

Discussion

ON OUR OBLIGATION TO SELECT THE BEST CHILDREN: A REPLY TO SAVULESCU

INMACULADA DE MELO-MARTÍN

ABSTRACT

The purpose of this paper is to examine critically Julian Savulescu's claim that people should select, of the possible children they could have, the one who is expected to have the best life, or at least as good a life as the others, based on the relevant, available genetic information, including information about non-disease genes. I argue here that in defending this moral obligation, Savulescu has neglected several important issues such as access to selection technologies, disproportionate burdens on women, difficulties in determining what is best, problems with aggregate effects of individual choices, and questions about social justice. Taking these matters into account would call such a moral requirement into serious question.

INTRODUCTION

In a recent article in this journal, Julian Savulescu¹ argues that we have a moral obligation to test for genetic contribution not only to disease but also to non-disease states such as intelligence, memory, or sex, and to use this information in reproductive decision-making. Savulescu defines as a disease gene, one that causes a genetic disorder or predisposes a person to the development of a disease. He understands a non-disease gene as one that causes or predisposes the person to some physical or psy-

¹ J. Savulescu. Procreative Beneficence: Why We Should Select the Best Children. *Bioethics* 2001; 15: 413–426.

chological state that is not a disease state, e.g. height or intelligence. Savulescu argues for a principle he calls 'Procreative Beneficence.' According to this principle, people 'should select the child, of the possible children they could have, who is expected to have the best life, or at least as good a life as the others, based on the relevant, available information.'² This principle, Savulescu defends, implies that couples should employ genetic tests for non-disease traits in selecting which child to have. Moreover, the principle implies that we should allow selection for non-disease genes in some cases, even if this maintains or increases social inequity. The main reasons for including selection of non-disease genes as part of parents' moral obligations is that it is not disease that is important but the genes' impact on well-being. Thus, insofar as non-disease genes, such as genes for intelligence, affect an individual's well-being then parents have an obligation to select for them, even if inequality results. This moral requirement, Savulescu maintains, implies that moral persuasion is justified but coercion is not warranted. I will argue here that in presenting this parental moral obligation to select for non-disease traits that might contribute to a child's well-being, Savulescu has neglected several important issues that, if taken into account, would call such a moral requirement into serious question.

SELECTION: WHO CAN DO IT?

As Savulescu points out, new reproductive technologies allow us to select from a range of possible children we could have. The advent of in vitro fertilisation (IVF) has made possible the origination of embryos outside of a woman's womb. These embryos can now be tested through pre-implantation genetic diagnoses (PGD) for a number of genetic diseases and, although it is not currently possible, in the future these techniques might allow us to also test the embryos for non-disease traits.

The first difficulty we find with the fulfilment of the parental moral requirement to select for the best children we can have, comes from the realisation that everybody who is thinking about becoming a parent would be morally obligated to use IVF and PGD. Now, this moral requirement might seem reasonable when parents are at a high risk of transmitting a genetic disease to their children that would cause them painful and miserable lives. Most parents would probably be willing to undergo medical procedures if they knew that doing so would mean a healthy child. However,

² Ibid. p. 415.

when the object is to make sure that we will select the embryo that might be more intelligent, is taller, or has more memory, this requirement seems far from reasonable. This is the case for several reasons. First, in countries like the US, with a large private-health sector, receipt of IVF and other genetic services depends mainly on the individual's ability to pay. But these technologies are quite expensive. The average cost of an IVF cycle ranges from \$10 000 to \$43 000, excluding the costs of previous treatments and the post-natal expenses.³ Second, the success rate of IVF is only between 15.8% and 25.4%.⁴

To this point Savulescu can respond in at least two ways. First, he might propose, together with his principle of procreative beneficence, that IVF and PGD (or similar technologies) be available to everybody who would want to use them. This would certainly help parents to do their moral duty in selecting for the best possible children they can have. But in the USA, a country where national health expenditures reached \$1.2 trillion in 1999,⁵ it does not seem likely that public policy makers are going to find this proposal very appealing. The use of IVF to treat infertility has become a \$2 billion-a-year industry. We can only imagine the costs of using this technology if everyone wishing to have children were to use it. In countries with national healthcare services, on the other hand, the need for these technologies would have to be evaluated in relation to many other and more pressing health needs. Given the problems with the distribution of healthcare resources in most countries with national healthcare, it is also unlikely that policy makers and the public would propose universal access to selection techniques when other health needs are more critical and urgent. To this we have to add the problem of self-defeating choices that will be discussed below.

