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## **Cyborgs, cripples and *iCrip*: Reflections on the contribution of Haraway to disability studies**

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### **Introduction**

Although Haraway's cyborg has been widely used in feminist science studies and other fields, 'disabled cyborgs' are largely absent (although see Moser, 2000; Moser, 2005). Ironically, whilst the cyborg is supposedly about 'transgressed boundaries' and 'potent fusions', the starting point in any cyborg discussion is inevitably a 'fully functioning human and a fully functioning machine' (Quinlan and Bates, 2009:51), an assumption which remains invisible and unquestioned. One of the reasons why there has been little utilisation of the transgressive cyborg figure within disability studies to date is because of a well-documented history of how technology was problematically associated with normalisation, rehabilitation and cure (Goodley, 2010).

This chapter will revisit Haraway's *A Cyborg Manifesto* (1991) in order to explore what the cyborg can offer disability studies. Opinions in disability studies are currently divided (Kafer, 2009): some argue that cyborg theory cannot offer solutions for the material disadvantage faced by disabled people in society, others see the cyborg as providing a way of understanding the lack of a fixed boundary between disabled and non-disabled people. As well as presenting these debates, this chapter will also consider other ways of using cyborg theory to make sense of the lived experience of impaired people who have intimate relationships with technology, such as people with prosthetics and implants or who use assistive devices such as wheelchairs.

After presenting a summary of Haraway's key work I look at the *lived experience* of impaired cyborgs and then briefly touch on *cultural* representations of disability and cyborgs within science fiction. Finally I discuss what the 'impaired cyborg' can offer disability studies through engagement with theoretical understandings of embodiment, identity and disabled/non-disabled binaries.

### 'A Cyborg Manifesto'

It was back in 1960 that the term 'cyborg' – cyb[ergetic] + org[anism] – first entered the lexicon. As a result of the US space research program, the first cyborg was a rat that had been fitted with an osmotic pump under the skin which automatically dispensed chemicals without any intervention by the organism (Clynes and Kline, 1995 [1960]). These scientific advances ran parallel with the popular culture of the time as science fiction, films and novels were quick to exploit the image of the cyborg, an entity which was neither human, animal or machine (Kafer, 2009). Now, fifty years later, cyborgs have proliferated into every facet of everyday life and culture (for more information see Gray, 1995; Gray, 2002) and 'cyborgization' is evident today in the everyday ways that people use technology – the commuter using a mobile phone, the teenager plugged into their iPod and someone interacting with others in *Second Life*, a virtual software-driven world accessed using the internet.

However, for the purposes of this chapter I want to draw on the work of Donna Haraway. In *A Cyborg Manifesto* (1991) Haraway used the concept of the cyborg as a way for feminism to engage with rapid advances in science and technology and to move beyond the impasse of standpoint feminism. Suggesting that Foucault's notion of biopower provided a 'flaccid premonition' (Haraway, 1991: 149) of how contemporary technoscience would impact on people and their lives, Haraway instead analyses the position of women *now*, asking what it means to be a subject in a post-industrial power framework. Haraway argues that advanced capitalism has spawned an 'informatics of domination' which is based on social relations of science and technology that underpin a new global technoculture. *A Cyborg Manifesto* introduces the cyborg as a

cybernetic organism, a hybrid of machine and organism, a creature of social reality as well as a creature of fiction. (Haraway, 1991: 149)

Haraway points out that by the late twentieth century,

we are all chimeras, theorized and fabricated hybrids of machine and organism; in short, we are all cyborgs. The cyborg is our ontology; it gives us our politics. (Haraway, 1991: 150)

The cyborg can be found in the transgression of the human-animal boundary, such as the implantation of human cancer cells into mice (OncoMouse™). The blurring of physical and non-physical boundaries provides another site for cyborgisation, as reflected in sexual practices on the internet (Netsex) which may or may not involve a real blood-and-flesh

partner (Gray, 2002). Internet encounters may be virtual, but the resulting friendships can be real, supporting Haraway's assertion that 'the virtual isn't immaterial. Anyone who thinks it is, is nuts' (Gane, 2006: 147). Finally, and most importantly for this chapter, the cyborg can also be found in the transgression of the human-machine boundary as in people with prosthetic limbs, implants or artificial organs.

In *A Cyborg Manifesto* Haraway uses her feminist theory of cyborg politics to offer a way forward in the face of fragmentation in traditional identity politics.

There is nothing about being 'female' that naturally binds women. ... Gender, race, or class consciousness is an achievement forced on us by the terrible historical experience of the contradictory social realities of patriarchy, colonialism, and capitalism. (Haraway, 1991: 155)

Haraway suggests that rather than searching for a new essential unity, cyborg feminism identifies a new political struggle which is about coalitions rather than divisions, working towards affinity rather than identity (see also the chapter in this book by Roets and Braidotti which considers the contribution of Deleuze to disability studies).

