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Review

GOD ON MORAL ENHANCEMENT**JOHN HARRIS****Contact: Prof. John Harris**

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John Harris is Lord Alliance Professor of Bioethics at the University of Manchester School of Law and Director of the Institute for Science, Ethics and Innovation. Recent books include *Enhancing Evolution* Princeton University Press 2007 and *On Cloning* Routledge 2004.

Abstract: This paper identifies human enhancement as one of the most significant areas of bioethical interest in the last twenty years. It discusses in more detail one area, namely moral enhancement, which is generating significant contemporary interest. The author argues that so far from being susceptible to new forms of high tech manipulation, either genetic, chemical, surgical or neurological, the only reliable methods of moral enhancement, either now or for the foreseeable future, are either those that have been in human and animal use for millennia, namely socialization, education and parental supervision or those high tech methods that are general in their application. By that is meant those forms of cognitive enhancement that operate across a wide range of cognitive abilities and do not target specifically “ethical” capacities. The paper analyses the work of some of the leading contemporary advocates of moral enhancement and finds that in so far as they identify moral qualities or moral emotions for enhancement they have little prospect of success.

Keywords: Moral Enhancement, Cognitive Enhancement, Freedom, God.

God on Moral Enhancement

JOHN HARRIS 2010¹

God had important things to say on the subject of moral enhancement. If God's feelings on the subject have been reliably reported by John Milton, the verbatim account to be found in *Paradise Lost*² is important because it contains, in a most concise form, many of the most cogent reasons for suspicion as to the viability of moral enhancement as a coherent project, at least as it is being understood in the emerging literature.

Famously, in Book III of *Paradise Lost* Milton reports God saying to his "Only begotten Son" that if man is perverted by the "false guile" of Satan he has only himself to blame:

.....whose fault?
 Whose but his own? Ingrate, he had of me
 All he could have; I made him just and right,
 Sufficient to have stood, though free to fall.³

These lines have inspired many writers about the human condition and about the precious nature of freedom and in particular of free will. William Golding echoed these famous lines and discussed their theme in his novel *Free Fall*.⁴ I first read *Free Fall* as an undergraduate in the 1960s⁵ (and it was Golding that pointed me to Milton). Golding asks two crucial questions in that book: "when did I lose my freedom?", and "how did I lose my freedom?" Here is how they are posed on the first page of *Free Fall*:

When did I lose my freedom? For once I was free. I had power to choose. The mechanics of cause and effect is statistical probability yet surely sometimes we operate below or beyond that threshold. Free will cannot be debated but only experienced, like a colour or the taste of potatoes. I remember one such experience. I was very small and I was sitting on the stone surround of the pool and fountain in the centre of the park. There was bright sunlight, banks of red and blue flowers, green lawn. There was no guilt but only the splash and splatter of the fountain at the centre. ... The gravelled paths of the park radiated from me: all at once I was overcome by a new knowledge. I could take whichever I would of these paths. There was nothing to draw me down one more than the other. I danced down one for joy in the taste of potatoes. I was free I had chosen.⁶

¹ I wish to acknowledge the stimulus and support of the iSEI Wellcome Strategic Programme in *The Human Body: Its' scope, limits and future*. I thank John Coggon for reading earlier drafts and making many valuable suggestions and to Sarah Chan for some incisive suggestions. Thanks are also due to Saira Mian for helpful assistance and insights.

² John Milton, *Paradise Lost* Penguin Books, London, 2000 Ed. John Leonard. Milton first published *Paradise Lost* in 1667.

³ Ibid Line 96ff.

⁴ William Golding, *Free Fall* Faber and Faber, London 1959.

⁵ While a graduate student in Oxford I had the good fortune to get to know Bill Golding through my friendship with his daughter Judy and with Terrel Carver (later to become Bill's son-in-law) and had the privilege of discussing freedom and many other issues with Golding on a number of occasions.

⁶ Golding *op cit* Penguin Books, Harmondsworth 1966 page 5.

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4 Leaving aside Golding's rather suspect views about statistical probability and the
5 assertion that free will cannot be debated, which is demonstrably contradicted in the
6 passage just quoted, Golding vividly illustrates a feeling that surely everyone has had, the
7 feeling of what it is like to be free in an existential sense⁷. With the exhilaration of that
8 feeling, I hope, coursing through our veins (and not, I hope, clouding our judgement)
9 let's return to Milton.
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11

