

The Un-enhanced Underclass

Gregor Wolbring

Advances in the converging technological fields of nanotechnology, biotechnology, information technology and the cognitive sciences are set to increase our abilities to enhance our bodies and brains in terms of structure, function or capabilities. They will do this beyond the typical boundaries of what it means to be human to the point where the technical description of us as members of the species *Homo sapiens* ceases to be accurate. Many different forms of enhancement are proposed with many different purposes. Each form and purpose of enhancement comes with its own sales pitches, social consequences, problems and implications.

One of the main arguments in the enhancement debate is that you can and should make a distinction between therapy and enhancement. However, this argument and many others employed in the enhancement debate depend on what concept of health you follow. So for me the key question is which concepts of health, disease, disability, well-being and even medicine we use. I'd also like to highlight a number of dynamics that make it nearly impossible to prevent enhancements and some of the problems and policy implications this could cause.

Models and causes of health and well-being

First of all we need to clarify the difference between 'health' and 'wellbeing'. The World Health Organization (WHO) considers well-being as being within the umbrella term 'health' where health is defined as 'a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity'.¹ This model combines medical health and social health under the term health. But, increasingly, the policy world is moving away from the WHO definition of health and treating well-being less and less as a determinant of health. Policy-makers are interpreting the term health to mean medical health or medical illness. 'Social health' is often not covered under this definition of health.

Second, we need to look at the existing main models of health and disease – the medical and social models. Within the medical model of health and disease, health is limited to cover 'medical health' and is characterised as the normative functioning of biological systems, whereas disease or illness is defined as the sub-normative functioning of biological systems. This model does not deal with social well-being or 'social health'. Its method for locating the cause of and solution for 'ill medical health' comes in two flavours:

'identifying the cause of sub-normative functioning within the individual's biological system leading to medical interventions that bring the individual back towards the species typical norm (these are medical, individualistic cures)²

'external factors such as contaminated water, which leads to bacterial or parasitic infections, or job insecurity, which contributes to stress and heart disease.

If people refer to and talk about the 'social model of health' or the 'social determinants of health', they are mostly talking about the social causes of medical health, looking at how social factors contribute to medical illness. However, the real social model of health includes the social wellbeing – the 'social health' – of a person who is not medically ill. One can be in bad social health without having to be in bad medical health. In the social model, disabled people are disabled by society's inability to adapt to them.

The transhumanist model

But now there's a new kid on the block to add to the two previous models. Within the transhumanist or enhancement model, health is no longer characterised as an endpoint, where someone is healthy if their biological system functions within the normal boundaries. No matter

how conventionally "medically healthy" a person is, a person is seen as limited and defective, in need of constant improvement made possible by new technologies appearing on the horizon. Think of it as a little bit like the constant software upgrades we do on our computer. Health, in this model, is the concept of having obtained maximum enhancement of one's abilities, functioning and body structure. Disease, in this case, is identified through a negative self-perception of one's unenhanced body or a negative perception of social groups confined to unenhanced human bodies.

Under this model, technologies which add new abilities to the human body are seen as the remedy for ill health and well-being. Enhancement medicine is the new field providing the remedy through surgery, pharmaceuticals, implants and other means. To see the differences between the three models of health, and in particular the potential effect of the transhumanist model, look at these quotes from the Bangkok Charter for Health Promotion in a Globalized World³ and the Universal Declaration of Human Rights⁴ and think about what using the different definitions of the terms health and well-being above would mean for the scope and actions required:

The United Nations recognizes that the enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being without discrimination.

Regulate and legislate to ensure a high level of protection from harm and enable equal opportunity for health and well being for all people.

Government and international bodies must act to close the gap in health between rich and poor.

Everyone has the right to a standard of living adequate for the health and well-being of himself.

I don't believe that we can prevent human enhancement technologies from developing. This poses some imminent problems that current systems of governance for science and technology are unlikely to be able to deal with. Here are a few of the problems I foresee.

First, the question of personhood. All UN-based documents use the term "person". However, the term is not set in stone. Throughout history, many humans have not been seen as persons and in some places some are still seen as non-persons today. How do we define human beings? What happens when we go beyond what can be defined scientifically as *Homo sapiens*? What are the criteria for personhood? Do we have to redefine personhood to take into account new technological realities? How does any given redefinition of personhood affect people perceived as persons today? Might some people who are perceived as persons today become non-persons? All are questions that human enhancement raises.

Second, the creation of an ability divide. The more forms of enhancement become available, the bigger the ability divide will become. This would follow the pattern of the divides that developed after the introduction of other technologies. As we seem not to be able to close any of the other divides (remember 98% of web pages are still not accessible to blind people), it is doubtful we will be able "under current policies" to close the ability divide. Indeed, people and groups who promote human enhancement use the existence of other societally accepted divides to further their own cause.

As the World Transhumanist Association states: "Rich parents send their kids to better schools and provide them with resources such as personal connections and information technology that may not be available to the less privileged. Such advantages lead to greater earnings later in life and serve to increase social inequalities."⁵ A debate has to take place about which divides are acceptable, under what conditions, and why.

