

Making better babies: pro and con

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The following text is based on a public debate between Professor Julian Savulescu and Associate Professor Robert Sparrow on the topic of ‘Making Better Babies,’ which took place in Melbourne, Australia, on Tuesday, October 2, 2012. The debate was introduced by Professor Michael Selgelid, the Director of the Centre for Human Bioethics, at Monash University, and facilitated by Associate Professor Justin Oakley. The text has been edited from the original transcript for clarity and brevity.

Julian Savulescu

Imagine that a couple is having IVF. They have produced six embryos and have had those embryos tested by PGD. The embryos are all healthy – as far as we can tell, they don’t have any genetic disorders.

I’m going to do a quick poll, just to see how much enthusiasm there is for ‘designer babies.’ How many of you think that this couple should be allowed to test those six embryos for eye colour and hair colour, a show of hands? ... I’d say about ten percent. Alright, what about height? Do you think they should be able to test to see how tall the child would be? ... Ah, maybe a few more, about fifteen percent. Intelligence? ... Maybe twenty, thirty percent. Athleticism and musical talent? ... Probably about the same.

There are many mistakes in this debate and I'm going to outline a few of them and point to some that Rob will make during his talk [*audience laughter*].

The first mistake is to confuse the debate about designer babies with a debate about embryo destruction. Many people's intuitions about selecting embryos are polluted by their intuitions about whether it's right or wrong to kill an embryo, but these are different issues.

In fact, the selection of gametes – the egg and the sperm that go to form the embryo – is already widespread. Those qualities which I just mentioned to you, in connection with PGD, are routinely tested and required in sperm donor questionnaires in Australia and elsewhere, where they look for features including personality type.

Around five hundred babies a year are born to Australians who travel overseas to look for egg donors and to pay for egg donors. In May this year, a Cambridge-educated couple in the UK sought to find an egg donor from Cambridge University because they said they wanted to have a donor they felt a connection with. In the United States, it's a free market. Donors earn more if they study at a good university, have a sought-after talent or are particularly pretty. If they're proven 'breeders,' they earn still more. Fees range from \$6500 for a first time donor to over \$20,000 if you're an Ivy League educated woman, or if you're a model. An egg donor catalogue is like a dating website. For example, 'in South Africa, Annabelle from Pretoria is one point six metres tall, seventy-two kilograms, thirty-two years old with brown hair and hazel eyes and she likes adrenaline sports.' Sperm donors are selected for similar criteria. According to one sperm bank owner, parents seek sperm from donors who are athletically or musically inclined, and they prefer donors who are educated. Hair colour is particularly important. One sperm bank closed its doors effectively to red headed donors in Denmark earlier this year. This all involves creating designer babies.

So, many people seem to believe that it's okay to have a child like themselves, but not one that's better than themselves. However, this would be to entrench privilege. If Cambridge graduates can select a Cambridge egg donor, why can't all women, if they want, select a similar donor?

Despite the rhetoric, in practice we love designer babies. Of course, just because we love them doesn't make creating them right. However, I'm now going to argue that not only should people be allowed to create them, but that we actually have an obligation not to choose hair colour and eye colour but to select certain other traits.

The first point to recognise is that genes do matter. Sometimes in these debates you hear that selection just won't work: you will never be able to create designer babies, the science is too complicated; all this choice about race, eye and hair colour, it just won't work. This kind of objection would imply that you're just as likely to have an Asian baby if you choose sperm from a Caucasian donor.

That's obviously false: certain forms of genetic selection do work. Indeed, this objection is self-defeating. If we weren't able to create designer babies, then there would be no point in debating the ethics of doing so. Even if there's just a small chance of influencing a child's character traits through the use of genetic selection, that can still be important. Consider a parallel: just because we can't determine the outcome of some social or educational project or policy, it doesn't mean that we shouldn't try, if the intended outcome is a good one.

In fact, I think that genes have quite a significant impact on who we are. Most traits are around fifty percent heritable. As the great genetic experiment that's been occurring over ten thousand years has shown us, the ability to manipulate genes and determine phenotype is profound. The three hundred different breeds of dogs that are around today are all the result of genetic selection over ten thousand years. Some are smart, some are stupid, some are vicious, some are placid, some are hardworking, some are lazy, that's all genetic. No matter how you treat or train a Chihuahua, how many vitamin supplements you give it, it will never beat a Doberman in a fight. A Russian woman, Lyudmila Trut, has selectively bred foxes to be as domesticated as dogs over her lifetime. This shows that genetics does have quite a profound influence.

What took us ten thousand years in the case of dogs could take us a single generation through genetic selection of embryos.

The next point that I think is important is that not only does health matter, but that our capacities, talents, biological advantages, virtues, character – whatever you want to call them – also matter. They fundamentally shape how our lives go, how happy we end up, how successful we end up. You need an IQ of ninety – and the average is a hundred – to complete a tax return in the United States. With an IQ of a hundred and twenty you can have any job that you like. With an IQ between seventy and eighty you're virtually unemployable and the U.S. military won't even consider you for enlistment.

