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A Kantian Ethical Analysis of Preimplantation Genetic Diagnosis

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Abstract

In an era where new genetic and reproductive technologies are increasing, ethical concerns continue to grow as well. Preimplantation genetic diagnosis (PGD) is a technique used in addition to in vitro fertilization (IVF) to screen embryos for genetic abnormalities and either discard them or place them in the uterus. The emergence of new uses for PGD has made PGD a frequent target of ethical commentary and speculation about a future of greatly increased genetic selection and manipulation of offspring (Robertson, 2003). Although PGD is not currently widespread, its potential for abuse signifies a need for serious ethical analysis. Immanuel Kant was an 18th Century philosopher, whose theories still influence modern ethics. In this paper, I will examine the ethical issues relating to PGD, describe its benefits, analyze it through a Kantian ethical framework, and discuss my own position. Although my worldview differs from that of Kant, we both hold the same position in regards to PGD and view it as morally wrong. PGD is a procedure based on IVF, where embryos are screened for a variety of genetic diseases, including sex-linked disorders, single gene defects, and chromosomal defects. Defective embryos are discarded, while genetically normal embryos are selected for re-implantation into the uterus. This decreases the likelihood of having a miscarriage or of giving birth to a child with a birth defect. Some parents can also use PGD to select their child's gender.

Keywords

Kant, ethics, genetics

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A Kantian Ethical Analysis of Preimplantation Genetic Diagnosis

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Introduction

In an era where new genetic and reproductive technologies are increasing, ethical concerns continue to grow as well. Preimplantation genetic diagnosis (PGD) is a technique used in addition to *in vitro* fertilization (IVF) to screen embryos for genetic abnormalities and either discard them or place them in the uterus. The emergence of new uses for PGD has made PGD a frequent target of ethical commentary and speculation about a future of greatly increased genetic selection and manipulation of offspring (Robertson, 2003). Although PGD is not currently widespread, its potential for abuse signifies a need for serious ethical analysis.

Immanuel Kant was an 18th Century philosopher, whose theories still influence modern ethics. In this paper, I will examine the ethical issues relating to PGD, describe its benefits, analyze it through a Kantian ethical framework, and discuss my own position. Although my worldview differs from that of Kant, we both hold the same position in regards to PGD and view it as morally wrong.

PGD is a procedure based on IVF, where embryos are screened for a variety of genetic diseases, including sex-linked disorders, single gene defects, and chromosomal defects. Defective embryos are discarded, while genetically normal embryos are selected for re-implantation into the uterus. This decreases the likelihood of having a miscarriage or of giving birth to a child with a birth defect. Some parents can also use PGD to select their child's gender.

Kantian Ethics

Before analyzing the ethics of all this, a discussion of Kantian ethics is in order. This is a strictly deontological (principle-based) theory. Deontological ethics judges the morality of an action based on its ability to follow a rule. Kant believed for an individual to act ethically, he should be motivated by a desire to do his duty and do what is right. Ethical decisions should be made by considering the nature of the act itself, not the consequences. The authority for Kant's ethics was reason alone, which is good when properly used. If we act with the intention of fulfilling our duties, we have met our ethical obligation (Wilkens, 2011).

Kant believed in moral duty, as seen in the central method of his theory, the categorical imperative. A categorical imperative is a general axiom that is not itself a moral rule but a means of arriving at specific moral rules that apply to everyone (Wilkens, 2011). Kant's first categorical imperative states, "never act except in such a way that I can also will that my maxim should become a universal law" (Kant, 1785/1993, p. 14). Every action a human takes is based on a maxim or rule of action. Kant believed humans should not act in a way that cannot be

universalized for everyone.

Kant's second categorical imperative states, "act in such a way that you treat humanity, whether in your own person or in the person of another, always at the same time as an *end* and never simply as a *means*" (Kant, 1785/1993, p. 36). Humans are not equal to the sum of their parts; rather, they have value and dignity simply because they are humans. This categorical imperative demonstrated Kant's belief that people have inherent value. To put it in other words, he said, "Now I say that human beings, and in general every rational being, exist as ends in themselves, not as mere means for arbitrary use by another will" (Kant, 1793, p. 209).