In addition, the cyborg is an individual and the whole, representing 'transgressed boundaries, potent fusions, and dangerous possibilities' (Haraway, 1991: 154). The hybrid figure of the cyborg blurs categorical distinctions such as human/machine, human/animal and nature/culture and moves beyond the dualisms which contribute to the domination of those marked as Other. Cyborgs can unsettle the existing order by creating new modes of 'resistance and recoupling' (Haraway, 1991: 154) which undermine the implicit hierarchies within these dualisms. This theoretical approach raises new ethical and epistemological questions; for example, how does the cyborg (often seen as posthuman) question what it means to be human?

I have briefly identified some of the key points about the cyborg figure described by Haraway in *A Cyborg Manifesto*. Whilst she engages with issues of difference such as gender, ethnicity and class, her discussion about disability is restricted to a passing comment that many disabled people are already cyborg.

Perhaps paraplegics and other severely handicapped people can (and sometimes do) have the most intense experiences of complex hybridization with other communication devices. (Haraway, 1991: 178)

This omission is particularly striking when one takes into account the fact that Haraway's father was disabled from childhood which meant

he used under-arm crutches to walk (Haraway, 2008). Whilst Haraway talks about the cyborg relationship her father had with his crutches and various wheelchairs, there is no discussion of *disability* per se; this seems odd given that it is likely she grew up with a father who would probably have experienced environmental barriers of some kind during his life as a crutch user before the disability rights movement started in the US in the 1970s.

Whilst there is potential value in exploring disability within the larger ‘bodies’ of cyberculture, the internet and telecommunications technologies, such as disability activists working together across the world via internet technology (Goodley, 2010), that has been set aside for another day. This chapter sets out to revisit the figure of the *individual* cyborg and to consider its relevance for disability studies in the 21<sup>st</sup> century.

### **The impaired body as contemporary cyborg**

For people with impairments, the hybridisation of machine/human or animal/human is often synonymous with lived experience, particularly for those with physical or sensory impairments (which will form the focus for this chapter). Potential cyborg figures can be seen in the wheelchair user, the person with a cochlear implant, artificial leg or pacemaker, someone who uses an assistance dog. In this section I want to look at the issues which are raised if the impaired body is viewed as a potential contemporary cyborg.

#### **Access to cyborg technology**

There have been various criticisms within disability studies about the cavalier use of impaired bodies within mainstream theorising about cyborgs. For example Mitchell and Snyder describe how *A Cyborg Manifesto* provides an example of how

disabled people exemplify, *in a footnote*, the self-evident cyborgs of modernity – transhuman subjects who rework the nature/culture divide. (Mitchell and Snyder, 1997: 28-29, my emphasis)

This footnoting is common; discussion of prosthetics and impaired bodies is often limited to consideration of how technology either restores functionality or normalises the person with little discussion of the cultural/social implications of prosthetics, or of the lived experience of body and prosthetic. Discussions of the connections between ‘cyborg’ and ‘disabled’ are rarely made (Campbell, 2009).

Mitchell and Snyder (1997) also point out the insensitivity that many social theorists and philosophers display when using impaired bodies and technology to illustrate cyborg thinking. It is all very well to fantasise about

the couplings of human and technology which have developed over time to include prosthetics, implants, artificial organs and technological aids - human trials will start by 2012 on a prosthetic arm which is directly controlled by micro arrays which have been implanted into the brain (Drummond, 2010). This is close to the stuff of science fiction. But at the same time, disabled people are amongst the poorest group in society and so access to adequate prosthetics or technology so that they can participate in society as an 'active citizen' is seriously curtailed (Mitchell and Snyder, 1997). Therefore improvements in technology do not always relate to improvements in the quality of life of disabled people because

[t]echnology is always already social – which in our culture means it is shaped and informed by market forces and the requirements of powerful vested interests. (Cromby and Standen, 1999)

This leads to hierarchies in 'who gets what prosthetic'; whilst an injured US soldier receives a high-tech prosthetic arm costing \$18000 (Page, 2007), a civilian who has lost a leg because of illness is assessed by US insurance companies based on what is necessary to get between the bed and toilet.

No other aspect of daily living other than using the bathroom is considered "necessary," which means your basic prosthetic given to most amputees - a stick with a rubber foot as a leg, or a stick with a hook on the end as an arm, has fundamentally not changed since WWII. (Mullins, 2009b)

This could be seen as reinforcing the existing hierarchies in culture about the relative worth of different impairments (Deal, 2003); thus acquiring an impairment through fighting for one's country is more worthy than that caused through illness. For a politics of cyborg bodies to be envisioned, then certain questions need to be asked, including:

Does everyone have the "right" to become any kind of cyborg body? Or are these "rights" economically determined? (González, 2000: 65)

People with impairments do not have automatic 'rights' to become the cyborg body they want because these 'rights' *are* economically determined and tied up with other factors such as hierarchies of impairment as well as gender, class and ethnicity. This is analogous to the stratification of women and people from ethnic minority groups into lower socio-economic groups in the world as a result of the development of new social relations of technology (Haraway, 1991).

