues of scarcity, (bio)politics and power no longer are considerations.

*The Apocalyptic Reflex: (Post)Human Nature*

As with technophilic posthumanism, Apocalyptic posthumanism can be understood as both a body of literature and a popular movement which views humanity as situated astride a critical historical rupture, approaching an epoch in which technology has so enmeshed itself with humanity that the two are now (or soon will be) indistinguishable. In contrast to hyperbolic imaginings, the apocalyptic position views this new era as fraught with danger, and sees technological intervention as corrupting or eroding a central aspect of ‘our’ essential humanity.

In *Our Posthuman Future*, Francis Fukuyama (of *The End of History* notoriety) calls for a “return to the pre-Kantian tradition that grounds rights and morality in nature.”<sup>15</sup> He sets about defining human nature (derived from “genetic rather than environmental factors”<sup>16</sup>) as an aggregation of quantifiable human qualities that can be statistically distributed along a bell curve. Unlike Kant, who locates human uniqueness in the capacity for rational moral choice,<sup>17</sup> Fukuyama suggests that the Human is instead based in a common genetic endowment that gives rise to a broadly similar distribution of phenotypical instantiations, emotional responses, moral instincts and social institutions. Since “Moral order comes from within nature itself, and is not something that has to be imposed on human nature by culture”<sup>18</sup> it follows that any technological pollution or augmentation of our genotype could potentially erode our unique human nature, and thus the moral order that derives from it. The original violence of this manoeuvre lies in its effacement of the margins of the ‘normal’ distribution. Individuals whose genotypes, phenotypes or behavioural characteristics lie outside statistical standard deviations are relegated to the realm of the subhuman or inhuman, to whom we owe reduced or even no moral consideration.

Fukuyama positions technology as outside of and distinct from human nature, the normative foundations of which are perceived as under threat from (bio)technology’s corrupting effects. While Fukuyama’s argument is not entirely contingent on a strict body/technology dichotomy, he nevertheless is unable to adequately disentangle (human) nature from technicity, nor does he coherently delimit precisely what technologies do not bare the high moral risks he associates with genetic engineering and neuropharmaceuticals. For example even the most seemingly natural, banal technologies such as cooking and crop cultivation have fundamentally altered us on a genetic, physiomorphological and evolutionary level. This unproblematised positioning of technology as ontologically and materially distinct from the human is a common and highly problematic feature of many technophilic and apocalyptic understandings of the post-human.

## II. LIMITROPHY AND THE POST-HUMAN AS DECONSTRUCTIVE METAPHOR

The liminal bodies of the post-human and the cyborg make them ideal deconstructive metaphors for thinking across obliques separating body/technology, internal/external, natural/artificial etc. A large body of work has been growing over the past twenty years from postcolonial, feminist, poststructuralist and queer theory scholars who deploy the cyborg metaphor as a deconstructive tool. Unlike thinkers within the technophilic or apocalyptic modalities, these authors are generally less concerned with the technical details of what would constitute a future post-humanity; rather they recognise that the very articulation of post-human calls for a critical re-examination of its antecedent—the Human, Humanism, and by extension Man. Rather than articulating ‘Man’ as an ontologically uncomplicated *a priori*, the deconstructive modality of post-humanism often positions it in triptych alongside technology and the non-human or animal, and through this positioning interrogates and complicates their limits.

These approaches explore how the disavowals, erasures and violences perpetrated in the production of the human are repeated and mirrored in the formation of the hyperbolic and unproblematised post-human, and demonstrate the ways in which both the human and its post-human *telos* are contingent on the production of

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the ahuman, nonhuman and subhuman.

As with postcolonialism and postmodernism, the critical/deconstructive modality of the post-human does not mark a specific empirical condition or style of embodiment, neither does it name a specific historical moment or movement; rather it represents a subversive way of reading that interrogates the body as a politicised and contested site of meaning-making. Thus, critical post-humanism can be read as a kind of limitrophy; it is not a brand of simple postmodern iconoclasm, rather it interrogates the limits and boundaries of the human and its others, without banal appeals to the transcendental or attempts to establish homogenising continuums. These approaches develop the theoretical resources needed to read the post-human resistively, highlighting its many contingencies. However they rarely interrogate the material consequences of these contingencies or the material conditions from which technocentric and apocalyptic discourses of the post-human arise.

### *Technologies and Bodies*

*If anything the modern collective is one in which relations between humans and non-humans are so intimate, the transactions so many, the mediations so convoluted, that there is no plausible sense in which artefact, corporate body, and subject can be distinguished.*<sup>19</sup>

In *Pandora's Hope* Bruno Latour gestures towards a zone of indeterminacy and a confusion of the limits between Object and Subject, between the 'who' and the 'what', which has been brought into sharp relief by 'our' supposed increasing intimacy with technological artefacts.

