

MARKUS SPÖHRER*

THE COCHLEAR IMPLANT BETWEEN RESTORING AND TRANSCENDING HUMANNESS: THE CASES OF MICHAEL CHOROST AND ENNO PARK

Abstract

This paper deals with a neuro-prosthesis that has been the subject of various controversies since it was developed in the 1950s and successfully applied and commercialized in the 1980s: the Cochlear Implant (CI). While praised as a medical 'wonder' by a range of medical experts, the CI is regarded critically by some Deaf activists, as the practices involved in cochlear implantation construct deafness as a 'disability' and degrade sign language to a mere 'prosthetic language' instead of acknowledging deaf people as an individual cultural and ethnic group and sign language as their genuine form of communication. In this context, the CI's rehumanizing and dehumanizing effects have frequently been discussed: from a medical perspective, being 'deaf' is an 'abnormal', 'inhuman' state that needs to be cured. Here, the CI is functionalized as an enhancement, enabling 'rehumanization' of the formerly 'disabled' individuals. However, the Deaf opposition argues that they do not consider themselves 'deficient' or 'abnormal' in any way and that the CI is a 'dehumanizing' instrument of power by which deaf people are 'normalized' and assimilated into a majority of hearing people. These controversies aside, self-proclaimed cyborgs like philosopher Michael Chorost and software programmer Enno Park consider socio-technological symbiosis with the CI as a possibility to transcend the physical and perceptive borders of the human body and to question and revise (humanist) concepts of what it means to be 'human'. This paper considers those three perspectives, thus focusing on a cultural phenomenon that has rarely been addressed within CI research. Indeed, an effort will be made to analyze how popular film and media discourses on post- and transhumanism and the motif of the 'cyborg' are appropriated, reworked, negotiated and associated with the CI as a means of subjectivization. The paper will also consider how these discourses are mobilized in order to construct the CI as both a rehumanizing and a dehumanizing instrument or a means of transcending humanness.

Keywords

Cochlear implant; cyborgs; prosthesis; enhancement; deafness; popular film and media; Enno Park; Michael Chorost; transhumanism; science fiction.

1. INTRODUCTION

The history of science and medicine is full of examples of technologies and innovations which are outright accepted and celebrated as crucial for the improvement of health, rehabilitation, social life, and the advancement of humanity in general. In contrast to this, technologies in the field of 'human enhancement', though often intended as means of medical improvements or therapy, tend to be subject to controversy:

* Department of Media Studies, University of Konstanz, Germany – markus.spoehrer-uni-konstanz.de.

Besides euphoric affirmations of technological or medical novelties and progress as represented by the philosophies of modern science, ethical concerns are uttered and warnings are issued concerning health risks, social impoverishment, biopolitical concerns, threats to concepts of humanity or even the eradication of the human species¹. Within the field of recent medical technologies the cochlear implant (CI), a hearing prosthesis, can be considered a crucial example of how a biomedical object can shape and reshape discussions and discourses about therapy and enhancement as well as concepts of humanness.

Designed as a prosthesis, which is capable of restoring hearing in deaf or hard of hearing patients, the CI has been subject to a range of controversies: On the one hand, medical experts praised the CI as a technological ‘miracle’, which ‘cures’ ‘disabled’ people and thus (re)enables communication and participation in everyday social life. From this point of view being deaf is an ‘inhumane’, ‘abnormal’ or ‘imperfect’ state of being, which demands for technological enhancement. On the other hand, certain members of Deaf communities, dismissed the assumption that deafness is a ‘disability’ which needs technological cure. According to the ‘Deaf perspective’, deafness is not only a specific ethnicity or a way of life, but also in no way a ‘communicationless’ or even ‘inhumane’ state of being. Rather, enforcing the implantation of this technical device on perfectly functioning (and by all means: ‘normal’) deaf persons lead to the criticism that the CI is a ‘dehumanizing’ instrument of power by which Deaf people are ‘normalized’ and assimilated to a majority of hearing people.

