

# SCRIPT-ed

*Volume 1, Issue 1, March 2004*

## **Sex selection: options for regulation**

*Nadja Kanellopoulou*\*

DOI: 10.2966/scrip.010104.217

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\* Nadja Kanellopoulou is a PhD Research student at the AHRB Research Centre for Studies in Intellectual Property and Technology Law, School of Law, University of Edinburgh

## 1. Introduction

In 2002, the UK Government asked the Human Fertilisation and Embryology Authority (HFEA) to conduct a review of sex selection techniques, their safety and reliability and the options for their regulation.<sup>1</sup> HFEA conducted a review that sought to take into account public and expert opinion, findings from public consultations and commissioned research on the scientific, technical, social and ethical issues. HFEA presented its recommendations a year later, in its November 2003 report.<sup>2</sup> In the report, HFEA recommended that the current prohibition on sex selection for non-medical reasons should continue and that unregulated techniques for treatment involving sperm sorting should be regulated in the UK.<sup>3</sup>

## 2. The Background

Sex selection involves choosing the sex of an embryo, which is determined by the sex chromosome carried by the sperm. There exist a number of different techniques for sex selection pre- and post-conception.<sup>4</sup> Some of them have been available since the 1970s. However, more recent developments since the early 1990's seem to compel a re-examination of the safety, efficiency and reliability of available techniques as well as their regulation.<sup>5</sup>

The recent HFEA report focuses on two of the methods used most frequently for sex selection: pre-implantation genetic diagnosis (PGD) during in vitro fertilisation (IVF) fertility treatment and sperm sorting. PGD enables screening for chromosomal diseases and allows implantation in a woman's uterus of embryos not affected by a particular genetic. Sex selection can be part of a procedure to screen for sex-linked disorders and thus allows the selection of embryos of the desired sex.<sup>6</sup> In UK, PGD can only be used for medical reasons and is closely regulated. Only clinics licensed by HFEA can offer PGD and only where there is a risk of a serious inherited genetic disease.<sup>7</sup> Licensed clinics have to comply with the HFEA Code of Practice. This allows HFEA to monitor and control the practices that take place in clinics across the UK.

Another technique, made possible since the mid-1990s, is sperm sorting. There are a number of sperm sorting techniques, developed by different teams based mainly in the US.<sup>8</sup> All techniques allow separating male from female sperm (that is, sperm carrying

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<sup>1</sup> HFEA, *Sex Selection: Options For Regulation* (2003)

<sup>2</sup> *Ibid.* The full report is available from the HFEA website at <[www.hfea.gov.uk](http://www.hfea.gov.uk)>

<sup>3</sup> *Ibid.*

<sup>4</sup> *Ibid.*, paragraph 2.

<sup>5</sup> Parliamentary Office of Science and Technology (POST), "Sex Selection" (2003) *Postnote* Number 198, 2.

<sup>6</sup> E S Sills et als, "Preimplantation genetic diagnosis: considerations for use in elective human embryo sex selection" (1999) *J Assist Reprod Genet* 16 (10) 509.

<sup>7</sup> There are currently eight clinics licensed by HFEA to carry out PGD to specific medical conditions and these include sex-linked diseases that affect only males, such as Duchenne's muscular dystrophy or haemophilia, see note 1, above.

<sup>8</sup> See note 5, above.

Y or only X chromosomes respectively), in order to increase the chance of conceiving a child of the preferred sex. Sperm sorting takes place prior to conception and it does not necessarily involve storage of sperm, since fresh sperm can be used. Thus, because the technique is not directly involved with the storage or the creation of an embryo, it does not fall under the remit of HFEA.<sup>9</sup>

This leaves a legal loophole in the UK that has allowed private, non-licensed clinics to offer the technique for non-medical reasons. In addition to this, questions regarding the reliability of sperm sorting techniques are still in the air. They may be less intrusive and less expensive than PGD but the success rate and safety of some of them is still controversial.<sup>10</sup> Both of these observations relate to real issues that any possible regulation of sperm sorting ought to address. Currently, sperm sorting techniques remain unregulated in the UK. The recent HFEA review called for them to be regulated.<sup>11</sup>

It is worth noting that the recent HFEA review was launched partly as a response to reports that sperm sorting was being offered in private clinics, and partly to reports that a sperm sorting technique was available commercially for British and other couples in a Belgium clinic, in collaboration with a US laboratory.<sup>12</sup> These reports raised concerns that people were trying new techniques that promised better success rates. Yet little evidence about the long-term effects of new techniques exists.<sup>13</sup> It was in the light of these reports that HFEA felt that a re-examination of sex selection was needed, to see if public opinion had shifted since the last public consultation on sex selection in 1993, which had outvoted non-medical sex selection.<sup>14</sup> The HFEA launched its second public consultation on sex selection and the availability of new techniques in October 2002 and took the findings of this consultation into account in its recent review.

