

[[eCHSS_5_2015 – 4_2 // Schwerpunkt// Der optimierte Mensch]]

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Human Enhancement: The need for Ability Expectation Governance

We will be increasingly able, whether through assistive devices or genetic manipulations, to give the human body abilities it normally does not have. These abilities will be added to the body through therapeutic and non-therapeutic interventions. Who will pay for these ability enhancements? Will we see a hierarchy of worthiness of therapeutic interventions (base model versus enhancement model)? What will be the respective demand drivers? What consequences might be linked to this development?

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[[h1]]Setting the stage

Science and technology activities are often articulated in terms of better health and well-being. So far, the very meaning of health and therefore treatment and rehabilitation has been benchmarked to the normal or species-typical body, as have been the discourses around health insurance, disability insurance and social security. One of the main emerging health system policy challenges are linked to the ever increasing ability of science and technology products and processes to modify the functioning of the human body beyond existing norms and species-typical boundaries. Artificial arms, artificial blood, artificial blood vessels, artificial ears, artificial eyes, artificial gut, artificial heart, artificial legs, artificial retina, artificial skin, bionic knee, spinal cord prostheses, cranial, neural, and other implants, artificial joints, artificial muscles, artificial noses and tongues, nose on a chip, bio-artificial kidney, artificial liver, artificial lungs, artificial discs, diagnostic sensors, artificial hippocampus (a chip implanted under the skull that can act as a memory repository), brain machine interfaces (implanted or non-implanted version that allow the control of objects by thought through a computer link), cognitive enhancers (cognition modifying drugs) emotive enhancers (emotion modifying drugs), sub vocal speech (allowing the translation of thought into speech through a computer without a need to actually speak) are just a few emerging products with the potential to change the species-typical norm of body abilities. More down the road the issue of genetic enhancement of the human genome looms. Brain machine interfaces for example allow for the thought control of computer linked objects, an ability that the human body does not have.

[[h2]]The role of health consumers

Two classes of consumers can be identified for these emerging enhancement enabling products. One class will be the people who are labelled as impaired in the sense that they do not fulfill species-typical abilities and they obtain the enhancements as part of therapeutic interventions (therapeutic enhancement, TE). Indeed they are seen as early adopters of these ‘health technologies’ and are seen to play a key role in mainstreaming and increasing the acceptance of body enhancements beyond the species-typical in general.¹ The second class will be people who are seen as healthy in the species-typical sense. Many TE will also be desired by the species-typical ‘healthy’ people² fitting with the appearing social dynamic that expects beyond species-typical body related abilities of humans and with the long history of body modifications and the existence of a body morphing community.

This quote highlights this trend

- «Un outil, une machine ce sont des organes, et des organes sont des outils ou des Machines.»³

Some predict that we will see the appearance of a new class of health care consumers that will drive the uptake of enhancements using the argument of choice⁴ whereby this class of healthcare consumers will be the ones that defined themselves so far as species-typical healthy but now might define themselves as ill in the non-enhanced stage. This development is linked to a change in the meaning of health were one is healthy after one obtained the upgrade to one’s body leading to an enhancement version of health and medicine, which incorporates, condones, and even expects human performance enhancement beyond species-typical boundaries as one prerequisite of being “healthy.”

[[h2]]How does the access work? Who will pay for it?

The term morphological freedom was coined by Sandberg to support one’s right to modify oneself in general and to enhance oneself in particular. Question is how morphological freedom is linked to ones ability to access the enhancement and if yes how.

Sandberg states:

«What is morphological freedom? I would view it as an extension of one’s right to one’s body, not just self-ownership but also the right to modify oneself according to one’s desires.”
”Morphological freedom is the right to modify oneself. Morphological freedom can of course be viewed as a subset of the right to one’s body. But it goes beyond the idea of merely passively maintaining the body as it is and exploiting its inherent potential. Instead it affirms that we can extend or change our potential through various means. It is strongly linked to ideas of self-ownership and self-direction. Morphological freedom is, like the others, a negative right. It is a right to be able to do certain things, but it does not in itself imply others are morally obliged to support exercise of it. It would after all be unreasonable to demand others to support changes in

¹ Hughes, James, *Citizen Cyborg. Why Democratic Societies Must Respond to the Redesigned Human of the Future*, Boulder, CO 2004

² Wolbring, Gregor, «Hearing Beyond the Normal Enabled by Therapeutic Devices: The Role of the Recipient and the Hearing Profession», in *Neuroethics* 3/2013, S. 607–616 und Wolbring, Gregor, «Therapeutic Enhancements and the view of Rehabilitation Educators», in *Dilemata International Journal of Applied Ethics* 8/2012, S. 169–183

³ Canguilhem, Georges, *La Connaissance de la vie: Machine et organisme*, Paris 1952 : « Werkzeuge und Maschinen sind eine Art Organe. Und Organe sind eine Art Werkzeuge und Maschinen».

