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## Mitigating Anthropogenic Disasters by means of Moral Bioenhancement

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**Abstract:** This paper presents a dialectic between the proposed use of moral bioenhancement (MBE) and its critics. The proposal made by Savulescu and Persson is motivated by the realization that we have been unable to improve our moral capacities despite the astonishing improvements of our other capacities, including capacity for self-destruction, brought about by technological advancements. MBE's success depends primarily on the discoveries in the field of Neuroscience as these will determine how the use of biological, neuroscientific, pharmacological and technological interventions can improve our moral dispositions like empathy, altruism, sense of justice, and cooperation. The prospective utilization of MBE has received serious criticisms from Harris and Sparrow. John Harris laid the terms of debate on the issue of freedom. Moral behavior brought about by successful implementation of MBE is not free action. This takes away being "free to fall" and the agent is not worthy of blame or praise. Sparrow adds that if MBE does not provide us with deeper moral reflection, then it is not true that the agent has undergone any moral enhancement whatsoever. In response, we argue that while person P is given MBE, P still acts on reasons borne out of conscious moral deliberation. It is not true that P is deprived of freedom because MBE does not in any way produce autonomic behavior divorced from P's practical judgment. Contra Harris, where P's action depends on P's decision, there is freedom. If this case does not count as moral enhancement then it is not due to absence of moral reflection, contra Sparrow.

**Key Words:** Moral enhancement; Moral bioenhancement; Cognitive enhancement; freedom; ultimate harm



## 1. INTRODUCTION

A good number of events that transpired in recent years have forced us to take a closer look at our ways of dealing with the world around us and to cast a second look at the world within us. Human decisions impact events that are seemingly beyond human control like natural disasters or "acts of nature." When our way of life affects the processes of nature, the resulting catastrophes can be considered anthropogenic. Disasters arising from climate change are due mainly to humans' inability to care for things and people beyond the immediate environment. These catastrophes plus the deaths resulting from armed conflicts may lead to our downfall.

In *Unfit for the Future*, Savulescu and Persson (2012a) argued that if we are to avoid ultimate harm (UH), "an event that would make worthwhile life forever impossible on this planet," it is necessary for humans to resort to moral enhancement (ME). To be morally enhanced is to have those dispositions which make it more likely that you will arrive at the correct judgement of what is right to do and more likely act on that judgement (2012a). "In order for something to count as moral enhancement, it must enhance your moral motivation, your disposition to (decide and) try to do what you think you ought morally to do, rather than your capacity to implement or put into effect such tryings, to succeed if you try" (Savulescu et al, 2017).

Sadly, we have long used traditional means of ME by moral education but still we have not developed our moral capacity to catch up with tremendous capabilities afforded us by recent scientific discoveries. In order to avoid UH, Persson and Savulescu (2012) proposed the use of additional moral enhancement using drugs, genetic modifications or devices to augment moral education. These are called Medical bioenhancements (MBE) which are "pharmaceutical, neurological or genetic means of strengthening the central moral drives of

altruism and a sense of justice" (Savulescu et al, 2017).

This paper presents charitable reading of the arguments for MBE and initiates a dialectic between the idea of using MBE and the philosophical objections raised against it by Harris and Sparrow. The debate between proponents of MBE and its critics focus on the possible loss of freedom and absence of moral deliberation that may result from implementation of MBE. The authors find these objections inadequate to defeat the proposal, and outline conditions under which MBE can be desirable.

## 2. METHODOLOGY

This philosophical paper uses dialectic as a technique of exposing false beliefs and eliciting truth about the desirability of MBE. This involves exchange of arguments between its advocates and its critics. This requires clarifying the meaning of concepts, testing arguments for soundness, and determining the truth or falsehood of the claims that make up the argument. Counterarguments and counterexamples are presented to expose inconsistencies and weaknesses of the claims presented. Specifically, we presented the strongest possible version of arguing for MBE while addressing the objections against it.

## 3. RESULTS AND DISCUSSION

### 3.1. Neuroscience and Moral Enhancement

Any change in a moral agent—effected or facilitated in some significant way by the application of a biomedical intervention that results, or is reasonably expected to result, in the agent being a morally better agent is considered as an MBE. While research on MBE is at its infancy, the discoveries in neuroscience can provides some direction.



