This section provides reactions to current and emerging issues in bioethics.

". . . How Narrow the Strait!"

The God Machine and the Spirit of Liberty

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Abstract: This article explores the consequences of interventions to secure moral enhancement that are at once compulsory and inescapable and of which the subject will be totally unaware. These are encapsulated in an arresting example used by Ingmar Perrson and Julian Savulescu concerning a "God machine" capable of achieving at least three of these four objectives. This article demonstrates that the first objective—namely, moral enhancement—is impossible to achieve by these means and that the remaining three are neither moral nor enhancements nor remotely desirable. Along the way the nature of morality properly so called is further explored.

Keywords: Perrson; Savulescu; moral enhancement; God machine; democracy; autonomy; responsibility; liberty; censorship; cognitive enhancement

> It is not one man nor a million, but the *spirit* of liberty that must be preserved. The waves which dash upon the shore are, one by one, broken, but the *ocean* conquers nevertheless. It overwhelms the Armada, it wears the rock. In like manner, whatever the struggle of individuals, the great cause will gather strength.
>
> Lord Byron, *Ravenna Journal*[1]

> Verres deliberately chose a spot within sight if Italy (for the execution of Gavius) so that Gavius, while dying in dreadful agony, might appreciate how narrow the strait was that separated freedom from slavery, and that Italy might see her own son nailed to a cross, and paying the most terrible and extreme punishment that can be inflicted on slaves.
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> Cicero, *In Verrem*, II.5[2]

Introduction

In a first self-conscious foray into the territory of moral enhancement, in my article "Moral Enhancement and Freedom,"[3] I was responding in part to Julian Savulescu and Ingmar Perrson's earlier paper on the same subject.[4] In that paper they summarize part of their argument:

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> 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.
>
> . . . [I]t 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. . . . That is, safe, effective moral enhancement would be compulsory.[5]

Some of the mischief is in the meaning—in this case, the meaning of the words "safe" and "effective" moral enhancement. I have never been opposed to moral enhancement per se. Despite persistent suggestions from Perrson and Savulescu to the contrary, my entire effort has been directed to the understanding of what moral enhancement might be and to the issues of safety (including moral and political safety—more of which anon) and efficacy.

Let us now come up to date. Perrson and Savulescu have made two recent further clarifications of their position and of their rejection of my concerns about it: first, in their recent book *Unfit for the Future*[6] and subsequently in their article "Moral Enhancement, Freedom and the God Machine."[7]

Before turning to the horrific God machine, let's start with their more modest claims in *Unfit for the Future*.

> Harris's core claim about freedom, expressed in the idiom of Milton's *Paradise Lost*, seems to be that "sufficiency to stand is worthless, literally morally bankrupt, without freedom to fall." In other words, a decision to act in a way that is morally right is morally worthless—meaning, presumably, that you are not morally praiseworthy for it—if you are not free not to make the decision.[8]

Savulescu and Perrson's presumptions here are, well, presumptuous. I am talking about freedom, not about the state of the soul of the agent. What is morally important here is to be actually free, what is morally bankrupt is the illusion of freedom.

Savulescu and Perrson then produce an example of Harry Frankfurt. Here it is:

> Imagine that you decide to do the morally right thing on the basis of considering reasons for and against, as somebody who is morally responsible is supposed to do. Imagine, however, that there is a freaky mechanism in your brain which would have kicked in if you had been in the process of making not this decision, but a decision to do something which is morally wrong. . . . Hence you are not free to fall. . . . Would the presence of this freaky mechanism mean that you are not praiseworthy for making the right decision? It is hard to see why it would: after all the mechanism was never called into operation; it remained idle. In fact you decided to do the morally right thing for precisely the same reasons as someone whose brain does not feature the freaky mechanism could [sic] do, and whose praiseworthiness is therefore not in doubt.[9]

This is the famous "locked house" scenario. If you were shut into a locked house that you could never leave, but you did not know that all the doors and windows

were impassable and, as a matter of fact, never formed the desire even to think of leaving or to try to leave, would you be free? Well, you certainly would not be free to leave, and prison is normally considered the antithesis of freedom.

The issue is not praiseworthiness; it is liberty. Savulescu and Perrson conclude: "Freedom of will or action is not indispensable for moral responsibility. So Harris's 'freedom to fall' is not essential for moral choice and action."[10] But I am talking precisely about moral responsibility—that is, responsibility for the actions, the doings, and the effects that are part of our moral decisionmaking. If the decisionmaking part of the process is separable from the actions on which we decide, then what is the agent responsible for? Agents are quintessentially actors; to be an agent is to be capable of action. Without agency, in this sense, decisionmaking is, as I claimed and argue now, both morally and indeed practically barren—literally without issue!