As part of her critique of the poststructural disabled subject Erevelles (2001) argues strongly that there is danger in viewing disabled subjects as being able to

seek a pleasurable survival as a border-crosser in the ironic political myth of a cyborgean materiality. (Erevelles, 2001: 97)

Whilst many disabled people do have intimate relationships with technology, guide dogs and ventilators which are necessary to everyday survival, this playful transgressing of boundaries so favoured by Haraway and subsequent theorists neglects the materiality of *disablism*, in other words, the social practices and cultural beliefs that underpin the disadvantage and exclusion experienced by people with impairments (Thomas, 2007: 13). The ease with which cyborg politics offers a new language and possibilities for marginalised groups risks erasing the *actual* struggles that many disabled people face for economic survival, especially in the majority world. Here the extreme poverty in some countries is exacerbated by the high numbers of people who become amputees as a result of war and landmines (Yeo and Moore, 2003) - cyborg politics would appear to have little relevance to these disabled people struggling simply to survive.

### **Reality of living as a cyborg**

Another criticism which has been made by scholars in disability studies is that the cyborg imagined by Haraway fails to take account of the *reality* of living with a body which is hybridised with technology. As Siebers (2008) puts it so well:

Haraway's cyborgs are spunky, irreverent, and sexy; they accept with glee the ability to transgress old boundaries between machine and animal, male and female, and mind and body. ... [However] Haraway is so preoccupied with power and ability that she forgets what disability is. Prostheses always increase the cyborg's abilities; they are a source only of new powers, never of problems. The cyborg is always more than human – and never risks to be seen as subhuman. To put it simply, the cyborg is not disabled. (Siebers, 2008: 63)

Siebers describes how his plastic leg brace helps ease the pain in his lower back, but in summer it chafes his calf causing pain and soreness. Long-term wheelchair users can develop painful shoulder problems in later life and implanted devices such as nerve cord stimulators can have wires break and batteries that need replacing; these are examples of 'impairment effects' (Thomas, 2007: 136), restrictions of activity due to bodily variation and ways

of managing that difference, rather than from externally imposed disablism. In addition to these physical problems that prosthetics can cause, there are also potential psycho-emotional barriers. For example, whilst using a wheelchair can be enabling, allowing the user to move more freely in space, that person then becomes subject to the prejudices that exist in society about the perceived inabilities of wheelchair users (Cromby and Standen, 1999). This example of psycho-emotional disablism (Reeve, 2006; Reeve, 2008; Thomas, 2007) is a form of social oppression that undermines emotional well-being, self-esteem and ontological security, impacting on 'being' rather than 'doing' as seen in examples of structural disablism such as inaccessible buildings. This experience of psycho-emotional disablism may make someone decide to abandon their prosthetic because they don't want to be marked out as different and subject to stigma; this has implications for professionals such as physiotherapists who need to rework their notion of 'non-compliance' through the lens of psycho-emotional disablism.

Another form of psycho-emotional disablism can emerge when people feel 'forced' to use a prosthetic or assistive device because of the reactions of others. For example, there is social pressure on women to wear a prosthetic or have breast reconstruction surgery following breast cancer (Herndl, 2002); not only does this retain the cultural image of women as feminine but it also hides the unspeakable spectre of cancer from public view. People using prosthetic devices can be stared at by strangers which is another example of psycho-emotional disablism. Alongside questions about how someone lost their hand for example, there are also questions about how the mechanical hand works (Garland-Thomson, 2009). Some people choose to wear an 'aesthetic prosthetic' which has no function, but helps reduce this experience of psycho-emotional disablism.

It is not just impaired bodies that have been seen as potential cyborgs – increasingly the ageing body can also be seen as a cyborg if one considers the use of stents, pacemakers, artificial hips and so on, that are offered to shore up worn out joints and other body parts near their sell-by date. Ihde (2008) who self-identifies as a 'partial cyborg' has written an excellent paper describing how these prosthetics do not work as well as the original body part and so they are 'quasi-transparent'. Although implants such as replacement hip and knee joints are common operations in the UK at least, they have a limited lifespan in practice and so people delay surgery as long as possible, aiming for 'late life, rather than mid-life cyborg parts!' (Ihde, 2008: 400). Although prosthetics 'fall far short of the bionic technofantasies so often projected in popular culture' (Ihde, 2008: 403), adopting cyborg options is one common way of attempting to counteract the processes of ageing.