One of the most profoundly determining factors is our ability to delay gratification or control our impulses. This was demonstrated in the famous marshmallow experiments, which you've probably heard about and seen: three-year-old children are given a marshmallow and told to resist it. Ten years later, those who could resist it have more friends, more motivation to succeed, and greater academic success. They end up higher on the socio-economic scale and less likely to be imprisoned. These things matter and they vary across individuals, just as our dispositions to disease vary.

Think of the things that you may think are important in yourself and in your children: your ability to remember things, empathy, sympathy, creativity, patience, hard work, optimism, generosity, a sunny disposition. Now think of something that is threatening these kinds of traits in your children: perhaps this lead in the water, or some toxin, or some disease. In virtue of the fact that we think those things are important we would seek to protect them. This shows us that we hold certain traits as being valuable both for ourselves and for the rest of society.

At the opposite end there is psychopathy. Some children have callous, un-emotional traits that cause them to torture animals and to have little response to the feelings and emotions of others: in many cases such children go on to become psychopaths. There is a strong genetic basis to both of these traits. Genetics is unravelling the contribution of genes to important behaviours, not just to blonde hair and blue eyes or to height, but to altruism. The COMT gene is one example – one version of it is associated with three times as much altruism. Non-violence and its opposite, violence, are associated with a gene called MAOA, and early childhood experience. Fidelity in relationships is associated

with a certain mutation of the AVPR1A gene. Fairness, that is, the sense of fairness, has a strong genetic contribution.

So if we accept that we should treat diseases and use genetics to prevent disease in our offspring, my argument is that we should also value those traits and the genetic contributions to those traits which affect how well our lives and our children's lives will go.

I have in the past, somewhat controversially, argued that we have a moral obligation to do this. Currently it's legally impermissible to select these sorts of traits in Australia, and I think this is profoundly wrong. However, more strongly, not only do I think that people should be able to do it, I think they should do it.

Why do I say that? Well, if I said to you, people should protect their children from disease, it's uncontroversial. But if disease is only important because it makes our children's lives worse, so too parents should choose those genes or choose those states which will promote a better life for the child.

We have many obligations. We have an obligation to provide good diet and education to our children, to stop climate change, to alleviate global poverty. We have obligations to ourselves and our families. We have many competing obligations. One of those obligations is to try to ensure that our children have the best lives possible and the best advantage when they start life. Now of course that obligation could be outweighed by our other obligations, but it is an obligation – what's called a *prima facie*, or defeasible obligation – nonetheless.

Now I'd better go through five or six bad objections to creating designer babies: I think Rob will make at least two of these.

The first objection is that if you discard one of those embryos in favour of one that you think it likely to be more intelligent, more empathetic – whatever you think is valuable – or indeed if you selected a hearing embryo rather than a deaf embryo, you could have just discarded Beethoven. I've heard this so many times. Now of course Beethoven wasn't born deaf, he became deaf through his life, and this illustrates a fundamental mistake. If you select an embryo that's hearing not only could the embryo be like Beethoven, but it could be an embryo who is hearing all through its life. With the information that you have available at the point of making genetic selections, you can

only make a prediction on the basis of that information – and any of those embryos could be Beethoven.

The second argument that you often hear is that this is eugenics – that it is what the Nazis did. I think this is one of the objections Rob is going to make. It certainly is eugenics. Eugenics literally means wellborn, it means selecting genes that are better for your children. So too is genetic testing for Down Syndrome, Cystic Fibrosis, Thalassemia, and in fact all of the genetic tests that are allowed already under current legislation.

What differentiates the so called new liberal eugenics from the old Nazi eugenics are two things. Firstly, people are free to make their own choices and decisions – and even to refuse to have genetic testing. Secondly, it is not based on race or on the Social Darwinist values that the Nazi program was.

We in fact have a natural experiment of what eugenics is like today in the form of testing for Down Syndrome and genetic disorders like Cystic Fibrosis. We allow people the freedom to choose not to have these tests or to carry on pregnancies with known disabilities. We even allow in some cases to intentionally select a disabled child – and I'll come to that in the last part of my talk. But current regulations today are paradoxically themselves eugenic. They are based on a certain vision of how the population should be: it should be chosen by chance – like that famous book by Rhinehart, *The Dice Man*, where he decides his life by the throw of a dice. This is exactly what VARTA, the regularity authority in Victoria, wants to happen for the next generation. They want it to be decided by the throw of a dice. This implies a certain vision of the way in which the world should be, and indeed people are coerced into having children this way because they're denied the freedom to use technology and denied the knowledge that's available.

The third objection is that we just don't know what qualities are important to people's well being – let alone what genes contribute to them. So we just don't know what's going to make people's lives better.

