

## Chapter Four

### The techno-enhanced body (Prosthetics)

<<<< absent ..... pattern >>>>

Jou lyf is  
swaar van bloed  
en jou rug  
'n singende kitaar.  
Ingrid Jonker, *Rook en Oker*, 1964

In the second body-technology encounter that forms part of my study's scope, the relationship between bodies and new technologies is geared towards body enhancement and augmentation. The hierarchies that became evident in the previous chapter's discussion on techno-transcendence, prevail as bodies are replaced, transplanted, invaded, enhanced and extended. There is still a drive towards abolishing the body, therefore the body is figured as **absent** on the semiotic square, although the techno-augmentation takes some physical form by means of surgery, body sculpting, and prosthetics, and accordingly, it follows a **pattern**. Clearly immortality still operates as a motivational factor in the background, but the main focus now falls on the extension and enhancement of somatic experience, instead of its complete renunciation. Bodies are affirmed and confirmed as objects of controlled consumer desire. Brian Turner acknowledges this turn towards consumerism when he states, "The regulatory control of the body is now exercised through consumerism and the fashion industry rather than through religion" (1996:23). While the cult of the "body beautiful" reigns with constructions of the ideal body as its explicit sign, no genuine shifts are made in predominant metaphysical perceptions of bio-bodies as fallible and fragile. In fact, the focus on bodies and their apparent necessity for techno-enhancement only reaffirms old fears about their supposed deficient nature.

Techno-transcendence, as discussed in the previous chapter, invests in overcoming or transcending life, in order to go beyond humanity and become trans-human. Techno-enhancement, on the other hand, aspires towards achieving longevity through the body, "in a series of stages, all the way to infinity; that is, a sort of **superhuman**, or, in its early stages, a bionic six million dollar man or woman with great extended senses and abilities which are still based on the human frame" (Cheatham 2000, emphasis added). Techno-transcendents opt for disembodiment, whereas techno-enhancers favour super-humanity or hyper-embodiment. Immortality is negotiated through the biological stratum, instead of leaving it behind, as in the case of techno-transcendence. As a result, the difference between the two body/technology

encounters can be epitomised as the difference between aspiring to “biological immortality” **[absent – pattern]**, which entails achieving immortality by means of the enhanced biological sphere; and “cybernetic immortality” **[absent – random]**, which means achieving immortality through transcending the body into cybernetics (Hans Moravec’s mind-uploading is a perfect example of this desire).

Importantly, in contrast with techno-transcendence, techno-enhancers acknowledge their bodily existence, although reluctantly. Techno-enhancers aspire to become perfect human specimens, both mentally and physically. The body is perceived as a piece of clothing that can be redesigned, refitted and made wearable on the way to morphological freedom. In other words, the body is something that one “wears” – a prosthesis, without acknowledging the obvious, namely that it also wears us – for if the body is altered, the conscious embodiment (the lived body) is also inevitably altered.



Fig.4.1 Prosthetic foot from *Prosthetics Research Study*

The leading metaphor in this chapter is that of the **prosthesis** or the artificial limb that is strapped on or taken off at will in order to enhance the broken body’s motility and abilities. The prosthetic motif does however, not only pertain to material extensions of the corporeal, both exogenously and endogenously, but also shapes and reifies guiding principles about post-humanity and embodiment. The central focus of my discussion here is how endeavours of techno-enhancement view the body almost exclusively as a prosthetic extension of mind (the so-called eternal “self”). In other words, embodiment is perceived as the controlling mind’s object – a mere prosthesis, in need of enhancement and improvement with the assistance of new technologies. The conflict between “having” a body versus “being” a body rules in this particular encounter between bodies and new technologies, for the body is bluntly understood as the mind’s prosthesis to have and to improve according to his better judgement.

To **have** a body or to **be** a body are perhaps the most substantial questions when trying to plot a cyberfeminist position on embodiment. The first position obviously suggests ownership, control, subjectivity and possession. One may also hint that **having** a body alludes to a hierarchical preference for mind over body. On the other hand, to **be** a body hints more at how

embodiment is understood within this study, namely, as a living process or a becoming. To **be** a body does not suggest, however, that one capitulates to the idea that the body is a pure, given entity, passively awaiting cultural inscriptions from the outside. Instead, the relationship between self and prosthesis, mind and body are complex and intricate. Referring to the two aspects as opposing and exclusive is not only outdated, but subverted by evidences and experiences from the lived body.

#### 4.1 Philosophical probing into prosthetics



Fig.4.2 Stelarc, *Third arm*, 1992

One of the major exponents of both techno-transcendence and techno-enhancement is the Australian performance artist Stelarc, whose accounts of the obsolete bio-body I have referred to earlier. Stelarc, not surprisingly, views the prosthesis precisely as an extension and modification of mankind, adding function to a redundant instrument and thereby merely perpetuating the mind/body split:

I [see] prosthetic attachments and transplanted organs as evolutionary experiments. **They are done in the guises of medical altruism but they are really experiments in modifying the body.** No one wants to admit that socially or ethically, but that's what they are. We are simultaneously transplanting organs and embedding technological components. This is a means of modifying and redesigning the body. (1994:389, emphasis added)

The difference that Stelarc announces between what he terms “medical altruism”, where prosthesis enhances damaged life, and “evolutionary experiments”, which are mostly geared towards enhancing existing life, is what most of the debate in this chapter focuses on. Developing a critical stance on prosthetics is complex, for there are plenty of examples of valuable medical altruism that guide the research, as well as the fact that prosthetics always already exceeds simplistic enhancement. On the other hand, though, prosthetics as an

evolutionary experiment to alter the body for the sake of taking control of the body and ultimately disposing of it proves more problematic within a cyberfeminist reading of prosthetics. For, as Robert Wilson advises, every technology also carries its “dark twin” (1995:242) and destructive counterpart, and it is this detrimental “other” of prosthetics that I would like to elaborate on and problematise in this chapter. Before I turn to prosthetics in the general sense, I will first look briefly at the philosophical foundations of prosthetics.



**Fig. 4.3 An adjustably flexible limb from *Prosthetics Research Study***

Prosthetics can be understood as involving endogenous and exogenous modifications to the body, but on another level, it may also be seen as humans’ “natural” inclination towards embodiment from the start. In some sense our embodiment is always already “prosthetic” due to the belatedness of experiences, which need to be “translated” into language/text to become comprehensible. Language is understood here in the Derridean sense as including the broadest range of writing, reading, speaking and textuality. Experiences are extra-textual in their immediacy, but, in order for meaning to be formed around them, they need to be mediated in and through language/text. Having direct access to the immediacy of events and experiences is impossible, for the experience needs to be mediated in order to be accessed. In this sense embodiment is prosthetic, for we are always too late in the presence of the present, in that we only have access to the present through the delayed and belated buffer that is language. The (Cartesian) notion of being fully present – having direct access to the present or the material realm – has been thoroughly undermined by deconstructive thinkers such as Derrida, who prove very helpful in this analysis of embodiment and prosthetics.

There is an *hors de texte*, to which we do not have direct access, except inside text, due to the mediated nature of our existence. Physical bodies form part of the *hors de texte* to which we have access within textuality. This does not mean that we do not experience the *hors de texte* quite literally and physically, but once we start making sense of the outside, even on an anatomical level, it is already inside. Embodiment can be likened to a Möbius-strip – the inverted three-dimensional figure eight<sup>1</sup> folding into itself – the outside (body) in – and back out again –

the inside (mind) out, before its “true” position can be pinpointed. It is, therefore, not possible to trace the exact moment when the outside (body) pleats into the inside (mind), for at the moment of realisation, the outside has already become an inside and vice versa. As established earlier in my discussion of the hysterical body, the body is both inside and outside text: it is both the prerequisite for language and simultaneously that which escapes language. In other words, the body is “impossible” in language, for its outside is constantly twisting into the inside, while the inside becomes an outside again.

Hence, due to the “impossibility” of capturing embodiment completely in language, one makes sense of one’s body (speaking **as if** one could distinguish body from mind), and it in turn makes sense of the self, through the textuality of body images. Elizabeth Grosz defines “body image” as follows: “The body image is not an isolated image of the body but necessarily involves the relations between the body, the surrounding space, other objects and bodies, and the co-ordinates or axes of vertical and horizontal. [...] The body image is the condition of the subject’s access to spatiality” (1994:85). Even more importantly, body image mediates the mind/body polarisation, and shows the “radical inseparability of biological from psychical elements, the mutual dependence of the psychical and the biological” (1994:85). Body images can for this reason be viewed as prosthetic in their workings, for they confirm the textuality of our bodies, both consciously and unconsciously. One is, in other words, not fully present to one’s body, and neither is the body fully transparent to techno-scientific probing. Rather the two (at least two) meet in **prosthetic body images**, which do not necessary ensure a fixed or perfect fit.

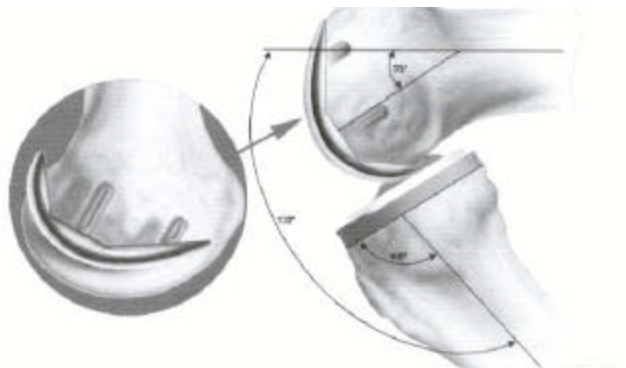


Fig. 4.4 Knee replacement surgery, *USA Today Magazine*, February 2000

The prosthetic nature of existence, according to which embodiment is always already embedded (Merleau-Ponty’s *flesh*) in language/text, operates in the background of my discussion. I assume throughout that the prosthetic enhancement of the body only doubles the alienation and mediation and intensifies the inherently prosthetic relationship that is inscribed in embodiment. When I refer to embodiment as prosthetic in nature, I am not implying that bodies are the mind’s prosthetic possessions, to have and control at will. I am not implying that we “have” bodies

solely, but rather that we “are” bodies as well. For this reason, I emphasise the unrealisable mediated prosthetic character of embodiment, escaping invariantly and not succumbing to the “mind over matter” control mechanism that guides techno-enhancement principles.

