



THE MORAL OBLIGATION TO CREATE CHILDREN WITH THE BEST CHANCE OF THE BEST LIFE

JULIAN SAVULESCU AND GUY KAHANE

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ABSTRACT

According to what we call the Principle of Procreative Beneficence (PB), couples who decide to have a child have a significant moral reason to select the child who, given his or her genetic endowment, can be expected to enjoy the most well-being. In the first part of this paper, we introduce PB, explain its content, grounds, and implications, and defend it against various objections. In the second part, we argue that PB is superior to competing principles of procreative selection such as that of procreative autonomy. In the third part of the paper, we consider the relation between PB and disability. We develop a revisionary account of disability, in which disability is a species of instrumental badness that is context- and person-relative. Although PB instructs us to aim to reduce disability in future children whenever possible, it does not privilege the normal. What matters is not whether future children meet certain biological or statistical norms, but what level of well-being they can be expected to have.

One of the deepest intuitions of many people is that a child is a gift, to be cherished and loved for what she is. To be a good parent is to be prepared to accept and nurture one's child, regardless of that child's talents or disabilities. This passage by Michael Sandel crystallizes this intuition:

To appreciate children as gifts is to accept them as they come, not as objects of our design or products of our will or instruments of our ambition. Parental love is not contingent on the talents and attributes a child happens to have. We choose our friends and spouses at least partly on the basis of qualities we find attractive. But we do not choose our children. Their qualities are unpredictable, and even the most conscientious parents cannot be held wholly responsible for the kind of children they have.¹

¹ M. Sandel. The case against perfection. *Atlantic Monthly* April 2004. See also M. Sandel. 2007. *The Case Against Perfection*. Harvard: Harvard University Press: 45–46.

The view we will defend in this paper seems to run directly counter to this common intuition. According to The Principle of Procreative Beneficence (PB),²

If couples (or single reproducers) have decided to have a child, and selection is possible, then they have a significant moral reason to select the child, of the possible children they could have, whose life can be expected, in light of the relevant available information, to go best or at least not worse than any of the others.³

² This principle was first presented by one of the authors in J. Savulescu. Procreative Beneficence: Why We Should Select the Best Children. *Bioethics* 2001; 15: 413–426. We've modified several aspects of the original formulation.

³ PB is silent on a number of further questions in procreative ethics. It is a claim only about same number choices: about selection of one child out of those possible. It is not meant to offer guidance in choices between, e.g., one versus several children of differing endowments. Similarly, PB assumes that a decision to have a child has been taken.

Address for correspondence: University of Oxford – Oxford Uehiro Centre for Practical Ethics, St Cross College, St Giles, Oxford OX1 3LZ, United Kingdom. Email: julian.savulescu@philosophy.oxford.ac.uk

This principle tells prospective parents to aim to have the child who, given her genetic endowment, can be expected to enjoy most well-being in her life. There may be more than one such child, but for simplicity's sake, we write as if there is a single such possible child, which we'll refer to as the *most advantaged child*. This is a comparative concept. It refers to the child, of those possible for the parents, whose life can be expected to go best. It does not refer to a child who is 'perfect' or more advantaged or better off than other existing children. PB therefore in no way suggests that people should have no child at all rather than one who is less advantaged than other existing children.

PB is at polar odds with the common anti-selection view, expressed by Sandel, that children should be accepted as gifts of Nature or God. But PB also conflicts with most pro-selection views. The vast majority of those who support selection *deny* that we ought to select the most advantaged child. Some believe that reproduction is a private matter, immune to moral scrutiny. Others think that morality allows people to aim at less than the best, or gives people complete freedom when making procreative decisions. There is thus a significant distance between PB and the moral intuitions not only of opponents of genetic selection, but also of many of its proponents.

In Part I, we introduce PB and correct common misunderstandings. In Part II, we argue that PB is superior to alternative procreative principles, and in Part III, we consider the relation between PB and one crucial test-case for any account of the ethics of procreative selection, the case of disability.

PART I. THE PRINCIPLE OF PROCREATIVE BENEFICENCE

Background

It is now possible to attempt to have a baby with desired properties by preconception, preimplantation and prenatal selection. The most reliable preconception method is flow cytometric separation of X and Y sperm.⁴ In the future, it may be possible to test sperm for chromosomal and genetic abnormalities and qualities.

Postconception, selection is possible by: (1) prenatal testing (chorionic villus sampling, amniocentesis, serum

It is neutral on the question of what reasons we have to *have* children. Finally, PB assumes that the child created will be the reproducers' biological child.

⁴ E.F. Fugger et al. Births of Normal Daughters After Microsort Sperm Separation and Intrauterine Insemination, In-Vitro Fertilization, or Intracytoplasmic Sperm Injection. *Human Reprod* 1998; 13: 2367–2370.

screening or ultrasound); (2) in vitro fertilization (IVF) and preimplantation genetic diagnosis (PGD).

The most accessible reliable prenatal method is chorionic villous sampling (CVS) at about 11 weeks gestation, which provides both anatomical information about the fetus and genetic information. At 11 weeks, couples in many legal jurisdictions are free to choose to terminate a pregnancy on any grounds in practice. Amniocentesis at about 14 weeks provides similar information and choice. Serum screening detects markers of fetal status in the maternal blood. Ultrasound at 11 and 20 weeks gestation is frequently performed providing fine anatomical detail of the fetus, including sex.

PGD provides an alternative which does not require abortion.⁵ It requires IVF and single sperm injection. Embryo biopsy removing one or two cells is performed on day 3 at the 8-cell stage. PGD can be used to detect chromosomal abnormalities (by Fluorescence In Situ Hybridization (FISH)) and single gene disorders such as cystic fibrosis or haemophilia. Frequently used FISH kits test for either chromosomes 13, 16, 18, 21, 22 or for 13, 18, 21, X and Y. FISH can thus be used for embryo sexing. A newly developed variant of this technique, called pre-implantation genetic haplotyping (PGH), takes a single cell and multiplies its genetic complement a millionfold. It may allow testing for a wider range of conditions and will vastly expand the use of genetic selection.

Genetic testing is currently used to detect chromosomal abnormalities, such as Trisomy 21 (Down Syndrome) and single gene disorders like cystic fibrosis. Recently, genetic testing has been extended to cover inherited cancer syndromes, adult onset neurological conditions such as Huntington Disease and Alzheimer's, sex selection⁶ and minor abnormalities. As gene chips are developed, thousands of genes could be tested at one time. There is no reason in principle why embryos in the future could not be selected on any genetic basis. Much progress has already been made in identifying the genetic

⁵ In practice, prenatal testing is often recommended as follow-up to PGD, and therefore abortion remains a possibility. See J.R. Botkin. Ethical Issues and Practical Problems in Preimplantation Genetic Diagnosis. *J Law Med Ethics* 1998; 26: 17–28.

⁶ In a recent survey of 190 U.S. PGD clinics, 42% have provided PGD for non-medical sex selection. Nearly half of these clinics (47%) are willing to defer to parental preferences and provide PGD for non-medical sex selection under all circumstances. Forty-one percent will only provide the service for a second or subsequent child. Seven percent will only provide PGD for sex selection if there is another medical reason to undergo PGD. See S. Baruch, D. Kaufman & K.L. Hudson. Genetic testing of embryos: practices and perspectives of US IVF clinics. *Fertil Steril* 2008; 89: 1053–1058.

basis of congenital conditions such as deafness.⁷ Recently, a genetic test (ACTN3) was developed to identify physical talent at either endurance or sprinting events, and a single gene polymorphism has been postulated to be associated with perfect pitch. Behavioral geneticists are studying the genetic component in non-disease states such as cognitive and physical abilities, personality traits, propensity to addiction, sexual orientation, etc.

The possibility of choosing embryos according to non-disease characteristics has raised heated debate.⁸ PB offers one simple answer: there *is* reason to obtain and use all genetic and other information about disease susceptibility *and* non-disease states to make a decision to select the most advantaged child. PB, however, is highly controversial.⁹ Some reject it on principled grounds. But others may reject it because they are not clear about its precise content, grounds, or implications.

Selection and common-sense morality

Most people will agree that there is a moral defect in parents who intend to conceive a child but are indifferent to whether their future child will be born with the potential for a good life. If prospective parents have moral reasons to care about the potential for well-being of their future children, then it would seem that they should also have reason to *aim* to have children who are more advantaged rather than leave this to chance or nature. Until recently, however, people only had few means to promote this end. They could select a partner on the basis of his or her genetic attributes and parenting potential, and they

could time conception so that their future child would be born in hospitable conditions, when they have built sufficient financial, material and emotional resources to provide a good life for their child. It would be a moral defect in parents to pay no consideration to their personal, financial and health situation when deciding when to have a child, especially when they expect those circumstances to change. These choices involve creating a different child, who will have better prospects.

