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Cyborg Identities and
The Posthuman Body

The recent feats of double-amputee Oscar Pistorius in the track and field events of the 2012 London Olympics have provoked question on the extent to which his specially-designed prosthetic legs actually augmented his performance.[1] While Pistorius" courage, hard work, and determination were never in doubt, his use of technological enhancements or assistance in Olympic competition (as opposed to the Paralympics in which he has won several gold medals) has caused reservations about having been allowed unfair advantage. Ultimately, what Pistorius" achievement brought to the fore again was the issue of humanity's coupling with technology and the significant transformations this has been effecting.

In this paper, I present the figures of the cyborg and the posthuman body as an interrogation of the liberal humanist conception of what it means to be human, by gesturing towards *human enhancement technologies* or HETs through which current limitations of human cognitive and physical abilities are being sought to be overcome. I conclude with some remarks on their implications to our relationships with each other, namely the shift from intersubjective relations to system interfacing.

This essay is divided into three parts: the first deals with an elaboration of the types and classifications of HETs; the second is an articulation of the figures of the

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[1]At the London 2012 Olympic Games, Oscar Pistorius made history by becoming the first double amputee to compete in the 400m run and in the 4 x 400m relay, and make it to the Olympic semifinals and finals respectively.

cyborg and the posthuman body which challenge and undermine the liberal humanist ideal of what is human; finally, I propose that this critique of the human by the posthuman (as instantiated by HETs) allows for new engagements and relations we have with ourselves, fellow-(post)human beings, animals, and technology.

"Citius, altius, fortius"

When the founder of the modern Olympic Games, Pierre baron de Coubertin, adopted the Latin motto of the Olympics (which is "*citius, altius, fortius*"), little could he have foreseen that it can be employed by posthumanists as their own battle cry. For with these three words—faster, higher, stronger—do we grasp immediately what a predominant strand of posthumanism aims for and subscribes to.

"The ultimate techno-evolutionary telos of the Human," posthumanists believe, "is the displacement or supersession of human nature through the deliberate biotechnological evolutionary choices exercised through precise genetic modification and technological augmentation."[2] In other words, posthuman discourse concerns the coupling of technology and the nonhuman with humanity that is seen to lead to greater human perfection.

In this regard, we can gesture towards human enhancement technologies or HETs in gaining further insight on what posthumanism is. Philip Brey's research on HETs will be instructive on this matter. He says that human enhancement or human augmentation is "an emerging field within medicine and bioengineering that aims to develop technologies and techniques for overcoming current limitations of human cognitive and

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[2]Jon Seltin, "Production of the Posthuman: Political Economies of Bodies and Technology," *Parrhesia,* No. 8 (2009): 44.

physical abilities."[3] Through advances in HETs such as genetic engineering, pharmacology (the science of drugs), bioengineering, cybernetics, and nanotechnology, human functions are improved beyond the normal range.[4] HETs thus aim for the expansion and improvement of humanity: faster and more agile individuals, stronger and more resistant to diseases—smarter even.

According to Brey, human enhancements or augmentations can be categorized based on the human traits they modify. He states that "a basic distinction can be made between *bodily* and *mental* or *psychological enhancements*, where the former include improvements of the body, and the latter improvements of the mind and behavior."[5] Still, he qualifies that as in the case of certain traits which involve both the body and the mind, this distinction does not apply, e.g., sexual functioning.

Bodily enhancements are said to be subdivided into two: physical and cosmetic; while mental enhancements are also further classified into two types: cognitive, affective and personality enhancements. Physical enhancements are improvements made on human physical capacities: *citius*, *altius*, *fortius*. They involve increasing the physical capacities of the body in terms of its activities, but also with regard resistance to disease and senescence. Cosmetic enhancements, in the meantime, are those modifications in the body frequently aimed at aesthetic ends, e.g., liposuction, nose job, transgender surgeries.

With regard cognitive enhancements, Brey explains that they are "enhancements of human perceptual and cognitive capacities . . . enhanc[ing] human abilities for sensoy perception, memory, decision-making, thought and

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[3]Philip Brey, "Human Enhancement and Personal Identity," in *New Waves in Philosophy of Technology,* ed. Jan Kyrre Berg Olsen, Evan Selinger, and Søren Riis (London: Palgrave Macmillan, 2009), 169.

[4]Ibid.

