

# Sex selection

by John Wyatt

It seems obvious that all parents would want to have healthy children and happy families. Part of this can mean trying to have not only the desired number of children, but also children of a desired sex. The motive may be to avoid certain genetic diseases or to meet particular social desires. The question is whether in making these choices people are trying to seek too much control.

A woman is pregnant. She and her partner already have two children, both of whom are boys. Friends meet them in the street, and over normal conversation say, 'Let's hope it is a girl, you'd be unlucky to get three boys'. When the third child is a boy, the same people probably say, 'Oh well, never mind, so long as he is healthy – that's all that counts'.

Underlying these statements is the recognition that while we have no choice in the matter, many parents wish that they could take more control over what kind of children they have. Medical technology is now moving to the point where parents can make this choice (see Methods box), and so the question arises – is it ever right to choose our offspring's sex?

## Many different motives

The pressure to choose the sex of your children can be very real and can come from social or medical motives.

### Social

In some cultures, boys are seen as a sign of blessing, especially a male first born. This is often a very practical

issue and the need for a son can be more than simple prestige. In countries where support in old age comes predominantly from within the family, many elderly people live with their sons – having no son can be the social equivalent of having failed to invest in a pension.

This can be further complicated when national legislation restricts the number of children a couple is allowed. The classic example is China. Here sons look after elderly parents, but couples suffer financial and other penalties if they have more than one child. The need to provide a 'pension' means that they go to extreme lengths to ensure they have a son. This can include infanticide or abandoning their female children.

Western cultures are not exempt from pressure. Until recently a family's inheritance passed down the male line. With no son, the family's wealth built up over generations could be lost. Even now, losing the family name is still an issue for some, particularly if the family runs or owns a business, or is a titled family.

Parents who already have one or more children of a particular sex may want to balance their family by ensuring that their next child is of the opposite sex. On the other hand parents may simply want to choose

the sex of their children, purely as a matter of personal preference.

Parents who wish to replace a lost child raise a more emotive issue. No one doubts that the death of a child through sickness or an accident is traumatic. Occasionally people who have lost a child argue that selecting the sex of any future children will enable them to reduce the trauma by restoring the original balance within their family.

### Medical

On top of this there is a variety of genetic X-linked conditions where women act as carriers, but the full effects of the disease are only seen in males. X-linked disorders include Duchenne muscular dystrophy, haemophilia and familial red-green colour-blindness.

These diseases are caused by mutated genes carried on the X chromosome. Females are seldom, or only mildly, affected because they have two X chromosomes and it is very unlikely that both carry the same defective gene. Statistically, a woman will, however, pass the defective gene onto half of her offspring. If the child is female, there is a 50:50 chance that she will be a carrier herself.

If the child is male, he again has a

50:50 chance of inheriting the disease-causing gene on his X chromosome. Unlike a girl, he only has one X chromosome, so the mutation will not be masked. The boy will therefore be affected by the disease.

Sex selection can be used to help these families avoid having boys, thus removing the risk of having a child with one of these disorders.

Some people, including some Christians, argue that there is a critical difference in the ethics of employing sex selection for either social or medical motives. Others believe that choosing the characteristics of your offspring is always wrong.

## UK legislation

In the UK, the Human Fertilisation and Embryology Act, 1990, determines that any medical technique involving embryos must occur in licensed clinics. This restricts the use of techniques like PGD. But techniques that use artificial insemination to introduce selected sperm to the woman's vagina or uterus, fall outside the scope of the Act.

## Making choices

People tend to line up in one of three camps when considering sex selection. Some say that selection for social and medical motives is an exciting extension of medical technology's ability to extend our control over life.

Others argue that choosing the sex of your child for social reasons is always wrong because it is an example of consumerism and commodification of human life. However, they would be prepared to use sex selection for medical reasons. A third group consider that any use of sex selection would be an unethical use of medical technology.

To understand these different viewpoints we need to study some areas of the debate. Deciding what you think about the use of sex selection will shed light on your hopes, fears and attitudes to human life.

# Methods of selecting children of the right sex

## Sperm sorting

Sperm contain either an X or a Y chromosome. X chromosomes are larger than Y chromosomes, so, on average, sperm carrying X chromosomes are marginally heavier than those with Y chromosomes.

