

Bioethics and Human Enhancement: an Interview with Julian Savulescu

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Professor Julian Savulescu, director of the Uehiro Centre for Practical Ethics, University of Oxford, and one of the best known moral philosophers in the area of practical ethics, lectured at the University of Granada in February 2010 within the seminar "Ethical and Political Aspects of Human Enhancement Technologies", organized by the project SEJ-01558. This interview is one of the sequels of that fruitful seminar. Besides, doctor Savulescu wrote in Granada a short piece ("What Is My Cognitive Enhancer?"), published also in this issue of *Dilemata*.

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Your first academic training was Medicine; why and when did you decide to research on Ethics? Could you tell us about the intellectual evolution process, which led you to applied ethics and bioethics?

I was always interested in Philosophy. I read Bertrand Russell when I was in high school – my religious studies teacher gave it to me. When I started Medicine, you could do a subject of your choice and I did Philosophy. I chose Peter Singer's Practical Ethics as a course. I was so impressed with this guy who gave logical arguments about poverty, animals, euthanasia and abortion. When I finished medicine and was working, I started a Masters of Bioethics at his Centre. Just for fun. I enjoyed it a lot though it was hard when I was a busy young doctor to find the time. I loved Michael Smith's lectures on metaethics and Justin Oakley was a great teacher. I decided to defer my specialist training – I had wanted to be a neurologist – to do a Ph D with Peter. Just for fun. One thing led to another, I got scholarships and the opportunity to go to Oxford as a post doc under Derek Parfit. I just drifted away from medicine. I did like medicine. You get access to human experience that few people get.



Sometimes people used to ask me, when I was a young post doc, why I left such a good career in medicine. The truth is I didn't have a plan. I just did what I loved and what I wanted to do. I was lucky I fell into a niche at the time of sequencing of the human genome. But in truth, there was no plan. I just tried to do as well as I could at the time and tried to move to things I enjoyed. My father used to say that whatever you do in life (work, cooking, your garden), you should do it with love. The real secret, I think, is to do the things you love with love.

Can you name some professors of Philosophy or Ethics whose teachings have influenced you? What authors would you recommend to students interested in bioethics?

The greatest figure I have ever met is Derek Parfit. His mind operates with several orders of magnitude greater power. Anything he writes is worth reading and occasionally it is applied. His *Reasons and Persons* inspired me to continue beyond my Ph D in Philosophy. It is the most influential book I have read. It teaches what philosophy in this area should be like.

After Derek is Peter Singer. His mind is like a razor and he follows logic to its conclusions. He is also a great speaker and unparalleled writer. I have learnt a lot from him, including how to write for a more popular audience, to engage with human stories and statistics. And to turn philosophical writing into literature, a short story.

Other people who have had significant influence on me are my examiners Ingmar Persson and Jeff McMahan. Both are great philosophers. I have done a lot of writing now with Ingmar. He is a classic. A real individual who thinks for himself, has great skills, perspective and originality. We are currently working on a book together called *Unfit for the Future* which I think will be the most significant thing I have done.

Would you say you are a "follower" of Peter Singer? What is so attractive in his proposals?

What is attractive about Peter's proposals are that they are firmly rooted in uncontroversial values – like the moral significance of well-being and equality – and he applies logic ruthlessly to the inconsistency of existing values and ethics. He also lives up to his own principles. There are a few places where I disagree with him, but all things considered, he is the greatest living practical ethicist or philosopher.

Peter is also a great philosopher – though he does not do a lot of fundamental philosophy nowadays. I have seen him David Lewis under a lot of pressure. Everything Peter says is intelligent and you always learn something from him.

Your argument for a moral obligation to use new biotechnology to have the best children is founded on the best life (understood as the life with the most well-being) expected for them. Is then your theory utilitarian?

Utilitarians would embrace it but it is not intended to be nor derived from utilitarianism. It is meant to fall out of basic rational choice. If you are only going

to have one child now, you should choose the better child, rather than leaving it to chance, just because it is better. You might have other reasons which outweigh this reason based on its value, but that is typical of all life choices. The point is that you have a good reason to choose it and absent some other reason, like health risk to you, cost to society, then you should choose the better child. This argument is not based on controversial values or theories but just on our existing approaches and attitudes to having children.

Parfit gave a similar argument many years ago in *Reasons and Persons*. I have merely extended it to reproductive technologies.

