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"Nostalgia for the future..." – prosthesis as a pop-cultural weapon?

Abstract

Prostheses—especially those created by prosthetic limb designer Sophie de Oliveira Barata—are not treated as disempowering artefacts, but as a McLuhanian extension of man: a tool for creating identity and style while keeping individuality and offering liberation from victim status. Prostheses are not a weakness but a strength, a potential. Moreover, technology is not gender neutral, as prostheses can provide new options for women. “Glamputees” reinterpret notions of the female body, beauty standards, minorities’ spaces, etc. On the other hand, so-called alternative modelling recreates the traditional image of woman. In the following article, I would like to show the dynamics of the “extended” or “bionic” body and the social environment by rereading prosthesis through the theories of Vivian Sobchack, Anne Marie Balsamo, and Donna Haraway. In this way, feminist discourse enhances ambivalent perspectives on the phenomenon of alternative limbs.

Key words: prosthesis, disability studies, feminism, transhumanism, popular culture, ideology

Introduction

"Forget what you know about disability": this is the motto from the videoclip of Viktoria Modesta’s song *Prototype*. It designates what the future prototype of a human should be: part human, part technology. It combines natural and artificial instead of juxtaposing these notions, and by doing so, it highlights a new body image for women and new adaptation patterns for disabled people. ‘Armed’ with one of her prostheses, a spike leg, the Latvian artist becomes both an incarnation of monstrous femininity and a superhero—a pop-cultural cyborg overcoming biological deficiencies. Thus, Modesta becomes a battlefield for much

discourse. Not only is her identity fluid, but so is her body. On the one hand, Modesta objects to the understanding of amputees as victims defined by their lacking limb. On the other, she has functioned as a glitch in the system to achieve celebrity status; she is known as a 'glamputee', reclaiming the traditional image of women while ostensibly reinterpreting it. In this case, the ambivalence of the phenomenon of alternative limbs is enhanced by feminist discourse.

Only by combining feminist thought, disability studies, technological progressivism, and cultural post-humanism can we approach the complexity and dynamics of the "extended/bionic body" in the contemporary social environment. The best way this methodological hybridity is embodied is by evoking the figure of a cyborg, popularised by Donna J. Haraway. Although overused and often misinterpreted, this theory of metaphorical "(con)fusion between the human and the machine"¹ has been actualized by modern glamputees: not only Modesta, but also Angel Giuffria, Amina Munster, Grace Madeville, Jo-Jo Cranfield, and above all Aimee Mullins. These women show that prostheses might be a way to claim positive ownership of their own bodies, to relocate themselves in traditional social structures. Their approach to body as a cultural construct is not negative: it is an opportunity for human enhancement, or even postbiological evolution. Therefore, it is an extension of the everyday practice of body modification, such as dieting, piercing, tanning and bodybuilding. Viktoria Modesta and Aimee Mullins are both extreme bodybuilders.

This shift of emphasis from disability studies to the body modification approach accentuates the productivity of the cyborg metaphor. There is a displacement: the former term conjures victimisation, passivity, exclusion, lack of agency, and objectification, while the second suggests liberation, negotiation, agency, (radical) identity statement, and (post-humanist) performativity. However, as I describe cases of women only², the issue of emancipating potential is expressed in rather equivocal terms: notions of femininity, beautification, media representation, and so on, collide with the post-gendered world implicated by the cyborg metaphor, becoming the epitome of hegemonic culture.

¹ Kim Toffoletti, *Cyborgs and Barbie Dolls: Feminism, Popular Culture, and the Posthuman Body*, (London–New York: I.B. Tauris) (2007), p. 2.

² Modern veterans could be an interesting case study: "[B]ig change has been wrought by the number of military amputees produced by the wars in Iraq and Afghanistan. 'They're quite proud of their limbs,' says De Oliveira Barata. 'They tend to have a different mode of thinking in general, perhaps because they've been prepped up about what might happen. They're quite impressive. They have this attitude as if it's almost a badge of honour and I think that has a knock-on effect. The metal work and the componentry is becoming more and more slick and robotic, and they love all that.'" (Andrew Anthony, "Meet the woman who turns artificial limbs into works of art", *The Guardian*, <http://www.theguardian.com/artanddesign/2013/dec/29/artificial-limbs-art-de-oliveira-barata-interview>, date accessed 15 April 2016).