The basis of this objection, in many cases, is a kind of moral relativism. The Nazis valued certain sorts of things. In Victorian England, people would have valued patriotism in their children, yet today we don't think that's an important value. Based on this view that values are relative to different times,

people fear that if we start allowing people to make choices we'll just have the fashion of the time – or even worse we could return to a kind of Nazi program. However, I believe that there are universal and objective values. We have upheld the Declaration of Human Rights since the Second World War. We have a great emphasis in developed countries on equality and justice. And we hold that the Nazis were racists. We hold that they were wrong in a strong sense, not just wrong by today's standards. They were wrong according to any standards. They were racists.

We have a concept of what is good when we try to educate our children, when we parent them, when we create social institutions and we use punishments or reward certain behaviours. Much of ethics is indeed in the grey zone – whether it's better to be introverted or extroverted, for instance. However, some of it is black and white. None of us today thinks that discrimination against the disabled or discrimination against people on the basis of race or sex are somehow justifiable. Psychopathy isn't good regardless of the time and place in which you live. So we can make some decisions about what's valuable.

The fourth mistaken objection is that prejudice will influence the sorts of things that we choose: in a sexist society genetic selection would require choosing a boy; and in a racist society it would require choosing a white skinned child.

It's true that we should predict the likely social environment – including the attitudes of people – when we choose what kind of children to have. But, as I said, choosing children that will have the best lives is only one reason amongst many. There could be other reasons to select other things, or indeed to ban selections altogether – for example, reasons of social justice. It would be quite reasonable to say that in order to promote social justice we will ban sex selection or selection on the basis of race. Interestingly we don't do that in the case of race and gamete selection.

Moreover, of course the main problem here is the prejudice which drives these choices, not the reproductive decisions. The idea that race is a perfectly permissible consideration when it comes to selecting sperm seems to suggest that people think that, in certain circumstances, race can be important in one's offspring.

The fifth objection to the use of PGD for enhancement is that it will discriminate against people with disabilities and people who are disadvantaged. It sends a message that certain lives are less worth living and reduces solidarity in the community.

This objection confuses, in quite a crude way, genes with people. It identifies people with a trait, with a category. For instance: I'm a male; I'm middle aged; I'm Caucasian; I'm an asthmatic; and, I'm a professional. All of these are categories, but I'm fundamentally a person. And all persons deserve equal respect. That's one of the ethical principles I mentioned earlier, which is non-relative. However, that's not to say that certain traits or genes aren't worse than others. We of course seek to treat and prevent disease. And we don't think that people are equated with their diseases. I have asthma. I use treatment against it. I would select against it if I were using genetic selection. But I still want to be treated with equal concern and respect and that seems perfectly legitimate.

The last objection which I think fails, and which is one that I think that Rob will make, is that inevitably this will lead to social engineering, not for increasing the wellbeing of our children but to promote certain social goals, like what the Nazis did, or what China did when it used a one child policy to limit the population.

Of course this technology could be used to achieve social goals. Contraception and sterilisation were used by China to achieve certain social goals. Any technology can be used to achieve certain social goals. The question is whether it *necessarily* will be and whether we can prevent that. As our experience has shown with testing for disabilities the best defence against this kind of slide is a robust respect for freedom, freedom for people to make different decisions. This freedom is best expressed when people do indeed select for disorders like deafness or dwarfism.

I believe that such choices are wrong. I think that deafness and dwarfism are disabilities that raise hurdles to people's lives, but nonetheless people should be free to make those choices in the kind of society that we live in.

The best defence against a slide towards the abuse of any powerful technology is ethics, which in many cases involves respect for freedom. Genetic selection is not alone in being a powerful modern technology. In this regard the debate

about designer babies is a test of our maturity, of our ethics. We should employ robust principles, such as the duty of easy rescue to provide great benefits to others when the cost is small to ourselves. We should invoke the harm principle, that people should be free to make the choices that they want provided that they don't harm other people. And we should use the values and principles that we agree on around equality, justice and what makes for a good life to guide our decisions. So this is not just a debate about designer babies; it's a debate about the use of new technologies. Will we ban them, or will we allow them to a free market?

I think both of those are the wrong way. We should design our principles thoughtfully and on the basis of secular ethics that we've developed over the last fifty to a hundred years. Not only should people have a child like themselves; they should have a child who's better than they are. We should aim to bestow upon the next generation a genetic endowment that is richer than our own. Thank you.