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13 When God says of man that "he had of me all he could have" he qualifies this in two
14 ways. Firstly by the vainglorious claim "I made him just and right", and second by a
15 wonderful analysis of freedom: "sufficient to have stood, though free to fall". Milton's
16 God was certainly overestimating her role in making humankind just, right and all the
17 rest, but nature, or more particularly, evolution, has done most of this for us. We have
18 certainly evolved to have a vigorous sense of justice and right, that is, with a virtuous
19 sense of morality. God was, of course, speaking of the fall from Grace, when
20 congratulating herself on making man "sufficient to have stood though free to fall", she
21 was underlining the sort of existential freedom Golding spoke of which allows us the
22 exhilaration and joy of choosing (and changing at will) our own path through life. And
23 while we are free to allow others to do this for us and to be tempted and to fall, or be
24 bullied, persuaded or cajoled into falling, we have the wherewithal to stand if we choose.
25 So that when Milton has God say mankind "had of me all he could have", he is pointing
26 out that while his God could have made falling impossible for us, even God could not
27 have done so and left us free. Autonomy surely requires not only the possibility of falling
28 but the freedom to choose to fall, and that same autonomy gives us self-sufficiency;
29 "sufficient to have stood though free to fall."
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34 It would be tempting to conclude at this point that we humans, although we need many
35 forms of enhancement and often desire much more enhancement than we need, do not
36 need and are irrational to seek, specifically *moral* enhancement. This is because we
37 already have not only an extensive moral endowment but because the ways being
38 canvassed to enhance that endowment are unlikely to leave us sufficient to stand though
39 free to fall. However that would not be quite right either. There are many very attractive
40 and effective forms of moral development including enhancement, available; it is simply
41 that they are not the ones so far being spoken of⁸ as either relevant to moral or to neuro-
42 enhancement.
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46 These, tried and tested methods include the traditional ones of bringing children up to
47 know the difference between right and wrong, to avoid inflicting pain or suffering, on or
48 doing harm to, others and methods of instilling in them habits of respect for others.
49 These modes of respect include altruism, sensitivity and consideration and perhaps above
50 all of being able to put ourselves in others' shoes so that we not only understand, but
51 imaginatively experience, what it might be like to be on the receiving end of the conduct
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55 ⁷ Not "freedom from" but "freedom to". See Isaiah Berlin *Two Concepts of Liberty* in Isaiah Berlin *Four*
56 *Essays on Liberty* Oxford, Oxford University Press 1969.

57 ⁸ For example in two essays typical of, indeed exemplary of, recent work on moral enhancement, see
58 below.
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3 of others. Equally, more general education, including self education, wide reading and
4 engagement with the world and with ways in which the world is mediated, (including
5 mass media, computers and the internet), are powerful tools of moral development and
6 improvement or enhancement. These must include, of course, sophisticated
7 understanding of cause and effect, in particular of the ways in which to allow things to
8 occur is as effective a way of determining the state of the world as is making positive
9 interventions.⁹
10
11

12 **Moral Enhancement.**¹⁰

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15 In considering moral enhancement, first questions to ask are: what is moral enhancement
16 and what does it have to do with ethical knowledge, if there is such a thing, or with
17 ethical expertise; and what do all of these have to do with knowledge of ethics or
18 morality?
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20
21 One thing we can say is that ethical expertise is not “being better at being good”, rather it
22 is being better at knowing the good and understanding what is likely to conduce to the
23 good. Those with the insight, sympathy, empathy understanding and knowledge to have
24 formed clear ideas of what might conduce to the good are not necessarily better at doing
25 good in any of the ways in which this is possible, including of course making the world a
26 better place. There are many reasons for this and we have space only for a few.
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30 Some of these are to do with a problem, understood at least since classical Greece, the
31 problem of “akrasia” or weakness of will, one form of which was brilliantly summarised
32 by Oscar Wilde, when he defined virtue as “insufficient temptation”. We know how
33 lamentably bad we are at doing what we know we should. But equally problematic is the
34 fact that this is not, or not wholly, due to lack of moral fibre or resolution or firmness of
35 purpose. Rather, and again only very partially, it is because we have many purposes,
36 many things to do and experience and many priorities, of which being good we hope is a
37 part because we hope we do all of these things in a good, a moral way. But of course
38 because we are doing these other things, hopefully with benevolence and good will and
39 good intentions, it is the other purposes with which we also do them that are often, if not
40 more important, at least more at the centre of our attention.
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44 A very fundamental problem, which has not been much discussed in the literature on
45 moral enhancement, is that the sorts of traits or dispositions that seem to lead to
46 wickedness or immorality are also the very same ones required not only for virtue but for
47 any sort of moral life at all.
48

49
50 Tom Douglas, who has a good claim to be one of the grandfathers of moral enhancement,
51 has defined the most promising form of moral enhancement as “an enhancement that will
52 expectably leave the enhanced person with morally better motives than she had
53

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55 ⁹ See John Harris *Violence and Responsibility*, Routledge and Kegan Paul, London 1980.

56 ¹⁰ In this section on moral enhancement I am influenced by the fact that I have just finished discussing them
57 in a new introduction to the forthcoming paperback edition of my book first published as John Harris
58 *Enhancing Evolution* Princeton University Press, Princeton and Oxford 2007
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3 previously”.¹¹ Noting substantial difficulties in identifying “good motives” let alone
4 thinking about how, other than through early education and imaginative engagement with
5 others, or thinking about how to manipulate or improve them, Douglas adopts the
6 interesting expedient of trying to identify what he calls “counter-moral emotions”. He
7 identifies at least two: “a strong aversion to certain racial groups” and “the impulse
8 towards violent aggression”. Douglas commits himself to the belief that “there are some
9 emotions such that a reduction in the degree to which an agent experiences those
10 emotions would, under some circumstances, constitute a moral enhancement”.¹²
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12