### **Surveillance, control and dependence**

Cyborg technology keeps pace with the times and I now want to turn my attention to other more subtle consequences that highly computerised

technological aids might have for their impaired users. Surveillance of disabled people is not new; the work of Foucault has been used to explain the workings of disciplinary power to exclude disabled people through systems of surveillance underpinned by medical definitions of (ab)normal bodies and minds (Tremain, 2005); see also the chapter in this book by Hodgkins and Blackmore. Cromby and Standen (1999) describe a 'caring house' which contains sensors, pressure pads and other devices which are linked to a central computer system, allowing for movement and activity in the building to be monitored and to call for assistance if the occupant appears to have fallen or become ill. Although this form of 'telecare' allows someone to live independently, the personal price paid is the loss of privacy because of the 24-hour surveillance by technology – 'care' has been morphed into surveillance. As countries seek to reduce the cost of their social care of disabled and older people, it is likely that telecare solutions will increasingly be offered instead of personal care solutions (Mort, Roberts and Milligan, 2009).

Wheelchairs are also becoming more technologically advanced with some incorporating 'remote presence' technology. If the user feels that they are about to have an epileptic seizure then they press a button and in

the best "Thunderbirds" tradition, the operator [at the remote base] then uses the joystick to drive the wheelchair and its occupant home again. (Cromby and Standen, 1999: 107)

Therefore this wheelchair reflects elements of both surveillance and total control because once the button has been pressed, the remote operator has complete control of the wheelchair's movements. Like the example of telecare, surveillance and safety are co-present overriding the right of the disabled user to have access to privacy and the acts of spontaneous intimacy which are available to other people. The disabled person is also dependent on the remote base (the 'carer') not to misuse this technology – surveillance and control at this level are only one step removed from the panopticon, an institution designed to allow the omnipresent gaze of authority on inmates who did not know when they were being watched (Foucault, 1977).

The final issue of dependency is multifaceted. Whilst we are all dependent on technology in the minority world for everyday life to function, for disabled people, moving towards *dependence on technology* can be one way of achieving *independence* to become an active citizen (Gray, 2002), for example, relying on increasingly technological wheelchairs and other assistive devices. Consequently a power failure is not simply inconvenient - it can be life threatening if one is dependent on artificial organs which work outside the body. In addition, software failures in implanted medical devices pose additional risks to life (Sandler, et al., 2010). Like other forms of technology, obsolescence and monopolies are other potential problems and the



more complex the assistive device is, the more likely one is to be tied into networks and institutions to support that device. Consequently, ‘people with disabilities [would] become hostages to the machines that help them.’ (Cromby and Standen, 1999: 108).

These issues of surveillance, control and dependency were well illustrated in a study of disabled teenagers who used AAC (Augmentative and Alternative Communication):

Thus, although the teenagers are enabled by their technology in some very positive ways, as was reflected by their verdicts that VOCAs [voice output communication aids] were ‘magic’, ‘fantastic’, ‘great’, and ‘help me say what I want’, they are also simultaneously very dependent on the technology and sometimes at the mercy either of it, or the people who manage it for them. (Wickendon, 2010: 240)

Thus technological assistance was a double-edged sword which left the teenagers ‘being technology enabled and technology dependent’ (Wickendon, 2010: 240).

### **Cyborgs in film and literature: The example of Lila Black**

I now want to briefly look at how cyborgs and disability have been represented in contemporary culture because this has an impact on how others – disabled and non-disabled people – view cyborg bodies.

[C]yborgs are everywhere and multiplying ... It’s not just Robocop, it is our grandmother with a pacemaker. Not just Geordi [in *Star Trek: The Next Generation*] but also our colleague with the myoelectric prosthetic arm. (Gray, Mentor and Figueroa-Sarriera, 1995: 2)

Therefore although disability is rarely discussed in cyborg literature, nonetheless the connections between disabled people and cultural icons are made when the word ‘cyborg’ is mentioned.

In *A Cyborg Manifesto* Haraway argues that writers are ‘theorists for cyborgs’ (Haraway, 1991: 173) because they offer accounts of what it means to be embodied in a highly technological society and hence to the politics associated with cyborg bodies. Haraway draws on the short story *The Ship Who Sang* by Anne McCaffrey which relates the story of Helva, a disabled child who is transformed into a space ship. Cheyne (2010) has analysed this story from a disability studies perspective and shows that although the most common interpretation of the story is that it represents a positive message about disability, this hides various disabling discourses. Unfortunately Haraway uses the literary connection with *The Ship Who Sang* to support

her suggestion that ‘severely handicapped’ people have the most intense experiences of hybridisation with technology and then adds that:

Gender, sexuality, embodiment, skill: all were reconstituted in the story. Why should our bodies end at the skin, or include at best other beings encapsulated by skin? (Haraway, 1991: 178)

As Cheyne wryly comments, ‘How could such a text be anything other than positive about disability?’ (Cheyne, 2010: 8). Whilst other cyborg theory and cyberculture writers have analysed *The Ship Who Sang* story, attention has been on the gender rather than disability issues in the story. So the one example of literature, which Haraway refers to which features disability, is used to support the contention that being transformed into a cyborg (if one is impaired) can only be ‘A Good Thing’ (Cheyne, 2010: 8).