[5]Ibid., 170.

imagination."[6] Meanwhile, affective and personality enhancements entail modifications in one's mood, personality traits and behavioral tendencies, a case of which is employing pharmacological treatment in order to have a "happy" disposition. The use of the drug Prozac (fluoxetine hydrochloride), a type of antidepressant called selective serotonin reuptake inhibitors (SSRIs), is an example.

Human enhancements can also be typified according to the technique or manner by which they are affected. Brey lists three: prosthetic, chemical or pharmacological, and genetic. The first pertains to enhancements achieved through the use of prostheses or artificial body parts in replacing damaged human organs, and/or in augmenting functions of the latter. At present, prostheses generally serve as replacements rather than enhancements or augmentation. Many scientists and engineers, however, are of the view that bionic and cybernetic limbs are nearing optimal development to become full-pledged human enhancements.

The second refers to "chemical modifications of biological organs or processes that yield superior functioning." Examples are performance-enhancing drugs employed in sports ("doping") like anabolic steroids and human growth hormone. Another is virility drugs like Viagra (sildenafil citrate) which aid men suffering from erectile dysfunction.[7]

Psychoactive drugs, says Brey, are a special sub-type of pharmacological enhancement. These chemicals temporarily—at times, even permanently—alter brain functions resulting to perception changes, cognition augmentation, mood modification, and personality transformation. Popular culture has latched on to this notion, for instance the movie *Limitless* which had Bradley Cooper in the lead role, had for its premise such a drug in which those who ingest it had their brain functions

[6]Ibid., 171.
[7]Ibid.

accelerated resulting to increased cognitive abilities; they became super intelligent, in other words. Of course, the movie—adhering to conservative humanist ideals—portrays this enhancement as requiring a steep price: due to acceleration of brain activity, the subjects who take the drug also die sooner than expected.

Third are genetic enhancements, those affected through genetic engineering involving the modification of genomes or the DNA (or deoxyribonucleic acid) in cells, resulting to enhanced human functioning. Brey admits that presently "human genetic enhancement is still largely science fiction," although its reality is "not far away."[8] He nonetheless cites instances of genetic engineering in which human-animal chimeras—the genetic coupling of human and animal zygotes—and inter-species chimeras had been produced. There are the cases of the "geep," a cross between a sheep and a goat, and a chicken with a quail's brain with regard the latter. As for human-animal chimeras, Brey mentions a human-rabbit that was nevertheless "terminated" after it reached embryonal stage.[9]

Finally, Brey speaks of intra-normal and supernormal enhancements. The former are "improvements of traits within the normal range for human beings," while the latter are "improvements beyond the normal human range and additions of qualitatively new traits."[10] An example of intra-normal enhancement is pharmacological enhancement of one's memory, while that of the supernormal are attached bionic limbs that increase speed and strength of an individual.

Cyborg identities and the posthuman body

The utilization of HETs which entail the fusion of human and machine result to cyborg identities. Arguably,

[8]Ibid.
[9]Ibid., 172.
[10]Ibid.

the concept of the cyborg was first given pre-eminent status with Donna Haraway's publication of the pioneering essay "Manifesto for Cyborgs: Science, Technology, and Socialist Feminism in the 1980s." In it, Haraway employed the figure of the cyborg to challenge and undermine what for many feminists was the ideal of liberal humanism: the rational and autonomous subject.

To do this, Haraway identifies three crucial "boundary breakdowns" between the human and the non-human. First, she speaks of how the boundaries enclosing what had hitherto been considered "human" have been "breached and transgressed" by animality. She lists those "beachheads of uniqueness" which humans have claimed as their own but are now "polluted if not turned into amusement parks – language, tool use, social behavior, mental events," because recent researches have shown them to be also within the abilities of animals. As such, Haraway points out, "nothing really convincingly settles the separation of human and animal."[11]

Second, Haraway states how the boundaries encompassing what is "human" have also become "leaky" in their relation to machines. While in a previous era, the chasm separating man and machine has been clearly discernible: machines lacked rationality and were not autonomous; "[now] we are not so sure. . . [with] [our] machines . . . disturbingly lively, and we ourselves frighteningly inert."[12] When many machines have taken

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[11]Donna Haraway, "A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in Late Twentieth Century" in *Philosophy of Technology — The Technological Condition: An Anthology,* ed. Robert C. Scharff and Val Dusek (Malden, MA: Blackwell Publishing, 2003), 430. This is a reprint of the essay originally published as "Manifesto for cyborgs: science, technology, and socialist feminism in the 1980s" *Socialist Review*, no. 80 (1985): 65–108.

