Gender Selection Of Babies

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The issue: Aside from cases in which it is used to prevent an inherited disease more likely to strike one gender than the other, should parents be permitted to use technology that selects the gender of their children?

- Critics of gender selection say: Selecting a baby’s sex treats children as commodities and opens the door to other forms of genetic modification. It can also encourage sex discrimination and lead to gender imbalance, as it has in China and India.
- Supporters of gender selection say: Parents should be free to select the gender of their children without outside interference in cases where they have one or more children of one gender and want one of the other. There is no evidence that gender selection in the U.S. or Britain, two countries where it is being debated, would yield an abundance of children of one gender over the other.

One of the first pieces of information that parents receive about a newborn baby is its gender. The widespread use of ultrasound technology during pregnancy even allows many parents to find out whether their baby is male or female before it is born. In recent years, technology has enabled parents to go one step further. They can now, with a good chance of success, take steps to select the gender of their children.
woman in Beijing, China, transports three young boys on her tricycle. It is common in China for couples to employ gender selection to ensure that they have sons rather than daughters.

Scientific sex-selection techniques were first developed in the 1970s, and have since become more sophisticated. Some involve scientists separating male- and female-producing sperm, while another method relies on the creation of an embryo of the desired gender. While the techniques are still somewhat expensive, they have lately attained a higher profile and have been increasing in popularity. At the same time, critics of the practice have become vocal as well. Sex selection is sometimes used so that a child will be less likely to get an inherited disease more prevalent in a particular gender, but its more controversial use involves cases in which the selection is based on nonmedical parental wishes for a boy or a girl.

While gender selection is legal in the U.S., it has generated some controversy among the medical advisory groups that tackle questions of bioethics. For instance, although the sperm-separation method is widely endorsed for families that have one or more children of a particular gender and want one of the other, the embryo-implanting method is not universally endorsed for nonmedical purposes. The issue is more controversial in Britain, where nonmedical sex selection has been banned since 2003. In March 2005, a British government panel recommended, by a narrow margin, that parents be allowed to use gender selection to balance their families. The recommendation sparked a heated debate in Britain.

Even more controversial is the use, in some Asian countries such as China and India, of a more improvised form of sex selection. In those countries, the cultural preference for boys is strong, and parents often determine the gender of their children through ultrasound and then abort the fetus if it is a girl. Although the governments of China and India have outlawed the practice, it has already affected the ratio of men to women, a situation that is blamed for the kidnapping and trafficking of women who are later sold as
brides to men who cannot find wives. Although somewhat distinct from the issue of gender selection in the U.S. and Britain, the Asian gender selection dilemma influences that debate as well.

Critics of gender selection tend to approve of its use for the prevention of disease but oppose its nonmedical application. They argue that it allows parents to customize their children and could lead to cases in which parents select other characteristics, such as intelligence and appearance. They add that sex selection can encourage gender discrimination and even lead to a gender imbalance of the type seen in India and China.

Supporters of gender selection counter that it should be the choice of parents themselves, and is a valuable option for couples who would otherwise simply keep having children until they got one of the desired gender. They dispute the assertion that sex selection will lead to gender discrimination and imbalance, noting that U.S. couples have not shown a strong preference for either boys or girls. And they say that if a particular society is biased against one gender, that is not the fault of sex selection technology but of ingrained attitudes that have to be corrected.

**New Technology Permits Gender Selection**

For centuries, people have sought to influence babies' gender in a variety of ways. Factors such as the timing of conception, sexual position used and types of food eaten while pregnant were said by some to affect the sex of a baby. It was not until the 1970s, however, that scientific methods began to be developed for selecting gender.

One example of such technology is the Ericsson method, which was developed by Ronald Ericsson in 1975 and continues to be used at clinics today. In the Ericsson method, sperm are placed in a test tube filled with viscous fluid. Since male-producing Y-chromosome sperm swim faster than female-producing X-chromosome sperm, they can be separated from each other based on their positions in the test tube and then used for insemination. The Ericsson method is inexpensive, but its success rate is debated, with detractors saying it has no more than a 50% chance of producing the desired gender.