Throughout much of the history of (pre-Heideggerian) western metaphysics, the ontological status of technology, machines and technical knowledges has been contingent on a structured break, or a "supervening opposition between *physis* and *nomos*, *physis* and *techné*,"<sup>20</sup> guaranteeing human ontological primacy *before* and agency *over* 'its' externalised technologies. This distinction was built upon the stratifications and divisions between the physio-empirical and the transcendental, body and soul, form and materiality present in Aristotle and Plato's writing. These divisions, articulated at the very inception of western metaphysics automatically render *techné*, technology, and machines intelligible only alongside or in opposition to the Human; as instruments, instrumental knowledges or as means-to-ends.

In the opening lines of his magnum opus, *Technics and Time* Bernard Stiegler points to the politicised and historically located origin of this cleft:

... the philosopher accuses the sophist of instrumentalising the *logos* as rhetoric and logography, that it, as both an instrument of power and a renunciation of knowledge ... philosophical *epistémé* is pitched against the sophistic *tekhné*, whereby all technical knowledge is devalued.<sup>21</sup>

As well as being ontologically distinct, *techné* is here rendered *subordinate* to *epistémé*, Truth and the transcendental.<sup>22</sup> The human (as *homo faber*) is set aside from non-humans in its capacity to deploy *techné* for instrumental ends, but in the process it is never affected ontologically by the use of its tools.

Thus the very definition of the human is located precisely within this classical cleft between *epistémé* and *techné*, *physis* and *nomos*. What we name as technology, technical artefact, or animal (and so simultaneously disavow as non-human) are all essentially "part of an interactive stabilisation of the human."<sup>23</sup>

There has been much work done in contemporary continental philosophy on re-examining and complicating this technology/body cleft, often through the deconstructive logic of the supplement.<sup>24</sup> Bernard Stiegler has staged one such intervention and has used the work of French paleoanthropologist Leroi-Gourhan in tandem with Derridean deconstruction to point to the inextricability and mutual-constitutive supplementarity of the human and *techné*. The first volume of Stiegler's *Technics and Time* is largely devoted to a close reading of the work of Leroi-Gourhan, whose work is based on the discovery of early tool-using pre *homo sapiens* hominids (formally

*Zinjanthropus boisei*, now *Paranthropus boisei*). Despite their use of tools, these hominids had a relatively small brain capacity, which led Leroi-Gourhan to invert the commonly held belief that increased brain development led to tool use. It was not the evolution of a larger brain capacity that led to the development of tools, rather it was the evolution of an upright posture which freed the hands and face for tool use, gesture and later speech. Expanded brain capacity and cognitive capability was not the origin of technicity; *they were its beneficiary*.<sup>25</sup> Leroi-Gourhan asserted that “[i]t is the tool, that is *techné*, that invents the human, not the human who invents the technical.”<sup>26</sup> Stiegler goes on to tease out the implications of this shift in evolutionary understanding in a passage that is worth quoting at length:

The human invents himself in the technical by inventing the tool—by becoming exteriorized technologically. But here the human is the interior: there is no exteriorization that does not point to a movement from interior to exterior. Nevertheless the interior is inverted in this movement; *it can therefore not precede it*. Interior and exterior are consequently constructed in a movement that invents both one and the other... The interior and the exterior are the same thing, the inside is the outside, since man (the interior) is essentially defined by the tool (the exterior).<sup>27</sup>

Technology is *invented by and invents* the human, the two cannot be dissociated because they exist in a transductive relationship, operating along an axis of supplementary logic. By temporalising or presupposing the ontological primacy of the Human, one effaces the co-dependency and inextricability of *techné* as the supplement, as always already inside, just as it is externalised. Derrida makes a similar point in *The Rhetoric of Drugs* interview when he suggests that:

The natural, originary body does not exist: technology has not simply added itself, from outside or after the fact, as a foreign body. Certainly this foreign or dangerous supplement is ‘originarily’ at work and in place in the supposedly ideal interiority of the ‘body and soul’.<sup>28</sup>

Though it may be anathematic to those who occupy an apocalyptic position on posthumanism, the human is originally, thoroughly and on every level produced through entanglements with technology. Language, memory, cultural artefacts and physiomorphology must all be thought alongside the technical, as they each share a common trace.

Bruno Latour’s once provocative assertion that “our very body is composed ... of sociotechnical negotiations and artefacts”<sup>29</sup> seems flaccid in light of Stiegler’s analysis; technologies not only shape, regulate and define our bodies, they are constitutive of our very humanness, and the capacity for knowing of that humanness—they grant us access to the ‘already-there’ by rendering ‘human’ a culturally intelligible construct. The human *as such* is physiomorphologically formed *but also made accessible* (revealed or unconcealed, as a function of *alētheia* in the Heideggerian sense) through delimiting discourses, which are themselves always both technical, and intermeshed with fields of power. This refusal to dissociate material technics from discursive technologies marks a central theme in the critical/deconstructive modality of post-humanism. The focus for Stiegler and Derrida (and thereafter Donna Haraway, Elaine Graham etc.) is not restricted to the material differences and outcomes of infolded technics and bodies, but also directed towards those discursive technologies which sequester the human and maintain its solid ontological footing, often through the division, subjugation and purging of the non-human, animal, ahuman, abject and monstrous.