Kant's views agree with the ontological personalism perspective on personhood, which states that by a human being is a person by his very nature. Kant's views on reason and human knowledge demonstrate how he viewed each human with value. All persons have value based on their humanity, not on the functions they are capable of. In contrast, empirical functionalism reduces humans to a sum of their parts and their utility to the world (Sullivan, 2003). Kant, on the other hand, understood that humanity could not submit to the objectification or the commodification of human persons.

Kant's *Grounding for the Metaphysics of Morals* will be helpful to keep in mind in order to consider the ethics of PGD:

Nothing in the world can possibly be conceived that could be called 'good' without qualification except a good will. Mental talents such as intelligence, wit, and judgment ... are doubtless in many ways good and desirable; but they can become extremely bad and harmful if the person's character isn't good — i.e. if the will that is to make use of these gifts of nature isn't good (Kant, 1785/1993, p. 2).

If one's will, reason, and character are not good, their end goal will not be good. The end goal of PGD is to eliminate genetic diseases, which is good. However, careful observation of the means to get to that end shows flaws in reason and character. I will first consider the potential benefits of PGD.

Benefits of PGD

PGD offers many benefits to those involved. The biggest benefit is that it significantly lowers the risk of giving birth to a child with a genetic abnormality. Bringing a child into the world with a genetic disease could potentially strain the family and the society that the child lives in. If the parents are carriers of genetic disorders, PGD can give them assurance that their children will not be affected by the disease, since only the genetically normal embryos will be placed in the uterus. Furthermore, PGD lowers the miscarriage rate and increases the probability of a successful and uncomplicated pregnancy. Parents can also use PGD to select the gender of their embryo to avoid sex-linked disorders.

PGD can benefit families with a sick child who requires a stem cell transplant. The parents can utilize PGD to identify an embryo who can genetically match the sick child's tissues. After the

child is born, stem cells from the umbilical cord can be collected and transplanted into the sick child.

Kantian Analysis

What would Kant's response be to each of these potential benefits? The main purpose of PGD is to test embryos for genetic "flaws." If PGD detects a genetic disease in an embryo, the embryo is discarded. In short, these genetically flawed embryos are destined for destruction. How can society value its members when it is trying to eliminate some of them? PGD denies the human value and dignity of each embryonic person.

One possibility for PGD is its use for genetic enhancement of offspring. Should parents have the right to choose specific traits for their child? In the future, PGD may increasingly become a tool to screen for non-medical traits, such as height, baldness, intelligence, or memory. Assuming Kant believed that embryos were human beings, genetic enhancement violates his categorical imperative to never treat a human as a means to an end.

Moreover, Kant believed that the morally right way to act begins with the argument that, "nothing in the world...can possibly be conceived which could be called good without qualification except a *good will*" (Kant, 1785/1993, p. 7). Things that are usually good, such as intelligence, fail to be good without qualification. If parents use PGD to genetically enhance their child to be more intelligent, they fail to do good because their method of reaching this end is unethical. The only thing that is truly good in itself is a good will, and this is only good when the individual chooses to act out of duty. It is not ethical to use PGD to choose physical characteristics of offspring, even with good intentions.

Even if preventing genetic disorders through PGD does not treat humanity as means to an end, it may lead to discrimination and possibly a form of modern eugenics. What defines a disability and at what point can we choose to select against a trait? For example, fertility specialists can use PGD to diagnose Down syndrome. If PGD caused fewer and fewer Down syndrome children to be born, the children who *are* born with Down's syndrome would become socially ostracized, and it would be difficult to mainstream them. Eventually, PGD could create a world of "designer children" where genetic engineering of offspring becomes routine (Robertson, 2003). From a Kantian perspective, if PGD were universalized and all embryos had PGD, many genetic diseases and disabilities would become obsolete.

If PGD were to be applied on a large scale, eventually over multiple generations the number of people with "desirable traits" would increase and the number of genetically disabled people would decrease. Wesley Smith has stated, "As history repeatedly has demonstrated, once we accept the pernicious premise that some people are 'superior' to others – the core principle of eugenic thinking – we open the door to great evils" (Smith, 2003, p. 41). Based on the principle of distributive justice and the categorical imperatives, Kant would disagree with PGD because it is not accessible to everyone. It would discriminate against the disabled and create a superior and inferior class of humanity.