13
14 There are two substantial problems with this, albeit highly creative, approach. The first is
15 that it seems unlikely that, for example, an aversion to certain racial groups, or to one or
16 more gender or sexual orientation is simply a “brute” reaction, a sort of visceral response,
17 as perhaps is an aversion to spiders. Rather it is likely to be based on false beliefs about
18 those racial or sexual groups and or an inability to see why it might be a problem to
19 generalise recklessly from particular cases. In short prejudice, as well as rationality,
20 usually has cognitive content and often makes factual claims. Beliefs with cognitive
21 content are for example beliefs that X is true or Y is false, that A is a danger and B is
22 not, that C is good and D is evil, they are explained by the people that have them in
23 terms of beliefs and ideas, including beliefs about facts which may be, and therefore can
24 often be shown to be, true or false.
25
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28 The most obvious countermeasure to false beliefs and prejudices is a combination of
29 rationality and education, possibly assisted by various other forms of cognitive
30 enhancement, in addition to courses or sources of education and logic.
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33 Ingmar Perrson and Julian Savulescu¹³ have advanced some reasons for denying or at
34 least circumventing the cognitive elements of certain “immoral beliefs”. They refer to
35 research which reports that “people encode the race of each individual they encounter,
36 and do so via computational processes that appear to be both automatic and mandatory.
37 Encoding by race is a by-product of cognitive machinery that evolved to detect
38 coalitional alliances.”¹⁴ While this may be true and while this encoding might be
39 susceptible to disruption, there are some problems with seeing this as a key to moral
40 enhancement. Racism still remains widespread, but is almost everywhere deplored, and in
41 many countries is also against the law. And of course it is racist behaviour, not racist
42 beliefs that are the problem, or the main problem¹⁵. The most important thing about the
43 prejudices that most, perhaps all of us, have in one form or another, is to recognise them
44 and learn to be ashamed of them and above all not to act on them. The neutralization of
45 the worst effects of racist beliefs, is thus probably enhanced by cognitive enhancement.
46 Moreover, it seems likely that racism affects, in a virulent form, only a minority of the
47 world’s population and yet all of us have the encoding, so one might think that the
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52 ¹¹Thomas Douglas “Moral Enhancement” *The Journal of Applied Philosophy* Vol. 25, No. 3, 2008. See
53 also <http://www.ncbi.nlm.nih.gov/pubmed/19132548>.

54 ¹² Ibid p. 231.

55 ¹³ Ingmar Perrson and Julian Savulescu “The perils of Cognitive Enhancement and the Urgent Imperative
56 to Enhance the Moral Character of Humanity” in *Journal of Applied Philosophy*, Vol. 25, No. 3, 2008.

57 ¹⁴ Op Cit p 168.

58 ¹⁵ I am grateful to Sarah Chan for reminding me of this important point.
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3 encoding cannot be that powerful. Racism has been further reduced dramatically in the
4 last hundred years by forms of moral enhancement including education, public
5 disapproval, knowledge acquisition and legislation. We thus have a very effective
6 blueprint for the sorts of ways in which we can reduce and hopefully eventually
7 effectively eradicate racism. The blueprint provides a good measure of the effectiveness
8 of these means and good reason to believe that racism can be defeated by such means
9 without resorting to biological or genetic measures which might have unwanted effects.
10 In the present case such an unwanted effect might be to weaken kinship ties more
11 generally or one's that are unconnected with race for reasons similar to those we are
12 about to discuss.
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16 Moreover, Perrson and Savulescu suggest that having:
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19 *Suggested that the core moral dispositions ...have a biological basis and, thus, in*
20 *principle should be within the reach of biomedical and genetic treatment, the next*
21 *question is to what extent such treatment is possible in practice. To this question*
22 *the answer seems to be: only to a very small extent.*¹⁶
23

24
25 To return to Douglas, the second problem with his account is that we would need to be
26 pretty sure that "the reduction in the degree to which the emotion was experienced" could
27 be precisely targeted only on strong aversions to things it is bad to have strong aversions
28 to and not things to which strong aversions are constitutive of sound morality. This
29 problem was effectively articulated by Peter Strawson in a famous essay entitled
30 "Freedom and Resentment".¹⁷ Strawson was not of course concerned with moral
31 enhancement, but rather with the problem of free will. And in the course of combating
32 some absurd forms of determinism, he points out that certain strong emotions, including
33 aversions, are an essential and even desirable part of valuable emotions, motives or
34 attitudes to others. Could we in short have the sorts of feelings that are appropriate and
35 indeed, it might be argued, necessary to morality, if we did not feel a strong aversion for
36 example, to someone who deliberately and unjustifiably killed or tortured those we love?
37
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40 While Douglas is right when he claims "there are some emotions such that a reduction in
41 the degree to which an agent experiences those emotions would, under some
42 circumstances, constitute a moral enhancement"¹⁸ this is a very modest claim indeed, and
43 I for one am sceptical that we would ever have available an intervention capable of
44 targeting aversions to the wicked rather than the good. Of course if ever we do have the
45 prospect of such precise and unequivocally good producing interventions, I will welcome
46 them. But I remain doubtful and remain worried about the prospect of weakening,
47 possibly essential and essentially moral, responses. This is a "baby and bathwater"
48 problem which may prove soluble, I hope it will, but fear it may be intractable.
49 Moreover, as we have seen there are substantial issues of liberty which would also need
50 to be resolved and which could conceivably be threatened by any measures that make the
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56 ¹⁶ Ibid. p172.