#### *Stabilisation-Through-Caesurae, Biopolitics and Bare Life*

The clefts between human and animal, *physis* and *nomos*, *physis* and *techné* etc. can thus be understood as strategies of stabilisation through opposition, as a necessary function of *Différance*. The unitary human can only be articulated through these ceaseless divisions and definitional oppositions, the most immediate of which, in the words of Giorgio Agamben, “passes first of all as a mobile border within living man.”<sup>30</sup> Here Agamben speaks of that most fundamental and intimate of caesurae which separates out and differentiates between vegetative, bare life (*zoē*) (as proper to all living beings), and relational, subjectified, political life (as that which is proper to man) (*bios*). The delineation and maintenance of this border is named by Agamben as the foundational activity

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of the biopolitical state. The intelligibility and effectiveness of the oppositions separating and elevating Man from bare, vegetative/animal life and technologies is contingent, according to Agamben, on the fact that these mobile and contingent borders lie *within living man*:

it is possible to oppose man to other living things, and at the same time to organize the complex—and not always edifying—economy of relations between men and animals, only because something like an animal life has been separated within man, only because his distance and proximity to the animal have been measured and recognized first of all in the closest and most intimate place.<sup>31</sup>

Anaesthesia, debates about the provision of life-support technologies, and the very definition of life itself are all contingent on this structured break and the separation of whole, political Man from mere bare life.<sup>32</sup> However just as bare life is marked (through techno-scientific, medical and judicial discourse) and excluded from the *polis*, it is simultaneously and paradoxically included, precisely by means of its exclusion. The whole human-as-inside is “obtained through the inclusion of an outside, and the non-man is produced by the humanization of an animal... the slave, the barbarian, and the foreigner, as figures of an animal in human form.”<sup>33</sup> This caesura, and the manufacturing of sub-human bare life as always already inside the human, is not an innocuous or apolitical artefact of technoscientific taxonomy, rather it allows for the strategic reduction of human to sub-human, such as is the case with the Jew, “that is, the non-man produced within the man, or the *néomort* and the overcomatose person, that is, the animal separated within the human body itself.”<sup>34</sup>

It is precisely this subsumption of the *zoê* into the *polis*, and the subsequent “subjugation of bodies and...control of populations”<sup>35</sup> which marked for Foucault the birth of the modern state, in which the principle manifestation of power was “the administration of bodies and calculated management of life.”<sup>36</sup> For Foucault the task then was to establish a radically new conceptualisation of power, outside of the frameworks of traditional political science and philosophy. Foucault (and thereafter Agamben) focussed on the place of the body within the body politic, on bodies as the very locus of power and sovereignty. While the institutions, disciplinary practices and discourses focussed on by Foucault in *The History of Sexuality* and *Discipline and Punish* were all relatively recent inventions (i.e. asylums, psychiatry etc.), the disjunction of *zoê* from *bios* and subsequent subsumption and subjection of specific bodies to state power is by no means a modern phenomenon. Rather this caesura-and-conjunction marks the foundational condition of sovereignty,<sup>37</sup> and of becoming-citizen and becoming-human. The increasing visibility of biopolitics in the modern state highlights the far-older foundational inextricability of power from bare life. The manufacturing of bare life, and its “inclusion ... in the political realm constitutes the original—if concealed—nucleus of sovereign power... [T]he production of a biopolitical body is the original activity of sovereign power.”<sup>38</sup> The border politics of the human are reliant on these practices of inclusion-through-exclusion, supported by elaborate politico-judicial, scientific, medical and economic technologies of demarcation, observation and control. As the citizen-subject is called into being by its inclusion in the state/law (through the exclusion of bare life in its capacity to be killed), so too the human is called into being through a similar double-movement: through the inclusion within technologies of taxonomy, medicine and bio-science, and simultaneous exclusion and exteriorisation of technology *as such*.

To this we can now add that, just as the human emerges through the subjugation, exclusion (which is always already an inclusion) and slaughter of sub/a/non-human bare life, the ‘post-human’ (understood in emancipatory, hyperbolic or eschatological terms) emerges from the erasure of embodiment, bodily markers of difference, and the denial of certain subjects to the very category of the fully-human. This marks a key reversal of the meanings of post-human where the diacritical hyphen now signifies denial of access to the fully-human, produced through the utter separation of *bios* from the subjugated *zoê*. Technophilic and hyperbolic figurations of the post-human produce (and are also produced by) bare life, both discursively and materially. It is precisely this relationship of dependence and disavowal which needs further unpacking and attention at a material, situated level.

Following Foucault and Agamben, it becomes clear that material bodies are the contested sites upon which the post-human is inscribed, divided and extruded. Despite this, the post-human is most often invoked in theory as a purely textual deconstructive trope, with only the most limited and obligatory nods to its materiality economic situatedness. Those few discussions of the post-human which do recognise this disavowed material underside rarely engage in detail with material bodies and their socioeconomic contexts.

The final section of this paper will look to some of these specific sites and specific bodies upon which the post-human is projected. It will look at the ways in which transcendental and voluntarist understandings of the post-human (the goal of which is ultimately liberation) are in fact contingent on reduction and subjection of specific bodies to bare life, and are reliant on a series of highly illiberal networks of power, labour and reliance.

