

Transhuman Perfection: The Eradication of Disability Through Transhuman Technologies

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ABSTRACT

This paper examines transhuman technologies that seek to eradicate disability - primarily prostheses and implants. While most would agree that disability denies individuals the same quality of life as those deemed “abled,” this eradication ultimately relies upon secular humanist notions of the perfect human. Transhuman technologies hold obvious implications for the human body, however they also hold implications for what it means to be an acceptable body; ultimately these technologies aim to create the perfect human by eradicating the disabled Other. This paper uses these notions to question concepts of “hierarchies of life,” at which disabled individuals are most commonly moved towards the bottom, or at the very least considered nonhuman. This article seeks to provide alternative theory to the eradication of disability, which states that these individuals may not have the same mode of existence, but that their mode/s are just as valid as those lived by “abled” individuals through an examination of Braille.

Introduction

The human body as a site of inquiry is not a contemporary concept, and notions of what classifies as a human body has largely influenced biopolitical regimes and sovereign power. Biopolitical discourses that culminated in the Nazi eugenics regime during World War II held the belief that specific types of bodies were inferior to others, and ultimately classified as inhuman, which resulted in the liquidation of countless individuals under the rubric of racial hygiene. Nazi eugenics is an extreme example of both the sovereign power over

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life and death, and a quest for corporeal perfection; more subtle examples can be seen in contemporary Western society, such as the treatment of disabled individuals. Many forms of eugenics were discriminatory by their very nature, operating within a system of exclusion. Indeed the “old form of eugenics discriminated against the disabled and less intelligent by forbidding them to have children” (Fukuyama, 2002, p. 159). While this is no longer the case and those deemed disabled are quite freely allowed to procreate, disabled individuals are encouraged to conform to corporeal hegemony in various ways, which can be seen as resurgence of eugenic regimes. While the Nazi regime was primarily preoccupied with issues of racial hygiene, eugenics in contemporary society has transgressed to issues of corporeality and *genetic* hygiene; at the core of both, however, are greater issues of equality and hegemony that position specific bodies as superior to others.

Of concern in this article is the disabled “human” body – that is, those with “cognitive and physical conditions that deviate from normative ideas of mental ability and physiological function” (Mitchell & Snyder, 1997, p. 2) – for its perpetual recognition as somehow “less than” human, and the subsequent marginalisation and disenfranchisement of these individuals. The marginalisation of these individuals demonstrates an exclusionary system still in operation in contemporary society, igniting the notion that eugenic regimes have evolved and are applicable to discourse on disability. This article will scrutinise the addition of what I will posit as transhuman technologies – such as implants and prosthetics – to disabled bodies that seek to eradicate perceived physical and/or psychological deficits, and the implications these technologies hold for notions of acceptable human bodies. It is important to note here that disability is not the only issue to be dealt with regarding these sorts of technologies, as aging and the quest for immortality can be highly linked with disability studies and transhumanism; however, this paper will specifically focus on the issue of disability, as to examine anti-aging and immortality would require extensive space.

Questions of what constitutes a human body are perhaps of greater importance now than ever before, due to the addition of advanced technologies to these bodies. Quite often it is often overlooked that “from the very beginning ... the body is always already intextuated and instrumentalised by a series of technologies” (Pugliese, 2011, p. 946), and indeed can be viewed as the original prosthesis able to be manipulated (Hayles, 1999). The possibility, then, of adding technology to any human body infringes upon notions of that

body remaining human, but rather becoming transhuman – and, eventually, posthuman. Nick Bostrom identifies transhumanism as a movement that seeks to enhance the human through technological advancement, “like genetic engineering and information technology, and anticipated [technologies] such as molecular nanotechnology and artificial intelligence” (Bostrom, 2003, p. 493). This article will adopt Bostrom’s understanding of transhumanism, and through this definition it is possible to view both implants and prosthetics as transhumanist technologies.

Implants and prosthetics now make use of nanotechnology to integrate seamlessly into the body of the recipient, however “applications derived from nanotechnology have the potential to further marginalise those in society who are perceived as disabled” (Sheremeta, 2004, p. 51). The visibilisation of difference – both pre- and post- nanotechnological implants/prosthetics – can act as a proponent of the “lack” of a pure human body, thereby placing them further within the category of other. This article posits implant and prosthetic technologies are transhumanist in nature for their capacity to modify the human; whether these modifications are positive or negative remains to be seen. This article suggests that it is through these transhuman technologies that the eradication of disability will most likely occur, unless one acknowledges the validity of modes of existence that lie outside Western hegemony. Through an examination of the technology of Braille and recent advances in adaptive computer software, this article suggests that transhuman technologies need not “amend” these bodies, but perhaps work with them to acknowledge the validity of non-hegemonic modes of existence, and potentially disrupt biopolitical discourses that seek to eradicate disability.