Since a common feature of mainstream moralities is that they are other-regarding (Gensler 2016), being moral requires a degree of self-sacrifice and altruism. It is a prerequisite of moral action that one should sacrifice or constrain one's own self-interest for the benefit of others (Savulescu et al, 2012b). Increasing the willingness to sacrifice one's own interests for the benefit of others is a ME, on any account of morality. Researchers in the field of neuroscience have found evidence that the "cuddle hormone" oxytocin strengthens social ties and help promote generosity (Hurlemann, 2015). Oxytocin is a potential MBE.

Another trait necessary for moral behavior is willingness to cooperate with other people. Serotonin has a long tradition of being associated with prosocial behavior, and as such is another candidate. "If you boost serotonin function, this makes people more prosocial. If you deplete or impair serotonin function, this makes people antisocial" (Crockett, 2014).

Impulse control is another. Inability to delay gratification results in lesser ability to sacrifice one's own interests for a moral goal. Drugs like *Ritalin* and *Adderall* increase impulse control and as such can contribute to more moral behavior. These MBE prescription drugs are regulated but can possibly be used as MBE. *Ritalin*, *Adderall* and other drugs improve impulse control in children with attention deficit disorder, indeed reducing violence and antisocial behaviour (Sinzig et al, 2007). These drugs are already being (ab)used as cognitive enhancers in some universities due to their efficacy to effect prolonged focus and concentration.

Empathy is the capability of vividly imagining what it would be like to be in another person's shoes, especially those who suffer (Savulescu and Persson, 2017). Empathy entails feeling concern for others, sharing and comprehending their emotions, prompting motivation to help them (Bernhardt and Singer, 2012). Dopamine causes a greater willingness to engage in prosocial behaviors,

such as ensuring that resources are divided more equally (Saez et al, 2004).

Empathy combined with the other traits mentioned would be key to developing MBE with the goal of avoiding anthropogenic disasters.

### 3.2. Objections: Harris and Sparrow

The prospect of increased capacity to avoid UH via MBE gives rise to optimism. After all, who wouldn't want a "better" future instead of the prospect of the demise of human race? This optimism generated by the prospective utilization of MBE has encountered criticisms, the most important of which come from Harris and Sparrow. If MBE takes away freedom of the will and moral deliberation, then somehow MBE turns humans into mindless robots who do not act for reasons but do moral actions.

The main protagonist in engaging Persson and Savulescu in the debate on freedom is John Harris. He argues that moral bioenhancement will "make the 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" (Harris, 2011). If we are to remain moral agents, it is imperative that we maintain our "freedom to fall." Without this, no one is "morally responsible for her character or deliberative powers, or for the results that flow from them.... Given that she was shaped to have such characteristics by environmental forces far beyond her control, she deserves no blame nor praise" (Waller, 85). If doing good is guaranteed by MBE, then the person is not free to fall, hence unfree.

Harris believes that as persons are capable of reason, we have the capacity to decide whether something is considered as right or wrong. The same reason also provides us the power to reflect and to introspect. This supports our capability of free-will. "No one who claims to be acting morally or out of moral conviction or principle can resist accountability for what they claim to believe or do in the name of



morality. And this means they must always be prepared to offer a reasoned defense and justification of their morality or elements of it. It would never be enough or indeed even respectable for the reply to be "I just felt like it." (Harris, 2012).

Sparrow (2013) adds that the real threat posed to freedom by moral bioenhancement is that the enhancers will be wielding power over the "enhanced." If MBE doesn't provide us with deeper moral reflection, it is not certain that the agent has undergone moral enhancement. Sparrow (2013), observes that much of their discussion proceeds as though altering behaviour — to prevent someone acting immorally or to ensure that they do the right thing in some particular circumstances — is moral enhancement. However, using sedative gas to prevent someone from completing an assault but we would hardly consider this as a case of moral enhancement.

For Sparrow (2013), we should focus to enhance our cognitive abilities for us to create better judgment. "Enhancing an individual's moral agency would therefore require more than simply reshaping their inclinations — it would require improving their capacity to act for the right reasons." Moral neuroenhancement will not produce deeper moral improvement, and traditional means of moral enhancement are more reliable and more effective.