Apart from the controversies surrounding the rehumanizing, enhancing effect and the dehumanizing agenda of hearing collectives, the self-declared cyborgs Michael Chorost (2007) and Enno Park (2014) consider the socio-technological symbiosis with the CI as a possibility to transcend the physical and perceptive borders of the human body and also to question and revise (humanist) concepts of what it means to be ‘human’.

The paper will focus on the discourses on ‘being human’ in relation to the CI. Therefore, the first paragraph is designed as an introduction to the CI controversy: I will firstly consider the discourse of the CI as a technological ‘blessing’ that, by fixing deafness, enables (re-)humanization and participation of presumably ‘disabled’ people. Secondly, in the first paragraph I will focus on a collective construction of the CI as an instrument of power, forcing stigmatized Deaf people into a dehumanizing ‘hearing normality’. In the second part, which functions as the main part of this essay, the implant is framed as a device to put into practice post- and transhumanist utopias of the before mentioned ‘cyborgs’. The two examples of Park and Chorost are taken into account to analyze how the discourses on (de-)humanization are mobilized, appropriated and (medially) reworked in distinctively different ways in order to form what can be called a ‘cyborg perspective’ on the CI. In this respect a special emphasis is placed on media discourses and the hybridizations with the CI discourse. Thus, I will neither focus on techno-historical developments of the CI² nor conduct a critical analysis of power relations such as suggested by disability studies³. Also I will not apply concepts from Sci-

¹ For an overview on the debate on enhancement and disability see M. Eilers, K. Grüber, C. Rehmann-Sutter (eds.), *The Human Enhancement Debate and Disability: New Bodies for a Better Life*, New York: Palgrave Macmillan, 2014.

² See for example: M. Eisen: “History of the Cochlear Implant“, in *Cochlear Implants*, edited by S. Waltzman, T. Roland, New York: Thieme, 2006, 1-10.

³ Although, as will be shown, arguments from such work will be taken into account in the following paragraphs as well in order to support my analysis.

ence and Technology Studies (STS) on disability, enhancement and cyborgs⁴. Rather the aim of this paper is to focus on a cultural phenomenon, which has rarely been addressed within CI research: I will focus on how popular film and media discourses on post- and transhumanism and the motif of the ‘cyborg’ are appropriated, reworked, negotiated and associated with the CI as a means of subjectivisation and constructing identity.

2. THE CI BETWEEN REHUMANIZATION AND DEHUMANIZATION

The CI is an electronic acoustic prosthesis which was developed in the 1950s in order to restore hearing in deaf and hard of hearing people, whose inner ear hair cells are dysfunctional but with the cochlear nerve still intact⁵. The CI, which is inserted into the cochlea in the course of a complex operation, is designed to replace these hair cells by stimulating the cochlear nerve via specific electrodes. It consists of two components: an external component with a microphone and a processor worn behind the ear. Sound which enters the external component is processed and translated into data and transmitted to a second, subcutaneous component consisting of a receiver sending information to the electrodes, which then stimulate the nerve.

From a medical perspective, the CI, by restoring or enabling the ability to hear, is a rehumanizing technology. This is based on the construction of deafness as an illness, a disability, a state which deviates from the ‘natural’ and biological condition of the human body and which consequently results in the inability to communicate, social exclusion and psychological problems. Such a construction derives from considering oral spoken language the central means of human communication or even the factor that grants ‘humanness’ to a person. Thus by enabling the ability to hear and communicate, according to medical experts and from the perspective of ‘normal’ hearing communities, the CI “can enhance the humanness of the individual by enabling a greater level of participation in the world”⁶. In contrast, being deaf logically denies “being human”⁷. This logic can be demonstrated by a syllogism that was formulated by Brenda Jo Brueggemann: “Speech is language; language is human; therefore, deaf people are inhuman and deafness is a problem”⁸. As philosopher Robert Sparrow puts it, taking into consideration the supposed misery that is connected to being deaf, “[i]t comes as a great surprise to most people in the hearing community to learn that a sizeable and influential section of the deaf community has reacted with hostility and

⁴ See for example: K. Besmer: “Embodying a Translation Technology: The Cochlear Implant and Cyborg Intentionality”, *Techné: Research in Philosophy and Technology*, 16, 3 (2012): 296-316; L. Mauldin: “Precarious Plasticity: Neuropolitics, Cochlear Implants, and the Redefinition of Deafness”, *Science, Technology & Human Values*, 39, 1 (2014): 130-153. Also see my work on Actor-Network Theory and the cochlear implant: M. Spöhrer: “The (Re)Socialization of Technical Objects in Patient Networks: The Case of the Cochlear Implant”, *International Journal of Actor-Network Theory and Technological Innovation*, 5, 3 (2013): 25-36.

