3-17-2016

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Can the Principle of Procreative Beneficence Justify the Non-Medical Use of Preimplantation Genetic Diagnosis?

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Abstract: The Principle of Procreative Beneficence formulated by Julian Savulescu and Guy Kahane states that the parents have a moral obligation to select the best possible child, when selection is possible, by means of the genetic screening of the embryos. Savulescu not only advocates the genetic screening in order to avoid the disease markers but also advocates for selecting the non-disease genetic traits of an embryo which might contribute to the child’s better future, e.g. the intelligence of the child or selecting a particular sex. In the paper, I put forward the question whether preimplantation genetic diagnosis is justified in the case of selecting the non-disease genetic markers. I explore the fundamental assumptions of the Principle of Procreative Beneficence as well as its moral foundation in order to understand Savulescu’s claim. I argue against the pro-selection view of Julian Savulescu exploring the basic assumptions and moral foundation of the Principle of Procreative Beneficence. The Principle of Procreative Beneficence presumes that the non-medical and medical use of Preimplantation Genetic Diagnosis are mutually inclusive in the question of a moral obligation for the parents. However, I identify that this is not the case if we consider the possible consequences of Preimplantation Genetic Diagnosis to the potential life of the child; the non-medical and medical use of Preimplantation Genetic Diagnosis are mutually exclusive in terms of their implication on a child. The Principle of Procreative Beneficence also presumes a degree of parental obligation in the concept of ‘significant moral reason’ in the case of employing Preimplantation Genetic Diagnosis which is morally problematic. Finally, I argue that the moral foundation of the Principle of Procreative Beneficence is based on the ‘common moral intuition’ which is not an authentic source of moral truth; hence, the Principle of Procreative Beneficence cannot justify the non-medical use of Preimplantation Genetic Diagnosis.
When I was just a little girl  
I asked my mother; “What will I be?  
Will I be pretty; Will I be rich?”  
Here’s what she said to me  
“Que sera, sera  
Whatever will be, will be  
The future’s not ours to see  
Que sera, sera  
What will be, will be”  
[A popular song in the movie The Man Who Knew Too Much (1956)]

**Introduction:**

Prenatal view of procreation seldom requires ethical justification. We take it for granted that we have an obligation to procreate. We presume an intrinsic blameworthiness for not procreating (Benatar, 2006; Overall, 2012). An extreme version of prenatalism not only advocates the obligation to procreate, but also extends the domain of obligation for parents to ensure the best possible life of the child. The Principle of Procreative Beneficence (PB) is one such extreme prenatal view in reproductive ethics. Julian Savulescu formulated the principle in his paper “Procreative Beneficence: Why we Should Select the Best Children”. Further development of the principle was done in another paper titled “The Moral Obligation to Create Children with the Best Chance of the Best Life” in collaboration with Guy Kahane (Savulescu & Kahane, 2009). The principle states that the parents have a moral obligation to select the best possible child, when selection is possible, by means of the genetic screening of the embryos. Preimplantation Genetic Diagnosis (PGD) is a reproductive technology that makes it possible to discover the medical and non-medical genetic traits of embryos. By medical traits it means the possible risk of some genetic disorders or chromosomal abnormalities such as Down Syndrome and Cystic Fibrosis, whereas non-medical traits mean some non-disease traits such as intelligence, sex, or perfect pitch. PB justifies employing PGD not only for medical reasons, but also for non-medical reasons. It is less
controversial to employ PGD in order to determine chromosomal abnormalities or other genetic diseases. Moral controversy arises when PGD is employed in order to select the preferred sex or certain genetic traits such as the intelligence of a child. The pro-selection view is divided on the issue of whether parents have a moral obligation to select the child with the best life or the child with a life worth living. Julian Savulescu claims that his formulation of PB is distinct from some other versions of PB (e.g. ‘the prevention of harm’ view or ‘the obligation to ensure a minimally decent life for the child’ view) and that it makes a stronger claim that parents have a moral obligation to select their child with the best chance of the best life. In fact, his proposed version of PB claims for a “significant moral reason” for the parents to ensure the best possible life of the child. The central inquiry of the paper is to find out whether non-medical use of PGD can be justified by PB proposed by Julian Savulescu. To explore the issue, I put forward the question, can PB make such a strong claim that the parents have a moral obligation to select the best possible child by employing PGD? In other words, can non-medical use of PGD be justified, in terms of its claimed obligation, by PB? I argue against the pro-selection view of Julian Savulescu exploring the basic assumptions and moral justification of PB. PB presumes that the non-medical and medical use of PGD are mutually inclusive in the question of a moral obligation for the parents. However, I identify that this is not the case if we consider the possible consequences of PGD to the potential life of a child; the non-medical and medical use of PGD are mutually exclusive in terms of their implication on a child. PB also presumes a degree of parental obligation in the concept of ‘significant moral reason’ in the case of employing PGD which is morally problematic. Finally, I argue that the moral foundation of PB is based on the ‘common moral intuition’ which is not an authentic source of moral truth; hence, PB is not justified, with its morally problematic
assumptions, to claim a moral obligation for the prospective parents regarding the non-medical use of PGD.

