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Not Dead Enough? Ethical Questions on the Posthumous Collection and Use of Human Gametes

Can a dead person conceive a child? Even if it is technically possible, should it be permitted? The legal system seems to have reached a position on this matter without obvious ethical reflection. Noting that a child should be able to know and relate to his or her parents, this article argues that a person's capacity to contribute to the conception of new life should cease with that person's death.

The ethics of assisted reproductive technology (ART) has always been difficult, but some recent legal decisions have served to complicate it even further. Court orders allowing the posthumous collection and use of gametes for reproductive purposes (PCUG) raise important new questions at the tangled intersection of consumer demand, technology, medical care, legislation, and ethics.

Some of this complexity arises from the fact that each of these domains works to its own logic and priorities, and these rarely coincide. Those who seek PCUG are often emotively portrayed as just having a 'natural desire to parent,' and exaggerated claims about the weight of public opinion can significantly skew the way these cases are reported.[1] The 'technology' pole of the ART enterprise tends to prioritise efficiency and cost-effectiveness, while the 'medical' pole focuses on evidence-based clinical benefit. Statutory legislation and the courts regulate ART practices in the interests of public order. Ethics, meanwhile, is left behind asking important questions of meaning and value which should properly guide prospectively, rather than succeed, social and legal trends in ART.

Perhaps the sharpest delineation occurs between law and ethics. The present discussion concerns two paradigm cases which found their way to the Western Australian Supreme Court in recent years for determination in *ex parte* hearings.[2] In each case, the applicant obtained and executed an urgent Supreme Court order to collect and store the gametes of her deceased husband. (The urgency is due to the limited post-mortem viability of gametes, which must be collected and stored within 24 to 36 hours of death.) While similar in many ways, the cases differ in significant details: in Case 1, the applicant and her deceased husband had signed consent forms at a fertility clinic with the intention of collecting and storing his gametes for subsequent ART procedures, but he died of a heart attack just days before gamete collection was to occur. In Case 2, the couple had considered ART but had neither made a final decision nor signed any consent forms; and the husband died by his own hand.

Detailed legal commentary is beyond the scope of this discussion, but three aspects of the court decisions in these cases highlight a considerable gap between the legal and ethical questions they raise.

First, on the issue of posthumous collection of gametes, the court in both cases could not rely on Western Australia's *Human Reproductive Technology Act 1991* (*HRT Act*) because it is silent on the question of posthumous *collection*; so it turned instead to Section 22 of the *Human Tissue and Transplant Act 1982* (*HTT Act*) which permits a designated officer for a hospital to authorise the removal of tissue from the body of a deceased person for the purpose of transplantation or for other therapeutic, medical or scientific purposes.[3] The court's logic in these cases seems to have been:

(i) assume that the applicant's request for the posthumous collection and storage of gametes for reproductive purposes is reasonable, and

(ii) establish simply whether this is permissible under existing legislation. Indeed, in one case the judge stated, "A decision needed to be made almost immediately. And I considered that there was a simpler legislative route to the orders that Ms C sought."[4]

At no time did the court consider that its role extended to questions such as whether the posthumous use of gametes to

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create a new human life is ethically defensible. Value-laden questions around the best interests of the child so conceived simply did not come into the court's consideration.

Second, the court in both cases ordered that the gametes collected must be stored "in accordance with the *Human Reproductive Technology Act 1991 (WA)*" but must not be *used* for any purpose without a further order of the court. On the critical question of using posthumously-collected gametes for reproductive purposes - which legislation subsidiary to the *HRT Act* prohibits[5] - the requirement to obtain a second court order does have the effect of balancing the urgency of an application on one hand against the need for a more measured consideration of key issues on the other.

Third, in Case 2 the judge determined that, in future, urgent applications for posthumous collection of gametes can be made directly to the designated officer of the hospital to which the deceased has been taken; if that officer considers that the request falls within S.22 of the *HTT Act*, he or she can authorise gamete retrieval without further recourse to the court.[6] Removing the need for any court hearing at all seems to grant *carte blanche* to posthumous collection and to push consideration of ethical questions even further into the background.

… the National Health and Medical Research Council put it very starkly: "The facilitation of conception in circumstances where the child born will never know one of his or her genetic parents is a serious act of profound significance for the child born" ...

It is notable that, on all three counts, the court process addressed the interests only of the adults making application to it: no-one, it seems, thought about the child.

An adequate ethical analysis of PCUG might begin by recognising a key feature of the *HRT Act*, that at all times consideration must be given to the welfare and interests of ART participants *and* the child likely to be born as a result of ART;[7] indeed the National Health and Medical Research Council [NHMRC] holds the child's welfare to be "paramount."[8] Because the term 'best interests' is notoriously difficult to define with precision, it tends to be framed in relation to the particular circumstances of individual cases. It seems reasonable, then, that ethical consideration of what might be in a future child's 'best interests' should reach beyond matters defined in legislation and embrace a range of psychological and social issues as well. These may include issues of justice and equity in relation to the child's 'right' to have contact and form a relationship with his or her genetic parent (the gamete provider); the surviving partner's capacity to provide adequate long-term parenting for the child; and communication issues relating to the child's right to know his or her origins. They may also include matters of a pastoral nature, such as requiring a 'cooling off' period for grieving before the gametes can be used, and requiring the recipient to undertake counselling.[9] The range of persons with interests in PCUG might also extend to other family members of the deceased and of the applicant who may wish to express a view on such use of the gametes, given that they also will have a familial relationship with the child.

