

New UK row on embryo research

Edwards in fresh ethical contretemps

Yet another public controversy has erupted in Britain about the *in vitro* fertilization of human ova and the practices associated therewith. At the weekend and in the following days, many British newspapers reported that Dr Robert Edwards, of the physiology department at the University of Cambridge, had told a weekend conference that he had been carrying out experiments on viable human embryos surplus to the requirements of *in vitro* fertilization operations.

Dr Edwards and the surgeon Mr Patrick Steptoe were the first British exponents of this technique. Most comments this week were accompanied by condemnations of what is supposed to be going on from various public figures, including Dr John Havard, secretary of the British Medical Association.

So far as can be learned, none of the popular reports so far published includes an account of what Dr Edwards actually said, first in the Galton Lecture of the Eugenics Society and then by telephone to a conference improbably held at Gatwick Airport, south of London, organized by the British Medical Journalists' Association and sponsored by the Ciba Foundation.

The occasion may nevertheless be important because of the appointment by the British government last July of a committee under Dr Mary Warnock to examine the ethical problems arising from *in vitro* fertilization. A spokesman for the Department of Health said on Monday that the newspaper reports merely confirmed that the government had foresight in setting up the committee, which is due to report two years from now. He could not immediately say whether the committee had yet met.

On the telephone earlier this week, Dr Edwards gave an account of his paper. After the Galton Lecture, the same discourse was given by telephone to the Medical Journalists' Association. He says that he explained how, in the process of *in vitro* fertilization, more than a sufficient number of fertilized ova (two or three) may be produced.

What seems not to be widely appreciated about the technique is that it is conventional to maintain these embryos in culture for between two and five days, before implanting them in the uterus of the putative mother. Dr Edwards said that he had reported to the conferences that "spare" embryos had on some occasions

been observed to provide further information on the optimum time for implantation.

Dr Edwards also reported that he told the conference that he had maintained some embryos in culture for longer than five days — nine days is the maximum so far. He said that while the primary objective of this work has been to improve the efficiency of *in vitro* fertilization, he is also interested in more distant possibilities, and told the conferences as much.

Dr Edwards said that while conventional wisdom has it that unwanted fertilized ova should be kept in a deep-freeze, but not allowed to die, until their future could be decided, there are good reasons for making use of them in studies of fertilization, differentiation and genetic abnormality.

He said, however, that there should first be "strong ethical advice" on the subject, and that those wishing to maintain human embryos for longer than a fixed period — five or nine days perhaps — should be required to have a licence to do so.

If those hurdles could be surmounted, however, Dr Edwards believes there are

substantial medical benefits ahead. While "dead against" the use of surrogate mothers to provide uterine hospitality for genetically unrelated embryos, he argues that freeze-dried congenic embryos grown at some future time to the stage at which heart or brain tissue differentiate (12-14 days) would provide adult human beings with access to compatible "spare part tissue" and thus offer an escape from immunological barriers in transplantation.

Dr Walter Hedgcock (73), a former deputy secretary of the British Medical Association, was reported by the *London Standard* on Monday as having been "horrified" by Dr Edwards's disembodied speech as received at Gatwick Airport, and to be looking for a parliamentary ban on such experiments.

Dr Edwards, not for the first time in trouble with the British popular press, considers he may have been unwise to talk to an audience without being able to look its members in the eye. The incident is nevertheless potentially important because it may prompt the British government to preempt the Warnock inquiry. ●

Reagan no science censor

Washington

President Ronald Reagan denied last Friday that his Administration sought to "close off legitimate transfer of knowledge and information" when his appointees in the Pentagon caused some hundred papers to be withdrawn in the name of national security at a symposium of the Society of Photo-Optical Instrumentation Engineers in San Diego, California, last month (see *Nature* 23 September, p.289).

At a meeting with a group of business publishers at the White House, President Reagan told me that the Soviet Union has acquired an enormous amount of US technology because of "carelessness". He defended the censorship as "just an attempt to close off those avenues where, just by reason of attendance at scientific forums and seminars, they have gone home with things that they have then turned to military advantage and the sophistication of their military build-up.

"Their technological sophistication is a threat to the whole peace-loving world . . . so that is what is back of that — not any desire on our part to close off legitimate transfer of knowledge and information."

The President continued by saying that "if, here and there, something goes too far, we will rectify that" — an apparent acknowledgement that the Administration has sometimes gone too far in censorship.

There is, however, no evidence that the withdrawal of the papers at the San Diego meeting was done with presidential knowledge, even though Secretary of Defense Caspar Weinberger had been informed in

advance of what his staff considered an impending "disaster" at the photo-optical society meeting. In view of the attendance of Soviet scientists, Mr Weinberger then asked his staff to warn those due to read papers that they might be in violation of Pentagon review procedures if they did so.

"The situation is in total confusion", says Hakime Sakai, professor of physics at the University of Massachusetts at Amherst, who withdrew his paper in response to warnings from his sponsor, the Air Force's Geophysical Laboratory at Hanscomb Field. Sakai, like others, has now submitted his paper for Pentagon review, a requirement he was unaware of until days before the meeting.

While the president stressed the importance of stopping the "careless" transfer of information to the Soviet Union, he also indicated an equal interest in preserving "legitimate" transfer of information. But neither the President nor his science adviser, Dr George A. Keyworth (who, in a statement at the time, called the photo-optical society incident "unfortunate and ill-timed"), said how these two goals will be met.

It is not yet clear which procedures cover the presentation of unclassified scientific material at international meetings or, for that matter, publication in the open literature. The office of Stephen D. Bryen in the Pentagon, which issued the warnings, cited a "new" regulation issued in April (numbered 5230.9) which requires central Pentagon clearance (instead of clearance