Q1. Savulescu argues that, as the technology becomes available, parents should be encouraged to use PGD to “have the best children” possible. Savulescu argues that PGD should be used not just to avoid genetic diseases, but to select for desired non-disease genes as well. Critically evaluate his argument.

Modern biotechnologies have now made it possible for embryos produced through in vitro fertilisation (IVF) to be non-destructively screened for genetic or chromosomal abnormalities. This is known as preimplantation genetic diagnosis or PGD. This information can then be used to decide which embryo is to be placed in utero for implantation and gestation, and which embryos are to be discarded. According to Julian Savulescu (2001), in such situations, prospective parents “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”. He calls this the principle of Procreative Beneficence. This implies, in Savulescu’s opinion, that the technology should not only be used to avoid disease, but also to select for non-disease genetic traits that are likely to benefit the child. I would give qualified support to these claims, recommending broad permission for parents to act in this way, but only a limited obligation to do so.

JUSTIFICATION

We normally consider that parents have a duty to take reasonable steps to act in their child’s best interests and maximise their welfare. The moral extent of the obligation is likely to involve significant positive duties, but legally it is more generally restricted to not causing harm. In making his argument for Procreative Beneficence, Savulescu is extending parental duty to take in the relevance of pre-conception choices to future individual welfare. This is a tricky ethical step. In doing so, it is important to consider that the in vitro embryos lack moral status as human lives. The situation conceptually becomes one of comparing hypothetical offspring, and choosing which will come into existence; rather than killing those that are undesirable. He then draws parallels with other orthodox reproductive scenarios, where parents’ choices regarding their hypothetical children are normally considered important. One
example he uses is that of a woman with rubella, who should choose to delay conception for several months, in order to avoid having a child with congenital abnormalities. The child she does eventually conceive will not only likely be healthy, but will actually be a different individual to the child she otherwise would have had. If one accepts that it would have been wrong for the woman not to delay conception, it appears one is accepting that a wrong can been done without anyone actually having been harmed. This is the ethical foundation of Procreative Beneficence.

Savulescu thus believes that, as in the rubella example, it is wrong for parents using IVF and PGD to choose to implant an embryo ‘A’ which has an identified genetic disease, when they can otherwise choose an embryo ‘B’ without the disease, but no other distinguishing traits. This is a well-justified claim. Apart from the definite risk of the identified disease in embryo ‘A’, there is an equal probability of other beneficial or deleterious trait inheritances for each of the two embryos.

Extending these arguments even further, Savulescu believes that pre-implantation genetic selection should be not only be used for avoidance of disease, but that it should also be used for selection of beneficial non-disease traits. This claim is far more controversial. It rests upon the fact that the definition of disease or disability is a somewhat qualitative one, with no clear line of demarcation between what is normal and what is abnormal. Well-being is affected by many different traits, some of which are classified as disease, and some of which are not. According to Savulescu, to ignore non-disease genetic traits, when they are known to impact upon well-being, is being inconsistent, and is unwarranted. This is a strong logical argument. Whether or not we yet have the means to identify non-disease traits and their effects is irrelevant to the general philosophical point; just as it is also irrelevant that there are many diseases for which we cannot yet accurately screen. However, Savulescu does ignore the fact that, even when a definitive objective cut-off between what is normal and what is disease cannot be drawn, it is still valid and useful in everyday life to make a qualitative distinction, based upon the extent of a condition’s impact on vital functions and/or its deviation from the usual. Hence, cosmetic surgery for congenital absence of all breast tissue in a woman is normally seen in a different medical and psychological context to that requested by a woman wanting to move from a C-cup to a D-cup. Although it would normally not be considered unethical to perform the procedure on the later candidate, there would not be the same obligation to bring the possibility to the attention of the patient, as there would be with the
first case. This suggests that even if PGD embryo selection based on non-disease traits is morally permissible, there may not be a strong parental obligation to undertake it, in all cases.

Notwithstanding this reservation, the conclusion that parents should be permitted to select by PGD for non-disease traits that enhance well-being is supported by several other considerations. Firstly, we currently allow (and morally, if not legally, expect) parents to undertake both pre-natal and post-natal environmental optimisation strategies. The extent to which this is desirable depends upon available information regarding likely effects, and family circumstances. In general, we consider it worthwhile, and indeed admirable, to attempt to enhance those qualities in our children that will be of general benefit to the widest possible range of future life-plans (Agar 1998). However, those parental strategies which will restrict the range of future options for the child, at an age when the child cannot be expected to have developed a clear life-plan, are usually seen as morally dubious. Legal wrong is not often done in these cases, however, as there is a strong (and appropriate) liberal presumption in our society as to the right of parents to raise their children in the way they desire. Distinguishing the moral acceptability of optimisation strategies in this way - by considering the effect of interventions upon the maximum range of future life-plans - would be useful, I think, when parents and society deliberate over possible PGD-based choices in the future.