As long as applications for PCUG are managed simply as legal issues – just matters of interpreting and applying statute law – these important human questions of PCUG will remain unasked and unanswered. This cannot be in the best interests of the potential child, or indeed of our wider society.

Another important ethical discussion could be held around the concept of a 'parenting project', specifically:

(i) any ethical difference between 'genetic parenting' by simply providing gametes, and 'social parenting' by participating more fully in the child's nurturing, development and formation as a person

(ii) what the deceased might have intended to include in his 'intention to parent', and whether PCUG effectively reduces that to 'genetic parenting' only

(iii) whether the surviving partner has any real 'right' to parent and if so, whether and how that might relate to a child's 'right' to know and form a relationship with his or her deceased gamete provider

The definition of 'parenting' serves to highlight another gap between ethics and the law. Surrogacy legislation in WA defines the 'birth mother' – the woman who gestates and delivers a live baby – to be the 'legal mother' of that baby until the Family Court transfers legal parentage to another woman (the 'arranged mother'). One way of interpreting 'parenting' in the matter of surrogacy, then, has 'parenthood' treated purely as a legal category ultimately defined not by biological relationship (since the arranged parent may have no biological relationship whatever with the child) nor by gestation (since parenthood can be transferred by the court), but apparently in terms of which adults agree to accept responsibility for the ongoing care and nurturing of the child. Alternatively, this somewhat fluid understanding of 'parenting' may simply be acknowledging that the verb 'to parent' means different things at different times in a child's life: while the child is *in utero* it describes a biological relationship only; at delivery it is a legal relationship; and *post-partum* it is used to describe a particular societal role in relation to the ongoing needs of the child. The latter view accepts that it would be possible for three different women to 'parent' this child at different times, but we still need to ask the question: where it so intimately impacts the present and future interests of a child, isn't parenting much more than a legal category?

It can be argued, for example, that in the normal course of events a couple's 'parenting project' always includes direct and personal engagement in the life of the child who is conceived, born and nurtured - that is, *'genetic + legal + social parenting'*. In Case 1, this was obviously part of the couple's project, since they had already embarked on ART - at least to the extent of giving consents required to help them realise that project. Yet it is reasonable to ask: did the husband's picture of himself as 'parent' include the possibility of him *becoming* a parent after his death? Had he

known he would die prior to the *conception* of his future child, might he have reframed his 'parenting project'? In terms of the validity of his consent to ART, one nagging question must be: did his consent include consent "to provide gametes after his death and so become a 'parent' of a child with whom no relationship would ever be possible"? Would he ever have thought that 'being dead' would not be dead enough to prevent him becoming a father?

Even more poignantly in Case 2, the question must be: does suicide represent the husband's complete cancellation of his 'parenting project'? Even if he had provided normal consent to normal ART procedures, doesn't suicide amount to withdrawal of that consent?

The question of a putative 'right' to parent is also ethically fraught: if the gametes of the deceased person are treated at law more or less as 'property' of the surviving partner, are we close to treating any offspring created from those gametes as commodities over which the surviving partner can likewise claim rights? It would be ethically repugnant to most people to treat a human being in this way.

One fundamental concern is the child's 'right' to know and relate to their genetic parent. The existence of 'donor registers' in most Australian jurisdictions seems to be predicated on such a right, and the NHMRC has enshrined this in their gold-standard ethical guidance.[10] Indeed the NHMRC put it very starkly:

> When either parent dies before the birth of a child, this is generally regarded by society as tragic in that the child will not know that parent. The facilitation of conception in circumstances where the child born will never know one of his or her genetic parents is, by analogy, a serious act of profound significance for the child born.[11]

… perhaps the wisest answer might be just to follow nature: a person's capacity to contribute to the conception and nurturing of new life, and so to become a 'parent', ceases with that person's death ...

Given the "profound significance" attaching to PCUG based on the interests of the child, one may wonder whether court authorisation of posthumous collection and storage of gametes implies, or even potentially facilitates, a future contradiction of the child's right to know his or her genetic parents.

Nevertheless, noting that "state or territory legislation may prohibit the use of gametes after a person has died," the NHMRC proposes that if such practices are ever to be permitted, then a number of essential conditions must apply before any clinic may cooperate with reproductive use of posthumous gametes. These conditions, apparently intended to be a minimum standard only, include requiring "clearly expressed and witnessed directions consenting" to the posthumous use of the gametes; counselling for the recipient; and most tellingly, that "the use does not diminish the fulfilment of the right of any child who may be born to knowledge of his or her biological parents."[12] In the introductory passage to this paragraph, the NHMRC speaks of the child "knowing" his or her parent – at face value, a more comprehensive concept than merely 'knowing about' a parent. In this light, the NHMRC's final condition seems to imply an ethical preference *against* PCUG.[13]

So far our legal system has not peered over the ethical horizon to consider the complex ethical questions that beset PCUG. It is in the best interests of our society that they be addressed carefully. And when they are, perhaps the wisest answer might be just to follow nature: a person's capacity to contribute to the conception and nurturing of new life, and so to become a 'parent', ceases with that person's death.