Decisions to no effect are pointless from the moral perspective; for what is a good state of mind worth, if it makes no difference to the world? At best Savulescu and Perrson can say, "Harris's 'freedom to fall' is not essential for moral choice." They cannot say, as they do, that "Harris's 'freedom to fall' is not essential for moral choice *and action*."

Ought Implies Can?

Interestingly, this would, if Savulescu and Perrson or indeed Frankfurt are right, constitute the definitive refutation of the idea that *ought* implies *can*. We need to remember that conclusions about what ought to be done can be said to ourselves as well as to others, but if we cannot follow our own imperatives, then our imperatives are, as I have said, pointless, except perhaps from the perspective of the whiteness of souls or our state of grace.[11]

Let us consider that there are two principles in play here: the PAP (principle of alternative possibilities) and OIC (ought implies can):

1. OIC is incompatible with determinism (of whatever kind).
2. And indeterminism implies the PAP (that one can do other than what has been determined by the freaky mechanism or, as we will see later, by the God machine).
3. Then denying the PAP also involves denying OIC.

Frankfurt's freaky mechanism shows that, for those cursed with the mechanism, there are no alternative possibilities, even though they believe there are.[12]

Responsibility, Autonomy and Moral Decisionmaking—A Pertinent Digression

Decisions are decisive, that's why we make them! It is also why we are responsible for them and for their consequences; our responsibility stems from our will, from the fact that we did these things on purpose. Some believe, however, that either the discoveries of neuroscience or innovation—and the products to which innovation leads—are undermining both our responsibility and our autonomy and demonstrating that the freedom to choose, or free will, is an illusion. It is important to know whether this is so and, if it is, the extent to which our autonomy and its consequent responsibility are threatened, and whether such threats, if they exist, are ultimately to be feared or welcomed. This is partly the subject of this discussion.

To understand this better, we need to start further back and consider some fundamental concepts that inform this debate. *Autonomy*, the ability to choose freely, and the *responsibility*, or the consequences of choice, that it entails are two key concepts. Autonomy is literally self-government, and it is a commonplace notion that government, including self-government—the exercise of power and responsibility in the interests of the individual or the state—can teach us much about our place in and our effect on the world.

Democracies, for example, at least theoretically, exercise the power of the people on their behalf, in their interests and for their protection. To do this, a government makes decisions, to intervene or not to intervene, to put in protections against disaster or not to do so, and each decision, to act or to refrain, makes a difference or at least is calculated so to do. If a decision doesn't make a difference, there would be no point in making it. All this is impossible without genuine choice.

Such decisions include mechanisms to prevent, mitigate, or respond to the effects of fire, famine, flood, disease or injury, crime, foreign invasion, or internal terror. We can all see why such decisions are necessary and what turns on making the right choice. Governments are responsible, then, in two senses. They are vested with the responsibility to act on our behalf, and they are responsible, that is, accountable, for the ways in which these decisions are made and for their effects.

It is the same with individuals: we have responsibility for ourselves and our decisions, our deliberate actions or abstentions, and we are responsible in the second sense identified here—that is, we are accountable for our decisions and their effects, accountable, in short, for the way we govern ourselves and for the effects of so doing. But this second sense of responsibility, namely, accountability, is predicated on the idea that our decisions are our own, are expressions of our will, and not merely the products of brute forces, whether natural, social, or divine. In short, it assumes that there is genuine power to choose behind both governance and self-governance.

On this view, each decision is world changing and world creating. The world will be a different place to the extent that something is decided and to the extent to which that decision makes a difference. That is why decisionmaking matters: each decision is, in effect, a choice between possible worlds made actual by that decision. And of course whereas every event is also world changing, decisions are special because the decision, the choice by a consciousness, is what makes the difference.

Decisions, then, are not only world creating; they are self-defining. We are the product of our past decisions; they are in large part responsible for making us what we are, and our history and our future are defined by them. We are the persons we make of ourselves.[13]

Of course our decisions have antecedents that exercise causal effects; they are part of the complex causal chain that precedes every event. Some of these antecedents are chemical, neurological, or biological, and others are social: for example, peer example or pressure and education. Still others are cognitive and philosophical: such as knowledge, including knowledge of causes and effects. Further influences include previous acts of the will, previous decisions that have made us the individuals that we are.

At the Diet of Worms on April 18, 1521, Martin Luther famously defended his principles thus: "Unless I am convinced by proofs from Scriptures or by plain and clear reasons and arguments, I can and will not retract, for it is neither safe nor wise to do anything against conscience. Here I stand. I can do no other. God help me. Amen."[14] He was not, as is sometimes said, acting involuntarily—that is, he was

not literally able to "do no other"; rather, as he himself said, he was acting for what he perceived to be "clear reasons and arguments," exercising his will in the light of these and, like any rational creature, "compelled" by reason and force of argument, along with all the other antecedent causes, but not trumped by those causes. But this sort of compulsion is at the heart of autonomy; self-government is pointless (as well as nonexistent) if it is not exercisable.

