



Should Parents Be Allowed to Select the Sex of Their Baby?

YES: John A. Robertson, from "Extending Preimplantation Genetic Diagnosis: Medical and Non-medical Uses," *Journal of Medical Ethics* (vol. 29, 2003)

NO: Marcy Darnovsky, from "Revisiting Sex Selection: The Growing Popularity of New Sex Selection Methods Revives an Old Debate," <http://www.gene-watch.org/genewatch/articles/17-1darnovsky.html> (January–February 2004)

ISSUE SUMMARY

YES: Law professor John A. Robertson argues that preimplantation genetic diagnosis (PGD), a new technique that allows parents-to-be to determine the gender of their embryo before implantation in the uterus, should be permissible. Robertson argues that it is not sexist to want a baby of a particular gender and that the practice should not be restricted.

NO: Marcy Darnovsky, associate director of the Center for Genetics and Society, argues that by allowing PGD for sex selection, governments are starting down a slippery slope that could create an era of consumer eugenics.

The practice of selecting the sex of a child is nothing new. Historically, couples who wanted a child of a specific gender might abandon an unwanted child of the other gender in the wilderness, leave the baby on the doorstep of a church or orphanage, or kill the unwanted baby. Although these practices still continue in some societies today, sex selection has also changed in significant ways. The development of ultrasound technology, for example, allows expecting parents to determine the gender of the baby before it is born, and some couples might consider abortion if the child is not the desired sex. Parents might feel additional pressure to make this decision in countries like China, which has a "one child" policy, whereby additional children receive no governmental support—a critical consideration in a communist nation that also places higher value on male infants than females.

For many Americans, the idea of sex selection by abandonment, abortion, or infanticide would be considered unethical, if not appalling. But in other areas of the world, the practice is carried out routinely to help parents meet strong cultural preferences to produce a male child. Such actions are based in the entrenched sexism of these male-dominated societies.

A seemingly more ethical technique that sorted sperm before conception has offered about a 50–85 percent effectiveness rate at predetermining sex for the past 30 years. More recently a new development in medical technology known as preimplantation genetic diagnosis (PGD), previously used to screen embryos for markers that may signal diseases like cystic fibrosis, now allows people using in vitro fertilization to select the sex of an embryo, with 99.9 percent accuracy, before it is implanted in the uterus. To many satisfied customers, this has provided the opportunity to "balance" a family, by adding a child of the other sex or evening out the number of male and female children. In some cases, first-time parents simply desire a child of one sex or the other.

While the use of PGD for medical reasons, such as screening for Down syndrome, in an embryo are generally seen as acceptable, there is less consensus concerning its use for nonmedical reasons, including sex selection. Is wanting to choose the sex of your child sexist? Does it reflect or perpetuate a gender bias in society? If selecting the sex of your unborn child is possible and legal, what about predetermination of other characteristics, such as eye color? Height? Musical ability? Sexual orientation?

In the following selections, John A. Robertson, professor at the University of Texas School of Law, argues that using PGD for sex selection in certain instances is not inherently sexist, and that it—and perhaps other nonmedical types of PGD should not be regulated based on the fear of what could possibly happen at some future time. Marcy Darnovsky, associate director of the Center for Genetics and Society, argues that by allowing PGD for sex selection, governments are starting down a slippery slope that could create an era of consumer eugenics.



Extending Preimplantation Genetic Diagnosis: Medical and Non-Medical Uses

PGD and Its Prevalence

PGD has been available since 1990 for testing of aneuploidy in low prognosis *in vitro* fertilisation (IVF) patients, and for single gene and X linked diseases in at risk couples. One cell (blastomere) is removed from a cleaving embryo and tested for the genetic or chromosomal condition of concern. Some programmes analyse polar bodies extruded from oocytes during meiosis, rather than blastomeres.¹ Cells are then either karyotyped to identify chromosomal abnormalities, or analysed for single gene mutations and linked markers.

Physicians have performed more than 3000 clinical cycles of PGD since 1990, with more than 700 children born as a result. The overall pregnancy rate of 24% is comparable to assisted reproductive practices which do not involve embryo or polar body biopsy.¹ Four centres (Chicago, Livingston (New Jersey), Bologna, and Brussels) accounted for nearly all the reported cases. More than 40 centres worldwide offer the procedure, however, including other centres in the United States and Europe, four centres in London and centres in the eastern Mediterranean, Southeast Asia, and Australia.

More than two-thirds of PGD has occurred to screen out embryos with chromosomal abnormalities in older IVF patients and in patients with a history of miscarriage. About 1000 cycles have involved single gene mutational analysis.¹ Mutational analysis requires additional skills beyond karyotyping for aneuploidies, including the ability to conduct the multiplex polymerase chain reaction (PCR) of the gene of interest and related markers.

Several new indications for PGD single gene mutational analysis have recently been reported. New uses include PGD to detect mutations for susceptibility to cancer and for late onset disorders such as Alzheimer's disease.^{2,3} In addition, parents with children needing hematopoietic stem cell transplants have used PGD to ensure that their next child is free of disease and a good tissue match for an existing child.⁴ Some persons are also requesting PGD for gender selection for both first and later born children, and others have speculated that selection of embryos for a variety of non-medical traits is likely in the future.

PGD is ethically controversial because it involves the screening and likely destruction of embryos, and the selection of offspring on the basis of expected

traits. While persons holding right to life views will probably object to PGD for any reason, those who view the early embryo as too rudimentary in development to have rights or interests see no principled objection to all PGD. They may disagree, however, over whether particular reasons for PGD show sufficient respect for embryos and potential offspring to justify intentional creation and selection of embryos. Donation of unwanted embryos to infertile couples reduces this problem somewhat, but there are too few such couples to accept all unwanted embryos, and in any event, the issue of selecting offspring traits remains.

Although ethical commentary frequently mentions PGD as a harbinger of a reproductive future of widespread genetic selection and alteration of prospective offspring, its actual impact is likely to be quite limited.^{5,6} Even with increasing use the penetrance of PGD into reproductive practice is likely to remain a very small percentage of the 150,000 plus cycles of IVF performed annually throughout the world. Screening for susceptibility and late onset diseases is limited by the few diseases for which single gene predispositions are known. Relatively few parents will face the need to conceive another child to provide an existing child with matched stem cells. Nor are non-medical uses of PGD, other than for gender, likely to be practically feasible for at least a decade or more. Despite the limited reach of PGD, the ethical, legal, and policy issues that new uses raise, deserve attention.

New Medical Uses

New uses of PGD may be grouped into medical and non-medical categories. New medical uses include not only screening for rare Mendelian diseases, but also for susceptibility conditions, late onset diseases, and HLA matching for existing children.

Embryo screening for susceptibility and late onset conditions are logical extensions of screening for serious Mendelian diseases. For example, using PGD to screen out embryos carrying the p53 or BRCA1&2 mutations prevent the birth of children who would face a greatly increased lifetime risk of cancer, and hence require close monitoring, prophylactic surgery, or other preventive measures. PGD for highly penetrant adult disorders such as Alzheimer's or Huntington's disease prevents the birth of a child who will be healthy for many years, but who in her late 30s or early 40s will experience the onset of progressive neurological disease leading to an early death.

Although these indications do not involve diseases that manifest themselves in infancy or childhood, the conditions in question lead to substantial health problems for offspring in their thirties or forties.⁷ Avoiding the birth of children with those conditions thus reflects the desire of parents to have offspring with good prospects for an average life span. If PGD is accepted to exclude offspring with early onset genetic diseases, it should be accepted for later onset conditions as well.

PGD for adult onset disorders does mean that a healthy child might then be born to a person with those conditions who is likely to die or become incompetent while the child is dependent on her.⁸ But that risk has been tolerated in other cases of assisted reproduction, such as intruterine insemination

with sperm of a man who is HIV positive, IVF for women with cystic fibrosis, and use of gametes stored prior to cancer therapy. As long as competent caregivers will be available for the child, the likely death or disability of a parent does not justify condemning or stopping this use, anymore than that reproduction by men going off to war should be discouraged.

A third new medical indication—HLA matching to an existing child—enables a couple to have their next child serve as a matched hematopoietic stem cell donor for an existing sick child. It may also ensure that the new child does not also suffer from that same disease. The availability of PGD, however, should not hinge on that fact, as the Human Fertilisation and Embryology Authority, in the UK, now requires.⁹ A couple that would coitally conceive a child to be a tissue donor should be free to use PGD to make sure that that child will be a suitable match, regardless of whether that child is also at risk for genetic disease. Parents who choose PGD for this purpose are likely to value the new child for its own sake, and not only for the stem cells that it will make available. They do not use the new child as a “mere means” simply because they have selected HLA matched embryos for transfer.^{10,11}

Non-Medical Uses of PGD

More ethically troubling has been the prospect of using PGD to screen embryos for genes that do not relate to the health of resulting children or others in the family. Many popular accounts of PGD assume that it will eventually be used to select for such non-medical traits as intelligence, height, sexual orientation, beauty, hair and eye colour, memory, and other factors.^{5,6} Because the genetic basis of those traits is unknown, and in any case is likely to involve many different genes, they may not be subject to easy mutational analysis, as Mendelian disease or susceptibility conditions are. Aside from gender, which is identifiable through karyotyping, it is unrealistic to think that non-medical screening for other traits, with the possible exception of perfect pitch, will occur anytime soon.

Still, it is useful to consider the methodology that ethical assessment of non-medical uses of PGD, if available, should follow. The relevant questions would be whether the proposed use serves valid reproductive or rearing interests; whether those interests are sufficient to justify creating and destroying embryos; whether selecting for a trait will harm resulting children; whether it will stigmatise existing persons, and whether it will create other social harms. To analyse how these factors interact, I discuss PGD for sex selection and for children with perfect pitch. Similar issues would arise with PGD for sexual orientation, for hair and eye color, and for intelligence, size, and memory.

PGD for Gender Selection

The use of medical technology to select the sex of offspring is highly controversial because of the bias against females which it usually reflects or expresses, and the resulting social disruptions which it might cause. PGD for gender selection faces the additional problem of appearing to be a relatively weak reason for creating and selecting embryos for discard or transfer.

The greatest social effects of gender selection arise when the gender of the first child is chosen. Selection for first children will overwhelmingly favour males, particularly if one child per family population policies apply. If carried out on a large scale, it could lead to great disparities in the sex ratio of the population, as has occurred in China and India through the use of ultrasound screening and abortion.^{12,13} PGD, however, is too expensive and inaccessible to be used on a wide scale for sex selection purposes. Allowing it to be used for the first child is only marginally likely to contribute to societal sex ratio imbalances. But its use is likely to reflect cultural notions of male privilege and may reinforce entrenched sexism toward women.

The use of PGD to choose a gender opposite to that of an existing child or children is much less susceptible to a charge of sexism. Here a couple seeks variety or “balance” in the gender of offspring because of the different rearing experiences that come with rearing children of different genders. Psychologists now recognise many biologically based differences between male and female children, including different patterns of aggression, learning, and spatial recognition, as well as hormonal differences.^{14,15} It may not be sexist in itself to wish to have a child or children of each gender, particularly if one has two or more children of the same gender.

Some feminists, however, would argue that any attention to the gender of offspring is inherently sexist, particularly when social attitudes and expectations play such an important role in constructing sex role expectations and behaviours.¹⁶ Other feminists find the choice of a child with a gender different from existing children to be morally defensible as long as “the intention and consequences of the practice are not sexist”, which is plausibly the case when gender variety in children is sought.¹⁷ Desiring the different rearing experiences with boys and girls does not mean that the parents, who have already had children of one gender, are sexist or likely to value unfairly one or the other gender.¹⁸

Based on this analysis the case is weak for allowing PGD for the first child, but may be acceptable for gender variety in a family. With regard to the first child, facilitating preferences for male firstborns carries a high risk of promoting sexist social mores. It may also strike many persons as too trivial a concern to meet shared notions of the special respect due preimplantation embryos. A proponent of gender selection, however, might argue that cultural preferences for firstborn males should be tolerated, unless a clearer case of harm has been shown. If PGD is not permitted, pregnancy and abortion might occur instead.

The case for PGD for gender variety is stronger because the risk of sexism is lessened. A couple would be selecting the gender of a second or subsequent children for variety in rearing experiences, and not out of a belief that one gender is privileged over another. Gender selection in that case would occur without running the risks of fostering sexism and hurting women.¹⁸

The question still arises whether the desire for gender variety in children, even if not sexist, is a strong enough reason to justify creating and discarding embryos. The answer depends on how strong an interest that is. No one has yet marshalled the evidence showing that the need or desire for gender variety in

children is substantial and important, or whether many parents would refrain from having another child if PGD for gender variety were not possible. More evidence of the strength and prevalence of this need would help in reaching a conclusion. If that case is made, then PGD for gender variety might be acceptable as well.¹⁹

The ethics committee of the American Society of Reproductive Medicine (ASRM) has struggled with these issues in a series of recent opinions. It initially addressed the issue of PGD for gender selection generally, and found that it "should be discouraged" for couples not going through IVF, and "not encouraged" for couples who were, but made no distinction between PGD for gender selection of first and later children.²⁰ Subsequently, it found that preconception gender selection would be acceptable for purposes of gender variety but not for the first child.¹⁸

Perceiving these two positions to be inconsistent, a doctor who wanted to offer PGD for gender selection inquired of the ethics committee why preception methods for gender variety, which lacked 100% certainty, were acceptable but PGD, which guaranteed that certainty, was not. Focusing only on the sexism and gender discrimination issue, the chair of the ethics committee, in a widely publicised letter, found that PGD for gender balancing would be acceptable.²¹ When the full committee reconsidered the matter, it concluded that it had not yet received enough evidence that the need for gender variety was so important in families that it justified creating and discarding embryos for that purpose.¹⁹ In the future if such evidence was forthcoming then PGD for gender variety might also be acceptable.

What might constitute such evidence? One source would be families with two or more children of one gender who very much would like to have another child but only if they could be sure that it would be a child of the gender opposite of existing children. Given the legitimacy of wanting to raise children of both genders, reasonable persons might find that this need outweighs the symbolic costs of creating and discarding embryos for that purpose.

Another instance would be a case in which a couple has had a girl, but now wants a boy in order to meet cultural norms of having a male heir or a male to perform funeral rituals or play other cultural roles. An IVF programme in India is now providing PGD to select male offspring as the second child of couples who have already had a daughter.²² Because of the importance of a male heir in India, those couples might well consider having an abortion if a pregnant with a female fetus (even though illegal in India for that purpose). In that setting PGD for gender selection for gender variety appears to be justified.

PGD for Perfect Pitch

Perfect or "absolute" pitch is the ability to identify and recall musical notes from memory.²³ Although not all great or successful musicians have perfect pitch, a large number of them do. Experts disagree over whether perfect pitch is solely inborn or may also be developed by early training, though most agree that a person either has it or does not. It also runs in families, apparently in

an autosomal dominant pattern.²³ The gene or genes coding for this capacity have not, however, been mapped, much less sequenced. Because genes for perfect pitch may also relate to the genetic basis for language or other cognitive abilities, research to find that gene may be forthcoming.

Once the gene for perfect pitch or its linked markers are identified, it would be feasible to screen embryos for those alleles, and transfer only those embryos that test positive. The prevalence of those genes is quite low (perhaps three in 100) in the population, but high in certain families.²³ Thus only persons from those families who have a strong interest in the musical ability of their children would be potential candidates for PGD for perfect pitch. Many of them are likely to take their chances with coital conception and exposure of the child to music at an early age. Some couples, however, may be willing to undergo IVF and PGD to ensure musical ability in their child. Should their request be accepted or denied?

As noted, the answer to this question depends on the importance of the reproductive choice being asserted, the burdens of the selection procedure, its impact on offspring, and its implications for deselected groups and society generally. The strongest case for the parents is if they persuasively asserted that they would not reproduce unless they could select that trait, and they have a plausible explanation for that position. Although the preference might appear odd to some, it might also be quite understandable in highly musical families, particularly ones in which some members already have perfect pitch. Parents clearly have the right to instill or develop a child's musical ability after birth. They might reasonably argue that they should have that right before birth as well.

If so, then creating and discarding embryos for this purpose should also be acceptable. If embryos are too rudimentary in development to have inherent rights or interests, then no moral duty is violated by creating and destroying them.²⁴ Some persons might think that doing so for trivial or unimportant reasons debases the inherent dignity of all human life, but having a child with perfect pitch will not seem trivial to parents seeking this technique. Ultimately, the judgment of triviality or importance of the choice within a broad spectrum rests with the couple. If they have a strong enough preference to seek PGD for this purpose and that preference rationally relates to understandable reproductive goals, then they have demonstrated its great importance to them. Only in cases unsupported by a reasonable explanation of the need—for example, perhaps creating embryos to pick eye or hair colour, should a person's individual assessment of the importance of creating embryos be condemned or rejected.

A third relevant factor is whether musical trait selection is consistent with respect for the resulting child. Parents who are willing to undergo the costs and burdens of IVF and PGD to have a child with perfect pitch may be so overly invested in the child having a musical career that they will prevent it from developing its own personality and identity. Parents, however, are free to instill and develop musical ability once the child is born, just as they are entitled to instill particular religious views. It is difficult to say that they cross an impermissible moral line of risk to the welfare of their prospective child in screening embryos for this purpose. Parents are still obligated to provide their child with the basic education and care necessary for any life plan. Wanting a child to have perfect

pitch is not inconsistent with parents also wanting their child to be well rounded and equipped for life in other contexts.

A fourth factor, impact on deselected groups, is much less likely to be an issue in the case of perfect pitch because there is no stigma or negative association tied to persons without that trait. Persons without perfect pitch suffer no stigma or opprobrium by the couple's choice or public acceptance of it, as is arguably the case with embryo selection on grounds of gender, sexual orientation, intelligence, strength, size, or other traits. Nor is PGD for perfect pitch likely to perpetuate unfair class advantages, as selection for intelligence, strength, size, or beauty might.