ENDNOTES

[1] Claims about the weight of public opinion do not always correspond with empirical data. For example, contrary to oft-repeated claims by some IVF practitioners, a "comprehensive poll of the nation's attitudes toward gender selection shows only one in five people support the technique." This report's portrayal of the discrepancy between the views of the general public and the views of some IVF practitioners is curious: "The findings reveal the public is significantly out of step with the country's leading IVF doctors"! For this, see "Roy Morgan poll shows most Aussies oppose sex selection for babies," News.com.au, www.news.com.au/roy-morgan-poll-shows-most-aussies-oppose-sex-selection-for-babies/story-fncynjr2-1226738494720

[2] Case 1 refers to *Re Section 22 of the Human Tissue and Transplant Act 1982 (WA); ex parte M [2008] WASC 276,* Supreme Court of Western Australia, http://decisions.justice.wa.gov.au/supreme/supdcsn.nsf/judgment.xsp?documentId=88F2DA1927AAE5AFC82575120023413C&action=openDocument; Case 2 is *Re Section 22 of the Human Tissue and Transplant Act 1982 (WA); ex parte C [2013] WASC 3*, Supreme Court of Western Australia, http://decisions.justice.wa.gov.au/supreme/supdcsn.nsf/judgment.xsp?documentId=A14DCB953D93727A48257AE70030600B&action=openDocument

[3] *Human Tissue and Transplant Act 1982 (WA) [HTT Act]* S.22(1), cited in *Ex parte C [2013] WASC 3.* However, the court turned to the HRT Act to regulate the *storage* of gametes, even though that Act permits storage and use of gametes for reproductive purposes only where the person who provided the gametes has given 'effective consent' - see *Human Reproductive Technology Act 1991 (WA) [HRT Act]* S.22(8).

[4] Edelman J in Ex parte C [2013] WASC 3, 11.

[5] *Direction 8.9* is titled "No posthumous use of gametes." It states, "Any person to whom the licence applies must not knowingly use or authorise the use of gametes in an artificial fertilisation procedure after the death of the gamete provider." Western Australian Government Gazette, 30 November 2004, www.slp.wa.gov.au/gazette/GAZETTE.NSF/gazlist/28FA432BECED857B48256F58002444B8/$file/gg201.pdf

[6] *Ex parte C [2013] WASC 3*, 22-25. One presumes that these gametes also will be stored in accordance with the HRT Act, although this is not specified in the judgment.

[7] *HRT Act*, S.23(1)(e).

[8] National Health and Medical Research Council (NHMRC), *Ethical Guidelines on the Use of Assisted Reproductive Technology in Clinical Practice and Research,* 2.5, 2007, NHMRC, www.nhmrc.gov.au/guidelines/publications/

[9] See Ibid., 6.15 and 6.16.

[10] Ibid., 6.1 and 6.11.

[11] Ibid., 6.15.

[12] Ibid., 6.15.

[13] Note also that paragraph 6.15.1 encourages clinics to seek "advice and guidance from a clinical ethics committee on the ethical issues raised" and only then, if necessary, to take legal advice.

All on-line resources accessed 18 November 2013.

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Sex Selection

The selection of the sex of an unborn child brings to mind many thoughts: playing God, gender discrimination, imbalance in the male:female gender ratio, and a slippery slope that could lead to designer babies. Sex selection also raises the question of reproduction autonomy. These and other issues are explored in this article.

Introduction

Selecting the sex of a child is not a new concept; throughout history many parents have desired a child of a particular sex for many different reasons. Hippocrates (460-370 BC) suggested tying off the father's left testicle to have a boy and the right to have a girl.[1] In some cultures, the desire is based simply on patriarchal inheritance laws, or the need for a son to look after parents in old age, or wanting to avoid paying an expensive dowry. For some, it is to fulfil their desire to raise a child of a particular sex. Thus, the desire to choose the sex of a child cannot necessarily be linked to the recent developments in reproductive technology. Prior to the introduction of the ultrasound in the 1980s, infanticide was the main form of sex selection.

… "the overwhelming opinion in the Australian community being against gender selection" ...

In Australia, social sex selection is not permissible under the National Medical Health and Medical Research Council's (NHMRC) *Ethical guidelines on the use of Assisted Reproductive Technology in clinical practice and research* (ART guidelines). However, the guidelines do allow the selection of the sex of an embryo if this selection lessens the risk of a child inheriting a serious genetically sex-linked syndrome.[2] The Australian Health Ethics Committee (AHEC), one of the principal committees of the NHMRC, is currently undertaking a review of Part B of the ART guidelines. This focuses on clinical practice, and social sex selection will be assessed again as part of this review.[3]

Gab Kovacs, an Australian IVF pioneer, initiated a poll by Roy Morgan Research to gauge the opinion of the current Australian society in regards to social sex selection.[4] A recent article in the *International Journal of Reproductive Medicine* reported on this October 2011 poll, revealing "the overwhelming opinion in the Australian community being against gender selection."[5] The poll did not identify the reasons for this, and the article speculates that it could be due to "a lack of informed discussion or because of its association of eugenics using the 'thin edge of the wedge' principle." Further, the article adds that the liberal ethicists who support social sex selection do not see why it should be forbidden as it does not harm anyone. The paper concludes with an observation that these liberal ethicists "have not been able to get their message accepted in the community."[6] Kippen et al also reported in 2010 that Australians did not approve of social sex selection.[7]

IVF specialists have commented that they have prospective parents requesting sex selection in their IVF clinics and that they are unable to help them due to the restrictions in place through the NHMRC guidelines.[8] Advice is available on some Australian IVF websites on where to seek a sex selection service. Prospective parents seeking this service must travel overseas.[9] These cases are often sensationalised in the media.