[Applause]

Robert Sparrow¹

The idea that we should use our knowledge of genetics to produce superior human beings may sound like a daring and radical proposition, especially when presented by a philosopher as lauded as Julian Savulescu. In fact, as I hope to show here, it is entirely pedestrian. It is an argument with a long pedigree, which has the appearance of novelty only because it had momentarily gone out of fashion. The argument that Julian has presented – that more is better and normal not good enough; that science is a force for good; that choice is sacred and progress our destiny – is entirely in tune with the logic of the market and the bureaucratic goals that govern the funding of research in universities around the world today. The presence of this argument in science fiction since

¹ The research for Associate Professor Sparrow's contribution to this debate was supported under the Australian Research Council's Future Fellowships funding scheme (project FT100100481). The views expressed herein are those of the author and are not necessarily those of the Australian Research Council.

the 1930s ensures that it excites the hearts of young men everywhere. The fact that it sounds controversial makes it the natural choice for media attention. Moreover, it has a long history in the development of the genetic sciences themselves, and a long history of public enthusiasm for eugenics ... a long and horrible history.

To argue that we should resist the logic of technology and the market, reject the endless pursuit of the better and defend the merely 'good enough' is, in this day and age, to be the heretic. To argue that we should reject these things without drawing on religious or conservative ideas is difficult indeed. Yet that is what I want to try to do today. In this debate, then, contrary to what might first appear, I am in fact the underdog.

In the time available to me I want to do four things. First, I want to clarify the logic of the argument so as to expose the nature of the disagreement between Julian and I. Second, I want to draw out a number of troubling implications of Julian's position that Julian plays down or denies. Third, I want to argue that the defence of the therapy-enhancement distinction – that is, the idea that we should use our knowledge of genetics to ensure that our children are born healthy but not to enhance them, not to try to improve them beyond the species-typical – is the only way that we can avoid the dangerous logic of the argument for enhancement. Finally, I will make a few remarks about why the debate about genetic human enhancement is important even though the science suggests that – contrary to Julian's claims – there is no realistic prospect of meaningful human enhancement using PGD for the foreseeable future.

Let me begin, however, by noting a number of points on which I'm actually in agreement with Julian.

I do believe that it is morally permissible – and may even be morally obligatory – to use preimplantation genetic diagnosis to select against serious genetic disorders. Thus, I'm in favour of genetic therapy.

I also agree that the line between therapy and enhancement – between the use of technology for medical ends and its use to produce 'better babies' – is hard to define and, to some degree, historically contingent. Everyone in this audience is already 'enhanced' compared to pretty much the entirety of

human history, simply by virtue of having had access to public sanitation, antibiotics, and reliable supply of nutritious food while they were growing up. Thus it is, indeed, always going to be a difficult argument to make, to say, that we should stop at normal health – knowing what a shifting historical entity that that has been.

I also agree with Julian that we do indeed have some reasons to want our children to be better. The environmental analogy – that most of us choose to educate our children, that we try to bring them up so that they're not just average but better than average – has a certain force. The logic of desire also points in this direction: we see something that we think is good – long life, intelligence, good looks, et cetera – and we conclude, okay more of that has got to be better. I actually think this claim is trivially true: it is not terribly profound or new at all to observe that we have some reason to want our kids to be better. Enhancements are things that are desirable and therefore we desire them. That actually seems to me to be the beginning of a debate about these technologies, not its end.

However, I don't think that we are morally obligated to enhance our children: I certainly don't think we have an obligation to have the best child possible, as Julian has argued. Moreover I don't think it would be a good idea to develop genetic technologies to enhance human beings. That is something I think that we should, as a society, try to resist. Perhaps most controversially, I think we may even have grounds to prohibit the use of genetic technologies to pursue non-therapeutic goals.

To understand why, we need to take a closer look at the nature and implications of Julian's arguments – and here I'm going to be drawing on his published work as well as the arguments he presented earlier. I want to bring out some details of the argument that reveal that it is much less plausible than superficially appears.

Julian has argued that we should have better babies, and I agree as far as therapy goes. So the dispute between us concerns Julian's claim that we should have babies that are better than normal – that we should not be limited by what is species-typical, instead we should be trying to improve our babies as we've bred dogs in order to improve them in various ways. Once we start this project

then it is actually very hard to resist the conclusion that we should choose the best baby. Once you've started down this road, it is quite hard to say at any point look, no that is good enough. More is always going to be better. That argument – look, you like long life expectancy, here is an embryo with more life expectancy – is going to continue to work, no matter where the technology is today, no matter what it currently makes possible. Thus Julian is actually not just arguing that we should improve our children, but that we should have the best children possible.

In fact, this is not something any parent tries to do when bringing up or educating their child. If you're a parent, the moment you spend any money purely for yourself then you are not maximising your child's chances. Thus, it is actually not very plausible to think that parents want to give their child the 'best life possible.' In practice we all settle for providing them with a life that is 'good enough.'

Julian also purports to be discussing reasons that should motivate us to action, and – as his remarks on moral relativism demonstrated – these reasons must be independent of our own particular beliefs. That is to say, we are obligated to have the child that actually is best, not just the child that we think is best. This means there may be right answers to the question of which embryo we should select even though we don't know what they are. It will often be the case that we can't tell which of two embryos is going to have the better life, but there will be a right answer. If Julian is right, we will be obligated to choose one of those. Of course, given that we don't know which, it may be morally permissible to choose either.