Our moral intuitions are clearest when the timing of conception can be expected to have a direct effect upon the health of a future child. Imagine that the rubella virus mutates so that it becomes highly virulent and resistant to current vaccination, and that a rubella epidemic occurs. A couple decides to have a child. However, if the woman falls pregnant now, it is highly likely that she will contract rubella and the baby will be born with congenital rubella – blind, deaf and with severe brain damage. In a few months, the epidemic will have passed and she would likely have a normal child.¹⁰

It is uncontroversial that the woman ought to wait a few months and have a normal rather than a brain-damaged child. Note this is not out of consideration for the welfare of the child she will have. If she waits several months, a different sperm and egg will create a different child to the one which she would have had during the epidemic. She is faced with an identity-affecting choice: a choice between child A with rubella or child B without rubella. If A's life with congenital rubella would be so bad it is not worth living, she clearly has a reason not to bring it into existence. But even if the future child's life can be expected to be tolerable, most people would still agree that the woman has reason to choose child B if it is expected to have a better life.¹¹ Indeed, we believe that many would further agree that if, because of some medical condition, a couple could have either a child with average health and talents now or an especially healthy and gifted child if they waited one month, then the couple has a reason to wait before having a child. Couples often wait years to build financial, emotional and other resources, in order to provide a better environment for their future child to grow. In waiting to have a family, they are selecting a child who will have a better life. Once the question of the moral permissibility and opportunity costs of certain *means* of selecting children is set aside, commonsense morality seems committed to favouring

⁷ Around 1 in 1500 children have some form of genetic deafness, and over 100 different mutations that cause congenital deafness have been already been identified. However, about 40% of congenital deafness is caused by mutations of a single gene (connexin-26). See C. Petit. From deafness genes to hearing mechanisms: harmony and counterpoint. *Trends Mol Med* 2006; 12: 57–64.

⁸ L. Kass. 2002. *Life, Liberty and the Defense of Dignity: the Challenge for Bioethics*. San Francisco: Encounter Books; F. Fukuyama. 2002. *Our Posthuman Future: Consequences of the Biotechnology Revolution*. New York: Farrar, Strauss, & Giroux; G. Stock. 2002. *Redesigning Humans: Our Inevitable Genetic Future*. New York: Houghton Mifflin.

⁹ For criticism of PB, see K. Birch. Beneficence, Determinism and Justice: an Engagement with the Argument for the Genetic Selection of Intelligence. *Bioethics* 2005; 19: 12–28; I. De Melo-Martin. On Our Obligation to Select the Best Children: A Reply to Savulescu. *Bioethics* 2004; 18: 72–83; P. Herissone-Kelly. Procreative Beneficence and the prospective parent. *J Med Ethics* 2005; 32: 166–169; J. Glover. 2006. *Choosing Children*. Oxford: Oxford University Press: 53–54; Michael Parker 'The Best Possible Child,' *J Med Ethics*, 2007; 33: 279–283; Sandel, *op. cit.* note 1; A. Buchanan et al. 2000. *From Chance to Choice*. Cambridge: Cambridge University Press: chapter 6 discusses objections to selecting the best child.

¹⁰ See D. Parfit. 1976. Rights, Interests and Possible People. In *Moral Problems in Medicine* S. Gorovitz et al. eds. Englewood Cliffs: Prentice Hall.

¹¹ D. Parfit. 1986. *Reasons and Persons*. Oxford: Oxford University Press: part IV.

selection of children who are more advantaged, even if it may not give it as much weight as to the prevention of serious disadvantage.

Thus, although many respond with repugnance to the idea that we should choose what our future children would be like, it is in fact implicit in commonsense morality that it is morally permissible and often expected of parents to take the means to select future children with greater potential for well-being. These intuitions survive reflection on the fact that these are identity-affecting choices. Those ethicists who claim that it is always morally forbidden to select our children must, if they are to be consistent, reject these existing moral norms, attitudes, and intuitions.¹² Such attitudes do not express hubris or a drive to master the ‘mystery of birth’, as Sandel claims. Nor do they ‘disfigure the relation between parent and child’ or ‘deprive the parent of the humility and enlarged human sympathies’.¹³ These are the familiar and morally admirable attitudes of many prospective parents. And they are entirely compatible with later cherishing and loving one’s children – once these have come into existence.

Often people object to genetic selection because they believe that it involves the destruction of a human being with interests. These people are objecting, not to selection *per se* or to the aim of having children with greater potential for a good life, but to specific means of selecting children. Their objections would not apply to gamete selection. And, again, if they are to be consistent, those who hold this view must reject the moral permissibility of widely practised therapeutic uses of such procedures – all prenatal and preimplantation genetic diagnosis. Moreover, disease itself is morally significant only in so far as it reduces well-being. The relevant moral principle underlying these widely accepted practices is not that we should have healthy children, but that we should have children who have better lives.

The nature of our moral reasons to select the most advantaged child

Given that in selecting a more advantaged child we are also bringing a different person into existence, what might ground a moral obligation or reason to select such a child? Like competing principles of procreative ethics, PB is compatible with different accounts of reasons to select future children. It can take either a wide person-affecting form or an impersonal form. According to the wide person-affecting version, our reason to select the

child with better prospects is that that child will benefit more than the other would by being caused to exist. According to the impersonal version, our reason is that selecting the most advantaged child would make the outcome better, even if it is not better for the child created. It is possible to support PB on either view. If by selecting a child with better prospects we are also benefiting her, then this is a significant reason to make this choice. If we prefer not to speak of benefit in such cases, then we can say that there is a significant reason to select the more advantaged child simply because this will be the better outcome.¹⁴ We do not take a stand on this difficult philosophical issue. As we have tried to show, our moral intuitions about timing of conception recognize reasons to select future children. PB is an account of the *content* of these reasons, not an explanation of what might ground them.

If we believe that impersonal or wide person-affecting reasons exist, then it might seem that our reasons to select the most advantaged child would have equal force to our reasons to promote the well-being of an existing child. That is, we would have as much reason to select a child free of rubella as we would to cure a child with rubella.¹⁵ Commonsense morality, however, seems to view the latter reasons as stronger. Most people believe that it is worse to fail to treat deafness than it is to allow a deaf child to be born instead of a hearing one. But even if the expected well-being of a future child should weigh less than the expected well-being of existing children, reasons of PB will still be significant reasons – reasons often strong enough to outweigh the reasons given by the interests of parents and other existing people. And it is important not to confuse the *strength* of reasons with their *content*. Even if reasons of PB are weaker in strength than reasons to benefit existing people, it does not follow that these are not nevertheless reasons to aim to have anything *less* than the most advantaged child.

We present PB as a moral obligation. This claim can be misunderstood. Some hold that if there is a moral obligation to do X then this implies that we absolutely *must* do X. If PB stated an obligation in this sense, we would get:

Absolute Obligation Version of PB. If reproducers have decided to have a child, and selection is possible, then they have an *absolute moral obligation* to select the

¹⁴ There are other ways of grounding PB. Virtue ethicists, for example, could claim that it is a part of the concept of being a good parent that one should aim to have children with the best prospects of the best life.

¹⁵ Parfit holds that there is no moral difference between a treatment that would cure a disease by altering an existing fetus or by bringing a different, healthy fetus into existence. (See Parfit’s Two Medical Programmes example in Parfit, *op. cit.* note 11, pp. 367–368).

¹² For such blanket rejection of selection, see Kass, *op. cit.* note 8.

¹³ Sandel, *op. cit.* note 1, pp. 45–46.

child, of the possible children they could have, whose life can be expected to go best.

It is doubtful that any non-trivial moral principle is this strong. PB is not an absolute obligation. It is the claim that there is a *significant moral reason* to choose the better child.¹⁶ The principle states, not what people invariably must do, but what they have significant moral reason to do.¹⁷ In this respect, however, PB is not different from most other moral principles. It is not different from our moral reasons to promote the welfare of our existing children or from other reasons of beneficence, such as caring about the welfare of future generations. Those who prefer to think of such reasons as generated by moral obligations should also think of reasons of PB as generated by an obligation. Since we do not think that anything turns on this distinction, in what follows we will use moral reason and moral obligation interchangeably.

When the obligation to have the most advantaged child is not overridden by sufficiently strong opposing moral reasons, it *will* be true that parents *ought*, all things considered, to select the most advantaged child. PB is not just the claim that parents are *permitted* to choose the most advantaged child. If the competing reasons are stronger, then it is *not* permissible to choose the most advantaged child. And if there aren't such reasons, or they are weaker, then it is not morally permissible to choose anything less than the best.