While some potential parents are seeking the help of IVF to conceive a child of a particular sex, the Australian public have been consistent in their views regarding social sex selection. It may be that the public's decision is based on a real concern for the unborn child or it may be something that cannot quite be described "as it just doesn't feel right."

Sex or Gender?

When parents seek to select their child's sex, is this desire based on societal gender stereotypes? Sex and gender are by definition not the same. Sex is a biological term that encapsulates the genetic, anatomical, hormonal and physiological determinants that establish our uniqueness as either female or male. There are some inherent differences in a male and a female: e.g. a male cannot gestate children.[10] These biological determinants may well also exert an influence on our acquisition of certain emotional dispositions or traits.

… Sex is a biological term that encapsulates the genetic, anatomical, hormonal and physiological determinants ...

Gender[11] builds on biological sex, providing further meaning to the dyadic of the male and female.[12] Robertson suggests that when parents seek to choose the sex of a baby, it may well be that they are choosing the normative psychological and behavioural characteristics associated with a particular gender.[13] Gender is described by US National Catholic Bioethics Centre (NCBC) as the manifestation of "certain emotional dispositions or traits characteristic of femininity or masculinity." They note that "'femininity' and 'masculinity' are gender terms and refer to specific traits or dispositions." However, they add that a male can have feminine-like characteristics, just as females can have masculine-like characteristics.[14] Johnson et al suggest that gender is a social construct that could be culturally based, historically specific, and constantly changing.[15] Further, Johnson and Repta note that societal media, religion, political and educational institutions may have assisted with the generation and moulding of these expectations of gender.[16] Through this complex interaction involving both sex and gender, some cultural practices and traditions may have been created and become the norm. These practices and traditions can be difficult to alter.[17]

Possible causes of gender preference

Often when issues surrounding sex selection are discussed, the preference for male children in China and India which has created an imbalance in sex ratios is frequently highlighted. This next section provides some background as to why some prospective parents in some cultures have a preference for their unborn child to be of a particular sex.

In east and south Asia, the vision of the female has its origins in the ancient religions and philosophic texts of Asia. What is common across these texts is that they identify gender differences and complementarity as underlying and/or contributing to cosmic unity and harmony. Confucian codes of beliefs and conduct include ancient cosmological notions of the universe compromising of two different but complementary elements of the yin (female) with dark, weak and passive characteristics, and yang (male) with bright, strong and active characteristics. Eventually, rather than an equal and complementary interacting system, a hierarchical relationship developed with the yin representing all that was negative and inferior in the universe. From the second century BC, these ideas became the dominant ideology. In the second century AD, the Confucian text the Book of Rites was compiled. It stated that "to be a woman meant to submit." A set of practices evolved that defined a female's space in communities and families.[18] Prior to the formation of the People's Republic of China, there was a well-documented tradition of infanticide and abandonment particularly of females. In the late nineteenth century, a missionary interviewed 40 women over 50 who had between them 183 sons and 175 daughters. However, only 53 of the daughters survived past 10 years of age whereas 126 sons had survived.[19] Almond et al draw on Freedman's 1970 book on *Family and Kinship in Chinese Society* to comment that "in Confucian tradition, it was explicitly within the prerogative of the father to kill his child."[20]

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In many areas of south and east Asia, an inter-generational contract exists. The contracts are considered time honoured, and are enhanced by the religious texts. The needs of the old take priority, and the rearing of children is regarded as security for old age care. As there is very little social welfare outside the family, children are seen as essential for care in old age.[21] Children – particularly a male child – therefore provide a means to an end. This has become even more important with smaller contemporary families. The main flow of resources is from the son to the parent. Sons are expected to worship and care for the family's ancestors from previous generations signifying an unbroken line of continuity.[22] On the other hand, daughters are seen as being kept eventually to be passed onto another family. Hence, discrimination can occur with the allocation of family resources.[23] Croll cites a number of studies that demonstrate this belief exists amongst many in China. However, old age insurance is becoming increasingly popular in China as a means of relieving the fear that parents will be unsupported in old age if they have a daughter. Particularly in rural areas, debates have begun about family lineage. While views are mixed, some are beginning to question traditional beliefs. Women are also being educated with a push to encourage more female teachers.[24] However, the threads of Confucianism that lie at the heart of Chinese tradition have seen a resurgence as capitalism gathers force in China. This has seen an increase in the value of sons, and a decrease in the value of daughters.[25]

In India, it is in the most ancient of Hindu religious texts, the Ryveda, the Samaveda and the Artharvaveda (all from no later than the second century BC) that the origins of gender differences are understood. The classic Vedic rituals are the main source of mythology, religious practice and social expectations. Briefly, they offer a mystic vision that a balance inclusive of female and male energies, and cosmic unity and harmony would be achieved through continual sacrifice by gods and men. Otherwise, the celestial and terrestrial worlds would be in a constant state of turmoil. Women were not included, and consequently this challenged whether they were worthy to partake in other facets of Vedic and Brahmanical dharma. Women became limited to domestic religious devotions, and thus a ritual gulf existed between the sacrificial (srauta) and domestic (grhya) which extended the female/male divisions as women in India became confined to the domestic domain.[26] Historically, Indian families were also expected to provide dowries for their daughters, which imposed a significant financial burden on families.[27]

The *Hindu Succession (Amendment) Act 2005* mandated for equal inheritance between sons and daughters. This Act was complemented by the *Maintenance and Welfare of Parents and Senior Citizens Act 2007,* which calls for the responsibility for the care of the elderly to be shared equally between sons and daughters. The legislation of these recent Indian laws provides women with a stronger economic, political and health basis, and hopefully will encourage a cultural shift towards more equality between men and women in India.[28]

Mara Hvistendahl, a Beijing-based correspondent for *Science,* has written more recently on the imbalance of the Asian sex ratio. Hvistendahl suggests in her book that years of a casual approach to abortion as a means of population control has possibly enabled a casual approach to the utilisation and acceptance of abortion to control the sex of an unborn child.[29] Governments in many Asian countries allowed and used abortion for this means. Advertisements for abortion are readily available.[30] However, a preference for one or other sex must pre-exist before any method of sex selection is accessed.