Another possible reply to this problem is to point out that 'ought to' implies 'can.' Thus, only those parents who have access to these technologies are morally required to use them in order to select the best children they can have. But this creates other

³ J. Botkin. Ethical Issues and Practical Problems in Preimplantation Genetic Diagnosis. *Journal of Law, Medicine & Ethics* 1998; 26: 17–28, at 18.

⁴ Center for Medical Consumers Fertility Clinics Release. Success Rates – An Important but Imperfect Guide. *Health Facts* 1999; 24: 4; and American Society for Reproductive Medicine/Society for Assisted Reproductive Technology. Assisted Reproductive Technology in the United States: 1996 Results Generated from the American Society for Reproductive Medicine/Society for Assisted Reproductive Technology Registry. *Fertility and Sterility* 1999; 79: 798–807.

⁵ C.A. Cowan et al. National Health Expenditures, 1999. *Health Care Financing Review* 2001; 22: 77–110, at 78.

problems. First, only a small number of people, those with economic power, would be able to select for the best children. This situation is problematic because it might exacerbate existing inequalities. Because Savulescu defends that selection for the best children is morally required even if it results in social inequalities, I will address this problem on its own in a later section.

Furthermore, it would seem strange to defend a moral obligation that we know cannot be met by an important part of the population. It seems that we are taking a particular economic standard as the norm for our moral obligation. Because ought to implies can, we recognise that some people are excused from fulfilling their parental duties. But when people are regularly excused for doing what we would consider wrong (to not select for the best children), they are consigned to a moral underclass of individuals who, due to their economic situation, are incapable of behaving morally. This might create conditions for guilt. Given the fact that most parents would want to do as much as they can to improve the conditions of their children's lives, most people, aware of their moral obligation to select for the best children, and unable to do so, would suffer feelings of responsibility because of the inability to do what is morally right. Moreover, because it is difficult in many cases to know whether people are justified in not fulfilling this parental obligation, many individuals would suffer moral condemnation.

AND, WHAT ABOUT WOMEN?

Another issue that Savulescu seems to have ignored when defending our moral obligation to select the best children, is the fact that this requirement overburdens women. As we mentioned before, pre-implantation diagnosis needs to be used in conjunction with IVF so that we can select from a range of possible children that we can have. But IVF is a set of procedures that can only be undergone by women. Furthermore, IVF involves physical and emotional costs. Women must learn an extraordinary amount of information to adequately prepare for IVF treatment. They must learn how to mix and administer injectable medications, interrupt their daily routines for serial blood tests and ultrasound examinations, and undergo a surgical procedure to retrieve oocytes. Moreover, IVF might pose serious risks to women's health.⁶ According to empirical evidence, risks to women undergoing IVF treatment vary from simple nausea to death. For

⁶ I. de Melo-Martín. 1998. *Making Babies*. Dordrecht. Kluwer.

example, the hormones that doctors use to stimulate the ovaries are associated with numerous side effects. Some studies assert that ovulation induction may be a risk factor for certain types of hormone-dependent cancers. Researchers have associated excessive oestrogen secretion with ovarian and breast carcinoma, and gonadotropin secretion with ovarian cancer.⁷ A substantial body of experimental, clinical, and epidemiological evidence indicates that hormones play a major role in the development of several human cancers.⁸ The ability of hormones to stimulate cell division in certain organs, such as the breast, endometrium, and the ovary, may lead (following repeated cell divisions) to the accumulation of random genetic errors that ultimately produce cancer. Hormone-related cancers account for more than 30% of all newly diagnosed female cancer in the United States.⁹ Hence any technique (like IVF) that relies on massive doses of hormones may be quite dangerous.