⁵ Also consider Mauldin’s account on the ‘neuropolitical’ “shift in the definition of deafness from a sensory loss to a neurological processing problem” and the resulting transformational effects on caregiving. Mauldin, “Precarious Plasticity”: 130.

⁶ S. Naufel, “Nanotechnology, the Brain, and Personal Identity”, in *Nanotechnology, the Brain, and the Future*, edited by S.A. Hays et al., Heidelberg-New York-London: Springer, 2012, 167-178 (177).

⁷ G. Goggin, C. Newell, “Reclaiming Civility: Disability, Diversity, and Human Rights”, in *Activating Human Rights*, edited by E. Porter, B. Offord, Bern: Peter Lang, 2006: 219-238 (226).

⁸ B.-J. Brueggemann, *Lend Me Your Ear: Rhetorical Constructions of Deafness*, Washington DC: Gallaudet University Press, 1999, 11.

dismay to the development of this technology”⁹. These Deaf communities do not only dismiss hearing and oral speech as the ‘natural’ and ‘normal’ conditions of human communication, but also act on the assumption that deafness as a disability needs to be understood as mere medical construction. Instead deafness should be considered a specific ethnicity, a lifestyle, a linguistic community using sign language as a means of ‘barrier free’ communication, which is equivalent to oral communication¹⁰. In this respect a large number of members of Deaf communities do not necessarily suffer from social exclusion, isolation and depression resulting from the incapability of participating in social activities as declared by some health professionals – in fact this applies to people who lost their hearing during their adult life and not to people ‘born into’ perfectly autonomous Deaf communities¹¹.

The complex and sometimes dangerous implantation as well as the operose adaptation process, meetings with audiologists and frequent software updates are generally a matter of choice. However, when discussions about the implantation by law arose in order to prevent children from living a life of disability, ethical protests followed. And as medical experts advise to implant the CI as early as possible – at best in the first months of the life of a child – in order to grant the development of ‘normal hearing’ and ‘normal’ oral communication and the perfect adjustment of the brain to the sensory stimulation, Deaf communities criticized that this would lead to a “sociocultural genocide”¹² and the eradication of sign language. Forcing implantation was considered a way of using the CI as an instrument of power by which deaf people are ‘normalized’ and assimilated to a majority of hearing people: “The surgery forces the child away from a ‘natural’ means of communication (i.e. ASL) into an artificial hearing status that will still not guarantee full acceptance by the hearing community”¹³. Another central argument about forced implantation and the CI in general brought forward by Deaf communities is that it does not only destroy perfectly functioning people by excluding them from their signing culture in which they are considered normal, but that adding a typifying technical device to the back of their head additionally marks them as ‘the Other’ – never accepted as ‘normal’ by the hearing nor by the non-hearing communities. Thus implantation could even be considered making the implantees “less human”¹⁴ and the CI a tool of assimilation that eradicates human traits in individual subjects. Furthermore, a point frequently made in relation to dehumanization via CI was that forcing signing people into oral communities is a limitation of freedom, which is a basic human right and condition of the development of a personal human identity¹⁵.

As can be documented by blogs, statements by members of Deaf communities and

⁹ R. Sparrow, “Defending Deaf Culture: The Case of Cochlear Implants”, *The Journal of Political Philosophy*, 13, 2 (2005): 135-152 (135).

¹⁰ Cf. M. Spöhrer, “Bilder der gelungenen Kommunikation: Das Cochlea-Implantat in sozialen und medizinischen Denkkollektiven”, *Das ZEICHEN*, 95 (2013): 382-389.

¹¹ Cf. M. Hermann-Röttgen, *Cochlea-Implantat: Ein Ratgeber für Betroffene und Therapeuten*, Stuttgart: Trias, 2010, 18.