⁴ Bostrom, Nick; Sandberg, Anders, «Cognitive enhancement: Methods, ethics, regulatory challenges», in *Science and Engineering Ethics* 3/2009, 311–341.

my body that they would not see as beneficial or even ethical according to their personal moral. If I want to have green skin, it is my own problem – nobody has the moral right to prevent me, but they do not have to support my ambition. Of course, other ethical principles such as compassion would imply a moral obligation to help, but I will here mainly concentrate on the skeletal rights framework”⁵

Morphological freedom is a negative right (meaning that it is seen as a right for someone not to be hindered in their desires but that they have no obligation to help others to obtain the same). This raises some questions. Will the enhancement reality play itself out within a negative right framework? Will it lead to a two tiered system of opportunities available to the enhanced that will not be available to the non-enhanced? If we assume that there is a market for enhancement products questions that arise for social security for example in the Swiss context is who will pay for it. Will the Swiss system follow a negative rights framework of morphological freedom? Will it be acceptable to self-identify as ill in the non-enhanced stage and as such be acceptable to have the health system pay for it? What about the people labelled as impaired because they were not seen as fitting the species-typical norm and who receive these enhanced abilities as a side effect of the ability of the therapeutic device. Will the health system pay access to this device or will it see it as a luxury version and continue to pay only for the base model that does not lead to enhancement abilities. If the health system does not pay will this lead to a two tiered system where the impaired with money can enhance themselves with potential benefits in marketability such as employee and the ones without money will stay unenhanced with even less changes for employment?

[[h1]]Governance of ability expectations

Governance of science and technology is a long standing endeavour. Question is who is involved in this arena, which questions are asked, what is identified as a problem and what solutions are sought?

The idea that we have to improve the human species through genetic and bodily assistive device interventions beyond its species typical is gaining ground. Question is what will the sales pitch be and how will the user be defined. One question one can ask is what ability expectations drive human enhancement? The 2001 U.S. National Science Foundation report, «Converging Technologies for Improving Human Performance: Nanotechnology, Biotechnology, Information Technology and Cognitive Science», employed the ability expectation of productivity over 60 times; the ability expectation of efficiency 54 times; and the ability expectation of competitiveness 29 times to sell their message.⁶ A 2006 Association for the Advancement of Science workshop looked into the dynamic of human enhancement and concluded that the following ability desires were the main drivers for human enhancements: 1) to keep one’s local and global competitive advantage; 2) to live securely; and 3) to maintain one’s quality of life and one’s consumer life-style. In the same report it was stated that “personal interest in, or aversion to, using Human enhancement technologies depends on one’s perceived social status,

⁵ Sandberg, Anders, «Morphological Freedom -- Why We not just Want it, but Need it», o.O. 2001; elektronischer Artikel: www.aleph.se/Nada/Texts/MorphologicalFreedom.htm (28.12.2014)

⁶ Wolbring, Gregor, «Why NBIC? Why Human Performance Enhancement?», in *Innovation. The European Journal of Social Science Research* 1/2008, S. 25–40

and how Human enhancement would affect his/her competitive advantage".⁷ Other drivers include peer-pressure.⁸ According to Donovan et al. who investigated how to achieve performance enhancing drug compliance in sports, the likelihood of drug use will be highest when: a) threat appraisal is low; b) benefit appraisal is high; c) personal morality is neutral (e.g. 'drug use is a personal decision – there are no victims'); d) perceived legitimacy of the laws and enforcement agency is low; e) relevant reference groups are supportive of drug use and f) high vulnerability on personality factors (e.g. low self-esteem, risk taker, pessimist).⁹

[[h1]]Conclusion

Ability Studies¹⁰ investigates how ability expectation (want stage) and ableism (need stage) hierarchies and preferences come to pass and the impact of such hierarchies and preferences on social relationships and lived experiences based on diverse ability expectations and the actions linked to such expectations.

Ableism is based on a preference for certain abilities that projected as essential, while at the same time, real or perceived deviation or absence of these essential abilities are seen as a problem and often results in the accompanying "Disablism", the discriminatory, oppressive behavior against the ones that are seen as not having the "essential" abilities.