As it is, there is substantial scientific literature showing that primates, dolphins, elephants, octopuses, and whales have exhibited one or more of the above mentioned "human" abilities.

[12]Ibid., 431.

over many of the functions humans "traditionally" took upon themselves, e.g., analysis and judgment (GPS devices do this all the time, and so do search engines like Google); and when many individuals adopt a machine-like routine in their lives (wake-up at 5:30 AM, shower, get dressed, breakfast, commute to work, work, eat, work some more, go home, eat, sleep, and the cycle begins anew), it becomes confusing what is human and who is the machine.

Lastly, Haraway indicated how the boundary between the physical and the non-physical has been rendered "imprecise." With the miniaturization of machines and the preponderance of information and communication technologies (ICTs) which are based on signals, on light and sound waves; the material constitution of these artifacts seamlessly melds with their non-physical properties that delineating between what is physical and non-physical has become very problematic.

With these "boundary breakdowns," subscribing and maintaining the ideal of the liberal humanist subject who is endowed with rationality and autonomy, and to whom everything is an "object" and thus an "other," are now fraught with serious difficulties. Consequently, *cyborgs* became possible, that is, *we* cyborgs became possible:

> A cyborg is a cybernetic organism, a hybrid of machine and organism, a creature of social reality as well as a creature of fiction. . . . By the late twentieth century, our time, a mythic time, we are all chimeras, theorized and fabricated hybrids of machine and organism; in short, we are cyborgs.[13]

When deployed by Haraway and other critics, the cyborg serves as a metaphor for a new set of identities that contrasts with and opposes the liberal humanist subject. For them, the cyborg metaphor or myth allows for the critical space in demonstrating the contingency, fragility,

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[13]Ibid., 429.

and oppressiveness of the liberal humanist subject. As Jon Seltin put it: "[cyborgs appear] as symbols of radical change, signifying a range of breaks with past bodies, past modes of subjectivity and past Humanisms."[14]

In Haraway's case, the cyborg myth she propagates is a critical tool to destabilize the feminist identity she was opposing at the time. Haraway was critical of the feminist identity that was being established through the subscription to binaries emanating from masculinist discourses and by locating itself as the "other" of these binaries. Among them are the male/female binary, the mind/body, natural/artificial, idealism/materialism, public/private, and so on. In lieu of the liberal feminist paradigm, she proposes the figure of the cyborg whose call to coalition is not by identity (from which lurks essentialist assumptions that Haraway adjudges to have become untenable), but by affinity, that is, by being part of the same network of power-relations that circulates in the socio-political realm.

The cyborg, the (con)fusion of the human and the machine, the body that integrates and is integrated by technology is a posthuman body. Posthuman bodies—themselves metaphors and critical apparatuses—seem oxymoronic especially in light of how N. Katherine Hayles characterized the posthuman. In the now canonical text that was published in 1999, Hayles provides an account of the posthuman in her book *How We Became Posthuman* as the transformation from corporeal embodiment to embodied virtuality. She brings this to the fore in describing the posthuman as a point of view with the following four premises:

> First, the posthuman view privileges informational pattern over material instantiation, so that embodiment in abiological substrate is seen as an accident of history rather than an inevitability of life. Second, the posthuman view considers

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[14]Seltin, "Production of the Posthuman," 43.

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.[15]

Hence, what is at issue for Hayles is the status and the fate of the body in the posthuman future. She narrates that the impetus for her book was, in fact, a roboticist's dream which for her was a nightmare: "the downloading of human consciousness into a computer." Hayles mentions being deeply disturbed by this claim of Hans Moravec in the latter's *Mind Children: the Future of Robots and Human Intelligence*. She writes:

[Moravec] invents a fantasy scenario in which a robot surgeon purees the human brain in a kind of cranial liposuction, reading the information in each molecular layer as it is stripped away and transferring the information into a computer. At the end of the operation, the cranial cavity is empty, and the patient, now inhabiting the metallic body of the computer, wakens to find his consciousness exactly the same as it was before.[16]

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[15]N. Katherine Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics* (Chicago: University of Chicago Press, 1999), 2-3.
[16]Ibid., 1.

In the advent of the posthuman, embodiment—the body—loses, if not its centrality, at least its fundamental and foundational importance to one's identity. Long considered as the seat of subjectivity or one's identity, the body is not necessarily corporeal in the posthuman. It can be a metallic avatar as was described by Moravec; or the body can be "flickering signifiers in the screen" indicating one's personal data like those being collected by Facebook.