Whilst there is an established body of work on the analysis of how disability representations in film such as the ‘evil cripple’ influence how disabled people are seen in society, it is in the genre of science fiction films that the search for perfect bodies and medical cure comes to fruition (Cheu, 2002). As medical technology and genetic engineering have developed, so have the futuristic ideas of a society where ‘disability’ is eradicated by the intervention of technology to cure and treat impairment. In films such as *Blade Runner* and *Gattaca* Cheu shows how disability is associated with the stigmatised identity of a ‘second-class citizen’ but in *The Matrix*, disability becomes a socially constructed concept. Meekosha (1999) has analysed the film *Alien Resurrection* and points out that identity and corporeality have a complex and troubled relationship. Classification systems have always existed in some form or another to mark out and separate the ‘insiders’ from the ‘outsiders’; this is exemplified in the scene where Ripley discovers her ‘failed’ clones in the laboratory. All of these human/alien hybrids embody common images of disability – “the deformed”, “the spastic”, “the disfigured”, “the limbless” (Meekosha, 1999: 26) – and cry out for Ripley to end their pain by killing them. Meekosha argues that by becoming Dr Death, Ripley is reproducing the ‘voluntary euthanasia’ scenarios which allow the ending of life on the basis of negative assumptions about the worth and value of disabled people’s lives. Consequently Meekosha doubts that cyborgs offer a vision of the future in which impaired bodies will have transcended ‘normalcy’ to become part of the variation of beings who are part of society.

In the same way that the disabled body is assumed to be asexual, cyborgs such as the Terminator or RoboCop who feature in the 1980s films *The Terminator* and *RoboCop* respectively, are portrayed as asexual, lacking human emotions and are represented as more machine than human (Cherney, 2001). Cherney contrasts this with David Cronenberg’s controversial film *Crash* which features a cyborg who is both disabled and sexy – Gabrielle who wears

a short skirt and fishnet stockings along with her leg calipers. In contrast to the ableist perception of disabled women as asexual and passive, Gabrielle is shown in the film as a beautiful woman who is erotic and highly desirable. Scars and prostheses in this film are seen as sexually desirable rather than stigmatising marks, thereby forcing 'ableist viewers to rethink their erotic gaze' (Cherney, 2001: 177). Although the film does risk fetishising the impaired body, Cherney argues that the need to challenge ableist assumptions about disability/sexuality through films such as *Crash* make the risk worthwhile.

The final example I want to introduce is that of the character Lila Black in the *Quantum Gravity* series written by Justina Robson (2006; 2007; 2008; 2009), who has a reputation for writing feminist science fiction that explores the blurred boundaries between human and technology, hybridity and subject formation (Mitchell, 2006). Throughout the stories, Lila battles with emotional insecurity and struggles to make sense of her rebuilt body – part human, part robot, part AI. Lila describes being careful sitting down so that the weight of her prosthetic legs do not break furniture. Initially at least, she dresses to hide her metal prosthetic parts so that she does not have to deal with the stares of other people. She also has to return to the Agency to restore her ammunition stocks and for ongoing medical treatment and maintenance; she has pain and discomfort.

But over time, she is aware that the interface where her flesh meets metal is changing into something new, slowly converting human flesh into machine; she worries about what will happen at the instant she moves past her 'final moment of existence as a human being' (Robson, 2008: 192). Lila tracks down her medical records for the cyborg procedure she underwent, as she tries to make sense of what was done to her body and the violence of this act is brought home sharply:

Where ordinary women would have their babies, she held a copy of a star [reactor power source] that could burn on long after any of her weak flesh body had gone. (Robson, 2008: 128)

In some ways Lila is like one of Haraway's cyborgs, 'spunky, irreverent, and sexy' (Siebers, 2008: 63), but she is also vulnerable and human. She does not reproduce the dominant discourses of femininity and queers heterosexuality somewhat by having two lovers - an elf and a demon. Thus compared to characters such as the *Bionic Woman* (Quinlan and Bates, 2009) Lila presents a more sophisticated representation of overlapping images of disability, gender and cyborg. Disability is occasionally present, impairment and impairment effects are part of her story. Therefore Lila presents a more realistic account of living as a cyborg, with all its inherent problems, which is closer to the lived experience of disability and impairment than is usual with science fiction cyborgs.

**iCrip: The impaired cyborg as disabled, non-disabled or something other?**

Earlier I suggested that impaired people with their intimate associations with technology both inside and outside the body in many ways are ‘already cyborg’. Add in the relationships between disabled people and a variety of (usually) canine ‘companion species’ who act as hearing, seeing and sensing support animals for their impaired owner and it is possible to see examples of blurred human/machine and human/animal boundaries. Whilst these relationships are not always as simple in practice – constrained by access to material resources and vulnerable to interruption caused by breakdown or chafing body parts – nonetheless they are still examples of cyborgs in everyday life. Now that I have discussed some of the cultural representations of cyborgs and the messages they give about disability, I want to consider what all this means for the categories of disabled/non-disabled, abnormal/normal and what, if anything, this can offer disability studies.