1. Disabled Bodies And The Transhuman Other

The figure of the disabled is generally viewed, in Western society, as undesirable, and a site for pity and/or disgust; these bodies act as reminders to the able-bodied that things can go “wrong”. Hence, the “disabled are constant reminders to the able-bodied of the negative body – of what the able-bodied are trying to avoid, forget and ignore” (Fitzgerald, 1998, p. 152). The image, then, of the able-bodied, becomes normalised in a sense, and “normality [becomes] an assumed state which reproduces itself through a visual registry that engenders bodily integrity as self-evidently visible” (Sullivan, 2005, p. 332). Abnormality, too, however, makes itself visible in the sense that these

states are recognised as deviations from the assumed “normal” state. Recognising disability as an undesirable characteristic, and potentially even as a threat to the mythical “pure human” can ultimately position the human as fragile; it is possibly this fear of fragility that drives the human to pursue the dream of perfection through technology. One can argue that the blatant shunning of the disabled Other by homogenous society has led to the development and deployment of transhuman prosthetics; in an effort to both restore the body to a state of normalcy, and furthermore to achieve the ultimate humanist goal, which is that of the perfect human.

Moreover, the potential of “disability” threatens notions of the pure human, of what is “proper to man” (Derrida, 2002, p. 409), and opens a line of inquiry into the anthropomorphic nature of the human. Derrida’s notion of anthropomorphism alone enables one to question the supposedly clear lines between human and nonhuman, thereby resisting the concept that humans are unique. When advanced technologies are added to this mix, the lines are further blurred and the human must reconsider its own existence in relation to other species, and acknowledge that the human may not be the sole possessor of qualities such as essence. Martin Heidegger, in *Being and Time* (1967), understands and positions essence as the unique human capacity for consciousness and rationality, which is a humanist paradigm outlining notions of the human as pure; the notion is itself a mode of disenfranchisement that devalues nonhuman species which ultimately seeks to preserve the human’s position atop a (hu)man-made hierarchical species structure. It can be understandable then, that the shape of contemporary technology aims to eradicate the threat of the potential disabled figure via the addition of transhumanist prosthetics.

“Transhumanists are lovers of life who recognise that the limitations of the human condition may be overcome through the technology of the future” (Young, 2006, p. 41), and as such, in transhumanist discourse, the manipulation of the body through prosthetics is generally seen as desirable for its capacity to enhance the imperfect body. In relation to the disabled body, however, this addition is seen as therapeutic rather than for enhancement measures. The obvious difference here is between therapy and enhancement; at the heart of the therapy/enhancement dichotomy lie notions of the “normal” body, and it is “the idea of ‘normal’ [...] that sets the standard around which bodies are evaluated, regulated and are even permitted to materialise” (Karpin & Mykitiuk, 2008, p. 414). This notion automatically places disabled

individuals in opposition to hegemonic normalcy, positioning these bodies as Other based on what is perceived as either physical or psychological lack.

With the addition of transhuman technologies such as prosthetics, a series of new questions arise surrounding the normal body and, indeed, levels of humanity. The ultimate goal, then, of both therapy and enhancement, and the resulting treatment of those deemed disabled, can be seen as the reinforcement of the notion of the pure human and its unique qualities of essence, consciousness, rationality “and reason, which ‘distinguishes us from the beasts’, [which] also confers upon the human being the power to tell the difference between itself and its non-human others” (Badmington, 2004, p. 8). The unfortunate circumstance for disabled individuals is that each of them has been grouped into this category of nonhuman by outlining supposed similarities between the human perspective of the animal and the hegemonic perspective of the disabled; indeed, it has been stated that “human mental faculties like consciousness and creativity rely to a huge extent for their development on the stimulation received from the environment” (Pepperell, 2009, p. 131). Pepperell relies on this assumption to disenfranchise both blind and deaf individuals, concluding that these particular bodies are unable to interact wholly with their environment, and as such, are not fully conscious. Maurice Merleau-Ponty describes consciousness “as the possession of an object of thought or as transparency to itself” (Merleau-Ponty, 1974, pp. xv-xvi), which seems not to discount disabled individuals as conscious. Merleau-Ponty does, however, assert that phenomenology – early studies of consciousness – incorporates the corporeal existence as the most significant aspect of consciousness, claiming that it is through his body that he experiences the world. Perhaps in this instance, as one of the pioneers of consciousness studies, Merleau-Ponty has deployed notions of the disabled as in- or non- human based on the physical lack.

