

Institution: University of Oxford
Unit of Assessment: 32
Title of case study: Challenging Perceptions of the Ethics of Human Enhancement
<p>1. Summary of the impact (indicative maximum 100 words)</p> <p>For over a decade, Professor Julian Savulescu has produced a body of work on the enhancement of human beings and its ethical implications, including work on the ethics of genetic selection and on the ethics of using technology to enhance human capacities. This work has had an influence on public policy, in particular by influencing government bodies in Norway, the United States, and Australia, and on business and industry. It has also been used in teaching material for secondary school pupils by the Wellcome Collection. Furthermore, through the many prestigious public lectures that Professor Savulescu has given and the seminars that he has led, through the television and radio interviews that he has given, and through the extensive discussion of his ideas in the press and online, he has both contributed to the public awareness of and stimulated lively debate around such issues as what distinguishes the use of doping in sport from seemingly acceptable forms of enhancement, and what if anything is wrong with designer babies.</p>
<p>2. Underpinning research (indicative maximum 500 words)</p> <p>Professor Savulescu has written both about the ethical issues surrounding genetic selection and about the ethical issues surrounding the use of technology to enhance human capacities. In the former case, his focus has been on the use of genetic selection to enable parents to have children with the best prospects of the best life: he coined the term ‘procreative beneficence’, which is now widespread in the literature. In the latter case, his primary focus has been on the use of biotechnology to enhance human cognitive capacities. One issue that he has addressed, in his 2002 article ‘The Embryonic Stem Cell Lottery and the Cannibalization of Human Beings’, is the ethics of embryonic stem research. In this article he argued that, even if an embryo is a person, that fact alone does not mean that there can be no justification for killing it.</p> <p>Although Professor Savulescu has been especially concerned with the enhancement of people’s cognitive capacities, his more recent work, particularly as represented in his 2009 article ‘Genetic Enhancement’ and in the volumes <i>Human Enhancement</i> and <i>Enhancing Human Capacities</i> that he co-edited in 2009 and 2011, has also been concerned with the enhancement of people’s physical capacities (e.g. through doping in sport), the enhancement of their moods, and the enhancement of their relationships; and indeed there is now an emphasis, most prominent in his 2008 article ‘The Perils of Cognitive Enhancement and the Urgent Imperative to Enhance the Moral Character of Humanity’ and in his co-authored 2012 book <i>Unfit for the Future</i>, on people’s moral enhancement.</p> <p>While some ethicists had previously argued that all these forms of enhancing human beings were morally permissible, Professor Savulescu was the first to argue that they are not only morally permissible, but morally obligatory. It is this key idea that has attracted the most attention. The recent emphasis on people’s moral enhancement has been a natural development of his earlier work. This is because other forms of enhancement, in common with technological advances of other kinds, have opened up possibilities of evil, including large-scale evil with catastrophic effects; and they are likely to continue to do so at an exponential rate, as discussed in his joint 2010 article ‘Synthetic Biology and the Ethics of Knowledge’. Professor Savulescu has argued that it is thus imperative that we try to ensure that research into moral enhancement keeps pace with research into these other kinds of enhancement—not least because, though there is good reason to believe that moral enhancement by biomedical and genetic means is possible in principle, in practice it remains a distant prospect.</p> <p>Professor Savulescu has carried out his research in his capacity as the Director of the Oxford Uehiro Centre for Practical Ethics (sponsored by the Uehiro Foundation), a position that he took up in 2002.</p>

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3. References to the research (indicative maximum of six references)

- Julian Savulescu, 'The Embryonic Stem Cell Lottery and the Cannibalization of Human Beings', in *Bioethics* **16.6** (2002): 508–29 [DOI: 10.1111/1467-8519.00308]
- Ingmar Persson and Julian Savulescu, 'The Perils of Cognitive Enhancement and the Urgent Imperative to Enhance the Moral Character of Humanity', in *Journal of Applied Philosophy* **25.3** (2008): 162–77 [DOI: 10.1111/j.1468-5930.2008.00410.x]
- Nicholas Bostrom and Julian Savulescu (eds), *Human Enhancement* (Oxford: Oxford University Press, 2009) [Listed in REF2: N03 for J. Savulescu and N01 for N. Bostrom]
- Julian Savulescu, 'Genetic Enhancement', in Helga Kuhse and Peter Singer (eds.), *A Companion to Bioethics: Second Edition* (Oxford: Wiley-Blackwell, 2009) [Available on request]
- Thomas Douglas and Julian Savulescu, 'Synthetic Biology and the Ethics of Knowledge', in *Journal of Medical Ethics* (2010): 687–93 [DOI:10.1136/jme.2010.038232]
- Julian Savulescu, Ruud Ter Meulen, and Guy Kahane (eds), *Enhancing Human Capacities* (Oxford: Wiley-Blackwell, 2011) [Available as an eBook via www.ebilib.com]
- Ingmar Persson and Julian Savulescu, *Unfit for the Future: The Need for Moral Enhancement* (Oxford: Oxford University Press, 2012) [DOI:10.1093/acprof:oso/9780199653645.001.0001]

The quality of this research is evidenced in each case by the place of publication. The peer-reviewed journals and publishing houses concerned do not publish work that is not of internationally recognised quality. Work between 2005 and 2008 was supported by a grant of £102,250 from the European Union, and work between 2008 and 2013 was supported by a grant of £821,874 from the Wellcome Trust.