What might these competing normative reasons be? They include the welfare of the parents, of existing children, and of others, possible harm to others, and other moral constraints. For example, there can be reasonable disagreement about the range of cases to which PB applies. The scope of the principle will depend on our stand on moral questions about genetic manipulation, IVF, abortion, or the moral status of embryos. It will also depend on the availability and safety of relevant technology. But it is important to distinguish an outright denial of PB from the view that its scope should be circumscribed by other moral considerations. Even those who deny that parents are allowed to select the most advantaged child will often admit that parents should hope for a child who is naturally endowed with talents and capacities that will make it likelier that she will lead a good life. When people have such wishes, they may be implicitly recognizing the normative force of PB.

¹⁶ The strength of the reason given by PB to select embryo A rather than B would reflect the difference in expected well-being of the two possible children: the more significant this difference, the stronger the reasons. Although the strength of the reasons given by PB varies in this way, we shall refer to them as *significant* moral reasons in order to mark their relative strength compared with competing moral reasons.

¹⁷ For this misunderstanding, see e.g. De Melo-Martin, *op. cit.* note 9.

Talk about moral obligation can be misunderstood in another way. On an understanding of obligation that has its roots in Mill, the existence of an obligation implies the threat of sanction. If this is taken to mean that there is a conceptual tie between obligation and moral disapproval, then PB is compatible with such a tie. Egregious procreative choices deserve our disapproval just like other failures to meet one's obligations, such as failure to protect the welfare of one's children. But although PB claims that parents have a moral reason to aim to have the most advantaged children, when such a choice is possible, this is compatible, at the legal level, with enjoyment of a right to autonomy, including the right to make procreative choices which foreseeably and avoidably result in less than the best child.¹⁸ Whether the public interest ever justifies legal constraints on reproductive choice is a separate question.

Evaluating expected wellbeing

In decision-theory, the expected value of an outcome is the value of that outcome multiplied by the probability of it occurring. When we make decisions, the option we should choose is the one which maximizes expected value. In the case of selection and reproductive decision-making, the outcome of interest should be how well a new person's whole life goes, that is, well-being. PB thus states that we have reason to select the child who is *expected* to have the most advantaged life. We cannot know which child will have the best life. Those born with the greatest gifts and talents may squander them while those born to great hardship may overcome enormous obstacles to lead the best of lives.¹⁹ It is not surprising that there are such limits on what prospective parents can reasonably hope to achieve through genetic selection. Unless one accepts a crude form of genetic determinism, it makes little sense to worry that the qualities of selected children would lose their unpredictability.

A common objection to PB is that there is no such thing as a better or best life.²⁰ It is hard to defend such a claim. What constitutes a good life is a difficult philosophical question. According to hedonistic theories, it consists of having pleasant experiences and being happy.

¹⁸ J. Savulescu. Deaf lesbians, 'designer disability,' and the future of medicine. *Br Med J* 2002; 325: 771–773.

¹⁹ In decision-making under uncertainty, other decision rules besides the maximization of value may also be rational. In particular, it might be rational for prospective parents to be averse to risk and to prefer, for example, an embryo which is expected to have a good life over one whose life is likely to go better but which also faces a serious risk of a very bad life.

²⁰ See De Melo-Martin, *op. cit.* note 9; Parker, *op. cit.* note 9.

According to desire fulfilment theories, what matters is having our preferences fulfilled. According to objective good theories, certain activities are intrinsically good – developing deep personal relationships and talents, gaining knowledge, and so on. PB is neutral with respect to such philosophical disputes about the nature of the good life. But although there is this philosophical disagreement, there is considerable consensus about the particular traits or states that make life better or worse, a consensus that would rule out many procreative choices as grossly unreasonable. Few if any would deny that chronic pain tends to make a life worse or that joy makes a life better. All plausible moral theories have to make such judgments – judgments about harms and benefits, or things that make a life go better or worse. PB doesn't rely on some special and controversial conception of well-being. All it asks us is to apply in our procreative decisions the same concepts we already employ in everyday situations. And aiming at the best is compatible with thinking that the concept of the most advantaged life is plural and open-ended. If different forms of life are equally good, or if the amount of well-being realized in each is incomparable, then parents can reasonably choose either option. But there are plenty of cases where we *can* rank the goodness of lives. We do so in numerous moral decisions in everyday life, especially in bringing up and educating our children. To deny this is to reject, not PB, but the very concept of well-being.

A parallel objection is that, even if there is ranking of better and worse lives, ordinary parents trying to follow PB will make serious mistakes. This, however, is not an objection to the truth of PB but only a worry about the dangers of its misapplication. To be sure, PB does place great responsibilities in the hands of prospective parents, responsibilities some might abuse. Parents may be swayed by fashion, superstition and outrageous conceptions of the good life to create children with very bad prospects. However, this problem is not unique to PB. Parenting does place great responsibilities in the hand of parents, and although parents are given much freedom in the exercise of these responsibilities, there are legal constraints that aim to prevent the most egregious parenting choices. PB is compatible with setting legal constraints on parental autonomy – parents, for example, should be prevented by law from selecting children whose lives are expected not to be worth living.²¹

²¹ See the discussion of wrongful life suits in J. Feinberg. *Wrongful Life and the Counterfactual Element in Harming*. *Soc Philos Policy* 1987; 4: 145–178.

PART II. COMPETING PRINCIPLES OF PROCREATIVE SELECTION: MUST PARENTS AIM FOR THE BEST?

We have argued that selection of a future child is morally permissible and that parents have reasons to care about the potential well-being of future children. But these claims are compatible with a range of pro-selection views. Anti-selectionists reject not just PB but all principles of procreative selection, whereas pro-selectionists disagree about the moral principles that should guide such choice. Most of the pro-selection views defended so far are at odds with PB. The weakest pro-selection view is

Procreative Autonomy. If reproducers have decided to have a child, and selection is possible, then any procreative option selected by reproducers is morally permissible as long as it is chosen autonomously.²²

According to this principle, it is permissible for parents to select the best, but it is equally permissible for them to select the worst. Procreative Autonomy is an extremely implausible moral principle. It would have some plausibility if genetic selection was morally permissible but parents had no reasons to care about the genetic potential of their future children. But morality is not indifferent to the choice between a child who will have a fulfilling life and one who will live a brief life of misery and torment. We suspect that most people who support Procreative Autonomy do so because they fail to distinguish moral and legal principles. PB is a moral principle. It states what would be morally right or wrong for reproducers to do. To repeat, PB is not the view that reproducers should be coerced into selecting the most advantaged child, or punished if they don't. Liberal political theory gives strong reasons to grant parents Procreative Autonomy. But this is compatible with thinking that some legal choices made by parents are nevertheless deeply wrong.²³

A version of procreative autonomy is the view Nicholas Agar calls *Liberal Eugenics*. According to this view, genetic selection should be voluntary, state-neutral, and individualistic. Agar claims:

[L]iberal eugenicists propose that [reproductive genetic technologies] be used to dramatically enlarge

²² See J.A. Robertson. 1995. *Children of Choice*. Princeton University Press; J. Harris. 1998. Rights and Reproductive Choice In *The Future of Human Reproduction: Ethics, Choice, and Regulation*. J. Harris and S. Holm, eds. London: Clarendon Press: 5–37; R. Dworkin. 1994. *Life's Dominion*. New York: Vintage Books.

²³ Note that a legal right to Procreative Autonomy may itself rest on the moral value of parents' autonomy. What we are denying is that this value can be any guide to the moral reasons *parents* have when they face this kind of reproductive choice.

reproductive choice. Prospective parents may ask genetic engineers to introduce into their embryos combinations of genes that correspond with their particular conception of the good life. Yet they will acknowledge the right of their fellow citizens to make completely different eugenic choices.²⁴

Liberal eugenics is a permissive view that allows parents to select their children according to their own conception of the good. As a moral view, it places too few constraints on which children parents should select. Parents could select according to *any* conception of the good, no matter how implausible. We clearly need something stronger than autonomy, liberty or liberal eugenics to guide procreative choice. But PB may seem to impose a very demanding norm on reproducers. PB, after all, is a maximizing principle. Some people find it easier to accept a principle that only instructs parents not to have children who will endure great suffering and hardship:

The Minimal Threshold View. If couples (or single reproducers) have decided to have a child, and selection is possible, then they have a significant moral reason to select one of the possible children they could have who is expected to have a *life worth living* over any that does not; they have no significant moral reason to choose one such possible child over any other.²⁵

It is hard to see, however, what could support such a view, once it is allowed that parents have reasons to care about the expected well-being of their future children. Many would agree that parents would be wrong not to wait before conceiving a child if this will mean that the child they bring into existence has greater endowment. The Minimal Threshold View couldn't be the whole truth about the ethics of procreative decisions.

It's important to distinguish the Minimal Threshold View, a claim about *selection*, from a separate claim about considerations that are reasons not to reproduce *any* child:

The Minimal Threshold Constraint on Reproduction. If reproducers cannot choose a child whose life will be worth living, then they ought not to have a child at all.