The ovarian hyperstimulation syndrome (OHSS) is another possible iatrogenic (caused by medical treatment) consequence of ovulation induction. Women with the severe form of OHSS may suffer renal impairment, liver dysfunction, thromboembolic phenomena, shock, and even death. The incidence of moderate and severe OHSS in IVF treatment ranges from 3% to 4%. This seems quite a high risk, taking into account that IVF is a selective procedure. This syndrome is extremely rare following natural conception.¹⁰

⁷ See, for example: J. Jarrel, J. Seidel & P. Bigelow. 1993. Adverse Health Effects of Drugs Used for Ovulation Induction. In *New Reproductive Technologies and the Health Care System. The Case for Evidence-Based Medicine*. Royal Commission on New Reproductive Technologies. Ottawa. Canada Communications Group: 453–549; and P. Stephenson. 1993. Ovulation Induction during Treatment of Infertility: An Assessment of the Risks. In *Tough Choices*. P. Stephenson & M.G. Wagner, eds. Philadelphia. Temple University Press: 97–121; A. Brzezinski et al. Ovarian Stimulation and Breast Cancer: Is There a Link? *Gynecol. Oncol.* 1994; 52: 292–5; and R.E. Bristow & B.Y. Karlan. The Risk of Ovarian Cancer after Treatment for Infertility. *Curr. Opin. Obstet. Gynecol.* 1996; 8: 32–37.

⁸ See, for example: S. Fishel & P. Jackson. Follicle Stimulation for High-Tech Pregnancies: Are We Playing it Safe? *British Medical Journal* 1989; 299: 309–311; Stephenson, *op. cit.* note 7, pp. 105–107.

⁹ See, for example: H.P. Schneider & M. Birkhauser. Does Hormone Replacement Therapy Modify Risks of Gynecological Cancers? *Int. J. Fertil. Menopausal Stud.* 1995; 40, suppl. 1: 40–53; T.J. Key. Hormones and Cancer in Humans. *Mutat. Res.* 1995; 333: 59–67; F. Berrino et al. Serum Sex Hormone Levels after Menopause and Subsequent Breast Cancer. *J. Natl. Cancer Inst.* 1996; 88: 291–296.

¹⁰ See, for example: B. Rizk. 1992. Ovarian Hyperstimulation Syndrome. In *A Textbook of In Vitro Fertilization and Assisted Reproductive Technology*. P.R. Brinsden & P.A. Rainsbury, eds. Park Ridge, NJ. The Parthenon Publishing Group:

The procedures that doctors normally use to obtain women's eggs, i.e. laparoscopy and ultrasound-guided oocyte retrieval, also pose risks to them. Although there are no accurate statistical data about hazards associated with these two procedures, risks related to these technologies include postoperative infections, punctures of an internal organ, haemorrhages, ovarian trauma, and intrapelvic adhesions.¹¹ Furthermore, intrapelvic adhesions can exacerbate pre-existing infertility or cause it in healthy women who undergo IVF treatments when their male partners have reproductive difficulties.¹²

Implantation of embryos or gametes into women's bodies may also be hazardous for them. Some of the possible risks are perforation of organs and ectopic pregnancies. Studies show that 5% to 7% of all IVF pregnancies implant outside the uterus.¹³ The hazard in the general population, however, is approximately 1%.¹⁴ Ectopic gestations may be life-threatening for the woman and can aggravate infertility.¹⁵

369–383; I. Calderon & D. Healy. 1993. Endocrinology of IVF. In *Handbook of In Vitro Fertilization*. A. Trounson & D.K. Gardner, eds. Boca Raton. CRC Press: 2–16; M.P. Steinkampf & R.E. Blackwell. 1993. Ovulation Induction. In *Textbook of Reproductive Medicine*. B.R. Carr & R.E. Blackwell, eds. Norwalk, Connecticut. Appleton & Lange: 469–480; Stephenson, *op. cit.* note 7; J.G. Schenker & Y. Ezra. Complication of Assisted Reproductive Techniques. *Fertility and Sterility* 1994; 61: 411–422; and J.G. Schenker. 1994. Ovarian Hyperstimulation Syndrome. In *Reproductive Medicine and Surgery*. E.E. Wallach & H.A. Zacur, eds. St. Louis. Mosby: 649–679.