¹² J.A. Niparko, “The Cultural Implications of Cochlear Implantation”, in *Cochlear Implants: Principles and Practices*, edited by J.A. Niparko, Philadelphia: Lippincott Williams & Wilkins, 2002, 335-342 (338).

¹³ J.B. Christiansen, I.W. Leigh, *Cochlear Implants in Children: Ethics and Choices*, Washington DC: Gallaudet University Press, 2002, 300.

¹⁴ S. Garner, “Image-Bearing Cyborgs”, *Theology and the Body: Reflections on Being Flesh and Blood*, 14, 2 (2011): 33-54 (38).

¹⁵ J.A. Winter, “The Development of the Disability Rights Movement as a Social Problem Solver”, *Disability Studies Quarterly*, 23, 1 (2003): 33-61. Accessed June 30, 2015, <http://dsq-sds.org/article/view/399/545>.

examples of academic research from the field of disability studies, such arguments are frequently made with reference to popular images and notions of the ‘villainish cyborg’ as represented especially in Hollywood cinema. In most cases the CI technology and implantation is compared to the *Star Trek: Next Generation* (1987-1994) franchise’s *Borgs*. In analogy to the Deaf people, who are deprived of their autonomy and freedom by being implanted with a CI, the main character of the franchise, Jean-Luc Picard, “loses his personal identity, autonomy, and freedom, that is his selfhood, and therefore his humanity, as the result of invasive technology”¹⁶.

As will be shown in the following paragraph, the discourses on ‘humanness’ in relation to the CI as well as the corresponding popular medial realizations of the ‘cyborg’ are mobilized, appropriated and reworked in different ways by Michael Chorost and Enno Park.

3. BEING REBUILT AND BECOMING REHUMANIZED: ‘CYBORG’ MICHAEL CHOROST

In his autobiographical account – *Rebuilt: How Becoming Part Machine Made me More Human*¹⁷ –, the formerly hard-of-hearing philosopher Michael Chorost, who lost his hearing in his adult life when his remaining hair cells stopped functioning¹⁸, tells the story of how he got implanted with a CI and linked and adjusted to the technical device. As the title suggests, Chorost takes an affirmative approach to the cochlear implantation and to ‘cyborgization’ in general. However, in the course of narrating his story of transformation, he thoroughly constructs a differentiated discourse on the possibilities and the dystopian visions of the CI as far as gaining or losing ‘humanness’ is concerned.

Chorost, who had been hard of hearing since he was born and has worn a hearing aid since childhood, has always considered himself partly an outsider, not necessarily completely isolated, but at least partly excluded from most social activities, since he was not able to hear ‘right’ and communicate successfully with hearing people. Interestingly enough, Chorost narrates his adolescence condition as follows: “I had always been *sort of*: sort of hearing, sort of socially aware, and as one dating prospect ambiguously said to me, sort of adorable. I felt, as a result, sort of human”¹⁹. While he seems to be able to cope with his partly dysfunctional ear – even though there are traits of psychological harm resulting from this condition –, the full hearing loss in his 30s evokes the discourse of deafness as a profound disability, a state in which one is completely isolated from both social life and ‘the world’. In the first chapter of the book, unambiguously titled “broken”, Chorost narrates the situation in which he loses his ability to hear as a helpless and panic-fueled event of getting instantly ‘removed’ from reality, as a feeling of dissolving: “Hearing constitutes your sense of being *of* the world, in the thick of it. To see is to observe, but to hear is to be enveloped. People who go completely deaf often report feeling dead, invisible, unsubstantial. They feel that it is *they* who have become unreal, not the world”²⁰.

¹⁶ J. Thweatt-Bates, “Posthuman Selves: Bodies, Cognitive Processes, and Technologies”, in *Search of Self: Interdisciplinary Perspectives on Personhood*, edited by J.W. van Huyssteen, E.P. Wiebe, Cambridge: Wm. B. Erdmann’s, 2011: 243-255 (245).

¹⁷ M. Chorost, *Rebuilt: How Becoming Part Machine Made Me More Human*, London: Souvenir Press, 2005.