²⁴ N. Agar. 2004. *Liberal Eugenics: In Defense of Human Enhancement*. Oxford: Blackwell: 6. Agar's view would be closer to PB if he claimed that prospective parents have *positive* reason to follow their conception of the good in selecting *the most advantaged child*.

²⁵ Glover defends this view in *op. cit.* note 9, pp. 52–53, 54–60. Glover however believes that, because it is hard to determine when a life is not worth living, what parents should aim at is to have only children with 'a decent chance of a good life' (p. 63).

There may be good grounds to adopt *this* claim as a supplement to PB. After all, PB leaves open the possibility that, in some unfortunate cases, even the best prospects will fall below a minimal threshold. Those who think that parents should not bring a child to life in such circumstances may want to also adopt the Minimal Threshold Constraint, indeed, as we suggested above, to even give it a binding legal force.

Even if we reject the Minimal Threshold View, we may think that aiming at the best is too strong. Why not aim to have children who will have a *good enough* life? Those who defend this view are endorsing a satisficing version of PB:

The Satisficing View. If reproducers have decided to have a child, and selection is possible, then they have a significant moral reason to select one of the possible children they could have who is expected to have a *good enough life* over any that does not; they have no significant moral reason to choose one such possible child over any other.²⁶

Why prefer this principle to PB? Recall some of the constraints we have placed on the pursuit of the most advantaged child. Parents' procreative choices should not involve excessive burdens and sacrifices. This means that parents may sometimes have an overall reason to aim at less than the best. Another limit is epistemic. Parents may have reasonable doubts about what is likely to make a child's life go best, and may therefore prefer to aim at securing only certain agreed primary goods – health, intelligence, self-control, sociability, and the like. It will often be easier to be confident that a condition will make a life go better than that it will lead to the most advantaged life.

The claim that we should select the best option available is simply the application of a general constraint on practical reason, a constraint that applies to both moral and prudential choice. This constraint follows from the familiar conceptual connection between goodness and rational choice. Roughly, we have reason to choose what is good, and we have *more* reason to prefer what is better. If A and B are identical in all regards except one, and A is superior in that regard to B, we have a reason to choose

²⁶ A number of authors claim that prospective parents are obliged to select children whose expected well-being is at a level higher than a life barely worth living, but significantly lower than the best life possible (see B. Steinbock & R. McClamrock. *When Is Birth Unfair to the Child?* *Hastings Cent Rep* 1994; 24: 15–21; F.M. Kamm. 1992. *Creation and Abortion*. Oxford: Oxford University Press: 132–133.) These views can be interpreted as variants of the Satisficing View or as lying between that view and the Minimal Threshold View. On either reading, they are subject to our objections to these views.

A. Once it is accepted that the well-being of future children should have weight in our deliberation, then if we have two embryos which are in all respects the same, except that B has a state which will reduce her expected well-being, then we have a significant reason to choose A.

The satisficing principle, however, holds that if one has a choice between embryo A and embryo B, both of whom would have lives that would be well worth living, but A can reasonably be expected to have a significantly better life than B, then this latter fact provides *no* moral reason to choose A rather than B, *even* when there's no reason not to choose A. This is implausible.²⁷

This implausibility is clearest when there are no opposing reasons. When there is absolutely no cost to selecting the best option, it is hard to see how it could be reasonable wilfully to select, say, the fifth best option, or even to allow the fifth best to be chosen by lottery.

PB, of course, makes an even stronger claim. It claims that there is *significant* reason to select the most advantaged child. When there is some cost or risk in such a choice, these different reasons compete. The examples we considered so far are ones where there are no such competing reasons. Such examples help demonstrate the *truth* of PB but shed little light on its *strength* when weighed against other considerations. Although, as in other areas, there may not be any simple recipe that tells us how to weigh these against each other,²⁸ we believe that unless the risks and costs are substantial, parents *ought* to select the most advantaged child. If a couple is already employing IVF and genetic testing is safe, they should employ tests to evaluate the genetic potential of their embryos and choose on the basis of it. And although women should not undergo risky fertility treatments in order to be able to select an embryo whose expected well-being is only negligibly greater than that of the child they expect to have naturally, we believe that PB instructs women to seriously consider IVF if natural reproduction is likely to lead to a child with a condition that is expected to reduce well-being significantly, even if that condition is not a disease. This is clearest if natural reproduction is likely to result in a child disposed to, say, clinical depression or autism. But we believe that reproducers also have strong reasons to seek to prevent even an innate tendency to

²⁷ The rationality of satisficing has been much debated in recent years. See for example M. Byron, ed. 2004. *Satisficing and Maximizing: Moral Theorists on Practical Reason*. Cambridge: Cambridge University Press.

²⁸ If one adopts total act utilitarianism, then there may be a simple recipe: the expected well-being of future children is to be directly weighed against the expected well-being of existing people. But variants of utilitarianism that accept a pluralist conception of well-being, and forms of consequentialism that recognize values besides well-being, may also fail to provide a 'simple recipe' for weighing different aspects of well-being, or well-being against other values.

negative affect, or the severe impairment in social skills associated with Asperger's syndrome.²⁹

As means of selection become safer and our ability to use them to select non-disease characteristics increases, we believe that PB will require most reproducers to select the most advantaged child unless doing so is predicted to lead to a very significant loss of well-being to existing people. As we have repeatedly emphasized, although PB is not an overriding obligation it is a *significant* reason. It cannot be dismissed lightly.

We saw earlier that commonsense intuitions seem to be stronger when reproductive choices aim to prevent a child who will suffer from coming into existence than when they aim to create a child with very good prospects. This might suggest that what should matter in selection is not the positive promotion of well-being but rather the prevention of serious suffering and loss of opportunity. On this view, reproducers should not select children who can be expected to endure significant suffering or hardship *even* if these children are also expected to have a high overall level of well-being. This would give us the following procreative principle:

The Prevention of Harm View. If reproducers have decided to have a child, and selection is possible, then they have a significant moral reason to select one of the possible children they could have who is expected to experience least suffering or limited opportunity or serious loss of happiness or good compared to the others.³⁰

Conditions such as depression clearly make a life worse, sapping its very life blood. According to both this view and to PB, parents have reason to select children less disposed to depression. Manic depression, however, is more complex and has been associated with great creativity and productivity. The Prevention of Harm View might require selecting against manic depression if the lows are

²⁹ The genetic component in these conditions is reviewed in C.M. Freitag. The genetics of autistic disorders and its clinical relevance: a review of the literature. *Mol Psychiatry* 2007; 12: 2–22; and D. Lykken & A. Tellegen. Happiness is a stochastic phenomenon. *Psychol Sci* 1996; 7: 185–189. Lykken and Tellegen estimate that the heritability of the stable component in subjective well-being approaches 80%.

³⁰ This is one way of interpreting what Buchanan et al. *op. cit.* note 9, p. 249 call 'Principle N'. For an unambiguous defence of such priority, see S.V. Shiffrin. Wrongful Life, Procreative Responsibility, and the Significance of Harm. *Legal Theory* 1999; 5: 117–148, and E. Harman. Can We Harm and Benefit in Creating? *Philosophical Perspectives* 2004; 18: 89–113. For criticism of such views, see J. Griffin. Is Unhappiness Morally More Important Than Happiness? *Philos Q* 1979; 29: 114: 47–55. As we suggest in note 19, it may be rational for reproducers to select an embryo with a less risky future even at the cost of possible benefits. In this respect, PB is compatible with giving priority to prevention of harm.

low enough. But some manic depressives endorse their condition, identifying with it, and their lives appear very successful. It is an advantage of PB that it leaves it open whether parents have reason to select against manic depression. This is a question for the theory of well-being. Moreover, parents are exposing children to risks of suffering, hardship and frustration simply by bringing them into existence. If procreative choices were constrained in this way, there could be strong presumptive reasons to abstain from procreation altogether.³¹ Finally, notice that the Prevention of Harm View is not the same as giving *priority* to the prevention of harm. Even if in procreative choices prospective parents ought to give greater weight to preventing suffering and hardship, it hardly follows that they ought to give *no* weight to selection of non-disease characteristics that will result with a life with greater benefits, large or small.

Consider finally the following procreative principle:

Respect for the Autonomy of Future Persons. If reproducers have decided to have a child, and selection is possible, then they have a significant moral reason to aim, not to maximise expected well-being, but to maximize *expected autonomy*.

Some anti-selectionists believe that we shouldn't determine the genetic endowment of future children out of respect for their future autonomy.³² Sometimes this is expressed as respecting a child's right to an open future.³³ However, it makes little sense to think that we limit a future child's autonomy by selecting its genetic endowment (especially increasing talents and capabilities), but respect it by leaving the formation of that endowment to natural processes. Whether or not we select our children or leave things to chance, some future options will be closed to them or made more difficult, and other options will open or be made easier.³⁴ And it is likely that children with greater talents and health will have more options open to them.