Another technique, flow cytometry, began as a means of selecting the sex of farm animals. It was applied to humans beginning in 1995. That method, used by the company MicroSort, a division of the Genetics and IVF Institute, sorts X and Y sperm by staining them with fluorescent dye. Because of differences in the amount of DNA contained in the two types of sperm, the dye glows more brightly on X sperm than on Y sperm, allowing equipment to separate them based on their level of fluorescence. Sperm of the desired type is then used to impregnate the woman through artificial insemination.

The MicroSort procedure costs several thousand dollars, and according to the company, is accurate roughly 75% of the time in selecting boys and around 90% of the time in selecting girls. The Food and Drug Administration is currently conducting a study of babies born through use of the method to determine whether they have an unusual number of birth defects.
A third technique uses in-vitro fertilization (IVF), mixing parents' sperm and eggs to create embryos in laboratories. In a process known as preimplantation genetic diagnosis (PGD), cells are then taken from the embryos to determine gender, and those of the desired gender are implanted in the woman's uterus. In-vitro fertilization is already used to help infertile couples have children, and laboratories use PGD to screen for genetic diseases in accordance with that purpose. PGD has a higher success rate than the Ericsson method or MicroSort, allowing parents to choose their baby's gender almost 100% of the time. However, before that can happen, the in-vitro fertilization must result in a successful pregnancy, and the chances of that happening are significantly lower. In addition, PGD is more expensive than MicroSort, costing close to $20,000.

Some couples who select the gender of their children do so to avoid genetic diseases that are more likely to appear in one gender than the other, such as Duchenne's muscular dystrophy and hemophilia, which mainly afflict boys. Many, however, have begun to select the gender of their children for nonmedical reasons, and clinics have begun to more prominently advertise that option. Those developments have generated increased controversy over the practice.

**Gender Selection the Subject of Controversy**

In recent decades, another type of gender selection has become even more controversial. That involves the selective use of abortion of female fetuses in countries with strong cultural preferences for boys. The practice has received particular attention in China and India, where it is blamed for a current shortage of women relative to men. That phenomenon, in turn, drives such practices as the kidnapping and trafficking of women, who are sold to men who cannot find wives. Widespread anti-female gender selection is being addressed as a serious problem by the governments of China and India, and by international organizations such as the United Nations. [See 2005 Gender Bias and Sex Selection in China and India (sidebar)]
Jeremy Eagle

While selective abortion of the sort practiced in China and India continues to be opposed in the U.S., there is a strong movement in favor of allowing couples to select the sex of their children through methods such as MicroSort and PGD. In the U.S., parents have so far tended not to overwhelmingly favor one gender over the other. However, some critics of gender selection argue that the problems faced by China and India should give pause to advocates of sex selection.

The issue has inspired less controversy in the U.S. than in Britain, where rules instituted by a government board charged with regulating reproductive technology largely banned gender selection in 2003. The Human Fertilization and Embryology Authority (HFEA) ruled that sex selection was legal only when used to prevent gender-related diseases. Although public opinion polls in Britain showed that a majority supported the ruling, gender selection advocates complained that it was unfair to couples seeking the option, who were forced to go abroad to choose the sex of their children.

In the U.S., sex selection for nonmedical purposes is legal, but still controversial. In 2001, the American Society for Reproductive Medicine (ASRM), a medical professional organization, issued an opinion stating that the sperm-sorting technique used by
MicroSort should be available for nonmedical use in cases of "gender variety," also known as "family balancing," where parents who already have one or more children of a particular gender want one of the other gender. Another ASRM opinion, however, discourages use of the PGD method for nonmedical purposes. Despite the stance taken by the ASRM, many U.S. clinics offer elective PGD to parents. More recently, an opinion issued in 2004 by the President's Council on Bioethics recommended that more attention be paid to the use of gender selection.