57 ¹⁷ Peter Strawson, "Freedom and Resentment" *Proceedings of the British Academy*. Vol. 48. 1960.

58 ¹⁸ Douglas "Moral Enhancement" *op cit*.
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freedom to do immoral things impossible, rather than simply making the doing of them wrong and giving us moral, legal and prudential reasons to refrain.

Perrson and Savulescu

Ingmar Perrson and Julian Savulescu have produced a characteristically bold and simultaneously an intriguing and a worrying manifesto for the urgency and importance of moral enhancement. In a paper whose title sums up the agenda,¹⁹ they are pessimistic, to the point of paranoia,²⁰ about the merits of cognitive enhancement and seem to argue that efforts to improve cognitive powers and capacities should be put on hold until moral enhancement is perfected and infallible and made not only universally available, but comprehensively mandatory. One problem with such an approach is that there are good reasons (which we have reviewed and will return to in due course) to believe moral enhancement must, in large part consist of cognitive enhancement.

Perrson and Savulescu summarise their argument in five main claims:

1. *It is comparatively easy to cause great harm, much easier than to benefit to the same extent.*
2. *With the progress of science, which would be speeded up by cognitive enhancement it becomes increasingly possible for small groups of people, or even single individuals, to cause great harms to millions of people, e.g. by means of nuclear or biological weapons of mass destruction.*
3. *Even if only a tiny fraction of humanity is immoral enough to want to cause large scale harm by weapons of mass destruction in their possession, there are bound to be some such people in a huge human population, as on Earth, unless humanity is extensively morally enhanced. (Or the human population is drastically reduced, or there is mass genetic screening and selection, though we take it that there is no morally acceptable way of achieving these sufficiently effectively.)*
4. *A moral enhancement of the magnitude required to ensure that this will not happen is not sufficiently possible at present and is not likely to be possible in the near future.*
5. *Therefore, the progress of science is in one respect for the worse by making likelier the misuse of ever more effective weapons of mass destruction, and this badness is increased if scientific progress is speeded up by cognitive enhancement, until effective means of moral enhancement are found and applied.*

¹⁹ Ingmar Perrson and Julian Savulescu “The perils of Cognitive Enhancement and the Urgent Imperative to Enhance the Moral Character of Humanity” in *Journal of Applied Philosophy*, Vol. 25, No. 3, 2008.

²⁰ Elizabeth Fenton has also criticised the Perrson and Savulescu arguments against cognitive enhancement, although she is more sanguine than I am as to the possible merits and success of genetic or biological cognitive enhancement. See Elizabeth Fenton, “The perils of failing to enhance: a response to Perrson and Savulescu” in *The Journal of Medical Ethics* Vol. 36 No. 3 March 2010 148-151.

Perrson and Savulescu conclude that:

If safe moral enhancements are ever developed, there are strong reasons to believe that their use should be obligatory...That is, safe, effective moral enhancement would be compulsory.

Now of course the mischief is in the meaning...in this case of the words “safe and effective” but before seeing just how much mischief might be possible it is worth taking a moment to examine the plausibility of Perrson and Savulescu’s five main claims.

First Claim

1. It is comparatively easy to cause great harm, much easier than to benefit to the same extent

This seems superficially true, so that when Perrson and Savulescu draw attention to the Virginia Tech killings in 2007 and say:

Seung-Hui Cho killed 32 people in the worst civil shooting in US history. Cho used two semiautomatic handguns. The actual killings took place in a couple of minutes. It is almost never possible to save 32 lives in the same period of time.²¹

we are inclined to accept it at face value.

But when we stop nodding at the obvious, but limited, relevance of such an example and examine it, this claim shows itself to be totally implausible. Raising the alarm when a fire is noticed in a school so that the building can be successfully evacuated or overpowering hijackers or terrorists who would destroy a plane in flight, often saves as many and usually more lives in as many minutes. So that when Person and Savulescu say: “It is almost never possible to save 32 lives in the same period of time” I am sorry to have to say that this is manifestly absurd.

On Saturday 26 December 2009 Umar Abdul Mutallab tried to set off a bomb on flight 253 carrying 290 people while it was attempting to land in Detroit. Jasper Schuringa became an international hero for thwarting this attempt and probably saving every life on the plane. This is the report of the incident from *The Observer*, a London newspaper, of the following day:

When [it] went off, everybody panicked," said Jasper Schuringa, a Dutch film director travelling to the US to visit friends. "Then someone screamed, 'Fire! Fire!' I saw smoke rising from a seat... I didn't hesitate. I just jumped." Schuringa said he heard a sound similar to a firework going off and looked across the aisle at the suspect who had a blanket on his lap attempting to ignite an object he was holding. "It was smoking and there were flames coming from beneath his legs," he

²¹ Perrson and Savulescu op cit p. 173.

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said. "I searched on his body parts and he had his pants open. He had something strapped to his legs."

