Online Ethics Center
FOR ENGINEERING AND SCIENCE

Human Enhancement Subject Aid

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Description

A short guide to some key resources and readings on the topic of human enhancement.

Body

The debate over human enhancement focuses on interventions (biomedical, technological, genetic) that are used to improve the human form or functioning beyond what is necessary to restore or sustain health.

Parens, Erik. 1998. *Enhancing Human Traits: Ethical and Social Implications.* Washington: Georgetown University Press.

Subject Overviews

Borenstein, Jason. 2009. "The wisdom of caution: Genetic enhancement and future children." ***Science and Engineering Ethics*****. 15(4): 517-530.**

Many scholars predict that the technology to modify unborn children genetically is on the horizon. According to supporters of genetic enhancement, allowing parents to select a child's traits will enable him/her to experience a better life. Following their logic, the technology will not only increase our knowledge base and generate cures for genetic illness, but it may enable us to increase the intelligence, strength, and longevity of future generations as well. Yet it must be examined whether supporters of genetic enhancement, especially libertarians, adequately appreciate the ethical hazards emerging from the technology, including whether its use might violate the harm principle.

Degrazia, David. 2005. "Enhancement technologies and human identity." *Journal of Medicine and Philosophy*. 30(3): 261-283.

As the President's Council on Bioethics emphasized in a recent report, rapid growth of biotechnologies creates increasingly many possibilities for enhancing human traits. This article addresses the claim that enhancement via biotechnology is inherently problematic for reasons pertaining to our identity. After clarifying the concept of enhancement, and providing a framework for understanding human identity, the author examines the relationship between enhancement and identity. Then he investigate two identity-related challenges to biotechnological enhancements: (1) the charge of inauthenticity and (2) the charge of violating inviolable core characteristics. His thesis is that a lucid, plausible understanding of human identity largely neutralizes these charges, liberating our thinking from some seductive yet unsound objections to enhancement via biotechnology.

Coeckelbergh, Mark. "The Transhumanist Challenge" in *Human Being @ Risk. Enhancement, Technology, and the Evaluation of Vulnerability Transformations*. Springer Netherlands, 2013.

Philosophers have only interpreted human being, in various ways; the point, however, is to change it. This parody of Marx could well be a slogan of the transhumanist movement, which advocates radical ways of human enhancement. Human enhancement can be defined as the improvement of humans by technological means. There are many kinds of human enhancement, depending on the aim and the technology (means) proposed. For example, in a medical context, the term typically refers to improvements

that go beyond mere therapy, such as improving the genetic make-up of an individual. But other technologies may be involved as well, and more likely a combination of technologies is used.

Juengst, Eric and Moseley, Daniel, 2015. "Human Enhancement", *The Stanford Encyclopedia of Philosophy* (Summer 2015 Edition), Edward N. Zalta (ed.), http://plato.stanford.edu/archives/sum2015/entries/enhancement/.

Provides an in-depth definition of what is meant by human enhancement as well as a good discussion about the difference between treatment and enhancement, issues of cheating and human enhancement, questions of dehumanization, and potential policies issues and questions.

Policy and Guidance

The National Academies of Science Engineering and Medicine. 2014. *Emerging and Readily Available Technologies and National Security: A Framework for Addressing Ethical, Legal, and Societal Issues.* Washington, D.C.: National Academies Press. https://www.nap.edu/catalog/18512/emerging-and-readily-available-technologies-and-national-security-a-framework

Emerging and Readily Available Technologies and National Security is a study on the ethical, legal, and societal issues relating to the research on, development of, and use of rapidly changing technologies with low barriers of entry that have potential military application, such as information technologies, synthetic biology, and nanotechnology. The report also considers the ethical issues associated with robotics and autonomous systems, prosthetics and human enhancement, and cyber weapons. These technologies are characterized by readily available knowledge access, technological advancements that can take place in months instead of years, the blurring of lines between basic research and applied research, and a high uncertainty about how the future trajectories of these technologies will evolve and what applications will be possible.

United States: President's Council on Bioethics. 2006. *Beyond Therapy: Biotechnology and the pursuit of happiness*. Washington, D.C.: President's Council on Bioethics.

This report looks at the potential implications of using biotechnology "beyond therapy," in order to try to satisfy deep and familiar human desires: for better children, superior performance, ageless bodies, and happy souls. Such uses of biotechnology, some of which are now possible and some of which may become possible in the future, are likely to present us with profound and highly consequential ethical challenges and choices. They may play a crucial role in shaping human experience in the fast-approaching age of biotechnology.

Bibliography

Online Ethics Center for Science and Engineering. 2016. "Human Enhancement Bibliography." Developed by ASU. https://onlineethics.org/cases/human-enhancement-collection/human-enhancement-bibliography

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