… there is neither Jew nor Greek, slave nor free, male nor female, for you are all one in Christ Jesus ...

Osipenko and Szscepura report on some evidence from China and India that women are choosing not to carry a female child to term as they do not want their daughter to suffer as they have in their own lives.[31]

Western tradition and culture has its origins in the ancient Greeks, the Roman Empire and Christianity. The most influential text is the Bible. Many Biblical references particularly in the Old Testament (e.g. in Exodus, Leviticus, Numbers and Deuteronomy), suggest a role for women that is submissive in a patriarchal context. However, in his Letter to the Galatians (3:28), St Paul wrote that “there is neither Jew nor Greek, slave nor free, male nor female, for you are all one in Christ Jesus."[32] While Paul in his Letter to the Ephesians (5:22) may have suggested that the man is the head of his wife as Christ is head of the Church, the next ten verses counsel men to love their wives.[33] Rodney Stark’s book *The Rise of Christianity* establishes that the differences in the lifestyle and values of the pagan Roman Empire and the burgeoning Christian communities within the Empire led to a surplus of women in the Christian communities.[34] A bias in female converts to Christianity surely contributed to this. However, two more significant reasons for this surplus of women were that Christianity forbade infanticide and abortion.[35] Female infanticide and death due to abortion appeared to have significantly affected the number of women in the pagan Roman Empire. Christian women also married at a later age than their pagan counterparts. Christian widows were respected and able to keep their husband’s estates. The church supported poorer widows, providing them with a choice whether to marry again or not. A pagan widow was met with pressure to remarry and when she did, any inheritance became the property of her new husband. With women being respected and filling leadership positions within the Church, there was a substantially higher level of fertility compared to the pagan world. This also aided the rise of Christianity.[36] This stance against abortion and infanticide was strengthened during the second to fourth centuries AD through some of the writings of the early Church Fathers, including St Justin and Tertullian.[37] While there are many contemporary views that Christianity may be discriminatory to women because of its all-male hierarchy, life - male or female - has always been valued within Christianity.

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In pre-Islamic Arabia, female infanticide was widely practised.[38] However, the Qur’an strictly forbids infanticide with specific mention of female infanticide in Surah 81 v 8 – 9.

Although infanticide is not actively supported by any religion, there is a difference in tolerance to infanticide by different religions. Sex ratios are normal in the West and in west Asia where Christianity and Islam are the dominant faiths. Christian and Muslim minorities also have normal sex ratios in India and South Korea.[39] However, Caldwell and Caldwell suggest that condemnation of infanticide did not occur in the organised religions of the Asian agrarian societies as it did in the West. “Hindu and Confucian priests carried out ceremonies and kept their adherents to the proper rituals rather than keeping them to strict moral rules of behaviour in keeping with a given code of life. The West took the latter route.”[40]

Sex Selection Methods

There are a number of methods which parents have employed over time hoping that they will help with selecting the sex of their child. Some websites devote much space to them.[41] Additionally, on the internet there are a number of kits available that claim they are able to help with the conception of a male or female child.[42]

There are also a number of medical technologies available today that can be utilised to help with the selection of a child of a particular sex. They can be categorised as: pre-conception, pre-implantation, and prenatal.[43]

Preconception intervention utilises flow cytometry which can separate X and Y sperm. While two completely separate populations are not created, semen is altered to become either enriched with X or Y sperm. This is then used for insemination. This technique is quoted as having a 90% success rate for the conception of a female child and a lower rate of 75% for a male child.[44]

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Pre-implantation intervention is customarily performed by preimplantation genetic diagnosis (PGD) where the sex of an embryo (created by IVF [45]) is determined by an embryo biopsy, which involves the removal of one to two embryonic cells at day 3.[46] Only an embryo of the desired sex is then transferred into the mother’s uterus.

Prenatal testing of the sex of an unborn child can be through chromosome analysis by chorionic villus sampling and amniocentesis (14-18 weeks) or through visual observation by ultrasound (approximately 20 weeks). If the child is of the undesired sex, then a termination of pregnancy[47] may be sought, dependent on the laws of the Australian state or territory and the gestation of the pregnancy. While sex selection cannot be cited as the reason for the abortion, abortion is legally available in a number of Australian states and territories.[48]

Since late 2012, a non-invasive method of detecting chromosomal disorders (trisomies) at approximately nine weeks of gestation has been available in Australia.[49] This is called non-invasive prenatal testing or NIPT. Fetal DNA in the mother’s blood is tested. Other genetic analyses will be possible in the future. Determination of sex is one of these possibilities.[50] At the time of publication, the cost of NIPT was $AUD 800 to $1,400. Professional bodies agree that this test should not become part of the routine laboratory testing that is provided for all women prenatally, but should only be provided after adequate counselling and reflection so an informed decision can be made.[51]