A final factor is the larger societal impact of permitting embryo screening for a non-medical condition such as perfect pitch. A valid concern is that such a practice might then legitimise embryo screening for other traits as well, thus moving us toward a future in which children are primarily valued according to the attractiveness of their expected characteristics. But that threat is too hypothetical to justify limiting what are otherwise valid exercises of parental choice. It is highly unlikely that many traits would be controlled by genes that could be easily tested in embryos. Gender is determined by the chromosome, and the gene for perfect pitch, if ever found, would be a rare exception to the multifactorial complexity of such traits. Screening embryos for perfect pitch, if otherwise acceptable, should not be stopped simply because of speculation about what might be possible several decades from now.

PGD for Other Non-Medical Traits

The discussion of PGD for perfect pitch illustrates the issues that would arise if single gene analysis became possible for other traits, such as sexual orientation, hair or eye colour, or height, intelligence, size, strength, and memory. In each case the ethical assessment depends on an evaluation of the importance of the choice to the parents and whether that choice plausibly falls within societal understandings of parental needs and choice in reproducing and raising children. If so, it should usually be a sufficient reason to create and screen embryos. The effect on resulting offspring would also be of key moral importance. Whether selection carries a public or social message about the worth of existing groups should also be addressed.

Applying this methodology might show that some instances of non-medical selection are justified, as we have seen with embryo selection for gender variety and perhaps for having a child with perfect pitch. The acceptability of PGD to select other non-medical traits will depend on a careful analysis of the relevant ethical factors, and social acceptance of much greater parental rights to control the genes of offspring than now exists.

Conclusion

Although new indications are emerging for PGD, it is likely to remain a small part of reproductive practice for some time to come. Most new indications serve legitimate medical purposes, such as screening for single gene mutations

for late onset disorders or susceptibility to cancer. There is also ethical support for using PGD to assure that a child is an HLA match with an existing child.

More controversial is the use of PGD to select gender or other non-medical traits. As with medical uses, the acceptability of non-medical screening will depend upon the interests served and the effects of using PGD for those purposes. Speculations about potential future non-medical uses should not restrict new uses of PGD which are otherwise ethically acceptable.

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Marcy Darnovsky



Revisiting Sex Selection: The Growing Popularity of New Sex Selection Methods Revives an Old Debate

In the United States and a few other prosperous, technologically advanced nations, methods of sex selection that are less intrusive or more reliable than older practices are now coming into use. Unlike prenatal testing, these procedures generally are applied either before an embryo is implanted in a woman's body, or before an egg is fertilized. They do not require aborting a fetus of the "wrong" sex.

These pre-pregnancy sex selection methods are being rapidly commercialized—not, as before, with medical claims, but as a means of satisfying parental desires. For the assisted reproduction industry, social sex selection may be a business path toward a vastly expanded market. People who have no infertility or medical problems, but who can afford expensive out-of-pocket procedures, are an enticing new target.

For the first time, some fertility clinics are openly advertising sex selection for social reasons. Several times each month, for example, the *New York Times'* Sunday Styles section carries an ad from the Virginia-based Genetics & IVF (in-vitro fertilization) Institute, touting its patented sperm sorting method. Beside a smiling baby, its boldface headline asks, "Do You Want To Choose the Gender Of Your Next Baby?"

Recent trends in consumer culture may warm prospective parents to such offers. We have become increasingly accepting of—if not enthusiastic about—"enhancements" of appearance (think face-lifts, collagen and Botox injections, and surgery to reshape women's feet for stiletto heels) and adjustments of behavior (anti-depressants, Viagra, and the like). These drugs and procedures were initially developed for therapeutic uses, but are now being marketed and normalized in disturbing ways. When considering questions of right and wrong, of liberty and justice, it is well to remember that the state is not the only coercive force we encounter.

This constellation of technological, economic, cultural, and ideological developments has revived the issue of sex selection, relatively dormant for



more than a decade. The concerns that have always accompanied sex selection debates are being reassessed and updated. These include the prospect that selection could reinforce misogyny, sexism, and gender stereotypes; undermine the well-being of children by treating them as commodities and subjecting them to excessive parental expectations or disappointment; skew sex ratios in local populations; further the commercialization of reproduction; and open the door to a high-tech consumer eugenics.

Sex Selection Debates in the United States

Sex selection is not a new issue for U.S. feminists. In the 1980s and early 1990s, it was widely discussed and debated, especially by feminist bioethicists. This was the period when choosing a boy or girl was accomplished by undergoing prenatal diagnostic tests to determine the sex of a fetus, and then terminating the pregnancy if the fetus was of the undesired sex.

Ultrasound scanning and amniocentesis, which had been developed during the 1970s to detect, and usually to abort, fetuses with Down's syndrome and other conditions, were on their way to becoming routine in wealthier parts of the world. Soon they were also being openly promoted as tools for enabling sex-selective abortions in South and East Asian countries where the cultural preference for sons is pervasive. Opposition in these countries, especially strong in India, mounted in the early 1980s and remains vibrant today.