Pepperell uses this denial of consciousness to further argue that only humans have the quality of consciousness and therefore blind and deaf individuals must not be fully human. In similar fashion, the dehumanisation of disabled individuals – and the subsequent comparison to the animal – can be viewed as a contemporary reinscription of the Agambenian notion of bare life; that is, those whose lives are viewed as expendable under sovereign power, which Michel Foucault describes as “essentially a right of seizure: of things, time, bodies, and ultimately life itself” (Foucault, 1990, p. 136); and as Athena Athanasiou writes, “the subjugation of human life and death to

biopolitical sovereignty comes to be what is at stake in modern technology” (Athanasiou, 2003, p. 136). That is, the eradication of disability via transhuman technology can be seen as a model of the sovereign power over the right to let die.

It is perhaps this sovereign power that initiates a model of exclusion, as “bare life has the peculiar privilege of being that whose exclusion founds the city of men” (Agamben, 1998, p. 13). The notion of exclusion, as stated earlier, can be seen as deployed in contemporary society in a variety of discourses, though perhaps most visibly through the reduction of disabled individuals into nonhuman entities. In this way, then, “the disabled have been particularly fortunate beneficiaries of the age of intelligent machines” (Kurzweil, 2000, p. 58), particularly in relation to advanced prosthetics as “upgrading” these individuals to more than simply bare life, “for those with missing or disfigured parts, passing as able bodied is important for social as well as physical functioning” (Hogle, 2005, p. 706), which is demonstrative of biopolitical regimes of homogeneity and hegemony. With this discourse of normality, one is able to make the argument that prostheses used as a therapeutic measure in disabled individuals acts as a pathway to the restoration of the full body. Perhaps, then, the addition of prosthetics enhances the state of consciousness to these individuals.

Despite any addition of, for example, a prosthetic limb, however, it can be argued that these bodies are not reinstated as “fully” human, as “visible prosthesis ... reminds us of the way in which prosthetic culture is enveloping all of society, not only the disabled and the disfigured” (Mitchell & Snyder, 1997, p. 86); this in conjunction with the fear of losing our human essence is perhaps what renders post-prosthetic individuals as just as nonhuman as they were pre-prosthetic. Thus, the “alignment of disability with fears of the inhuman” (Wills, 1995, p. 28) does not only extend towards animals, but also towards technological nonhuman species, such as the image of the cyborg. The overtly robotic nature of visible prostheses – particularly limbs – promotes the cyborgic image, thereby further threatening the mythical pure human that secular humanists so desperately try to preserve. However, as Mervyn Bendle notes, “humanity is merely a temporary stage along the evolutionary pathway” (Bendle, 2002, p. 48), suggesting that the addition of robotic prostheses, and indeed, various other forms of technology, is nothing to be afraid of and is, in fact, part of the natural evolution of the human. Despite theorists like Bendle providing a techno-progressive view, and theories by N. Katherine Hayles

(1999), Donna Haraway (1985), and Jill Didur (2003) that suggest the human has always existed in relation to technology and therefore has always been cyborgic in nature, the overall attitude of this sort of technological intervention on the human body is still at odds with transhumanist perspectives that argue for the adoption of these technologies for the purposes of both enhancement and therapy.

The hegemonic view that these technologies render the recipient as less than human places individuals – particularly those deemed disabled – in a Catch-22 dichotomy, or a no-win situation; even with the addition of prosthetic limbs which aim to restore the body to a state of hegemonic normalcy, these bodies still remind the “abled” of what can go wrong, and are a firm embodiment of an “impure” body. Regardless of the reinforcement of biopolitical hierarchies present within this dichotomy, these bodies are further positioned as Other and, abysmally, as nonhuman in the sense that they are somehow recognised as more machine than human; rendering these individuals as the transhuman Other.