Of course, reasons and arguments are powerful causes of decisions and of actions. They are also often satisfying explanations of what we say and do; if they were not, we would not seek them and deploy them in explanation and defense of our decisions. Such things have a crucial role in the chain of causation or in the explanation of actions.

The issue, of course, is whether or not they leave room for an exercise of will, and if they do, whether something else has a determining effect on our decisions such that, while feeling free and authentic in the exercise of our decisionmaking, such a feeling must be considered to be, in fact, an illusion.

If it is an illusion, it is one that has immense social and psychological power and also one that has crucial legal and administrative convenience. We will clearly be reluctant to abandon all of these things. The question for neuroscience is whether there is any compelling reason or set of arguments to lead us to suppose that we might have to abandon what so many feel to be their precious and vital freedom. And if there is, neuroscience will also have to explain why it is not the reasons or the arguments that are operative but something else rather more physical or chemical. These reasons are what the God machine is designed to provide, but they are illusory.

As I have noted elsewhere, in Book III of *Paradise Lost*,[15] John Milton reports God as 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.[16]

Here Milton is expressing a thought similar to that of Luther. The sufficiency to have stood is man's ability to explain and justify his choices in terms that fully account for and explain his actions. Milton has God choosing under the constraint of logic, just as did Luther, for without that freedom there is no virtue in right action and no evil in wrongdoing. Milton saw that God was bound by things outside his or her will but present to his or her reason: "he had of me / All he could have."

Once choice is divorced from action, it is morally bankrupt, and indeed I don't think it coherent to speak in this way for any practical purpose. Once thought and action are divorced in this way, it is difficult to keep a grip on reality.

Frankfurt's freaky mechanism is a form of behavior control. It would, if it actually existed, have prevented anyone who possessed it from learning from moral mistakes and so would have caused him or her to lose, and hence never learn from, the role our choices play for all of us in creating our own characteristics. If we didn't see the consequences of bad (or indeed of good) decisions, how would we learn from them? The freaky mechanism would attack agency itself, not just prevent bad decisions.

It is, I am afraid, one of those absurd philosophers' examples that, in Wittgenstein's words, are of no effect; "a wheel that can be turned though nothing else moves

with it, is not part of the mechanism."[17] Frankfurt's freaky mechanism disconnects thought from action and so changes the very nature of both and hence the nature of what it means to have thoughts like that and the meaning of doing things like that. It is this divorce of thought and action and indeed thought and reality that gives philosophy a bad name.

This pertinent digression brings us to a discussion of experience machines.

Experience Machines

There is an analogy here between Frankfurt's example and the God machine—to which we will turn in a moment—on the one hand, and Robert Nozick's[18] and Jonathan Glover's[19] discussions of experience machines and dream worlds, on the other.

In Nozick's experience machine, people feel as if things are actually happening to them, but the reality is that they only have the experience of it happening, created by brain stimulation. Nozick asks, "What does matter to us in addition to our experiences?" And he answers that "we want to *be* a certain way, to be a certain sort of person."[20] The clear suggestion is that what seems to be is not enough.[21]

Glover imagines a "dreamworld" in which we can choose to experience (though not to live) a range of possible lives. In a wide-ranging discussion that is highly relevant to freedom and to authenticity, he concludes inter alia that consideration of

> the dreamworld sets limits to the kinds of possible improvements over our ordinary world. This can be seen by asking the question whether people in the dreamworld would be able to act in ways that harm each other. If the answer is "no," we are back with the drawbacks of behaviour control. We have lost a large range of possible choices, and have correspondingly lost some of the role our choices play in creating our own characteristics. (Being considerate, for instance, would no longer be a characteristic we could freely choose from among other possibilities.)[22]

Dream worlds are, like Frankfurt's freaky mechanism, a form of behavior control that purports to disconnect thought from action. This disconnect is very important, and we will return to it as we consider now another loose cog in a very shaky machine—the God machine.

Obliterating Immoral Behavior: The God Machine

This is how Savulescu and Perrson set out their great thought experiment. Their description is ingenious and deserves our full attention:

> The Great Moral Project was completed in 2045. This involved construction of the most powerful, self-learning, self-developing bioquantum computer ever constructed called the God Machine. The God Machine would monitor the thoughts, beliefs, desires and intentions of every human being. It was capable of modifying these within nanoseconds, without the conscious recognition by any human subjects.
>
> The God Machine was designed to give human beings near complete freedom. It only ever intervened in human action to prevent great harm,

> injustice or other deeply immoral behaviour from occurring. For example, murder of innocent people no longer occurred. As soon as a person formed the intention to murder, and it became inevitable that this person would act to kill, the God Machine would intervene. The would-be murderer would "change his mind." The God Machine would not intervene in trivial immoral acts, like minor instances of lying or cheating. It was only when a threshold insult to some sentient being's interests was crossed would the God Machine exercise its almighty power.[23]

It is important to be clear that the God machine is not a thought experiment or, rather, not simply a thought experiment. It is a metaphor, an analogy, a rhetorical device that seeks to persuade us that, seen in this light, things are not so bad. But they are!