**Cure, ‘fix’ and the ‘twilight zone’: The experience of cochlear implants**

One of the obvious criticisms of cyborg theory and disability which I have not mentioned is that it risks reinforcing the individual model of disability because of the way in which

cyborg theory’s celebration of technological intervention and human/machine couplings perpetuates the ableist assumption that disabled bodies are broken and require “fixing”. (Kafer, 2009: 224)

This reinforces a rehabilitation discourse of medicine and although it might be possible to fix the impaired body, it is argued that this particular cyborg body will continue to be stigmatised and seen as ‘half a human being’ (Barnes and Mercer, 2003: 83). This has not been helped by Haraway’s silence about the relationship between disabled people and cyborgs (Campbell, 2009). The case of cochlear implants which were hailed as a ‘cure’ for deafness is one such example of ‘fixing impairment’ (for a more detailed discussion see chapter five in Campbell, 2009). The promotional literature for cochlear implants stressed how the device would enable the user to straddle both the hearing and Deaf communities. Instead, this has led to the creation of ‘hybrids, who are destined to exist in the ‘twilight zone’ of the hearing and Deaf worlds’ (Campbell, 2009: 95). Although people who have had the cochlear implant surgery can supposedly ‘return’ to the Deaf world by removing the external component of the device, in reality these people feel that they are only temporary visitors to the Deaf community. Additionally, the hearing outcomes vary for each person and will never return hearing

to 'normal'; cochlear implants do not provide 'bionic ears' with enhanced hearing abilities as implied by cultural science fiction narratives.

It seems to me that the arguments about whether or not (and how) impaired bodies should be modified by relationships with technology are analogous to those associated with the contentious issue of 'cure' (Shakespeare, 2006). Technology can never totally remove impairment but it can help reduce the effects of impairment. There is still an imperative for society to be challenged and changed to include disabled people as equal citizens at all levels – this is outside the remit of cyborg technology. Technology should never be forced on someone as a 'fix' and they need to be fully informed about the decisions they are making, especially when surgery is involved. Whilst the 'benefits' of cochlear implants are debateable, there is no doubt that other implants such as pacemakers and artificial hips go a long way towards *reducing impairments*; prosthetics, wheelchairs and other aids such as VOCA do not change the impairment but *reduce impairment effects* – in both cases they allow the individual to participate more fully in social life, especially given the reality that we still do not live in a fully accessible society (Cherney, 2001). However as I have noted previously the use of these technologies comes with their own problems and are not equally available to all.

#### **Unsettling of the 'normal'**

Therefore in disability studies there is a strong argument that viewing the impaired body as a contemporary cyborg reinforces the discourses of normal/abnormal because of the way technology (informed by medicine) tends to recreate the 'normal' body. But this assumption ignores the aspects of cyborg theory that should enable the 'rethinking [of] normal society, normal bodies, and normal relationships with technology' (Cherney, 2001: 169). How instead might the relationships of impaired people and technology unsettle the everyday understandings of 'normal'?

One good example of this unsettling of the 'normal' is seen in the two sprinters, Oscar Pistorius and Aimee Mullins, both of whom run with lower limb prosthetics made from carbon fibre. These 'Cheetah Legs' had been used for fifteen years by amputee sprinters, but it was only when Pistorius entered a track event in 2007 and came second in a field of non-disabled runners that he was 'deemed *too* abled' (Mullins, 2009d, emphasis in original). Athletics in particular has always been the domain of the physically perfect body. These cultural messages about the desirability and value of 'normal' bodies contrast with the denigration and devaluation of those bodies which are 'abnormal'. Therefore Pistorius with his request (and proven ability) to compete (and win) against non-disabled athletes is 'encroaching on hallowed ideological territory' (Swartz and Watermeyer, 2008: 189) because he is directly challenging the notion that success in mainstream athletics is only for those with perfect 'normal' bodies.

Moreover, programmable prosthetic legs are on the horizon and these will be able to be configured to emulate the thresholds that reflect flesh-and-bone legs. So whilst this might mean that the legs could be configured to a 'normal' setting defined by an Olympic standard to allow the user to race alongside other non-disabled athletes, there will be no such rules in the Paralympics.

In an ironic, amazing cultural flip, you will see runners in the Paralympics going faster than those in the Olympics. Now won't *that* be an interesting comment on "dis"ability? (Mullins, 2009d, emphasis in original)

So Pistorius and his Cheetah Legs are directly challenging the boundary between disabled and non-disabled bodies and his request to participate in the Olympics reveals a *cyborg anxiety* at not only the level of top athletics, but more fundamentally, the implications this could have for body culture and notions of 'othering' (Swartz and Watermeyer, 2008).