#### 4.2 When prosthetics was young: from wooden leg to nano-technology

Prosthetics, understood as bodily extensions, like technologies, is rooted in the socio-economic processes of humankind from the earliest times. Concrete evidence of prosthetics being used in ancient Egypt as early as 1065-740 BC was recently found in the form of a well-preserved mummy of a woman, whose right big toe had been amputated (Nerlich *et al.* 2000:2176).<sup>2</sup> The missing toe had been replaced in her lifetime by a wooden prosthesis; clear marks on the sole of the prosthetic toe indicate that it had been used. In other words, the prosthetic toe was not merely a customary gesture of “wholeness” by burying all the body’s lost parts together to prepare the soul for its eternal life:<sup>3</sup> the wooden toe was in fact made for everyday use. This is a fascinating piece of evidence of how medical altruism provided a woman almost three thousand years ago with the opportunity to continue her daily activities by means of a prosthetic toe.



Fig. 4.5 View of well-preserved mummy of a woman’s right foot and *prosthesis*, from *Ancient Egyptian prosthesis of the big toe*, in *Lancet*, 2000 (356):9248

Currently an estimated 25 000 people step on land mines per year, while ten thousand of those die. The survivors continue their lives as amputees, with or without prosthetic help. Altruistic relief organisations such as *Handicap International* teach local workshops on how to make cheap and effective prosthetic legs from available resources, but many victims still have to do without even that basic support. This means that, ironically, in our info-techno-skilled world, most land mine victims are facing a fate worse than the Egyptian woman referred to above, due to a lack of sufficient infrastructures and medical resources to supply them with prostheses that

would dignify their existence. In some cases, miraculously, a prosthetic leg is improvised, as shown by a Cambodian child's prosthetic leg [Fig. 4.7], made from recycled material found in a war-torn country. The leg is miraculously fashioned from a found 75mm rocket shell and a flip-flop sandal. This model costs nothing to make, compared with the “Sarajevo Leg” [Fig. 4.8] from another war-ridden part of the globe, which, although comparatively cheap, costs US\$166.



**Fig. 4.6 Image of land mine victim with two children.**  
From: Prosthetics Outreach Foundation

Though relatively cheap, but effective, even these basic prosthetic devices are out of reach for the majority of war amputees. As will be discussed shortly, the earliest research and medical development of prostheses was undertaken with the aim of supporting the military classes to uphold war activities, whereas, ironically, modern-day civilian victims of war are not privileged to gain from the advantages of the latest technological developments in prosthetics. That privilege is, instead, reserved for the “virtual classes”<sup>4</sup> who are preparing themselves for eternal techno-enhancement.



**Fig. 4.7 Improved and recycled Cambodian child's prosthesis,** *Benetton Colors*, 1996/7:12



**Fig. 4.8 The “Sarajevo Leg” made of stainless steel and polyurethane,** *Benetton Colors* 1996/7:13

Upon exploring the history of prosthetics, it appears that the evolution and inventions in the field of prosthetics were biased from the start, since this branch of medicine coincided mostly with



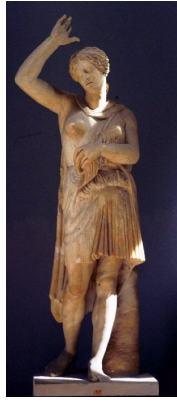
developments in modern science – especially warfare. The history of prosthetics overlaps with the cyborg's inception from military origins.<sup>5</sup> The impetus for early research on prosthetics was provided by modern warfare practices, which left thousands of amputees in their wake. As a result medical altruism took on legendary proportions with the work done, for instance, by Ambroise Paré (1510-90) [Fig. 4.9], a French army barber-surgeon.<sup>6</sup> Naturally all the war amputees had to be fitted with artificial limbs again, so they could continue their normal existence, or even more importantly, return to the battlefield. <sup>7</sup>



**Fig. 4.9 Ambroise Paré, (1510- 1590).**

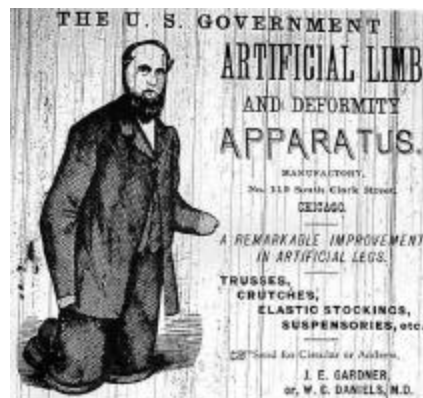
In fact, examples of progressive prosthetics are mostly drawn from the interwoven relation between the medical sciences and military craft. The interconnections between war and prosthetics can be clearly picked up in the stories of war figures such as the Indian warrior Queen Vishpla, documented in an ancient Indian poem (3500 BC),<sup>8</sup> who lost her leg in battle, fitted with an iron prosthesis and then returned to battle (Sanders 1986:15). Queen Vishpla's bravery can in turn be likened to the mythological figures of the warrior women, or Amazons<sup>9</sup> [Fig. 4.10] who also had themselves augmented for battle by disposing of one breast. Also noteworthy in the history of prosthetics is the legendary figure of the German mercenary knight Gotz von Berlichingen (1480-1562), who gained his reputation as an avatar of Robin Hood. Upon losing his right arm in battle, he was fitted with an amazingly functional prosthetic iron arm.





**Fig. 4.10** *The wounded Amazon*, Rome, Vatican Museum

One of the major stimuli for modern prosthetics came through the “Great Civil War Benefaction” project, following the American Civil war (1861-65) [Fig. 4.11]. The project provided prostheses to war veterans in the hope of sparking entrepreneurship after the devastation of the war. What is clear from this brief synopsis on the history of prosthetics, though, is that most of these heroic examples came from the battleground. It is therefore not bizarre to state that early prosthetics, like early cyborgism, served the military classes and genders particularly well. The impetus provided by the military to fund and stimulate modern prosthetics contributed greatly to the sophistication of current prosthetics, especially during the twentieth century’s two World Wars and thereafter.



**Fig. 4.11** The U.S. government artificial limb and deformity apparatus, Gardner & Daniels, 1874. Chicago Historical Society

The profile of prosthetics has, however, shifted dramatically in the info-virtual age. Its subject have shifted from war veterans to cosmetic surgery; its tools have updated from wooden pegs to nano-technology. Modern prosthetics has transformed itself from mere replacements of lost body parts into mega-medical and trans-national consumer businesses trading in both exogenous and endogenous body parts. Prosthetics in the twenty-first-century deals with

implants, transplants, xenotransplants,<sup>10</sup> wearables,<sup>11</sup> plug-ins, nano-technology, neuro-prosthetics, bio-computing, cosmetic surgery, full-scale bio-engineering and smart drugs – to mention only its most obvious forms.



**Fig. 4.12 Simulation of robot assisted surgery,  
From: Surgical Navigation and Robotics Lab, Charité, Berlin**

Increasingly, prostheses are permeating under skins and infiltrating bodies on a microscopic level, as bodies are not only outwardly enhanced, but also surveyed internally by medical science. The traditional boundaries between “inside” and “outside” are collapsing as nano-technology advances. The human endoskeleton is turned into an exoskeleton, as bodies are made transparent to the invasive panopticon of new techno-medicines. The inside is externalised and expanded beyond recognition. The medical procedures themselves are prosthetised by means of surgical robots capable of performing nano-specific surgery on bio-bodies [Fig. 4.12].<sup>12</sup> The robots as extensions of human capabilities (or prostheses) are now built to operate on humans, to transplant organs, graft skin and augment bodies with an unknown degree of accuracy. In an absurd sense it can be argued that the prostheses (robots) are now themselves operating on other prostheses.<sup>13</sup>

### **4.3 Prophetic prosthetics**

In *Civilization and its discontents* (1930), Sigmund Freud briefly speculates about the increasing prosthetisation of mankind. Could it be a mere coincidence that Freud at the time had to wear a “huge prosthesis, a sort of magnified denture or obturator, designed to shut off the mouth from the nasal cavity” (Wills 1995:92) after throat cancer was diagnosed? Did Freud’s own prosthetic embodiment impel him to see mankind as prosthetic in nature? Although Freud’s own

uncomfortable prosthesis may have informed his ideas on prosthesis, what is of more interest here is how Freud perceived the subject. He describes it as follows:

With every tool [man] is perfecting his own organs, whether motor or sensory, or is removing the limits to their functioning. Motor power places gigantic forces at his disposal, which, like his muscles, he can employ in any direction; thanks to ship and aircraft neither water nor air can hinder his movements; by means of spectacles he corrects defects in the lens of his own eyes; by means of the telescope he sees into the far distance; by means of the microscope he overcomes the limits of visibility set by the structure of his retina [...] **Man has, as it were, become a kind of prosthetic God.** When he puts on all his auxiliary organs he is truly magnificent, but these organs have not grown onto him and they give him much trouble at times. [...] Future ages will bring with them new and probably unimaginably great advances in this field of civilization and will increase man's likeness to God still more. But in the interests of our investigations, we will not forget that present-day man does not feel happy in his Godlike character. (Freud ca 1930, 1953-74: 90-2, emphasis added)

This description implies that civilisation is the progressive accumulation and use of prosthetics, thus technologies are used by a specific gendered category, namely man. Freud holds that man's use and implementation of prosthetics makes him more and more godlike, but his increasing resemblance to God does not necessarily afford him happiness. Perhaps Freud was speculating from the perspective of an older man suffering with a painful prosthesis. As he notes above "these organs have not grown onto him and they give him much trouble at times" or perhaps he was accurately making a prediction about man's growing relationships with prosthetics. It seems, though, that Freud realised that the cost of becoming a "prosthetic god" may be disenchanting disembodiment.

Marshall McLuhan also later explores the prosthetic nature of mankind in *Understanding media: The extensions of man* (1964), where he asserts that all media are extensions of ourselves. In other words, all media are prosthetic in character:

During the mechanical ages we had extended our bodies in space. Today, after more than a century of electronic technology, we have extended our central nervous system itself in a global embrace, abolishing both space and time as far as our planet is concerned. [...] Whether the extension of consciousness [...] will be a 'good thing' is a question that admits of wide solution. There is little possibility of answering such questions about the extension of man without considering all of them together. **Any extension, whether of skin, hand or foot, affects the whole psychic and social complex.** (ca 1964, 1994:1, emphasis added)

McLuhan, like Freud, realises the implications of becoming complete "prosthetic gods" and fittingly uses the powerfully embodied metaphor of amputation to delineate his case. He

identifies the sacrifice of prosthetisation not only on a physical level, but also as a painful psychological amputation.