Every individual, household, community, group, sector, region, and country cherishes and promotes numerous abilities and finds others non-essential; for example some individuals see the ability to buy a given product as essential, others don't; some perceive living in an equitable society as important, while others don't. Abilities are also measured between countries, for example, quality of education and employment rates. I mentioned already various abilities seen as drivers for human enhancement. Ability expectations exist in two forms, one where having the ability is wanted but is not regarded as existential and another where this ability is considered existential (ableism). Ability expectations were/are often used as a tool to justify the negative treatment (disablement/disablism) of others. The term ableism was coined by the disabled

⁷ Williams, Enita A., *Good, Better, Best: The Human Quest for Enhancement*. Summary Report of an Invitational Workshop Convened by the Scientific Freedom, Responsibility and Law Program American Association for the Advancement of Science, o.O. 1.–2. Juni 2006:

www.aaas.org/sites/default/files/migrate/uploads/HESummaryReport1.pdf (28.12.2014)

⁸ Maher, Brendan, «Poll results: look who's doping», in *Nature* 452/2008, 674–675 und Ball, Natalie; Wolbring, Gregor, «Cognitive Enhancement: Perceptions Among Parents of Children with Disabilities», in *Neuroethics*, o.O. 2014: <<http://link.springer.com/content/pdf/10.1007%2Fs12152-014-9201-8.pdf>> Journal > Biomedical Science > Neuroethics > Cognitive Enhancement (PDF, Open access, 28.12.2014)

⁹ Donovan, Robert J. et al., «A Conceptual Framework for Achieving Performance Enhancing Drug Compliance in Sport», in *Sports Medicine* 4/2002, S. 269–284

¹⁰ Wolbring, Gregor, *Op.cit.*, Fussnote 6 und ders., «Expanding Ableism: Taking down the Ghettoization of Impact of Disability Studies Scholars», in *Societies* 3/2012, 75–83, <http://www.mdpi.com/2075-4698/2/3/75/pdf> (PDF, Open access, 28.12.2014) sowie ders., «Ecohealth through an ability studies and disability studies lens», in *Ecological Health: Society, Ecology and Health*, hg. von. Magnus Kjartan Gislason, London 2013, S. 91–107

people's rights movement to indicate the cultural preference for species-typical physical, mental, neuro and cognitive abilities which was/is often followed by the experience of disablement/disablism by people who were/are judged as lacking required physical, mental, neuro or cognitive abilities. Will the enhanced disable, the non-enhanced meaning will the enhanced have the power to change the ability expectation of certain parts of society so that the non-enhanced have less access to education or good paying employment? Will the enhanced make the non-enhanced feel inferior in need of enhancement? Will the enhanced have more access to the different facets of human security as described by the World Health Organization¹¹ which consist of economic, food, health, environmental, personal, community and political security?¹² Will the meaning of various health terms change including what is seen as public health in a reality where enhancement products give people advantages? Will the right to health include the right to be enhanced? Which ability expectations are too detrimental for how citizens relate to each other? Which ability expectations are untenable with the self-understanding of the social understanding of a distinct nation? Who governs ability expectations? How are ability expectations governed? These are some worthwhile questions for the reader to think about. I think these questions need to be answered through a dialogue among each and every member of a society, including the ones depending today on social security and health insurance.

To conclude I leave the reader with a dialogue from the 2003 game «Deus Ex: Invisible War» that reflects the importance of ability expectation governance.

“Conversation between Alex D and Paul Denton

Paul Denton: If you want to even out the social order, you have to change the nature of power itself. Right? And what creates power? Wealth, physical strength, legislation — maybe — but none of those is the root principle of power.

Alex D: I'm listening.

Paul Denton: Ability is the ideal that drives the modern state. It's a synonym for one's worth, one's social reach, one's "election," in the Biblical sense, and it's the ideal that needs to be changed if people are to begin living as equals.

Alex D: And you think you can equalise humanity with biomodification?

Paul Denton: The commodification of ability — tuition, of course, but, increasingly, genetic treatments, cybernetic protocols, now biomods — has had the side effect of creating a self-perpetuating aristocracy in all advanced societies. When ability becomes a public resource, what

¹¹ United Nations Trust Fund for Human Security «Human Security Now», o.O. 2003: www.unocha.org/humansecurity > Resources > Publications and products > Human Security Now (28.12.2014)

¹² <http://hdr.undp.org/en> > Library > Human Development Report 1994: New Dimensions of Human Security (PDF, 28.12.2014)

will distinguish people will be what they do with it. Intention. Dedication. Integrity. The qualities we would choose as the bedrock of the social order. (*Deus Ex: Invisible War*)”.¹³

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¹³ Wolbring, Gregor, «Is there an end to out-able? Is there an end to the rat race for abilities?», in *M/C Journal: A Journal of Media and Culture* 3/2008