**How Preimplantation Genetic Diagnosis Works**

In Vitro Fertilization (IVF) is one of the Assisted Reproductive Technologies (ARTs) that has given the hope to the couples who have been unsuccessful to procreate for number of reasons. Generally, there is prenatal testing (the test for the fetus) available for couples who are at high risk of transmitting genetic diseases to their offspring. If the fetus is diagnosed with any sort of genetic abnormality, then the options are either termination of the pregnancy or giving birth to a child with a genetic disease. PGD is comparatively a new technology that detects the genetic conditions of embryos before implanting it into the uterus. A single cell from the embryo is taken by biopsy to detect the genetic abnormalities. Therefore, PGD has brought up alternative options for the couples who have known genetically transmittable disease. In IVF process, the goal of employing PGD is to diagnose for the specific genetic conditions for the embryos, not the fetus, before the pregnancy. Couples can choose an unaffected embryo after mutation analysis in the case of PGD which liberate them from the anxiety of a possible pregnancy termination and start a pregnancy with the knowledge of the genetic condition of their offspring (Fiorentino et al., 2006, p 670).

Currently, the technology is used mostly to detect the genetic abnormalities. However, in near future, there is a possibility to detect some non-diseases genetic traits of the embryos as well by this technology such as the intelligence or height of the child. One of the popular non-disease uses of PGD at present in the western countries is ‘sex selection’. Couples may select the sex of their potential child from the available embryos. There are existing laws in different jurisdictions restricting the sex selection only to ‘family balancing’; for example, a couple may opt for a baby girl if they already have two or more baby boys in the family.
The Foundation and Formulation of the Principle of Procreative Beneficence

The advancement of reproductive technology has made us rethink the parental moral obligation. Savulescu’s attempt is to formulate a guidance principle for the prospective parents. He formulates the Principle of Procreative Beneficence and claims that the parents have a moral obligation to act in accordance with the principle. The principle says,

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. (Savulescu & Kahane, 2009, p. 274).

Savulescu’s principle conceives an underlying argument in it. Let us examine Savulescu’s argument in the principle:

Premise 1: Parents have an obligation to care about the potential for wellbeing of their future children

Premise 2: Some specific genetic traits make our life ‘most advantageous’

Premise 3: It is possible, by means of PGD, to select some specific genetic traits which can make the life of a child ‘most advantageous’

Conclusion: Parents have a moral obligation to select those genetic traits in order to ensure the most advantageous life of their child.

The first premise of the argument discusses parental obligation to secure the wellbeing of their future children. Savulescu appeals to our common sense morality in order to justify parental obligation. Usually parents do care about the wellbeing of their children. We save money in order
to provide the best care to our children; we select our partner with certain genetic attributes and desire our children to bear those attributes so that they can be benefited; we take time to prepare ourselves financially and materially so that we can provide the best environment to our children. According to Savulescu, common sense moral intuition says that it is morally wrong if parents do not concern themselves with their children’s future life.