As Julian has also clarified for us, the motivation for the pursuit of the best child – what it is that we are concerned with when we try to decide which embryo is best – is the welfare or 'interests' of the child. We should have the child that will have the best life.

Now this claim is important in the logic of the argument: why should we think that parents should choose the child that will have the highest expected welfare?

Well, in part, this just sounds very nice and sensible. It appeals to medical goals; doctors are motivated, at least in part, by a concern for their patients'

welfare, so if we can demonstrate that the use of a technology developed for medical purposes could be used to increase welfare beyond the norm then such use just looks like a natural extension of the medical project. It also coheres nicely with what we think about the aims of good parents; good parents care about the welfare of their children. They're not trying to have children that will be good at working in the family business or good at keeping the neighbours amused as a conversation starter – they are trying to have a child that will have a good life.

Importantly, the most plausible alternative to a concern with the welfare of the child – the idea that parents should have children that would be good for society, or good for the species or the world – is irredeemably tarnished by the history of eugenics. What people dislike about eugenics of the 1930s is not just that it was coercive, but that it sacrificed the interests of the individual for the sake of the public good.

You should have this baby because it would be good for Australia! That is a disturbing notion. The moment that we start to hold that parents should choose embryos that would be best for other people, we will find it hard to resist the idea of selecting people to suit their social circumstances. It would be better for Australia if your child fitted nicely into a particular social niche: Australia needs more people to sweep the streets so we have selected you to have a child that will be a happy street sweeper. In order to resist that dialectic, it seems sensible to say no, the new eugenics, this new use of genetic technology, should be about the welfare of the child.

Having clarified the logic of Julian's argument, let me now speak briefly about a number of its surprising implications.

To begin with, you should be aware that your child is not the best child that you could have had! You all have many genes that are bad for your children. If you really wanted to have 'the best child possible' then you should have somebody else's baby. You should find a couple with better genetics than your own and ask them for one of their embryos.

The moment that we restrict procreative beneficence – the obligation to have the best child possible – to the best child that *you* could have then we have already sacrificed most of the force of the argument. If it turns out that

the obligation to have the best child possible can be overridden by my desire just to have my own, genetically related, baby, then we are not really concerned with maximising the welfare of the child at all. Instead, are only concerned with this tiny little spectrum of choice available using the embryos that we could produce with our partner.

Even more problematically, for any given environment there is actually likely to be one best embryo – or at least a small number of equally good embryos. So not only should you not have your own child, but you should probably all have the same child. We should find one embryo with the best genome, clone it and make sure everyone has that embryo, because that would indeed be the best child possible, with the best expected welfare.

Now of course we often won't know which child is going to have the best life prospects in a given environment. Where this is the case, it may be permissible to choose from a range of embryos, but what we'll really be obligated to do is to have the one that actually is best. Best here is an objective notion, not a relative notion. There will be one best embryo, and you'll be obligated to have it.

As Julian has observed, I do worry that in sexist or racist societies the best child – the child with the highest expected welfare – will be a blonde-haired, blue-eyed, male child. The impact of racism and sexism on the welfare of children is very real. It is as real as many other things that we could influence genetically.

Now perhaps we should legislate against selection on the basis of unjust social discrimination like racism, homophobia, or sexism. However, that is a different argument to the argument about obligation. If you care about the welfare of your child in a racist and sexist society you should make sure that your child will not be a victim of sexism and racism by ensuring that they are not born a woman or a member of an oppressed racial minority.

Interestingly, the argument that parents have an obligation not to reinforce social injustice actually subtly relies on the recognition that racial variation – or variation in the sexes – is part of normal human variation. Some people with disabilities have argued very forcefully that the suffering and reduction in opportunities that they experience is a product of an unjust social order

rather than inherent in their bodies. For instance, if there were more wheelchair ramps, there would be fewer restrictions on the mobility of people in wheelchairs. Thus, unless you are prepared to say no to therapeutic uses of PGD to prevent disability, singling out selection on the basis of race and sex and saying, no, that's bad because it is racist and sexist, actually relies upon being able to identify and defend these latter aspects of persons as part of normal human variation. That is, it relies upon the distinction between therapy and enhancement that Julian denies.

Finally, the increase in parental choice that Julian refers to is entirely illusory. Once genetic selection for enhancement becomes available, parents will effectively be required to enhance their children to prevent their children from being out-competed for scarce social goods, including positional goods. It will be like what has happened with private schooling. In Australia, if you are concerned that your child should have the maximal possible opportunities, then it is hard to resist the thought that you should send them to a private school. I'm not sure that the claims about private schools providing a better education are actually true, but if they were, then every parent faces the dilemma about where to send their children knowing that, because other people have this choice, their child is likely to be disadvantaged if they don't go to a private school. If you know that everybody else out there is choosing a better baby it is going to be very hard to make the decision to let your child go through life with normal genes. Indeed, if you do that you won't be choosing the best child possible.