From a reading of comments at the online forum www.in-gender.com, Osipenko and Szczepura commenting that parents rationalise knowing the sex of their child allows them to decorate baby rooms, buy baby clothes and bond

with a future child. They add that some women might not feel comfortable discussing sex selection in such a public environment, however they do report on a small number of women who comment in the forum that they might consider termination if the unborn child was the "same sex as previous children in the family."[52]

A quick internet search also reveals that first trimester sex determination testing kits can be purchased on the internet, either from Australian or overseas suppliers. For example, for $AUD 75, the Intelligender (claiming 90% accuracy) is available from Australian chemists and can be done at home. The mother's urine can be tested from as early as the eighth week of pregnancy.[53] Testing such as this can allow a mother to 'determine' the sex of her unborn child early in pregnancy. This result which may or may not have accurately determined the sex of her unborn child could prompt the mother to act without any medical advice or support.

Sex Selection Arguments

When examining the question of sex selection there are many questions that need to be pondered and answered, keeping the common good of society at the heart of the conversation. Some of the questions that should be considered are: why do prospective parents want to access sex selection, is it ethical to use medical technology for this purpose, is it appropriate to access a medical intervention when one is not suffering from an illness, does a government have an interest in prohibiting sex-selection and what will be the effect on society if sex-selection is allowed?

… Some questions: why do prospective parents want to access sex selection? is it appropriate to access a medical intervention when one is not suffering from an illness? what will be the effect on society if sex-selection is allowed? ...

Many couples believe their personal reasons for choosing the sex of their unborn child are rational and can be acceptable in a pluralistic society which values personal reproductive freedom. They feel that they should be able to choose what is ethically acceptable to them from the medical technologies that are available locally and internationally. There are also some strong viewpoints supporting reproductive autonomy and a parent's right to choose. However, there are many robust arguments that advocate sex selection should be banned:

Arguments Against Sex Selection

The potential to create an imbalance in the male:female gender ratio is put forward by Kalfoglou et al and many others as one of the most troublesome outcomes of sex selection. Male:female sex ratios at birth are calculated from the normal ratio of about 105 males:100 females. (Another figure used is 104 females:107 males.) These ratios are based on global ratios prior to the introduction of technology that could ascertain the sex of a child prenatally.[54]

There is much empirical evidence from various studies that confirm in some countries there is a genuine skew in this ratio which is the result of the sex selection of unborn children, usually with the preference for a male child. This is evident in some Asian countries, such as India, China, South Korea and Vietnam, as well as a number of the newly independent former Russian states in the Caucasus.[55] However, this effect may be unlikely in Western countries as a strong preference for one sex needs to pre-exist for an imbalance to occur.[56]

Much has been also written regarding the effects on societies that have a male dominance. Hudson and Boer in their book *Bare Branches:*[57] *The Security Implications of Asia's Surplus Male Population,* suggest that violent crime - in particular the kidnapping and trafficking of women - has become widespread in areas where there are too many men. These surplus men in China often lead transient lives and are not connected within local communities which can provide stability. The nineteenth century Nein Rebellion is thought to have been caused by bare-branch militias. Brooks suggests that the tens of millions of excess males in Asia could be a threat to global stability as much as to the stability of their own societies. This is also something he suggests should not be taken lightly in Australian culture where we have a culture of alcohol fuelled violence.[58]

Selecting a child by its sex could be considered inherently sexist and an action that violates human dignity. Globally there are a number of laws which do not allow discrimination against a person.[59] Children have the right to be loved, respected and valued for their inherent worth, not for what they represent. Children need to be honoured and respected as a gift. In Australia, the NHMRC furthers this by stating that "sex selection is incompatible with the parent -child relationship being one that involves unconditional acceptance."[60] The selection of a child of a particular sex can indicate loss of a true sense of what it means to be a parent, as parents are choosing a particular child, not simply a child.[61] Insistence upon a child of a particular sex is also incompatible with the albeit rare occurrence of gender dysphoria and the birth of children born with ambiguous genitalia.

A child may be harmed by being selected for his or her sex, as they may be expected to behave in a predetermined manner, in accord with the gender expectations of the chosen sex. Indeed, they may be resented if they do not fulfil this parental expectation. Children have the right to an open future, being brought into the world with as much freedom as possible to work out who they are and what they want to be. This freedom is potentially narrowed - as is the child's ability to choose his or her own life's journey - when a parent has expectations of a child because of their chosen sex.[62]

… Selecting a child by its sex could be considered inherently sexist and an action that violates human dignity ...

When parents choose their child's sex, they invest significant money to do so. Often when one invests money, one expects a return.[63]

Slippery slopes are often considered in ethical debates. Thus, it is frequently argued that sex selection could be the beginnings of the slippery slope towards the acceptance of other eugenic technology. Some question, is sex selection the first step towards designer babies? Furthermore, if choice is available for different characteristics, will those parents who have a child born with imperfections be blamed, as they did not employ the techniques available to avoid such a birth?[64] Can this slippery slope be compared to that of euthanasia and physician assisted suicide where, for example, in Belgium the gate posts of what is permitted keep moving?[65] To be fair, Kalfoglou et al does comment that there is no evidence which suggests that a slide is inevitable.[66]

… The National Health and Medical Research Council furthers this by stating that "sex selection is incompatible with the parent-child relationship being one that involves unconditional acceptance" ...

