

The ethical regulation of science

Occasionally science makes procedures possible that are so radical that those at the interface between science and politics are called on to define moral standards for society.

Mary Warnock

When in 1978 the first baby was born by *in vitro* fertilization (IVF) it was inevitable that there would be calls for the procedure to be prohibited. That science develops too fast for morality had become the cliché of the twentieth century. Wisely, the UK government decided to set up a committee from which to seek advice before legislating on such a complex and emotive issue.

The Committee of Enquiry into Human Fertilisation and Embryology was founded to examine the social and ethical implications of the new techniques. Therefore the committee could not be made up entirely of physicians and scientists. With some difficulty, 16 people — including me as the chair — were gathered to look at the problem from all angles. Our areas of expertise included social work, law and theology.

We were not a group of ‘moral experts’, with particular moral authority derived from our expertise. Rather, our entitlement to propose legislation derived from the fact that we had been set up by government and that we had been given the time and resources to do so. The only other requirement was that we should all be capable of formulating and listening to arguments.

The central and most controversial issue before us was whether or not research using live embryos should be permitted. There was little possibility of a moral consensus. If research were prohibited, IVF could not continue. It would have been too risky for patients.

When legislation seemed imminent in Britain, the Catholic Church published an instruction condemning IVF and research using human embryos. The Church stated that its instruction was based on “the criteria of moral judgement as regards the application of scientific research and technology, especially in relation to human life and its beginnings”.

The Church claimed a right to regulate science in this area, because of its superior knowledge of morality. In sharp contrast, the committee’s entitlement to issue moral advice to ministers derived from its having been set up to do so, and from its having a wide and non-partisan membership.

Prohibition of IVF did not seem to the majority of the committee to be a serious option, given its widespread welcome as an innovative remedy for infertility. We all regarded infertility as a serious malfunction, causing much distress. Instead,

we proposed a strict system of licensing, backed up by the criminal law. Regulation was not a mere sop to science-phobia. There was a real danger that women, desperate to conceive, might be exploited, taken in by unrealistic promises and charged extortionate fees for futile or dangerous treatment.

Establishing what limits should be placed on embryonic research entailed a decision by the committee as to the moral

and legal status of the live human embryo *in vitro*. Those who opposed the use of embryos in research could seek to demonstrate that it was morally wrong only by answering in advance the very question we were asking. They deemed that the embryo had the same moral status as any human being. One of the most difficult tasks the committee faced was to get

parliament to understand that the status of the embryo *in vitro* was a matter not of science but of moral decision. The novelty of the embryo *in vitro* meant that there could be no appeal to precedent or existing moral convention or to religious laws.

We recommended that research using early embryos might continue. But the law demands certainty. We therefore recommended that it should be a criminal offence to keep an embryo alive in the laboratory more than 14 days after fertilization. The 14-day rule was criticized by those who sought to prohibit the research altogether and by those who complained that it was arbitrary and would not be observed.

It was not, however, entirely arbitrary. Important changes occur in the embryo at about 14 days from fertilization, after which cells are differentiated, no twinning can take place and the first signs of what will be the spinal cord appear. Such considerations weighed with us. The point was to have some legislative barrier, about which there could be no dispute. As such it has survived.

The legislation that followed the committee’s report included the 14-day rule, as well as the establishment of the Human Fertilisation and Embryology Authority (HFEA) that we recommended should

be in charge of licensing and monitoring research and clinical procedures.

The moral decisions that such committees have to make are essentially matters of public not private morality. We had to consider our own moral or religious scruples (which would obviously influence our thinking), alongside what the consequences might be of the decisions for society as a whole. This was the reason

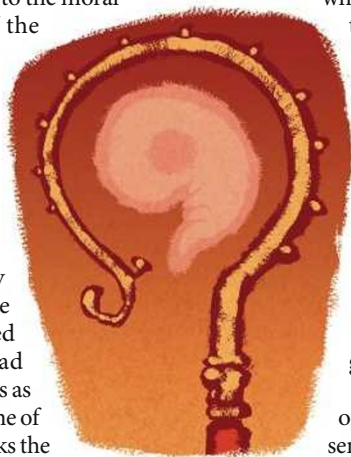
why we could not allow ourselves to be swayed by arguments derived from a particular religious dogma. The moral standards of our society in Britain, however deeply influenced by the Judaeo-Christian and Muslim traditions, are not intrinsically religious. As a committee we were given the task of setting such a standard. This must be done by weighing up possible goods against possible harms.

These harms do not include only the offending of religious sensibilities of a particular group. The legislation would govern everyone — believers and atheists — and had to take into account wider considerations, such as the relief of suffering. Nor was it to be other than permissive. No one would be compelled to seek a form of infertility treatment or engage in a form of research of which his religion taught him he should disapprove. Above all, the harm that the legislation should seek to minimize was the exploitation of the vulnerable and ignorant. This was the task of the HFEA.

One may generalize from the case of IVF to other cases where it is feared that dedicated and ambitious scientists and doctors may pursue research that some members of society find repugnant. Examples include embryonic stem-cell research, therapeutic cloning and the construction of mixed-species embryos for research purposes. But it is essential that ignorance and prejudice should not be allowed to dictate the outcome. Everyone should be educated so as to have a broad understanding of science, and an appreciation of its potential for good. Without this, we cannot responsibly erect barriers to scientific advance. ■

Mary Warnock is a philosopher and an independent crossbench member of the House of Lords, London, SW1A 0PW, UK.

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D. PARKINS