Now it is true that this kind of dilemma is nothing new. We face these problems about the intersection of individual choice and injustice all the time. However, the fact that we've faced these problems before is no reason to embrace them again.

Another implication of Julian's arguments, which he downplays, is that failure to choose the best child should be criticised. People who don't do what they should do, do the wrong thing. We should name it as such. If Julian is right, most of you have done the wrong thing because you didn't use PGD to select the best child possible. Moreover, we should try to persuade people to do the right thing by putting up big banners, which say 'Choose better babies!' in the streets. We should reinvigorate the sort of 'Fitter Families' competitions that

were a feature of the eugenics of the 1920s to encourage people to do the right thing and choose a better child. Indeed, we should probably provide incentives in the form of tax breaks for those who use PGD to enhance their children.

Finally, when it comes down to it, there will be a case for regulation. If a failure to enhance your child will leave your child effectively socially crippled because their genes are so much worse than the genes of people who have chosen to make a better baby, this looks a bit like child abuse. Furthermore, it actually imposes costs on others. If I have to pay for your child's healthcare because your child gets sick more often than my child who has better genes, then your choice has imposed a cost on me and that may justify regulating. Whether legislation is justified or not, if these technologies become available, there is likely to be an immense public pressure to require parents to give their children the best lives possible.

Indeed, without legislation we can't avoid collective action problems. In some of my work I've been interested in sex selection as an enhancement technology. If I invented a simple medical intervention that would increase your child's life expectancy by five years, people would hail me as a great scientist. Actually sex selection will do that. Girl children, roughly speaking, have a five-year longer expected life span than male children. So that suggests that parents who want their children to have the best life possible should choose a girl baby!

Now the obvious response to this suggestion is that if everybody does this, then we'll get a society without men, which might be thought to be problematic.

However, the fact that if everyone does this, the outcome would be bad, doesn't give me any reason not to do it myself. If everyone else does it, it doesn't matter what I do. If nobody else does it, then I might as well make sure that my child has the longer life expectancy. Whatever other people do, then, I should choose the child with the best life prospects.

In order to avoid these kinds of problems, we will have to legislate. We will have to pass laws to restrict people's access to these technologies in order to try to ensure that certain collective goods are maintained.

Faced with all these disturbing alternatives, I think that we should stick with the idea of what is good enough – and agree that normal human health

is good enough. Genetic selection for above-species typical traits is a choice that we should collectively reject. Maintaining the distinction between therapy and enhancement in these choices is the only way to avoid our genomes becoming subject to the logic of technology and the market. ... Or it would be if the technology lived up to its hype. Personally, I think this is unlikely. I actually think that we are not going to be able to breed human beings like dogs. You're only going to be able to use PGD to choose from the embryos that you have available to you through IVF, which is very small, and we simply won't know enough about the genetics to exercise a meaningful influence over the welfare of the children except in the few cases where we are preventing disease conditions. So I have quite a different take on the technology to Julian.

Yet I think the debate still matters, because the real message of arguing that we should have better babies is to encourage the illusion that better genes make better babies and that better babies have better genes – in short, that those people who are wealthy and successful are that way because success is in their genes. It is the connection to the history of Social Darwinism – as much as to the history of eugenics – that is the reason why I think we should be more cautious about claiming that we should be making better babies.

[Applause]

Julian Savulescu

Okay, so Rob makes very many interesting points and I can't address them all. I just want to point out, because I know there are lots of students in the audience, a couple of new mistakes that Rob makes [*audience laughter*].

He started off by saying that he holds a treatment-enhancement distinction, and in fact at one point he said that he might hold that there would be a moral obligation to have healthier children.

Now, if you hold that there's a treatment-enhancement distinction, I can't see that he doesn't fall prey to the very objections he raises against me. So, for example, he says, 'Well if you want the best child, you should have someone else's child.' Well, if you want the healthiest child, you should have someone

else's child, because someone else is much more likely to have a healthier set of genes than you have, especially in terms of dispositions to common diseases.

He says quite bizarrely that the best thing would be a small number of clones. I find that a really boring world, but let's assume that that is the case. Then the same applies to disease. We should have a small number of clones of the very healthiest babies. So if you hold the treatment-enhancement distinction the same problems that he claims apply to my account apply to his.

He says that people that fail to make these choices should be criticised, and we should persuade people to have better, fitter families. Well, the same thing would apply with having healthier families. Even today on his argument, we should be trying to persuade people to have children who don't have Down Syndrome or Cystic Fibrosis or common dispositions, or to persuade them to have other people's children if they are at risk of having a genetic disorder. But the fact is that we don't do that, even today with eugenics that's available in the form of testing for diseases. This shows that having obligations doesn't imply criticizability.

And lastly he says that this will all end up in requiring regulation because people will impose costs on others by having children who are unhealthier.