³¹ Such an anti-natal conclusion is reached by D. Benatar. 2006. *Better Never to Have Been Born*. Oxford: Oxford University Press. We doubt that such counterintuitive conclusions were intended by Buchanan et al.

³² J. Habermas. 2003. *The Future of Human Nature*. Cambridge: Polity Press.

³³ D.S. Davis. Genetic Dilemmas and the Child's Right to an Open Future. *Hastings Cent Rep* 1997; 27: 7–15. Notice that although we are discussing the view that reproducers have reasons to maximize the expected autonomy of future children, our remarks apply with equal force to a satisficing version of this view, which would only claim that there are reasons to provide future children with a *good enough range* of options.

³⁴ Robertson, *op. cit.* note 22; J. Savulescu. Is There a Case in Favour of Predictive Testing of Children? *Bioethics* 2001; 15: 26–49.

The above principle might instead mean that we should select future children with the aim of intentionally *promoting* their expected autonomy. This could take two forms. In one, parents would aim to select children with psychological traits that are likely to increase the future child's autonomy – traits such as foresight or self-control, empathy and sympathy. In another, parents would aim to keep open as many future options as possible for their future child.

It seems to us doubtful that having a wider range of choices is valuable in itself, *independently* of its contribution to expected well-being.³⁵ And there seems no reason to keep open options that will lead to misery and misfortune, or to keep open trivial options at a general cost to expected well-being. But if respect for future autonomy is understood to benefit a person because it contributes to her well-being, then it is entirely compatible with PB. Some philosophers believe that autonomy is in itself good for a person. An option that is in itself independently good would be better if chosen by the child herself rather than chosen in advance by her parents. Even those who doubt that autonomy is intrinsically good, would almost invariably admit that autonomy is instrumentally good. A child is likely to form his own conception of the good life – a range of values, projects and desires – and this conception will itself at least partly determine what would count as a good life *for him*. And as he grows, that future child will often know better than his parents what would best contribute to his life. These claims all fall squarely within the scope of PB. All they do is add to PB a further claim about the good life.

The moral stain of the atrocities committed in the name of eugenics in the previous century has distorted recent debate about procreative ethics. Although PB and the procreative principles we have considered here bear little resemblance to the collectivist, coercive and often racist projects of 20th century eugenics,³⁶ most supporters of genetic selection have tended to proceed gingerly, defending views that are unnecessarily weak. We have argued that PB is superior to these competing principles of procreative selection – the norms implicit in commonsense morality, as well as general constraints on rationality, instruct us to aim to have the most advantaged child.

³⁵ See G. Dworkin. 1988. *The Theory and Practice of Autonomy*. Cambridge: Cambridge University Press: ch. 5.

³⁶ For discussion, see Buchanan et al. *op. cit.* note 9, chapter 5; J. Glover. 1998. Eugenics: Some Lessons from the Nazi Experience. In *The Future of Human Reproduction: Ethics, Choice and Regulation*. J. Harris & S. Holm, eds. Oxford: Clarendon Press: 55–65.

Objections to maximizing moral principles

In technical terms, PB is a *maximizing principle*. This has suggested to some that it must be vulnerable to standard objections to such principles. In this section we'll consider such objections. But first let us correct the mistaken impression that because PB is a maximizing principle, it *must* belong in a consequentialist ethical theory. Both consequentialists and the vast majority of their opponents agree that there is moral reason to promote the good. Where they differ is over whether there are moral constraints that limit the promotion of the good. In fact, within total act utilitarianism, PB could not be an independent moral principle but only a label for one kind of value that needs to be weighed in utilitarian deliberation. Indeed, the right act for a total act utilitarian will sometimes be to create a child with prospects for a poor life, if this will lead to a higher aggregate level of wellbeing. For example, it might be better for some parents to have a dull, lazy child than a highly intelligent and challenging child who herself would have a better life. PB may often clash with total act utilitarianism, although it is compatible with other forms of consequentialism.

There is nothing in the PB that makes it incompatible with non-consequentialist moral theories. It is compatible, for example, with respecting persons as ends in themselves. We are not treating a future child merely as a means when we aim to have the child who will enjoy the most advantaged life – reasons of PB are *not* reasons of parental self-interest. And PB is also an extension of one central parental virtue: concern for the well-being of one's children. As such, it is equally compatible with virtue ethics.³⁷ Furthermore, we have argued that reasons of PB can be outweighed or defeated by other reasons, and these reasons may be non-consequentialist in origin, such as reasons of justice.

Even if PB is compatible with non-consequentialist views, it might still be vulnerable to familiar objections to maximizing moral principles. For example, several authors have claimed that PB is too demanding – that it places too stringent a burden on parents. As Glover argues,

There is something to be said for avoiding the intrusion of too many or too stringent moral obligations into an intimate personal decision. There is a case against placing additional moral burdens on people having children, a case for simply welcoming whatever children is born.³⁸

³⁷ See R. McDougall. Acting Parentally: An Argument Against Sex Selection. *J Med Ethics* 2005; 31: 601–605.

³⁸ Glover, *op. cit.* note 9, p. 51. See also Sandel, *op. cit.* note 1.

It has indeed seemed to many that morality couldn't require us to give up our personal projects and special ties to family and friends in order to increase the welfare of total strangers.³⁹ Reasons of PB, however, are continuous with familiar parental duties governing the spacing of our children and the circumstances under which we should have them. It is not uncommon to hear the criticism, 'They should have waited to have children.' To the extent that parents have reasons to care about the expected well-being of their future children, these reasons can be seen as extensions of parents' special relations to their own children, not as the external demand of an impartial morality.⁴⁰

Second, it is doubtful that the choice itself could be described as a burden. If parents believe, or would believe if they had reflected on the available information, that child A will have a better life than child B, how can it be a burden to select A? There is an important disanalogy here from many acts that promote the well-being of existing children. In many cases, the more an act promotes well-being (e.g. taking a child to speech therapy), the greater its cost (in terms of time and money). Now whether parents should undergo IVF in order to select the most advantaged child does depend on the costs – financial, emotional and physical. But in those cases where couples are already undergoing IVF for infertility or risk of genetic disorder, there are no significant further costs to selecting the most advantaged child compared to selecting a child without Down Syndrome.⁴¹ If parents have already committed themselves to spending a certain amount on their child's education, what further burden do they bear in selecting the better school out of several similarly priced options? Perhaps what is meant is rather that raising a child with extraordinary talents may be a burden to normal parents. This may be true in some cases. But whether and when can only be settled empirically.

Another objection to maximizing principles is that they are self-defeating. If all a person aims to do is promote her self-interest, then she may find this aim self-defeating. She may have a better life precisely by being concerned about many things other than her self-interest. Directly

³⁹ See Bernard Williams's contribution to B. Williams & J.J.C. Smart. 1973. *Utilitarianism, For and Against*. New York: Cambridge University Press.

⁴⁰ See D. Wasserman. The Nonidentity Problem, Disability, the Role Morality of Prospective Parents. *Ethics* 2005; 116: 132–152.

⁴¹ This was not true in the past. In order to have even limited control over one's child's genetic make-up, one would have had to choose a partner according to their genetic make-up. This would have often amounted to a great burden.

and exclusively seeking happiness may make a person miserable. Couldn't this be said of seeking to have the most advantaged children?⁴²

Notice first that this is not an objection to the truth of PB but to using it as a direct guide to action. In any case, this objection couldn't plausibly apply to the promotion of our biological and psychological potential and abilities. How can the capacity to remember things better, concentrate longer, be less depressed, or better understand other people's feelings have the effect that one will be less likely to achieve the good life? It may be self-defeating *in some circumstances* to aim directly at achieving the good, but it is surely sensible to aim directly at achieving the *potential* to be able to realize the good. If it is not self-defeating to alter the educational environment to maximize our children's potential and opportunities, why is it self-defeating to intervene more directly in their psychology or biology?

Parents who obsess about their child's well-being and future accomplishment may indeed make their child less rather than more happy or accomplished. But this has nothing to do with the act of selection itself. Selecting the best is not, in this way, self-defeating, as compared to letting nature or chance take their course. It is subsequent attitudes to the child that may cause such damage. But if so, then this is no real objection to PB.⁴³ It is an objection to certain styles of 'hyperparenting'.⁴⁴

There is one way in which PB may be self-defeating. One factor that can influence how well a person's life goes is her position on a range of positional goods – how she ranks compared to others on attributes such as intelligence and height. Not everyone can be the most intelligent or the tallest. But, to the extent that genetic selection is available to many reproducers, then whether and to what degree a given feature is likely to benefit their future child will thus often depend in part on other parents' genetic choices. Such coordination problems pose a genuine difficulty. But parents already face such difficulties with many decisions they make with respect to existing children. Moreover, many such goods are not purely positional. The world and the lives of the people in it might be better if everyone were funnier, more intelligent,

more empathetic and less aggressive. And in so far as such joint action has significant social costs, these costs would provide independent reasons for restricting parental choice.