Schuringa and the cabin crew then dragged Mutallab, a 23-year-old Nigerian, to the front of the plane, where he was restrained until landing. Mutallab reportedly told intelligence agents who began interrogating him after he was taken to hospital strapped to a stretcher that he had an explosive powder strapped to his leg. He was trying to set off the device with a syringe filled with liquid.²²

We are obviously not going to quibble over the meaning of the words "same period of time". I am sure Mr Schuringa did not time the event, but the issue is the plausibility of the claim "It is comparatively easy to cause great harm, much easier than to benefit to the same extent". The example of Flight 253²³ shows that 9 times the number of people, as in the Perrson and Savulescu example, can be saved in a comparable period of time; and this is not an isolated example. The case of the infamous shoe bomber who was overpowered by crew and passengers while trying to set off a bomb and which anyone who has had to remove their shoes at airport security will remember with affection,²⁴ was similar, and there are many more.

More obviously, the voting of huge sums of money for famine relief or aid work following a tsunami or earthquake, or to allocate vaccines (for example the provision of 35 million doses of the Tamiflu vaccine for the UK population against a pandemic)²⁵ is the work of a few minutes, but can save thousands, even millions of lives. In the event of course the influenza pandemic was much milder than feared and most of the anti-viral reserves remain for another day. Vaccine programmes, while not instantly implementable, are quick and dramatic ways to save millions of lives. Whatever the death toll of a disaster, once methods of preventing a recurrence are found, the implementation of those methods almost certainly saves as many if not more lives as might have been threatened by the disaster. This is because preventive measures probably forestall not only this year's disaster but next years' and the following years as well. For if the preventive measures are permanent, as is likely in the case of smallpox and polio for example, then arguably an indefinite time sensitive multiplication of the death toll relates plausibly and proportionately to the lives saved. Whether or not this is an acceptable basis for a precise calculation, it is surely unlikely that the lives saved will be less than those previously lost in a permanently prevented pandemic. Thus:

'Smallpox continued to ravage Europe, Asia, and Africa for centuries. In Europe, near the end of the eighteenth century, the disease accounted for nearly 400,000 deaths each year, including five kings. Of those surviving, one-third were blinded. The worldwide death toll was staggering and continued well into the twentieth

²² <http://www.guardian.co.uk/world/2009/dec/27/abdul-muttalab-flight-253-terrorist-al-qaida>. Accessed 11th April 2010

²³ <http://news.bbc.co.uk/1/hi/uk/8431499.stm> Accessed 11th April 2010

²⁴ [http://en.wikipedia.org/wiki/Richard_Reid_\(shoe_bomber\)](http://en.wikipedia.org/wiki/Richard_Reid_(shoe_bomber)) Accessed 11th April 2010

²⁵ <http://news.bbc.co.uk/1/hi/health/8606032.stm> Accessed 11th April 2010

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century, where mortality has been estimated at 300 to 500 million. This number vastly exceeds the combined total of deaths in all world wars.²⁶

And arguably the initiation of the WHO plan to eradicate smallpox saved at least as great a proportion of the world's population as that estimated to be threatened by it.

In 1967, when WHO launched an intensified plan to eradicate smallpox, the "ancient scourge" threatened 60% of the world's population, killed every fourth victim, scarred or blinded most survivors, and eluded any form of treatment.²⁷

As of the last century, as Perrson and Savulescu confirm, smallpox is regarded as entirely eradicated. So much for the claim that: "It is comparatively easy to cause great harm, much easier than to benefit to the same extent"! Perrson and Savulescu can certainly be forgiven for this error, it is all too easy to accept a dramatic cliché which seems to illustrate something one is tempted to believe, and I have done so many times myself. It is however useful to lay this particular "canard" to rest once and for all.

Perrson and Savulescu quite rightly make great play with the dangers of biological weapons and the possibilities of bioterrorism.

The polio virus has now been artificially constructed...More frighteningly scientists have modified mousepox to make it lethal in 100% of mice... Voltaire estimated that smallpox killed around 20% of the French population in his day. It was eradicated last century from the globe by vaccination...Genetic engineering of smallpox could create a new strain which would wipe out all or most of humanity.

So it could, and cognitively enhanced science might create a vaccine in time to prevent it. This seems a telling example; but what does it tell? The answer is that it tells rather against the Perrson/Savulescu thesis than for it. First it shows that just as a disease like smallpox is an effective killer, vaccines against it are equally successful ways of saving lives. How long did it take to kill 20% of the French population in Voltaire's day? How long did it take to save those same numbers with a vaccine? These are complex questions and because of ambiguities about when a lethal agent operates and when a protective measure actually does the protecting, they are probably not even answerable questions.

But if we compare the time taken by Seung-Hui Cho to kill 32 people and the time it would take to administer say thirty two doses of polio vaccine via sugar lump to a queue of children, the time difference would not be significant. Add to this the numbers killed by polio and the numbers vaccinated we can see that it is often comparatively easy and not time consuming to save great numbers of lives.

²⁶ sites:<http://www.infoplease.com/cig/dangerous-diseases-epidemics/smallpox-12000-years-terror.html>
Accessed 11th April 2010

²⁷ <http://www.who.int/mediacentre/factsheets/smallpox/en/>, Accessed 11th April 2010

Of course it might be claimed that the development of effective vaccines, for example against polio and smallpox, took a great deal of time, but so did the development of semiautomatic handguns. From the first use of firearms somewhere between China in the ninth century and medieval Europe in the thirteenth century to today is a very long time indeed. The fact that once developed, both vaccines and semiautomatic firearms, are fast acting emphasizes the similarities rather than the differences.