But that's precisely what he did say we did have an obligation to do – have healthier children. He said we have an obligation to select against diseases. So if there was an opportunity for regulation it would surely be at this point already because disease does have a much more profound impact on our wellbeing than most of the things that I've discussed.

So I can't see how, given his own premises, he doesn't fall on his own sword in terms of the objections that he raises.

Now, I want to make a pedestrian point, and I agree with him, this is a very pedestrian argument, and it's stunning that it causes so much angst. He says we should stick with good enough. Now, it is well known that it's irrational to stick with good enough for any value if you could have something better at no cost. The only reason to stay with something that's good enough is if the costs of moving from that point attempting to have something better outweigh the

expected advantages. So, why would you ... if you were buying a television set and you said well that one's good enough but I could have this one with more features at no extra cost, what would you say? Well this one's good enough? It's irrational to sub-maximise unless you have a good reason.

I've suggested that there are lots of reasons why we might stop people having the best children. And I actually said that there would be reasons on the basis of collective action problems to restrict reproduction.

Okay, so I've gone through this quickly so I've got more time to discuss some of the other problems. The critical point that I've said is that we have many obligations, there are many reasons for what we do, and having a child with the best endowment – given the opportunities that we have – is only one of them. And we can of course have reasons based on social justice and other reasons for influencing reproduction in many ways.

He finished by saying we will only have a limited choice because we'll have a small number of embryos. Now that of course is true today. If you use stem cell technology you could actually use stem cells to produce hundreds of thousands, if not millions of eggs, and enable people to make huge selection decisions. So, that I think is also a time limited objection.

Rob also said that somehow this was a return to Social Darwinism, that wealth was in your genes and so you deserved what you got. I think when you look at the data that of course wealth isn't ... it's determined by a lot of factors, but it is in part determined by things like self control, intelligence, and those things have part social and part genetic determinants. Now, to deny that is just to deny the evidence. And the argument that I've given is that, insofar as we think it's important to change the social determinants of those things that determine how our lives go, we should also think about genetics in exactly the same way. To not do that is to be guilty of a kind of social determinism, that our fate is just determined by our upbringing, the society we live in, which is not true. It's a combination. And given that we've already acknowledged that certain kinds of things are valued besides health, we should also start to use our knowledge of genetics to make better decisions.

Robert Sparrow

Ok, thanks Julian, I am glad that I found some new errors to make today ... [audience laughter]. Look I don't think that we should maximise our children's health. I think we should stop at having a healthy child. There is a range of healthy children and I think that we should simply try to have a child that is good enough.

Now Julian thinks that this is irrational ... on the grounds that more of anything is better. However, the rationality of maximising is problematic. For instance, your partner is not the best person that you could be with. What, there are seven billion people on the planet? No matter how happy you are with the person you're with, there is almost certainly someone out there who is better for you. But if you go through every day of your life asking, of each new person that you meet, 'Are they better? Are they better? Are they better?' then that is a recipe for a really unhappy life. There are all sorts of situations where we don't maximise, we 'satisfice.' Is the person I am with now good enough? Probably, so let's stick with them and see if we can make something work. It is simply not the case that whenever we identify some value then we think that we should maximise it.

Now the more I've engaged with Julian on these issues, the more it has become clear how small the claim he is making actually is. His claim is simply that we have some reason to want our children to be better, that we have, as he said here, a *prima facie* obligation or, as he has said elsewhere, a *pro tanto* reason.

I really do think that this is a trivial claim. Yes, we have some reason to want this, but to say that we are obligated, even weakly obligated, is to say something more than that. It is to say that we have a certain kind of reason, a reason that outweighs our mere preferences or our aesthetic desires.

Thus, the more you push on Julian's argument, the less and less it seems to matter. It now looks as though your most trivial preferences – i.e. your preference to have a child that would make the world more interesting, or to have your own genetic offspring – outweigh what first sounded like this very strong and radical claim, 'have the best baby possible.' If you want to know what you are 'all things considered' required to do on his account, you can

pretty much do whatever you like ... because you can always find some reason that is going to outweigh this very weak reason you have to try to maximise various things in your children.

I also think that there is this slide in Julian's discussion between the argument about regulation and the argument about obligation. I agree that we might have good reasons to regulate – to say, look, people shouldn't be allowed to use PGD to ensure that they have white skinned children in racist societies because that would be racist – but when it comes to what parents have reason to do out of a concern for the welfare of their child, they may still be, as his argument goes, obligated to promote the welfare of their child by ensuring that they are born privileged. If you try to build in a concern with social justice into the parental obligation itself, then again you're not really concerned with the welfare of the child. The moment you start to say, look, we shouldn't all have cloned babies because that would be a less interesting world, then you are implying that some people should have sub-optimal children for the sake of variety. Who wants to be the unlucky parent who gets a child with less welfare than the children around them because we like a bit of variety? It is therefore very hard to see how we can have this obligation without it leading in the very strongly maximising direction that I suggested.