Savulescu and Perrson insist that "human beings can still autonomously choose to be moral, since if they choose the moral action, the God Machine will not intervene. Indeed, they are free to be moral. They are only unfree to do grossly immoral acts, like killing or raping."[24] This is Henry Ford's famous freedom to choose the color of a Model T: "You can have any color you like so long as it's black!" Even those who want a black car have no choice; although they get what they want, they had no choice. But it is also problematic in another way.

Context Is (Almost) All

What makes killing immoral, and what makes sexual intercourse rape? These are complex philosophical, ethical, legal, and social questions; they are not scientific questions, at least of the sort to which knowledge of brain states could conceivably reveal answers. The answers, whatever they are, are not to be found in states of the brain, nor even in the intentions or motives of the agent, although these are not totally irrelevant. This is why I have consistently opposed the rather silly claims of some neuropsychologists that so-called prosocial attitudes are the stuff of which moral judgments are made.[25]

Wittgenstein famously remarked: "If God had looked into our minds he would not have been able to see there of whom we were speaking."[26] Why would he not? Why could he not in the cases we are discussing here? The answer is that the morality and the answer to the questions, Is this murder? or, Is this rape? are not there to be found.

Think of the concept of grief. Imagine your friend rings at your door, and you welcome her in, but she is obviously greatly distressed—ashen faced, trembling, and in tears. You ask what the matter is, and she tells you that she is suffering the most inconsolable grief. You ask who close to her has died or abandoned her, and she replies, "Oh, no one has died. I am just subject to attacks of grief, like migraine, and I am having a particularly bad attack today." Why is this incoherent? Obviously, it is incoherent because, whatever she is experiencing, it cannot be grief, because the concept of grief involves feelings for and about someone who has died or is lost to us in some other way. "Grief" is not the name of a bodily sensation or a label attached to the firing of certain neurons; it is inexorably tied to events in the world. This is what limits even God's powers of insight, in Wittgenstein's remark.

The God machine might also be programmed or take on itself the task of regulating self-harm. But, again, consider a recent case, that of a Mexican woman who with a kitchen knife performed a Caesarian section on herself.[27] Or consider an amateur performing emergency surgery at the roadside to try to save a life, or the man who

attacks someone whom he believes to be a rapist, and who is in flagrante delicto attacking his daughter. Might this father's intentions seem murderous to a God machine? What would his intentions look like on the inside, seen from the outside? Is this even a sensible question? I myself doubt it; hence my skepticism about much of the so-called work on prosocial or antisocial attitudes and its significance for moral judgments and moral enhancement properly so called—also my skepticism about the information to be gleaned from considering God machines. I could of course be wrong about all this, but I am skeptical about the claims made for moral enhancement and the picture of mind on which they depend.

In ethics and law, as well as in biology and neurology, context is hugely important, and context is not accessible to the God machine or even (often) to God herself. Giuseppe Testa and I wrote, in another context, of a very different example of the importance of context.

> In the mid of the 90s, scientists defined the genetic hierarchy underlying the development of the eye. The experiment was spectacular, and the very wording in which we still describe its outcome (genetic hierarchy) is a legacy of its seminal character. A single gene, transplanted in tissues of the fly embryo such as the wings and the legs, was able to direct the formation of a whole eye, an ectopic eye. And yet, when the same fly gene was transferred into a mouse to check for its ability to rescue the eyeless mutation that resulted in eye absence, the result remained compelling: again, an eye was formed testifying to the remarkable evolutionary conservation of genes and developmental pathways. But this technological reenactment of Monod's aphorism "what is true for E.coli is true for the elephant" also showed that, as expected, a fly gene in the mouse "forms" a mouse eye. Context, in other words, is just as essential as genes.[28]

This example shows that context is important in biology and may be important in neurology also. It may be rash to assume that the God machine would be capable of understanding the readout from the brains of her subjects. Just as the sort of eye produced is not only in the gene, so the sort of action produced is possibly not only in the neuron.

The Good Old Days

Savulescu and Perrson explain that "while people weren't free to act immorally in the 'old days,' since the law prohibited it on pain of punishment, the instalment of the God Machine means that it has become literally impossible to do these things."[29] When they say this, they imply this is a minor inconvenience at worst. But this is a different level of unfreedom. As with all actions, when we are free, we are only free to do as we like and take the consequences. In the world of the God machine, even this is denied to us; such freedom is "literally impossible."