What seems clear is that the time the killing or the saving takes is trivial compared with the effectiveness of each. No generalizations to the effect that damage is always or even often quicker than repair, or prevention slower in taking effect than what it prevents, are helpful in addressing the potency of dangers or the probability of defences against them being effective. We can be confident in our conclusion that claim one is false; not least because it depends on upholding a version of the acts/omissions distinction which I am sure that Savulescu at least, rejects. For if a mad or bad individual can destroy the world instantly by setting off a doomsday machine, then a good consequentialist can save the world as quickly by killing him (or morally enhancing him) the moment before he can do so or at any time before that! And this sort of prevention is a recurrent theme of Savulescu's work.

Claims 2 and 3 need to be considered together.

2. *With the progress of science, which would be speeded up by cognitive enhancement it becomes increasingly possible for small groups of people, or even single individuals, to cause great harms to millions of people, e.g. by means of nuclear or biological weapons of mass destruction.*
3. *Even if only a tiny fraction of humanity is immoral enough to want to cause large scale harm by weapons of mass destruction in their possession, there are bound to be some such people in a huge human population, as on Earth, unless humanity is extensively morally enhanced...*

Essentially this is the claim that it only takes one bad man to spoil things for the rest of us. This may well be true, in the sense that its possibility cannot be ruled out, but it is not just the wicked that present problems of this sort. Moreover, it is not clear either that speeding up the progress of science through cognitive enhancement exacerbates the process, nor that moral enhancement has much prospect of eradicating this possibility, indeed the reverse may be true. We need to remember that any tool or technology can be abused or misused and that accidents and negligence can already routinely cause or threaten, harms on a massive scale (Three Mile Island, Chernobyl).

If, and in so far as, it is true that scientific progress increases the power of individuals to do harm, it is not clear that moral enhancement if and when it might be possible to imagine it to have become "safe" and "effective", will much reduce this danger. Although I am sure that Perrson and Savulescu would acknowledge that mad, as well as bad, individuals can cause harm, they talk throughout their paper almost exclusively as if

the danger was from wickedness, perhaps because they want to encourage the prioritization of moral enhancement as a field of study.

Remember the idiots.

Now add to this that the danger comes not simply from the malevolent, but from another important category of disastrous individuals. Perrson and Savulescu refer to the work of Martin Rees. Now Rees is famous for (among many other things) his elevation of the “village idiot” to global status. In his fascinating book *Our Final Century*²⁸ Rees catalogues the disasters which might, if the causes of them are not addressed, lead to the end of human life on this planet. Rees considers the role of malevolence or wickedness but also warns of the dangers posed by incompetence or stupidity.

*We are entering an era when a single person can, by one clandestine act, cause millions of deaths or render a city uninhabitable for years, and when a malfunction in cyberspace can cause havoc worldwide to a significant segment of the economy: air transport, power generation, or the financial system. Indeed disaster could be caused by someone who is merely incompetent rather than malign.*²⁹

Rees glossed these remarks at the Hay festival in 2006: “in a global village there will be global village idiots, just one could be too many” and he concluded “I think there is a real concern about whether our civilization can be safe-guarded without us having to sacrifice too much in terms of privacy, diversity and individualism”.³⁰ I agree with Rees about this, and would add dangers to liberty and autonomy. But I run too far ahead, let’s complete our discussion of Perrson and Savulescu.

Claims 4 and 5 need to be considered together.

4. *A moral enhancement of the magnitude required to ensure that this will not happen is not sufficiently possible at present and is not likely to be possible in the near future.*
5. *Therefore, the progress of science is in one respect for the worse by making likelier the misuse of ever more effective weapons of mass destruction, and this badness is increased if scientific progress is speeded up by cognitive enhancement, until effective means of moral enhancement are found and applied.*

These final two claims are interesting. The first that moral enhancement by new and more radical means than education, knowledge acquisition and scientific progress is at best a long way off seems right to me; but the alleged sequitur is definitely of the “non” variety. One of the reasons for this is that claim 4 not only notes how far off moral enhancement

²⁸ Martin Rees *Our Final Century* Arrow Books, London, 2004.

²⁹ Ibid page 61.

³⁰ As reported in Guardian Unlimited Monday May 2006.

http://blogs.guardia.co.uk/culturevulture/archives/2006/05/29/doom_destructio.html accessed 08.04.2010.

