



The Human Fertilisation and Embryology Bill 2008 Parliamentary Briefing 1

Genetic Modification of Human Embryos ...opening the door to GM children

In the Human Fertilisation and Embryology Bill, the Government wants to allow the creation of genetically modified (GM) human embryos, in order to develop safe technology for creating GM children. All participants in the debate about Human Genetic Modification (HGM) agree that it would be a momentous step, the point when humans begin to direct their own evolution. Nearly all European and industrialised countries treat HGM just like reproductive cloning, and have banned it, and the EU has therefore prohibited any research towards cloning and HGM in its last two Framework Research Programmes¹. The Government's decision is an historic first which breaks the international consensus, yet few people are even aware of it.

HGA² is secular and supports women's reproductive rights - our concerns are about the ethical and social consequences of starting down the road towards GM children. **HGM is medically unnecessary, but will lead to consumer eugenics and the treatment of children as commodities. We urge MPs to support amendments restoring the existing ban on genetic modification of human embryos.**

The Government's plans

The Government initially stated openly its aim to allow the

development of safe technologies for HGM, citing the Science and Technology Committee's 2005 recommendation. (Existing GM techniques would not be safe for human use, since they often disrupt the embryo's chromosomes, leading to deformities.) Although the Bill retains, for the present, the existing ban on implantation of such embryos, (see overleaf for details) this is not reassuring, since the Government is refusing to state clearly that the creation of GM children would be ethically wrong³. It would certainly be illogical to begin research on something which you intended to remain permanently illegal - hopefully the Government would not allow research to develop eg. human cloning.

It is naïve, therefore, to think that research is, in itself, harmless. The creation of GM babies is not just hypothetical: Robert Winston (a Government adviser on these issues) and Ian Wilmut have already patented HGM techniques, including patenting GM human semen and embryos⁵. Clearly, what is planned is a normal process of technology development, followed by legalisation (initially, the Government proposed to take the enormous step of legalising GM babies through regulations!). **In HGA's view, since Human Genetic Modification would be a disaster for our society, it makes no sense to allow research intended to develop it.** The UK should follow the EU lead in banning such research.

The Ethical Case Against Human Genetic Modification

HGM is medically unnecessary, but will be used to make 'designer babies'

HGM could be used to treat genetic diseases, but if parents wish to avoid passing on genetic diseases, there are other ways of doing this. People may remain childless, adopt, use sperm or egg donation, prenatal testing, or genetic testing of IVF embryos. HGM is therefore medically unnecessary, but it is the only technology that can produce genetically 'enhanced' children, and that is where its real market will be. If HGM was permitted, it would be impossible to prevent its use for 'enhancement', as drugs and surgery are used today.

HGM commodifies children Traditionally, we see human beings as subjects endowed with rights. HGM overthrows that basic conception, degrading human

subjects into objects, to be designed like any other consumer goods. Obvious consequences of doing this would be a disruption of parents' unconditional love for children - parents who have given their child an expensive set of genes will expect them to perform according to their specifications. This is what many people mean when they say that we should not play God with our children. HGM would undermine the child's sense of free will and pride in their achievements. The objectification inherent in HGM undermines human dignity, and ultimately will undermine human rights.

A new eugenics HGM would soon become the basis for new social inequalities based on a person's 'genetic merit', and the worst prejudices in our

society would begin to be written into our genes. Disabled people are worried that consumer eugenics would reduce society's tolerance for them, and HGM would be used like cosmetic surgery to help people's bodies conform to social prejudices. Since the technology would be very expensive, wealthy people would be able to give their children genetic advantages over others.

It is often said that while a market economy is a good thing, a market society is not. With HGM, we would be going beyond a market society - we would be creating a market humanity, in which market forces are written into our genes. This would be a decisive defeat for anti-discrimination and diversity politics, and for all politics based on the idea of basic human equality.

Once we start down the road to HGM, it will be very difficult to turn back, so it is crucial that this issue is debated now. The lesson of GM food is that there must be democratic decisions at the earliest stages: if people are presented with a fait accompli there will be a backlash against science. In fact, HGA has been contacted by gene therapists who are worried about the effect that this decision will have on the public's support for their work. Quite apart from its social consequences, the fact that there has been practically no public debate about beginning GM embryo research is a good enough reason not to allow it now.