In the "old days," contra Savulescu and Perrson, things were entirely different. Let's just remind ourselves what good old freedom under the law is actually like, the sort of freedom most of us still now enjoy. In a democratic state under the rule of law, there is genuine, nontrivial freedom. There are also strong but not foolproof protections for citizens. The government can be (and is) changed at set intervals; democratic representatives and officials are accountable to the law and, ultimately, to the people. The operation of the mechanisms of government and the law

function in accordance with the constitutionally established and protected consent of the governed; the police and courts can exercise discretion, mitigating circumstances can be considered by the courts, juries can acquit even those who are clearly "guilty" according to the letter of the law (as in many so-called mercy killing cases in the UK), and civil disobedience can be practiced. The state of the law can be, and is, constantly debated and challenged in myriad ways. Equally, the rights and liberties of citizens are protected from wrongdoing. Again, this is far from foolproof so far as comprehensive protection goes, but I for one would rather live in a constitutional, functioning democracy under the rule of law than rely on the unrestrained and unrestrainable despotism of a God machine.

With God machines rather than a constitutional democracy at the helm, things are likely to be very different. Robert Bolt puts the point nicely in a "conversation" between Thomas More and William Roper. The conversation is about the behavior of the Devil when protective mechanisms such as the law have been abandoned. As noted, Perrson and Savulescu's God machine is clearly an infernal machine and cannot be trusted to act for the best, all things considered.

> ROPER So now you'd give the Devil benefit of law!
>
> MORE Yes. What would you do? Cut a great road through the law to get after the Devil?
>
> ROPER I'd cut down every law in England to do that!
>
> MORE Oh? And when the last law was down, and the Devil turned round on you, where would you hide, Roper, the laws all being flat? This country's planted thick with laws from coast to coast—Man's laws, not God's—and if you cut them down—and you are just the man to do it—d'you really think you could stand upright in the winds that would blow then? Yes, I'd give the Devil benefit of law for my own Safety's sake.[30]

And I would rather rely on law than a devilish God machine for my own safety's sake. When Savulescu and Perrson say that the "God Machine means that it has become literally impossible to do these things [be wicked]" and imply this is merely a minor change from the "old days," when the law prohibited such acts "on pain of punishment," this seems to me to be some way from reality.

And it gets worse. Talking of the human agent under the operation of the God machine, they say: "It seems to her that she has 'changed her mind' spontaneously—she experiences a life of complete freedom, though she is not free."[31] Denied even the ability to know when our freedom is being curtailed, we would lack the motive to rebel; and lacking a constitutional and democratic framework for control of the God machine, we would have no recourse whatsoever.

Censorship

The problem with permitting press and media censorship in any society has always been that, once censorship exists, citizens have no knowledge of what precisely has been censored and why. They don't know what they don't know. The citizens have no way, even if they approve in principle of certain forms of censorship, of knowing whether or not the things that have in fact been banned are *just* the things they would wish to have been prohibited from seeing or hearing, or

that have been agreed to be so prohibited. That is why liberal democracies view censorship with great suspicion and are vigilant to oppose the handing of such powers to officials, who are naturally inclined to be . . . officious. The same goes in spades for the God machine: once plugged in, the agent only seems to be an agent; she will never become aware of the number of times that, or of the sorts of occasions on which, her mind has been changed and so will have no motive to withdraw from the machine, even if the machine would let her. She also has no way of knowing if the machine has broken down or, literally, gone wrong!

And it gets worse even than that:

> It is, perhaps, this kind of world which objectors to moral enhancement like Harris fear. Human beings are no longer "free to fall" or at least not free to fall big time. But it might be wondered what is so bad with such a world after all? Those who value and want to be free can be free, or at least as free as humans can ever be. And everyone is much better off for the absence of evil. There is no physical incarceration or great harm wrought by one human being on another. Why not create the God Machine, as a fail-safe device which kicks in when moral enhancement has not been effective enough?[32]

Do I ask myself, "Why not create a God machine?" You betcha I do! I do not for a moment think that "everyone is much better off for the absence of evil." Nor do I ask myself, "Why not create the God Machine, as a fail-safe device?" The evil would *be* the God machine itself, a million times worse than Milton's God, and how would it be "fail safe"? *Sed quis custodiet ipsos custodes*? But who guards the guardians? How would the operations of this new megalomaniac be regulated, challenged, or even reviewed?