Prosthesis Whisperers, or the context of disability studies

As Liat Ben-Moshe, Anthony J. Nocella and A. J. Withers critically pointed out, "Disability is fluid and contextual rather than biological. This does not mean that biology does not play out in our minds and bodies, but that the definition of disability is imposed upon certain kinds of minds and bodies... However, more than that, disability, if understood as constructed through historical and cultural processes, should be seen not as a binary but as a continuum. One is always dis/abled in relation to the context in which one is put".³ Disability studies are still engulfed in a more traditional, essentialist identity project that imposes a sense of "normalcy" defined by a dominating group that exerts these definitions on others, and creates dichotomies marginalising ab-normal and dis-abled. While "[s]ome in disability culture and activism view disability as a source of pride, some as a form of biodiversity"⁴, common understanding still stresses the absence. Although full of empathy, one of the symptomatic definitions from the U.S. Americans with Disabilities Act explains disability as "a difficulty or the inability to perform one or more major life activities because of impairment"⁵.

The psychosocial consequences of amputation and adjusting to a prosthesis are challenging under this framework. Amputees must learn to accept a new body image, deal with perceived or actual social stigma, potential loss of independence, changes in social roles, etc.⁶ "[B]odily appearance affects both social identifications and self-definitions"⁷ and this stigmatisation is gender-determined. As the Dublin Psychoprosthetic Group revealed:

only higher functional satisfaction with the prosthesis was correlated with daily hours of prosthetic use in males, while greater prosthetic use in females was correlated with higher functional, aesthetic and weight satisfaction with the prosthesis. For male participants, functionality was

³ Liat Ben-Moshe, Anthony J. Nocella, A. J. Withers, "Queer-Crippling Anarchism: Intersections and Reflections on Anarchism, Queer-ness, and Dis-Ability", in *Queering Anarchism*, ed. C. B. Daring, J. Rogue, Deric Shannon, and Abbey Volcano (Oakland, CA: AK Press) (2013), pp. 210-211.

⁴ Liat Ben-Moshe and Sandy Magaña, "An Introduction to Race, Gender, and Disability: Intersectionality, Disability Studies, and Families of Color", *Women, Gender, and Families of Color* 2:2 (2014), p. 106.

⁵ Ruta Sevo, *Basics About Disabilities and Science and Engineering Education*, (Atlanta, GA: under the direction of Robert L. Todd, Center for Assistive Technology and Environmental Access, Georgia Institute of Technology) (2011), p. 31.

⁶ See: Elisabeth Schaffalitzky, Pamela Gallagher, Deirdre Desmond, and Malcolm MacLachlan, "Adaptation to Amputation and Prosthesis Use", in *Amputation, Prosthesis Use, and Phantom Limb Pain: An Interdisciplinary Perspective*, ed. Craig Murray (New York-Dordrecht-Heidelberg-London: Springer) (2010), pp. 65-66.

⁷ Elisabeth Schaffalitzky, Pamela Gallagher, Deirdre Desmond, and Malcolm MacLachlan, p. 70.

important, perhaps relating to traditional social roles. For females, it appears that aesthetics is important perhaps through helping to sustain a sense of femininity.⁸

Therefore, many factors are involved in the transformation of the prosthesis into a tool or a corporeal structure. Cosmesis is one such factor that prefers a (hyper)realistic-looking prosthesis (so called cosmeses), but also simulates full-ability, disguises the artificial limb under clothing, and avoids situations which demand exposure, etc. This enables the achievement of a sense of "normalcy" or even "humanness". However, as phenomenologist Craig Murray points out, "not all participants considered cosmesis as important, and a number of participants actually conveyed a distaste for the use of cosmetic limbs in general, seeing such use as indicative of an inability to 'deal with' limb loss/absence, or even as conspiring in an oppressive climate in which people with limb loss/absence were pressured to conform, or be ashamed of their prosthesis use. (...) a sizeable number of participants were militant in an approach that might be termed 'prosthetic limb display'. Here, participants displayed their amputation, limb absence and prosthesis use as a method of defiance, resistance, and to challenge notions of disability. As such, 'prosthetic display' held profound personal significance and meaning to self and social identity, and was part of the politicisation of disability"⁹. In this case, prostheses are not only praised for their functionality, but also for their performative potential. They may become the ground of a new identity, self-expression, pride, and social change. This need-directed, individualistic approach to prosthetic design is a guide to rejecting anthropomorphism, sublimating high technology, and creating a transhumanist identity on this basis.