PART III. AN APPLICATION: PROCREATIVE BENEFICENCE AND DISABILITY

Existing reproductive medicine already offers means either to prevent the birth of children with many disabilities or intentionally to bring into existence children *with* disabilities. The most heated debates in procreative ethics have consequently revolved around the question of disability. According to a recent survey, deliberate selection of children with conditions such as deafness or dwarfism is not uncommon: 5% of 190 of PGD clinics surveyed in the US have allowed parents to select embryos with conditions commonly taken to be disabilities.⁴⁵ In one famous example, Sharon Duschneau and Candy McCullough, a deaf lesbian couple, deliberately created a deaf child by using sperm from a deaf male donor.⁴⁶ Many disability advocates believe that such procreative choices are morally permissible. Many others believe that they are morally wrong and that, indeed, we ought to use reproductive technology to prevent disabled children from coming into existence. Any adequate account of procreative ethics must address these issues. It might seem however that PB, a claim about the selection of the most *advantaged* children, contributes little to this debate. In this final section we shall argue that PB provides a better approach to the question of disability than the competing procreative principles.

Many believe that it is morally wrong to create a disabled child intentionally. Others believe an even stronger claim, that there are strong reasons to try to prevent disabled children from coming into existence. This stronger view might be supported by two procreative principles, one about selection.⁴⁷

⁴² For this objection, see Parker, *op. cit.* note 9.

⁴³ Similar remarks apply to Glover's worry that in aiming to select the best we 'substitute the mindset of quality control for the cheerful moral anarchy of the free-range approach' (*op. cit.* note 9, p. 51.)

⁴⁴ Sandel seems to conflate the two in *op. cit.* note 1. If selection on the one hand and accepting care or love on the other could be really inextricably linked, then it seems to follow that instead of being able to choose a partner freely, we would be better off if marriages were arranged by our parents or society, or perhaps better, the outcome of a 'marital lottery'.

⁴⁵ Baruch et al. *op. cit.* note 6.

⁴⁶ See M. Spriggs. Lesbian Couple Create a Child Who is Deaf Like Them. *J Med Ethics* 2002; 28: 283. For an example of a couple who used IVF to select a child *without* a gene that causes hereditary deafness, see J. Kelly. 2002. Chosen One: Designer Baby to Have Perfect Hearing. *Herald Sun* (Melbourne). September 21: 1–2.

⁴⁷ The weaker view relies on the doing/allowing distinction. It forbids reproducers from actively selecting disabled children but permits them to allow such children to be born. Of course those who believe that selection itself is morally forbidden reject selection both for and against disability.

The Selection Against Disability (SAD) View If reproducers have decided to have a child, and selection is possible, then they have a significant moral reason to select, of the possible children they could have, one of those who are expected to be non-disabled.

and one about reproduction:

The Disability Constraint on Reproduction. Reproducers should not knowingly bring into existence a disabled child. If they cannot bring into existence a child who is expected to be normal, then they ought not to have a child at all.

The Disability Constraint is an extreme view. Whereas the SAD View at least seems to allow that reasons to prefer a non-disabled child might be overridden in some circumstances, the Disability Constraint claims that it is never permissible to knowingly bring into existence a disabled child. It is hard to defend this view. A plausible constraint on reproduction is The Minimal Threshold Constraint. But that constraint does not support the Disability Constraint. The lives of the vast majority of disabled people are not merely worth living but good.

In any case this is a claim about reproduction, whereas PB is a claim about selection. Does PB at least support the SAD View? PB gives reasons to select the most advantaged child out of the possible children a couple can select. Given that the most advantaged child might still be disabled, PB does not imply the SAD View. But PB might still imply a related view. It might give reasons to select a non-disabled child when this is possible. And it might therefore give reasons not to seek intentionally to bring into existence a deaf child when it is possible to have a hearing one. Whether PB has these implications depends on how we understand disability.

Defining disability

In its everyday use, the word ‘disability’ is a messy and misleading mixture of descriptive and evaluative elements – it typically expresses a negative valuation and is used to refer to conditions considered detrimental, but these conditions are often singled out as those that deviate from what is taken to be the standard of normality for humans.

There are several ways in which we could revise the concept of disability, and different accounts will better match different aspects of the everyday use of the word. Some hold a *Species Norm View* of disability and define it as deviation from some biological standard:

Disability A stable intrinsic property of subject S that deviates from the normal functioning of the species to which S belongs.⁴⁸

In normative inquiry, however, we are interested in a concept of disability that has an *internal connection* with norms or values. Some people believe that the species norm does have such a connection. They believe that *simply because* a condition deviates from normal functioning, this condition makes a person’s life go worse, and therefore gives reasons to avoid, regret and correct it. This view is not defensible. Deviation from the biologically or statistically normal couldn’t have such a normative significance in itself. Loss of hearing with old age is certainly consonant with the biological and statistical norm, but hardly less disabling for that. Around 34 per cent of all men aged 40–70 have some erectile dysfunction, which is a part of normal ageing. As a result, 20 million men worldwide use Viagra.⁴⁹ Many men are not satisfied with species typical normal functioning.⁵⁰

If we adopted the Species Norm account of disability, then the SAD View would be false. There is generally no reason to base decisions about which children to have on considerations of whether they deviate from the species norm. Deviation from such a standard matters only when it is likely to affect the quality of a life – by making it worse or, sometimes, better. The Species Norm account thus offers us little assistance in answering normative questions. To answer such questions, we would need to relate facts about species norms to facts about well-being. Worse, since in its everyday use the concept of disability implies a negative evaluation, adopting a Species Norm account of disability is likely to confuse, rather than advance, normative inquiry.

Our revisionary account of disability will thus focus precisely on what matters for normative inquiry: on the tendency of a condition to affect how well a life goes. Our account, we believe, largely corresponds to everyday use. Like other revisionary accounts, it sometimes departs from it. This, however, is not a problem. When our account of disability departs from everyday usage in

⁴⁸ For such a view, see Buchanan et al., *op. cit.* note 9. As it stands, this above definition will not do. If someone has extraordinarily good vision or memory, she also deviates from normal functioning. So we need an asymmetry between two kinds of deviations, negative and positive. We need to talk not just of deviation but of something like pathological or defective deviation, however that is to be defined.

⁴⁹ M.D. Cheitlin et al. ACC/AHA Expert Consensus Document JACC: Use of sildenafil (Viagra) in Patients with Cardiovascular Disease. *J Am Coll Cardiol* 1999; 33: 273–282.

⁵⁰ For further arguments against the normative significance of species norms, see J. MacMahan. Our Fellow Creatures. *J Ethics* 2005; 9: 353–380 and J. MacMahan. 2002. *The Ethics of Killing: Problems at the Margins of Life*. Oxford: Oxford University Press: 209–228.

some surprising way, it is our definition, we believe, that captures what matters most for questions in procreative ethics.⁵¹ In our *Welfarist View*, a condition is a disability if it is:

Disability A stable physical or psychological property of subject S that (1) leads to a significant reduction in S's level of well-being in circumstances C, when contrasted with realistic alternatives, (2) where that is achieved *by* making it impossible or hard for S to exercise some ability or capacity, and (3) where the effect on well-being in question *excludes* the effect due to prejudice against S by members of S's society.

As we define it, disability is a species of instrumental badness – it is a harmful condition. The notion of a harmful condition can be cashed out in different ways. One natural way is counterfactual: had condition X not been present, the person's well-being would be higher.⁵² This comparison, however, must involve a counterfactual alternative that is realistic: not being able to fly or to read others' minds are not plausibly described as disabilities, even if possession of such fantastic capacities would make our lives go better, just as it is not a misfortune that we do not live to 150, although it would be in a world where this had become a realistic possibility.⁵³

Although there are genuine difficulties in identifying an appropriate counterfactual baseline for assessing the effect of a given condition on a person's lifelong well-being,⁵⁴ these difficulties are luckily less pressing in the context of many procreative decisions. When parents are faced with the choice between a number of possible embryos, it is clear what possible lives they are comparing. PB instructs them to choose, out of these possible future children, the one who is likely to be the most advantaged. And this means that, on our account of disability, parents *do* have reasons not to have a future child who is likely to be disabled if they have the option of choosing another who is expected to have less or no

disability, although whether it would be wrong to do so would depend on the overall balance of moral reasons.

This claim is compatible with the obvious and important fact that people with disabilities can have very good lives. Biological and psychological disabilities make it more difficult to lead a very good life just like being very poor or having little education. But they do not remove opportunity altogether unless very extreme.