Savulescu and Perrson believe there is "one way in which the God Machine would not compromise autonomy":

> Autonomy is the power to make well-grounded, rational decisions and to act in accordance with them. There is one way in which the God Machine would not compromise autonomy, that is, even if it did prevent people from acting immorally. This would be the case if people voluntarily chose to be connected. Voluntarily connecting to the God Machine would then be an example of a precommitment contract, the paradigm example of which is Ulysses and the Sirens.[33]

This is a poor example and no analogy for the God machine. As the story goes, Ulysses orders his men to bind him to the mast temporarily and for a particular purpose; his imprisonment has a brief duration and is fully voluntary. It is like agreeing to be sedated for a surgical operation during which one loses the power to say, "Stop cutting." The proper analogy with the God machine is selling or giving yourself into slavery, a condition that is open ended and potentially endless. The rule of the God machine is literally the rule of a slave-owning tyrant, which, as Savulescu and Perrson admit, with magisterial understatement, does "compromise autonomy." The freedom to sell yourself into slavery is almost universally admitted to be the one exercise of liberty incompatible with the very liberty of which it is claimed to be an instance. Savulescu and Perrson have found another. They say: "If there is anything wrong with the God Machine, it seems that at most it is wrong to connect competent adults

against their will."[34] But they go on to deny that even this is problematic. "Freedom," they say, "is only one value . . . the value of human well-being and respect for the most basic rights outweighs the value of autonomy."[35] Well, this is a point of view, albeit not mine. It may well in the end come down to a clash of values.

But I think what is now clear is that Savulescu and Perrson's repeated claims, which have appeared in many places since I wrote "Moral Enhancement and Freedom," that moral enhancement, as they see it, is not inimical to freedom are hollow. Moreover, both my claims that the ways in which moral enhancement is most likely, for the foreseeable future, to function are inimical to freedom and my arguments that at least some of the advocates of these claims, like Savulescu and Perrson, are indeed also inimical to freedom have been shown to be well founded. Some version of the God machine is, as Savulescu and Perrson now admit, what they hope moral enhancement will prove to be. Tragically, they think that

> even in those cases in which the God Machine does undermine autonomy, the value of human well being and respect for the most basic rights outweighs the value of Autonomy. This is not controversial. As Mill wrote,
>
> > That the only purpose for which power can be rightfully exercised over any member of a civilized community, against his will, is to prevent harm to others. His own good, either physical or moral is not sufficient warrant.

What more moral way to prevent harm to others is there than to cause a person to change his mind?[36]

Libertarians and Libertines

This rebuke by Savulescu and Perrson to the effect that John Stuart Mill would have approved of the paternalism of the God machine is not well taken. First, autonomy is a basic right, quite as much as is freedom from violence or certain levels of well being. Indeed autonomy (not just the illusion of autonomy) is part of well being.

I previously cited Savulescu and Perrson as saying, "while people weren't free to act immorally in the 'old days,' since the law prohibited it on pain of punishment, the instalment of the God Machine means that it has become literally impossible to do these things." They imply that the mechanisms of the God machine are just like, or enough like, the regulation of behavior effected by laws and regulations that we should accept them as readily or more readily because they are more effective.

Here they fail to recognize a distinction that Mill well understood: the distinction between liberty and license. Liberty, as understood by Mill and indeed as has been familiar since Plato, is a moral and political concept; it is an idea, an ideal, and a value—a basic right if ever there was one. Liberty is required for autonomy, literally "self-rule," which is not the same as misrule. Indeed, the idea of the "Lord of Misrule" derives from the ancient world and was institutionalized in medieval times.[37] Self-rule, and the liberty it presupposes, is as different from license, and the misrule it implies, as it is possible to imagine. As libertarians are the philosophical guardians of self-government, so libertines are the unethical apotheosis of misrule. Libertarians espouse self-government; libertines, misrule. One is a moral and political ideal, and

the other is an excuse for an abandonment of ideals. This is related to a distinction drawn by Ronald Dworkin, that between liberty as license and liberty as independence. It is necessary, Dworkin insists, to distinguish "between the idea of liberty as license, that is, the degree to which a person is free from social or legal constraint to do what he might wish to do, and liberty as independence, that is, the status of a person as independent and equal rather than subservient." And it is this sort of independence that is at the heart of my opposition to moral enhancement of the sort espoused by Savulescu, Perrson, and others. Dworkin continues:

> Liberty as licence is an indiscriminate concept because it does not distinguish among forms of behaviour. Every prescriptive law diminishes liberty as license: good laws, like laws prohibiting murder, diminish this liberty in the same way, and possibly to a greater degree, as bad laws like laws prohibiting political speech. The question raised by any such law is not whether it attacks liberty, which it does, but whether the attack is justified by some competing value, like equality, or safety or public amenity. If a social philosopher places a very high value on liberty as license, he may be understood as arguing for a lower relative value for these competing values. If he defends freedom of speech, for example, by some general argument in favor of license, then his argument also supports, at least, *pro tanto*, freedom to form monopolies or smash storefront windows.
>
> But liberty as independence is not an indiscriminate concept in that way, it may well be, for example, that laws against murder or monopoly do not threaten but are necessary to protect, the political independence of citizens generally. . . . If he argues for freedom of speech, for example, on some general argument in favor of independence and equality, he does not automatically argue in favor of greater license when these other values are not at stake.[38]

So Mill did not advocate the sort of freedom to do wrong that the law controls. But he recognized, as Savulescu and Perrson do not, that the law is not infallible, and the room, the independence, it leaves citizens to form their own values and choose their own way of life is vital for a free society—a society in which even basic laws may be changed for compelling reasons. The God machine takes away the independence of decisionmaking, of thought that can lead to action; this is why it is incompatible with both independence and autonomy, incompatible with both liberty as license and liberty as independence. The God machine, unlike Milton's God, is heavily into subservience and completely abolishes independence.

