

Improving human performance

B1



There is immense scope for technology to improve how the human body performs and functions.

Human enhancement

Changing our bodies inside

B2



We have always developed external tools which enable our bodies to do things we could not naturally do. If we could develop 'internal' tools to do the same thing, what's wrong with that?

Human enhancement

What would you like to enhance if you could?

B3



If it was possible to use pills, implanted chips, electrodes etc., would you improve: appearance, physical strength, need for sleep, memory, concentration, facial recognition, mood? Or something else?

Human enhancement

Life as a gift

B4



We should see human life as a gift, not something we should tamper with, in order to try and make our own improvements.

Human enhancement

Missing the point?

B5



Our deepest human problems are moral, spiritual and relational, not our bodily limitations. They lie beyond physical enhancements to answer.

Human enhancement

Altering nature and altering ourselves?

B6



It's one thing to use technologies to manipulate our environment, but we should not try to manipulate ourselves.

Human enhancement

What is a human being?

B7



Are we a bag of genes, a conscious mind in a body, the image of God, etc.? Are we material or spiritual, separate individuals or dependent on relationships?

Human enhancement

Diminishing our humanity?

B8



Are there some basic things about being human, which would diminish our humanity if we changed them?

Human enhancement

Keeping within our biological limits, or not?

B9

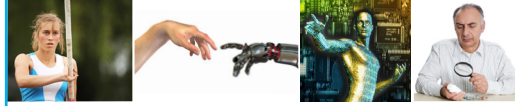


The human body works within physical limits like size – we can't fly or digest grass. Should we respect those limits or use new technologies to try and perhaps go far beyond them?

Human enhancement

Radical or more limited enhancement?

B10



I don't want to make radical changes, to become like some superhuman, but I wouldn't object to making limited enhancements of the human body. But is that just the start of a slippery slope?

Human enhancement

Everybody wins

B11



Enhancement is like most new technologies; it will create new winners and losers. As they become more widely adopted, costs come down. Most people should be better off in the end.

Human enhancement

Make poverty history?

B12



If enhancements would give competitive or commercial advantages, should the priority in research be on applications to help the poor and disadvantaged? Is this possible?

Human enhancement

Overcoming discrimination

B13



A civilised society should be able to prevent enhancement leading to discrimination, just as it seeks to do in other areas.

Human enhancement

Have's and have-not's

B14



Human enhancement would always be socially divisive. To allow a privileged few to 'hard-wire' permanent physical or mental advantages into their bodies would cause even more division and injustice in our world.

Human enhancement

Enhancements for only some?

B15



If enhancements really were so good, it would be unjust if they were only available if you could pay, with the rest left behind in the new human race.

Human enhancement

Enhancement and eugenics?

B16



Some say it is a short step from human enhancement to social engineering or eugenic practices, for example to offer radical life extension only to those deemed to be functionally 'fit'.

Human enhancement

Opportunity cost?

B17



Faced with poverty, hunger, disease, and climate change, would our research effort and resources be better spent on other goals than trying to enhance ourselves?

Human enhancement

Peer pressure and values

B18



Because of peer pressure or the fear of falling behind, some people might feel forced into adopting an enhancement against their personal values or better judgement.

Human enhancement

Dual use

B19



Scientific breakthroughs in medicine may also have military applications used for enhancements. Should this 'dual use' be restricted, or should that choice left to the military?

Human enhancement

Should society decide?

B20



Are the implications of enhancement too serious to treat just as matters of personal preference? Or has society no right to prevent an individual to flourish by making enhancements?

Human enhancement

Getting locked in to enhancement

B21



The relative benefit of a competitive performance enhancement would be lost if everyone adopted it. No one would dare stop using it, but no one would benefit any more. Everyone becomes locked in to a now pointless technology.

Human enhancement

We got to the moon and back!

B22



Enhancement builds on the scientific skills we have developed over generations. Of course we can't predict all the outcomes, but if we never try we'll never improve ourselves.

Human enhancement

Risks can be handled

B23



Just as invasive medical procedures are done under careful regulation to avoid causing unnecessary harm, we will be able to handle any risks of human enhancement.

Human enhancement

Fooling ourselves?

B24



If we cannot make household appliances that don't break down, and if we mismanage so many complex projects, are we fooling ourselves to think we can redesign ourselves?

Human enhancement

Can we keep
in balance?