¹⁸ *Ibid.*

¹⁹ *Ibid.*, 17.

²⁰ *Ibid.*, 9.

Chorost, a self-proclaimed science fiction aficionado, thus bases his narrative on deafness as being ‘broken’, degraded, a not fully functional human being, a deficit state, “a wreck”²¹. To use a metaphor by Chorost: he considers himself a “crippled spacecraft”²² with “its main antenna failed to open en route to Jupiter”²³. Interestingly he uses the metaphor of the spaceship here, a machine, which is usually considered inhuman (and in fact throughout the book, Chorost does never really attribute ‘humanness’ to machines and technical devices). As a consequence, being implanted is considered both a welcome physical and social enhancement, a rebuilding of a broken, but “potently reconstructible”²⁴ shell. Chorost’s narrative thus follows a simple logic of the (common and popular) enhancement discourse: “enhancement is the gain of function, disability is the loss of function”²⁵: “It is as if the universe is whispering into my now deaf ear, ‘Now. Now is your chance. You have been torn down in body and soul. Go through the change and come out new. *Rebuild*”²⁶. The implantation, although described as a very painful and sometimes frustrating process of adaption and (re)calibrating, is thus a means of ‘rehumanization’, a “project of rebuilding himself”²⁷. His autobiography is not only a “straightforward narrative about his transformation from deafness to cochlear implant hearing”, but “also a narrative act that reconstructs his human non-cyborg life from birth, to his authoritative ‘cyborg’ present and community-seeking future”²⁸. Although referring to a variety of classic works of science fiction literature and film in which ‘cyborgs’ and androids are depicted as inhuman and even as villains – *Robocop* (Paul Verhoeven, 1987), the ‘Borg’ of *Star Trek* (CBS, 1987-1994), H.A.L. 9000 in *2001: A Space Odyssey* (Stanley Kubrick, 1968), Steve Austin in *Cyborg* (Martin Caidin, 1972), the artificial intelligence discourse in *Dune* (Frank Herbert, 1965) –, Chorost does not appropriate the discourses of the cyborg technology as a dehumanizing and assimilating bio-political tool²⁹. Instead of agreeing with this dominant strand of discourse on CI cyborg technology, which refers to the pessimistic and dehumanized images produced by mainstream media culture, he embraces those attributes of the cyborg which truly have an enhancing effect on social and communication abilities. He favours this conception over the discourse of cyborgization, in which human traits are eradicated in order to become physically superior: “Hollywood’s depiction of the cyborg seemed like a cheat, a poor bargain: to become more than human, you also had to become less than human. You had to give up your soul to the machine”³⁰. Chorost dismisses the image of the cyborg as an entity that either loses their human attributes in the course of implanting technological parts into their body or becoming inhuman villains, impassible, lacking any kind of humanness. CI technology is rather a physical, social and psychological enhancement in terms of coping with the ‘human struggles’ resulting from his deaf,

²¹ *Ibid.*, 13.

²² *Ibid.*, 45.

²³ *Ibid.*, 44.

²⁴ *Ibid.*, 13.

²⁵ Eilers, Grüber, Rehmann-Sutter, *The Human Enhancement Debate and Disability*, 2.

²⁶ Chorost, *Rebuilt*, 13-14.

²⁷ *Ibid.*, 20.

²⁸ K. Thayer, “Beyond Cyborg Metaphography in Michael Chorost’s *Rebuilt to World Wide Mind*: Introducing ‘Morphos’ as a Rhetorical Concept in Cyborgography”, *Teknokultura: Revista de Cultura Digital y Movimientos Sociales*, 10, 2 (2013): 415-449 (419).

²⁹ However, this does not mean that Chorost is not aware of both the corporate and the biopolitical implications of being implanted with cyborg technology and having a technical device controlling one of his most important senses, as his discussion of the ‘Borg’ of the *Star Trek* franchise shows. Cf. Chorost, *Rebuilt*, 9-10.