Furiosa's prosthesis – feminist approaches to prostheses

Before mentioning a small range of apologetic statements on a culturally grounded approach, it would be useful to introduce Vivian Sobchack's phenomenology of prosthesis use. In the article *A Leg to Stand On: Prosthetics, Metaphor, and Materiality*, she refuses to compare her experiences as an amputee to Roland Barthes' *Jet-Man* metaphor or H+ standpoints. She distinguishes *her* prosthetic and *the* prosthetic: a phenomenologically lived artefact and a cultural

⁸ Elisabeth Schaffalitzky, Pamela Gallagher, Deirdre Desmond, and Malcolm MacLachlan, p. 71.

⁹ Craig Murray, "Understanding Adjustment and Coping to Limb Loss and Absence through Phenomenologies of Prosthesis Use", in *Amputation, Prosthesis Use, and Phantom Limb Pain: An Interdisciplinary Perspective*, ed. Craig Murray (New York-Dordrecht-Heidelberg-London: Springer) (2010), pp. 88-89.

metaphor.¹⁰ Academic overuse of this notion (e.g. prosthetic memory, consciousness, aesthetics) "for describing a vague and shifting constellation of relationships among bodies, technologies, and subjectivities" causes displacement and diminishes "response-ability"¹¹. Sobchack calls for a more literal and material approach which has been "amputated" by cultural studies. This remarginalisation of amputees is something against which Sobchack is fighting. Her article is "intended to ground and lend some 'unsexy' material weight to a contemporary prosthetic imagination that privileges the exotic (indeed, perhaps erotic) *idea* rather than the mundane *reality* of my intimate relations with 'high' technology"¹².

Sobchack's arguments are justifiable as an admonition not to divide (grounded on actual experiences) social studies and humanities, stating implicitly that the latter could be parasitical. However, sometimes this arbitrariness supports a change of thinking. Prostheses users are not an example of equal rights and possibilities, but rather they produce a new paradigm that is programmed and narrated through technology. In the case of Modesta and others, technology is a tool of subversion, combating prejudices about disabled people, and even creating an alternative hierarchy. Rejecting medical discourses and disciplinary practices can be a medium of renewal: "transubstantiation of the key elements of experience"¹³ via "metallisation", extensions, or body hacking (the next "sexy" metaphor, as Sobchack asks). There is a place for the other in the non-hierarchical, "remixed" world without power relations that was postulated by Donna J. Haraway.

Although technology is often treated as a way of excluding women, this is what Haraway focuses on. According to her, technology supports a non-dualistic, non-essentialist, post-modern worldview, while blurring boundaries and deactivating them through the image of the cyborg. Haraway sees the world as inhabited by chimeras, hybrids of machine and organism, and endless possibilities of transformation: "So my cyborg myth is about transgressed boundaries, potent fusions, and dangerous possibilities which progressive people might explore as one part of needed political work"¹⁴. Haraway's manifesto is not only a technofeminist theory, but also a programme of social change: "The cyborg is our ontology; it gives us our politics"¹⁵. To manage it, Haraway requires cyborg writing, a reformulation of *écriture féminine*: "The tools are often stories, retold stories, versions

¹⁰ See: Vivian Sobchack, *Carnal Thoughts: Embodiment and Moving Image Culture*, (Berkeley–Los Angeles–London: University of California Press) (2004), p. 206.

¹¹ Vivian Sobchack, p. 207.

¹² Vivian Sobchack, pp. 219-220.

¹³ Nick Mansfield, *Subjectivity: Theories of the Self from Freud to Haraway*, (Sydney: Allen&Unwin) (2000), p. 152.

¹⁴ Donna J. Haraway, *Simians, Cyborgs, and Women: The Reinvention of Nature*, (New York: Routledge) (1991), p. 154.