The second premise entails that some certain genetic traits of human beings contribute to making the life advantageous. For example, intelligence is such a trait by virtue of which someone can be successful in life. Or, a specific gender may serve as an advantageous condition for a child. The third premise says that it is possible now to select the genetic traits of embryos by means of PGD. Previously people had to depend on nature to have the desired genetic traits.

The conclusion infers that the parents have an obligation to select the best possible child so that he or she can lead the most advantageous life. If we look at the argument carefully, we see that the obligation inferred in the first premise has been extended to another degree in the conclusion. In the first premise, it talks about parental obligation in general. Whereas, the conclusion extends the general obligation to a specific category i.e. obligation to select the best embryo. The meaning of general obligation implies that parents should be concerned about the future of their child. On the other hand, a specific category of obligation implies that if genetic selection creates a better future for their child, the parents should opt for it. What is the justification of this jump from the assumption of a general obligation to an obligation to a particular action? I shall discuss this problem later on.

Let us now analyze some of the significant properties of the principle. ‘Significant moral reason’, ‘relevant available information’, and ‘best life’ are the three important properties of the principle. Savulescu argues that with the relevant available information, the parents have a moral
obligation to select the best embryo for the sake of the best possible life of their child. By ‘relevant available information’ Savulescu means the genetic information of embryos. There are both disease and non-disease genetic information available in the process of PGD. The PGD clinics are permitted to offer tests for about 250 genetic conditions or the genetic conditions licensed by the respective jurisdictions. Prospective parents can opt for any number of those tests of genetic conditions and have the genetic information of the embryos. However, the principle rests on some basic assumptions which, I argue, are problematic in nature.

Some Morally Problematic Assumptions of the Principle of Procreative Beneficence

Firstly, Savulescu presumes a *degree* of obligation in the formulation of PB. By ‘significant moral reason’, Savulescu means that the prospective parents have an obligation towards their potential child. However, he does not mean that the parents have an *absolute* moral obligation to ensure the best life of the child. Rather, he uses the phrase ‘significant moral reason’ to express a flexible concept of obligation. There are criticisms of such a flexible account of obligation in Savulescu’s paper. Robert Sparrow writes,

> Savulescu confuses reasons with obligations and moves between the claims that parents have some reason to want the best for their children and the more radical claim that they are morally obligated to attempt to produce the best child possible. (Sparrow, 2007).

Can there be a flexible concept of obligation? Savulescu argues that there is an obligation for procreative parents to ensure the best life for their child, but the obligation can be ignored in some exceptional cases. For example, there is no obligation to select the preferred embryo if the mother is exposed to any health risk due to the selection. Savulescu uses the term ‘obligation’ in the title of his paper; however, he replaces the term with ‘significant moral reason’ in his formulation of PB. This replacement, in my opinion, implies a *degree* of moral obligation. This is
evident in his claim for a non-absolute moral obligation. But the question comes whether we can claim a degree of obligation. Can we have the concept of ‘less obligation’ or ‘more obligation’ in the realm of morality? Can we say that we have less obligation to select the best embryo if the selection procedure involves a possibility of harm to the mother, otherwise we have more obligation? Clearly not, either we do have an obligation to do certain actions or we do not. There is no middle ground between them.

Secondly, Savulescu presumes the mutual inclusiveness of the medical and non-medical use of PGD in formulating PB. The problem of this assumption becomes clearer if we envisage the implication of the medical and non-medical use of PGD in the construction of the best possible life. In Savulescu’s view, there are some genetic traits which can contribute to the formation of a healthy, successful, and happy life. If a couple avoids some genetic conditions such as Cystic Fibrosis or Down Syndrome, then it would help the child to have a better life in future without those diseases. Similarly, if a couple chooses some genetic conditions such as intelligence or height, then the child have a better chance to lead a better life than leading a life without those traits. Both cases contribute to the possibility of leading a good life according to Savulescu. But, do they have a similar implication? Are they mutually inclusive in terms of determining the parental obligation? Let us consider the current available diagnosis for the genetic conditions to determine genetic abnormalities and their implication to the construction of a good life. There is scientific evidence that some genetic traits cause some specific diseases. Currently it is approved in the UK to test for 250 genetic conditions (Human Fertilisation and Embryology Authority, n.d.). If parents want to avoid any specific genetic condition, then they can test it during PGD. However, there are scientific evidences to prove the correlation between the type of gene and possible diseases. This is empirically tested that the choices made by the parents in case of the selection of
genes to avoid some certain diseases has a necessary relation to the chances of leading a better life. For example, there are identifiable genetic markers which cause immediate diseases like Down syndrome and Tay-Sachs. PGD can also identify certain genetic markers which might develop certain diseases like Alzheimer, Huntington disease, Hemophilia A and B, and Breast cancer in later life. That means, the avoidance of certain genetic traits contributes directly to the construction of a better life comparing a life with the diseases stated above.