Genetic modification for basic research?

Since HGA began campaigning and alerting the public about the threat of GM embryos, government spokespeople have started to claim that the aim of the Bill is to allow genetic modification for basic research purposes, unconnected with the development of safe techniques for HGM. But at present there are no proposals for basic biomedical research of this kind being put forward by the scientific community. We suspect that the technical difficulties and inefficiency of genetic modification explains why, although genetic modification of human embryos has been technically possible for more than 20 years, scientists have never come forward with proposals to begin such research.

It is hard to justify a change in the law on the basis of speculative possibilities, rather than concrete proposals. The recent detailed debate over human-animal hybrids, for example, would have been impossible without concrete research proposals to judge, and a group of scientists to defend them. It would therefore be much better to wait until there are actual proposals to be judged, before changing the law. In our view, the Government's 'future-proofing' is an abdication of its responsibility to consider the ethical and social consequences of new reproductive and genetic technologies on a case by case basis. Instead of considering the broad public interest, it would appear that the government is bowing to lobbying pressure from narrow scientific interests. The most often used analogy for the way genetic and reproductive technologies are being developed is a runaway train, with society constantly struggling to keep up with the ethical consequences of new technologies. **By simply allowing unspecified research in future, without adequate debate, the Government's 'future proofing' is setting the signal lights to green all the way up the track.**

Conclusion

The Government's proposal to allow genetic modification of human embryos disregards public opinion and is dangerous in the extreme, since it opens the door to HGM. **In our view, on an issue of such huge potential consequences for the whole world, and for future generations, the British**

Legal details of the HFE Bill⁴

The Government's decision to allow scientists to create (GM) human embryos was stated clearly in the White Paper (Paragraph 2.52). However, the words 'genetically modified', do not appear in the Bill, because what the Government has done is to remove the prohibition on genetic modification in Schedule 2, paragraph 3(2)(4) of the 1990 Act.

There would now be no rules regarding genetic modification of embryos: when an application to create GM embryos is made to the HFEA, it would be treated like any other application. The HFEA has never finally rejected a research license application in the 18 years of its existence. The Bill also positively permits the creation of a subset of GM embryos, those containing animal genes, in Clause 4A(5), which defines 'human admixed embryos'.

The Bill prohibits, for the present, the implantation of GM embryos in a woman: it defines embryos which may be implanted into a woman as 'permitted embryos' (Clause 3(2) and 3ZA), and paragraphs 2b,3b and 4b of Clause 3ZA state that an embryo, egg or sperm cannot be 'permitted' unless their nuclear or mitochondrial DNA has not been altered. However, this should not be taken to mean that the Government is opposed to HGM in principle, and permanently (see main text). Moreover, the Government has introduced a major loophole in the ban, by creating powers to permit HGM in cases of mitochondrial disease (Clause 3ZA (5)).

Government has no right to break ranks with the international consensus. Once British scientists unilaterally begin this line of development, it will be very difficult to stop, and will eventually oblige the whole world to deal with the consequences. There are strong reasons why nearly all other industrialised countries have instituted permanent bans on HGM and are therefore refusing to allow research on genetic modification of human embryos. The Government has given no good arguments for taking such an enormous step. **We urge MPs to reject the Government's plans.**

References

1. For FP6, see http://ec.europa.eu/research/fp6/pdf/fp6-in-brief_en.pdf, For FP7, <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2006:412:0001:0041:EN:PDF>
2. Human Genetics Alert is an independent watchdog group. www.hgalert.org, david.king@hgalert.org, 020 7502 7516
3. HGA asked for a clear statement about this in a letter to Dawn Primarolo, but the Government response failed to state clearly that HGM is wrong.
4. See http://www.hgalert.org/GMembrs/GM_Embryos_Background_Docs.html for a more detailed briefing.
5. Patent numbers: US2006064763, GB2331751 (Wilmut) and US2002138865, WO0069257, WO0029602 (Winston).