2. Beneath the surface: Implants and genetic hygiene

According to Ad Bergsma “we may gain the power to redesign the human body and mind” (Bergsma, 2000, p. 403), and certainly with the development of transhuman prosthetics, this has proven to be accurate. However, it can be seen that prosthetic technologies indeed act as a proponent for the eradication of disability, while simultaneously further producing the recipients of these technologies as the transhuman Other – either way, these individuals are not seen as fully human, reinforcing biopolitical hierarchies of life. Comfortably atop this hierarchy lies the mythical pure human, though its position becomes increasingly unsteady with the deployment of advanced implants and the development of genetic hygiene techniques, which have aided the re-deployment of notions of the human. In relation to these same hierarchies, various modes of existence that deviate from hegemonic norms are thus invalidated. These implant technologies, too, may be seen as resurgence of eugenic regimes, and certainly with the development of advanced nano-implants and the potential for designer babies, it doesn’t take a stretch of the imagination to envision the deployment of these technologies as a reinscription of biopolitical hierarchies and genetic hygiene, and ultimately, the eradication of disability.

The eradication of disability can be seen as a reinvigoration of eugenic regimes – or to use a term by James Hughes, “neo-eugenic” (Hughes, 2009, p. 16) – that aim to move the human towards a state of perfection; as discussed in the introduction to this article, an extreme example of this form of eugenics was the culmination of the Nazi death camps, the focus of which was the racial hygiene of Germany and other parts of Europe. The resurgence of eugenics in contemporary society is primarily focused on genetic hygiene; that is, the perfection of the human through the manipulation of genetic material, as demonstrated through the development of designer babies. As well as the intervention of genetic material, the use of nanotechnology to develop implants that alter and enhance the human can also be seen as yet another form of eugenics. While the extremity of Nazi eugenics faded some time ago, the eradication of disability can be viewed in a similar fashion when we articulate mass annihilation “in terms of mechanical economy in the age of technological reproduction; the concentration camp is cast, at a stroke, as an assembly line of decorporealisation, a technological project whereby the natural world is reduced to a ‘standing-reserve’ or raw material” (Athanasίου, 2003, p. 134). Just as the Jews were annihilated in the hopes of creating a “master race”, so too are disabled individuals, though rather than rounding disabled people into concentration camps, technologies, such as those deemed nano – specifically implants and genetic manipulation – are dispersed upon these bodies to alter, improve, enhance, and ultimately to erase undesirable deficits most commonly seen as disability.

While implants and genetic hygiene are two very different techniques used to eradicate disability, these technologies do share an important thread, which is what I will call on for this paper; both implants and genetic hygiene aim to promote and enhance desirable traits and/or characteristics in human subjects, thereby perpetuating hegemonic norms and acceptable bodies. Genetic hygiene does this through technologies such as genetic manipulation known to Simon Young as “superbiology, [which] will enable us to enhance our minds and bodies beyond the limitations of the human condition” (Young, 2006, p. 21). The notion of designer babies ensures that undesirable characteristics are literally bred out of future generations through genetic manipulation; implants, however, arrive after a body has been created and deemed disabled, undesirable, nonhuman, or some other form of Other. The most notable implants are, arguably, neural implants derived from nanotechnology, for the fact that these implants may directly impact notions of consciousness as

discussed earlier in this paper. These technologies are not without merit, of course, and in some ways should be celebrated for their capacity to shift a recipient's quality of life to a more standardised notion of what is inferred by "quality". For example, "deep brain stimulator implants, are a remarkable therapy that relieve the tremor, rigidity and bradykinesia of Parkinson's disease by manipulating basal ganglia activity" (Donoghue, 2002, p. 1085). While there is no denying that this technology will allow people with Parkinson's to enjoy a different lifestyle, and the validity of these technologies are not being disputed per se, this paper is elucidating the notion that these technologies are necessary; that different modes of existence must be eradicated. Through the use of these advanced technologies, contemporary Western society is perpetuating hegemonic discourse not only on acceptable bodies and biopolitical hierarchies of life, but also on what constitutes the human.