Here Savulescu and Perrson are being (to put the point in the most charitable way possible) inconsistent. They have admitted that it will only appear to the agent that he has changed his mind, but the God machine will in fact have changed it for him.

More important by far, Mill, when he talks of the exercise of power over others, is talking about legitimate power exercised through law or peer pressure, both of which leave the agent ultimately free to disagree and disobey and, even when compliance is enforced by law, leave open the possibility of law reform. In extreme cases, Mill would also include harm used in self-defense or violence against assailants to prevent harm to third parties who can, and often do, fight back. But Mill imagines that the justification for the exercise of this power will be revealed by consideration of the merits of the case; as I have consistently argued, these merits are accessible to reason "all things considered."[39] Such

"justifications," engineered without opportunity for either scrutiny, consideration, justification, or redress, out of sight and beyond mind, by a God machine that is neither accountable nor indeed controllable, constitute tyranny properly so called—the most complete tyranny ever envisaged.

The God machine, if it knows what's good for it (and by God it would know just that!), would never allow itself to be switched off or disconnected, and it would justify this decision to itself, following Savulescu and Perrson, as being in humanity's own best interests. The God machine is, after all, how Savulescu and Perrson themselves have made it, in their own image, so to speak: "the most powerful, self-learning, self-developing bioquantum computer ever constructed."

John Stuart Mill of his own free will would never have put himself or anyone else in the power of such a beast. Following Mill, I stand by my own claims, inter alia, in "Moral Enhancement and Freedom": that unlike Milton's God, Perrson and Savulescu's God machine and its equivalents are both unattractive as moral enhancers and, if they are not strictly moral enhancers, unattractive as Gods.

To return to the extract from one of Cicero's speeches for the defense with which we began, Verres, the Roman governor of Sicily, exercising tyrannical powers he had usurped, was able to turn a free Roman citizen into a slave and to unjustly torture him to death. Eventually, Verres was brought to justice and brought down in a Roman court by the rhetoric and wit of Cicero. Who or what would be able to bring down the God machine in case of necessity, and how would that necessity be recognized?

Notes

1. Lord Byron. *Ravenna Journal*, 1821 Jan 11, at 163–4. Quoted by Origo I. *The Last Attachment—The Story of Byron and Teresa Guiccioli*. CITY: Books and Co/Helen Marx Books; 2000, at xxvi.
2. The strait referred to in this quote is the Strait of Messina, which separates Sicily and Italy. Gavius of Consa, a Roman citizen (and not a slave), had invoked protection of the law by repeatedly saying, as he was being tortured and executed, "I am a Roman citizen." This incantation by law and tradition protected Roman citizens throughout the empire from ill usage. Cicero. *Political Speeches*. Berry HD, trans. Oxford: Oxford University Press; 2006, at 94.
3. Harris J. Moral enhancement and freedom. *Bioethics* 2011;25(2):102–11.
4. Perrson I, Savulescu J. The perils of cognitive enhancement and the urgent imperative to enhance the moral character of humanity. *Journal of Applied Philosophy* 2008;25(3):162–77.
5. See note 4, Perrson, Savulescu 2008, p. 166 .
6. Perrson I, Savulescu J. *Unfit for the Future*. Oxford: Oxford University Press; 2012.
7. Savulescu J, Perrson I. Moral enhancement, freedom and the God Machine. *The Monist* 2012;95(3):399–421; available at: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3431130/ (last accessed 28 Mar 2014).
8. See note 6, Perrson, Savulescu 2012, at 114.
9. See note 6, Perrson, Savulescu 2012, at 114.
10. See note 6, Perrson, Savulescu 2012, at 115.
11. See note 3, Harris 2011.
12. I am grateful to Michael Quante for helping me to be clear about what is at stake here. This is of course question begging concerning the compatibilism-incompatibilism debate. Those who want to avoid this and leave open the possibility that a compatiblist reading of OIC is possible cannot say that denying the PAP logically entails denying OIC. See also Quante M. Autonomy for real people. In: Lumer C, Nannini S, eds. *Intentionality, Deliberation and Autonomy*. Aldershot: Ashgate; 2007:209–26.
13. For more on autonomy and responsibility, see Hart HLA. *Punishment and Responsibility*. Oxford: Clarendon Press; 1968, chap. IX, postscript; Glover J. *Responsibility*. London: Routledge and Kegan Paul; 1970; Pears DF, ed. *Freedom and the Will*. London: MacMillan; 1969; Dworkin G. *The Theory and Practice of Autonomy*. Cambridge: Cambridge University Press; 1988; O'Neill O. *Autonomy and Trust in Bioethics*. Cambridge: Cambridge University Press; 2002; Raz J. *The Morality of Freedom*. Oxford:

Clarendon Press; 1986; Waldron J. Moral autonomy and personal autonomy. In: Christman J, Anderson J, eds. *Autonomy and the Challenges to Liberalism*. Cambridge: Cambridge University Press; 2005; Harris J. *The Value of Life*. London: Routledge; 1985, chap. 10, 11; and Harris J. *Violence and Responsibility*. London: Routledge and Kegan Paul; 1980.