Now, is it the same for the selection of non-disease genetic markers? More specifically, does the selection of certain sex, e.g. male, contribute to the construction of the best possible life of a child? In the disease case we have empirical and scientific evidence to the possibility of leading a better life for a child; whereas, there is no empirical evidence but a hypothetical assumption by a moral intuition to find the correlation between non-diseases genetic selection and the possibility of leading a good life. Therefore, the selection of non-disease genes is not equivalent to the avoidance of certain disease traits in the case of employing PGD. Savulescu argues for the same moral obligation for both selecting non-disease traits and avoiding disease traits in order to have the best possible life of the child. Selection of non-disease traits and avoidance of disease traits are mutually inclusive in Savulescu’s view which is morally problematic.

Now, how does this mutual exclusiveness of the choice of disease traits and non-disease traits make a difference to the parental obligation? I discuss the question whether parental choices of genetic selection have a necessary relation to the chances of the wellbeing of their children. It seems, when we read Savulescu, that selecting genetic traits of the embryos is directly connected to the wellbeing of the potential child. But, a critical examination reveals that the relation is not necessary, but is rather contingent. Genetic selection has very little to do to the formation of future life. We shape our life by everyday activities and thoughts. Our life is not the legacy of our genetic
blueprint. Even complex symbolic information cannot be contained in the genes which are passed on from parents to offspring. Developmental psychology provides us proof of how we attain skills, a sense of identity, and the ability to form an empathetic relationship with others through environmental influences. The new research in the area of cognitive science and developmental psychology shows that genes are not the blueprint of complex mental imagery and processes, but rather they function as the initial catalysts of developmental process (Knox, 2004). Therefore, someone’s success in life has nothing to do with his or her genetic inheritance. Even if we select ‘smart genes’ during PGD, that does not guarantee a successful life of the child. With an overarching view of genetic inheritance, PB ignores the human capacity of innovation.

Clearly, disease and non-disease selection of genes have different merits and different ethical considerations. Savulescu claims the same ethical considerations for both cases. Intelligence, certain sex, skin color, or height might work as a part of the constituents of the best life, but that does not mean that the best possible life is not possible without them. An intelligent person might end up miserable in his or her life. Recent studies in neuroscience and psychology have found a correlation between intelligence and anxiety. “Gifted children are prone to disharmonious development, which may result in the development of personality disorder, obsessional behavior, and anxiety disorder” (Coplan et al., 2011). Sometimes, the higher IQ might cause greater psychological fragility of a person.

In my opinion, it is morally obligatory to avoid passing on some specific genes if it may cause possible diseases; whereas it is not morally obligatory but morally permissible to select the non-disease traits of embryos so that the child has a possibility of leading a good life because of those genetic traits. Therefore, the selection of non-disease traits and avoidance of disease traits in PGD are mutually exclusive in terms of determining the obligation for the parents.
The Moral Foundation of the Principle of Procreative Beneficence

It is customary for the ethicists to formulate a moral principle and judge human actions on the basis of that principle. Usually the principles are justified by moral reasoning with a solid and reliable moral foundation. Savulescu’s attempt is no exception. He formulates PB in order to judge the morality of certain procreative decision of the prospective parents. But, what is the moral justification of Savulescu’s principle? He tries to avoid the complex philosophical justification of his principle, but rather he justifies his principle by the common moral intuition. He argues that people have general intuition about the concept of a good life. We also ought to do the best possible things for our children to ensure the best life. For example, we save money before bringing our child into this world. Or, for example, a sensible couple would wait some time if there is any health risk to procreate in a certain period. I completely agree with this common moral intuition. But can PB be justified by the common moral intuition? Hypothetically, we can easily think of counterexample of Savulescu’s argument. For example, everybody wants the best life of their child but people would disagree about the means to achieve the ‘best life’. One would not take bribe in order to ensure the best life of his/her child. The question comes, can we rely on such a principle which is based on just common moral intuition or should we look for a stronger principle in order to claim an obligation? Immanuel Kant in his *Groundwork of the Metaphysics of Morals* states some conditions of moral law should it claim an obligation. He says,