The integration of nanotechnology onto, and furthermore into, the body, is potentially what drives questions of the human – for some, it becomes uncertain just how human an individual is if they have a network of wires throughout their body, a neural chip, or a robotic limb. Despite humanist technophobia, research into such technologies continues, and "nanotechnology has been prophesied to accomplish almost anything called for by human desires" (Milburn, 2002, p. 262). Indeed, the corporeal enhancement capabilities of these technologies seem almost endless. It seems to make sense, then, to derive from these technologies applications that seek to enhance those deemed disabled. However, as briefly discussed above, when these technologies are deployed onto non-hegemonic bodies, the application is then seen as therapeutic and/or restorative in nature, rather than enhancing. This may be due to the very nature of the therapy/enhancement dichotomy; the distinction between therapy and enhancement is "commonly made between interventions that are therapeutic in their intent, used to treat disease or disability, and interventions to enhance or improve on normal species function or to bestow entirely new capacities, non-health related improvements" (McGee & Maguire, 2007, p. 293). This definition reinforces Western hegemonic discourse, which becomes problematic when we acknowledge that applying transhuman technologies to a disabled body for therapeutic means positions these individuals further as Other, abnormal, and ultimately, nonhuman.

Positioning disabled individuals in this way acts as "a reminder that the body proves no less mutable or unpredictable than the chaos of nature itself"

(Mitchell & Snyder, 2001, p. 126); hence the importance to hegemony of applications derived from nanotechnologies – specifically implants and genetic manipulation – becomes increasingly clear. Applications from implants and genetic manipulation perpetuate the ideal that certain bodies are more acceptable than others, not only invalidating groups of people – for example, those deemed disabled – but also invalidating their entire mode/s of existence.

3. The Transhuman Other as Valid

Thus far, this paper has addressed the fact that transhuman technologies aim to eradicate disability and enforce Western hegemonic discourse on acceptable bodies. What has been of focus is the intent to eradicate non-hegemonic modes of existence, implying that these technologies must *overcome* certain deficits rather than *accommodating* perceived deficits. Rather than acknowledging the validity of non-hegemonic bodies and their subsequent modes of existence, transhuman technologies seek to create a master race, just as eugenic regimes have done throughout history. This is not to say that there doesn't exist certain technologies that aim to work with a person's perceived disability, as some forms of technology have been adapted and developed to do precisely that; one prime example is that of Braille, another is computer software designed for those with vision impairments. Despite the lack of an interface and advanced computer software and hardware, Braille is nonetheless a transhuman technology. The technology of Braille is written into the lives of blind individuals and rather than attempting to remove the disability through the use of advanced technology, Braille accompanies blind individuals throughout their daily lives simultaneously allowing them to continue to be blind without forcing hegemonic discourses onto, and into, their bodies and minds.

In this sense, then, Braille acts as a form of enhancement rather than therapy, opting to exist on the counter-side of the therapy/enhancement debate than the usual placement of these sorts of technologies. As in common knowledge, people with perceived deficits “have not only been constructed as ‘Other’, but frequently as ‘the Other’ of ‘the Other’”. People with disability are marginalized even by those who are themselves marginalized” (Clapton & Fitzgerald, 1997, p. 1), so while scientists develop bionic eyes and restore sight, it is important that the technology of Braille remain for those who do not wish to partake in genetic engineering or nano-upgrades. Especially because,

for some, their “disability has become an essential part of their identity and genetic engineering thus challenges the worth of their own sense of self” (Fitzgerald, 1998, p. 160), so any attempt to alter their mode of existence is likely to be met with fear. The notion of altering modes of existence through either therapy or enhancement lends itself to the premise of eugenics – as discussed throughout this paper – but also to that of mastery, which is “the extent to which one regards one’s life chances as being under one’s own control in contrast to being fatalistically ruled” (Pearlin & Schooler, 1978, p. 5). Eugenics and mastery almost go hand in hand, however the notion of mastery is perhaps the driving force behind eugenic research; the Nazi’s focused on the mastery of race, and now it seems that contemporary society is focused on the mastery of disability, thereby challenging any assumption that disabled individuals have any chance of being their own “masters”, and indeed, governing both their own bodies and minds.