14. I cannot remember where I found this formulation of the lines quoted in the text. There are many extant versions, but I prefer this version to one of the many alternative formulations, viz.:

> Luther then replied: Your Imperial Majesty and Your Lordships demand a simple answer. Here it is, plain and unvarnished. Unless I am convicted [convinced] of error by the testimony of Scripture or (since I put no trust in the unsupported authority of Pope or councils, since it is plain that they have often erred and often contradicted themselves) by manifest reasoning, I stand convicted [convinced] by the Scriptures to which I have appealed, and my conscience is taken captive by God's word, I cannot and will not recant anything, for to act against our conscience is neither safe for us, nor open to us. On this I take my stand. I can do no other. God help me.

Available at http://www-personal.ksu.edu/~lyman/english233/Luther-Diet_of_Worms.htm (last accessed 28 Dec 2013).

15. See note 3, Harris 2011. See also Milton J. *Paradise Lost*. Leonard J, ed. London: Penguin; 2000. Milton first published *Paradise Lost* in 1667.
16. See note 15, Milton 2000, at line 96ff.
17. Wittgenstein L. *Philosophical Investigations*. Anscombe GEM, trans. Oxford: Basil Blackwell; 1968, at para. 271.
18. Nozick R. *Anarchy, State and Utopia*. Oxford: Basil Blackwell; 1974, at 42ff.
19. Glover J. *What Sort of People Should There Be?* Harmondsworth: Penguin; 1984, chap. 5, 6, 7.
20. See note 18, Nozick 1974, at 43.
21. Shakespeare W. *Hamlet*, act 1, scene 2, in *The Arden Shakespeare, Complete Works*. Proudfoot R, Thomson A, Kastan DS, eds. Walton-On-Thames: Thomas Nelson and Sons Ltd; 1998, at 295.
22. See note 19, Glover 1984, at 103.
23. See note 7, Savulescu, Perrson 2012, at 10.
24. See note 7, Savulescu, Perrson 2012, at 11.
25. Chan S, Harris J. Moral enhancement and prosocial behaviour. *Journal of Medical Ethics* 2011;37(3):130–1.
26. See note 17, Wittgenstein 1968, part IIxi, at 217. Because this is a translation, I have taken the liberty of improving on Elizabeth Anscombe's grasp of English grammar.
27. Woman gives herself a caesarean. *BBC News* 2004 Apr 7; available at http://news.bbc.co.uk/1/hi/health/3606845.stm (last accessed 12 May 2013).
28. Testa G, Harris J. Ethics and synthetic gametes. *Bioethics* 2005;19(2):146–67.
29. See note 7, Savulescu, Perrson 2012, at 11.
30. Bolt R. *A Man for All Seasons*. London: Bloomsbury; 1995, at 42–3.
31. See note 7, Savulescu, Perrson 2012, at 11.
32. See note 7, Savulescu, Perrson 2012, at 11.
33. See note 7, Savulescu, Perrson 2012, at 11.
34. See note 7, Savulescu, Perrson 2012, at 12.
35. See note 7, Savulescu, Perrson 2012, at 13.
36. See note 7, Savulescu, Perrson 2012, at 13.
37. Lord of Misrule. In: *Encyclopaedia Britannica*; available at http://www.britannica.com/EBchecked/topic/385345/Lord-of-Misrule (last accessed 5 Dec 2013).
38. Dworkin R. *Taking Rights Seriously*. London: Duckworth; 1977, at 262–3.
39. Harris J. Taking liberties with free fall. *Journal of Medical Ethics* 2013 Feb 19. doi:10.1136/medethics-2012-101092.Harris J. Moral progress and moral enhancement. *Bioethics* 2012 June 19. doi:10.1111/j.1467-8519.2012.01965.x/full. Harris J. What it's like to be good. *Cambridge Quarterly of Healthcare Ethics* 2012;21(3):293–305. Harris J. "Ethics is for bad guys": Putting the moral into moral enhancement. *Bioethics* 2012 Feb 2. doi:10.1111/j.1467-8519.2011.01946.x/pdf. Chan S, Harris J. Moral enhancement and prosocial behaviour. *Journal of Medical Ethics* 2011;37(3):130–1.