“Everyone must admit that a law, if it is to be valid morally, i.e., as the ground of an obligation, has to carry absolute necessity with it; that the command ‘You ought not to lie’ is valid not merely for human beings, as though other rational beings did not have to heed it; and likewise all the other genuinely moral laws; hence that the ground of obligation here is to be sought not in the nature of the human being or the circumstances of the world in which he is placed, but *a priori* solely in concepts of pure reason, and that every other precept grounded on principles of mere experience, and even a precept that is universal in a
certain aspect, insofar as it is supported in the smallest part on empirical grounds, perhaps only as to its motive, can be called a practical rule, but never a moral law.” (Kant, 2002, p 24).

I do not claim that all moral principle should have such an ambitious plan, rather I claim that a principle must have a proper justification in order to claim an obligation. The counterexample proves that common moral intuition itself is not an authentic source of moral truth. Common moral intuition needs to have a higher rational justification. Moreover, in traditional logic an appeal to intuition is considered as an informal logical fallacy.

Common moral intuition in the case of disability: Julian Savulescu applies PB in the case of disability to show that PB can contribute in the debate of whether a parent can bring a deaf child in this world intentionally for the sake of the wellbeing of the child. However, common moral intuition can also be misleading in the case of disability. Usually, non-disable people think that the quality of life of the people living with disability is extremely low. But, disable people themselves rate their quality of life higher than the assessment of the outside observers (Albrecht, 1999). This proves that a common moral intuition does not hold for the foundation of a moral principle.

Some Possible Objections

It might be said that Savulescu’s principle claims a prima-facie obligation for prospective parents rather than a final obligation. A prima-facie obligation in this case means that the parents have an obligation to their child with some conditions. For example, PB does not claim an obligation for parents if employing PGD might cause any health risk to the mother. However, in my opinion, even if PB claims a prima-facie obligation for parents, we need to be cautious to frame it. Since, if someone does not fulfil an obligation, he or she is subject to a moral blameworthiness. Can we blame a couple if they do not select a non-diseases genetic trait of their child respecting
the child’s right to an open future? A further analysis will be needed in order to determine the conditions of the prima-facie obligation. For example, in the case of PGD, we need to determine the circumstances where parents have no moral obligation to select the non-disease genetic traits of their child. It seems that Savulescu is reluctant to generate a discussion of the general conditions of the prima-facie obligation for prospective parents. Rather, he emphasizes more on the parental obligation than the discussion of the circumstances where an obligation can be suspended. Therefore, claiming a prima-facie obligation will go in vein without a discussion of its conditions.

An objection can be raised that still we generally know that some genetic traits are good for people. Usually, intelligent people are successful in their life. But, there is no evidence that tells us that intelligent people always lead a good life. Perhaps, we mistakenly place all the credit to intelligence or some other genetic traits when we evaluate a successful life. Moreover, success has very little to do with a good life. Some people’s genius and intelligence have contributed to the society in a great manner, but their lives were not good at all. A BBC documentary titled “Dangerous Knowledge” has explored how four brilliant mathematicians – George Cantor, Ludwig Boltzmann, Kurt Gödel, and Alan Turing – became insane for their genius and committed suicide after their breakthrough discovery (Malone, 2007). These counterexamples prove that it is at least questionable to take it for granted that some genetic traits are necessarily relevant to the concept of a good life.