The posthuman body is thus decentered, displaced, and frequently virtual. Unsurprisingly, for posthuman discourse the corporeal body is considered as only one among possible prostheses; original admittedly, but not final and definitive. As the discussion of HETs indicated earlier, augmentation of human capacities may include fitting it with bionic limbs. When corporeal extremities become too cumbersome or too limiting, the posthuman body adopts cybernetic arms and legs, even virtual ones.[17]

In sum, the cyborg and the posthuman body throw into bold relief the familiar body and identity of the liberal humanist subject. Hayles assures us, however, that they do not mark the end of humanity. Rather, they signal "the end of a certain conception of the human, a conception that may have applied, at best, to that fraction of humanity who had wealth, power, and leisure to conceptualize themselves as autonomous beings exercising their will through individual agency and choice."[18] Like Michel

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[17]The movies *Source Code* and James Cameron's commercially successful movie *Avatar* come to mind here. In the latter, the main protagonist played by Sam Worthington is exhilarated by the experience of having both legs again. But notice that while the protagonist "leaves" his corporeal human body to inhabit a corporeal but non-human body, he does so through his integration with sophisticated machines and computers that serve as the interface with his "avatar."

[18]Hayles, *How We Became Posthuman,* 286.

Foucault in *The Order of Things*, they herald the death of "Man," that construct of the modern age.[19]

Recognizing and taking into serious consideration the impacts technology has on human existence, posthuman and cyborgian theorists announce the obsolescence, or at least the impoverishment of current identities still fixated on corporeal embodiment but oblivious to embodied virtuality, to human-machine integration, and to inter-species incorporation. The cyborg and the posthuman, they claim, signal fluidity,

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[19]"[F]rom the nineteenth century onward, changes [occurred]: the theory of representation disappears as the universal foundation of all possible orders, language as the spontaneous *tabula*, the primary grid of things, as an indispensable link between representation and things, is eclipsed in its turn; a profound historicity penetrates into the heart of things, isolates and defines them in their own coherence, imposes upon them the forms of order implied by the continuity of time; the analysis of exchange and money gives way to the study of production, that of the organism takes precedence over the search for taxonomic characteristics, and, above all, language loses its privileged position and becomes, in its turn, a historical form coherent with the density of its own past. But as things become increasingly reflexive, seeking the principle of their intelligibility only in their own development, and abandoning the space of representation, *man enters in his turn, and for the first time, the field of Western knowledge.* Strangely enough, man—the study of whom is supposed by the naïve to be the oldest investigation since Socrates—is probably no more than a kind of rift in the order of things, or, in any case, a configuration whose outlines are determined by the new position he has so recently taken up in the field of knowledge. . . It is comforting, however, and a source of profound relief to think that *man is only a recent invention, a figure not yet two centuries old, a new wrinkle in our knowledge, and that he will disappear again as soon as that knowledge has discovered a new form.*" [italics mine]. See Michel Foucault, *The Order of Things: An Archaeology of the Human Sciences* (New York: Vintage Books, 1973), xxiii. This is a translation of *Les Mots et les choses* originally published in Paris by Éditions Gallimard in 1966.

multiplicity, and ultimately, immortality. For it is the conquest of death that is technology's real aim.

From intersubjectivity to interface

Intersubjectivity, our relations with one another, have been linked to our having bodies which display to and commingle with each other. But when our identities are supposedly being turned into cyborgs and posthuman, what impact does this have on our engagement with one another? *Quo vadis* intersubjectivity?

We might consider the most pedestrian of instances in which we assume cyborgian and posthuman personae: texting and interacting through social media. With the mobile phone, our social identities—we have more than one—are co-constituted**.** Yet even as we relate with others, we also form a relation with this particular technology for it becomes an extension of ourselves.[20] This is quite evident in the dual movement found in the "personalization" of our gadgets: we incorporate them into our persons, even as we frequently ascribe to them a persona or identity that is their own.[21] In addition, as we integrate this technology into our identity, we ourselves coalesce with the technological system, altering us in subtle and tremendous ways. Our intercourse with technology precisely breeds new identities for us: ones which extend beyond the layer of our skin**;** ones where our corporeality—our skin color, our race, our gender, our age, and all our physical

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[20]In fact, a research paper examining the relationship established between teens in Finland and their mobile phones discussed precisely this point. See Virpi Oksman and Pirjo Rautiainen, "Extension of the Hand: Children's and Teenagers" Relationship with the Mobile Phone in Finland" in *Mediating the Human Body: Technology, Communication, and Fashion* (Mahwah, New Jersey: Lawrence Erlbaum Associates, Publishers, 2003), 103-112.

