

HUMAN ENHANCEMENT

Applications, benefits & concerns of human enhancement

Enhancement technologies include devices and procedures that can alter the human body and boost and/or change the workings of the human mind. Now and in the future.

BODY



PHYSICAL

- Performance-enhancing drugs
 - Advanced prosthetics
 - Wearable devices
- Possibly, in the future:
- Genetic modification



COSMETIC

- Plastic surgery
 - Magnetic fingernails
- Possibly, in the future:
- Biological camouflage



LONGEVITY

- Possibly, in the future:
- Anti-aging drug
 - Common cold vaccine
 - Zero-gravity body modification
 - Synthetic skin replacement

MIND



AFFECTIVE

- Selective-serotonin reuptake inhibitor (SSRI)
- Possibly, in the future:
- Anti-boredom drug
 - Happiness enhancer
 - Fear reducer
 - Empathy enhancer



COGNITIVE

- Memory enhancer
- Focus booster
- Wakefulness booster
- Neurostimulation devices



MORAL

- Methylphenidate (Ritalin®) to curb recidivism
 - Chemical castration
 - Anaphrodisiacs
- Possibly, in the future:
- Cooperation enhancer

IMPACTS



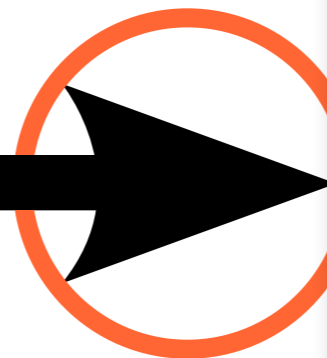
BENEFITS

- Improve human capability
- Mitigate social inequalities
- Reduce unfairness and injustice
- Advance human health and well-being
- Enhance bodily integrity



RISKS

- Potential to harm human health, i.e. addiction or risk of hacking
- Compel individuals to remove or change 'abnormal' or 'unenhanced' traits
- Increase competition
- Increase surveillance
- Homogenise society leading to loss in diversity



PEOPLE AFFECTED

- Children
- Elderly
- Patients
- Soldiers
- Consumers
- Workforce & management
- Individuals with disabilities
- Everyone who is interested in enhancement

sienna.
Technology, ethics and human rights

- We will help address some of these issues by:**
- Analysing the legal, ethical, social & economic impacts of human enhancement
 - Connecting with citizens to understand their concerns via surveys in 11 countries & panels in 5 countries
 - Consulting experts and discussing ethical & human rights issues
 - Developing ethical codes & protocols

Learn more at sienna-project.eu
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