The permissibility of parents employing PGD-based genetic selection of embryos for non-disease traits is given further strong support by the fact that we already allow unregulated pre-fertilisation genetic selection at the level of mate selection. This is so ubiquitous as to go largely unmentioned. In fact, it is usually seen as morally extremely dubious for a person to select a reproductive mate indiscriminately or anonymously. Such selection is affected at both a conscious and unconscious level, and may be a surprisingly accurate discriminatory tool for both disease and non-disease traits. It will likely be many years before our ability to predict complex traits such as an altruistic nature or paternal ability by in vitro screening methods can match humans’ innate ability to predict such traits in vivo. However, should this technological faculty be forthcoming, there seems to be no fundamental ethical justification for allowing and encouraging it at the level of mate selection, but not subsequently at the level of gametic or embryonic selection.
OBJECTIONS

Despite the initial plausibility of Savulescu’s principle of Procreative Beneficence as it applies to PGD-based selection for embryos with comparatively advantageous trait profiles, it is a controversial topic, and many possible objections to his claims need to be considered.

1. It harms the discarded embryos

If one considers that an embryo at the very early pre-implantation stage has full moral standing as a human life, then PGD is unequivocally morally impermissible. In general, however, the law does not consider this to be the case. In the normal execution of an IVF cycle, several eggs will be fertilised, with the goal of a single successful embryonic implantation. The others will be used for research or simply destroyed. I personally feel that this is appropriate, as I follow a gradualist view of foetal moral standing, and at the preimplantation stage accord insignificant moral relevance to the embryo. Although this appears to be a very common view, I acknowledge that there is a very wide range of alternative views regarding the moral status of embryos and foetuses, and a significant sector of society feel that PGD is unacceptable based on this objection. Unfortunately, there is no ironclad ethical argument that has settled this controversy, and there is not the space to fully discuss the relevant issues here.

2. It harms the future child

Savulescu considers the possible objection that direct harm may result to a child from PGD-based selection if an unexpected state of reduced well-being eventuates, perhaps due to the large gaps in available genetic information and our overall limited general predictive powers. He rightly dismisses this as an invalid objection, based upon the fact that the child produced cannot actually have been harmed by simply having been brought into existence, as opposed to not having been brought into existence at all.

The objection that a possible harm to the child may occur may be valid, however, if one is considering a case of genetic manipulation of an individual embryo, instead of simple embryo screening and selection. With genetic manipulation, one could actively, albeit accidentally, change a particular person’s possible life from better to worse. Although this possibility does
not in itself preclude genetic manipulation, it does create greater ethical concerns. This thus opens up a slippery-slope argument, whereby one may contend that allowing PGD and embryonic selection will inevitably create pressure to extend possible intervention to include genetic manipulation. For example, a couple who are both extremely short are unlikely to have an embryo to choose from that has the desired genes for tallness, and may assert a right to insert such genes into one of their embryos via gene splicing techniques. This concern is a reasonable one, and would require careful moral and legal consideration in the event that gene-splicing technology was made feasible.

A possible cause of indirect harm to a child born utilising genetic selection techniques, mentioned by Savulescu, is if the technique fostered excessive parental expectations for their child. This would be especially problematic for the child, one assumes, if they were born with unexpected disadvantageous traits, despite the best efforts and financial sacrifices of the parents. This objection relies on the supposition that the use of the selection procedure itself will result in inappropriate attitudes, or at least significantly worsen them. However, one suspects that the parents are likely to have such inappropriate attitudes prior to this decision. One might even imagine that denying access to such technology in cases like this may result overall in more poorly accepted children than in allowing it. In any case, it seems an insufficiently valid concern for it to outweigh the legitimate desirability of affording sensible and well-adjusted parents the opportunity to increase their future child’s general-purpose means.

3. It harms the parents

In a reply to Savulescu’s paper, Inmaculada de Melo-Martin (2004) attacks the claim that Procreative Beneficence places a moral obligation upon parents to utilise IVF/PGD embryo selection technology, even when there is no special risk for inherited disease, and even when it will be for non-disease traits. De Melo-Martin points out the very significant financial burden that such therapy would place on couples, or alternatively on the state if fully subsidised access was felt appropriate. In addition, there is an additional very onerous and even somewhat risky physical and medical burden placed upon the woman that supplies eggs for the IVF, through the required hormonal stimulation of ovulation and laparoscopic egg harvest. Finally, there is the possibility of significant parental guilt occurring because they have a child with an unexpectedly disadvantageous phenotype. This outcome may eventuate
despite careful decision-making on their part, due to the highly probabilistic nature of the information they act upon.