In the context of procreative choices, however, what matters is not whether particular disabled people have had good lives, but whether parents can reasonably believe that a child with deafness or some other condition is *likely* to have a *better* life than a child without this condition. Consider this analogy. Money, it is said, can't buy happiness. But few would sincerely deny that having money is instrumental to having higher well-being. Opening a savings account for one's child is a way of promoting his or her expected future well-being.⁵⁵ It may still turn out that the money was badly used. It may even turn out, in retrospect, that if the child had been left poor, she would have had a better life. But the fact that such outcomes are possible is hardly a reason not to save money for a child's future. The very same point applies to preventing disability. The fact that a condition may in certain cases play a role in increasing overall well-being is irrelevant, unless it can be shown, at the time of choice, that this is the likeliest outcome. In the context of procreative choices, the operative concept is that of *expected* disability.

Disability is context and person relative

As we have defined it, disability is a context and person-relative notion. What makes it harder to lead a good life in one circumstance may make it easier in another. The atopic tendency which leads to asthma in the developed world protects against worm infestations in the undeveloped world. Deafness would be a positive advantage in an environment of extremely loud and distracting noise.

This relativity shouldn't be surprising. What is intrinsically bad remains intrinsically bad in all possible worlds. But, with a few possible exceptions, things couldn't be instrumentally bad in all possible worlds. They are instrumentally bad only in a given causal context. In this respect, the concept of disability is formally similar to the concepts of an obstacle or a danger. Things are not dangerous absolutely. They are only dangerous relative to a person and to a given situation. In

⁵¹ We further develop this revisionary account of disability in G. Kahane & J. Savulescu. *The Welfarist Account of Disability*. In *Disability and Disadvantage*. A. Cureton & K. Brownlee, eds. Oxford: Oxford University Press (forthcoming).

⁵² This is a widely held view of harm. See e.g. Feinberg, *op. cit.* note 21.

⁵³ See Jeff McMahan's defence of a 'realism condition' as a constraint on assessments of fortune, *op. cit.* note 50, pp. 133, 142 and 145ff.

⁵⁴ We discuss these difficulties further in G. Kahane & J. Savulescu, *op. cit.* note 51. They are not unique to our account of disability. They have been much discussed in tort law (see L. Katz. *What to Compensate? Some Surprisingly Unappreciated Reasons Why the Problem Is So Hard*. *San Diego Law Rev* 2003; 40: 1347–53) and in the context of attempts to account for the badness of death (see McMahan, *op. cit.* note 50, ch. 2, esp. pp. 98–117).

⁵⁵ Note that parents can open such a savings account even before conceiving a child, with the aim of saving money that would benefit their future child, *whoever* this child will be.

order to judge which conditions constitute a disability, we need to predict what the context or environment is likely to be. There is no context-independent answer to the question whether we should select hearing rather than deaf children.

The context-relativity of disability is nicely illustrated by the example of colour blindness. Generally this is seen as a very mild disadvantage because it has little impact on a person's life. Colour blind people experience the world differently, but they are able to function normally and to discern relevant colours where it matters. Although it involves some disadvantage, colour blindness constitutes a mild disability. But now imagine that some master painter became colour blind. Such a person might be prepared to spend vast sums of money to correct his colour vision. This represents the value of colour vision to that particular person in his context. For such a person, colour blindness might be a severe disability.

Another illustration of this context-relativity, as well as of the distance between the Welfarist and the Species Norm views, is the case of Ashley, a nine-year old from Seattle who was born with a condition called static encephalopathy, a severe brain impairment that leaves her unable to walk, talk, eat, sit up or roll over. According to her doctors, Ashley will remain at a developmental level of a three month old baby.⁵⁶ In 2004, Ashley's parents and the doctors at Seattle's Children's Hospital devised what they called the 'Ashley Treatment,' which included high-dose estrogen therapy to stunt Ashley's growth, the removal of her uterus via hysterectomy to prevent menstrual discomfort, and the removal of her breast buds to limit the growth of her breasts. Ashley's parents argue that the Ashley Treatment was intended 'to improve our daughter's quality of life and not to convenience her caregivers'.⁵⁷

On both our Welfarist view and the Species Norm view, Ashley was born with a severe disability. But their verdict radically diverge when we turn to the effect in Ashley of the treatment devised by her doctors. On the Species Norm view, the treatment would greatly increase Ashley's disability – driving her even further from the human norm. On our view, in the *context* of Ashley's brain impairment, and assuming that the claims made for the effects of the treatment on Ashley's well-being

are correct, the treatment would be not disabling but enhancing.

When is disability 'socially constructed'?

It is often claimed that disability is 'socially constructed'.⁵⁸ This claim can mean different things. On the *Social Model*, disability can be defined as

Disability A stable intrinsic property of subject S which (1) deviates from the normal functioning of the species to which S belongs *and* (2) which tends to reduce S's level of well-being *because* members of the society to which S belongs are prejudiced against such deviation from the normal.

This account captures one important way in which some conditions make people's lives worse – through unjust treatment. Given that we have deliberately defined the Welfarist View to exclude the effects on well-being of such prejudice, the two views are compatible. Given that both consciously depart from the everyday use of the word 'disability', it is a terminological matter which best deserves to keep this label. The Welfarist View, however, better captures what is worth preserving in the existing concept. It refers to an important property of persons that the existing use of 'disability' tracks in a rough and misleading manner. We need a way to refer to this form of instrumental badness. And advocates of the Social Model sometimes go on to claim that *all* the negative significance of conditions commonly described as disabilities is due to social prejudice against the abnormal. This claim is surely mistaken.

There is, however, a qualified sense in which many disabilities could be truly said to be socially constructed even on our account. Conditions that count as disabilities in our sense are only instrumentally bad, and have harmful effects only in a given context. In some possible world, with different social institutions, a condition which in our world is a disability might be neutral or even advantageous. Indeed, in some contexts, having perfect health can be a disadvantage. In Russia in the 1800s, having good health in men meant 15 years' service in the army, with a significant chance of being killed. These, however, are only empirical claims, whereas the view that

⁵⁶ D. Gunther & D. Diekema. Attenuating Growth in Children with Profound Developmental Disability, A New Approach to an Old Dilemma. *Archives Pediatr Adolesc Med* 2006; 160: 1013–1017.

⁵⁷ See <http://ashleytreatment.spaces.live.com/> [Accessed 10 May 2008]. These claims are controversial. Our aim here, however, is not to decide this particular case but to illustrate how the welfarist account sheds light on such difficult cases.

⁵⁸ See H. Lane. Do Deaf People Have a Disability? *Sign Language Studies* 2002; 9:2 356–379; R. Amundson. 2005. Disability, Ideology, and Quality of Life: A Bias in Biomedical Ethics. In *Quality of Life and Human Difference: Genetic Testing, Healthcare, and Disability*. D. Wasserman, J. Bickerbach & R. Wachbroit, eds. Cambridge: Cambridge University Press; S.M. Reindal. Disability, gene therapy and eugenics – a challenge to John Harris. *J Med Ethics* 2000; 26: 89–94.

disability is socially constructed is usually taken also to have a very specific normative import. It is often taken to imply that it is *always* society that should be changed to correct disability. In the next section we shall argue that this claim is too strong.

Biopsychosocial correction of disability

Whenever there is a mismatch between biology, psychology and social or natural environment resulting in a bad life, or even a life that is not as good as it could be, we have a choice. We can alter our biology, our psychology, or our environment. Which should we change?

When it comes to selecting children, we can select children suited to our environment or we can attempt to alter our environment to suit our children. Some have attempted to do the latter. For example, asthma develops from an immune response which was originally beneficial in protecting us against worm infestations. One doctor is attempting to replicate this condition in the developed world by introducing benign worms into the intestines of asthmatics. But another solution would simply be to select children without the predisposition to asthma.

Our own view is that all routes must be considered. We have moral reasons to aim to have the most advantaged children. But there is no obligation to achieve this end by biological means, or by biological means alone. In some cases, it is reasonable and practicable to alter the environment. But in others, it is going to be difficult to change the modern or natural environment to allow all possible people to flourish. For example, it may be most effective to choose children with more melanin pigment in their skin to protect them from the sun in areas of high ozone layer damage, rather than attempting to close the hole in the ozone layer in that area or enforcing sunscreen, coverage of the skin and avoidance of the sun.

When a given social arrangement is unjust, there will be priority to changing society, although it is a fallacy to assume that if the lives of people with a certain condition would go better in a different social context, then present arrangements must always be unjust. But even if a social arrangement is not unjust, in some cases social intervention may be less risky or more likely to succeed. When it comes to existing people, one consideration in favour of changing society is that changes to biology or psychology can endanger a person's sense of identity or psychological unity. At the most extreme case, such changes may amount to a change in numerical identity. We do not benefit a person if, in order to cure his migraine, we transplant another brain in his skull. But although most

cases of biological or psychological change would not literally terminate one person's life and replace her with another, such change may still threaten to disrupt the psychological unity of a person or undermine her deepest life projects. These considerations, however, do not apply in the context of reproductive choices where we are considering future children, not existing people. Here there is no question of the costs of adaptation to a different set of senses or capabilities, and there aren't yet life projects that may be undermined.