### III. POST-HUMAN POLITICAL-ECONOMIES

Almost two decades after it was first written, Donna Haraway's "Cyborg Manifesto" remains one of the most relevant and critically-cutting interrogations of the politico-economic implications of machines and their integration with bodies. Haraway devotes large sections of the *Manifesto* to interrogating the feminisation and international division of labour, and the impacts of communications and the global information economy on structuring the social, economic and bodily relations of women worldwide. However, her analysis focuses primarily on the *figure* of the cyborg (described throughout the work as a 'cyborg myth') as the foundation for a radical new politics of affinity. The figure of the technologically augmented *trans*-bodied cyborg serves as a resistive metaphorical resource which offers "a way out of the maze of dualisms in which we have explained our bodies and our tools to ourselves."<sup>39</sup> Haraway outlines the intricate entanglements of labour, communications, biotechnologies, capitalism, globalisation and international production, all wound into an "informatics of domination" in which capital and labour are configured alongside (as transductively constituting and constituted of) material bodies. For Haraway, the intimate interfaces and co-pollution of technologies and bodies can only be understood in terms of capital and capital production; the very body of the cyborg is structured and dictated on every level by capital. She resists traditional Marxist understandings of labour as the "pre-eminently privileged category enabling the Marxist to overcome illusion and find that point of view which is necessary for changing the world."<sup>40</sup> Instead of relying on an outdated, exclusionary and *humanising* conception of labour-as-identity, Haraway's cyborg metaphor opens up a new way of conceptualising the relationships between workers (particularly women), technology, information and bodies. However, despite the central place of labour and capital in the *Manifesto*, the work is curiously devoid of the singular material bodies of those women whose work serves as the basis for contemporary digital economies and the '*informatics of domination*'.<sup>41</sup>

Another watershed in the field, Elaine Graham's *Representations of the Post/Human*, deals explicitly with the maintenance of the 'ontological hygiene' of the Human through the exclusion of the "non-human, monstrous, abject or alien."<sup>42</sup> Despite dealing primarily with fictive representations of the post-human in film and literature, the spectre of capitalism and the place of economics and capital in machine/human relations can be seen operating in the subtext of her work. Early in the text Graham marks the fact that our relationship with technology needs to be thought alongside capital:

Technologies emerge from particular economic relations of production, bearing the marks of particular (often gendered) divisions of labour, the objectification of nature, disciplining of bodies, accumulation of capital, and pressures of commercialisation.<sup>43</sup>

Throughout the text Graham continually returns to the economic base upon which the hyperbolic superstructures of disembodiment, immaterial information (in particular genetic code and immaterial capital) are constructed. For Graham, the cyborg metaphor signals an economic shift in late capitalism from traditional production and consumption to the processing and circulation of information, in which wealth creation and the production of capital are less tethered to processes of material production, and more focussed on information flow.<sup>44</sup> She rejects the hyperbolic assertion that digital information technologies will establish global post-industrial

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economic prosperity in which the very material problems of distribution and scarcity will simply be transcended by the shift to information economics, characterised by their supposed “technologically-driven abundance and democratisation.”<sup>45</sup> Instead Graham draws attention to issues of access to the high-tech artefacts, economics and symbolic spaces taken for granted by hyperbolic trans/posthumanists:

To the privileged first-world citizens, the digital and biotechnological developments bring with them an expansion of selfhood beyond the limits imposed by finite bodies and minds. To those unable to participate, however, it means further exclusion, compounded by the possibility that due to globalization, the wealth of Western cyborgs rests on the cheap labour of their Third-World sweatshop fellows... Despite their iconoclasm and self-styled radicalism, transhumanist principles have little to say about human evolution as involving the eradication of poverty, disease and discrimination.<sup>46</sup>

The transcendental hyperbolic accounts of post-human economic, bodily and political futures are predictably devoid of this disavowed underside; there are no material bodies marked by poverty, sickness, disability etc. or situated within global economic hierarchies of domination and subordination; there is only the limitless ‘emancipatory and egalitarian’ potential. These teleologies operating within hyperbolic accounts of the post-human obscure the multitude of people whose lives (and deaths) are currently structured by a lack of access to even the most basic of life-sustaining technologies (clothes, food, water sanitisation, malarial prophylactics, etc.). Discussions of biotechnological innovations, life-extension technologies, gene therapies and genetic engineering as heralding the end of sickness and senescence appeal to a transcendental ‘outside’, in which systemic problems of poverty and inequity can simply be ignored. Instead, Graham argues that the “primary *cause* of much disease is poverty; but such lavish attention to the gene effectively cloaks alternative routes in preference for the prestigious, high-profile ‘big science’ of biotechnology.”<sup>47</sup>

While Graham invokes the situated bodies which are left out of hyperbolic accounts of the post/human, her work focuses on representation and does not unpack the economic infrastructure or processes at play in post-human production. I want to move beyond Graham here by suggesting that hyperbolic post-humanism not only obfuscates and ignores this disavowed material underside; it is structurally reliant (both ontologically and materially) on the separation/subjugation of *zōē*, and the production of bare life.