For Liao (2011, 2016), if ingestion of pills brings about higher levels of oxytocin in the bloodstream and creates the right neurological conditions enabling a person to perceive one's child as worthy of affection, this practice can be considered as MBE. But as Kabasenché (2016) warns us, "physiological stimulation of a state is in danger of lacking any serious critical reflection about the moral value of that state, of its proper expression in context, and of its place in the larger moral outlook of the individual being enhanced." Moral enhancement cannot simply be a matter of changing a physiological state.

### 3.3. Response: Acting for reasons

In response, Persson and Savulescu present two points for consideration. First, those who have undergone MBE would act for the same reasons as any moral person does. "The sense in which it is 'impossible' that they do what they regard as immoral will be the same for the morally enhanced as for the unenhanced person," and second, "people who are morally good and always try to do what they regard as right are not necessarily less free than those who fail to do so" (Savulescu et al 2011a).

We see a common thread in these lines of reasoning. Few would find it objectionable to assert that just as cognitive enhancement (CE) does not give knowledge, MBE by itself will not produce moral behavior. Just as learning requires effort, moral behavior requires conscious deliberation and decision, then realized in action. To say that MBE might make it easier and more likely to do good is not equivalent to saying that freedom and moral reflection are excluded. Even when morally enhanced biomedically, a person still has to determine the right reasons (moral deliberation) for performing act A, and he has to exert effort to carry out the moral decision. In fact, the same person may not carry out his decision into fruition. By weakness of will, *akrasia*, he may not perform the good action he may have already intended and decided on. Doing good in this case is not a matter of expending energy that is automatically triggered by dispositions developed with the aid of MBE. It is not autonomic behaviour divorced from practical judgment (Kabasenché 2016). The merits of this argument re-establishes that the moral agent in these conditions is worthy of praise or blame.

To illustrate the point, let us use the case of John, as imagined by Savulescu and Persson (2012b). Imagine that there is a drug, D, which when taken, heightens one's empathy. The drug would be helpful in having a clear vision of other people's condition. Now, consider a person, John, who takes D, walks on his way to work, sees a beggar, and decides to give the



beggar an apple. He figures it is better than giving money to the beggar.

In this case, there is just the right sort of connection between deliberation, judgment and action. Consider the complete succession of events involved here. John takes MBE. John's empathy is heightened. John sees a beggar while walking. John "sees" the suffering of the beggar. John ponders on what action to perform. John decides not to give money to the beggar. John helps alleviate the beggar's suffering by giving an apple. It is clear that John acts for reasons, just as anyone who is free acts for reasons. MBE just aided in enabling him to see things the right way. John's act of giving the apple was not unfree – it was deliberate, borne out of sound moral judgment, and more importantly, virtuous. John could have done something else, perhaps give money or walk away enjoying his apple.

Next, imagine a priest, P, who gets visited by a couple of beggars on a weekly basis, and regularly at about one hour after the P's breakfast which includes a dose of cognitive and moral enhancers. The beggars would tell the porter that they really need to solicit help from P, given the sad plight that they are in. To the surprise of people in the community, time and again, P would give some cash and a pack of groceries after talking to them for about half an hour. Could he have rejected some of those pleas for help from the same people who are perceived by others as already taking advantage of the generosity of the priest? Definitely, in fact insofar as justice is concerned, the couple might have abused the kindness of P and do not deserve to receive aid. When P was asked about why he kept on helping the couple and listening to their "sad stories", he explained that he feels with them and understands that their situation in life is really "sad" such that they might have actually felt the need to lie to him about their needs to receive help from him. Acting on *this* personal reasoned belief, P freely does a virtuous act. MBE could have activated or heightened prosocial behavior, but the action and its reason arise from conscious personal reflection. While it may be the case that "moral judgments are

not fixed, but malleable and contingent on neuromodulator levels, stress, and so on,... such judgments are not so dependent on the vagaries of neurochemistry." (Crockett, 2016j