I think this is just a basic principle of rational choice applied to reproduction. What surprises me is how much resistance there is, that people really think you should toss a coin when you have information about which embryo is better. Embryologists of course do this when they look at embryos and try to pick the one which looks best. But why do we resist it? There are of course many reasons, but I have argued they are bad reasons.

It is normal that parents look for the best schools, training activities and diets to make their children better people and increase their opportunities in life. However, why do you think that people do not accept so easily the improvement of our children through biological interventions?

The reason may be it acknowledges profound and substantial biological inequality. People want to believe that everyone could do equally well, if only society was ordered in the right way and everyone tried as hard. That is just false. People hate the idea that some people are inherently more gifted or have a more advantageous intrinsic nature. They want to believe that, while some people might discover relativity or win the 100 m race, their lives could go just as well. That is largely false. Some people will face significant internal obstacles to having a substantially good life. That is hard to face. Like death.

What are the main differences between your view about human beings enhancement and the ideas of the eugenics movements in the first half of twentieth century?

The eugenics movement of last century was coercive – it forced people to be sterilised or be killed. It was not for the benefit of the individuals it was practised upon but to realise often racist, social Darwinist ideals of society. I believe enhancement and genetic selection should be offered to people, for the benefit of them or their children (not primarily society), that its goal should be enhancing their well-being (not some state goal), and they should be free to refuse those interventions.

What do you think about the trans-humanist movement?

I agree with many of their arguments and I like the transhumanists I know – they are very nice people. But I don't like groups and crowds. I used to hate going to the football and being a part of the crowd. I couldn't stand being in the choir at school and I refused to sing hymns. I don't like mass events and clubs. Transhumanism has a kind of group-think or quasi-religious quality that does not suit well my nature. I prefer to stand outside it and make my own arguments. But their hearts (and minds) are in the right place. We agree on most things.

Many people see the debate about enhancement as a threat for those who defend the total social integration of people with 'functional diversity'. What is your position about this issue?

What is "functional diversity"? If you mean disability, I have argued that deafness and other "functional diversities" are in fact disabilities because they represent impediments to well-being, in the way the world is and could justly be. I think enhancements should be offered to people with disabilities but that they should be free to reject them. I have even argued that deaf people should be able to select deaf embryos, even though I believe this is wrong.

The key point is that people with "functional diversity" or any disease, disability or disadvantageous biology or psychology should be treated as equals, given equal concern and respect, equal opportunities to the basic goods in society, such as the ability to work, participate in society and politics, etc. Even with enhancement and genetic selection, there will inevitably be biological and psychological inequality in our capabilities, if only because there will be disease and accidents. We require social institutions to give as many people as possible a chance to live a sufficiently good life, regardless of their talents or intrinsic disadvantages. So I don't think justice and fairness are threatened by enhancement. Indeed, I have argued that if we distributed enhancements in the right way, they would reduce injustice.

Just because we offer some treatment for paralysis to someone whose spine was cut in a car accident does not mean we necessarily prevent the total social integration of other paraplegics who can't be treated. How we treat them is up to us. The wise use of enhancements could increase and is certainly consistent with social justice.

You think that a controlled use of drugs to enhance sport qualities should be accepted. Does this thought imply that athletic competition would be replaced by competition between pharmaceutical companies?

I have argued that a more liberal approach to safe doping would be safer for athletes, reduce the benefits and advantages of cheating and improve the spectacle of sport. It would not be a competition between pharmaceutical companies for several reasons. Firstly, everyone's biology is different and will respond to pharmacology differently. Secondly, most performance will be driven by inherent biology and psychology. No amount of steroids, growth hormone or EPO will mean I can beat Lance Armstrong in the Tour de France. Thirdly, many current sports like cycling are already a competition between pharmaceutical suppliers but on the black market. Fourthly, I believe sport has a significant if not dominant psychological element, for both training and performance. That won't be affected by current drugs. The will to win will still be necessary. Steroids only work to facilitate recovery after you drive the muscles to tear.

Many opponents to utilitarianism think, wrongly, that this doctrine is the ideological and methodological approach about moral problems that predominate in the European universities. What approaches or schools do you think are the most influential in the European scene?