¹⁵ Donna J. Haraway, p. 150.

that reverse and displace the hierarchical dualisms of naturalized identities"¹⁶. Expanding Foucauldian tradition, the texts to be rewritten are bodies and societies: "There is no drive in cyborgs to produce total theory, but there is an intimate experience of boundaries, their construction and deconstruction. There is a myth system waiting to become a political language to ground one way of looking at science and technology and challenging the informatics of domination in order to act potently".¹⁷

Today, many bodies invite rereading via the creation of new corporeal narratives. Of these, prostheses are amongst the most powerful, raising concerns expressed by post-human and post-gendered concepts. Bodies composed of metal, glass, and plastic elements re-evaluate the notion of anthropomorphism and negotiate new meanings, especially in the case of women who are traditionally associated with biological functions and irrational status of nature. Bearing Sobchack's critic in mind, I will not put female prosthesis users in the same paradigm of social change, feminist politics, and contemporary postmodern identity. I would rather focus on particular strategies while highlighting their ambivalent status. Viktoria Modesta and her video clip *Prototype* are my main references, but I also want to mention her role model and the prosthetic designers Aimee Mullins and Sophie de Oliveira Barata, respectively.

Speaking doll: Aimee Mullins

Aimee Mullins was born with fibular hemimelia, a condition that resulted in the amputation of her both legs below the knees. However, as we can read on her webpage, "[b]y age two, she had learned to walk on prosthetic legs, and spent her childhood doing the usual athletic activities of her peers: swimming, biking, softball, soccer, and skiing, always alongside 'able-bodied' kids"¹⁸. The rest of her biography contains information about educational and sports successes. She was a medal winner at the 1996 Paralympics, where she wore her sprinting legs: Flex-Foot Cheetah designed by Van Phillips. Nowadays, they are commonly used by amputee athletes, but Mullins was the first person to do so, which brought her a lot of publicity. She has become a spokesperson for disabled people, encouraging change and discussing prosthetic design and body image at numerous conferences. She has worked as a model (e.g. appearing for Alexander McQueen in a runway show in beautiful wooden carved prostheses) and an actor, debuting in multiple roles in Matthew Barney's avant-garde *Cremaster 3* (wearing leopard and

¹⁶ Donna J. Haraway, p. 175.

¹⁷ Donna J. Haraway, p. 181.

¹⁸ *Aimee Mullins*, <http://www.aimeemullins.com/about.php>, date accessed 15 April 2016.

glass/polyurethane alternative limbs amongst others). Called "Wonder Woman" or "Fashion-able", located in the context of evolution (Italian *Wired* published an article about her entitled *Evoluzione in corso*¹⁹) and human enhancement, she tries to wield influence on society by renarrating disability and being at the forefront of cultural change.

In one of her popular TED talks, she stated an important shift:

The conversation with society has changed profoundly in this last decade. It is no longer a conversation about overcoming deficiency. It's a conversation about augmentation. It's a conversation about potential. A prosthetic limb doesn't represent the need to replace loss anymore. (...) [P]eople that society once considered to be disabled can now become the architects of their own identities and indeed continue to change those identities by designing their bodies from a place of empowerment²⁰.

Even Vivian Sobchack mentions Aimee Mullins and her three pairs of legs (as a matter of fact she has twelve pairs in different shapes, made of various materials, and enabling her to modify her height) as an example of conjoining literal (prosthetic experience) and figural (prosthesis as a metaphor).²¹ However, the American writer is alerted by the ambiguity evoked by an aestheticization of the disability discourse summarised in the statement "Poetry matters".

Mullins places prosthesis in the body modification arena, undermining its status: "What does a beautiful woman look like? What is a sexy body? And what does it mean to have a disability? Pamela Anderson has more prosthetic in her body than me... Nobody calls her disabled". Something we can call a joke becomes a serious argument about body image, canons of beauty, and body-oriented technologies. The latter shows that plastic surgery may be disempowering, whereas prostheses might be emancipating. However, this includes aesthetics; Mullins treats her prostheses as sculptures. Rejecting the anthropomorphic, she advances a beauty ideal, offering new possibilities.

Kim Toffoletti does not combine plastic with a symbol of consumptionism, and thus being fake and homogeneous. This is related to elasticity, variability, and transformation. Toffoletti rejects traditional depictions of Barbie dolls and their feminist frame of reference and tries to rework this narrative via the notion of plasticity. She points out that "it can serve as a strategy to hack into the phallogocentric codes that structure ideals of femininity and scramble interpretations of embodiment that reinscribe an unchanging and essentialised

¹⁹ Jill Greenberg, Cover of *Wired Italy: Evoluzione in corso*, April 2009.