Various methods use this difference to sort male and female sperm. Because this process is not regulated by law it is difficult to establish the validity of claims made by different clinics, but the technique certainly increases the chances of having a child of the sex of your choice.

Some new, more hi-tech methods now fix dyes to either the X or Y chromosomes inside the sperm. The sperm then travel through a flow-cytometer that sorts them one at a time. Users claim success rates as high as 91% in selecting females and 76% for males. Pregnancy rates are comparable with standard fertility procedures.<sup>1</sup>

## PGD

During many forms of fertility treatment it is possible to remove a cell from a few-day-old embryo and subject it to genetic tests. This pre-implantation genetic diagnosis (PGD) can easily determine the sex of the embryo. Only embryos of the desired sex are placed in the woman's uterus.

## Abortion/infanticide

The crudest form of selection is to wait for the baby to grow large enough for visual examination to determine the individual's sex. This can now include an ultrasound scan while the baby is in the womb. Unwanted babies are then aborted, abandoned, or treated in a way that brings their lives to an end.

## Health or 'type'?

Arguments in favour of sex selection are frequently phrased in terms of benefit to those born, saying that the technology ensures that any children born will benefit. This can be in terms of providing a more balanced family or avoiding certain genetic disorders.

Opponents of selection point out that in reality, parents are not helping a child to live a healthy life, but choosing the type of child they wish to be born. This is a radical departure from any previous treatments.

For example it is different from a woman's decision to take folic acid to prevent her baby developing spina bifida, or having a rubella vaccination to ensure that any baby can't be damaged by her catching the disease

while pregnant. Both of these maximise the chance of any future children being born free from illness, rather than preventing individuals of a certain type being conceived or born.

Similarly sex selection is subtly different to contraception. Both technologies give people an element of control over their offspring, but contraception limits the number of children, without choosing between types of children.

Selecting offspring on the basis of health also begs two questions; what is health? and, what is normality? People's concepts of health and normality differ. On occasions the notion of health has been challenged when parents with a type of dwarfism called achondroplasia and others with genetic forms of deafness

have asked to use genetic techniques to select children with the same conditions. For them, it is perfectly 'normal' to be either four feet tall, or be unable to hear.

## Challenging discrimination

Those who argue for sex selection for medical reasons point to the seriously debilitating nature of some sex-linked disorders. In this case, the issue is about maximising the chance of having a healthy baby.

Opponents say that while using sex selection to avoid X-linked diseases appears to benefit the offspring because they don't suffer effects of the disease, it does not help the individual avoid the harmful effects of disease. Instead it avoids the person's existence. Such sex selection effectively says that it is better that this type of person, or a person with this genetic disorder, never exists.

Many disabled people argue that the main problems of living with a disability come from discrimination and the attitudes of other people, rather than the medical problem itself. This may not apply if there is very profound disability. But even in these cases, many Christians would not wish to argue that the life of a disabled person was not worth living.

## Slippery slope

Opponents of sex selection ask, 'where does it stop once you start selecting the "kind of babies" we have?' Sex selection for medical reasons introduces the notion that deciding to have healthy babies is morally acceptable. While sex selection can only be used for a small set of X-linked disabilities, PGD can be used for any other genetically influenced disease or characteristic.

Society would soon be faced with requests from parents to select the colour of their children's hair, or genes that influence their child's potential intelligence.

The evidence is that we are not good at stopping part-way down a 'slope'. For example, abortion was

legalised in the UK on the basis that it would be used only in extreme circumstances, but changes in social and medical attitudes have led effectively to abortion on demand.

If society does move down the slippery slope, prospective parents could end up being expected, or perhaps even required, to have certain tests done to ensure that the child they have meets the health criteria. At this point it will also become a duty of any health providers to supply their patients with the relevant tests.

Parents who refuse interventions and have a child with a disability may find themselves judged harshly, and blamed for the birth. This could result in a lack of social support with the family being left to face the emotional, social and financial cost of care alone.

## Valuing all people

Christians need to emphasise that while they wish to prevent or alleviate

disability, they are also committed to love and care for people with disabilities. Not all means of preventing disability are ethical; and certainly not if these means involve destroying or selecting against disabled individuals. They will do everything to remove disability, but at the same time will do all they can to help people with disability live fulfilled lives.