Many of the Europeans I have met seem to have been raised in continental or religious tradition. There is a lot of deontology in Europe. It really stifles moral progress. They seem to get stuck on some principle, implementing regardless of the context, reasons in a particular case or consequences. Deontology can be very stifling to originality, creativity or personal moral decision making.

Why do you think your views do not really influence political decisions? Or do you think that they really have any impact?

In Australia, I think my views have had some limited impact in forming policy on cloning, stem cells and abortion. I did a lot more media and political work there and I was encouraged to do it a strategic and responsible way. In Oxford, there has been less incentive to do that kind of thing, but I am starting to do more of it now. My nature inclination is to say things as I see them, or to put arguments that I think need to be considered. I often do this in a way that provokes people to think (see <http://juliansavulescu.typepad.com/blog/2010/03/open-to-forbidden.html> for my views on Practical Ethics). But this can come across as being crazy and extremist. What politicians and policy makers want is a gentle, wise, calm father figure to give them advice that they can follow. I don't see myself as that kind of person. I want people to think for themselves, not agree with me.

Do you think that bioethics can be easily misused to legitimize very restrictive proposals in the penal field or ultraconservative views in committees on research ethics, for example?

Yes, you give arguments to justify anything. That is what the Nazis did. That's why we need good, solid, philosophical, properly valued based ethics. Many "ethics committees" are not really ethics committees – they don't do real ethics except try to squeeze research through some deontological sausage machine, without really considering it rationally and contextually (see my article on Gelsinger in the JME).

Do you think that bioethics has contributed in a decisive way to promote agreements about medical dilemmas?

Do you think that it is firmly consolidated in the institutions or, on the contrary, it has less and less weight in sanitary institutions?

Bioethics is a very broad field with different disciplines and genres. I think bioethics has had some effect on EU policies and government policies in Europe, but in many cases for the worse. Popular, religious or deontological bioethics has not clearly been for the better.

There have been some successes. There is an emerging rational consensus and endorsement of euthanasia around Europe. That is one of victories for rational bioethics. Eventually, every civilised secular state will offer euthanasia. I did my doctorate on this topic 15 years ago. I thought the arguments were exhausted then and that change must rapidly come. I am staggered at how slow it has been. There are no good arguments against euthanasia but most countries still resist.

What biotechnological invention do you think will have the greatest impact in the real life of the future generations? What do you think are the emergent subjects with more relevance for the bioethical reflection in the next years?

The advances in synthetic biology and artificial life may well be of pivotal significance. Craig Venter is creaking open the most profound door in humanity's history, potentially peeking into it's destiny. He is not merely copying life artificially as Wilmut did with Dolly the sheep, or modifying it radically by genetic engineering, like creating a fluorescent rabbit. He is going towards the role of a god: creating artificial life that could never have existed naturally. Creating life from the ground up using basic building blocks. At the moment it is basic bacteria just capable of replicating. This is a step towards something much more controversial: creation of living beings with capacities and natures that could never have naturally evolved. The potential is in the far future, but real and significant: dealing with pollution, new energy sources, attacking cancer and HIV, new forms of communication and biological computing. But the risks are also unparalleled. We need new standards of safety evaluation for this kind of radical research and protections from military or terrorist misuse and abuse. These could be used in the future to make the most powerful bioweapons imaginable.

The other big one is artificial intelligence. At some point in the next 50 years, we may well have vastly more powerful machine intelligence. It is a real question how this should develop and whether we will at some point be replaced with machines.

The neurosciences are also a vein of gold for bioethics. We may well be able to understand and manipulate the human mind, engineer desire and motivation.

We are working the ethics of advances in the biological sciences in our Programme on Ethics of the New Biosciences in the James Martin 21st Century School and on the neurosciences in the Oxford Centre for Neuroethics. Nick Bostrom's Future of Humanity Institute is doing a lot of work on AI and the singularity.

It is commonly said that the complexity in social communication of Science, low level of scientific literacy, and the unconditional adherence to certain values as detected by studies of public perception, may negatively condition the social acceptance of technologies. Would you consider that all these elements are still distorting some bio-ethical debates? Which ones?

All of these are important. There is going to be an important translational and discursive role for some people able to translate radical scientific advance into intelligible terms and to promote public discourse about that.