³⁰ *Ibid.*, 20.

disabled and isolated state of being. To be ‘assimilated’ – a term frequently used by Star Trek’s Borg, an evil cyborg race –, to be a member of the collective and not to be marked as the ‘other’ is in fact the desired state of being for Chorost. This of course does not mean that there are no problems at all with the implant and the implantation, also it does not imply that he is capable of hearing perfectly and being instantly adapted. Becoming a cyborg is a sometimes painful and unnerving process of accepting the “alien”³¹ implant inside one’s body and adapting to it, a lifelong process of reciprocal tuning of implant, implantee and the social environment. However, during his “story of transformation”³², the narrative and rhetoric of becoming ‘new’, Chorost does not become “more than human” in a post-humanist sense – he does not envision himself to become an in-human superior god-like hybrid steered by superhuman technology³³: “I’m becoming something else: not *inhuman*, not *post-human*, but differently human”³⁴. Moreover, Chorost does not strive for being ‘different at all cost’, but rather for being as close to collective images and understandings of ‘normality’ as possible and for fulfilment of his own quest for being ‘better’ in a truly personal, individual, and subjective sense³⁵. His personal use and adjustment to the CI makes it possible “[t]o reject the worthless bargain offered by Hollywood, and negotiate a better one. To become a cyborg. In real life. On my own terms, in my own way”³⁶. According to Chorost, in “acquiring the body of my teenage dreams, I would have the chance to become the adult I wanted to be. To cast off, my long *agon* with the machine, the longstanding frustrations left over from an unfinished adolescence”³⁷. In addition to this, the CI experience and being capable of experiencing ‘different ways of hearing’³⁸ (e.g. through different software adjustments) made Chorost aware of his own senses and their role in the perception, construction of and the immersion into ‘the world’. Chorost’s understanding of being ‘more than human’ is thus, again, based on his deficit state of being isolated resulting from his lack of hearing. His upgrading cyborgization and ‘rehumanization’ needs to be understood as a kind of ‘expansion of consciousness’:

My bionic hearing made me neither omniscient nor dehumanized: it made me more human, because I was constantly aware that my perception of the universe was provisional, the result of human decisions that would be revised by time and again. Unlike Robocop or the Borg I was not disconnected from the world, remote and uncaring in the bioelectric shell of my skin. The very provisionality of my perception reminded me that my political perspective was provisional also, and that it was my task as a human being to strive to connect ever more complexly and deeply with people and places of my life³⁹.

³¹ Cf. *ibid.*, 47. Chorost’s use of the word ‘alien’ or the concept of an ‘alien’ entity or object infiltrating one’s own body, can certainly be related to popular film discourses as well. A prominent example is the film quadrilogy based on *Alien* (USA, Ridley Scott, 1979,) a film whose narrative revolves around a predated alien life-form that implants their offspring into their human prey.

³² Cf. *ibid.*, 20.

³³ Chorost’s remarks in this regard also refer to a whole range of topoi and discourses of science fiction literature and film. A recent example for such a fictional transformation from human to a superhuman or god-like cyborg is power-hungry Will Caster’s (played by Johnny Depp) fusion with a super-intelligent computer in *Transcendence* (USA, Wally Pfister, 2014).

³⁴ *Ibid.*, 33.

³⁵ Cf. Thayer, “Beyond Cyborg Metapathography in Michael Chorost’s *Rebuilt to World Wide Mind*”, 423.

³⁶ Chorost, *Rebuilt*, 22.

³⁷ *Ibid.*

³⁸ Cf. Besmer, “Embodying a Translation Technology”, 297.

³⁹ Chorost, *Rebuilt*, 157.

4. THE TECHNO-ORGANIC INTERFACE: ENNO PARK AND THE TRANSHUMAN PERSPECTIVE

As could be shown in the last paragraph, there are constructions of CI cyborgs, which heavily rely on the disability discourse. In these cases the CI is a hearing prosthesis, an enhancement for a ‘disabled’, ‘dysfunctional’ body (even if there are examples of implantees who wear the CI as a trendy accessory and attribute a certain *nerdish* and self-confident *coolness* to it)⁴⁰. While Chorost not necessarily believes in the CI as an enhancement that is capable of excelling the (‘natural’ or ‘normal’) physical human capacities and transcending concepts of humaneness, there are collectives of self-described ‘transhuman’ or ‘post-human’ people who locate themselves beyond the opposition of ‘abled’ and ‘disabled’.