Medical interventions are usually reserved for those who require assistance for a medical reason. The utilisation of medical intervention to conceive a child when neither prospective parent is infertile questions the use of facilities, technology and resources. As well, as with all new medical technologies, the long term safety aspect of the procedures utilised is unknown, and this will continue to be uncertain as newer technologies are introduced. This is a potential unknown harm to both the mother and the child.[67]

The social justice aspect of selecting the sex of a child, runs deep. Almost all reproductive technologies can only be accessed by those who can afford them. With sex selection, only the affluent will be able to access PGD and sperm sorting techniques. If PGD is utilised, embryos are created and destroyed if they are of the undesired sex. The dignity of each person born and unborn is not upheld by this distribution of resources.[68]

It has also been argued that sex selection may result in a distortion of birth order. It has been hypothesised that often parents would seek to ensure that their first born is a male. However, America data demonstrates that in the United States at the present time, gender selection is usually sought only when a family has two or three children of one sex and are seeking a child of the opposite sex.[69]

One of the other most often quoted reasons against sex selection is that society is playing God.[70] For Catholics the sexual act is both unitive and procreative, and sex selection is seen to be against natural and divine law.

Arguments For Sex Selection

Both in Australia and around the world, debate continues about whether or not sex selection for social reasons should be permitted. Even those who oppose sex selection for social reasons should be aware of the arguments of their opponents:

In *On Liberty,* John Stuart Mills argues that the only rationale for constraining the freedom of a person is to protect others. Kalfoglou et al references fifteen papers on sex selection which claim sex selection causes no harm. This is the most commonly utilised argument for allowing sex selection for parental preference.[71] McCarthy endorses this view, stating that "it is hard to see that selecting sex is interfering with the basic liberties of others." He suggests that we need to evaluate the harms and costs that could arise from sex selection.[72]

Savulescu examines the possible harm to the child, family and society if sex selection was permissible. He argues that children do not live up to parental expectations almost daily, and so a child chosen to be a particular sex who did not fulfil a parental desire of that sex, would be just one more example of a common reality. The parents who seek the opportunity to select the sex of their unborn child, could be considered to benefit from that child because they have been able to choose the sex of a particular child they desired. Other siblings could be potentially at harm; however, they are not necessarily unwanted just because one child happened to be specifically chosen. Savulescu comments that the personal belief structure of the parents should influence the outcomes of children in a scenario such as this. Savulescu argues there is no risk of psychological harm to anyone when the motive for sex selection is for family balancing.[73] He claims that family balancing is not about a particular sex's superiority, but rather about a desired variety of the sexes.

… "a false belief in the inferiority of women is not a product of sex selection," but rather "sex selection is the product of that belief" ...

Further, as parents are able to choose to accept or terminate a child with a disability, should they then also be allowed to choose to accept or terminate a child of a particular sex?[74] Certain jurisdictions allow the selective termination of an unborn child with a disability even if having a child with a disability means the message of such a birth could have a positive impact on the marginalisation of the disabled. The harm and discrimination that is often suggested could affect women if sex selection is allowed may actually be advantageous to women. They will become the rarer sex, possibly being able to provide more influence. Savulescu also argues that "a false belief in the inferiority of women is not a product of sex selection," but rather that "sex selection is the product of that belief." Overall, Savulescu argues that the degree of harm that could arise from sex selection is not enough to allow a jurisdiction to impinge on a person's reproductive autonomy. A further argument is that a request for an embryo which does not have a sex-linked condition can be considered as a method of incidental sex selection.[75]

Contemporary issues

The fluidity of populations includes migrations from Asian countries to Western countries. This migration can include the preservation of cultural beliefs and traditions, bringing into a number of Western countries issues with sex selection.[76] As shown from the cultural belief systems in both India and China, male preference is embedded into

their cultural system of beliefs and is centuries old. South Korea recently led a very successful campaign to alter the belief that daughters were not worthwhile. Campaigns were run on television and by various other methods, to encourage parents to accept daughters. This campaign was so successful that the skew in the sex ratio in South Korea has now almost normalised.[77]

… "ancient-held cultural beliefs can be serviced by contemporary medical technologies." ...

Canada, the United States and Britain have shown through studies of their migrant populations that the cultural belief of son preference does exist in some cultures within their societies. An article in the Canadian Medical Association's Journal in 2012, highlights the significance of son preference amongst Canadian immigrants from south and east Asia with the ratio for first born children only slightly higher than the norm at 1.08. Amongst the immigrants this ratio becomes skewed for subsequent births where the first child is female, varying between 1.39 to 1.90.[78] Ray et al demonstrated in a study that an Indian-born multiparous woman in Ontario is significantly more likely to have a male infant than other Canadian multiparous women. Ray et al suggest that their findings indicate that Indian-born couples in Canada are more likely to utilise prenatal sex determination and terminate a subsequent pregnancy if the unborn child is female. While this study lists many limitations (e.g.it did not investigate the length of time of residence in Canada, nor look at the ancestry of the Canadian-born mothers), it does provide an insight into some possible practices amongst Canadian immigrants.[79] Puri et al in a study in the USA, in which courageous Indian women shared their personal stories, established that 40% of the sixty-five women interviewed had terminated a previous pregnancy as they were carrying a female child. Puri et al detailed how the use of current medical advances are shaped by the sociocultural environment. The women interviewed had learnt in India that the purpose of an ultrasound was to determine the sex of the fetus. Again, this study had its limitations in making generalised statements as the sample was not randomly selected but self-selected from women who had actively pursued sex selection technologies. However, the study shows how ancient-held cultural beliefs can be serviced by contemporary medical technologies.[80] In Britain, Dubec and Coleman calculated that there was an increase in the sex ratio of children of Indian-born women in Britain. They calculated that approximately 1,480 females are missing from 1990 to 2005. Their findings on an increase in the sex ratios confirm two earlier studies in Britain.[81]

All medical technologies can be accessed through medical tourism. They are marketable products that transcend international boundaries. In reproductive tourism, a commercial exchange takes place that puts a monetary value into the relationship between parent(s) and a child, i.e. if a couple/person desire to choose the sex of their child because they want to, they will do so if they can and most of all if they can afford it. Alternatively, Wittaker suggests that clinics offering the service of sex selection can be considered as exploiting the desires of parents who are prepared to pay whatever is charged to fulfil their personal desires.[82]

Concerns have also been voiced about the rapidity of evolving technology and its impact on the values of society, and how we could evolve into a society that utilises technology to allow us to become selective about who we allow to be born.[83] Placing restrictions on the disclosure of the sex of an unborn child until the pregnancy has passed the gestational age where elective abortion is legal, has been suggested as a means of discouraging sex selection abortion. In the last thirty years, five Asian and south Asian countries have put in place legal restrictions on the use of medical technology either to determine the sex of an unborn child or for the terminations of a child based on sex.[84] It is entrenched cultural beliefs and desires that support the use of medical technologies for such practices.

Wittaker proposes as a term "the pathologization of gender disappointment." This term is not to trivialise postnatal depression, but to indicate that the reproductive technology industry could be using family balancing and gender disappointment as a means of medical entrepreneurialism and exploitation to encourage the purchase of their services. Further, Sauer comments that in some situations those who support sex selection are often in a position to profit financially.[85]

… we could evolve into a society that utilises technology to allow us to become selective about who we allow to be born ...

Another quick internet search yields pages and pages of blogs, forums and advice on how to cope with gender disappointment. A small number of studies have looked at the issue of postnatal depression in cultures with a preference for a child of a particular sex. Robertson et al reviewed the literature available till 2004, finding that studies in Western societies showed no association between gender disappointment and postpartum depression. However, gender disappointment was significantly associated with a risk of developing postpartum depression in Indian and Chinese populations.[86] A further literature review in 2008 by Klainin and Arthur, found seven studies that investigated the effect of a baby's gender on the mother's postpartum depression. A greater risk of post-partum depression was found in Indian, Turkish, Chinese and Japanese women if they had delivered a female child. These new mothers were found to be blamed for the female child and experienced antipathy, criticism and hostility from their husbands and mother-in-laws. Again the cultural preference for male children is the offender.[87] In 2011 in Canada, Davey et al reported that the sex of a baby did not influence the risk of postpartum depression. Although immigrants in the study had a greater risk of postpartum depression, it was not linked to the sex of the baby but rather to the issues surrounding migration.[88]

However, Joyce Venis, a psychiatric nurse in New Jersey in the United States, estimates that at least 40 percent of her clients with either prenatal or postnatal depression state

have some feelings of disappointment with the sex of their child. Venis suggests that society should not make these women feel guilty.[89] In *Postpartum Depression Demystified*, Venis and McCloskey list "Unhappiness with Baby's Gender," as one of the psychological risk factors for postpartum depression.[90] Venis and McCloskey discuss that a desire to have a child of a specific sex can leave a woman feeling guilty about being disappointed with the sex of their child, whether they are disappointed for themselves or because they were unable to give their partner a child of a desired sex.[91] Sherr comments that we need to consider in such women whether they are depressed because of the sex of their baby or whether they are simply depressed and the baby's sex has become a focus of their depression? Sherr notes that most parents don't give up parenting their children even if they are of the undesired sex; if they do, this probably points towards something more worrying.[92]

The reality check came for one mother who had desired children of a particular sex. After some initial prenatal testing suggested the possibility of an abnormality, she rushed to have an amniocentesis. When the results showed everything was fine, she stated, "For the first time, I understood the phrase, 'it doesn't matter what the baby is, as long as it is healthy.'"[93]

… "it doesn't matter what the baby is, as long as it is healthy" …

Conclusion

Sex selection fulfils the desire of the parent(s), not the desire of the child. New medical technologies allow us to choose the sex of unborn children. Is the ability to choose and thus fulfil a parental desire appropriate? Or has the child whom we desire just become another product, an accessory that can be bought on the open market and which we simply must have because we desire it?

… While laws can attempt to bring about a change, they cannot change the desire …

While laws can attempt to bring about a change, they cannot change the desire. We therefore need to change the cultural influences that premeditate a desire for a son. We also need to change our attitudes to the view that 'I want, so I will do whatever I can to get it.' In the West, sex selection is often requested for family-balancing reasons. But this is also a cultural, gendered desire, not essentially different from the cultural desire of those who yearn for a male child to fulfil their needs. As Wittaker states, to say that Western sex selection differs in principle to that of non-Western countries is Orientalism.[94] We need to value each and every child as a gift, for who they are, and for their potential. We need to embrace the child for what they can teach us, not for what we expect them to fulfil for us. We do have many disappointments in life, let not the gift of the birth of a child be one of them.

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