Any invention or technology is an extension or self-amputation of our physical bodies, and such extension also demands new ratios or new equilibriums among the other organs and extensions of the body [...]. Physiologically, man in the normal use of his technology [...] is perpetually modified by it [...]. (ca 1964, 1994:8)

In the case of the automobile, for instance, the human organs of motion, namely legs are consciously “self-amputated” to enable travelling at greater speed. As prosthetics are integrated into physiology, more and more biological functions are replaced by cybernetic functions. After each amputation, what remains of the physiology has to adapt to the new prosthesis and compensate for its losses in order to find “new ratios or new equilibriums” again. The ultimate replacement or prosthesis comes, however, in the form of extreme immersive technologies such as virtual reality, where the “organic function of the self [is replaced] with an electronically mediated self-experience” (Pesce 1993:5). In other words, virtual reality, taken to its logical end, amputates the body completely, leaving nothing but prosthesis in its place. The implications of complete body replacement or prosthetisation for being human have not yet been completely determined: they may perhaps only be realised after final amputation has occurred, which may be too late.



**Fig. 4.13 Bionic arm created by the Edinburgh Infirmary's Bioengineering Centre, Benetton's *Colors* Dec 1996-Jan 1997(18):6-7**

Furthermore, McLuhan challenges the apparently neutral and transparent relation that people have with their prosthetic technologies. In other words, McLuhan does not perceive prostheses as mere bodily extensions that are managed by a distant mind and which do not have concrete implications for embodiment. Instead, “the mind” is implicated physically in the acquisition of prostheses and is instantly touched by its workings. Humans do not only make technological prostheses, but they are also themselves made in return by their prosthetics. In other words, just

as prostheses are modified, so humans are modified. McLuhan warns against a narcissistic attitude towards the extensions of our bodies as something “really out there and really independent of us” (ca 1964,1994:68). As long as we perceive techno-prosthetics as outside and not part of ourselves, we will do “the same sort of banana-skin pirouette and collapse” (ca 1964, 1994:68). According to him, when we do not realise that our prostheses are ourselves, there are no clear boundaries possible between self and prostheses.

It is to this effect that Sandy Stone, a well-known transgendered cyber-theorist, exclaims: “I have a bad history: I am a person who fell in love with her own prostheses. Not once, but twice. Then I fell in love with *somebody else’s* prosthesis” (1998:3, original emphasis). She continues to describe her early experiences with a primitive crystal radio, her introduction to a “24 24 recording console” and finally how she listened to Stephen Hawking giving a lecture by means of his artificial speech device. All these technological extensions fascinated her and “hooked” her interest in technology. However, Stone, like McLuhan, does not understand prosthesis “in the specific sense of the Greek term *prosthenos* – extension” (1998:12). In other words, prostheses are not “separate, discrete agencies or tools that occup[y] physical or conceptual spaces separate from those of the human” (Stone 1998:12). Just as we embody prosthetics, so they also embody us.

Stone arrives at the same conclusion as Freud did, when he contemplated prosthetics, namely that, although magnificent in his prosthetic adornments, “present-day man does not feel happy in his Godlike character” (Freud ca 1930, 1953-74:92). If a techno-sceptical chord is struck by Freud, McLuhan and Stone, it should however, not be read as a Luddite denouncement of techno-prosthesis. It rather calls for what Michael Heim has termed “virtual realism” – going beyond naïve realism and technological idealism.<sup>14</sup> This involves living with our techno-prostheses and realising that they are us.

As we increasingly become “prosthetic gods”, as Freud speculated, the often discomforting and painful experiences of prostheses are not accounted for in the rhetoric of techno-enhancement. The fact that prosthetics are generally not experienced as pleasurable, but instead, as aching sacrificial amputations, is commonly neutralised in techno-enhancement’s versions of prosthetics. Or, as mentioned earlier in connection with cyberpunk author William Gibson’s “simstim”, when the body in pain is faced at all, it has to be kept at a safe voyeuristic distance.

A voyeuristic distance can be upheld because cyberpunk theorists do not treat the techno-body as a lived body but, rather, suspend the life of the body as an object only for contemplation. In other words, according to techno-enhancers, the augmented body is “always something ‘other’ than the body” (Sobchack 1995:206). It is constructed as a prosthesis “out there”, separated from the “true” disembodied self. The real and physical implications of techno-

enhancement for embodiment are austere avoided in the debate. Don Ihde comments on the paradoxical stance of describing prosthetics as desirable and pleasurable entities, and yet not accepting the embodied consequences that they entail. Ihde argues:

On the one side is a wish for total transparency, total embodiment, for the technology to truly 'become me'. Were this possible it would be equivalent to there being no technology, for total transparency would *be* my body and senses [...]. The other side is the desire to have the power, the *transformation* that the technology makes available. Only by using the technology is my bodily power enhanced and magnified by speed, through distance, or by any other ways in which technologies change my capacities. These capacities are always *different* from my naked capacities. The desire is, at best, contradictory. I want the transformation that the technology allows, but I want it in such a way that I am basically unaware of its presence. I want it in such a way that it becomes me. Such a desire both secretly *rejects* what technologies are and overlooks the transformational effects, which are necessarily tied to human-technology relations. This illusory desire belongs equally to the pro- and anti-technology interpretations of technology. (1990:65, original emphasis)

The contradictory wish for what technologies offer without accepting their full embodied consequences is typical of most techno-enhancement discourses. Even though pain is irreducible, it is not uttered in these discourses, for on the way towards longevity one does not want to be reminded that the journey may be cumbersome and agonising. At the core this wilful amnesia is tantamount to not wanting to be reminded of embodiment at all.

It is productive to return to Freud's own painful prosthesis to make explicit the fragility of embodiment, lest we "forget that present-day man does not feel happy in his Godlike [prosthetic] character" (Freud ca 1930, 1953-74:92). Modern techno-dualists tend to neglect the fact that prostheses are embodied, sometimes even while experiencing excruciating pain. Prosthetics not only enhance capabilities, or restore them, but in most cases painfully modify the owner as well. Vivian Sobchack explains:

Indeed, there is nothing like a little **pain** to bring us back to our senses, nothing like a real (not imagined) mark or wound to counter the romanticism and fantasies of techno-sexual transcendence that characterize so much of the current discourse on the techno-body that is thought to occupy the cyberspace of postmodernity. (1995:207, emphasis added)

Sobchack's reminder of pain comes from her own experience with a prosthesis due to the amputation of her left leg above the knee. Obviously, Sobchack's intimate relation to her prosthesis does not automatically elevate her to the state of being a truthful agent of prosthetics, but it does provide Sobchack with knowledge of prosthetics that she has earned through embodiment. Therefore, Sobchack's call on the senses, precisely through the experience of

pain, makes a valuable contribution to the prosthetic debate, precisely from a gendered point of view, especially when the traditional identification of embodiment as female is taken into account. Pain insistently stresses the fragility and complexity of embodiment, which is so easily negated by techno-discourses. Sobchack wryly states: “my prosthetic leg has its limits and whatever it does to extend my being-in-the-world, whatever way it enhances and amplifies [...] my existence [...] I still had to give up my fleshy leg in trade, to lose something in the bargain” (1995:213). Phrased in cyberfeminist terms – Sobchack had to make a sacrifice, not only on a psychological level, but very importantly on an irreversible physical level, in order to accomplish a “godlike” prosthetic state. Embodiment is a fragile and yet precious gift that seems to be appreciated only after the fact of amputation; after its integrity has been compromised.

When John Perry Barlow, influential virtual reality expert, makes his famous remark in connection to virtual reality: “It is like having your everything amputated”, he pronounces this without taking cognisance of his embodiedness and the excruciating pain that may be involved if such a ludicrous act should be executed.<sup>15</sup> The narcissistic impulses behind Barlow’s statement can be unravelled by making use of Marshall McLuhan’s explorations of the myth of Narcissus to describe modern man’s prosthetic relation with technologies.<sup>16</sup> Related in computational terms and in terms of virtual reality, Narcissus (modern man and his prosthetics) has gone into a feedback loop, for he does not recognise himself in his own image or prosthesis. He is so seduced by his own image (prosthesis) that he becomes completely amputated from himself. McLuhan explains, “Self-amputation forbids self-recognition” (ca 1964, 1994: 43). Evidently, Barlow does not make allowance for the eventuality of non-self-recognition in his virtual dream of complete amputation. Instead, like Narcissus, who was fixated on his own enhanced image due to the narcotic and seductive effect it had on him, Barlow ignores the intolerability of “suicidal autoamputation” (ca 1964, 1994:43). Like a mythical Narcissus, Barlow is unknowingly dulled and narcotised<sup>17</sup> by his prosthetic enhancements. Each technological extension can be described as a voluntary amputation of a bodily function, whereupon physical functionality is substituted by the prosthesis. Each prosthetic enhancement impacts on the individual’s complete embodiment, as an embodied equilibrium has to be reached again in order to incorporate the newly acquired prosthesis. When Sobchack narrates that her prosthesis did not incorporate her, but that it was **she** instead who had painstakingly to learn how to incorporate the prosthesis, she makes a valuable point about what prostheses require from embodiment.

A useful example of the body’s struggle to adapt and embody the prosthetics of new technologies comes in the very mundane form of what is increasingly diagnosed as “carpal tunnel syndrome”. The syndrome entails the affliction of nerves and tendons of the wrists and is reported as the most common disease treated by hand specialists in the U.S.A. today (Beeld 1998:9). The use of computers on an extended daily or regular basis is the one of the direct

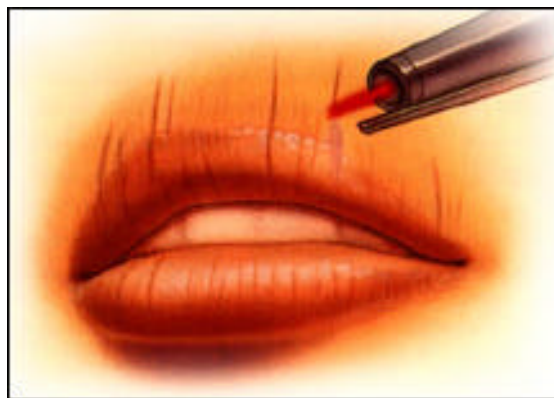


causes of carpal tunnel syndrome.<sup>18</sup> Apparently the syndrome is only one of several new stress-related diseases caused by the over-use of computers. The cure for the syndrome varies according to the levels of severity, but computer users who use their computers for more than an hour a day are strongly advised to take care of their bodies by doing regular stretching exercises – in other words reconnecting with their embodied selves again. It is easy for the Internet-addicted, for instance, to mistake themselves as disembodied beings during their virtual interactions, and it is only when the body reminds them of its existence via pain and discomfort that it is noticed.

