

## Europe Split on Embryo Research

*Deeply etched memories of Nazi atrocities are digging a gulf between West Germany and other European nations over whether human embryos should be used for research purposes*

Mainz, West Germany  
MEMORIES OF WORLD WAR II are casting a long shadow over efforts to reach a European consensus on the circumstances under which research should be permitted on human embryos.

Despite fierce objections from the Catholic church to any such research, most European countries seem to be moving toward legislation that would permit research under strict limits—for example, that no experimentation be allowed on embryos more than 14 days old.

In sharp contrast, however, West Germany's Ministry of Justice is drafting a law that would make it a criminal offense—punishable in principle by up to 5 years in prison—to engage in any research that could be considered harmful to a human embryo. The proposed law would effectively isolate German scientists in the field from their colleagues in most of the rest of Europe.

A driving force behind the proposed legislation in Germany is a reawakening of national sensibilities over human experimentation carried out by Nazi doctors. During the Nuremberg tribunal, 20 medical officials were sentenced for experiments carried out in concentration camps.

These sensibilities have been reinforced by deeply held metaphysical convictions about the status of early embryos as "potential human beings," in contrast to the view that the individual comes into physical existence some time after fertilization of the ovum.

"Some people say that the preembryo has only a limited value, since it only has a limited chance of survival," says E. Seidler, a pediatrician and historian of medicine at the University of Freiburg, who was a participant in a meeting held jointly by the West German government and the Commission of the European Economic Community in Mainz earlier this month. "I come from a country in which there was, in the past, a long discussion on what type of life was worthy to live; that is why I am very anxious when I hear this type of issue raised," he said.

During the 10 years that have followed the birth in Britain of the world's first "test-tube baby," the main focus of the debate in

Europe has shifted from the desirability of the techniques of in vitro fertilization (IVF) to a questioning of the ethical implications of the research needed to improve the effectiveness of these techniques.

It has also coincided with public discussion of broader concerns about potential applications of recombinant DNA techniques to human beings, with discussion of possible interventions to correct genetic defects leading to dark predictions of laboratory-produced supermen that evoke in some memories of Nazi propaganda.

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Legislative proposals to minimize the potential conflict between two sets of values, the freedom of research on the one hand and the need to respect human dignity on the other, are currently on the drawing board in virtually every European nation. Such laws are being discussed in Britain, France, Denmark, West Germany, Switzerland, Sweden, and Austria. But different countries are already planning to draw the line in different places.

"The problem is not the relation of science and religion; it is which ethical principles are relevant," says S. Andersen of the institute for ethics at Aarhus University in Denmark. "We have utilitarian principles on the one hand, and the idea of human dignity on the other. In many European countries, people are very likely to take the utilitarian starting point; but in countries like Germany, they start from human dignity as a first principle."

According to officials at the Council of Europe who are currently drawing up pro-

posals for a new legally binding European convention on biomedicine and human biotechnology, there is broad agreement in Europe on a number of areas that should be outlawed. These include human cloning, the creation of chimeras between human and animal embryos, the use of genetic technology on germline cells, and any trade or commerce involving embryos or embryonic material.

There remains some disagreement over whether it is acceptable that unfertilized eggs—for example those which might have been donated by a woman whose ovaries are being removed—be fertilized artificially in the laboratory purely for research purposes.

Some countries see nothing wrong with such a practice, provided that other restrictions (such as the 14-day rule) are observed. This, for example, was the position taken by a commission set up in 1982 by Britain's Department of Health and Social Security under the chairmanship of Dame (now Baroness) Mary Warnock, a philosopher who is mistress of Girton College, Cambridge. It was the first official committee to look closely at the moral issues raised by artificial human fertilization.

Others are less prepared to sanction such an activity because, they argue, it would place scientists on the slippery slope toward creating human life for research purposes only. Legislative proposals recently published by the science and technology committee of the Council of Europe, for example, would explicitly prohibit "the intentional creation of human zygotes, embryos, or fetuses for purposes other than procreation." Such a rule, however, could outlaw some current research already being conducted in Britain, argues Anne McLaren, director of the Medical Research Council's Mammalian Development Unit.

The most divisive issue remains whether research should be allowed at all on an embryo unless it is aimed at improving the chances that the embryo will turn into a healthy human being. So far, no country in Europe has committed itself to an unequivocal position on this issue.

The British government, for example, in a White Paper responding to the Warnock Report, took the virtually unprecedented

step of proposing two alternative formulations for legislation—one allowing and the other prohibiting research on early embryos—and announced that the choice will be determined by a free vote in the House of Commons. But no bills have so far been scheduled for Parliamentary consideration, which suggests that the government is not anxious to see the debate actually take place.

Warnock is clearly irked by the procrastination. She is particularly keen that the current Voluntary Licensing Authority, set up as a result of her committee's proposals to oversee both research into and the applications of IVF, be turned into a statutory body. "The single most important recommendation we made has not been implemented, though, with every day that passes, the need becomes more urgent," she says.