### *Flexibilisation, the Global Production and the Global Information Network*

In tandem with massive structural changes in global capital flow and dramatic reductions in trade barriers, the nature of global labour markets have been fundamentally restructured over the past century. Global production chains have resulted from increasingly liberalised labour markets, particularly in those developing nations that have adopted export-oriented economic development strategies. IMF assistance and World Bank loans to developing countries are usually conditioned on economic restructuring projects, which often entail labour-market deregulation and liberalisation, the reduction of import tariffs and the elimination of domestic industrial subsidies.<sup>48</sup> As a result domestic industries are often displaced by export-processing, funded by foreign direct investment (FDI) seeking to capitalise on cheap labour costs. This shift to export-processing in less developed countries is characterised by post-Fordist ‘just-in-time’ production and delivery strategies and increasingly ‘flexibilised’ patterns of employment, in which work is often casual, informal, subcontracted and inherently insecure.<sup>49</sup>

These flexible and informal working arrangements are becoming the norm in those export sectors dominated by global value chains and FDI, particularly in manufacturing industries, electronics assembly and textile industries.<sup>50</sup> Flexible employment allows employers to externalise many of the risks and costs associated with global production by transferring them to their subcontracted, casual or informal and thus interchangeable employees.<sup>51</sup> For those employees whose labour is central to the functioning of these global chains of production, the experience of flexibility is often synonymous with ongoing financial instability, little job security and poor government regulation of domestic labour markets.

Following Haraway's "Cyborg Manifesto" which established the indissociability of (women's) labour, technoscience and globalised information economies, it becomes clear that flexibilised, feminised production (i.e. in electronics assembly industries) serves not only as the basis for the processes and flows of globalisation, but also for the formulation of the hyperbolic, transcendental post-human. Coco Fusco takes the analysis further by focussing specifically at the sites at which electronics are actually assembled; at specific factories which provide much of the hardware upon which digital fantasies are enacted.<sup>52</sup> Fusco rejects the emancipatory and democratising claims that information technologies lead to liberation, and that "'we' don't need to be concerned with the violent excise of power on bodies and territories anymore because 'we' don't need to carry all that meat and dirt along to the virtual promised land."<sup>53</sup> Instead she focuses her attention on those assembly workers whose integration with technologies and machines is marked not by liberation and transcendence but their absolute antitheses: by crippling poverty, an absolute lack of economic and personal security, and a complete alienation from the symbolic spaces that their labour produces. While many electronics assembly workers may have no access to the internet, their cheap labour provides the material basis upon which the dreams of digital disembodiment of transhumanists are based.

These electronics assembly workers are rendered post-human in that their technological augmentation situates them *beyond human*, and denies access to the very category of the 'human', as codified in international labour standards, international law and human rights conventions. The supposed fluidity, transcendence and liberation associated with digital technologies and hyperbolic post-human futures are structurally contingent on the cheap labour and de-humanisation of these other post-humans.

#### *Export Processing Zones and Post-Human Production*

In an attempt to attract FDI many developing countries establish export processing zones (EPZs)<sup>54</sup>—economic enclaves which are often fenced-in and offer free trade conditions, liberal regulatory environments, minimal customs and duties, tax incentives as well as ready-made manufacturing, communication and transport infrastructure.<sup>55</sup> Over the past forty years there has been explosive growth in both the number of EPZs (from a mere 79 EPZs in 25 countries in 1975 to 3500 zones in 130 countries in 2006)<sup>56</sup> and the number of employees (currently over 66 million worldwide).<sup>57</sup> EPZs further represent a fundamental shift in the gendered division of labour, with the majority of factory-floor assembly and textile workers being female. 'Feminisation' has become synonymous with export-oriented manufacturing, particularly in electronics industries where women constitute the vast majority of factory-floor staff.<sup>58</sup> An International Labour Organisation working paper expounds on this shift:

Whereas the typical industrial worker in the Fordist era after the Second World War was a European or American male working in capital-intensive "heavy industry", who could expect lifelong job security in a reasonably tight labour market, the right to join a union, some statutory or firm-based benefits and protections and a "family wage" which assumed full-time housework for women, the typical manufacturing worker is now more likely to be a young single Asian woman employed in labour-intensive, low value added stages of production, paid wages too low to cover a household's basic costs and enjoying very little social protection.<sup>59</sup>

'Feminisation' in EPZ employment thus not only describes increases in the proportion of female workers, but moves towards flexible modes of employment, lower wages, low job security and generally low labour standards. As EPZs are structurally dependant on highly fluid, mobile FDI and are open to global competition, any significant increases in labour standards or worker-protection legislation often precipitates foreign capital flight. Countries which have achieved some degree of increased labour standards and higher minimum wages (i.e. South Korea, Hong Kong and Malaysia) have lost a substantial amount of their low value-added FDI labour markets to countries with less developed economies and suppressed labour standards (i.e. Bangladesh, Sri Lanka and Vietnam). This tendency for capital flight and the subsequent need for systemically suppressed labour standards, coupled with continual international competition between essentially interchangeable labour

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markets means that EPZs do not necessarily lead to increased development or aid in industrialisation, rather they may simply perpetuate cycles of economic dependence and hegemonic domination.