Braille is precisely the type of technology that enables this sense of mastery within members of the blind population, as do adaptive technologies for the blind and the visually impaired such as JAWS, PEARL, SARA, the MAGic large print keyboard, and portable Braille displays. The fact that these technologies even exist implies that the quest for perfection is not unanimous and that non-hegemonic existences are viewed as valid by at least some, however the duality of these technologies must not escape this field of inquiry. These technologies at once operate as therapeutic in the sense that they aim to allow the recipient/s to achieve a sense of hegemony, while simultaneously operating as an enhancement technology in the sense that these technologies are, in a way, linked to these bodies, altering their corporeal experience with their surroundings. This is not to suggest that these individuals require enhancement with their surroundings, however according to the description by McGee and Maguire (2007) earlier in this paper, enhancement suggests improving function and non-health improvements. Computer software like JAWS does not aim to improve the health of blind individuals, but to allow them to engage with documents and literature by reading aloud to the blind individual what is on their screen. Despite the dual functionality of these technologies as operating as both therapeutic/enhancement, they still perpetuate the mastery of the body as the recipients of these technologies have first and foremost *chosen* to utilise them, and furthermore, have chosen the extent to which they engage with these technologies. What is the most important aspect of these technologies, however, is that they acknowledge

blindness as an acceptable mode of existence and works with, rather than against, the disability.

Even with this acknowledgement, many of the blind community would rather possess the sense of sight, and “by appealing to the vast majority of disabled who strongly support enabling cures and prosthetics, progressives can marginalize the few but vocal radical disability activists who reject enhancing technologies as neo-eugenic” (Hughes, 2009, p. 16). The reinscription of eugenic regimes is highly problematic for the perception of non-hegemonic bodies as valid and seems like nothing more than the mass disenfranchisement of clusters of non-hegemonic bodies; and ultimately, the invalidation of different modes of existence for the goal of perfecting the human race. Furthermore, transhuman technologies reinforce notions of biopolitical hierarchies of life through this process of disenfranchisement. It becomes supremely important, then, that modes of existence that lie outside hegemony are acknowledged as valid, which is what the technology of Braille and adaptive computer software seek to achieve; unfortunately, there may not be enough of these technologies to allow for the acknowledgement that I propose, with the dominant goal in Western society being that of perfecting the human.

Conclusion

Notions of disability are largely based on presupposed ideological frameworks of what constitutes the “human” – furthermore, the “whole human” – particularly regarding perceived understandings of normalcy. This paper has drawn on historical biopolitical hierarchies of the human – specifically, that of eugenic regimes – and the perpetuation of these hierarchies in contemporary Western society through the disenfranchisement of disabled individuals; ultimately this treatment of the disabled amalgamates into the positioning of them as somehow nonhuman, as “less than”, based on hegemonic notions of lack.

The figure of the nonhuman thus perpetuates humanist paradigms of the perfect human, the quest for immortality, and a deep-seated desperation to assume acceptable bodies. With the progression of advanced technologies, which this paper has posited as transhumanist in nature, it can be argued that this dream of perfection has led to both the development and deployment of these technologies; indeed, the use of these technologies are nothing more

than extensions of humanist paradigms that sought to eradicate modes of existence that deviated from presupposed hegemonic norms.

The eradication of disabled individuals through transhumanist technologies, such as implants and prosthetics, operates within a dichotomous structure of ideological values. They at once enhance “normal” human bodies and provide therapy to those deemed Other, which perpetuates notions of acceptable bodies and biopolitical hierarchies. The aim of this paper has been to demonstrate that the Other, and ultimately the nonhuman should not be discounted, disenfranchised and invalidated, but have their modes of existence acknowledged as just as valid as those deemed hegemonic. This paper, then, has argued for the acknowledgement of disabled individuals as valid and worthy, and advocated for the removal of biopolitical hierarchies of life that dictate and govern how bodies are viewed, and how they are viewed as disabled.

Certain technologies have been developed to adapt to specific disabilities, rather than overcoming them or removing them entirely. Disabilities such as vision impairment/blindness utilise the technologies of Braille and adaptive computer software to accommodate the deficit of the user. These technologies, then, impose enhancement qualities upon the user, rather than therapeutic qualities, which challenge the therapy/enhancement dichotomy and works to validate these bodies, despite their deviation from hegemony. The existence of these technologies is quite significant for the (re)-construction of hegemonic norms, as the recalibration of what it means to own an acceptable body may very well lead to a re-examination of the human itself; specifically in relation to other nonhuman species such as animals and cyborgs. The fact that technologies exist to accommodate certain disabilities and enhance the individuals rather than provide therapy to them initiates the notion that disabled individuals are indeed just as conscious as those deemed abled, which further disintegrates abled/disabled binaries as well as – and more importantly – human/nonhuman binaries. Technologies that operate in this way, then, have the potential to eradicate the need to create the perfect human, and encourage the notion that non-hegemonic bodies need not assimilate in order to have their mode of existence seen as valid.

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