

## Should People Be Allowed to Use Technology to Choose Their Baby's Sex?

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The issue of whether people should be allowed to use technology to choose their baby's sex is hotly debated in the 21st century. After the development of in-vitro fertilisation technology in the late 1970s and the subsequent development of embryo screening technology in 1989 (pre-implantation genetic diagnosis), it has become possible for people to use technology to determine their baby's sex. Arguments for the use of sex-selection technology tend to concentrate on practical and autonomic reasons whereas arguments against its use tend to be more social and ethical in nature.

The most common form of "technology" through which people can choose their baby's gender is during in-vitro fertilisation (IVF). IVF literally means "in glass" fertilisation, and is the name given to the procedure through which artificial fertilisation occurs *outside* of the uterus. The first step of IVF is the stimulation of the ovaries. This is achieved through injecting a hormone — human chorionic gonatrophin (HCG). The ovaries then produce multiple oocytes (unfertilised embryos). These are then removed, and fertilised in the laboratory by injecting pre-prepared sperm cells through the wall of the oocyte via an intracytoplasmic sperm injection. The embryo is then grown in a

culture medium for three days. Screening can now be used to determine the sex of the potential baby.

During this screening process, the presence of genetic disorders such as Down's syndrome (extra chromosome 21) and cystic fibrosis (mutation on chromosome 7) can be ascertained through the study of the karyotype (normal karyotypes shown above). Once an embryo of the desired sex has been located, it can then be implanted into the female uterus via a catheter through the cervix.

IVF technology was initially only used for those couples with infertility and serious genetically inherited disorders. However, with modern screening technology, more and more people covet the use of sex selection. Foremost among the arguments supporting sex-selection technology is the process of "family balancing". In this, families with one (or more) children of one sex want a child of the opposite gender to "balance" the family. However, sex selection for family balancing is banned in all the States of Australia. The Australian Health Ethics Committee (AHEC) explicitly states that "admission to life should not be conditional upon a child being a particular sex".<sup>1</sup>

Although this may seem superficially unfair, AHEC believes that sex selection would result in an expression of sexual and social prejudice. Will a "chosen" child be "better" than a normal child? Will a boy be "better" than a girl or vice versa? A survey conducted by Newcastle University showed that 80% of the public questioned felt that sex selection was wrong. Dr Tom Shakespeare, the author of the study commented, "They feared children could be turned into 'consumer items', and that sex selection could lead to choosing babies on the basis of eye or hair colour". Some argue that the sex selection is unethical because it breaches sacred boundaries of divine right. This can be seen when Pope Paul VI announced, "In-vitro fertilisation is wrong because it separates human procreation from conjugal union. In the process, couples make themselves the masters of human life instead of its stewards".<sup>2</sup>

Furthermore, in countries such as China, a traditionally agrarian society, boys are much more “favoured” than girls due to their greater physical strength and cultural preference. Hence, if sex selections were available, many may choose to have male babies; thus leading to a greater skew of gender, which may lead to social difficulties. Indeed, there are already 20% more young men in China than young women and this has resulted in many difficulties in finding a wife.<sup>3</sup>

Sex selection is allowed in most countries (including Australia) if and only if a serious genetic condition could be passed on. “Sex selection (by whatever means) must not be undertaken except to reduce the risk of transmission of a serious genetic condition” (NHMRC, Ch. 11, Sex Selection Procedure).<sup>4</sup> This is because some genetic disorders are genetically linked. Haemophilia, for example, is an X-linked genetic disorder. All female offspring will *not* be affected, but will be carriers, but all male offspring will suffer from the disease. Hence, sex selection is allowed for use in a couple where one parent is suffering from the disorder. They are allowed to use sex-selection technology to pick a female child who, for example, will not be largely affected by the genetic disorder.

“Procreative autonomy” is the liberty to decide when, how and under what circumstances to have children according to what the parents judge is best. This is only logical, for it will be the *parents* who will look after the child for the first 18 years of his/her life. However, parents are not allowed to use sex selection except in the case of a genetic disorder. Some would say, therefore, that the government ban on sex selection is an infringement of procreative autonomy; for the *government* is restricting choice that parents feel is inherently theirs. In a society that prides itself on being democratic, some would feel that this is an unwarranted restriction of free choice.

However, government regulation is present in every aspect of our daily life. Just as it is acceptable to prevent someone from physically attacking another, some believe that so too is the practice of preventing someone from using sex selection accept-

able. From a democratic viewpoint, surveys from Newcastle University and the Australian Health Ethics Committee have both shown that the majority of people are *against* sex selection.<sup>5</sup>

In conclusion, whether to allow or to ban sex selection is an increasingly topical issue for all people. There are numerous arguments for and against its use. At the moment, the majority of countries allow sex selection only for medical reasons. Whether this restriction is constrained further or waived will parallel a transition in public opinion. If the public acceptance of sex selection increases from its current level, it is entirely possible that sex selection will be allowed in the near future.

*Only time will tell.*

### Endnotes

- 1 AHEC (NHMRC). 2004. Ch. 11 Sex Selection Procedure.
- 2 Pope Paul VI, 25 July — “*Humanae Vitae*”— encyclical letter.
- 3 *The Guardian* — Tuesday February 6, 2001 — ‘In search of rogue genes’.
- 4 BBC health news- Saturday, 5 November 2005 ‘Family balancing choice opposed’.
- 5 NHMRC — 2004 — Ethical Guidelines on the Use of Assisted Reproductive Technology in Clinical Practice and Research.

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