4. Details of the impact (indicative maximum 750 words)(i) Impact on Public Policy

Professor Savulescu's work has had a direct influence on public policy. In 2010, he organised a workshop entitled 'Human Enhancement and Genetic Selection', at St Cross College Oxford, for the Norwegian Directorate of Health, which is responsible for applying and interpreting laws and regulations in the health and care sector in Norway. The NDH requested that this workshop be held for its National Bioethics Advisory Committee and for representatives from its advisory group, the former comprising experts in medicine, law, and science, the latter comprising staff from universities and university clinics with expertise in these fields and in bioethics. In a subsequent e-mail to Professor Savulescu, Anne Forus, a senior adviser, wrote: 'Our group found the visit in Oxford and the discussion with you and your research fellows very inspiring... The main impact for the further work of our group, i.e. in our evaluation on the Norwegian Act on medicinal use of biotechnology, has been the approach your group presented for dealing with ethical challenges. This has been taken on board in our further work' [1].

Later that year, Professor Savulescu's joint article 'Synthetic Biology and the Ethics of Knowledge' was cited in *The U.S. Presidential Commission on Bioethics Briefing Book*^[ii]. This commission was to consider the scientific, social, and moral implications of new biotechnological developments. The book states, in the context of the citation, that, after careful deliberation, the Commission, in line with Professor Savulescu, 'was not persuaded by concerns that synthetic biology fails to respect the proper relationship between humans and nature'. It also refers, in the same context, to 'the challenges of defining "nature" or "natural" in this context, particularly in light of humans' long history interacting with and affecting other species, humankind, and the environment.' The same article was also cited in a subsequent report of *The U.S. Presidential Commission for the Study of Bioethical Issues*, this time to help counter concerns that the creation of new organisms could have unexpected adverse consequences.

Professor Savulescu gave two lectures at the Australian Leadership Retreat in Queensland in 2010^[iii]. This retreat is a unique, invitation-only forum for leaders in the business, political, and academic communities to exchange ideas about Australia's defining challenges. Professor Savulescu urged the case for human enhancement, and was cited in the subsequent report as exploring 'a new dimension to individual resilience'. The report went on to state that 'a resilient society must continuously adapt to its environment' and, in the light of Professor Savulescu's

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arguments among others, considered ways in which Australia's healthcare stands in urgent need of reform.

(ii) Impact on Business and Industry

In 2010, Professor Savulescu delivered the keynote speech at a conference entitled 'Human Enhancement—Biotechnology in Sports', in Oslo, organised by The Norwegian Biotechnology Advisory Board in collaboration with Anti-Doping Norway: this conference was held for the benefit of athletes, scientists, trainers, and the general public. His views have been sought more generally by business and industry: for example, he has spoken to several programmes at the Said Business School in Oxford, including more than one programme for the State Farm Insurance Company and one for SABMiller, and he has addressed a workshop led by Richard Branson on Necker Island in 2011.

(iii) Impact Through Teaching Material and Through Engagement With the Public

Professor Savulescu has made his ideas available through participation in events at the London Science Museum and the Wellcome Collection: in the latter case, an online talk of his is available on their website^[iii]. The Wellcome Collection has also produced teaching resources, designed for secondary school pupils, in which extensive use is made of his ideas^[iv]. His work has been disseminated through books, journal and newspaper articles, public lectures, podcasts, and media performances (including an appearance on the BBC's *Moral Maze* in 2008 and a 2010 interview by Richard Dawkins for BBC Radio 4's 'The Age of the Genome', a very high-profile three part series presented by Dawkins about the science of genomes and resulting ethical issues). There were several national newspaper and on-line media reports on a conference entitled 'Science, Ethics and Policy Challenges of Pluripotent Stem Cell-Derived Gametes' that Professor Savulescu organised in Hinxton in April 2008^[v]. Recognition of Professor Savulescu's position at the forefront of public debate in this field was indicated by his selection as winner of the 'Thinkers' category of *The Weekend Australian's* top one hundred Emerging Leaders awards in May 2009: this list is devised as a list of Australians who are on the rise or newly established in roles of influence and leadership^[vi]. His ideas were discussed in the *Sunday Herald Sun* in 2011^[vii]. All of this has contributed to the public awareness of the various questions that he has addressed and the various ideas that he has advanced.