²⁰ *Aimee Mullins i jej 12 par nóg*, TED 2009,

https://www.ted.com/talks/aimee_mullins_prosthetic_aesthetics?language=pl#t-519012, date accessed 15 April 2016.

²¹ See: Vivian Sobchack, p. 225.

myth of woman as tied to nature".²² Regardless of the potentially subversive quality, this reinterpretation can have, Toffoletti writes about post-human examples: a CD cover for post-gendered Marilyn Manson, an advertisement inspired by body hacktivism, and bio-artists' experiments. Mullins, with her pair of everyday Barbie-like legs (and named of one of the most beautiful people in the world by *People*), seems to reclaim traditional body image. Although inspirational, admirable and brave, Mullins is more often associated with the catwalk than Stelarc, and with a celebrity status rather than activist actions. Pop culture gladly consumes her activities, which can be liberating, but, alas, mostly for her, not for the group she is representing.

Prosthetic fetishism: Viktoria Modesta

While Mullins is a white, upper-middle class American, Modesta's background is different: she was socially and economically underprivileged, which affected her access to prosthetics and medical help. She was born in Latvia (under the Soviet regime) and her bone structure was severely damaged during a forced birth. At the age of 12, the artist moved with her mother to London where she became passionate about the aesthetic eccentricity of underground subculture. Three years later, when she started a career in alternative modelling, "she decided that realising her dreams and exploring her potential was simply not possible with the uncertainty of her dysfunctioning leg; a burden left after 15 surgeries under the USSR system. Inspired by creative cult imagery of Alexander McQueen and Matthew Barney [with whom Mullins was working – M. S.], VM approached doctors to have her lower limb amputated and replaced by a prosthetic in order to finally take control over her body. After a five-year battle to find support for her decision among the medical profession, she finally had a voluntary operation at the age of 20".²³ Essentially, this bio from Modesta's webpage is a story about gaining morphological freedom. Coupled with a feminist or even—due to her ancestry—postcolonial approach, Modesta could be the perfect figure of a cyborg, progressive body-identity relation, and human augmentation in an oppressive social context. "I upgraded my opportunities, my comfort, my body. It was really empowering".²⁴ Deliberately exploring the issue of modern identity, combining technology and performance, fashion and avant-garde, MTV and MIT Lab, she changes emancipatory disability narration from clichéd Helen Keller stories and moves it

²² Kim Toffoletti, p. 79.

²³ *Viktoria Modesta*, <http://www.viktoriamodesta.com/>, date accessed 15 April 2016.

²⁴ Andrew Anthony.

closer to cyberpunk. As Haraway puts it: "the boundary between science fiction and social reality is an optical illusion"²⁵.

Additionally, there is a notion of reclaiming one's body, taking control of it: "[t]he profound sense that a prosthetic limb could be a 'life enhancing tool' was apparent"²⁶. On the other hand, Modesta highlights the significance of reflecting one's personality through an altered body image; this is precisely what gains media attention and opens numerous doors, even those of breakfast television. As Anna Moore wrote in an article in *The Times*, "She's stunning—with her rolled hair and doll face, she looks like Bettie Page landed in *Blade Runner*—but the biggest buzz is reserved for her legs"²⁷. Brass leg, stereo leg, light leg, spike leg, crystal leg; these are a few examples of Modesta's alternative limbs functioning as both fashion items and art projects, modifying her into a "bionic pop artist".

Viktoria Modesta intensifies Mullins' ambiguous interconnection with pop culture and the contemporary media landscape, while Aimee Mullins spoke about the "X factor", the potential of human will that is often ignored by physicians, something unpredictable and unappreciated²⁸. Modesta performed in *The X Factor* final and made her first music video, and Mullins contributed to another TED talk. These differences may generate Haraway's future heteroglossia. Nevertheless, leaving all the differences aside, both women are interconnected by their equivocal status in popular culture. The video clip accompanying the song *Prototype* is Modesta's most discussed work to date.²⁹ It was produced as a part of the "Born Risky" campaign launched by Channel 4, a British TV channel particularly committed to issues of diversity, cumulating alternative voices and taking creative risks. The first imagery is mostly aural: a pointed tool rings out sharply as it comes down onto a glass surface. It later turns out the tool in question is the singer's spike leg. The abstract quality of this scene announces a new nameless experience. The next image presents Modesta as a queen or even a goddess. Sitting on a high throne, she is surrounded by three hooded faceless men performing amputation surgery on her leg. The main plot line of this video clip concentrates on VM's cult in some historically undefined police state—her Betty Boop-like cartoon character transforming to a superhero inspires a rebellion (symbolically represented by moths flying around the illuminated limb in a leitmotiv). Her prosthesis wields superpower, but its connotations with new identity and individuality are more important, encouraging people to stand up for themselves. This interpretation is