### **Embodiment and technology**

Within disability studies, there has been a growing interest in the role of the body and impairment in understanding the experience of disablism; some of the other chapters in this book reflect this trend. What happens to the 'body' when prosthetic devices, assistance aids and the like enter the equation? For someone with a visual impairment, a long white cane can enable them to negotiate the built environment – the cane is not simply an object but becomes an additional tactile organ, providing feedback on objects and surfaces at ground level (Iwakuma, 2002). Similarly wheelchair users describe how the chair becomes a 'part of them' (Winance, 2006).

She also objects strongly if anyone leans on her chair, as if they are leaning on her body without permission. (Marie described in Wickendon, 2010: 236)

A phenomenologically trained academic who also uses a hi-tech prosthesis commented:

Indeed, in learning to use the prosthesis, I found that *looking objectively* at my leg in the mirror as an exteriorized thing - a piece of technology - to be thought about and manipulated did not help me to improve my balance and gait so much as did *subjectively feeling* through all of my body the weight and rhythm of the leg in a gestalt of intentional motor activity. (Sobchack, 2004 cited in Ihde, 2008: 399, emphasis in original)

In these cyborg examples, the Cartesian dualisms of body and mind start to become unstable; Campbell (2009) suggests that technology is

characterological ... in its unification and transmogrification of the corporeal and psychic life of the person with disability (Campbell, 2009: 54).

Therefore living with technology impacts on the lived experience of disabled people at the level of both body and mind, irrespective of whether the technology is outside or inside the body (Ihde, 2008). Becoming cyborg in this manner can also alter the body - 'I am now part chair, with some capabilities that exceed my original specifications' (Hockenberry, 2001: 105). Whilst it is possible for the prosthesis, cane or wheelchair to become part of the embodied experience of the world, this fusion is nonetheless contingent because technology can fail thereby revealing the illusion of this melding. In the same way that corporeal bodies are only brought into the foreground of our attention when injury or illness occurs, then the electric wheelchair, VOCA technology or hi-tech prosthetic leg can be taken for granted until it breaks or becomes unreliable. This is very close to other phenomenological accounts of the body (such as Iwakuma, 2002) and the 'dys-appearing' body (Paterson and Hughes, 1999).

### **iCrip: New ways of being?**

I now want to end by seeing the potential that technology has for destabilizing the categories of 'disabled' and 'non-disabled'. As I have shown in the sections above, the impaired cyborg is not always seen as disabled – it depends on the kind of prosthetic or implant – which in turn is informed by cultural images, visibility, economics and how common and readily available the technology is for people with impairments. For example, someone who has an artificial knee joint fitted is much less likely to see themselves as disabled (or be seen by others as disabled) than someone who uses VOCA to communicate with others. Having a pacemaker fitted is almost a 'normal' aspect of ageing like needing reading glasses – it is not a marker of disability. Compare this to the example of this competent wheelchair user, who despite being able to 'coast flat out and slalom effortlessly around pedestrians' (Hockenberry, 2001: 103), continues to have a fixed ontological status as disabled. Thus the prosthetic is endowed with cultural and social meanings which in turn impact on identity and subjectivity.

The cultural images of cyborgs discussed earlier can be used to advantage by those who use prosthetics. Aimee Mullins, mentioned earlier, is an actress and fashion model, as well as an athlete; as someone who travels widely, she has learnt to travel wearing her carbon fibre 'RoboCop' legs rather than her cosmetic looking legs (Mullins, 2009b). When the metal detectors at the airport go off, lifting trouser legs to reveal these obvious prosthetics leads to less explaining

(and potential misunderstanding) than if she appeared to have ‘normal’ legs – the word ‘prosthetic’ is unlikely to appear in your average tourist dictionary. She also described how when wearing her RoboCop legs, she finds that children, rather than being fearful or staring, are ‘drawn like a magnet to them, accompanied by a list of very astute questions’ (Mullins, 2009c). In her opinion, it is the exposure to cultural images such as RoboCop which ‘familiarises’ the unfamiliar and results in engagement rather than avoidance by others.

So I do not agree that it is *inevitable* that the impaired cyborg will be stigmatized and seen as ‘half a human being’ (Barnes and Mercer, 2003: 83). As technology improves and becomes available to more people, then new possibilities can emerge.

A prosthetic limb doesn't represent the need to replace loss anymore. It can stand as a symbol that the wearer has the power to create whatever it is that they want to create in that space. So people that society once considered to be disabled can now become the architects of their own identities and indeed continue to change those identities by designing their bodies from a place of empowerment. (Mullins, 2009a)

Whilst acknowledging the very privileged situation Mullins is in with respect to access to prosthetics, nonetheless her point about people being able to redesign their bodies and challenge who is seen as ‘disabled’ is empowering and a good example of what I will term *iCrip*. The use of the prefix ‘i’ is to allow the reclaimed Crip word (McRuer, 2006) to be conjoined with technology, to represent the 21<sup>st</sup> century impaired cyborg (inspired by the name of the ‘iLimb’ prosthetic (Page, 2007)).