These are all quite reasonable concerns, and it argues strongly against a rigid obligation for parents to use such technology whenever they contemplate having a child. This is particularly so with regards to non-disease traits, and in circumstances with only a very low risk for serious genetic disease.

4. It harms society

Probably the most widespread and passionate objection (other perhaps than that which regards harm to destroyed embryos) to PGD-based embryo selection is that it will result in perpetuation and even exaggeration of existing negative discriminatory attitudes towards people with certain traits. Some people are concerned that this will even occur when the technique is used for clear-cut disease prevention (Asch 2002), and should be thus completely impermissible. Others seem to believe that the potential massive benefits of disease prevention in these cases will outweigh the costs due to effects on discriminatory attitudes; but that those interventions based on non-disease traits may still be impermissible (Tong). Arguments extend in various directions from this initial premise, some even suggesting that it would stifle diversity and change (Little 2002). Unfortunately, it is difficult to detect a coherent and lucid justification for this belief in most commentaries. This reflects, I think, both a fear of authoritarian eugenics, and a fundamental misunderstanding regarding the nature of discrimination. There appears to be a failure to recognise the distinction between quality of life judgements on the one hand (which we all make all the time, and which parents must make for their children), and value of life judgements on the other. It is the later that, when allowed to differ for different groups without relevant justification will be the grounds for discrimination. So, although I attempt in my own life to minimise my children’s’ and my own risk of accident causing quadriplegia, I do not discriminate against quadriplegics in any way, and would certainly condemn such a person being euthanased! I suspect that part of this misunderstanding results from an inconsistent conception of what embryo selection actually is: perhaps as a murder when imagining the promotion of discrimination (which would be a value of life decision); but a no-harm failure to exist situation when PGF-based selection is considered in other contexts (which is a quality of life decision).
In addition, I also feel that many claims regarding embryo selection and its effect to foster discrimination reflect a lack of appreciation for the fundamental difference between a trait that is discriminated against, and a community trait for discrimination. In fact, the former in the context I am considering here is a genetically determined trait, while the latter is a socio-environmentally determined trait. Hence, in the controversial case of gender selection bias in India, female infanticide is not the cause of this attitude, but a result of it.

A third mistake in these considerations is to relate possible increases in the proportion of people with unfairly-favoured traits in the population to even further negative changes in the treatment of those people living with the disfavoured traits. This doesn’t seem to hold true for disease states, and there is no absolutely clear logical reason why it should be that way for any other trait. Holding ratios artificially at any level in itself misses the point, and is as discriminatory as the behaviour that it is designed to combat.

So, with gender bias, it could well be argued, on the basis of social advantage, that the best decision for an Indian couple to make if they are interested in promoting equal treatment for women, is to select a male child and raise it with anti-discriminatory values. He will have a higher chance of succeeding socially and spreading these values than a female child.

Finally, if preimplantation selection was really that crucial in forming and perpetuating unjust biases, it would follow that we should not allow pre-fertilisation selection of mates also. It would make sense that a couple would have freedom to marry, but not to procreate coitally. Samples of all male sperm in the community would go into a central bank, and when a couple desired a child, the woman’s eggs would be fertilised using an anonymous sperm donor sample. Now that would be eugenics!

A further argument relating to PGD-based selection leading to inequality revolves around the prohibitive cost of such technology. It would initially be available only to those of some means. This is true, but it is not a justification for withholding the good in a liberal free-market society. If so, then we would never have had MRI scanners or other expensive technologies. There would be, of course, an obligation for the state to try and provide a subsidised service to suitable couples as soon as possible.
Finally, the social harm that is possible through the application of centrally-determined eugenics programmes cannot be overestimated. It is essential that the decisions to distribute reproductive goods that it allows be left firmly in the hands of individual couples, as in the current liberal tradition.

CONCLUSION:

I believe that although a duty of care does exist that justifies Procreative Beneficence, this is not an absolute obligation to use it under all circumstances. As with all parenting decisions, and indeed with almost all moral decisions generally, there is a requirement for a balance to be struck between the absolute duties of rights-based approaches, and the consequentialist need to consider broader effects. This is a fine example of a situation in practical reasoning that is well-addressed by the approach of virtue ethics; with its emphasis on there being no complete right or wrong, and with a recognition of the need for intuition, emotional sensitivity, and flexibility in charting a course through complex ethical environments. In general, then, the obligation to use the goods of IVF and PGD to maximise the possibility of a good life for future children is highest where there is a known high risk of genetic disease that can be reliably screened for; and lowest where no such significant risk is present. Although its use would not be obligatory for non-disease trait selection in the usual circumstance, it would be permissible when this is unlikely to constrain success in the widest possible range of future life plans. It use is more strongly morally indicated when IVF is already being undertaken for fertility purposes.

REFERENCES:


