France Introduces Bioethics Law

Exactly 200 years after a revolution that embodied the newly conceived rights of man, France has announced that it is to become the first Western nation to introduce a wide-ranging law on bioethics, defining how the "dignity of the individual" should be protected in an age of rapidly advancing medical technologies.

In a bill that seeks to balance the freedom of research and the requirements of progress with the rights of man, the French government last week published legislative proposals that would, for example, outlaw any sale or trade in human organs, and confirm an existing ban on commercial surrogacy arrangements.

The bill, which Prime Minister Michel Rocard has said he wants to turn into law within the next few months, would also forbid any attempt to maintain a human embryo in vitro for more than 7 days. In exceptional circumstances, the bill permits an extension to 14 days, provided France's National Ethical Committee gives its consent.

Although scientists will be forbidden to create fertilized embryos for any reason apart from a parental desire for procreation, potential parents will be permitted to donate unwanted embryos for research purposes. In such circumstances, however, the proposed law specifies explicitly that "the research must not in any way threaten the integrity of the human race or lead to eugenic practices."

The new law is based on a report on "The Life Sciences and the Rights of Man" commissioned by the government from one of France's top administrative lawyers, Guy Braibant. It is intended to provide a broad juridical base from which detailed regulations covering specific areas of medical technology will subsequently be elaborated.

Arguing that the recent evolution of this technology has created a situation in which "it is now necessary to pass from ethics to law," a preamble to the government's bill says that its intention is to "define through principles that are as simple as possible the rights of the individual in the face of the sciences which study him or her, and in the face of those responsible for developing medical, biological, and genetic technologies."

It adds: "It is also a question of tracing out for medical practitioners the limits of their powers over their fellow humans, while at the same time respecting the fundamental rights of research and protecting the beneficial possibilities of scientific progress in this field."

The need for a new law defining the rights of the individual—whether alive or dead—over the disposition of his or her body was dramatically highlighted early last year by a case in which a surgeon was accused of carrying out unauthorized experiments on a patient who had been clinically diagnosed as "brain dead" (*Science*, 18 March 1988, p. 1370). Such practices would now be clearly designated as illegal.

The French move comes at a time when European nations are attempting to harmonize their legislation on the use of human embryos in research. Last month, for example, the Parliamentary Assembly of the Council of Europe passed a resolution proposing that an international ethics committee be established to try to ensure that all biomedical research workers in the Council's 24 member states follow the same basic ethical rules.

Many European countries, however, remain deeply divided on whether any research should be allowed using human embryos that is not directed at the well-being of the individual embryo being studied. In Germany, there is still strong political pressure for a ban on all such research. And in Britain, even though the government has promised a parliamentary debate (and a highly unusual free vote) on whether or not such research should be permitted, no such debate has been scheduled for the current legislative session. ■ **DAVID DICKSON**

Germany Enters Hypersonic Race

Bonn

West German Research Minister Heinz Riesenhuber announced last week that the German government has agreed to fund the initial development work on a two-stage reusable hypersonic space plane called Sänger.

The manned aircraft is to carry a cargo plane piggyback into space. In endorsing the project, Riesenhuber said that West Germany intends to lead Europe in the development of hypersonic space transport by the end of the century.

West Germany is the fifth nation, after the United States, France, Britain, and Japan, to announce plans for a hypersonic transport plane. Such a plane will depend on the successful development of a new generation of ram jets that would burn atmospheric oxygen and attain speeds five or six times the speed of sound. West German aerospace giant MBB Communications recently tested a new ram jet in Munich, but a company spokesman insists there is still "a long way go."

Speaking at a press conference in Bonn, Riesenhuber said he expects a "milestone" decision at the end of a feasibility study in 3 years' time, and a first demonstration of components between 1993 and 1999. The prototype, he said, could be finished by the turn of the century and development work carried out through the European Space Agency (ESA) could begin as early as 2004.

For the first phase, which will run up to the end of 1992, the West German Research Ministry is providing $122 million, 7% of its total budget for space activities. The German Aerospace Research Establishment is contributing $48 million, and the German Research Society $17 million. In addition, the West German aeronautics and space industry is investing a further $22 million in the project.

West Germany discontinued initial research into hypersonic technology in the mid-1970s. The decision to develop Sänger follows the growing awareness of a need for what Riesenhuber described as "inexpensive, reliable cargo transportation." According to Riesenhuber, similar projects, including the U.S. aerospace plane program "Orient Express" and Great Britain's one-stage reusable space transport system HOTOL, also reflect this need. "But," he added, "existing problems can only be solved with the development of a completely new generation of transport systems."

The project is named after the West German space pioneer Eugen Sänger. Sänger, who died in 1964, was the first to suggest winged space transport systems, and he played a major role in development of rocket engines and the ram jet.

According to Riesenhuber, West Germany will use knowledge gained from developing the Hermes shuttle, currently under development through a French-led ESA program agreed upon 2 years ago, to build Sänger.

A major incentive, he added, is the potential reduction in space transportation costs. In theory, Sänger has the potential of reducing costs of placing payloads in orbit from $8000 per kilogram to about $1000 per kilogram. "We want to lead Europe in this technology," says Riesenhuber.

■ **DON KIRK**

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