In the end though, as science further progresses and offers real treatments or enhancements that really do benefit people, they will vote with their feet. It is easy to oppose embryonic stem cell research when it is theoretical or has not yielded any useful interventions. But most people would accept medical treatments from embryonic stem cells, if that was the only way to save their lives. Likewise, if some cognitive enhancement is safe and works, they will take it. Caffeine is the world's second largest export. Experience is the greatest moti-

vator.

Which role do you think the precautionary principle should play in debates concerning particular technologies for human enhancement?

The precautionary principle is often disastrously invoked to preclude any intervention which has some risk. Everything has risks so you could invoke a precautionary principle to not do anything. It is crazy to give up the extraordinary benefits of genetic modification for the tiny risks of some harm. We need to do a rational cost-benefit analysis. In most of the cases I have seen it employed, the precautionary principle displaces proper rational choice, the proper employment of expected utility theory.

There is only one version of the precautionary principle that I think is useful, where it should displace standard rational choice theory. This is the case where an intervention has some existential risk, that is, risk of annihilating humanity. It is rational to reject an intervention if it has an existential risk, even if its expected utility outweighs the disutility of the intervention. At very least, we have a moral obligation to reduce or remove existential risks.

Here is an illustration of the point. Suppose that your level of welfare could be assigned a number, say, 100 units. Suppose also that probabilities could be assigned numerical values. Consider now your choice of whether or not to participate in a lottery in which the probability that you will gain 2 units is 99%, but the risk that you will lose all of your 100 units is 1%. Then the expected value of the possible gain is nearly double and the expected disvalue of the possible loss, and standard decision theory would require participating in the lottery. But many of us would regard it as more reasonable not to participate. It would strike us as almost crazy to run even such a small risk as one in a hundred of losing everything in order to gain an increase in well-being which seems relatively insignificant.

This argument may well apply to advances in the biological sciences that could generate superlethal bioweapons (e.g. synthetic biology) or advances in computing that could lead to unfriendly AI...

Do you have an opinion about the recent debate on the responsibility of WHO (World Health Organization) in creating a world-wide alarm about the dangers of the new H1N1 flu virus, possibly to the benefit of the pharmaceutical companies that manufactured the vaccines?

The previous point applies. Where there is a risk of massive harm, we should employ aggressive strategies, even if the risk is small. I think that governments were ineffective in rapidly deploying sufficient resources to deal with an influenza outbreak. There were insufficient antivirals, limited access to vaccination, etc. They were just lucky it did not mutate into a Spanish flu-like virulent strain. If 10 million people had died world wide, we would have said that they did not do enough or quick enough. But that is what could have happened and will likely one day happen.

This argument about blaming pharmaceutical companies is a typical scape goat argument. The real issue was one of risk and the governments, to my mind, did not respond enough to the risk, or rather the expected harm. They were lucky they got away with it.

It would be better to spend more money preparing for flu epidemics and less on unjust, immoral, counterproductive and enormously expensive wars like Afghanistan and Iraq.

Here we see again failure of non-consequentialism and deontology, and the superiority of consequentialism. I was shocked to discover US spent \$3trillion on Iraq/Afghan war but only \$2.1 trillion on aid in last 50 years.

What Is My Cognitive Enhancer? By Julian Savulescu

Sometimes people ask me, "Which enhancers do *you* use?"

Despite having defended doping in sport, I have never taken drugs to improve my physical performance. I have refused to have cosmetic whitening of my teeth and plastic surgery to correct damage to my leg from a skiing accident.

I have taken a variety of cognitive enhancers. I regularly use caffeine, sometimes having five cups of coffee/tea a day. I infrequently use nicotine, usually when I am driving long distances, tired or for jet lag. I have used modafenil a couple of times when I have had to give important lectures with jet lag. But there is one cognitive enhancer which, in my experience, is vastly better than caffeine, nicotine or modafenil. I will call it E.

I started taking E's when I was student to help to stay awake more and longer. I discovered them myself by accident, when I was about 16 or 17. I used to take them regularly. I would have about 3 Es per day, but sometimes up to 5 when I was working 13 or 14 hour days. I would take one at about 10am, one after lunch, at about 430pm, after dinner and around 930pm.

My performance was significantly improved on Es. I won nearly every prize in medicine and I attribute a lot of that to my Es. I have never told anyone that.

But it is time to come clean.

I haven't taken Es much in the last 15 years, for various reasons, but have started taking the occasional one again. I plan to take more. I hope I can get a lot more.