Another objection might be raised in that if we are morally justified in employing PGD to identify the possible genetic diseases, then we are also justified to select specific genetic traits of the embryos. Proponents of this view often ignore the distinction between medical and non-medical use of PGD in terms of parental obligation which I discussed earlier.
Conclusion

Parental obligation to select non-disease traits of embryo is not justified if we critically investigate the constituents of a good life. The concept of ‘good life’ or ‘most advantageous life’ is too broad to be affected by a single event like selecting a non-disease genetic trait. We encounter billions of events in our whole life and a specific genetic trait has very little to do to influence the eventful life of a person. Someone might lead a good life because of his or her ability to manage emotion perfectly, someone might lead a good life without any contemplation and philosophical insight about the world around us. Think of the people who have the motto of ‘eat, drink, and be merry’; aren’t they leading a good life? Selecting a single genetic trait cannot change the whole course of life to make it good or bad. Rather, our everyday choices shape our life and create our future as well. Some people lead a good life simply by virtue of their luck, not intelligence.

In my opinion, selecting the embryos with certain genetic traits is not obligatory for the parents if we critically analyze the concept of moral obligation. There are at least two conditions of obligation, as we generally understand it. First of all, in order to hold a moral obligation, we must presume that there is freedom of choice, though there are huge debates as to whether freewill is a must to assume moral responsibility. We do not enter into the debate here, rather it is presumed, for the sake of the argument, that freedom of will is necessary for moral responsibility. In other words, we are responsible for such actions in which we have control over, or we have the ability to do otherwise. Secondly, our choices or actions must have a necessary relation to the chances. We do not hold any responsibility if our choices do not have a necessary relation to the chances. For example, Peter Singer argues in the context of the moral obligation of rich countries to help the poor countries. According to his view, the rich people cannot be blamed as murderer if they do not choose to help them. Because they are not actively involved to the death of those poor people
(Singer, 2011). Surely, we do not hold responsibility for dying children in poor countries because of hunger or malnutrition. If I prefer buying a car to giving charity to Oxfam, I cannot be accused of murdering children in poor countries. Why don’t I bear any obligation for death of the children in poor countries? Because, my choice of buying a car does not have a necessary relation to the chance of children’s death in poor countries. Similarly, choosing a non-disease genetic trait does not have a necessary relation to the chance of children’s future good life.

What kind of obligation do the parents have to their children, negative obligation or positive obligation, or both? Julian Savulescu, in his formulation of PB, presumes both negative and positive obligation of parents towards the children. The question can be formulated in terms of absolute duty and limited duty. Do parents have an absolute duty towards their children, or a limited duty? An absolute duty will concur them to ensure the best suitable condition for the children, no matter what happens to the parents. A limited duty will keep some space for the parents to think of the means by which children’s best life will be ensured. If we have the ability to prevent harm and if it does not cost much to us and if we do not prevent it, then it is immoral. This means, we only have a negative obligation towards others. Savulescu refuses the Prevention of Harm View on the ground of common moral intuition, although, he does not offer any additional justification for the positive obligation of parents toward their child. A possible objection in this regard is from a feminist perspective of ethics. For example, the ethics of care advocates a special kind of obligation towards the people we are related to. The parents have a special obligation to their children, and the children have a special obligation towards their parents. But, one thing should be noted that the ethics of care does not imply an unlimited obligation for parents. PB is too demanding for the prospective parents. It demands the parents to act out of altruism. Parental responsibility becomes a burden in the case of genetic selection of non-disease traits. Suppose, if
something goes wrong in the genetic selection process, the parents will be responsible for all of the sufferings of their child because of their choice. Thus, PB ascribes a huge burden towards parents. PB does not clarify why parents should take such a responsibility. Ethics of care would not recommend parents to act altruistically as well.

Different ethical considerations are required for disease and non-disease genetic selection of PGD. Parents have moral obligation to protect their child from possible disease, and they should reject the embryos on the basis of available genetic information in the process of PGD. However, parents are not morally obligated to select the non-disease genetic traits. Non-disease traits are contingently related to the wellbeing of the child. The principle of Procreative Beneficence does not capture this contingent relation of selection and consequence. Hence, its claimed moral obligation for parents is flawed. Consequently, non-medical use of Preimplantation Genetic Diagnosis cannot be justified by the Principle of Procreative Beneficence.

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