### **3. The HFEA approach**

For the purpose of this commentary, it is interesting to focus on specific aspects of HFEA's approach. According to HFEA, licensed centres should not select the sex of embryos for social reasons and should not use sperm sorting techniques in sex selection. Licensed clinics are only allowed to select sex of embryos using PGD for the avoidance of serious, inherited, sex-linked disorders.<sup>15</sup>

The recent report confirmed and retained the status quo, only allowing sex selection to avoid serious sex-linked disorders. In doing so, HFEA considered a number of key findings. These findings rely partly on the results of the public consultation that

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<sup>9</sup> For a table of regulated techniques and permitted uses under HFEA, see note 1 above, paragraph 5.

<sup>10</sup> See note 8, above.

<sup>11</sup> See note 1 above, paragraph 114.

<sup>12</sup> The Observer, 'Parents pay to choose baby's sex' and "Will it be a girl or a boy?" (2002) 8 September.

<sup>13</sup> K Horsey, "Sex selection" (2004) *BioNews* 31 January, available at <[www.bionews.org.uk/update.lasso?storyid=1660](http://www.bionews.org.uk/update.lasso?storyid=1660)>

<sup>14</sup> HFEA, *Sex Selection Consultation* (1993).

<sup>15</sup> HFEA, *Code of Practice* (2003), paragraphs 9.9 and 9.10. See also HFEA (2003) report, note 1 above, paragraph 12.

revealed “very widespread hostility to the use of sex selection for non-medical reasons”.<sup>16</sup> Both the quantitative strength and consistency of the public opposition to social sex selection made HFEA assert that there would need to be “substantial demonstrable benefits” of a pro-social sex selection policy, if the state were to challenge the public consensus. HFEA did not consider the potential positive debatable benefits strong enough to support a policy to which the great public majority is opposed.<sup>17</sup> In its report, HFEA also stated that, ‘although some people’s private motives for wishing to select in favour of a particular sex could be perceived as morally unacceptable’, in HFEA’s view ‘they need not always be so... [that] it is neither possible nor desirable to restrict access to sex selection on such criteria’.<sup>18</sup>

HFEA placed emphasis on the impact of sex selection on the child born as a result of sex selection, taking into account the welfare of any existing children in the family. Hence the most persuasive arguments for restricting access to social sex selection refer to the welfare of the children and families concerned. HFEA weighed a number of factors affecting the welfare of the children concerned, namely, psychological harm if a child finds out that she had been sex-selected, the possibility of preferential or prejudicial treatment to fit parental expectations, or the potential for favoritism and neglect of existing children. It also anticipated, if the birth of a child of undesired sex occurs as a result of a misdiagnosis, how this child might suffer from parental frustration and disappointment.<sup>19</sup> All of these concerns warrant extreme caution, even if sex selection is not always incompatible with the welfare of the child. An example of this is argued in the context of family balancing below.

#### **4. Commentary**

Does the question of whether we should be allowed to choose the sex of our children depend on whether sex selection techniques have become more reliable? The recent HFEA report aimed to address whether sperm sorting techniques should be allowed and regulated. The report is practical, in terms of what procedures and options may or may not be available. It addresses sex selection as a reality and does not pose the questions in terms of whether the techniques should be permitted but, rather, in terms of whether they should be restricted. The social and ethical issues regarding sex selection were already discussed previously in its 2002 report.<sup>20</sup> This was accompanied by a questionnaire to raise awareness around the issues and to invite responses, so that HFEA could consider and present policy recommendations to the Government, in light of new advances in technology and research.

Many participants in the 2003 public consultation suggested that the social and ethical arguments about sex selection should be separated from the arguments regarding the relevant technology. In ethical terms, there is a fundamental conflict of values involved in debating sex selection and this pertains to the reasons for social sex selection. What motivates people to select the sex of their child varies. Setting

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<sup>16</sup> See note 1 above, paragraph 147.