An example for this is the German software-designer, *body hacker*, blogger and author Enno Park, who describes himself as “human and machine at the same time”⁴¹. According to his blog and numerous interviews, Park is not satisfied with being able to hear ‘normally’. Park’s credo, ‘design yourself’, rather reminds of the philosophy of feasibility of modern science: to not waste scientific and technological potential, but instead to use it to optimize the human body, to progress and to transcend the borders between machine and humans. For Park, the CI is a ‘real life’ possibility of a ‘human interface’, because, according to one of his blog entries, technology has become an inseparable part of his body⁴² and in the near future he will be capable of “expanding the human abilities far beyond the natural degree”⁴³. As a matter of fact, according to Park, being implanted does enhance his ‘natural’ sense of hearing even without modifying the device in a distinct manner. Through different kinds of software adjustments he is capable of processing sound in different ways, for example adjusting to a conversation in ‘noise polluted’ environments and thus being able to hear his conversational partner better. Also he claims that the CI can be considered a ‘brain interface’ as he does not need headphones anymore, since the CI allows for connecting him directly to his MP3 player: “The result is that the music is transmitted directly into my brain, without producing sound anywhere”⁴⁴. As Besmer (2014) accurately explains, such cyborgian forms of “hearing without sound” – by the way discussed by Chorost as well –, “destabilize our understanding of what human hearing means. At the very least, it indicates that a distinctively new form of human hearing has emerged”⁴⁵ and thus provokes a re-conceptualization what both ‘normal’ and ‘human’ can mean. Another use of the CI that would distinguish him distinctively from ‘normal’ hearing persons is that he can simply

⁴⁰ Again, in these cases references are frequently made to the iconic character of Jean-Luc Picard, who was assimilated into the Borg collective and transformed into the cyborg villain Locutus of Borg. For such a blog entry, in which a newly implanted CI wearer and science fiction lover jokingly refers to himself as Locutus of Borg see B. Stone, “Hello I’m Borg”, *Lost and Found: My Cochlear Implant Life*, November, 26, 2013. Accessed October 8, 2015, http://bonniestone.blogspot.de/2013_11_01_archive.html.

⁴¹ S. Gennies, “Hallo. Ich bin ein Cyborg. Berliner Verein will Implantate basteln”, *Tagespiegel*, January 9, 2014. Accessed April 14, 2015, <http://www.tagesspiegel.de/berlin/berliner-verein-will-implantate-basteln-hallo-ich-bin-ein-cyborg/9300130.html>.

⁴² Park in J. Scholl, “Zukunfts visionen werden Stück für Stück wahr: Enno Park im Gespräch mit Joachim Scholl”, *Deutschlandradio Kultur*, November 18, 2013. Accessed April 14, 2015, http://www.deutschlandradiokultur.de/cyborgs-zukunfts visionen-werden-stueck-fuer-stueck-wahr.954.de.html?dram:article_id=269321.

⁴³ *Ibid.* [translated by M. Spöhrer].

⁴⁴ *Ibid.* [translated by M. Spöhrer].

⁴⁵ Besmer, “Embodying a Translation Technology”, 297. See also Chorost, *Rebuilt*, 58.

‘switch off’ his hearing. While normally one could close one’s eyes whenever they want stop seeing, this was not possible for the hearing sense – a least not for ‘non-cyborg’ persons, because Park claims to use this function of the CI to facilitate falling asleep.

While the CI’s possibilities of enhancing the physical abilities of the human body are by far not exhausted, they are still limited by the device’s manufacturers, as the CI software is protected by the *Walled Garden* principle (hard- and software information is only available to certified audiologists). This principle keeps the wearers, such as Park, from manipulating their implant, although he even considers hacking his implant, as this would mean that he could expand his bodily and sensory abilities even further. For example theoretically it is possible to program the implant to receive infra- and ultrasound (e.g. for ‘hearing’ bats’ noises). Also, hacking the implant would allow for an expansion of the human interface and linking one’s body to other devices such as a Geiger counter, a bluetooth interface, a smart phone and data glasses⁴⁶, making it possible to perceive the world substantially different from ‘natural perception’. Thus, such a continuously expanding techno-organic interface would be, according to Park, superior to the ‘natural’ human condition – just as depicted in popular cyborg images such as the TV series *The Million Dollar Man* (1974-1978):

Enhancing and controlling the senses offers a chance to have a broader perception of the environment and feel closer to nature as a simple, non-abstract, everyday experience. In spite of some gaps compared to natural hearing, the cochlea implant is more acute than our normal senses, which makes it a ‘cyborg device’⁴⁷.