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3 of any new kind is likely to be, but refers to a “moral enhancement of the magnitude
4 required to ensure that” disaster is avoided. There are many reasons to believe that such
5 “ensurance” and the assurance that follows from it, are impossible, not least because
6 failures in any human intervention are not only possible but are arguably inevitable.
7 There is no such thing as *ensuring* safety.
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10 Even more significant are the costs of delay. While we wait patiently with Perrson and
11 Savulescu for the mid to far future perfection of genetic or biological moral
12 enhancement, and while we put on hold the cognitive enhancement that might accelerate
13 scientific advance and the discovery and innovation it produces, “stuff” or even events
14 happen!³¹ That stuff will be the minute by minute, day by day accumulation of premature
15 death and suffering from causes that cognitive enhancement and the resulting innovation
16 might have prevented.
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20 In my book *Violence and Responsibility*,³² published thirty years ago now, I was
21 concerned with our responsibility for harms which we might prevent or might have
22 prevented. I insisted that, for example, the violence of political change must be evaluated
23 against what the social historian Barrington Moore Jr called “the violence of normal
24 times”. “To dwell on the horrors of revolutionary violence while forgetting that of
25 ‘normal’ times” he said is “merely partisan hypocrisy”.³³ Barrington Moore Jr warned
26 that the death toll of, for example the revolutionary terror of the French Revolution, must
27 be seen as a response to “the prevailing social order” which “always grinds out its toll of
28 unnecessary death year after year”.³⁴ We are attuned now to be sensitive to the costs of
29 delay in instituting not only social reform that might prevent unnecessary death and
30 suffering, but the delays that result from failures to turn discovery rapidly into
31 innovation, and to ensure that innovation results in products in the clinic and the
32 marketplace that will save and ameliorate lives. Perrson and Savulescu refer to the work
33 of Jonathan Glover, although not in this regard, but they might also have referred to
34 earlier work of Julian Savulescu. It is an irony that Savulescu is here advocating the sort
35 of delays in adopting new technology and medical innovation which certainly will cost
36 lives, delays of the sort that in the past he has been vigilant to oppose.³⁵ Of course if haste
37 will cost more lives than delay we have good reasons for a precautionary approach. In the
38 present case, as Perrson and Savulescu admit, there is not only no immediate prospect of
39 moral enhancement but we have literally no idea how long (if ever) it will take to perfect.
40 On the other hand we have daily evidence of the record of science and technology in
41 preventing and treating disease and premature death and in dramatic increases in life
42 expectancy.
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50 ³¹ Donald Rumsfeld was by no means the first to give this memorable truism an epigrammatic handle. The
51 British Prime Minister, Harold MacMillan, gave this idea slightly more elegant expression in response to a
52 journalist who allegedly asked him what might blow the government off course was “events dear boy,
53 events” and much as it goes against the grain they were both right.

54 ³² John Harris *Violence and Responsibility*, Routledge & Kegan Paul, London, 1980.

55 ³³ W. Barrington Moore Jr *The Social Origins of Dictatorship and Democracy*, Penguin, Harmondsworth
1969 page 103.

56 ³⁴ Ibid.

57 ³⁵ See for example Julian Savulescu, “Justice, Fairness and enhancement” in *Annals of the New York
58 Academy of Sciences* 1093: 321-338 2006.
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Moreover if Martin Rees is right this cannot be *ensured* because it is unlikely that moral enhancement will affect the proverbial “village idiot”, nor the sort of disaster that might result from negligence or miscalculation. Rees’s book cites many examples of how much room there is for the disastrous miscalculation of the level of risk inherent in many apparently benign or “morally neutral” technologies. The question then becomes one of whether forgoing the benefits that might accrue from accelerating science via cognitive enhancement, including the rapid development of antidotes to engineered diseases and other bio-weapons and biohazards, better insights into how to combat the worst affects of climate change and reliable methods of predicting asteroid strikes and developing methods of diverting the asteroids, to identify just a few of the dangers that we may hope will prove amenable to a scientific or technological “fix”. While we can be sure of none of these things it would not simply be a brave man, but surely a reckless one who would bet against the overall utility of scientific advance and cognitive enhancement.

Julian Savulescu is one of the smartest people I know. Until this moment I had no reason to think of him as, for this reason, also one of the most dangerous. Should I also begin to look on my most talented students with equal suspicion and do my best to sabotage their cognitive advancement? I hope I have found reasons in this paper both to continue to admire Julian, and continue to encourage my best students. Indeed as Elizabeth Fenton has pointed out “it is difficult not to take [Perrson’s and Savulescu’s pessimism] to imply that unless and until we further understand moral enhancement, we should try to slow scientific progress”.³⁶ She might have gone further and pointed out that their extreme risk aversion would justify not only retarding scientific progress but retarding the cognitive powers of people as well.

Milton Revisited.

Although Perrson and Savulescu say: “True, there are also respects in which scientific progress accelerated by cognitive enhancement would be for the better, by protecting us against threats posed by asteroids, epidemics etc. We have not attempted to settle definitely the balance between these good and bad respects”. This is disingenuous and is at odds with what they say elsewhere. In talking about the dangers from cognitive enhancement for example they say:

...it is enough if very few of us are malevolent or vicious enough to use this power for all of us to run an unacceptable increase of the risk of death and disaster. To eliminate this risk, cognitive enhancement would have to be accompanied by a moral enhancement which extends to all of us, since such moral enhancement could reduce malevolence.³⁷

Here they are explicit that cognitive enhancement “would have to be accompanied by a moral enhancement which extends to all of us” before the risks of cognitive enhancement would be other than “unacceptable”.

³⁶ Fenton *op cit* Page 149.

³⁷ Perrson and Savulescu *Op Cit* page 166.