<sup>17</sup> *Ibid.*

<sup>18</sup> See note 1 above, paragraph 137

<sup>19</sup> *Ibid* paragraph 139

<sup>20</sup> HFEA, *Sex Selection: Choice And Responsibility In Human Reproduction* (2002).

medical reasons aside and apart from the issues related to the adverse impact on the welfare of the child, as already seen above, there are a number of identifiable risks and harms from non-medical selection, including the potential for discrimination and the enforcement of gender roles and sexism, and concerns about so-called 'designed babies'. Religious and other social and cultural reasons also apply and affect the motivation for choosing a child's sex. Such reasons are culturally, ethnically and socially dependant, as in the example of countries like India or China, where males are favoured, in accordance with traditional social and economic standards or pressures.<sup>21</sup> Relevant studies in these countries show that sex selection techniques, when available on a wide scale, can have a direct impact on the sex ratio of populations. Take, for example, the millions of missing female children in rural China, or demographic data ratio changes in more recent years.<sup>22</sup> It must be noted, though, that data about western societies do not raise the same concerns. They indicate preferences for girls in European societies and they estimate that restricted techniques would not significantly affect the overall sex ratio, should they become available.<sup>23</sup> Other concerns regard the issues of equality and fair access to services via the NHS – or, rather, not via NHS - since these procedures are expensive and could be afforded privately by few.

It was insightfully pointed out, in the HFEA 2002 report that most instances of sex selection tend to be about the preferences of the prospective parents, rather than of the future children.<sup>24</sup> This, for the present analysis, is problematic. In non-western countries, where there is a prevalent preference for male children, it seems inappropriate to employ sex selection as the answer to social and economic problems. The traditional reason for bringing a child into the world is love, and it is better perceived as unconditional love, with no wish to control or infringe the child's autonomy. Moreover, a child's sex is fundamental to her identity and her personality and the reasons given above do not seem strong enough to justify an intervention of this kind. In addition, choosing a child's sex for other than medical reasons seems to turn the process into a consumer experience, giving it a measurable, commodified value.

Then again, the prominent argument against prohibiting sex selection is that it infringes individual autonomy and procreative choice.<sup>25</sup> This, of course, assumes that we accept that procreative choice may always contain the right to actively choose a child's sex. It has been argued that it is difficult to see why family design should not include reliable sex selection practices, especially when much family planning of other sorts is practiced and encouraged.<sup>26</sup> Yet again, it is not obvious for this analysis that the inclusion of social sex selection in family planning would be in accordance

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<sup>21</sup> G Benagiano and P Bianchi, "Sex preselection: an aid to couples or a threat to humanity?" (1999) *Hum Reprod* (14) 868.

<sup>22</sup> A Malpani et als, "Preimplantation sex selection for family balancing in India" (2002) *Hum Reprod* 17 (1) 11.

<sup>23</sup> See note 20 above, paragraph 86. See also J A Simpson and S A Carson, "The reproductive option of sex selection" (1999) *Hum Reprod* (14) 870.

<sup>24</sup> See note 20 above, paragraph 87.

<sup>25</sup> See S McLean, "Intergenerational Justice" (2004) *BioNews* 240, 5-11 January, Commentaries. Also see J Savulescu "Sex selection – the case for" (1999) *Med J Australia* (171) 373.

<sup>26</sup> J K Mason & R A McCall Smith, *Law and Medical Ethics*, 5<sup>th</sup> edn (1999).

with the autonomy and human rights of the child in question. Of course, the question whether the state can interfere with the reproductive freedom of individuals and ban parents from choosing their child's sex is an issue for regulation by legislation and cannot be resolved here. A few thoughts are offered however, to indicate a potential direction. HFEA recognises that sex selection concerns one of the most intimate aspects of private family life, namely the decision to have children, and that the state should intervene only to prevent the occurrence of serious harms and only where this intervention is non-intrusive and likely to be effective.

Another non-medical reason for sex selection, popular in the US, is family balancing, namely the possibility to opt for sex selection to complement an existing family with a child of the other sex than the one the family already has.<sup>27</sup> According to the HFEA 2003 report, many people feel uncomfortable with the idea of choosing a child's sex to balance a family. Nonetheless, there have been cases in which parents have sought to balance the family through sex selection. One example is the case of the Mastertons, which was reported in the UK media in October 2000. The Mastertons asked HFEA to allow them to undergo IVF treatment and select a female embryo using PGD. Mrs Masterton had been sterilized after the birth of their youngest daughter who had died the year before. The family had four sons and claimed the right to rebuild their family. No UK clinic applied to HFEA to treat them on these grounds so they sought treatment in Italy.