²⁵ Donna J. Haraway, p. 149.

²⁶ Craig Murray, p. 87.

²⁷ Anna Moore, "Viktoria Modesta: 'My leg is gone. I have nothing to hide'", *The Times*, <http://www.thetimes.co.uk/tto/life/article3530833.ece>, date accessed 15 April 2016.

²⁸ *Aimee Mullins: Szansa, którą niosą przeciwności*, TEDMED 2009, https://www.ted.com/talks/aimee_mullins_the_opportunity_of_adversity?language=pl, date accessed 15 April 2016.

²⁹ Modesta recorded her first EP but none of her songs have gained broad publicity.

validated by another scene in which VM is engaged in sexual relations with a man and a woman while not wearing any of her prostheses, suggesting that her identity is fluid, more complex, non-dualistic and receptive.

The first problematic issue with this clip occurs in the final scene: VM, wearing her spike leg, is walking and then starts a fierce dance. In spite of the warrior-like stylization, her empowering message is weakened by the puppet strings attached to her body (another doll-like, gendered metaphor after Mullins' Barbie legs). However, there are more inaccuracies within the context in which she puts herself. Firstly, her body is fragmented—and as Laura Mulvey explained in *Visual Pleasure and Narrative Cinema*—it fetishizes women and represents her as an object of male desire.³⁰ As the clip's director, Saam Farahmand, explains: "It was very important to create a deliberate collision between (the physical realities of amputation) and the fantasies of sexualisation in pop culture"³¹. However, why combine the two instead of creating a new language based on the plot of female subversive powers? An uncontrollable and therefore threatening force is reduced to a sexualized object. Secondly, Modesta interchanges an anthropocentric paradigm with an egocentric one: seemingly anarchistic movement turns into a subsequent authoritarian system. Moreover, it brings the cyborg back into its primal militant context. As Haraway emphasises, "I would rather be a cyborg than a goddess"³², but Modesta inverts this attitude. She recreates the cyborg metaphor not to blur boundaries, but to create new ones. This subject-centred approach stems from treating one's life as a work of art and does not take into account a wider social context.³³ In the first verse, she sings "We're playing god/And now's the time/We're limitless, we're not confined/It's our future", but after that she immediately changes "we" for "I".

Modesta does not think about productive social change, her DIY ethos³⁴ substitutes collective thinking and that is how she goes a step further than Aimee Mullins towards popular culture and standardized identity. Attached to a more underground culture, but yearning for common recognition, the Latvian artist merges subversive and normative figures and puts herself at the forefront of change, while recreating traditional structures. However, her individuality is not as extreme as she presents it; it rather depends on the designer of the prosthetic.

³⁰ See: Laura Mulvey, "Visual Pleasure and Narrative Cinema", *Screen* 16:3 (1975), pp. 6-18.

³¹ Jazz Monroe, "'Bionic Pop Star' Viktoria Modesta invades X Factor final", *Dazed*, <http://www.dazeddigital.com/music/article/22934/1/bionic-pop-star-viktoria-modesta-invades-x-factor-final>, date accessed 15 April 2016.

³² Donna J. Haraway, p. 181.

³³ See: a feminist critic of late Foucault thought described by Margaret A. McLaren, *Feminism, Foucault, and Embodied Subjectivity*, (Albany: State University of New York Press) (2002), pp. 69-80.

³⁴ This approach was criticized by Liat Ben-Moshe et al., 2013.