[21]See J. E. Katz and M. A. Aakhus, *Perpetual Contact: Mobile communication, private talk, public performance* (Cambridge, England: Cambridge University Press, 2002).

attributes—hold very little significance in *who* we claim and assert ourselves to be.

Yet not only are we changed, but embodied virtuality which undergird cyborg and posthuman identities also transforms the kind of relation we have with others. From *intersubjectivity* in which relations are between rational and autonomous subjects, we are disposed to relate by *interface*, that is, the interaction and communication between distinct and unrelated systems of informational patterns which are technically mediated. It is a relation that exists not between subjects, but between systems of data belonging to an all-encompassing network of digitized information. Despite its term, *interfacing* precludes the "face-to-face" encounter—ironically enough—and instead, obtains in an interaction that ensues from the exchange of data or information. In other words, interface relations amount mainly to informational exchange and manipulation.

What does this entail?

With the increasing globalization of labor, workers" bodies have been shuttled far from their homes and families. Parents and their children, wives and their husbands (and vice-versa) have been separated by time zones and locations that being corporeally present to each other has become *humanly* impossible. But unfettered by corporeality, virtual identities are able to instantaneously communicate with large numbers of other individuals or virtual identities. Similarly, by being embodied virtually, one is able to engage in long-distance communications in real-time (think of Skype). One is able to be present in the lives of others, albeit virtually/electronically.

MIT media theorist Sherry Turkle, however, marks a different effect virtual presence has in current human relations. She says that "for those who are lonely yet afraid of intimacy, information technology has made it possible to have the illusion of companionship without the

demands of friendship."[22] For Turkle, the dissolution of corporeality in human relations frequently translates into companionship without friendship, relationship without intimacy.

Indeed, interfacing allows for the overcoming of limitations on relationships posed by space and time. Still, we can wonder if our relationships are more intense, more profound, more pleasurable even, because of the transcendence of space and time. Indeed, with Facebook and other social media sites, we gain and maintain numerous friends. Are our relationships with them more life-nourishing because our virtual presence allows for quick and multiple communications? (This of course begs the question: what is "life-nourishing" in the first place.)

On the other hand, interfacing also gains for us the possibility of relating with non-human species, with nature, and technology without having to assume a position of dominance or mastery. For the cyborg and the posthuman who are the amalgam of human and the non-human, there is an immediate respectful affinity with them.

To return to the matter of HETs, we can note the problems raised by transgender or transsexual surgeries in which the gender or sex of an individual has been changed, either from male to female or from female to male. Many conservative-minded individuals find the prospect of engaging a sexual relationship with transsexuals uncomfortable to say the least. However, from the perspective of cyborgian and posthuman discourse, sexual identities are fluid and even multiple. From this view, what matters is not the "person" but the "persona," that is to say, the informational pattern that is ensconced inside the gendered body.

In the end, do this mean that intersubjective relations are superior and "more authentic" than technological interfacing? While the demise of the liberal

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[22] Sherry Turkle, "How Computers Change the Way We Think," *The Chronicle of Higher Education,* 50, no. 21 (2004): 26.

humanist subject may prove to be a welcome development, our sensibilities remain bothered by the prospect of not being able to kiss and hug the people we love. Thus, while Skyping, "texting," and yes, sexting and cybersex certainly have their charms and allure, we remain *inclined*—disciplined or socially constructed perhaps—to seek the tangible, the palpable, and the corporeal. We remain embodied therefore, and our relations persist to be grounded on embodiment, *on presence*. It is uncertain, however, how long our embodiment will stay corporeal before we fully embrace our cyborg and posthuman selves. Retrospectively, it is inarguable that we have always been tool-users, and because of this "we have never been human" if to be human means accepting the figure of the "natural human," that is, untouched by technology, rational and autonomous, and separate from the network of existences on this planet. But why has this myth of the "natural human" been so predominant? Haraway and others, following Marxism, are convinced that it is because this myth of the liberal human subject has secured for long time the interests of occidental, white, male, bourgeois individuals. It is because that this myth, like Plato's "noble lie," has served to stabilize the socio-political realm.

That is, until recently.

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