According to Haraway, cyborg identity is established on transgressing boundaries, in particular the discourses of otherness which result in binaries which maintain the illusion of the invulnerable autonomous subject. If the cyborg is ‘never an either-or but always both’ (Gane, 2006: 153), *iCrip* represents new ways of being which are (non)disabled and (ab)normal. So for example, the ways in which impaired people incorporate their wheelchairs, prosthetics and canes into their corporeal and psychic sense of self produces new ways of being which are both (non)disabled and (ab)normal, which are *iCrip*. But *iCrip* is not always a productive outcome if one considers the ‘twilight world’ between the Deaf and hearing worlds inhabited by some people with cochlear implants discussed earlier. In addition, *iCrip* is subject to the problems associated with living as a human-machine hybrid discussed previously in this chapter, such as surveillance, stratification and hierarchies, control and dependence.

I have tried to show how *iCrip* changes as technology becomes more freely available, better fitting (in other words, fits the purpose better both physically and psychologically) and grows to be more culturally acceptable.



Rather than seeing technology as ‘fixing’ impaired people in normative ways (and therefore to be rejected), it is more productive to see the new ways of being in the world that emerge from living as cyborg. Haraway’s cyborg has the potential to

open up productive ways of thinking about subjectivity, gender [or disability] and the materiality of a physical body. (Balsamo, 2000: 157)

When considering the ways in which the impaired body meshes with technology to become a cyborg it is possible to see the ambiguity which results from what is then (ab)normal or (dis)abled as reflected in the case of Oscar Pistorius as well as new embodied ways of being in the world.

Finally, what does this mean for identity politics? In the UK, from where I am writing, the disabled people’s movement has achieved a great deal for disabled people, such as anti-discrimination legislation with more disabled people in mainstream society than forty years ago. However, like other social movements, it is not representative of all disabled people in society; often people with chronic illnesses see themselves as ‘ill’ not disabled, and older people see their difficulties associated with their age rather than because of disabling barriers (Grewal, et al., 2002). In many ways disabled people represent another diverse group, like women, who might have more cohesion if they came together as a group based on political kinship and affinity, rather than any imagined ‘disability identity’ (Kafer, 2009). Therefore it might be possible to rethink the category of ‘disabled people’ as a ‘cyborg identity, a potent subjectivity synthesized from fusions of outside identities’ (Haraway, 1991: 174), which could better include those ‘disabled people’ who are currently absent such as older people and those with chronic illness. Similarly, it would be useful to consider what organisations of *iCrip* could achieve politically, culturally and socially through their ability to produce new ways of being which are not necessarily ‘disabled’.

### **Conclusions**

Although Haraway’s cyborg theory has rarely engaged with disability, other than as a metaphor or footnote (McRuer, 2006), in this chapter I have tried to use it literally, to look at the reality which many people with impairments experience when living with a variety of prosthetics, implants, artificial organs and technological aids. I have described some of the issues which are raised by the experience of living in an intimate relationship with technology and how this is never straightforward for most disabled people. The experience of living as a contemporary cyborg, a fusion of human and machine raises many issues which tend not to feature in accounts of cyborg theory outside disability studies: the unequal distribution of technology to

those who could use it, the compromises people make to live with it such as pain as well as vulnerability to surveillance, control and dependency. At this point I would be inclined to agree with Kirkup (2000) who commented that the value of the 'gendered cyborg' was limited:

Its usefulness for cultural deconstruction of gender has become apparent, but its usefulness as a tool for material change is yet to be proved. (Kirkup, 2000: 5)

I agree with other disability studies writers, that in the case of disability, cyborg theory is unlikely to prove a way forward for reducing the material poverty and exclusion experienced by disabled people.

However I do not agree that this therefore renders cyborg theory irrelevant to disability studies, to be dismissed as 'extravagant flights of academic fancy' (Barnes and Mercer, 2003: 83). Some academics suggest that the cyborgization of impaired bodies is simply the individual model in disguise – after all it is the individual that is being 'fixed' to adapt to the environment through the application of artificial limbs. But not all cyborg adaptations are seen in this way – for example, artificial organs which keep someone alive on the transplant list, or stents and artificial hips. Rather than 'throw the baby out with the bathwater', I have used cyborg theory to look at embodiment and to illustrate the way in which impaired cyborgs, are potentially able to unsettle the binary divisions between normal/abnormal, non-disabled/disabled as exemplified by *iCrip*. Living with technology as many disabled people do, potentially offers new ways of being and can directly challenge what is 'normal', particularly when the prosthetic or assistance device supplied 'does the job well' both physically and psychologically. So whilst the cyborg world has its risks of ignoring the material realities of disablism, it could also offer hope for the future:

In place of the security of a rigid categorisation that has bred intolerance, persecution and the putative mastery of strange and unfamiliar others, there is the opportunity of positive transformation in our ontological and epistemological models. (Shildrick, 2002: 128)

Cyborg theorists may have neglected disability; but disability studies can use cyborg theory to look at embodiment and subjectivity in new and productive ways, as suggested through the figure of *iCrip*.

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