The workers in EPZs are often subject to strict biopolitical regimes of control, regulation and observation. For example, in an ethnographical study of Mexican electronics *maquiladoras* workers, Melissa Wright describes how female workers are favoured because of their “naturally subordinate”<sup>60</sup> nature, their “inherent untrainability,”<sup>61</sup> and a range of other essentialised physiomorphological traits (i.e. “dexterity and the ability to work with small components are reputedly described as ... natural feminine traits”).<sup>62</sup> Wright describes how the female employees are expected to, very literally, “embody the concept of flexibility”<sup>63</sup> in that they are regarded as incomplete subjects, as untrainable bare life whose bodies serve “merely a conduit for the supervisor’s knowledge”.<sup>64</sup> Thus the *maquiladora* floor-worker is produced through the utter differentiation of *zoē* from *bios*, that is, as a body which is governed and operated through what Wright describes as a “prosthetics of supervision.”<sup>65</sup> The bare life of the electronics assembly worker is subordinated and appropriated first by way of the prosthetic relationship with her (almost always male) supervisor, and then at a second-level by the technologies and flows of global capital.

Despite their total integration with technological artefacts and instantiation within global networks of information and capital flow, Fusco rails against the labelling of the women working in *maquiladoras* as ‘cyborgs’, since such a naming would “natural[ise] the economic order to which they are subjected and myth[ify] the political nature of their interface with technology.”<sup>66</sup> Employing the augmented, hyphenated typography of post-human may serve as a better metaphor for understanding EPZ workers, as it signals their position as outside of the fully-human. This reappropriation of ‘post-human’ confounds transhumanist understandings of the emancipating and transcendent potential of technology, and serves to highlight what is left behind in these fantasies of transcendence.

The EPZ is by its very definition a ‘state of exception’, the logic of which establishes the conditions for the production of instrumentalised bare life. The definitional feature of an EPZ is that the laws and policy framework governing its operation are “distinct from what applies elsewhere.”<sup>67</sup> While the EPZ exists physically within a sovereign territory, it remains outside the regular juridical order of the state and is excluded from the tax laws, customs conditions, labour legislation, and environmental protections standards that apply elsewhere.

Similarly EPZ workers are excluded from the body politic physically (by strict security controls to prevent smuggling into domestic customs territory, usually by way of large fences and walls) and symbolically (through their exclusion from the regular juridico-political order, and through the lack of unionisation, international labour standards and independent monitoring).

As such, the EPZ can be seen to function with the same exceptional logic as the camp (as described by Agamben<sup>68</sup>). As with the inhabitants of the camp, EPZ workers are ushered into a zone outside of regular citizenship and the normal legal order. This exclusion is effected by a simultaneous inclusion, as EPZs are often established in special legislation, but also because they form key nodes in the globalised commodity chains, and are essential for the functioning of globalised capitalism.

As with the camp, the fenced-off enclave of the EPZ represents an absolute biopolitical space in that it allows for the unmediated application of power directly to bare life.<sup>69</sup> Here I do not mean to collapse the obvious and abysmal difference between the camp (which represents not only the production of bare life, but its genocide extermination) and the EPZ. Rather I aim to highlight the common divisional logic between the EPZ and the camp, both as paradoxical zones of exception and sites of production of bare life.

Agamben here provides us with a way of thinking ‘post-human’ “not as a unitary subject but as a dialectical oscillation between two opposite poles.”<sup>70</sup> On one pole exists the liberated pure *bios* of the transcendental tech-enhanced post-human, the personification of free-floating disembodied capital, while the other pole represents the deficient bare life of those post-human workers who are defined explicitly through their violent exclusion

from the symbolic and juridical order, who are post-human in a very different sense, in that they are excluded from what counts as human elsewhere.

Thus ‘post-human’ should be heard in its contradictory valencies; the situated and subaltern post-human and the transcendent technologically augmented cyborg are articulated in a double-movement, and are structurally reliant on each other at every level (materially, economically, politically, judicially, and symbolically). The post-human hyphen thus begins to represent that internal, fundamental biopolitical fracture between *zoē* and *bios* upon which these opposed understandings of the post-human are founded—the internal contradiction which is always already at its core.

The point here is not to resurrect some essential or normative notion of the human which should be extended to EPZ workers, nor to suggest that the borders of precisely what counts as human need to be renegotiated. A materialist analysis highlights the internal contradictions, inconsistencies and relationships of domination upon which the post-human is founded. The normative weight and usefulness of this phase-shifting methodology is not derived from some prescriptive or positivist notion of the human which *ought* to be extended to EPZ workers, rather it simultaneously troubles the terms on either side of the post-human hyphen. (Post)Humanist discourses of liberation, autonomy, individualism, emancipation and progress are *materially and symbolically contingent* on (re)producing the illiberal, violent, and inhuman conditions they propose to transcend.