At the risk of over-interpreting carpal tunnel syndrome I want to identify it as an example of the failure to “amputate” the body. The computer cannot, in its current form, be incorporated by the body, and therefore it causes stress and tenderness in tendons that are unaccustomed to the strain of working excessively with a prosthetic mouse and keyboard. The body plainly contradicts predictions of seamless cybernetic uploading, for it cannot be forgotten or be amputated in its entirety while working on the prosthetic computer. As a result it keeps reminding hopeful techno-wizards of the fact that materiality is not negotiable – not even in a lucid interface. The non-negotiability of embodiment also guides my following discussion on cosmetic surgery, or prosthetic surgery, for although the body can be changed and augmented, it is still embodied.

#### **4.4 Prosthetic surgery**

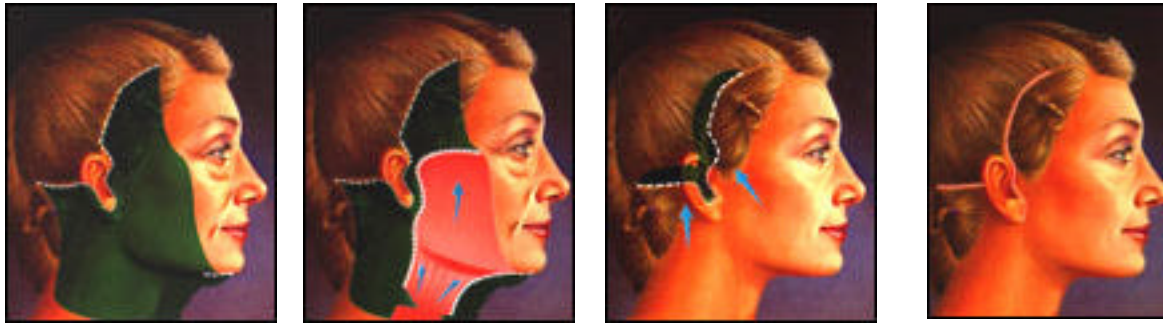
Undoubtedly, the debate on cosmetic and plastic surgery warrants a study on its own and I cannot, within the parameters of this study, devote sufficient time to create the depth of analysis that the issue deserves. Accordingly, the aspects I touch on here are directed towards exploring the key issues of this chapter, namely techno-enhancement, embodiment and prosthetics.



**Fig. 4.14 Image of laser surgery  
(False Creek Surgical Consultants, Vancouver, Canada)**

The term “prosthetic surgery” refers to surgery with the intention of prosthetising the body (forgetting embodiment) and accordingly, is closer to cosmetic surgery than to plastic surgery in general. Whereas plastic surgery deals with the alleviation of deformities due to disease, birth and accident, cosmetic surgery is driven by aesthetic improvement and therefore by an image or model of idealised beauty (*la chirurgie esthetique*, as Jean Baudrillard (1994) terms this phenomenon). I do not want to dichotomise these two surgical procedures, constructing the one as necessarily and conclusively “bad” and the other as “good”, but there is a slight difference between the two. Except for numbers, since cosmetic surgery accounts for over forty percent of all plastic surgery (Davis 1995:16), the two medical treatments have different expectations and outcomes. The one rectifies injury and malfunction, whereas the other beautifies attributes that are quite functional. Obviously, one can beautify while rectifying and by beautifying some rectification can also be done. The problem lies, however, in how embodiment is perceived and constructed within cosmetic and plastic surgery discourses. Cosmetic surgery generally has a more problematic relation to embodiment, and female embodiment in particular, than plastic surgery. I intend to explicate this more troublesome relation in my following discussion.

Each lived embodiment has its joys and limitations, which may be rectified and beautified, but if the idea is evoked that surgical possibilities are limitless, how viable is such an option? In other words, if one “looks” different, will one inevitably “feel” different? In most cases the surgical subject will probably feel different, but what happens in those cases where s/he expects to feel different but does not? What happens when changed appearances do not change the way in which the person embodies him/herself?<sup>19</sup> For instance, does rhinoplasty (nose surgery – the oldest form of cosmetic surgery) [Fig. 4.15] necessarily improve one’s self-image? In those cases where it shifts one’s body image the answer is probably yes, and in those cases where it fails to make any significant change in one’s perceived body image the answer is probably negative. Consequently, the ways in which the after-effects of surgery are embodied plays a vital role in the “success” of cosmetic surgery: surgical changes do not merely remain on the surface.



**Fig. 4.15 Images of “facelift” (rhytidectomy)  
(False Creek Surgical Consultants, Vancouver, Canada)**

Certainly, the body is not a clean slate provided with the compliments of “Mother Nature” and genetic heritage that eagerly awaits the precision of the techno-knife to mould it into highly contextualised ideals of perfection. In fact, the lived body, not the so-called given body<sup>20</sup> or a view of the body as a clean slate, plays an unprecedented part in how appearances are constructed. This seems obvious enough, without implying deterministically that a person’s fate is locked into their bodily appearances. Obviously, anatomy is not destiny: but the opposite proposition, namely that bodies are exchangeable consumer products, is also not satisfactory. Naturally a person has something to “say” or to contribute to their appearances, as a person “interprets” their body through body images, but is control situated entirely in the subject’s agency? Moreover, is having complete control over, and consumer choices in relation to, one’s body, truly a worthwhile and viable goal? If personal appearances can be reduced to a consumer choice list of nose and breast types (in other words, if personhood is only appearances without embodied consequences), why are cosmetic surgery’s rites of passage so painful both physically and psychically? I suggest that this is precisely because appearances are a complex embodied matrix, involving (at least) biological constitution, genetic material, socio-economic perceptions, sexed and gendered body images, identity formation and consumer desires. It is also culturally significant that ninety percent of all cosmetic operations are performed on women (Davis 1995:21). In addition, even though the male cosmetic industry is growing, the gender bias in cosmetic surgery can be expected to remain intact for a long time. The reason obviously is the unproblematic alliance of women with appearances and images, to which, of course, women themselves contribute greatly.<sup>21</sup>

Prosthetic surgery, as I have labelled it, denies the complexity of embodied appearances and is driven by what Jean Baudrillard describes as the seduction of consumer society by the “pathos of ideal likeness” (1994). Ironically, this striving towards the ideal likeness does not bring about a radical alteration of appearances, but rather perpetuates “a hypostasis of the Same” (Baudrillard 1994). In other words, during prosthetic surgery, appearances do not meet their “Other”, their radical and strange outside, but the process merely perpetuates the “Same” ideal

likeness over and over. As prosthetic surgery abounds, the body is increasingly perceived as “a locus of identification” (Baudrillard 1994), which needs to be repaired, perfected and made into the ideal object. This is underpinned by the problematic and unattainable construction of the “ideal” within metaphysical abstractions, from which women have historically been excluded. The body is thus appropriated as a mere extension or prosthesis of the male self. The attention that the body seemingly enjoys is not for the sake of the body, but rather to preserve an idealised Same-self. Baudrillard likens the increasing identification with the body in cosmetic surgery to “an autistic cult [...] of a quasi-incestuous manipulation” (1994) to which there exists no outside or Other, for it is the perpetuation of the “Same” (mind) – the Cartesian *res cogitans* – that is met every time and not another “look” or “appearance”. It is the “look” and “appearance” of the “Same” which is emulated over and over again. Prosthetic surgery can be identified as a practice wherein the amputated technology-user, narcotised and dazed, is caught in a feedback loop of the “Same-self”.

#### **4.4.1 Self-prosthetisation**

In exploring the theme of prosthetic surgery further, investigating the body of work of French “multi-media, pluri-and/or inter or rather trans-disciplinary artist”, Orlan may be useful. At first glance Orlan<sup>22</sup> seems to take herself literally at cosmetic face value with the legendary proportions and extremities that the surgical reconstruction of her body and face has taken. Although other famous figures, such as Michael Jackson and Cher, in the entertainment sphere have also undergone drastic surgery, their surgical abuses have not been undertaken with the same intent as Orlan’s body modifications.



**Fig. 4.16 Orlan in front of her latest series of works entitled *Refiguration/Self-Hybridation*, 1998-9**

Orlan can rightly be described as a “self-made” woman, designed in her own “image”. She has vehemently and actively protested against the images imprinted by patriarchy on the female flesh by re-making herself according to her own designs. She is both outspoken and proud of the blasphemous nature of her work. Her obsession with her own physique, which she candidly adores, began at the inception of her art career in the early seventies. As she declares, “my approach has always been to question the status of the body in society, and in particular the status of the female body” (Ayers 2000:176). Although Orlan’s questioning of the status of the female body in society is laudable, I remain critical of the art that she aspires to create.

Orlan works in a genre, which she calls **Carnal Art** (*L’Art Charnel*) as opposed to Body Art (*L’Art Corporel*), which is usually applied to performance art focusing on the human body. She defines Carnal Art as:

[...] self-portraiture in the classical sense, but realised through the possibility of technology. It swings between defiguration and refiguration. Its inscription in the flesh is a function of our age. The body has become a ‘modified ready-made’, no longer seen as the ideal it once represented; the body is not anymore this ideal ready-made it was satisfying to sign. (Orlan 2000)<sup>23</sup>

Furthermore, Orlan makes it clear that she does not hope to achieve purification and redemption through the experience of bodily pain, as most Body Art sets out to achieve. She strongly distances herself from the Judeo-Christian tradition’s denial of the pleasures of the “sinful” flesh. Carnal Art is also not obsessed with the plastic results of surgery, as prosthetic surgery would be, but is more interested in the surgical performances themselves, during which the body is refigured as a malleable site for public display and debate.

To a certain extent, I commend Orlan’s strategy of challenging preconceived patriarchal ideas about female beauty and embodiment as portrayed in the canon of western art history, which ironically endures in popular consumerist cosmetic surgery discourses and in other media, such as advertising. The way she uses her body and new technologies to mime these ideals of beauty, while simultaneously changing them, is fascinating. She literally embodies these concepts by physically reincarnating them in her “artworks” through surgery. As a result, Orlan refers to her body in the following terms: “This is my body. This is my software” (1996:81). Accordingly, she follows a powerful miming strategy, wherein she, like the nineteenth-century hysterical female patients of Salpêtrière, apparently becomes what she is expected to become, except that she mimes that position and does not become it to the full. It should be noted, though, that in Orlan’s case the boundaries between miming and becoming are very slippery indeed. And unfortunately the comparison made between embodiment as computer software

("This is my body. This is my software") indicates a specific intolerance towards the constraints of being embodied, which I will unpack shortly.