¹¹ See, for example: R. Rowland. 1992. *Living Laboratories*. Bloomington. Indiana University Press: 25–30; L. Koch. 1993. Physiological and Psychosocial Risks of the New Reproductive Technologies. In *Tough Choices*, *op. cit.* note 7, pp. 122–134; and P.J. Taylor, P.J. & J.V. Kredentser. 1992. Diagnostic and Therapeutic Laparoscopy and Hysteroscopy and their Relationship to In Vitro Fertilization. In *A Textbook of In Vitro Fertilization and Assisted Reproductive Technology*, *op. cit.* note 10, pp. 73–92.

¹² See: P.R. Brinsden. 1992. Oocyte Recovery and Embryo Transfer Techniques for In Vitro Fertilization. In *A Textbook of In Vitro Fertilization and Assisted Reproductive Technology*, *op. cit.* note 10, pp. 139–153; Rowland, *op. cit.* note 11, pp. 25–30; Koch, *op. cit.* note 11.

¹³ Medical Research Institute, Society of Assisted Reproductive Technology, The American Fertility Society. In Vitro Fertilization/Embryo Transfer in the United States: 1988 Results from the National IVF-ET Registry. *Fertility and Sterility* 1990; 53: 13.

¹⁴ See: O.K. Davis & Z. Rosenwaks. 1993. Assisted Reproductive Technology. In *Textbook of Reproductive Medicine*, *op. cit.* note 10, pp. 571–586. See also: S.F. Marcus & P.R. Brinsden. Analysis of the Incidence and Risk Factors Associated with Ectopic Pregnancy Following In Vitro Fertilization and Embryo Transfer. *Human Reproduction* 1994; 10: 199–203.

¹⁵ See: Brinsden, *op. cit.* note 12; Rowland, *op. cit.* note 11, pp. 30–32; Koch, *op. cit.* note 11.

Savulescu can reply by reminding us that women are free to consent to the risks involved in IVF. But this, however, does not solve the problem that comes from defending a moral obligation that puts disproportionate burdens on women. These burdens do not appear only because of the risks to women's health involved in undergoing IVF. The burdens would also be present, albeit less problematic, even if there were no health risks involved. This is so because only women can undergo IVF. Of course, I am not saying that we can never defend moral obligations that overburden a group of individuals. However, if we are going to do so, we must take this into account and offer a justification for it.

SELECTION: WHAT DO WE SELECT FOR?

In his article, Savulescu offers several examples where the selection of embryos seems not only quite reasonable, but also quite easy. In all of his examples, parents are faced with two embryos. Tests on embryo A indicates that the child will have a disease or a predisposition to it e.g. asthma, or lacks a desirable non-disease trait such as memory or intelligence. Tests on embryo B, however, show that B does not have the genes that would predispose the child to have asthma, or that it has genes indicating predisposition for greater memory or intelligence. Let's ignore, for the moment, the problems mentioned in the prior sections about access to these technologies and risks to the mother's health. It seems that given the choice between an embryo B that has traits that will increase the well-being of the child and A that will have traits that will reduce the quality of life of the child, all other things being equal, reasonable people will chose embryo B. But imagine that the choice is between an embryo A that shows a predisposition to asthma and has a better profile for memory or intelligence and embryo B that does not have a predisposition to asthma but it lacks the elevated profile for memory or intelligence. Or, we have to choose between embryo A that has a predisposition for physical strength but has normal height and embryo B that will be taller but will have normal strength. Or, a little more difficult, and also a more plausible scenario for the kinds of choices that parents might have to make, will give us embryo A that is more likely to have physical endurance, be prone to stress and ulcers, high intelligence, hearing problems, blue eyes, and very fair skin, and embryo B that will be more likely to be tall, have good memory, food allergies, brown eyes, physical beauty, and early hair loss. Of course, we can make the scenario

as complicated, but again more plausible, as we wish. The point is that the selection for the best children we can have becomes much more complicated than it appears to be in Savulescu's examples.

