

In the political arena, the relatively liberal recommendations of bioethicists on government panels studying fetal tissue and human embryo research have over the past decade been mostly disregarded by Republican presidents and Congresses. Even Clinton said that embryo research recommendations went too far, by allowing the creation of human embryos for research, when he banned federal funding for the practice. And the sole legislation to emerge from the ELSI programme, a model genetic privacy law, has been largely ignored by lawmakers.

Cloning ban

On cloning, congressional Republicans have rapidly shunned the NBAC, drafting — in the only bill to pass a committee so far — a far more conservative prohibition than the commission recommended (see *Nature* 388, 505; 1997). Indeed, apart from a couple of early, significant, victories, “it’s hard to show any concrete influence” on policy by US bioethicists, says Boston University’s Annas.

Part of the reason stems from the lack of political influence of bioethicists in a society that traditionally tries to resolve issues by lawmaking rather than by agreeing common ethical standards of behaviour. “A tendency of American bioethics is to shift the debate from whether something is right or wrong to whether it should be outlawed or not,” says Annas, who contends that bioethics should move its focus “beyond defining the minimum morality the law requires and more into the realm of the right and the good”.

Advocates with strong opinions on bioethical issues agree with him. They were dissatisfied, for instance, with the NBAC’s recommendation last spring for a five-year legal moratorium on cloning for reproduction on the basis of safety concerns. NBAC postponed religious and ethical questions, saying they should be dealt with in a broad societal debate before the moratorium ends.

This drew criticism from conservatives, who desired an outright declaration of cloning’s immorality. At the same time, critics on the left complained that the NBAC ducked questions such as why asexual as opposed to sexual reproduction should be an affront to the dignity of the species.

More importantly, says Annas, the strictly legal approach to US bioethical decisions has resulted in one particular “cloud” over US bioethics. In 1973, the Supreme Court determined that abortion is legal before fetal viability, leaving private individuals to decide on its morality. But the lack of a US moral consensus on abortion has meant that issues from human embryo research to fetal tissue transplants to cloning remain bedevilled by the subtext of abortion politics.

Still, despite recent setbacks, some early victories of US bioethics remain significant.

Russia warned: act now or regret it later

If the Russian government fails to introduce legislation on genetic engineering soon, “in two or three years it will be too late — the state will not be able to control the safety of newly produced food and medicines”. That was the warning given last month by Rem Petrov, the Russian Academy of Sciences vice-president for biological sciences.

Petrov was speaking at a symposium on assessing the safety of genetically modified crop plants and novel foods on the Russian market. The meeting was organized by the academy and the United Nations Food and Agriculture Organization.

Amirkhan Amirkhanov, deputy chairman of the state committee on the protection of the environment, said that the rapidly growing number of small private companies experimenting with plant, animal and even human genes increased the need to introduce regulations as rapidly as possible. But a major obstacle was in persuading officials of the need for action.

Perhaps significantly, the strongest voice heard at the meeting in favour of the tight regulation of genetic engineering represented neither researchers nor the government, but private industry.

Yuri Kalinin, general director of the Biopreparat company, which makes more than 40 per cent of Russia’s biotechnology products, said his enthusiasm for regulation was based on the difficulties he had experienced with foreign partners. Their goods and biological components were required to pass various examinations but, even though they had received international or national safety certificates, these were not valid in Russia owing to lack of legislation.

Konstantin Skryabin, director of the academy’s Bioengineering Centre, which hosted the meeting, said that some of the laws sought by the scientists and businessmen have already passed through the State Duma, the lower chamber of the Russian parliament.

Carl Levitin

The most important, most agree, was the adoption of government protections for human research subjects. These were informed by the earlier drafting of the Nuremberg Code and shaped by the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research. The commission was set up in response to the 1972 revelation that the US government had for 40 years funded the notorious Tuskegee Syphilis Study, in which treatment was withheld from 399 black men with the lethal disease.

Model law

A later commission, the President’s Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research, launched in 1979, laid out a model law on the determination of death that has been adopted by a majority of states. Separately, a *de facto* prohibition on the use of anencephalic infants as heart donors “was virtually single-handedly a victory of bioethicists”, says Paul Root Wolpe, a sociologist at the Pennsylvania centre.

But today, the government’s interest in soliciting bioethical opinion may reflect less the influence of such opinion than the fact that the public displays a seemingly insatiable appetite for bioethics ‘experts’ to analyse the social significance of biomedical developments. In the two months after the announcement that Scottish scientists had cloned Dolly, for example, the Pennsylvania centre’s website drew one million hits. Clinton’s reaction to Dolly was to ask the NBAC — which until then had languished, under-

funded, in obscurity — to produce policy recommendations within 90 days.

Some argue that this leads bioethicists into perilous waters, as the government can quickly exploit their conclusions to provide cover for difficult or unpopular political decisions.

“The irony of ethics is that it tends to be scandal driven,” says Wolpe, suggesting that what he calls “crisis intervention bioethics” may not be the most effective route to rational policy.

The problem is exacerbated for government-funded ethicists, who, Annas contends, become hostage to their funders and are forced into dealing with “very, very narrow parochial interests... within a very short time frame.” There may be further peril in the private sector, whose increasing wooing of bioethicists risks turning them into “a domesticated species”, says LeRoy Walters, director of the Kennedy Institute of Ethics at Georgetown University in Washington DC.

Two pharmaceutical companies, Smith-Kline Beecham (SKB) and Zeneca, are paying for employees enrolled in the Pennsylvania master’s programme. SKB also donated almost \$1 million in 1995 to Stanford University to fund research on genomics, ethics and society. And the American Medical Association has launched an Ethics Institute.

Both business and government will soon have more than their pick of bioethicists. Students are packing the many bioethics courses that have appeared over the past decade. Michael Grodin, director of bioethics at Boston University, says student interest “is booming”.

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