Orlan's most ambitious and comprehensive body project, entitled *The reincarnation of St. Orlan*, and *Image – Nouveaux Images* began in 1990. It includes a series of ten planned cosmetic surgery operations (or *Interventions*) [Fig. 4.17]<sup>24</sup>, which all set out to restructure her appearance using the blueprint of beauty as defined by western mythology and art.<sup>25</sup> At the time of writing Orlan has completed seven of the operations and it is not clear when and if she will finish the project, for, as she confesses: "If I don't manage it, well, bad luck!" (Ayers 2000:182). Importantly, the operations are televised across the world via satellite to different art galleries and audiences in real time. The operation rooms are also turned into spectacular environments, with the medical staff dressed in designer wear (including Paco Rabanne and Isey Miyaké) and the room is filled with visual elements that support Orlan's disruptive message. Orlan herself also does not succumb to the traditional role of the patient as a passive entity. She can be seen reading appropriate and selected texts aloud (such as Michel Serres, Alphonse Allais, Antonin Artaud and Julia Kristeva) and engaging with her captive audience worldwide, while being exposed from the inside out and the outside in, baring/bearing all.

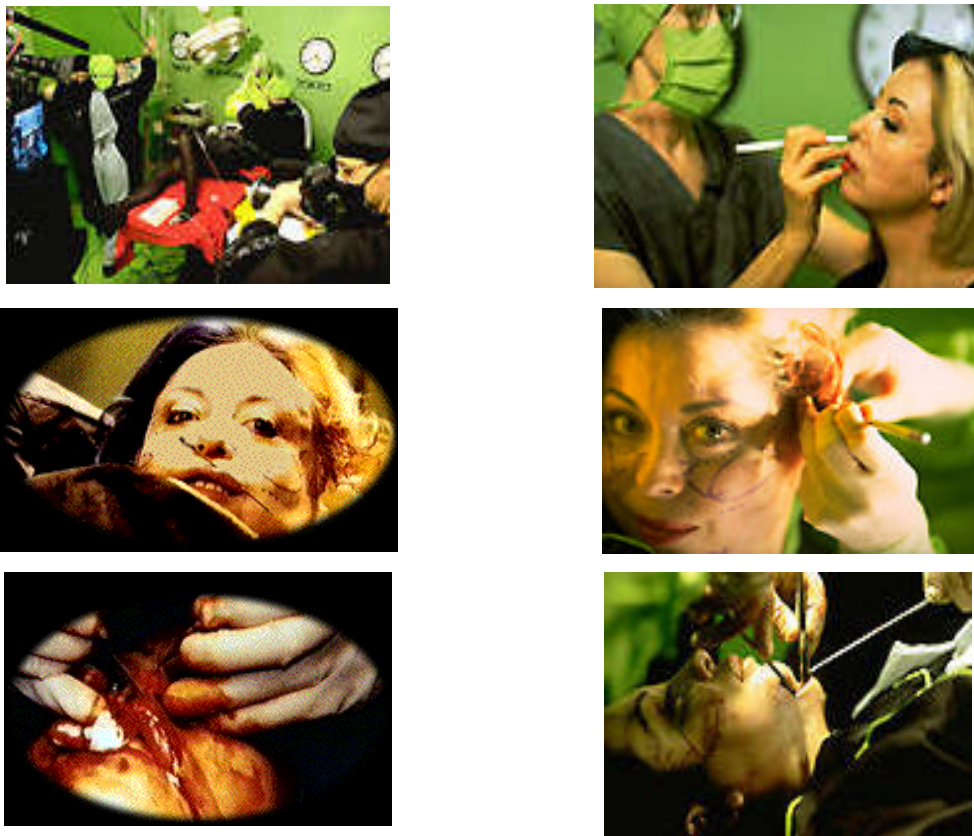


Fig. 4.17 Images from *Orlan's cosmetic surgery operations/Interventions*, 1990-93



The last three operations or *Interventions* consisted of implanting the largest possible implants (prostheses) into her face [Fig. 4.18] – two bumps were added to her forehead, reminiscent of two budding horns and finally an implant was added to her nose. Orlan has since started with a new project, the *Refiguration/Self-Hybridation* series (1998-9) [Fig. 4.19] in which she explores standards of beauty in other cultures, civilisations and epochs, such as the Maya and Olmec from pre-Columbian cultures. Instead of imprinting these “standards” onto her own flesh by undergoing surgery, Orlan now works with computer-photo images of herself. In other words, her refigurations have mercifully shifted from real to virtual.



Fig. 4.18 Orlan's latest nose and bumps implants, 1997

My discomfort with Orlan lies in her uncritical endorsement of body-denial discourses, such as those propagated by fellow artist Stelarc: “Like the Australian artist Stelarc, **I think that the body is obsolete**. It is no longer adequate for the current situation” (Orlan 1996:91, emphasis added). I have to agree with Orlan that there has always been a body that has been constructed as pure and natural or sinful and deceitful, that was and is, indeed obsolete. In fact, such a body has never existed. However, declaring or sentencing the body to extinction altogether is extremely controversial. Moreover, Orlan ardently wants to take complete control over her body and redesign it into something new: “It should be a performance radical for myself and beyond myself” (Orlan 2000). The implications of taking control of one’s body and making it into what the “eternal” subject wants – a temporal object – seems very dubious, and in fact merely perpetuates patriarchal notions about embodiment. Ironically, while ostensibly challenging patriarchal constructs about embodiment as lacking and enslaving, Orlan plays the same disastrous mind-over-matter-game by acting as the *auteur* of her own anatomical destiny.



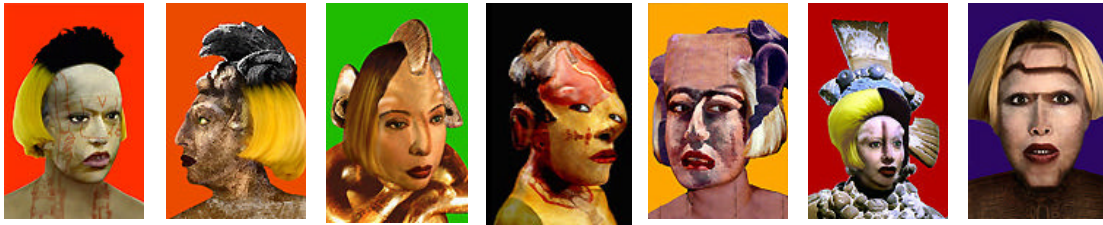


Fig. 4.19 Images from the *Refiguration/Self-hybridation* series, cibachromes mounted on aluminium behind plexiglass, 1998-9

Certainly, our bodies are not pure entities, untouched by technologies and nature, and I am not problematising plastic and cosmetic surgery *per se*. I am, however, problematising the notion of controlling every detail of one's appearance – for changed appearances have consequences, just as they need to be embodied. Hence, it is a fascinating bit of detail that Orlan has undergone three unsuccessful surgical attempts to reconstruct a cleft in her chin (Norris 1996:40). Objectively there is no apparent reason why this surgical procedure should fail, and yet it did. The fact that Orlan could not control the outcome of these operations provides a clear reminder of the body's existence outside the realm of the mastering mind. Before bodies are declared obsolete it should be noted that bodies do in fact exceed control.

Another disturbing aspect of Orlan's work is the way in which she deals with pain. As earlier implied when referring to painful prosthetics, pain is irreducible. Orlan makes it perfectly clear that she does not want to suffer pain while in surgery: "I'm not at all in favour of pain. I don't consider it made for my redemption or purification or whatever [...] the first deal I have with the surgeon is 'no pain'" (Ayers 2000:182-3). Obviously, she is contesting the metaphysics of pain, according to which severe pain is interpreted as a redemptive tool that purifies the mind from its sinful body. That version of pain problematically perpetuates the mind/body split. However, Orlan continues by adding: "for these operations there is a price to be paid: I don't suffer but I am aware that my body suffers, which **are two very different things**. If the body is in pain, that's one thing, but if I am not suffering, I can talk, I can do other things. If I am in pain, I can no longer do anything – I'm forced to suffer" (Ayers 2000:183, emphasis added). By making this statement Orlan echoes Descartes's ill-advised judgement that "if a foot is cut off, or any arm, or any other part of the body, **I know that nothing is thereby taken away from the mind [...]**" (Descartes 1969:86, emphasis added).



Fig. 4.20 No pain, no gain: photos of *Orlan* convalescing after surgery

Similarly to Descartes, Orlan makes a definite distinction between the suffering body and the thinking “I” hovering around, disembodied and pain-free, seemingly unscathed by the pain affecting the cut-up body. Orlan cruelly separates the thinking “I” and the suffering body, and is more than relieved that it is not the “real” I (or mind) who is suffering, but instead the “mere” body, narcotised and drugged – amputated and prosthetised. This contradicts her claim that all her work deals with an “and” and not an “or” logic, for, according to her, she would rather emphasise good **and** bad, beautiful **and** ugly, rather than good **or** bad, beautiful **or** ugly. She professes to support an inclusive logic, but instead reveals a very reductionist one when she describes body and mind as “**two very different things**”. Can Orlan really propose that her body bleeds and is bruised without impacting on the thinking and talking “I”?

In addition, Orlan claims in her *Carnal Art Manifesto* that everything about her has changed except her **voice**. Although she is obviously referring to her physical voice and vocal cords, surely she is not unfamiliar with the metaphysics of voice. For it is the voice that is described in the metaphysical tradition as the bastion of the invincible and truthful “I”. Derrida has termed the prevalence given to voice over supplementary writing, as the “metaphysics of presence” (1984:131). The apparently immanent voice ironically always communicates via “writing” and, thus, representation or mediation, in order to manifest itself. Voice is always mediated and textual, and not fully present to itself, even if it masquerades as such. If Orlan is indeed convinced that her voice is left unchanged by these operations or interventions, while the temporal body (like supplementary writing) has changed, then sadly, like Descartes, she has carved a “*res cogitans*” and “*res extensa*” out of the inseparable body/mind embodiment complex. Phrased in Derridean terms, she has constructed a “metaphysics of presence” from the apparently unchanged voice. She has substituted the image of patriarchy and God imprinted on the female body, with her own blueprint. In the process, she has not opened another liberating aspect of embodiment, in my view, but has sadly merely substituted one subjective control-system for another.