#### IV. CONCLUSION

To suggest that it is somehow ‘more important’ to focus on the material underside of the post-human would be to reinscribe yet another unproductive limit between the figurative and the material, or between rhetoric and flesh. By instead deploying the post-human in a contradictory and pluralistic manner, by using it elliptically to explore the nuanced and layered interconnections, co-dependencies and transductive co-constitution of bodies and technologies, material economies and metaphors, one can begin to see that the transcendental promises of ‘post’ are in fact contingent on the production of bare life. Here, and throughout the paper I mean ‘production’ to be heard in its multiple valencies to signify the discursive production of sub-human bare life, but also the material production of bare life itself, in conditions such as EPZs.

A methodology which phase-shifts from a symbolic/deconstructive to a material/sociological perspective helps highlight the danger and violence of any transcendental or universalising languages, whether they come from hyperbolic promises of digital immortality, or from the false-exits from humanism offered by critical deployments of ontologically subversive cyborg imagery. This mode of theoretical pluralism accommodates bodies and technologies, which are always already co-constitutive and are together always already ensnared within hierarchical networks of labour, capital, and power.

By practicing this mode of methodological phase-shifting, the post-human may be revived as a useful critical tool and conceptual rubric which highlights the transduction of ‘body’ and ‘technology’, but also the central importance of materiality and political economy, while flagging the danger of the transcendental ‘post’. Such an analysis allows us to begin excavating the sites at which both the discourses and the material fabric of post-humans are produced, the technologies (discursive, material, juridical etc) which go into their production, and their economic and ethico-political consequences. Furthermore, this type of analysis holds at its core a disavowed underside of singular, material bodies—rendered non/barely/post/human by the very same technologies, logics and flows which go into producing the hyperbolic post-human. By refusing to ignore or obfuscate these material conditions and situated bodies, and highlighting the economic and political networks within which they are instantiated, a critico-materialist approach to the post-human forces a reassessment of the ethics and mechanics of our uses of technology ■

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### NOTES

1. Ed Regis, *Great Mambo Chicken And The Transhuman Condition: Science Slightly Over The Edge*. Reading, Mass.: Addison-Wesley, 1991, 148.
2. Ray Kurzweil, *The Singularity Is Near: When Humans Transcend Biology*. New York: Penguin Viking, 2006, 29.
3. Virilio's concerns and focus are obviously wildly divergent from those of the other authors listed here—I include him only because of the apocalyptic (sometimes deployed literally) tone he adopts in discussions of technology.
4. Hans Moravec, *Mind Children: The Future of Robot and Human Intelligence*. Cambridge, Mass.: Harvard University Press, 1988, 5.
5. N. Katherine Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics*. Chicago: University Of Chicago Press, 1999, 2-3.
6. *Ibid.*, 12.
7. Neil Badmington, "Theorizing Posthumanism" *Cultural Critique* 53 (2003), 11.
8. *Ibid.*, 12.
9. See especially Badmington, "Theorizing Posthumanism" and Eugene Thacker, "Data Made Flesh: Biotechnology and the Discourse of the Posthuman" *Cultural Critique* 53 (2003), 72-97.
10. 'Transhuman' is the teleological descriptor used by many hyperbolic thinkers (especially Bostrom, Kurzweil etc.) to describe a transitory, intermediate stage in the techno-evolution from human into 'posthuman'.
11. Nick Bostrom, "The Transhumanist FAQ: A General Introduction," 2003, 4. Available at: <http://www.transhumanism.org/resources/FAQv2.pdf>.
12. *Ibid.*
13. Sherryl Vint, *Bodies of Tomorrow: Technology, Subjectivity, Science Fiction*. Toronto: University of Toronto Press, 2007, 9.
14. Bostrom, "Transhumanist FAQ", 22.
15. Francis Fukuyama, *Our Posthuman Future: Consequences of the Biotechnology Revolution*. London: Profile Books, 2003, 112.
16. *Ibid.*, 130.
17. Rational choice as proper only to humans is an increasingly untenable concept considering the increasingly intelligent nature of machines.
18. *Ibid.*, 156.
19. Bruno Latour, *Pandora's Hope: Essays on the Reality of Science Studies*, 1st ed. Cambridge, Mass.: Harvard University Press, 1999.
20. Jacques Derrida, *Of Grammatology*. Baltimore: Johns Hopkins University Press, 1976, 33.
21. Bernard Stiegler, *Technics and Time, 1: The Fault of Epimetheus*. Stanford: Stanford University Press, 1998, 1.
22. Here I use *epistémé* in the Platonic (as opposed to Foucauldian) sense to signify the knowledge of the Forms, transcendental realities through the sciences (i.e. mathematics and physics), and metaphysics in general.