Finally, the science really is important here. Okay, maybe somewhere down the track we'll be able to create thousands of eggs from women's skin cells and that will allow us to use PGD to select from amongst thousands of embryos. Even then, you are still only going to be able to choose between those children that you would have been able to have naturally. They'll all come with bundles of genes. Some will be good, some will be bad. It will be very hard to make anything more than the most miniscule improvement to their life prospects through genetic selection, particularly given the uncertainties about the environment in which they are likely to grow up. Moreover, it will take us twenty years to know whether any of this technology works. You could choose all the genes that you wanted and then discover five years down the track that the science was all wrong. Look how many times people come out and say, look, we thought this was a gene for that, and it turns out it is a gene for something else. Julian's account of the science is implausible.

What matters is the social impact of this debate, and in that context talking about making better babies does encourage this myth that success is all in the genes. There may be some determinants of success in the genes, but what we should be concerned about is social justice, not trying to tweak people's genetics to give them better lives.

[*Applause*]

Julian Savulescu

Okay, the treatment-enhancement distinction is purely arbitrary. What constitutes disease is something two standard deviations below the mean. Intellectual disability affects two percent of the population, but why should what matters be determined by a point on a statistical curve; what matters is how well people's lives go.

It's a brute fact that natural inequality exists already. Nature has no mind to how well people's lives go or how healthy they are. We've used our ability to influence natural inequality in terms of disease to make people's lives go better. We should also use our knowledge of science to correct natural inequality in the very beginnings of dispositions of how our lives will go. Rob's very concerned about the effects on social justice, and so am I. We should promote social justice, but we should also promote biological justice. We should use our knowledge of our limitations, our differences, to try to make people's lives go better, not just healthier.

I'll finish with this one example. Everyone here – all of us in virtue of being people, one hundred percent of us – will age. And we will age at different rates. People of over one hundred have got a lucky genetic hand. They have a set of genes that protects them against the effects of ageing. Now, just because ageing is normal doesn't mean that we should accept it. I don't know anyone that enjoys the effects of ageing for themselves. Losing memories, losing abilities that you had before, and that is in large part genetic, and we will be able to influence that and also select embryos, as Rob said, that have longer life spans. The fact that women live five years longer may be offset by many other disadvantages in terms of reproduction and other aspects of their lives, but we should use our

knowledge of genetics and ageing to have children who age better and that's just a very simple example of something that's uncontroversially bad, but is completely normal. One hundred percent of humans have the disposition to age, but I still think we have a strong reason to resist it and to have children who age in better ways than we do.

Robert Sparrow

Sometimes arbitrary distinctions are the only ones that are available to us. It is an old philosophical trick to prove that night equals day by pointing out that there are shades of grey between night and day, and there is a point where you can't tell the difference between them. The fact that it is hard to draw some of these lines doesn't mean that we shouldn't draw them, and that we shouldn't cling to them in order to avoid the sorts of problems I've been describing.

Julian, at some points of his argument, is very clear that we must maximise: he insists that it is irrational not to maximise. However, when you point out that this would have quite dramatic impacts on human choice and diversity, he retreats to a claim about incommensurability – he admits that there might be many equally good genomes.

That blows the case for enhancement out of the water because then it is simply not the case that we must have the best child possible; we just have to have one of the many children that are not worse than any of the others. His insistence that many lives may be equally good is also very closely related to an argument made quite powerfully by some people with disabilities, where they say 'the lives of healthy people don't go better than mine, mine is just different.' I struggle with that version of the argument, because I think that some impairments are actually quite bad. It is normal health that strikes me as the point at which you might plausibly say, look, it is equally good to be male or female, to have an IQ of ninety-five or one-hundred and five, to have the different genomes that we have. If we abandon that line, it is going to be very hard not to find ourselves driven by this technology towards the endless pursuit of the better.

Julian and I also have very different levels of faith in the market. I don't have any faith at all that allowing individuals free choice will prevent this

drive towards the best leading to the social outcomes that I'm worried about. It doesn't become any better to be a girl in a society in which there are more and more men. It is not the case that when seventy percent of the population is male, suddenly it becomes great to have a daughter. It actually gets worse and worse to be a woman in a society as it gets more and more sexist because there are more and more men around. Thus, it is not true at all that we can simply rely on individual free choice to prevent these problems arising.

Finally I'd just like to draw attention to the language of natural injustice, of swapping embryos, and of genetic improvement, in Julian's presentation tonight. Despite his best efforts, Julian's language – and indeed the entire project of making better babies – really does encourage us to think that it is 'all in the genes.' It encourages us to turn away from the impacts that education and wealth have on people's life prospects and to believe this myth, which the wealthy are always telling us, that wealthy people are wealthy because they're better people. Even if we can't get this technology to work, we should worry about the contemporary enthusiasm for it, because of its history and because of what it suggests about our future.

[Applause]