Savulescu would likely respond to this problem by arguing that the choice is up to the parents and probably dependent on their conception of the good. In liberal democracies there is a presumption in favour of liberty and, therefore, we should allow couples to make their own decisions about which child to have.¹⁶ Of course, this does not solve the difficulties that the parents are going to experience in deciding what traits might, as a whole, make the child better off. Furthermore, this response presents us with another problem that Savulescu seems to have also ignored.

THE PROBLEM OF THE AGGREGATE EFFECTS

The choices of prospective parents have implications not only for the well-being of the children that they select, but also for society in general. The effects of many different parents fulfilling their moral obligation of selecting the best children could sometimes have self-defeating outcomes.¹⁷ For example, suppose that we want to select for physical strength. Presumably we consider that this non-disease trait will have a favourable impact on our children's well-being. But we believe this to be the case because in our society physical strength brings a competitive advantage. Now, it might be true that I cannot make my children stronger than a given range, but if I select for such a trait while nobody else does, then in a society that values physical strength, my child will be better off (all other things being equal). However, if all parents are making the same choice with respect to physical strength about their children, then the variation in strength will presumably remain unchanged. Thus, our selection would be self-defeating. Given the costs and time involved in the selection of children, it would seem quite problematic to simply allow parents to select for traits when the effects on the well-being of the children chosen will be in-existent.

We should notice though, that this problem appears only in the case of selection for non-disease genes that offer some competitive advantage in the society we live. The self-defeating effect does

¹⁶ Savulescu, *op. cit.* note 1, p. 425.

¹⁷ See, for example: A. Buchanan, D.W. Brock, N. Daniels & D. Wikler. 2000. *From Chance to Choice*. Cambridge. Cambridge University Press: chapter 5.

not surface when we are selecting against a disease gene or in the case of traits that are selected independently of the fact that they might offer a competitive advantage.¹⁸

THE PROBLEM OF SOCIAL JUSTICE

Savulescu defends that we ought to fulfil our moral obligation to select the best children we can have, even if this maintains or increases social inequality.¹⁹ He then goes on to defend this claim by presenting examples of diseases or disabilities and concludes that the arguments extend to selection for non-disease genes. There are several difficulties with Savulescu's arguments in this respect. In general I do agree with Savulescu that in cases of diseases and disabilities, the possibility of increasing social inequalities is not sufficient reason to require or encourage parents to have children with diseases.²⁰ The case of non-disease genes, however, seems quite different and in need of further justification.

The moral obligation to select for non-disease genes that will favourably impact our children's well-being, even if inequality results, might have seriously problematic implications. This moral requirement has, to say the least, the strange result of obligating parents to select for traits that might make the life of their children only slightly better off even if they increase social inequality significantly. Of course, Savulescu allows for the possibility that we balance the principle of procreative beneficence against other principles.²¹ But this is only a matter of personal choice. If parents value social justice, there may be no overall reason to try to dissuade them and, thus, they can select less than the best child if that is going to increase social justice. Nevertheless, the moral requirement to select for the best children means that people are morally justified in selecting for traits that might improve their children's well-being slightly, even if this results in social injustice. It seems to me that this claim needs more of a justification than the appeal to reproductive liberties.

Savulescu suggests that it is unlikely that selection on a scale that contributes to inequality would promote well-being.²² But this claim seems either true but irrelevant, or false. First, this

¹⁸ Ibid.