Meanwhile, in a controversial decision in Britain, a government committee in March 2005 endorsed gender selection for nonmedical purposes. The Science and Technology Committee, composed of 11 members of Parliament (MPs), recommended by a vote of six to five that parents be permitted to use gender selection for family balancing. After weighing the cases for and against gender selection, the committee stated that "we find no adequate justification for prohibiting the use of sex selection for family balancing."

However, the dissenting MPs issued their own statement, finding that "this report is unbalanced, light on ethics, goes too far in the direction of deregulation and is too dismissive of public opinion and much of the evidence." Part of the reason for the split related to disagreement over other controversial bioethics issues, such as cloning and the mixing of human and animal cells, that the report also dealt with.

**Critics Warn of Negative Effects**

Most critics of gender selection approve of its use in cases where a genetically acquired disease is more likely to afflict a child of a particular gender, but find it problematic when it is used for nonmedical purposes. Nonmedical uses of gender selection do not justify the ethical problems associated with such uses, they argue. "The last time I checked, your gender wasn't a disease," says Mark Hughes, a PGD specialist at Wayne State University School of Medicine in Detroit, Mich. "There is no illness, no suffering and no reason for a physician to be involved."

One problem with nonmedical gender selection, critics say, is that it risks commodifying children. Not only does that interfere with nature in a profound way, it also has the potential to lead to other types of selection, critics warn. They say that modifying babies for the desired gender could open the door to "designer babies," in which genetic characteristics such as height, hair and eye color and even intelligence and ability could be chosen by parents before their children are born. "Parents need to be left to receive and accept their children just as they are, not be led into believing they can select children as they would a customized personal accessory," says the Right Rev. Tom Butler, the Anglican Bishop of Southwark in Britain.

In addition, critics express concern that parents who chose to have a child of a particular gender might be hoping for specific characteristics that are not guaranteed. Parents who select a male child in the hope that he will be a sports enthusiast, for instance, are creating expectations that will not necessarily be met, they say. That could lead to
undesirable pressure on children to conform to what their parents expect them to be, rather than being themselves, critics argue.

Opponents also say that gender selection has the potential to encourage sex discrimination. Parents may choose one gender over the other to an extent that conveys the message that a particular gender is less desirable than the other, they say. If males were selected at the expense of females, it would reinforce a social bias against women that already exists, critics warn. As an example, they point to the situation in China and India, where a form of gender selection is employed to choose boys over girls. "It is clear that sex selection targets women," says Alfonso Gomez-Lobo, a professor of philosophy at Georgetown University in Washington, D.C. "From an ethical point of view, all of this is quite unacceptable."

Critics add that the example of China and India also shows that gender selection can throw off the balance between men and women, leading to additional problems. China, for instance, is experiencing a rise in human trafficking related to the shortage of women there, they note. For other countries, particularly those that pride themselves on gender equality and human rights, to practice sex selection gives tacit encouragement to such behavior, they say.

Peter Saunders, general secretary of the British religious medical group the Christian Medical Fellowship, says that "our opposition to practices in China and India that favor male children would be hypocritical if we legitimize sex selection here. Sex selection is a global issue and it is essential that the [Human Fertilization and Embryology Authority] recognizes its international responsibilities."

Some critics object to gender selection on the grounds that it terminates, or leads to the termination of, human life. Pro-life groups who oppose the destruction of embryos, for instance, note that fertilization clinics often destroy the embryos that they do not implant, a practice that can occur with PGD. And opponents condemn the use of sperm-sorting to select gender as well. Since those techniques can be unreliable, they say, there is a chance that a woman who is pregnant with a fetus that is not of the desired gender will choose to get an abortion rather than carry it to term.