Although referring to popular media depictions of the cyborg such as the ‘inhuman’ versions mentioned above, this is a highly affirmative and euphoric perspective dismissing the dystopian horror scenarios suggested by Hollywood and by opposers of the CI. Park decisively rejects the images of the ‘assimilated’, ‘dehumanized’ cyborgs and CI-wearing “shambling zombies”⁴⁸, which are discussed in Deaf collectives’ discourses on cochlear implantation. Instead, villainish and inhuman Hollywood cyborgs are appropriated and reworked by Park and used as a pattern of differentiation. In fact, he considers it part of his and the Cyborg Verein’s [Cyborg Association] – an association founded by him to put into practice cyborg utopias – mission to educate people about how ‘real life’ cyborgs are not one-eyed evil robots such as represented by Arnold Schwarzenegger in *Terminator* (James Cameron, 1984), but instead need to be considered a positive figure, a potential for a better human future, leaving behind the deficit human body and using technology to enhance humanity. Although actually being deaf himself, for Park the implant consequently is not a tool of hearing collectives to assimilated Deaf people. In fact it seems that all these discourses do not seem to play a role in his version of the cyborg and rather need to be considered as a flawed concept themselves:

I would like to give the example of myself: I have been deaf for over 20 years and now I can hear again. That is not horrible at all. The most technological development used in [the Cyborg Association] are designed to help people. They are not intended to be killer machines as in Hollywood movies [...] basically we are doing what humans have always done throughout cultural history: to use tools and to bring oneself to perfection. No matter

⁴⁶ Park in Scholl, “Zukunftsvisionen werden Stück für Stück wahr”, 2013.

⁴⁷ E. Park, “Ethical Issues in Cyborg Technology: Diversity and Inclusion”, *NanoEthics*, 8, 3 (2014): 303-306 (304).

⁴⁸ Chorost, *Rebuilt*, 96.

if you are talking about history of agriculture, the development of tools or the automobile society or even education. We have always manipulated our environment and ourselves in every possible way⁴⁹.

5. CONCLUSION

The optimization of the own identity in relation to the CI is in both cases based on a somewhat 'deficit' state of being human. In Chorost's case being deaf and considering himself 'disabled' avoids him from attributing complete 'humaneness' to himself. Partly excluding himself, partly being excluded by hearing collectives, Chorost cannot reach emotional and social fulfillment and is 'disabled' of personal and individual design of his identity. Becoming "part computer", however, enables him to perceive his circumstances differently and to 'upgrade' both his physical and psychological and his social conditions. This allows for a construction of himself as "more than human", since as a CI 'cyborg', whose hearing sense is regulated by a technical device, his perception is constantly changing and he is capable of developing some sort of 'personal' and 'individual' enhancement, finally being able to participate in and to experience what he had always desired: 'normal' social and emotional life. Park also strives for some form of individualization. The possibility to 'hack himself' can be conceptualized as a way of 'free development of the individual' and striving for human progress (even if that will change or eradicate concepts of what it is to be considered 'being human'). Becoming a man-machine symbiosis is enhancement in the sense that it allows for progressing a form of 'identitary openness', a constantly expandable interface, that enables 'utopian' or 'yet to come' identitary and physical states of being. In constructing an affirmative and positive version of Hollywood fictions in relation to the CI, both Park and Chorost create a space of possibility in which a 'real' and individually negotiated version of the cyborg can exist in relation to science fiction discourses.

⁴⁹ Park in Scholl, "Zukunftsvisionen werden Stück für Stück wahr", 2013 [translated by M. Spöhrer].