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23. Adrian Mackenzie, *Transductions: Bodies and Machines at Speed*. London; New York: Continuum, 2002, 43.
24. I do not mean to suggest, however, that the problematisation of the technology/human distinction only began with post-structuralism and deconstruction. This would be to ignore the (already all too often overlooked) thinkers who had, centuries before, already begun to think technology central to and constitutive of the human. For the sake of concision I can only gesture towards thinkers like Lamarck (who laid the foundations for both Stiegler and the emerging field of epigenetics), La Mettrie (whose *L'homme Machine* could be read as a 1747 precursor to Haraway's "Cyborg Manifesto") and Henri Bergson, who as early as 1907, stated that artificial objects and mechanical invention are "from the first...[the] essential feature" of the Human. Henri Bergson, *Creative Evolution*. Dover Publications, 1998, 138. By suggesting that the interactions of technologies and bodies are only *now* being understood in supplementary terms would be to caricature Enlightenment thought and efface the tacit, embodied knowledge of humans who have always lived intimately and inseparably with *techné*. Alison Muri's 2006 book *The Enlightenment Cyborg* is one of few accounts which offer a corrective to what she terms the "misappropriation of the Enlightenment in postmodernist readings of the cyborg" (Allison Muri, *The Enlightenment Cyborg: A History of Communications and Control in the Human Machine, 1660-1830*. Toronto: University of Toronto Press, 2006, 7) by highlighting heterogeneity present in Enlightenment medicine and philosophy and illustrating its many non-Cartesian undercurrents.
25. Steigler, *Technics and Time*, 134-179.
26. Leroi-Gourhan in Stiegler, *Technics and Time*, 141.
27. Steigler, *Technics and Time*, 142. Emphasis added.
28. Jacques Derrida, "The Rhetoric of Drugs: An Interview." *Differences* 5 (1993), 1-25.
29. Bruno Latour, *We Have Never Been Modern*. Cambridge, Mass.: Harvard University Press, 2007, 64.
30. Giorgio Agamben, *The Open*. Stanford: Stanford University Press. 2004, 15.
31. *Ibid.*
32. *Ibid.*
33. *Ibid.*, 37.
34. *Ibid.*
35. Michel Foucault, *The History of Sexuality*. New York: Vintage Books, 1978, 140.
36. *Ibid.*
37. Giorgio Agamben, *Homo Sacer: Sovereign Power and Bare Life*. Stanford: Stanford University Press, 1998.
38. *Ibid.*, 6.
39. Donna Haraway, "A Cyborg Manifesto: Science, Technology and Socialist-Feminism in the Late Twentieth Century" *Simians, Cyborgs, and Women: The Reinvention of Nature*. London and New York: Routledge, 1991, 181.
40. *Ibid.*, 159.
41. This absence of singular bodies is particularly obvious when read in parallel with Haraway's most recent book, *When Species Meet* (2008), which abounds with references to specific bodies and the political-economic contexts that shape and constitute them.
42. Elaine Graham, *Representations of the Post/Human: Monsters, Aliens, and Others in Popular Culture*. Manchester: Manchester University Press, 2002, 18.
43. *Ibid.*, 30.

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44. *Ibid.*, 202.
45. Elaine Graham, "'Nietzsche Gets a Modem': Transhumanism and the 'Technological Sublime'" *Literature and Theology* 16:1 (2002), 67.
46. *Ibid.*, 69.
47. Graham, *Representations of the Post/Human*, 121.
48. Jean Pyle, "Sex, Maids, and Export Processing: Risks and Reasons for Gendered Global Production Networks" *International Journal of Politics, Culture, and Society* 15:1 (2001), 55-57.
49. S. Barrientos, N. Kabeer, and N. Hossain, "The Gender Dimensions of the Globalization of Production" *International Labour Organisation Working Paper* (2004), 17.
50. *Ibid.*, 1.
51. *Ibid.*
52. Coco Fusco, *The Bodies That Were Not Ours: And Other Writings*. London and New York: Routledge, 2001, 194.
53. *Ibid.*, 188.
54. Different countries employ different names for these zones; 'Maquiladora' in Mexico, 'Special Economic Zone' in China, 'Free Economic Zone' in the ROK, 'Foreign Trade Zones' in India etc.
55. See M. Engman, O. Onodera, and E. Pinali, "Export Processing Zones: Past and Future Role in Trade and Development" *OECD Trade Policy Working Papers*, No.53. Paris: OECD Publishing, 2007; World Bank, "Export Processing Zones." *Policy and Research Series* No.20. Washington D.C.: World Bank, 1992.
56. Engman, et. al. "Export Processing Zones", 12.
57. *Ibid.*
58. See Melissa Wright, "Desire and the Prosthetics of Supervision: A Case of Maquiladora Flexibility" *Cultural Anthropology* 16:3 (2001); Engman, et. al. "Export Processing Zones"; Barrientos et. al., "Globalization of Production".
59. Barrientos et. al., "Globalization of Production", 4.
60. Wright, "Desire and the Prosthetics of Supervision".
61. *Ibid.*, 359.
62. *Ibid.*, 362.
63. *Ibid.*, 354.
64. *Ibid.*, 363.
65. *Ibid.*
66. Fusco, *The Bodies That Were Not Ours*, 200.
67. Engman, et. al. "Export Processing Zones".
68. Agamben, *Homo Sacer*.

69. *Ibid.*, 171.

70. *Ibid.*, 177.