B25

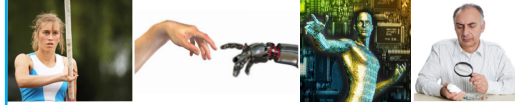


Some sports enhancements have had tragic results, e.g. among racing cyclists. Can we enhance one part of our body, without upsetting its overall balance?

Human enhancement

Uneven risk
balance

B26

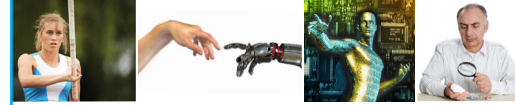


There are serious risks in many aspects of intervention in the human body, for which enhancement has no balancing good like a hope of treating terminal illness.

Human enhancement

Not so fast!

B27



Commercial, medical or military pressures can sometimes drive the application of science faster than we understand it. We can't afford this to happen with human enhancement.

Human enhancement

Would it
be better?

B28



Many so called enhancements might not turn out to have made things better – e.g. radically improving our memory: there are many things we're glad to forget.

Human enhancement

Do we have
wisdom enough
to alter ourselves?

B29



We have greatly altered many ecosystems and other species, and too often we've done unintended harm. Should we then alter ourselves?

Human enhancement

Brain/computer
links and
freedom?

B30



Links between our brains and computers might give me better performance. But would I lose some degree of control and no longer have full freedom of thought?

Human enhancement

Why seek to
be enhanced?

B31



Practical: to overcome one's limitations; not getting so tired, thinking quicker;
Competitive: beating one's rival at last;
Aesthetic: doing a job better, a more skilled musician;
Altruistic: helping someone else better;
For fun!

Human enhancement

Altruistic
enhancements?

B32



Would the most satisfying enhancement be, say, to create a finer work of art or craft, just for the sake of it, or to help someone else – in other words, something which is not just for my sake?

Human enhancement

Enhancement – the highest aspiration?

B33



The prospect of transcending our human limits is the greatest goal we can aspire to. Now we're getting the tools to achieve it, we should use them.

Human enhancement

Well-being

B34



Some people say that instead of 'health' we could use 'well-being' as a yardstick to assess enhancements. But is it possible to agree on what would make people's lives go best?

Human enhancement

Is it really winning?

B35



If I got an enhancement to beat my rival, would I be satisfied, knowing I wasn't actually better, but I'd just used a smart drug or implant, and he/she didn't?

Human enhancement

Would we be 'better' humans?

B36



Suppose we could become stronger, quicker thinking, more memory, longer lived, or even had entirely new human capacities, would it actually makes us better as human beings, taking our whole humanity into account?

Human enhancement

Becoming less human?

B37



If I started using an enhancement like a drug so that I could manage with less sleep, would I become more dependent on technology, but less free to be human?

Human enhancement

A treadmill of dissatisfaction?

B38



If I want to be enhanced because I want to attain more, would I ever be satisfied, compared with being more enhanced still? Is pursuing the idea of technological enhancement chasing a really unattainable goal?

Human enhancement

Making the most of ourselves?

B39



Is our success as humans more about making the most of what we are, compared with seeking always to be changing it into something else?

Human enhancement

Am I really enhanced?

B40



Suppose I decided to have some claimed enhancement done to myself, how would I know if it had truly enhanced me? And would my friends and family necessarily agree it was an improvement?

Human enhancement

How would enhancements be used in practice?

B41

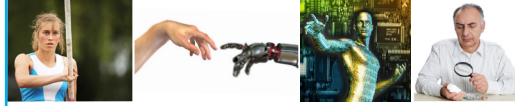


If an infrared vision chip was available, that was intended to help me drive more safely at night, would I just use it to drive faster, instead of safer?

Human enhancement

Parental choice

B42



We decide all kinds of things in advance for our children. Would they blame us if we did not enhance them, given we had the option? Or blame us if we did?

Human enhancement

Is technical efficiency always a good thing?

B43



Technology can reduce drudgery and increase efficiency. But do we use well the space that we gain? And can we lose important human or social 'goods' by pursuing mere technical efficiency?

Human enhancement

Should we enhance trust using a special drug?

B44



Researchers claim that giving rats the chemical oxytocin increases their trust of other rats. Should we try this on humans? But is it real trust, if it's induced by chemicals? Is it too open to manipulation?

Human enhancement

Enhancement as a condition of employment

B45



If work performance could be enhanced, should we allow such enhancements to be used in employment: as a condition of getting a job, winning promotion, or keeping your job in hard times?

Human enhancement