A third, related, problem will be a worsening of the gap between the rich and the poor. Transhumanists and others propose that wealth will eventually trickle down.⁶ However, if this is the case, why do we still have poor people, unclean water and many places without phones and

electricity? Every technology has led to a new group of marginalised people and to new inequalities. There is no reason under today's policy realities why this would be different if the human body becomes the newest frontier of commodification. As much as human enhancement technology will become an enabling technology for the few, it will become a disabling technology for the many. I believe that we need to change the whole system towards distributive justice, giving the enhancements first to the ones who need them most. And as this is not very likely to happen, the second best option is to ensure absolutely that no one can gain any positional advantage from enhancements and no one can force their desires and self-perception on others, whether it is their child or child to be or others. If we go on as we are today we will see the appearance of a new underclass of people – the unenhanced.

Fourth, it will require changes to the concept of responsibility. The transhumanists consider it to be a parental responsibility to use genetic screening and therapeutic enhancements to ensure as 'healthy' a child as possible.⁷ Under such a model, would it be child abuse if parents refused to give their children cochlear implants, if they felt there was nothing wrong with their child using sign language, lip reading or other alternative modes of communication? Would it be child abuse to fail to provide a 'normal' child early in life with a brain-machine interface?

Finally, it will increase the number of people perceived as 'impaired' because as enhancement technologies are developed, the definition of 'impaired people' will change. The transhumanist model sees every human body as defective and in need of improvement, so that every unenhanced human being is, by definition, 'disabled' in the impairment or medical sense. For transhumanists, disabled people are not able to improve themselves beyond what is normal for our species (I call these people the techno-poor disabled). There is a variation of the medical, individualistic model using transhumanist principles, taking the medical model further to include enhancement technologies.

It might be assumed that 'traditional disabled people' would welcome such a shift, as it would move the focus away from particular forms of impairment, towards the ability to enhance oneself – a challenge that the 'traditional disabled people' would share with other 'unenhanced people'. Indeed, many transhumanists are very aware of the potential to use disabled people as a trailblazer for the acceptance of transhumanist ideas and products.⁸ As James Hughes, the executive director of the World Transhumanist Association, writes, 'Although few disabled people and transhumanists realise it yet, we are allies in fighting for technological empowerment.'⁹

However, as many 'traditional disabled people' are poor and live in low income countries, they have far more to lose than gain from such a shift. They might think that they are better off because they would share that lack of ability with others who can't afford the enhancement, but we can expect that resources would never be 'wasted' on people who are below the traditional norm. This is because with the same amount of money more people who already fit the traditional norm could be enhanced than people who are different.

As Murray and Acharya have written (Murray is the father of 'disability adjusted life years' – a measure developed to give decision-makers a tool to judge who money should go to in health interventions), 'individuals prefer, after appropriate deliberation, to extend the life of healthy individuals rather than those in a health state worse than perfect health'.¹⁰ What this means is that it is realistic to expect that if we follow the same model decision-makers will choose to enhance the lives of healthy individuals rather than those in a state of less than perfect health because it will be seen as better value for money.

All these problems combine to mean that, unless we act now, we are sleepwalking into a society with an unenhanced underclass.

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Notes

1. World Health Organization. WHO definition of health: preamble to the Constitution of the World Health Organization as adopted by the International Health Conference, New York, 1946; signed on 22 July 1946 by the representatives of 61 states (Official Records of the World Health Organization, no.2, p.100) and entered into force on 7 April 1948. The definition has not been amended since 1948. Available from www.who.int/about/definition/en/ (accessed 11 Jan 2006).
2. G Wolbring, 'Solutions follow perceptions: NBIC and the concept of health, medicine, disability and disease?'. Alberta Health Law Review, 12, no 3 (2004).
3. The 6th Global Conference on Health Promotion, 'Policy and partnership for action: addressing the determinants of health?', Bangkok, Thailand, 7-11 Aug 2005, available from www.who.int/healthpromotion/conferences/6gchp/en/ (accessed 11 Jan 2006); see also 'The Bangkok Charter for Health Promotion in a Globalized World?', available from www.who.int/healthpromotion/conferences/6gchp/bangkok_charter/en/print.html (accessed 11 Jan 2006).
4. See www.un.org/Overview/rights/ (accessed 11 Jan 2006).
5. See www.transhumanism.org/resources/faq.html (accessed 11 Jan 2006).
6. Ibid.
7. See www.transhumanism.org/resources/faq.html (accessed 11 Jan 2006).
8. See <http://transhumanism.org/index.php/WTA/communities/physicallydisabled> (accessed 11 Jan 2006).
9. J Hughes, 'Battle plan to be more than well: transhumanism is finally getting in gear?', 3 Jun 2004, available at www.betterhumans.com/Features/Columns/Change_Surfing/column.aspx?articleID=2004-06-03-1 (accessed 11 Jan 2006).
10. C J Murray and A K Acharya, 'Understanding DALYs (disability-adjusted life years)?', Journal of Health Economics 16, no 6 (1997).

Dr Gregor Wolbring is a biochemist, bioethicist, health researcher, futurist and disability studies and governance of science and technology scholar with appointments at a number of universities. His webpage is www.bioethicsanddisability.org/start.html