¹⁹ Savulescu, *op. cit.* note 1, p. 415.

²⁰ See, for example: Buchanan et al., *op. cit.* note 17, chapter 7.

²¹ Savulescu, *op. cit.* note 1, pp. 424–425.

²² Ibid. p. 424.

claim is irrelevant because parents who follow the principle of procreative beneficence might be so concerned with selecting the child that would have more chances at a better life that they might be unaware of how their decisions contribute to the community. Thus, although it might be the case that their choices result in a diminution of well-being, this would be the case only after they have made the choice. Moreover, because of the problem of aggregate effects, parents might think that only a few people will select for the same trait they are selecting for, and thus the result of all of those choices will be far from promoting well-being for those children. Suppose, for example, that we live in a society where women are discriminated against and where access to sex selection technologies is widespread. A couple, knowing this, has the possibility of selecting for embryo A, a female, or embryo B, a male. All other things being equal, the couple follows the principle of procreative beneficence and they select embryo B. They believe, however, that because many people judge discrimination against women to be wrong, other couples would act by trying to promote social justice, and thus other parents would decide to have girls. But they don't, because most everyone is thinking the same. So, the result might quite possibly be one where the selection is unlikely to result in the well-being of the children, but of course that can only be known when it is too late.

But to say that it is unlikely that selection on a scale that contributes to inequality would promote well-being might be false. Suppose that access to technologies that help us select our children depends on the ability to pay. And suppose also that in this society women are discriminated against. Following the principle of procreative beneficence, those with access to the necessary technologies will select for boys, thus increasing their chances at a better life. Those who do not have access to the technology will have to rely on chance. It is quite likely that these boys would be better off, at the same time that their parents' choices have contributed to the discrimination against women.

Savulescu also points out, correctly, that in order to solve social inequality we should promote social institutional reform rather than interference in reproduction.²³ I do agree that changes in social institutions will probably be more effective in solving problems of social injustice than interfering with parents' reproductive choices. However, this claim might have important implications

²³ Ibid. p. 424.

for the principle of procreative beneficence. Many of the non-disease genes that parents would select for in a society would be selected for because they give a competitive advantage to their possessor in that society. That is, it is the fact that some people are worse off in that society that would make parents select for the valued non-disease gene. For example, suppose that we live in a society that values height. The value of this trait is, however, due to our particular social arrangements and not to the fact that height is a trait that will increase our well-being in any kind of society that humans can create. Thus, our social arrangements result in presumably unjustifiable disadvantages for people who are short and advantages for people who are tall. It is in this context that we think parents, following the principle of procreative beneficence, ought to select for the embryo that would likely be taller. But if we change our social institutions to address the discrimination against short people, then parents will have no reasons to select for such a trait. I realise that some of the non-disease genes parents will select for will be chosen not because they offer a competitive advantage in their particular society, but because they might be good for humans to have in any kind of social arrangement that they generate. For example, memory might be a good trait for humans to have in any society we form. But this is certainly not the case with all non-disease genes. Thus, reform of our social institutions to promote social justice might make the task of selecting for the best children we can have easier for parents to execute and likely less problematic in its results. Unfortunately, our world is far from achieving social organisations that do not create unfair disadvantages for many of their members.

CONCLUSION

The moral requirement to select the best children we can have initially seems an appealing one. Most people, when making decisions about their children's lives, already do quite a lot to try to produce the best children possible. Of course, although most people might think that it is morally desirable and certainly morally permissible to act in such a way, we might have some quandaries when what is proposed is a moral obligation. In any case, suggestions of moral requirements need critical scrutiny. I have tried to show in this paper that, in presenting this parental moral obligation to select for non-disease traits that might contribute to a child's well-being, Savulescu has neglected several

important issues that, if taken into account, would call such a moral requirement into serious question.

Inmaculada de Melo-Martín
Department of Philosophy
St. Mary's University
San Antonio
TX 78228-8566
USA
demelo@stmarytx.edu