The public has had all sorts of opportunities to register its engagement with Professor Savulescu's ideas. In 2010, he led the University of Oxford Online Debate proposing the motion: 'Performance enhancing drugs should be allowed in sport'^[viii]. The debate proved very popular, with around 7500 visits, and the public posted comments throughout the debate which closed with a public vote (18% in favour, 82% against). He also contributed to the 'Intelligence Squared Debate', first in New York in 2008, then in London in 2009 (this appeared on YouTube), and finally in Sydney in 2012^[ix]. The last of these debates involved a pre- and post-debate poll of the audience's opinion on whether there is anything wrong with designer babies. There was a shift from 19.9% in favour of Professor Savulescu's view, 36.7% undecided, and 43.3% against, to 47% in favour, 10% undecided, and 43% against. There was a similar pre- and post-debate poll after a debate on whether it is acceptable for athletes to take performance-enhancing drugs, broadcast as the 'IQ²' debate on ABC and on BBC World, to which Professor Savulescu contributed^[x]. This time there was a shift from 17.4% in favour of his view, 17.3% undecided, and 65.3% against, to 33.5% in favour, 6.7% undecided, and 59.7% against.

Several of Professor Savulescu's newspaper and journal articles, in which he summarizes his views, have been accompanied by extensive online blogs debating the views^[xi]. Examples include: a 2012 *New York Times* opinion piece on doping; a 2012 *New Scientist* article, written jointly with Anders Sandberg, on enhancing love; and a 2012 article in Australia's *The Punch* on gene selection (the blog in this case attracted nearly 150 comments). Similar debate followed extensive reference to his views in an article by Ian Steadman in *Wired* in 2012 and a feature on his views in *The Huffington Post* in 2012. Professor Savulescu also has over 1600 followers on Twitter, where he engages with the general public in discussion of his views.

Among the highly distinguished public lectures and other public presentations that Professor Savulescu has given on these issues are: a contribution to the debate 'Do We Have the Right to Improve Upon Human Nature?' at the Smith Foundation, in New York, in 2008; two lectures at the World Economic Forum in Davos, in 2009; the Fulvio Guerrini lecture in Torino, in

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2009; a lecture to the Royal Institution in London, in 2009; a lecture at the Festival of Dangerous Ideas in Sydney, in 2009; a lecture to Consilium 2010, a Davos-style event for business and political leaders in Queensland, in 2010; a keynote address at 'Visionary Education 2010' and participation in a subsequent public seminar, in Melbourne, in 2010; and a keynote address at 'The Posthuman Condition', at Aarhus University, in 2010.

5. Sources to corroborate the impact (indicative maximum of 10 references)

Testimonials

[1] E-mail from Senior Advisor, Norwegian Directorate of Health

Other Evidence Sources

[i] The citations from *The U.S. Presidential Commission* reports (July 2010 and December 2010) can be found at:

<http://cmsdev.bioethics.gov/sites/default/files/Background-Material-for-July-2010-Commission-Meeting-on-Synthetic-Biology0.pdf>

<http://www.bioethics.gov/documents/synthetic-biology/PCSBi-Synthetic-Biology-Report-12.16.10.pdf>.

[ii] The report of the Australian Leadership Retreat can be found at:

http://adcforum.org/wp-content/uploads/2012/02/ALR_2010_REPORT1.pdf.

[iii] The Wellcome Collection online talk can be found at:

<http://www.wellcomecollection.org/whats-on/exhibitions/superhuman/the-future-of-humanity.aspx>

[iv] The Wellcome Collection teachers resources can be found at:

<http://www.wellcomecollection.org/whats-on/exhibitions/superhuman/learning-resources/teachers-pack.aspx> and

<http://www.wellcomecollection.org/whats-on/exhibitions/high-society/essays/cognitive-enhancers.aspx>.

[v] Two of the reports on the Hinxton conference are:

http://www.dailymail.co.uk/pages/live/articles/health/thehealthnews.html?in_article_id=559728&in_page_id=1797

<http://news.bbc.co.uk/1/hi/health/7346535.stm>.

[vi] Professor Savulescu's award as winner of the 'Thinkers' category of *The Weekend Australian's* top one hundred Emerging Leaders was announced in *The Australian*, June 2009, and is reported at: <http://www.theaustralian.news.com.au/story/0,25197,25653002-5013871,00.html>.

[vii] The discussion of his ideas in *The Sunday Herald Sun* in February 2011 can be found at:

<http://www.heraldsun.com.au/ipad/only-breed-smart-babies-ethicist/story-fn6bfkm6-1226005105129>.

[viii] The website for the University of Oxford Online Debate is:

www.ox.ac.uk/debates.

[ix] Details of the Sydney 'Intelligence Squared Debate' can be found at:

<http://www.iq2oz.com/events/event-details/2012-series-sydney/september.php>.

[x] Details of the 'IQ²' debate on ABC can be found at:

<http://www.abc.net.au/tv/bigideas/stories/2013/06/03/3770761.htm>.

[xi] The blogs in which Professor Savulescu's views are discussed are:

<http://www.nytimes.com/roomfordebate/2012/08/07/should-doping-be-allowed-in-sports/permit-doping-so-we-can-monitor-it>

<http://www.newscientist.com/article/mg21428646.200-love-machine-engineering-lifelong-romance.html>

<http://www.thepunch.com.au/articles/Theres-nothing-nasty-or-Nazi-about-gene-selection/>

<http://www.wired.com/playbook/2012/09/sports-and-doping/>

http://www.huffingtonpost.com/2012/08/16/julian-savulescu-oxford-p_n_1792470.html

<https://twitter.com/juliansavulescu>.