There is some literature, mainly in the US,<sup>28</sup> which argues the case for limited sex selection for family balancing. The proposals do, however, include a number of restrictions, namely that selection will not proceed if the family is already 'balanced', the selected sex must be of the outnumbered sex, and selection cannot be used for the first child (or not after a second child of the same sex is born).<sup>29</sup> Family balancing seems here to be perceived as serving a corrective or pre-emptive function. It could be argued that it is not associated with sexism because the sex is 'conditioned' by the sex of the already existing child (or children). It has also been argued that it can contribute to the happiness of the family by evening out dynamics in the family.<sup>30</sup> The HFEA 2002 report entertained family balancing to the extent that some people may feel that there is something potentially better in having a family with children of both sexes. The report remarked that it did not aim to take any position since its purpose was to inform and facilitate rational debate on the issue. It seems that the same objections discussed earlier can equally be raised against the family balancing claims, even if an interest could be recognised in having a family with children of both sexes. It remains to be seen how the Government will respond to the recent recommendations in the near future.

The UK Department of Health (DoH) has already announced plans to conduct a full review of the HFE Act 1990. The DoH review has to examine wider issues to

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<sup>27</sup> G Pennings, "Family balancing as a morally acceptable application of sex selection" (1996) *Hum Reprod* 11 (11) 2339.

<sup>28</sup> *Ibid.* See also Ethics Committee of the American Society for Reproductive Medicine (ASRM), "Preconception gender selection for non-medical reasons" (2001) *Fertil Steril* 75 (5) 861, "Sex selection and preimplantation genetic diagnosis" (1999) *Fertil Steril* 72 (4) 595, J D Schulman "Ethical issues in gender selection by X/Y sperm separation" (1993) *Hum Reprod* 8 (10) 1541.

<sup>29</sup> *Ibid.*, Schulman.

<sup>30</sup> *Ibid.*

determine whether there is a need to update the HFE Act. The Act has remained unchanged since its introduction in 1990, although there have been a number of considerable challenges in recent years, such as the ability to license research using cloned embryos, the ability to license PGD with tissue typing, or the very recent challenge on the consent provisions about two women's frozen embryos. The aim is not to re-open the fundamentals of the Act, but to ensure that the Act will be as effective as possible in the future. One of the issues to be considered is reproductive procedures and techniques that have developed since the Act was introduced and that are now unregulated. Sex selection should be one of them. As the review develops, it will be interesting to follow any account of the impact of new procedures and of possible changes to public perception over ethical issues in assisted reproduction, as well as the impact of international legislative initiatives.<sup>31</sup>

The DoH review is scheduled to include a full public consultation in 2005. It will also take account of the findings of the current SCT inquiry into human reproductive technologies, due in autumn 2004. Last January, the Parliamentary Science and Technology Committee (SCT) launched an inquiry into human reproductive technologies and the law, with a view to bringing regulation of reproductive technology issues before Parliament for debate. Among other issues, in the context of sex selection, the SCT is considering what constitutes a 'serious disease' and if it is time to draw the line before demand grows for wider use of available techniques. The SCT will also be asking if a ban on non-medical selection is workable, since techniques are available overseas, and UK patients cannot be stopped from traveling abroad to seek treatment via these techniques, as the Chair of HFEA has observed.<sup>32</sup>

## **5. Conclusions**

At the moment, the question remains whether the Government will follow the HFEA recommendations to maintain the prohibition on non-medical sex selection and to extend protection to the regulation of sperm sorting techniques. The recent HFEA reports on sex selection revealed that there is strong public consensus against non-medical sex selection in the UK.

This analysis aimed to describe the current state of affairs and to address the main controversial issues. Fundamental questions still remain, however. Does the issue really depend on the availability of reliable techniques? Is this only about assessing risks and balancing the benefits? Could human rights be used as a safeguard against parental intervention? If there are complex ethical questions to address, will the law address them and balance the relevant values accordingly? It remains to be seen what will be proposed in the next year. Given the previous record of the HFE Act as a landmark piece of legislation, we must have faith that, in its new form, it will reflect consensus, expertise and flexibility in the years to come.

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<sup>31</sup> Department of Health, "Review of the Human Fertilisation and Embryology Act 1990" 20 January 2004, available at <[www.doh.gov.uk](http://www.doh.gov.uk)>

<sup>32</sup> BBC News, "Baby gender selection ruled out" 13 November 2003, available at <[www.bbc.co.uk](http://www.bbc.co.uk)>