This also includes recognising that able-bodied people have a lot to learn from friends who have physical or mental abnormalities; and that part of being human involves learning to serve and help others less fortunate than ourselves.

## Safety and reliability

If you argue that sex selection is always wrong, then issues of safety and reliability are irrelevant in the debate. Even if the techniques were totally safe and provide the right sex baby 100 per cent of the time, they

# Extreme experience

## India

Most commentators believe that India has a particular problem regarding sex selection.

- In 1984 UNICEF claimed that of the 8,000 babies aborted in Jaipur, 7,999 were girls.<sup>2</sup>
- In 1993 a survey covering 300 small poor rural communities in one area of Tamil Nadu, India found that 196 girl babies had died under suspicious circumstances.<sup>3</sup>
- In 1994 the Indian Parliament outlawed sex selection, but there was no conviction in the next five years due to the social acceptability of the practice.<sup>4</sup>
- A 1999 report claims that ultrasound is now the preferred method of determining a baby's sex, allowing parents to decide a baby's fate as early as 14 weeks into pregnancy.<sup>5</sup>
- A paper published in 2002 from a private IVF clinic in India described using PGD to sex embryos for family balancing purposes.<sup>6</sup>
- A paper published in 2003 estimated that between 2 and 5 million female fetuses are aborted each year in India, with 130 boys being born for every 100 girls.<sup>7</sup>

## China

There is a long-standing tradition of female infanticide and abandonment that pre-dates the 1949 formation of the People's Republic.

- During the 1950s, 60s and 70s the practice subsided, but returned when in 1979 the government introduced a 'one child' policy. A recent publication suggests that there are now 117 boys born for every 100 girls.<sup>8</sup>
- There are currently an estimated 111 million Chinese men who are unable to find a wife as a direct result of the one-child policy. This has fueled a growing black market in women.<sup>9</sup>

should not be used. For those who consider that there may be cases when sex selection could be used, safety and reliability are important considerations.

There are growing anxieties about the safety of many assisted fertility techniques. Using them as a mechanism for sex selecting therefore exposes any offspring to the risk of long-term side-effects.<sup>10</sup>

No method is likely ever to be 100% reliable, so there will always be children of the wrong sex conceived. Parents will either choose to abort the baby, or there is the chance of the child growing up living under the burden of being 'wrong'.

## Restore or select?

Medicine is traditionally built on restorative actions. Christians believe that health is good and see disease and disability as an effect of the Fall. It is therefore not part of God's original intention for humanity. Medicine seeks to 'restore the masterpiece' within the physical limits of our fallen humanity; to help people to live their lives as fully as possible.

Reproductive medicine enters a new domain since it enables choice about the people that are brought into existence, choices made primarily on the basis of their health. This is not restorative, but selective.

Christians would also want to emphasise that this life is not all that there is. Life does not end at death but there is life after death where, if we have faith in Christ, we will live

forever with new bodies, like that of Christ after his death and resurrection, that are free from all disease and disability. For this reason alone the life of a disabled person is always worth living because the best by far is yet to come.

## An issue of control

Perhaps the critical issue is control. And the question is whether there are limits to the control we should exert on our future children. In Christian thought, all human beings are equal under God and we receive the children that God gives us. They are gifts given to us to love and care for, not commodities that we choose and own. There is a danger that in extending the scope of the choices parents make, we will alter the nature of parenthood, and change the structure of our society.

## Conclusion

Medical technology gives us many new choices, but not all these choices are good for us or for society. Nearly all Christians are opposed to sex selection for social reasons, whereas some would allow it to avoid having a child with severe disability.

All the same, there are many reasons why we should have grave reservations about selecting the sex of our children even on medical grounds, both because of the way it discriminates against certain kinds of

people, and because of the way it may change our society and ourselves.

We cannot know with certainty what life has in store for us, or our children, but Christians believe that God holds the future and works for our good in all things.<sup>11</sup> This does not mean that we are necessarily protected from suffering, but rather that God will help us to cope with the burdens that life brings. Christians believe that living with burdens can enable a person's character to grow as God gives them the strength, both directly and through the help of others to face it. Bearing one another's burdens is at the heart of Christian morality.<sup>12</sup>

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