#### 4.5 Body sculpting

In dealing with the topic of body sculpting,<sup>26</sup> I will briefly consider the visualising technologies of a stream of body-controlling advertisements that aspire to sculpt the body according to reigning ideals of health and beauty. The selected advertisements are scrutinised for the way in which they depict the fitness and “body beautiful” cult fed by capitalist consumerism. In the onslaught of the seductive consumerist logic, the body is narrowed or slimmed to an image – a

representation or simulacrum, almost losing its connection to materiality. Even though, exercising and stretching routines apparently affirm the materiality of the body, exactly the opposite logic is at work. The body is not being affirmed for and in itself, but it is rather affirmed as a tool or instrument (prosthesis) that, when exercised and controlled sufficiently, can induce longevity. The female body is especially vulnerable to this regime, for it shares a specific constructed history with the supposed malleability of the material realm. One may well ask, with Sandy Stone, in the title of her renowned essay: “Will the real body please stand up?” This is not to argue that access to the “real” body is possible without mediation, but rather to reiterate that humans **are embodied beings** who cannot be reduced to images or prostheses only. In Agamben’s words:

Never has the body – above all the female body – been so massively manipulated as today and, so to speak, imagined from the top to bottom by the techniques of advertising and commodity production [...] **What was technologized was not the body, but its image.** Thus the glorious body of advertising has become the mask behind which **the fragile, slight human body continues its precarious existence**, and the geometrical splendor of the “girls” covers over the long lines of the naked, anonymous bodies led to their death in the lagers (camps), or the thousands of corpses mangled in the daily slaughter on the highways. (1990: 49-50, emphasis added)

Although the body survives “the glorious body of advertising”, it does so very precariously, for the “beautifying” demands made on the body are all-consuming, with sometimes devastating results. In addition, even though these body-sculpting designs serve apparently noble ideals, such as a healthy and fit body, they actually serve the instrumentalist ideals of techno-enhancement. The first advertisement under discussion is a *Health & Racquet Club* advert, which reads: “Fortunately you are your own worst enemy” [Fig. 4.21], showing that one does not have to accept the body that you **have** (as opposed to being a body) when you can sculpt and mould it into a more “truthful” image of yourself. The only obstacle obscuring the ideal is not the unwilling and incapable body, which is mere clay in a person’s mental “hands”, but rather the resisting mind. As the copy explains: “you are you own worst enemy”. The supremacy of mind over matter, as represented by the “you”, is acknowledged in the advertisement. In other words, “deep down” a “truer” version of “yourself” is lurking, waiting to be freed from the bodily constraints imprisoning this more truthful version. A person merely has to put their mind to “it” – the body – and “it” will surely follow obediently. The notion of a hidden truer self is reminiscent of Plato’s idea that the soul is kept prisoner by the deceitful body and is quite literally dying to get out. In the words of talk-show host Oprah Winfrey, one merely has to “make the connection” with who one “really” is, namely a thin, youthful and beautiful creature. After the connection has been made, one can spread one’s enhanced wings. The body that is identified with is not one’s own

imperfect body, for that is not important, but rather the image of the ideal active body as portrayed in these advertisements.



**Fig. 4.21** Fortunately you are your own worst enemy, Advert for *Health & Racquet Club Group, Style*, 2000:34



**Fig. 4.22** 'A young body is a terrible thing to waste, Advert for *Health & Racquet Club Group, De Kat*, 1999:91

Not only is making the connection with one's "true" self emphasised, but it is also crucial to attain and sustain a youthful body. This becomes evident in the second advertisement for the *Health & Racquet Club* [Fig. 4.22], stating: "A young body is a terrible thing to waste". Eternal youthfulness forms the foundation of the body beautiful cult, which is, however, not necessarily a new trend within western ideals of beauty. What makes this version different, though, is that the body is more than ever depicted and activated as an instrument or extension of the inner self, a prosthesis separated from the "true" inner identity. Obviously, a cyberfeminist perspective would hold that the body is not a prosthesis existing on a separate level from the "inner true self" or "mind", but they are both threaded together in an embodied chiasmus, which cannot be separated. Yet, the persistent thinking about bodies in the capitalist regime maintains that the body, as the traditional site of temporality and decay, needs to be worked (the work-out) and controlled into longevity; otherwise, the valuable commodity of youthfulness is wasted.

I am not challenging healthy living and regular exercise, which may indeed lead to longer and happier lives. I am, nevertheless, contesting notions of "healthy" living, which hold the body hostage as an instrument or tool that should be punished and forced into submissive obedience. I also criticise the commodification of exercises and "healthy living", which have become an industry of "selling" the body as a prosthesis. As Susan Willis makes clear, the "workout" or exercise session represents "the most highly evolved commodity form yet to appear in late-twentieth-century consumer capitalism" (1990:6). The end product of commodified exercises is "the production of the quintessential body object" (Willis 1990:6) and in my terms, thus, the

creation of the quintessential body prosthesis. There is a vast difference between embodied healthy living and a mind-over-matter approach to “healthy living”. In this instance, too, it has to be emphasised again that just as bodies are sculpted/written so bodies sculpt/write in turn.



**Fig. 4.23 “The architecture of a beautiful body”, Advert for *Ralph Lauren*, 2000**

Bodies are not sculpted innocently or within an ideological vacuum, as a short analysis of the advertisement for fashion designer Ralph Lauren introducing, “The architecture of a beautiful body” [Fig. 4.23] reveals. What exactly does the architecture of a beautiful body look like? Can a blueprint for the architecture of the beautiful body be traced to the construction of the “ideal likeness” (Baudrillard 1994)? Does the beautiful body inevitably wear a default race, class, gender and importantly, a default nationality? If Ralph Lauren’s advertisements are an indication, obviously, the architecture of the beautiful body is based in very specific preferences. The fact that it is a blonde statuesque girl portraying the architecture of the beautiful body with a “U S A” sprawled over her well-shaped breasts is clearly significant in the creation of images of the ideal likeness. One may wonder whether “Mother Nature” provided this beautiful body, or if it was rather sponsored by “father capitalism”. Somewhere between these extreme poles, namely the so-called “pure” natural body and the culturally simulated body, lies the lived body. The fact that the lived body, experienced by mortals, who have to combat corporeal imperfections daily, does not match up to “the architecture of the beautiful body” confirms the unforgiving rigidity of the body sculpting modus.

In the previous two categories, namely prosthetic surgery and body sculpting, the body has been prosthetised, enhanced and extended, but for the greater physical part, it has remained. In what follows, I examine discourses where the level of prosthetics is raised by extending or enhancing the body in her entirety and eventually replacing her completely with a

remade one, as in the extreme example of the **PRIMO 3M+** body. In this remaining category, more than previously, embodiment is increasingly reduced and narrowed to an interchangeable prosthesis. Additionally, embodiment's contextuality and specificity are exponentially cast off as mere circumstantial information that can be changed and redesigned at will.

#### 4.6 Complete prosthetisation

The discussion on complete bodily prosthetisation focuses on a digital advertisement for life extension entitled **PRIMO 3M+** [Fig. 4.24]. The digital advertisement, designed by Transhumanist and Extropian artist Natasha Vita-More (a definite pun on her uncompromising striving towards longevity and thus enjoying "more life"),<sup>27</sup> utilises a combination of art and science in order to design an ageless body, thus the ultimate prosthetic body. Vita-More introduces the viewer to the **PRIMO 3M+** body, which is "powerful" and "durable", evidently unlike our existing depreciating bodies. The new **Primo 3M+** body is apparently also "better suspended, more flexible" and it offers extended performance in Italian style, which is apparently the norm.<sup>28</sup>



Fig. 4.24 Natasha Vita-More , The **PRIMO 3M+** body, 1998

**Ageless**, the company that co-operated with Vita-More in designing the **Primo3M+** body assures prospective customers that the body is configured under the careful guidance of networked Artificial Intelligence agents. Thus, no fallible human hands are implicated in its construction. The **PRIMO 3M+** body, which is a prosthesis in itself, is also configured by other prostheses, doubling the process of alienation and prosthetisation. Consequently, if a comparison is made between the capabilities and capacities of the "old" twentieth-century-body with the evolved **PRIMO 3M+** body, the chart [Fig. 4.25] appears as follows:



<i>20th Century Body</i>	<i>Ageless Primo 3M+</i>
Limited life span	Ageless
Inherited genes	Replaceable genes
Wears out	Upgradable
Random mistakes	Error correction device
Intelligence capacity 100 trillion synapses	Intelligence capacity 100 quadrillion synapses
Single tracks circuits	Multiple viewpoints running on parallel
Gender restricted	Gender changeability
Prone to environmental damage	Environmentally friendly
Corrosion by irritability, envy, depression	Turbo-charged optimism
Waste products are messy and volatile	Recycles and purifies waste products

Fig. 4.25 Table from Extropic Art website

The advantages of the new **Primo 3M+** body are obvious, as well as the consumerist attitude towards embodiment underlying its construction.<sup>29</sup> If the image of the **Primo 3M+** body is considered, it reveals interesting cues about the creator's particular position concerning embodiment and its future prospects. The **Primo 3M+** body is presented as an image of a highly-toned, muscular, blonde female, clad in a second skin body suit, which hugs her like a condom and echoes her voluptuous curves seductively. She crawls on all fours in a stance of anticipation – ready to be jet-propelled into the prosthetic future. The pose that she strikes is not unfamiliar to pornography and high- fashion photography. It consciously recalls the renowned poster of Farrah Fawcett [Fig. 4.26] in the late 1970s, with her waving blonde curls and million-dollar smile that adorned many a teenager's walls. The angelic Fawcett was undoubtedly one of the legendary icons of the twentieth century and the poster immortalised her as a symbol of beauty and youthfulness. The goddess portrayed in the **Primo 3M+** advertisement [Fig. 4.27] strikes a very similar pose, with the difference that she aims at retaining that posture for another thousand years.

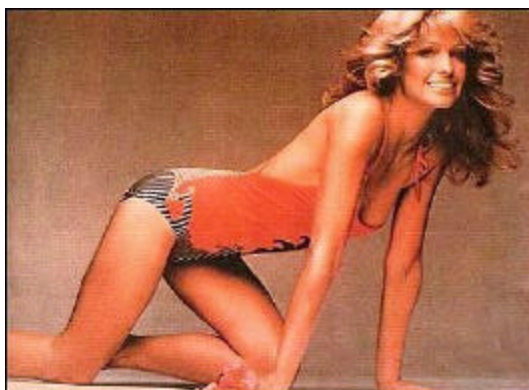




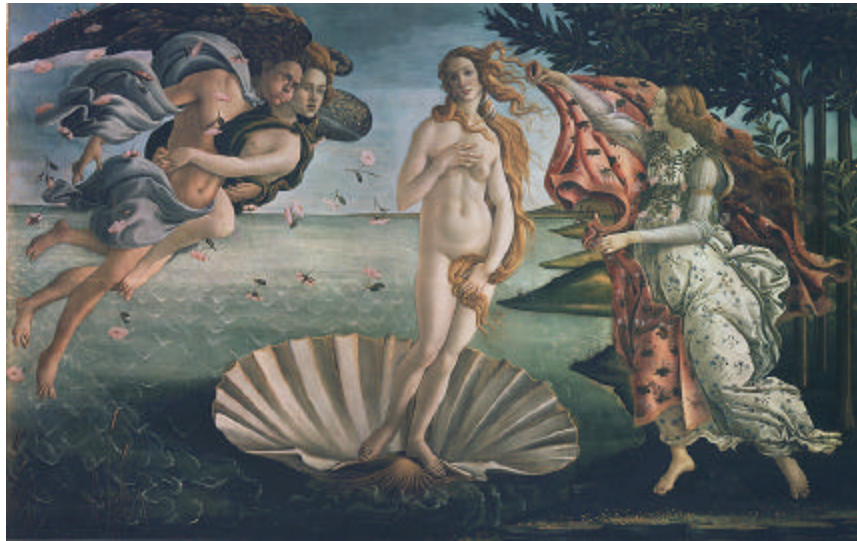
Fig. 4.26 Farrah Fawcett poster, 1979

Visitors to the website of **Primo 3M+** are invited to play an animation in which the blonde woman starts to dissolve into motion, with the sound of a racing car's screeching wheels and a seductive female voice announcing: "On the edge". The animation fittingly describes the lustrous **Primo 3M+** female goddess: she is on the edge, waiting for change and ready to evolve into something new and definitely more advanced. This shining being with her dark glasses, gloved hands and sculpted blonde curls can be said to resemble the birth of a technological Venus in interesting ways.



Fig. 4.27 **PRIMO 3M+** body, Natasha Vita-More, 1998

It is worthwhile comparing the **Primo 3M+** "goddess" and another immortal being that was also known for her beauty and grace, namely the goddess Venus or Aphrodite. In this regard, if *The birth of Venus* (1485) [Fig. 4.28] by Italian Renaissance artists Sandro Botticelli (1445-1510) is examined, one can discern distinct notions of immortality in the earlier Renaissance rendition and explore significant differences from the **Primo 3M+** version.



**Fig. 4.28 Sandro Botticelli, *The birth of Venus*, 1484**  
 Tempera on canvas, 5'8" X 9'1". Galleria degli Uffizi, Florence  
 (Gardner 1980 517)

In Botticelli's depiction, clearly, the limbs are elongated and other distortions occur, such as the unnatural length of Venus's neck, the steep fall of her shoulders and the strange way in which her left arm is hinged around her body. All these artistic liberties combine to create an infinitely graceful and gentle creature. After all, Venus is no mere mortal, but the goddess of Love and Beauty, and her glory and power is described thus: "So graceful and alluring was the Goddess that the Seasons rushed to meet her, imploring her to stay. Aphrodite smiled. Her stay would be never-ending, her work never complete" (Spretnak 1978:57-8). The painting depicts the glorious moment of Aphrodite's birth from the severed genitals of Uranus, mutilated by his sons. Aphrodite, like Athena, is motherless (*Aphrodite Uranus*) and yet she is simultaneously the mother of all. Aphrodite's motherless state implies that she has no part in the fallen and mortal physical domain.

Botticelli's Venus is heavily indebted to Christian Neo-Platonism as interpreted by Marsilio Ficino in Florence at the time. The mythological roots are only one part, although a very important one, of Botticelli's Venus. The Christian version appropriated her as the embodiment of the Soul and Eternal Love. Her physical beauty only hinted at her beautiful soul, because beauty is described in the Neo-Platonic cosmology as "the splendour of divine goodness" (Panofsky 1967:133). Aphrodite, accordingly, embodied immortal divine goodness as construed in the Neo-Platonic system. In other words, the figure of Aphrodite represents the aspiration towards her graceful spirituality, not her physique. It was accepted that no perfect beauty was possible on earth. Immortality was never an option in the physical realm, but could only be achieved in the spiritual after-world. One could not become an embodiment of Aphrodite, but could, instead, praise her in prayers, hoping to merit eternal life after death. Mortality was firmly

embedded in the physique and immortality was strictly reserved for the disembodied after-life. It is on this point that the twentieth-first-century interpretation of immortality differs, for the **Primo 3M+** body promises exactly that, namely immortality in the physique. The blonde techno-blast in the **Primo 3M+** version is a physical incarnation of immortality. She **is** Aphrodite made flesh through techno-enhancements.

In the background, a webbed matrix encloses her and almost gives “birth” to her. The environment that shapes her and enfolds her, almost like a shell, is a technological grid of coded networks and wired lines. This Aphrodite is, similarly, not born of woman: like the goddess Athena and Haraway’s cyborg (that is discussed in a later chapter), she is born of deviant technology and father science. Her “natural” environment is at the forefront of innovation. She embodies an immortal creature that will constantly replicate and upgrade herself. Her breast will not sag, her hips will not swell and neither will her forehead ever wear a permanent frown. Everything about and in the **Primo 3M+** body has been and can be enhanced or prosthetised. The **Primo 3M+** body is sculpted to perfection for all eternity and her youthfulness has been prolonged indefinitely. In all fairness, she is a prosthetic goddess.

But how is embodiment configured in this futuristic digital example? Embodiment as *flesh* (Merleau-Ponty) and “psychic corporeality” (Grosz 1994:22) has morphed into prosthetics, technological modification that can be replaced and upgraded at will. There exists no continuity between the specific lived body and the upgraded immortal body, mind and body. Instead, the lacking continuity is simulated by an eternal mind that body-hops from one upgrade to the next. Vita-More fiercely pursues the idea of the prosthetically perfect body when she self-indulgently subscribes to ideas such as:

The flesh-body is becoming a bio-tech body. The architecture of our image will take on novelty. While I enjoy sculpting my outer flesh, I look forward to bio-tech designs that will enhance physical abilities and augment intelligence and creativity. **Flex my mind – flex my body.** (More 1998, emphasis added)

In the artworks *Flex my mind, flex my body* [Fig. 4.28] Vita-More displays her own well-toned and masculinised upper body, fit to endure another millennium. Vita-More also gives a workout schedule for hopeful Transhumanists on her website. She informs the reader that she uses hormone supplements and other vitamin supplements to keep, not only her body, but also her “mind” healthy – as if the two are separable. While she is flexing her mind and body, both are prosthetised beyond recognition. In another series entitled *Xemplar '98*, Vita-More has created four “Transhuman posters” dealing exclusively with the theme of “achieving indefinite lifespan” (Vita-More 1998) – or is it indefinite youth? She posits herself and other Extropian and Transhumanist artists as “exemplar-makers”. What this actually means is that they are setting

examples for other mere “meat” humans of what can be achieved with the body, once the mind is creatively put to task.

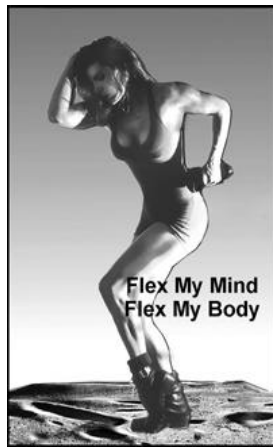


Fig. 4.28 “Flex my mind, flex my body”, photographs, Natasha Vita-More, 1997

The four posters that form part of the *Xemplar*-series are *Extropian* [Fig. 4.29], *DNA breakout* [Fig. 4.30], *A-life* (obviously referring to artificial life) [Fig. 4.31] and *I have a meme!* [Fig. 4.32]. Vita-More provides the following descriptions for these images: “*Extropian* represents the enhancement of our physical bodies as we interface with technology; *DNA breakout* represents our ability to break away from the constraints of our DNA; *A-life* represents the immediate evolution of electronic life forms; and *I have a meme!* represents our speaking out to the universe that we have something to say, and we are saying it!” (1998).

Natasha Vita-More, *Xemplar '98 series*, 1998



Fig. 4.29 Extropian



Fig. 4.30 DNA breakout

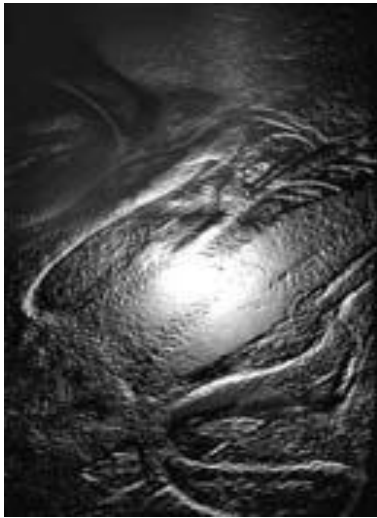


Fig. 4.31 *A-life*



Fig. 4.32 *I have a meme!*

As in the birth of the immortal technological Aphrodite reincarnated in the **Primo 3M+** body, in these works Vita-More similarly perpetuates the myth of untouched godlike perfection. It is also evident that her works are drenched with eternal techno-humanistic optimism guided by an instrumental approach towards embodiment. Robert Cheatham rightly refers to Extropianism as: “the ‘humanist’ version of the post-human” (2000). This means that humanist ideals of sovereign subjectivity without regard for the particulars of the embodied stratum still operate in this techno-humanist version.

Furthermore, in Vita-More’s art the body becomes a transparent tool, which, if invested in “correctly” and “wisely”, guarantees everlasting perfection. In other words, the body is treated as complete prosthesis separated from the “true self”, which has evidently broken free from the bio-stronghold of DNA (see *DNA Breakout*). Similarly the youth shouting “I have a meme!” from the roof of the Parthenon, for the entire universe to hear, epitomises Extropian art’s supposedly invincible and over-optimistic adventure, into the prosthetic techno-future.

Even though embodiment is “prosthetic” in nature due to the delayed and mediated nature of our existence, it does not necessarily imply that embodiment is not “real” or can entirely be circumvented by prosthetic replacement. The prosthetic nature of embodiment, referring to the merger of body and mind, differs from the prosthetisation of embodiment as followed by instrumental techno-enhancement. As stated earlier, embodiment is fragile and cannot be replaced completely without relinquishing its integrity in the process. Consequently, just as in the case of uploading discussed in the previous chapter, embodiment cannot be transcended or enhanced beyond itself, without necessarily also sacrificing it. The materiality of embodiment, although malleable, needs to be negotiated in all techno-enhanced procedures. There are definite limits to what can be achieved through enhancement. In other words, there

are limits to what the body can become; immortality is excluded. Endeavours of techno-enhancement tend to prosthetise the body without convincingly acknowledging that prostheses have to be and, in fact, are always already embodied, in order to exist as prostheses at all. Dealing responsibly with prostheses within a cyberfeminist framework would mean that developments in the field of prosthetics are embraced where the integrity of embodiment is vindicated. In those cases where embodiment is treated as just another prosthesis to wear cyberfeminism should critically distance itself from it. As we wear our prostheses, they also wear us.

### Endnotes:

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<sup>1</sup> See Elizabeth Grosz's utilisation of the Möbius strip as model for configuring the relationship between body and mind in structuring the chapters of her book *Volatile Bodies* (1994).

<sup>2</sup> This is not the earliest example of the use of prosthetic methods to aid physical impairments. In fact the earliest anthropological evidence of an amputee is that of a human skull which is 45,000 years old. It shows teeth shaped and aligned in such a way that indicate it was an upper extremity amputee. For more about the history of prosthetics, visit the Northwestern University Prosthetic Orthotic Center's website at: <http://www.nupoc.northwestern.edu/prosHistory.shtml>

<sup>3</sup> Amputation was apparently feared more than death in some early cultures, for it was believed that it not only affected the amputee's life on earth, but also, importantly, in the afterlife. The ablated limbs were buried and then disinterred to be reburied at the time of the amputee's death so that the amputee could be "whole" for eternal life (Northwestern University Prosthetic Orthotic Center 1999).

<sup>4</sup> See Arthur Kroker and Michael Weinstein's discussion of the term "virtual class" in *Data trash the theory of the virtual class* (1994), which supports my position.

<sup>5</sup> In chapter six I make an assessment of the cyborg's relatedness to military invention.

<sup>6</sup> I have already referred to Paré in the previous chapter in regard to phantom limb phenomena. Paré also made a breakthrough in amputation surgery and prosthetic sciences, not only by identifying phantom limb phenomena, but also by reintroducing ligatures instead of cauterisation with hot oil during amputations. Hippocrates originally put forward the use of ligatures to tie off bleeders in the 5<sup>th</sup> century BC. Apparently, Ambroise Paré re-introduced the use of linen ligatures when he ran out of cautery oil during battle surgery. This sparked a debate about the use of ligatures versus cautery oil (*Prosthetic history*).

<sup>7</sup> Paré also made great contributions as a prostetician by creating the *Le Petit Lorrain*, a prosthesis operating by springs and catches. This prosthetic arm was custom-made for a French Army Captain and equipped him to return to battle.

<sup>8</sup> The *Rig-Veda*, an ancient Indian sacred poem, written in Sanskrit, recounts the story of a warrior, Queen Vishpla, who lost her leg in battle.

<sup>9</sup> For an interesting assessment of whether Amazons did, in fact, exist, rather than being merely mythical figures see Jeannine Davis-Kimball's (1997) "Warrior women of the Eurasian steppes".



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<sup>10</sup> Xenotransplantation involves the transplantation of tissue and organs from one species to another, such as between human and pig. Apparently, using primates, such as baboons, for these purposes is too expensive for large-scale organ harvesting. Pigs, on the other hand, are cheap and many of their organs are close enough in structure to those of humans to be functional. During xenotransplantation the boundaries between species are blurred, which forms an important aspect of Donna Haraway's construction of the cyborg.

<sup>11</sup> Wearables refer to personal computers, electronic organisers and personal digital assistants, which can be worn almost like accessories, such as a bracelet, headband, or shoulder-bag. Obviously, wearable computers require different methods of input and also user-interface designs. Examples of different input types are speech recognition, single-handed keyboards, eyeball tracking and DataGloves.

<sup>12</sup> See, in this regard, the research activities and developments done by the Surgical Navigation and Robotics Lab, Charité, Berlin. It is one of the aims of the Clinic to develop their "demanding 'OP 2000' project aimed at precisely matching surgical intervention to the situation at hand through state-of-the-art information, computer, and laser technologies" (*Surgical Navigation and Robotics Lab*).

<sup>13</sup> Marshall McLuhan already predicted this increasing prosthetisation in the early sixties: "We acquired the art of carrying out the most dangerous social operations with complete detachment" (1994:4). The detachment that McLuhan is referring to is not only mental, but also refers to physical detachment via robotic replacements and tele-operations.

<sup>14</sup> I have explained Michael Heim's notion of virtual realism in chapter two as part of a cyberfeminist approach to new technologies.

<sup>15</sup> Sue Thomas's novel *Correspondence* (1991) is relevant in this regard, for it relates the story of a woman who becomes a "compositor", analogous to a human-computational entity that creates fantasies and dreams for other people: "a typical project might be to build a fantasy of warmth, for sale to geriatric hospitals" (Thomas 1991:18). But the compositor has to undergo severe physical augmentation, which involves a lot of pain: "Must you endure this double pain? There are blood tests, urine tests, marrow tests. Samples of your tissue writhe at this moment under histologists' microscopes. Extracts of every type of body fluids are sloshing and shaking in a hundred different test-tubes in a dozen rooms around the clinic. And in other rooms, fascinated technicians run copies of your programming and pore over circuit diagrams. Engineers approach you with fine-tuning tools and tiny screwdrivers like knives. They invade you at every point" (1991:144).

<sup>16</sup> McLuhan first uncovers the etymological relation of the name Narcissus to its Greek roots *narcosis*, which refers to a state of **numbness** (1964,1994:41). McLuhan continues by adding that Narcissus did not fall in love with his prosthetic image because he **knew** it was himself: instead he was both "amputated" and extended by his own image without realising it. McLuhan phrases Narcissus's predicament, and by implication modern man's predicament, as follows: "This extension of himself by mirror numbed his perceptions until he became the servomechanism of his own extended or repeated image [...]. He was numb. He had adapted to his extension of himself and had become a closed system" (1964,1994:41).

<sup>17</sup> The numbed relation that man (mostly) has with his prostheses is not induced by adoration, but by brute physical shock. McLuhan explains that when the body is exposed to severe pain and irritation, the central nervous system protects the body by containing and localising the pain through merciful numbness. The body part under attack or irritated is "severed" or amputated by means of numbness, so as to protect the complete organism. McLuhan describes this protective bodily action as follows: "The victim seems immune to pain or sense [...]. For the central nervous system rallies a response of general numbness to the challenge of specialized irritation"(1994:44). Obviously McLuhan's description of the body's self-amputational response to physical danger also applies to mankind's psychic response to technological enhancement. It seems that man's prostheses are not always pleasurable, but instead overwhelming to the extent that he is perplexed and continually in a state of shock. His senses and thoughts are dulled so as to survive the ordeal: it is only later, when the initial shock wears off and the numbness subsides that feeling or realisation will return to the narcotised limbs and dulled thoughts. It is only after the shock has worn off that the implications of the prosthesis or the "suicidal autoamputation" (1994:43) are realised - possibly too late.



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<sup>18</sup> Pregnancy can also cause carpal tunnel syndrome.

<sup>19</sup> See Kathy Davis's helpful analysis of women's actual responses after surgery, in other words the *before* and *after* "cosmetic surgery stories" (1995:97). Some of the issues raised by women who had cosmetic surgery concern the actual painful ordeal of surgery, which has major implications and after-effects on the body as a whole; the problem of recognition afterwards – in other words recognising "yourself" in a new face. How do friends and family respond to the "new" face or look? I quote a short extract from Diana's story (a participant in Davis's research who underwent major facial reconstruction), relating disappointment in her experiences of surgery: "I'm really not changed at all [...]. I guess I hoped that because of everything I went through I would be calmer, mentally. After all that suffering, you know. After that terrible pain. (pause) But that's not what happened [...]. I find that disappointing. Like maybe it will change more than just my appearance" (Davis 1995:111).

<sup>20</sup> The difference between the lived body and the given body is that the lived body is an embodied body situated in a specific context, changing and interacting with her context all the time. The given body is the body nature has supposedly provided and which is constructed as destiny. The given body underwrites notions of static and fixed embodiment. My understanding of embodiment overlaps more with the idea of the lived body, which is an ever-changing and dynamic system, not necessarily fixed and doomed by genes and materialistic determinism.

<sup>21</sup> As a clarifying point, it should be noted that when cyberfeminism focuses on women's link with appearances, in order to forge an alliance with new technologies, it is not to enhance appearances that disregard the embodied component, but rather appearances that acknowledge their embodied roots.

<sup>22</sup> Orlan's name may be a reference to Virginia Woolf's fictive character Orlando, from the eponymous novel of gender-swapping, although I could not find any specific mention of this.

<sup>23</sup> The "ready made" refers to Dadaist artist Marcel Duchamp's introduction of everyday objects into the domain of art. Orlan refers to her Carnal Art as making the body into a **changeable** "ready made", which differs from the ideal "ready made" awaiting the artist's signature.

<sup>24</sup> The project started on 30 May 1990 in Newcastle. The first and second *opérations-chirurgicale-performance* took place consecutively on 21 July and 25 July 1990 in Paris; the third took place on 11 September 1990 in Paris; the fourth was performed on 8 December 1990 in Paris; the fifth on 6 July 1991 in Paris; the sixth and seventh took place in 1993 and were transmitted via satellite at the Centre Georges; the eighth took place on 8 December 1993 in New York and the ninth on 14 December 1993, also in New York. Not all of them are full operations: some are performances only.

<sup>25</sup> Orlan has chosen the following goddesses and beauties from western art history to guide her new appearances: 1) the eyes of a depiction by the Fontainebleau school of the goddess *Diana* for her energy and aggression; 2) the brow of Leonardo da Vinci's *Mona Lisa* as a central figure in art history; 3) the nose of Gerôme's *Psyche* as the opposite of Diana, namely fragile and timid; 4) the chin of Botticelli's *Venus* as an embodiment of fleshly beauty; and 5) the lips of Gustave Moreau's *Europa* for her adventurousness and looking expectantly at the future. Orlan, however, emphasises that she does not want to look exactly like these figures, but rather tries to capture what they have come to symbolise (Orlan 2000).

<sup>26</sup> Although the topic of body-building could just as well have formed part of the discussion on body sculpting, I have chosen to focus instead on advertisements for body sculpting that link closely with body-building. For an interesting analysis of women's bodies and the technology of body-building, see Anne Balsamo's chapter "Feminist bodybuilding" in *Technologies of the gendered body. Reading cyborg women* (1996).

<sup>27</sup> Natasha Vita-More describes herself as a Transhumanist and Extropian artist. She summarises her projects on her website: <http://www.natasha.cc>

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<sup>28</sup> It is also stated that the new body with its expansive interior gives its owner 100 quadrillion plus synapse capabilities, which must indicate an upgrade in intelligence and memory, very similar to a computer's RAM.

<sup>29</sup> Prospective customers are informed about an array of possible options for the new **Primo3M+** body, such as replacement parts and upgrades, a guarantee for 10,000 years, multiple gender options and naturally a trade-in on the old body at a discount rate.