Throughout the 1980s and early 1990s, feminists and others in the U.S. who addressed the issue of sex selection were—almost universally—deeply uneasy about it. Not all opposed it equally, but none were enthusiastic or even supportive.

Some, like Helen Bequaert Holmes, pointed out that the deliberate selection of the traits of future generations is a form of eugenics.¹ Many deplored the practice as a symptom of a sexist society, in effect if not always in intent. In a book-length treatment of these concerns, published in 1985, philosopher Mary Anne Warren asked whether the practice should be considered an aspect of what she dubbed 'gendercide'—"no less a moral atrocity than genocide"—and published an entire book on the topic in 1985.²

But there was also broad consensus among feminists that any effort to limit sex-selective abortions, especially in the U.S., would threaten reproductive rights. Warren, despite her misgivings, argued that choosing the sex of one's child was sexist only if its intent or consequence was discrimination against women. She concluded that "there is great danger that the legal prohibition of sex selection would endanger other aspects of women's reproductive freedom," and considered even moral suasion against the practice to be unwarranted and counterproductive.

By the mid-1990s, the discussion had reached an impasse. No one liked sex selection, but few were willing to actively oppose it. Sex selection largely faded as an issue of concern for U.S. feminists, especially outside the circles of an increasingly professionalized bioethics discourse.

Separating Sex Selection from Abortion Politics

The new technologies of sex selection (and, perhaps, their potential profits) have prompted some bioethicists to argue in favor of allowing parents to choose their offspring's sex. As in past debates on other assisted reproductive procedures, they frame their advocacy in terms of "choice," "liberty," and "rights." John Robertson, a lawyer and bioethicist close to the fertility industry, is one of the leading proponents of this approach. In a lead article of the Winter 2001 issue of *American Journal of Bioethics*, Robertson wrote, "The risk that exercising rights of procreative liberty would hurt offspring or women—or contribute to sexism generally—is too speculative and uncertain to justify infringement of those rights."³

Robertson's claims are based on a world view that gives great weight to individual preferences and liberties, and little to social justice and the common good. As political scientist Diane Paul writes in a commentary on Robertson's recent defense of "preconception gender selection," "If you begin with libertarian premises, you will inevitably end up having to accept uses of reproductive technology that are even more worrisome" than sex selection.⁴

Definitions of procreative liberty like Robertson's are expansive—indeed, they often seem limitless. They are incapable, for example, of making a distinction between terminating an unwanted pregnancy—that is, deciding whether and when to bear children—and selecting the qualities and traits of a future child. However, sex selection and abortion are different matters, especially when a pregnancy is not involved.

Since new sex selection technologies are used before pregnancy, political discussions and policy initiatives which address them need not directly affect women's rights or access to abortion. In fact, many countries already prohibit "non-medical" sex selection, with no adverse impact on the availability or legality of abortion. One such nation is the United Kingdom, where, in November, 2003, after a comprehensive reconsideration of the issue, their Human Fertilization and Embryology Authority recommended that sex selection for social reasons continue to be prohibited, and that the Authority's purview be expanded to include regulation of sperm sorting technologies as well as other sex selection procedures. Even in the United States, where abortion rights are imminently threatened, the emergence of pre-pregnancy technologies should make it far easier than before, when sex determination meant selective abortion, to consider sex selection apart from abortion politics.

Eugenics: Is the Slope Becoming More Slippery?

When Mary Anne Warren considered sex selection in 1985, she summarily dismissed concerns of its contribution to a new eugenics as "implausible" on the grounds that "[t]here is at present no highly powerful interest group which is committed to the development and use of immoral forms of human genetic engineering."⁵

However, less than two decades later, a disturbing number of highly powerful figures are in fact committed to the development and use of a form of human

genetic engineering that huge majorities here and abroad consider immoral—inheritable genetic modification, or manipulating the genes passed on to our children. These scientists, bioethicists, biotech entrepreneurs, and libertarians are actively advocating a new market-based, high-tech eugenics.

Princeton University molecular biologist Lee Silver, for example, positively anticipates the emergence of genetic castes and human sub-species. "[T]he Gerlich class and the Natural class will become . . . entirely separate species," he writes, "with no ability to cross-breed, and with as much romantic interest in each other as a current human would have for a chimpanzee."⁶ Nobel laureate James Watson promotes redesigning the genes of our children with statements such as, "People say it would be terrible if we made all girls pretty. I think it would be great."⁷

Silver's and Watson's remarks (and all too many similar ones) refer to technologies that are being used routinely in lab animals, but have not been applied to human beings. However, pre-implantation genetic diagnosis (PGD), the most common new sex selection method, is very much related to these technologies. It was introduced in 1990 as a way to identify and discard embryos affected by serious genetic conditions, and thus prevent the birth of children with particular traits. Though PGD is touted as a medical tool, disability advocates have pointed out that many people who have the conditions it targets live full and satisfying lives. PGD, they say, is already a eugenic technology.