Prosthetic personality: Sophie de Oliveira Barata

Writing about "technoculture", Anne Marie Balsamo points out:

[t]his is a mind-set that enables people to think with technology, to transform what is known into what is possible. This imagination is performative: it improvises without constraints to create something new. (...) In the active engagement between human beings and technological elements, culture too is reworked through the development of new narratives, new myths, new rituals, new modes of expression, and new knowledge that make the innovation meaningful.³⁵

By creating new technologies, people can reproduce cultural structures and offer alternate ways of thinking, because innovations are not objects, but more "hybrid socio-technical-cultural assemblages".³⁶ Therefore, technology can provide us with new possibilities, if access to creating it and programming social and cultural transformation is open. Nevertheless, as long as women have limited access to it, they remain only objects of scientific discourse.

The process of doing things differently may be the work of women, but not the expression of essential feminine insight; it may seek different horizons, but not necessarily better ones; it may manifest different values, but not different outcomes. The gendered transformation of the technological imagination is not solely a matter of theory, but a matter of praxis.³⁷

Therefore, it is not a case of ordinary gender appropriation but—once again—enhancement and equality.

This can be achieved with Sophie de Oliveira Barata and her Alternative Limb Prosthesis (AltLimbPro). Having studied special-effects prosthetics in London, she has been customising prostheses in her London workshop since September 2011, creating them as an expression of personality and individual traits. Functionality remains important, but de Oliveira Barata's adjustments help in adaptation after limb loss in terms of new body image acceptance and fighting victimisation and social stigma: "It's drawing attention to their disability in a positive way... Rather than people seeing what's missing, it's about what they've got... Having an alternative limb is about claiming control and saying 'I'm an

³⁵ Anne Balsamo, *Designing Culture: The Technological Imagination at Work*, (Durham–London: Duke University Press) (2011), pp. 6-7.

³⁶ Anne Balsamo, p. 9.

³⁷ Anne Balsamo, p. 33.

individual and this reflects who I am".³⁸ So called 'gadget limbs' trigger discussion in a more potent way than amputees themselves. Although without any feminist agenda, de Oliveira Barata's projects meet mostly female expectations. With the exception of, for example, veteran Ryan Sneary and his anatomical leg, ArtLimbPro has created prostheses such as a floral porcelain leg, a snake arm, feather armour, and Priscilla. All are meticulously made, with an artistic or even surrealist touch, satisfying not only the fashion aspirations of their owners and alternative modelling's quirky demands, but even exhibition curators. These tools are "upgrading" disabled people who can still be on the margins of society, but are also now seen as free agents, performance artists and directors of gazes. It offers both empowering potential and pop-cultural lure.

This ambiguity is something we cannot remove. Alternative limbs (not only those made by de Oliveira Barata) help in the process of politicization of the body, upgrading humanity, and even creating body 2.0 which can be an expression of transhumanist ideals. However, these prostheses are always interconnected with a cobweb of oppressive structures. Aimee Mullins and Viktoria Modesta have a pop-cultural potential that emerges from their privileged position as young and good-looking women.³⁹ These features attract the cultural industry, which overuses the potential of these models' counterfeit alternativity. They both live in developed countries and were raised in a hegemonic society; therefore, their race is entwined ideologically with their high position and publicity, causing (re)exclusion and (re)disempowerment of the disabled. Their status transforms them into living artefacts and increases their opportunities, overshadowing Giorgio Agamben's "rest". Modesta and Mullins are intercepted by pop-culture: they are H+ Barbie dolls with diminished potential of social change by the same means they are using for publicity and even for social agenda. Although rather elitist, de Oliveira Barata's work seems more potent, transgressing boundaries not on stage, but in her workshop. She creates the transhumanist 'Other', but also makes the human body a site of inquiry, exposing it to ideological discourse. Is this a perfect human free of limitations or a product used instrumentally and arbitrarily by traditional notions of popular culture? The body (even hard-wired) remains political and highly ambiguous.

³⁸ Jené Gutierrez, "Prosthetic Limbs as Art: Sophie de Oliveira Barata's Alternative Limb Project", *Beautiful/Deacy*, <http://beautifuldecay.com/2013/11/18/prosthetic-limbs-art-sophie-de-oliveira-baratas-alternative-limb-project/>, date accessed 15 April 2016.

³⁹ What is important, articles about Oscar Pistorius highlighted his skills (e.g. Blade Runner), while Mullins is described mostly through her appearance.

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