Not only would PGD discriminate against the disabled, but it would also discriminate against

the poor. According to The American Society of Reproductive Medicine, the average price of an IVF cycle and PGD in the U.S. is \$12,400 and \$3,550, respectively (The Costs of Infertility Treatment, 2006). It is extremely unlikely for insurance to cover PGD; therefore, only the rich can pay for it. PGD therefore goes against Kant's categorical imperative because it cannot be universalized. Furthermore, on the basis of distributive justice, this marginalizes and discriminates against the less fortunate, the less educated, and those with lower incomes.

Another concern with PGD is its use in gender selection or "family balancing." The ability to choose the gender of one's child opens up a plethora of ethical issues. If a family wants a boy but ends up with a girl, they may be unhappy with their "product." Accepting a child as she is, regardless of her gender, is part of what makes the bond between parents and their children strong. If parents can choose the gender of a child before birth, then parents may begin to reject her other "flaws" before her life even begins.

In some cases, parents have used PGD to match an embryo's tissue to an existing child afflicted with a genetic disease. Such a "rescue" embryo can then be a source of bone marrow and other stem cells for transplant into the affected sibling in the hope of a medical cure. Embryos should not be created and implanted for the sole purpose of benefiting another human. Embryos are not products that can be accepted or rejected depending on whether or not they meet certain requirements. Using PGD to create babies for their "spare parts" is unethical. Again, it violates the Kantian categorical imperative.

According to Kantian ethics, when an action cannot be universalized, that action is absolutely prohibited. PGD cannot be used in every situation; therefore, Kant would not agree with PGD. Kant would not deliberately seek out to destroy humans with disabling conditions. PGD denies the inherent value of embryos with genetic mutations or disabilities. Furthermore, Kant would regard IVF as ethically impermissible because it uses embryos as a means to an end. If everyone had IVF, there would be millions of leftover embryos that would be discarded.

My Personal View

I disagree with PGD because it cheapens human life and makes children a product to suit one's desired characteristics. While trying to help improve mankind, it could eventually lead to a return of negative eugenics because we may eventually be destroying life in order to improve it. IVF and PGD could become the best form of childbirth, because it ensures no 'defective' embryos will be selected and implanted.

Several embryos are often discarded in the PGD procedure. Ethicist Ben Mitchell has said, "There is very little we can actually do once an embryo or fetus has been diagnosed with a genetic condition. The main function of the test is really used to inform the patient to abort or discard an embryo before it is implanted" (Veenker, 2001).

PGD is a form of discrimination which denies the personhood of an embryo with fatal consequences. If one does not believe an embryo has moral status, PGD would not be as ethically concerning. Since I believe that human value begins at conception, discarding an embryo – even if it is genetically flawed – is the same as discarding a human life.

Genesis 1:26 demonstrates how man is made in God's image and has value and worth. Genetic enhancement through PGD would recreate original sin, tempting man to "be like God, knowing good and evil" as seen in Genesis 3:5. This is a sin of radical moral autonomy. The Bible is clear that such activity is outside the moral bounds of man (Sullivan & Salladay, 2007).

Using PGD for genetic enhancement would cause Americans to become more utilitarian and to commodify people, especially the unborn. Although it could be seen as avoiding genetic diseases, we were not meant to "play God." We do not have the wisdom of God to manipulate one's nature for improvement. It is not right to humanly interfere with natural selection for the goal of creating a "perfect baby" or "perfect society." As "consumers" of the "product" of PGD, we need to balance the intended benefits of PGD with the potential harms.

Conclusion

The questions PGD raises are complex and significant. Although PGD offers the possibility of reducing the number of genetic diseases and bettering society, it violates Kant's categorical imperative on multiple levels. Kant would argue that PGD is not ethically justifiable. I also agree it is morally wrong. While PGD is not currently widespread, it has the potential to escalate into a modern form of eugenics. As seen in the past, once a society embraces eugenics with the goal of bettering the human race, it becomes easy to actually harm humanity.

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