Finally, let us suppose that there will be a conference of world leaders, a Summit perhaps, to decide on an important issue. Suppose further that, these leaders are well educated individuals. However, let us take W, W is among these world leaders, even though W has the peoples' best interest in mind, W still feels repugnant towards other world leaders. W sees that to achieve her peoples' needs she must see to it that there is no sense compromising with other world leaders, which have different beliefs from her, and prioritize her own and her peoples' needs. Because of W's action and decision, a bigger conflict arises that leads to the demise and suffering of others. Now, perhaps we can extend the findings of Danzinger et al (2011) to a much higher level of authority and representation. As it was found out that judges are more likely to grant parole if the hearing takes place immediately after a snack break, it might not seem unreasonable to propose that perhaps prior to attending a negotiation, arbitration or even a confrontation meeting, parties could be aided by a dose of MBE. Let us then imagine a different picture. Let us suppose now that W, prior to the meeting, took a dose of MBE. W, with her education and a dose of MBE, is more open to new ideas given the fact that her cognitive processes and moral inclinations are now aided by the MBE. This then gives her a more open and sensible mindset, her repugnance towards other world leaders are no longer prioritized or bears the same weight to her decision. This is because her repugnance coming from neurological processes are lessened by the MBE. In turn, W's improved mindset is a result of her cognitive excellence, an aid from MBE and her personal choice. Thus, MBE combined with her education and training allows her to be more reflective about her actions and because of this she then acknowledges compromise and negotiation with her colleagues. This led to a more fruitful and effective summit. However, this example may not be true for all world leaders because of their agency, W



still chose to communicate and be more open minded in the negotiation.

It is important to note that, while parties involved would hold on to belief systems that may be in conflict with the other parties' beliefs, it is always more beneficial to "see" the other side, and perhaps understand why and where the conflict arises. Acts that may lead to the destruction of the "other" may be averted. As a reiteration, it is possible that the parties involved would not come to an agreement as each participant remains free to decide on the basis of their respective reasons.

Abovementioned cases underscore the role of individual persons in making specific choices that lead to performance of moral action. These agents could have opted to do something else even when influenced by MBE. This position is consonant with what Wiseman (2018, 281) claims, namely, "without this active participation, only the crudest possibilities for moral enhancement remain—or arguably none at all... It is the individual and his own efforts which ultimately make MBE into moral enhancement—for without his willing participation, there is no intervention on earth ... which can make a person more moral in the most stringent, explicit sense." Indeed, as Wiseman and Crocket assert, moral behavior is mediated by the brain's biology but not determined by it.

These cases also highlight the crucial role of cognitive processes in moral decisions. Since moral deliberation or reflection is crucial in bringing about moral behavior, any intervention geared towards moral enhancement will be more beneficial if combined with cognitive enhancement. We develop "better" moral character via deeper moral reflection (that includes cognitive processes) that brings about decisions leading to moral actions. The combination can aid us in attenuating our tendencies to commit immoral acts and possibly avoid UH.

### 3.4. Making MBE morally desirable

With addition of some standard bioethical safeguards to the foregoing discussions, we can now identify conditions under which MBE can be desirable:

- (1) The drug or technology in question is (a) used as an aid or adjunctive intervention to well-established "traditional" forms of moral learning or education (rather than used, as it were, in a vacuum), such that (b) it allows for conscious reflection about and critical engagement with any moral insights that might be facilitated by the use of the drug; and (c) It has been thoroughly researched, with a detailed benefit-to-risk profile, and is administered under conditions of valid consent. (Earp et al, nd)
- (2) It has the ability to directly target certain emotional states/capacities (state of mind) that aid in producing a smooth interaction with other people, social context, environment, etc.
- (3) It can enhance cognitive processes,
- (4) It does not in any way determine morally good behavior but aids it, by turning it into a "critically reflective practice",
- (5) It does not in any way eliminate context appropriate emotions or produce autonomic behaviour divorced from their practical judgment (Kabasenche 2016), aiding us in moral formation.
- (6) It can be considered as a combination of CE and agential moral enhancement, and as such it will aid us in developing a better moral character.

### 4. Conclusion

Anthropogenic disasters attest to the fact that the astonishing progress of scientific technology has not produced a bright prospect for humanity's future due to our inability to develop our moral capacity. If we are to avoid ultimate harm, we need moral enhancement, both traditional and biological, coupled with cognitive enhancement. There is no guarantee that only good behavior will come out of the use of MBE insofar as freedom is not at all



compromised but there is hope that we can become fit for the future through continued practice of moral deliberation leading to our moral formation.

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