In recent years, PGD has begun to be used to screen for more and more genetic attributes—late-onset conditions, tissue types suitable for matching those of a future child's sick sibling, and sex. Advocacy of even greater permissiveness in the use of PGD is beginning to pepper the professional literature. Bioethicist Edgar Dahl recently published an essay arguing that if a "safe and reliable genetic test" for sexual orientation were to become available, "parents should clearly be allowed" to use it, as long as they are permitted to select for homosexual as well as heterosexual children.⁸ Bioethicist Julian Savulescu even baits disability advocates with the argument that we "should allow people deliberately to create disabled children."⁹

Concern about consumer eugenics and the commodification of children looms large for critics of social sex selection. As part of a recent campaign aimed at the Human Fertilization and Embryology Authority, the UK-based bioethics group Human Genetics Alert writes, "If we allow sex selection it will be impossible to oppose 'choice' of any other characteristics, such as appearance, height, intelligence, et cetera. The door to 'designer babies' will not have been opened a crack—it will have been thrown wide open."¹⁰

Another British NGO, Gene Watch UK [*no relation to GeneWatch magazine—ed.*] puts it this way: Allowing sex selection "would represent a significant shift towards treating children as commodities and [subjecting] the selection of a child's genetic make-up . . . to parental choice, exercised through paying a commercial company to provide this 'service'."¹¹

Some researchers, bioethicists, and fertility practitioners have publicly opposed such uses of PGD, and expressed alarm at what the new push for social sex selection seems to portend. In September, 2001, Robertson, then

acting chair of the Ethics Committee of the American Society for Human Genetics (ASRM), issued an opinion that overturned the organization's five Medicine (ASRM), issued an opinion. The *New York Times* reported that opposition to PGD for social sex selection. "One fertility doctor asked, this "stunned many leading fertility specialists." One fertility doctor asked, "What's the next step? . . . As we learn more about genetics, do we reject kids who do not have superior intelligence or who don't have the right color hair or eyes?"¹²

In the US, several women's organizations and other NGOs drafted a letter, signed by nearly a hundred groups and individuals, urging the ASRM not to loosen its recommendations on sex selection. Several months later, the ASRM affirmed its opposition to the use of PGD for "non-medical" sex selection. (The organization does not oppose sperm selection to select the sex of a child for "family balancing.") The spread of social sex selection and the ASRM episode were described in an *Atlantic Monthly* article titled "Jack or Jill? The era of consumer-driven eugenics has begun." Author Margaret Talbot concluded,

[I]f we allow people to select a child's sex, then there really is no barrier to picking embryos—or, ultimately, genetically programming children—based on any whim, any faddish notion of what constitutes superior stock. . . . A world in which people (wealthy people, anyway) can custom-design human beings unhampered by law or social sanction is not a dystopian sci-fi fantasy any longer but a realistic scenario. It is not a world most of us would want to live in.¹³

A Transnational Issue and a Preference for Girls

In 1992, Nobel Prize-winning economist Amartya Sen estimated the number of "missing women" worldwide, lost to neglect, infanticide, and sex-specific abortions, at one hundred million. Similarly shocking figures were confirmed by others.

Many in the global North are distressed by the pervasiveness and persistence of sex-selective abortions in South and East Asia, and believe bans on sex selection procedures may be warranted there. At the same time, some of these people believe sex selection in countries without strong traditions of son preference may not be so bad.

This double standard rests on shaky grounds. The increased use and acceptance of sex selection in the U.S. would legitimize its practice in other countries, while undermining opposition by human rights and women's rights groups there. Even *Fortune* recognized this dynamic. "It is hard to overstate the outrage and indignation that MicroSort [a sperm sorting method] prompts in people who spend their lives trying to improve women's lot overseas," it noted in 2001.¹⁴

In addition, there are also large numbers of South Asians living in European and North American countries, and sex selection ads in *India Abroad* and the North American edition of *Indian Express* have specifically targeted them.¹⁵ South Asian feminists in these communities fear that sex selection

could take new hold among immigrants who retain a preference for sons. They decry the numerous ways it reinforces and exacerbates misogyny, including violence against women who fail to give birth to boys. If these practices are unacceptable—indeed, often illegal—in South Asia (and elsewhere), should they be allowed among Asian communities in the West?

In contrast to sex selection in South and East Asia, however, a preference for girls may be emerging in North America and Europe. Anecdotal evidence—based on reports from companies offering various methods for sex control and on perusal of the “Gender Determination” message board . . . , which has over a quarter million postings—tends to confirm that of North Americans trying to determine the sex of their next child, many are women who want daughters.