Selecting a deaf child

We can return now to the deaf couple who deliberately sought to create a deaf child. The procreative choice of this couple is a good test case for competing procreative principles. Their choice already presupposes the moral permissibility of selection, and the question is only what moral principle should guide this selection. The means employed by this couple are relatively uncontroversial. And deafness is an appropriately controversial condition.

Is the couple's choice morally defensible? Consider first how PB answers this question. If deafness can be expected to be a disability in our welfarist sense, then PB implies that parents have moral reasons to select hearing children rather than deaf ones. This seems the right answer. However, to get this result on the Minimal Threshold View or the Satisficing View, one would need to argue that the lives of deaf people are not worth living, or not good enough. These are not defensible claims. PB makes no such claims. It can acknowledge that the lives of deaf people are good and often very good. And it gives no weight to claims about deviation from, or conformity to, the normal. PB doesn't tell us to prefer embryo A to embryo B because B will be 'abnormal' and A will be 'normal'. It tells us to prefer A because A is expected to have a better life.⁵⁹

This is a difficult question. To apply our account of disability to some condition, we need to conduct two separate inquiries, one normative and one empirical. First, we need to adopt some account of well-being. Then we need to identify the causal factors that influence a person's well-being in a certain set of circumstances. It is thus a substantive question, not determined by definition alone, whether the paradigmatic cases of disability in the

⁵⁹ Some people in the deaf community claim that deafness does not reduce well-being because signing is a unique form of communication that offers access to a unique culture that can only be fully experienced by the deaf. For these claims to have the relevant force, it is not enough for it to be true that deafness has *some* benefits. It must also be true that these benefits clearly outweigh the *costs* of deafness.

everyday sense – deafness, blindness, and intellectual subnormality – are disabilities. We ourselves are inclined to believe most of these are disabilities in the conditions holding at present and in the foreseeable future. But a case needs to be made, and it needs to be made case by case. If a case can be made that deafness is *not* a disability in our sense – if it can be shown that deafness does not reduce well-being, or at least that in a *given context* deafness is not *expected* to be a disability, then PB would not give any moral reason to select against deafness.

CONCLUSION

We have elaborated and defended the Principle of Procreative Beneficence, and explored its implications for the question of disability. We have argued that parents have significant reasons to select the most advantaged children. As we noted at the start, many find this suggestion disturbing. But it is important to see that when they do so, they are not relying on commonsense morality. Commonsense morality doesn't explicitly deny that there are such reasons. It is simply *silent* on this question. This isn't surprising, because, until very recently, this question couldn't be raised. But silence isn't the same as denial. And, as we've tried to argue, commonsense morality implicitly recognizes such reasons.

The real controversy should not be about PB, but about its application. In order to aim to have the most advantaged child, we need to form reasonable opinions on difficult questions about the nature of well-being and the good life, and about the weight we should give to the prospects of future children when these compete with other moral considerations. These are questions that some people may prefer to avoid. But these are questions we cannot avoid if we are to make the right procreative choices.

Discussion of disability has sometimes taken the form of a sterile debate between those who think that deviation from the species norm or some other standard of normality is intrinsically bad and always merits correction, and those who think the negative consequences of disability are always due to social prejudice. This is not a good way to frame the debate. As we have argued, there is an important element of truth in the social construction view. But its opponents are also partly right given that, in the circumstances obtaining in our world and in the likely future, it would be better if many commonly recognized disabilities were prevented or corrected.

Our Welfarist View side-steps this sterile dispute by breaking the definitional link between disability and normality. This is not only a terminological matter: it

Table 1. Comparison of anti-selection and competing pro-selection views as applied to different procreative choices. 'X' stands for 'forbids or gives significant reasons not to', '✓' for 'requires, or gives significant reasons to' and '-' for 'permits or is silent about'. 'Disability' refers to disability in the context-relative welfarist sense introduced in the paper. The examples of welfare enhancing traits we list are only illustrations

	ANTI-SELECTION	PROCREATIVE AUTONOMY	MINIMAL THRESHOLD	SATISFYING VIEW	PREVENTION OF HARM	PROCREATIVE BENEFICENCE
Select for serious disease?	X	-	X	X	X	X
Select for disability?	X	-	X	X	X	X
Select against serious disease/suffering? (e.g. cystic fibrosis)	X?	-	✓	✓	✓	✓
Select against disease traits? (e.g. haemophilia)	X	-	✓	✓	✓	✓
Select against disability?	X	-	-	-	✓?	✓
Select some non-disease traits? (e.g. average intelligence, sociability)	X	-	-	✓?	-	✓
Select any welfare enhancing trait? (e.g. positive hedonic tone, high intelligence)	X	-	-	-	-	✓

may help resist the needless stigmatization of both the disadvantaged and the species-atypical. Our account leaves little room for such stigmatization.⁶⁰ Indeed on our account, we all suffer from disabilities of various kinds – conditions inherent to our nature which reduce our well-being and make it more difficult to realize a good life.

What determines whether there are moral reasons for or against selecting a child with a congenital condition such as deafness is factual information about the expected well-being of such a child, when compared to other possible children, not whether the resulting child could be described as disabled or normal according to some possible definition. According to PB it is sufficient that a condition is likely, in our world, to make for a life with somewhat smaller prospects of well-being to give parents reasons not to select this condition. By contrast, according to Procreative Autonomy, *all* autonomous procreative choices are permitted, and on the Minimal Threshold and the Satisficing views a good case *could* be made for allowing parents to select children with disabilities that are not very severe. These alternative procreative principles seem to us to give the wrong answers to these questions about procreative choice (see table 1).

PB is thoroughly unsentimental about the present state of things. If parents could increase the prospects of future children's lives by selecting children who are far more intelligent, empathetic or healthier than existing people, then PB instructs parents to select such future children. In comparison to such possible future persons, most existing persons may count as suffering from disability. And if the prospects of future children in some future circumstances would be improved if they had a condition that, in our present environment, counts as a disability, then, again,

⁶⁰ It is often objected that, given existing racial prejudices, PB implies that mixed race couples might have a reason to have children with lighter skin because having darker skin is socially disadvantageous. But when these parents consider the question *only* from the perspective of the good of their future child, then it is no objection to PB that, in these unjust circumstances, there is *a* reason to prefer the fair skinned child. We often have to make compromising choices in unjust circumstances, including choices about the good of our children. The same problem would come up when choosing to send their child to a mixed race state school or a white private school. But this isn't to say that parents *ought* to select the fair skinned child. The reasons given by PB can be defeated or outweighed by other moral reasons. Many would say that they would be defeated in this case. Parents shouldn't choose the fair skinned child because of the expected prejudice. It's better to change pernicious attitudes than to reinforce them through capitulation.

this is the condition that parents should select. PB is thus not open to the objection that it expresses a discriminatory and hurtful attitude towards people with species-atypical traits.⁶¹

When people object to PB, this might be because they mistakenly think that it is incompatible with the strong intuition that parents ought to cherish and love their child for who he or she is. But PB is compatible with this intuition. It is up to us whether we love our children and give all people in society a fair go. This need not be affected by decisions about selecting which people come into existence. We all vary in our abilities and our disabilities. To a degree, we all suffer from disability. PB calls upon us to select the most advantaged children. We should aim to reduce disability, but we should also decide how we behave towards people as they are, with strengths and frailties, abilities and disabilities, desirable and undesirable characteristics.⁶²

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Professor Julian Savulescu holds the Uehiro Chair in Practical Ethics at the University of Oxford, and is the Director of the Oxford Uehiro Centre for Practical Ethics. His areas of research include the ethics of genetics, neuroethics, research ethics, especially the ethics of embryo research, new forms of reproduction, including cloning and assisted reproduction and medical ethics, including end of life decision-making, resource allocation, consent, confidentiality and decision-making involving incompetent people. Most recently, he has been working on the ethics of enhancement.

Dr Guy Kahane is Deputy Director of the Oxford Uehiro Centre for Practical Ethics, Faculty of Philosophy, University of Oxford, and Fulford Junior Research Fellow at Somerville College, Oxford. Kahane is co-editor of *Wittgenstein and His Interpreters* (Blackwells, 2007).

⁶¹ For this 'expressivist objection', see A. Asch. 1989. Reproductive Technology and Disability. In *Reproductive Laws for the 1990s*. S. Cohen & N. Taub, eds. Clifton, N.J.: Humana Press: 69–124.

⁶² As Kamm points out, we normally see no tension between seeking particular attributes in a future partner and our love for a particular person, regardless of their attributes, once we have already begun a relationship with them (F. Kamm. Is There a Problem With Enhancement? *Am J Bioeth* 2005; 5: 5–14). The case of genetic selection seems no different.

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