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4 Notice also that they talk of the *elimination* of the risk in a context where moral
5 enhancement which *extends to all of us* will only, at best, *reduce* malevolence. So even
6 in the most ideal scenario in their terms, a risk which obtains if only one malevolent
7 person escapes is still, for them, massively significant. So we have a strategy to eliminate
8 a danger which has to be universally applied but only reduces (but not eliminates) the risk
9 of the danger, the risk of which risk is defined in terms of the people who pose the danger
10 (whose numbers are already admittedly very small) - “it is enough if *very few* of us are
11 malevolent”!

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15 But of course cognitive enhancement is also well calculated to speed up the sorts of
16 advances that can, do and will save lives. We would have to be very sure of the
17 probability of its negative effects to be justified in ignoring the positive ones.
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20 My own reading of the balance here is rather different. Science, innovation and
21 knowledge production, particularly education, are I believe our chief hope of finding
22 solutions to the most threatening sources of probable mass destruction and is moreover
23 our only proven form of moral enhancement to date (and have proved very effective).
24 Add to this the point, emphasised by Martin Rees, that evil is not the most probable
25 source of catastrophe, and that threats not amenable to moral enhancement such as
26 asteroids, new diseases climate change and idiocy, inadvertence and negligence of all
27 sorts, are equally likely, perhaps more likely to produce disaster, and we have a different
28 agenda. This agenda is to reject the idea of putting on hold cognitive enhancement until
29 moral enhancement is in place to rein it in. Rather we must embrace reliable forms of
30 cognitive enhancement in the hope and reasonable expectation that they are our best
31 prospect of self-defence including whatever element of self-defence may eventually
32 result from moral enhancement. Indeed cognitive enhancement might reasonably be
33 expected to reduce idiocy, even of the common or village variety!
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38 Milton reminded us that we have been made with both freedom and a powerful sense of
39 justice and the right, and I am sure that Darwinian evolution rather than God is the force
40 responsible. Either way we have what we need, both to know the good and to try to do
41 the good. This knowledge, like all knowledge, can be improved upon and I believe we
42 should look to improve our capacity for knowledge as effectively and as fast as possible.
43 But the other part of Milton’s insight is the crucial role of personal liberty and autonomy:
44 that sufficiency to stand is worthless, literally morally bankrupt, without freedom to fall.
45 Again my own view is that I, like so many others, would not wish to sacrifice freedom
46 for survival. I might of course lack the courage to make that choice when and if the time
47 comes. I hope however that I would, and I believe, on grounds that have more eloquently
48 been so often stated by lovers of freedom throughout history, that freedom is certainly as
49 precious, perhaps more precious than life.
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53 Perrson and Savulescu end their paper with a truly chilling reference to C.S. Lewis’s
54 stories for children and the frightful “Deplorable Word”.
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*This is a 'magical curse which ends all life in the world except that of the one who speaks it'... If we all knew the Deplorable Word, the world would likely not last long. The Deplorable word may arrive soon, in the form of nanotechnology or biotechnology. Perhaps the only solution is to engineer ourselves so that we can never utter it, or never want to utter it.*³⁸

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Ironically and perhaps self-defeatingly it would have to be biotechnology, and possibly cognitively enhanced biotechnology, that would give us the power to engineer ourselves into losing our freedom to innovate in biotechnology in this truly deplorable way. I think we have to hope for something better and perhaps someone better than C.S. Lewis to analyse the dangers.

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Perrson and Savulescu may well be right, but we will only know that once moral enhancement has been perfected and only if thereafter bad men, madmen and idiots have ceased to commit or attempt acts of mass destruction. The perfection of moral enhancement is admitted by Perrson and Savulescu to be "not likely to be possible in the near future". I believe it will never be possible to the extent the Perrson/Savulescu thesis requires, or indeed that Tom Douglas believes,; both for reasons already given and because moral enhancement has little prospect of preventing idiocy - but of course I could be wrong! Even if Perrson and Savulescu have made the better bet, we will have to wait a long time to know which of us is right, a long time for non-traditional moral enhancement to be possible and then another, possibly even longer, period of time for it to become universal and then another even longer time than that to have any idea whether or not it is working. Meanwhile wickedness and idiocy not to mention human inadequacy will continue to grind out its daily death toll, a toll that might in all this time have been dramatically reduced by discoveries accelerated by cognitive enhancement. Moreover, these discoveries might save (might have saved) us from a very large class of mass destruction not attributable to malice, and therefore not susceptible to moral enhancement, such as disease, asteroid strikes and climate change. I don't believe it would be rational to bet on moral enhancement and against accelerating our ability to deal with...literally anything, an ability which is likely to stem, with immediate effect, from cognitive enhancement whether it takes the form of greater alertness or wakefulness in pilots and long distance drivers and emergency medical staff or better decision making from workers who have to function in all sorts of demanding situations.³⁹

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A strategy that leaves us free to search for solutions to problems we cannot as yet even foresee, one that permits us to use techniques of cognitive enhancement to accelerate that process and one which leaves us free to find, and equipped to implement, those solutions as quickly as possible is a better bet. It is surely better to remain sufficient to stand and to hang on to our precious freedom to fall.

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³⁸ Perrson and Savulescu *op cit.* Page 175.

³⁹ Henry Greely, Barbara Sahakian, John Harris, Ron Kessler, Michael Gazzaniga, Philip Campbell, Martha Farah: "Towards responsible use of cognitive enhancing drugs by the healthy" *Nature*, Vol 456, 18/25 December 2008