That North Americans may not use new technologies to produce huge numbers of “extra” boys does not, however, mean that sex selection and sexism are unrelated. One study, by Roberta Steinbacher at Cleveland State University, found that 81% of women and 94% of men who say they would use sex selection would want their firstborn to be a boy. Steinbacher notes that the research literature on birth order is clear: firstborns are more aggressive and higher-achieving than their siblings. “We’ll be creating a nation of little sisters,” she says.¹⁶

Observers of sex selection point to another discriminatory impact: its potential for reinforcing gender stereotyping. Parents who invest large amounts of money and effort in order to “get a girl” are likely to have a particular kind of girl in mind. As a mother of one of the first MicroSort babies recalled, “I wanted to have someone to play Barbies with and to go shopping with; I wanted the little girl with long hair and pink fingernails.”¹⁷

There are many reasons people may wish for a daughter instead of a son, or a boy rather than a girl. In a sympathetic account, *New York Times* reporter and feminist Lisa Belkin described some of the motivations of U.S. women who are “going for the girl.”

“They speak of Barbies and ballet and butterfly barrettes,” she writes, but “they also describe the desire to rear strong young women. Some want to recreate their relationships with their own mothers; a few want to do better by their daughters than their mothers did by them. They want their sons to have sisters, so that they learn to respect women. They want their husbands to have little girls. But many of them want a daughter simply because they always thought they would have one.”¹⁸

Wishes and Consequences

Compelling though some of these longings may be, sex selection cannot be completely understood or appropriately confronted by evaluating the rightness or wrongness of parental desires. The preferences of prospective parents are obviously relevant in child-bearing matters, but so are the well-being of future children, and the social consequences of technologies—especially those that are already being aggressively marketed.

Wishing for a girl, or for a boy, is cause for neither shame nor condemnation. But as legal scholar Dorothy Roberts points out, it is important to

“scrutinize the legal and political context which helps to both create and give meaning to individuals’ motivations.”¹⁹

If wishes, choices, and preferences are to be appropriately balanced with social justice and the common good, they cannot be unthinkingly transformed into protected liberties, much less codified rights. Isolated from social consequences, both wishes and liberties are at best naive.

Notes

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5. Mary Ann Warren. *Gendercide: The Implications of Sex Selection*. Rowman & Littlefield, 1985
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16. Lisa Belkin. “Getting the Girl,” *The New York Times Magazine*, July 25, 1999
17. “Choosing Your Baby’s Gender.” . . . November 7, 2002
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Should Parents Be Allowed to Select the Sex of Their Baby?

Imagine yourself in the position of being able to choose the sex of your future children. What would be the benefits of having a daughter as opposed to a son, or vice versa? How much of these benefits rest on your expectations of your future child's personality? Are these traits inherently tied to their sex or gender?

Now imagine the way your future child looks. How tall is s/he? What color eyes does s/he have? Hair color? Is your child athletic? Artistic? Intelligent? In the near future, it may be possible to make your "dream family" come true, for around \$18,000 per child. If you had the economic means, would you? Why or why not?

Is there something about yourself that you consider unique? Is it a physical ability or talent, or even a physical feature that sets you apart from the crowd? Did it come from your mother or father—or is it distinctive from all of your family members? Now imagine that your parents told you that they wanted you to have this feature so bad that they "selected" it while you were still an embryo. Would you feel any less unique? What if they simply said they wanted you to be a certain sex? Would that change the way you feel about yourself? Would you feel different about a friend whose athletic talent was thanks in part to their parents' design, rather than nature's (though both would require discipline and hard work to cultivate)?

Do you consider it acceptable to use PGD (or other prenatal techniques) to predetermine the characteristics of your baby? Is it acceptable to screen for hereditary debilitating conditions and diseases? What did you make of Darnovsky's claim that allowing PGD for sex selection could pave the way for "designer babies"?

Robertson challenged the "slippery slope" argument by stating, "Speculations about potential future non-medical uses should not restrict new uses of PGD which are otherwise ethically acceptable." Do you agree? Is genetic sex selection medically ethical? Is preferring a child of one sex inherently sexist? If genetic markers are found for musical ability, intelligence, sexual orientation, or any other trait, will companies begin to offer the selection or deselection of these traits to potential parents and customers? Should these types of procedures be regulated or restricted even if they do not yet exist?

Suggested Readings

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- D. Grady, "Girl or Boy? As Fertility Technology Advances, So Does an Ethical Debate," *New York Times* (February 6, 2007).
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- M. Healy, "Fertility's New Frontier," *Los Angeles Times* (July 21, 2003).
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