Denmark has taken the strongest action so far in Europe, passing a law in 1986 outlawing all research on human embryos. However, members of the Danish ethics committee say that law is intended as a stop-gap measure primarily to encourage broad reflection by scientists and the wider community on how to move forward before more permanent regulations are introduced.

Countries with a strong Catholic tradition are still exploring tentatively how to codify their positions in a form that will respect traditional values while not excessively restricting either the rights of researchers or the hopes of infertile couples.

The position of the Catholic church is obviously of central importance in these debates. The Vatican made its position clear in a March 1987 directive on "nascent human life and the dignity of procreation," which rejects all forms of "assisted human procreation" and nontherapeutic research on embryos.

This point of view is already reflected in some legal attitudes. Spain's Constitutional Council, for example, recently ruled that life begins at conception; similarly Irish representatives to the Council of Europe have made it clear that they are unlikely to support any international convention that allows research involving the destruction of human embryos.

In several other countries however, the views of the Catholic church are likely to be less influential. In France, for example, where Catholicism remains the dominant religion, the National Ethics Committee is currently helping to draft legislation along the lines of the proposals of the Warnock Commission. Having previously suggested a time limit of 7 days for research on fertilized embryos, for example, the committee is now expected to support a proposal that this be extended to 14 days.

Germany, however, stands out as a

marked exception. There, the views of the Catholic church (which remains particularly strong in southern Germany), rather than being tempered, as in France, by pragmatic considerations, appear to have been reinforced by haunting memories of the Nazi experiments.

These experiments have been directly responsible for a number of international legal efforts to guarantee respect for human dignity, including the Nuremberg Code of 1946, which requires that experiments on humans only be carried out with informed consent, and the United Nations' Universal Declaration of Human Rights of 1948. The same ideas are enshrined in the postwar German constitution.

When such documents were drafted, the concept of "human dignity" referred primarily to the protection of those who had already been born. However, a number of recent legislative proposals in Germany, at both the state and federal level, would extend comparable protection to human embryos. The main focus of current attention is a law being drafted by the federal Ministry of Justice in Bonn. This would make it a criminal offense to conduct any research on an embryo unless the research is directed toward the embryo's own well-being.

Widespread protests have come from the scientific community that such a law would impose excessive constraints on scientific freedom—which is also protected in the constitution—and drive a wedge between German scientists and their European colleagues.

In an attempt to forestall legislation, the two leading research funding organizations, the Deutsche Forschungsgemeinschaft (DFG) and the Max-Planck Gesellschaft,

have both said that they would be prepared to accept a voluntary moratorium on all research using embryos until the ethical questions have been satisfactorily resolved.

West German research officials would dearly like to see a consensus established in Europe that embryo research, if strictly controlled, is morally acceptable. For such a consensus could then be used to argue that Germany's own legislation should be based on the same principle.

A desire to see broadly comparable ethical standards throughout Europe is shared by many officials in Brussels. "We cannot have a situation in which the same research might lead to a Nobel Prize in some member states of the European Economic Community, and to prison in others" says Karl-Heinz Narjes, EEC Commissioner responsible for industry and scientific research.

Others, however, offer little comfort to those seeking a European-wide convergence of positions. Jeremy Metters, formerly medical secretary of the Warnock Commission and currently chairman of an ad hoc committee of experts set up in 1986 to advise the Council of Europe on possible international regulations, says that, even on his committee, "there remain fundamental differences of opinion on the status of the embryo," and that, after 17 meetings, this gulf "remains unbridgeable."

If, as currently appears likely, compromise proves impossible on the bigger question of whether research should be allowed at all, and it becomes a criminal offense to carry out activities that can be practiced in neighboring countries, Germany's biomedical research community and its infertile couples will be paying a heavy, if unexpected, price for past atrocities. ■ DAVID DICKSON

## A 20% Boost for Soviet Science

The Soviet Union has announced that it plans to increase by 20% the amount of money spent by the government in support of fundamental research next year, to a total of 21.5 billion rubles.

Much of this increase will be concentrated on the activities of the U.S.S.R. Academy of Sciences, and the academies of sciences in the individual union republics, whose total budget will be increased by the even higher amount of 32.3%.

These increases come after a number of statements by Soviet leader Mikhail Gorbachev emphasizing the potential contributions of basic science to the national economy—and pleas from the scientific community that this can only be achieved with additional funding.

The announcement that extra funds will

now be forthcoming was made at the end of last month in a speech delivered to a joint session of the Supreme Soviet by B. I. Gostev, the Minister of Finance, outlining the government's spending plans for 1989.

Gostev said that the new research money would, in particular, be used to support promising research in fields such as high-temperature superconductivity, the development of new construction materials, biotechnology and information technology.

He added that provision had been made for a special fund for financing new research proposals that will be placed at the direct disposal of the State Committee for Science and Technology, and will be awarded on the basis of competition between individual laboratories and research teams.

■ DAVID DICKSON