In my experience, Es are perfectly safe. Not only do they have serious cognitive enhancing effects, but they also seem to be good for your mental health. Unlike caffeine, they make you calm and relaxed. Modafenil is better than caffeine. But Es are, in my experience, much better than Modafenil.

Although most people don't realise it, Es are ubiquitously available. You can even get them in the developing world. And they are cheap. Ridiculously cheap. Paradoxically and almost uniquely, they often cost more for rich people than poor people. But the rich can well afford them.

To my mind, Es are the perfect cognitive enhancer. They are also immune to the standard objections to cognitive enhancement.

Cognitive Enhancers are unsafe and we won't know the long term side effects or subtle adverse effects on other domains of human cognition.

Millions of people have had plenty of experience using Es, though not specifically for cognitive enhancement purposes. There is not a single adverse effect reported or experienced from this use. While caffeine and some other cognitive enhancers may disturb normal sleep patterns, in my experience Es have precisely the opposite effect. You sleep better when you take Es regularly. It is true that Es have not been systematically studied like caffeine, but based on human use, they appear much, much safer. Indeed, as far as we know, they are *perfectly* safe.

Cognitive Enhancers will increase inequality, disadvantaging poorer, developing nations.

Es are, as I said, incredibly cheap and affordable to most human beings on the planet. And if someone could not afford an E, then they should as a matter of human rights be provided with the opportunity to take one.

Cognitive Enhancers will achieve nothing as everyone will use them and no one will be any better off.

Es not only give you a competitive advantage, as my performance in medical exams showed, but a personal advantage – your life goes better. You remember more, you think more clearly and precisely, you are more imaginative and creative. And, they also seem to make the rest of your life go better. I've not only experienced other mental health benefits, but they seem to be conducive to better physical performance. However, I have used them mainly as cognitive enhancers.

If everyone were on Es, society would be more productive, happier and better. Es paradigmatically have not only positional benefits but significant nonpositional benefits. We'd all be better off on Es, in my view.

Cognitive Enhancers rob the user of real achievement. Their achievements are the products of their enhancers, not their strivings, pains and struggles.

It is true that Es make it easier to perform more effectively, but you still have to put in the work to reap the benefits. I don't believe my own achievements were the product of my Es but they did enable me to work much more effectively. I still did the work.

Cognitive Enhancers reduce diversity in ways of thinking and creativity. We will all think the same.

Not true. Es do not in anyway constrain modes of thinking. They allow you to better think in your own way. In my experience, they significantly increase creativity, originality and penetrative thinking.

Cognitive Enhancers are playing God or against Nature.

Es are as natural as drinking water or having sex.

Cognitive Enhancers will reduce humility, solidarity and responsibility for others.

Es have made me believe we can all lead better lives and it is our choice to lead these. People should take responsibility for how they lead their lives, and whether they take Es. Yes, Es have made me feel less responsible for others, in a little way. But once they know the value of an E, it's their responsibility if they reject them. Why should I take responsibility for other people's wilful stupidity?

Cognitive Enhancers change people, but we should be changing society to enable people.

Not true. Es are safe, cost-effective and enhancing in many domains. No change in society could match and, moreover, these are not mutually exclusive. However, we should create a culture where taking Es is not only permissible but encouraged, because they are safe and effective. Societies should not look down on them, as they are in some cultures. We should change society to embrace such enhancers.

Cognitive Enhancers will compromise the mystery or meaning of life, making everything written into choice or predictable. We will live a sterile world where the ending is written into the beginning of the story and what we choose will be achieved.

Not true. Es still require great effort to succeed and mystery will be increased as our true creativity is unleashed. Es are a part of the meaning of a human life.

An E is the perfect cognitive enhancer. And despite them being available to all of us, we are blind to their value as cognitive enhancers.

An E is, I am sure you guessed, a 15 to 20 minute siesta or more fashionably called a "power nap". In my experience, once learnt, the short siesta is the perfect cognitive enhancer. The problem is that many cultures, such as English culture, are not set up to facilitate the siesta. And we do not teach or encourage people to siesta. This is hugely disabling.

If there were a drug which rivalled the siesta in terms of safety and efficacy, I would take it. And it should be encouraged, just as siesta should be encouraged. But at present, no drugs come close to siesta.

It is so strange that such effective enhancers are all around us but we don't see them. And our lives go much worse as a result.