Supporters Dispute Reservations

Those who support the nonmedical use of gender selection argue that the government should not intrude on the rights of parents. Individuals who are mature adults should be given the freedom to select the gender of their children, they say. "So why is the HFEA so hostile toward the idea of allowing parents the right to exercise control over the family life?" Frank Furedi, a professor of sociology at the University of Kent in Britain, wrote after the HFEA issued its 2003 ruling against nonmedical gender selection. "The principal reason why the HFEA opposes selection is because it believes that it knows better than parents what is in the best interest of their child," he continued.
Without the option of sex selection, couples who want a child of a particular gender might continue having children until they have one of the desired gender, supporters assert. Gender selection offers a less problematic alternative than having numerous children to care for, they say. That can be important to parents who want to balance the gender composition of their families, or who may have lost a child of a particular gender and want another of the same gender, proponents contend. In a November 2003 British Broadcasting Corporation (BBC) forum, fertility expert Paul Rainsbury described the scenario of "the couple who have been together for many years, and have got several children of one gender and the husband will say to me--in all conscience I can't go on getting my wife pregnant again and again...let's go for gender selection, for family balancing, to balance our family and to complete it."

Supporters say that fears of sex selection leading to gender discrimination or imbalance are overblown. In countries such as the U.S. and Britain, they say, there is no evidence that couples would choose one gender over the other. In the U.S., they note, many clinics report that requests for boys and girls are roughly balanced.

Similarly, supporters accuse critics of exaggerating the threat posed by gender imbalance. In a society where there is no strongly ingrained cultural preference for one gender over another, they say, there is no clear reason why people would choose boys more often than girls, or vice versa. Even countries that have such preferences, such as China and India, have already taken steps to alleviate the problem because it is their interest to do so, they say. "If ever IVF became cheap and easy, which it is extremely far from being, and was employed to produce just boys in cultures that prefer them, those cultures would soon find the choice self-defeating," writes A.C. Grayling, a professor of philosophy at the University of London. "Sex carries its own correctives."

Supporters also dispute the notion that gender selection will lead to selection for other traits, like appearance or intelligence. Those characteristics are too complex to be manipulated any time soon, if ever, they maintain, because they are not specifically rooted in individual genes. For that reason, fears of "designer babies" are misplaced, they insist.

Likewise, proponents dismiss the idea that gender selection encourages sexism. Any discrimination against women is the result of social imbalances that have nothing to do with sex selection capabilities, they say. For that reason, keeping parents from choosing the sex of their children will not have an effect on such attitudes, they say. "Sexism will no more be reinforced by [pre-conception gender selection] or human cloning than it is now by pre- and postnatal gender stereotyping," says Judith Daar, a bioethicist at Whittier Law School in California.

**Debate over Practice Ongoing**

Some observers say that gender selection is likely to become routine as familiarity with it grows. They point out that practices such as in-vitro fertilization and the use of ultrasound to detect the gender of babies are now largely perceived as normal. Some are disturbed by the prospect of more and more people resorting to gender selection without
adequate public debate. "Sex selection is a topic that's almost taboo for physicians to talk about," says Tarun Jain, a professor of infertility at the University of Chicago, who conducted a survey on public attitudes toward sex selection. "Yet it's important to understand patient interest in nonmedical sex selection and adequately address the ethical and social implications before the cat is out of the bag."

One of the prominent questions dividing supporters and critics of gender selection is the morality of human beings manipulating human life. Many of the most vocal critics of that aspect of gender selection are members of the religious community, who argue that it is wrong for people to try to "play God." Other, nonreligious critics evoke the racially based human engineering practices of Nazi Germany as a warning against human manipulation of life. Others say that such contentions stifle debate by ignoring nuances and condemning sex selection across the board, and that they allow fear to triumph over truth. Moral issues are likely to be at the forefront of the gender selection debate as gender selection becomes more common.

Discussion Questions & Activities

1. When you're older and planning a family, do you think you would want to select the sex of your children? Why or why not?

2. What are some steps that the governments of China and India might take to discourage the selective abortion of female fetuses?

3. What are some of the effects, either good or bad, that you think gender selection or other kinds of genetic modifications might have on society?

Bibliography


**Additional Source**

Additional information about gender selection in babies can be found in the following source: