CLONING AND THE U.S. CONGRESS

GEORGE J. ANNAS, J.D., M.P.H.

In the immediate aftermath of the birth of Dolly the sheep, the national debate over the banning of human cloning focused almost exclusively on the issue of safety. President Bill Clinton's National Bioethics Advisory Commission, for example, recommended in 1997 that Congress impose a five-year moratorium on attempts to clone a human because of the likely physical harm to the cloned infant. Congress did not act on this suggestion, but even if it had, that moratorium would already be almost over. Cloning is now back on the congressional agenda, with a new focal point: the creation of cloned embryos for stem-cell research. President George W. Bush has made his views known, as has the House of Representatives.

THE PRESIDENT'S POSITION

On April 10, 2002, President Bush announced that he believed that “all human cloning is wrong” and that therefore both reproductive cloning and research cloning “ought to be banned.” He gave three main reasons for this position: research cloning “would require the destruction of nascent human life”; anything other than a dual ban would result in “embryo farms” that would inevitably result in “the birth of cloned babies”; and the “benefits of research cloning are highly speculative.” This speech followed a major address to the nation in August 2001 in which the President referred to Aldous Huxley's Brave New World and rejected a science-fiction future of cloned, artificially programmed children, saying that “Huxley wrote about human beings created in test tubes in what he called a 'hatchery.'”

President Bush has also appointed a new President's Council on Bioethics. Its chair, philosopher-physician Leon Kass, opened the council's first meeting in January 2002 with a discussion of another work of fiction, Nathaniel Hawthorne's short story "The Birthmark." The story is the cautionary tale of a scientist, Aylmer, who marries a beautiful young women, Georgiana, who has a birthmark in the shape of a small red hand on her cheek. Aylmer becomes obsessed with removing the birthmark, thinking that removing this “blemish” will make his wife perfect.

He experiments with numerous drugs and finally finds one that succeeds in removing the birthmark. As the birthmark disappears, however, Georgiana dies. The moral of this 1843 short story is that the quest for human perfection is doomed to fail and that scientific hubris can lead to death and destruction.

The debate over human cloning is on, and whether it can be successfully resolved in Congress will to a large extent depend on whether the issue of the cloning of children—so-called reproductive cloning—can be separated from the cloning of embryos for the purposes of research, also known as “research cloning” or “therapeutic cloning.” None of the bills being considered by Congress distinguish between federal funding and private funding, so all the prohibitions contained in them would apply to everyone in the United States.

THE HOUSE OF REPRESENTATIVES

Under a very strict rule, floor debate on legislation regarding cloning was limited in the U.S. House of Representatives to a little more than two hours on July 31, 2001. Two competing bills were under consideration. The first (H.R.2505, “Human Cloning Prohibition Act of 2001”), sponsored by Representative Dave Weldon (R-Fla.), defines “human cloning” as “human asexual reproduction, accomplished by introducing nuclear material from one or more human somatic cells into a fertilized or unfertilized oocyte whose nuclear material has been removed or inactivated so as to produce a living organism (at any stage of development) that is genetically virtually identical to an existing or previously existing human organism.” The operative portion of the bill makes it a crime (punishable by a fine of $1 million or more, up to 10 years in prison, or both) for anyone knowingly “to perform or attempt to perform human cloning,” “to participate in an attempt to perform human cloning,” or “to ship or receive for any purpose an embryo produced by human cloning or any product derived from such embryo”; the importation of cloned embryos or products from cloned embryos is also prohibited. This bill would criminalize not just reproductive cloning, but research cloning as well.

The competing bill was written to prohibit reproductive cloning but permit research cloning. Sponsored by Representative Jim Greenwood (R-Pa.), H.R.2608 (the “Cloning Prohibition Act of 2001”) was offered on the floor as a substitute for the Weldon bill. The Greenwood bill does not define cloning, but instead defines “human somatic cell nuclear transfer technology” as “transferring the nuclear material of a human somatic cell into an egg cell from which the nuclear material has been removed or rendered inert.” The bill makes it a crime (punishable in substantially the same way as in the Weldon bill) to

From the Health Law Department, Boston University School of Public Health, Boston.

use or attempt to use human somatic cell nuclear transfer technology, or the product of such technology, to initiate a pregnancy or with the intent to initiate a pregnancy” or “to ship, mail, transport, or receive the product of such technology knowing that the product is intended to be used to initiate a pregnancy.”

The Greenwood bill also specifically lists activities that are not prohibited and requires persons who want to use somatic cell nuclear transfer technology to register with the Secretary of Health and Human Services, to acknowledge their awareness of this law, and to declare that they will abide by its provisions.

THE HOUSE DEBATE

The House debate was very focused. To oversimplify a bit, those favoring the Greenwood approach argued that it would permit research involving embryonic stem cells that could be of great benefit and pointed to the large number of consumer organizations—including the Parkinson’s Action Network, the Juvenile Diabetes Research Foundation, the Alliance for Aging Research, the American Infertility Association, and the American Liver Foundation—that supported their approach. They also argued that it was counterproductive to hold a ban on reproductive cloning (to which both sides agreed) hostage to a ban on research cloning, to which the Senate was unlikely to agree. In the words of Greenwood’s cosponsor, Representative Peter Deutsch (D-Fla.), “the Greenwood–Deutsch substitute is very simple. All we have been trying to do from the beginning is prohibit reproductive cloning. That is all we do . . . we all agree on, we all want to stop that, then we need to shoot a silver bullet and a rifle shot and stop that legislatively. We could do that.”

The supporters of the Weldon bill agreed that reproductive cloning should be prohibited but, following an argument that Leon Kass had developed in an article in the New Republic and in testimony before a congressional committee, suggested that once cloned embryos were available for research, it would be inevitable that someone would attempt to initiate a pregnancy, and that once a pregnancy was initiated, the government would have no authority to demand that it be terminated. Proponents of the Weldon bill also argued that any attempt by the government to stop implantation would put the government in the position of demanding that human embryos be destroyed—something the U.S. government has never done.

Support for the Weldon bill was crystallized by frequent reference to a newspaper column by Charles Krauthammer (now a member of the Council on Bioethics) that had been published in the Washington Post just a few days before the debate in the House. In the column, Krauthammer argued that he thought we had all “agreed that human embryos should not be created solely for the purpose of being dismembered and then destroyed for the benefit of others.” He blasted the Greenwood bill as protecting and codifying “the creation of cloned human embryos for industrial and research purposes,” asserting that “Greenwood sanctions, licenses, and protects the launching of the most ghoulish and dangerous enterprise in modern scientific history: the creation of nascent cloned human life, for the sole purpose of its exploitation and destruction.” Krauthammer concludes that “the human embryo . . . is not to be created for the sole purpose of being poked and prodded, strip-mined for parts, and then destroyed.”

Neither Krauthammer nor Kass was a direct participant in the debate on the floor of the House. Nonetheless, their arguments won the day: no cloned embryos can be made for research, and there can be no ban on reproductive cloning without a simultaneous ban on research cloning. The Weldon bill was adopted by a vote of 265 to 162.

THE SENATE BILLS

In the Senate, S.790, the “Human Cloning Prohibition Act of 2001,” a bill virtually identical to the Weldon bill that passed in the House, has been introduced by Senator Sam Brownback (R-Kans.). The Brownback bill adds a new “sense of Congress” statement advocating that the federal government join an international effort to prohibit human cloning (as defined in the Brownback bill), and that the President’s bioethics council study technical issues related to the bill and report back within five years.

The two major alternatives to the Brownback bill in the Senate are S.1758 and S.1893. S.1758 is co-sponsored by Senator Edward Kennedy (D-Mass.) and Senator Dianne Feinstein (D-Calif.) and is also known as the Feinstein–Kennedy bill (and named, like the Brownback bill, the “Human Cloning Prohibition Act of 2001”). It outlaws human reproductive cloning, by outlawing the implantation of a cloned embryo, but permits research cloning. The core of the bill is its definitions of human cloning and nuclear transplantation. It defines human cloning as “asexual reproduction by implanting or attempting to implant the product of nuclear transplantation into a uterus,” and it defines nuclear transplantation as “transferring the nucleus of a human somatic cell into an oocyte from which the nucleus or all chromosomes have been or will be removed or rendered inert.”

The bill provides for a $1 million fine and up to 10 years in jail for any person who engages in any of three acts: “to conduct or attempt to conduct human cloning,” “to ship the product of nuclear transplantation in interstate or foreign commerce for the purpose of human cloning in the United States or
elsewhere,” and “to use funds made available under any provision of Federal law for an activity” banned by the first two prohibitions.

The Feinstein–Kennedy bill also contains a list of types of research that are not prohibited, including “nuclear transplantation to produce human stem cells,” and requires such research to be conducted according to existing federal regulations, subject to a penalty of not more than $250,000.

The third major choice before the Senate is S.1893, the “Human Cloning Ban and Stem Cell Research Protection Act of 2002,” introduced by Senator Tom Harkin (D-Iowa). The bill is also designed to outlaw reproductive cloning by outlawing the implantation of cloned embryos. Its operative definitions of human cloning and nuclear transplantation are more inclusive than those used in the Feinstein–Kennedy bill: it defines human cloning as “sexual human reproduction by implanting or attempting to implant the product of nuclear transplantation into a woman’s uterus or a substitute for a woman’s uterus,” and it defines nuclear transplantation as “introducing the nuclear material of a human somatic cell into a fertilized or unfertilized oocyte from which the nucleus has been or will be removed or inactivated.”

The operative prohibitions (with the same basic penalties as in the other bills) forbid anyone “in or affecting interstate commerce . . . to perform or attempt to perform human cloning” or “to ship, receive, or import the product of nuclear transplantation for the purpose of human cloning.”

If the Senate passes the Brownback bill, the President will sign it and it will become law. If no bill is passed in the Senate, the attempt to pass legislation to regulate cloning will die until at least next year. If any bill other than the Brownback bill is passed in the Senate, the House and Senate bills will be sent to a conference committee where an attempt will be made to craft a compromise bill on which both chambers can agree. If no bill is enacted, cloning will remain unregulated.

COMPROMISE POSITIONS

The position the administration has adopted is essentially the one Kass articulated last spring, well before the President named him to head his Council on Bioethics. But the administration is going a step further than Kass, I think, in explicitly making the cloning debate a debate about the moral status of human embryos and thus about abortion politics. It does so by arguing simultaneously that human reproductive cloning should be outlawed and that it would nonetheless be wrong for the government to require a cloned embryo to be destroyed in order to prevent the crime of implanting it from being committed.

Of course, if no cloned embryos are ever created, none will be destroyed. But the destruction of embryos created for research is only unacceptable if one believes that the early human embryo has such a unique moral status that it should never be created for purposes of research, no matter how important the research. This concept is considered in Sounding Boards by Weisman and Evers in this issue of the Journal. It is also highly unlikely that any bill that simply outlaws the creation of human embryos for research could be passed by the U.S. Senate. Nonetheless, if the link between research cloning and reproductive cloning cannot be severed, efforts at compromise are likely to prove futile and the effort to outlaw reproductive cloning will die in the Senate again, as it did in 1998.

There are at least some Senators who might be persuaded that use of a limited number of cloned human embryos for important research might be justified. For these members, it may be very important to try to distinguish between the abortion debate and the debate on research involving embryos. The distinction is that in research involving cloned human embryos, there is no pregnancy involved (and thus none can be terminated), and whatever moral status is accorded to the early extracorporeal embryo, it should be less than that accorded to the implanted embryo and the early fetus. The chief rhetorical argument against permitting the creation of cloned embryos is that they will be made in very large numbers and “stockpiled” on “embryo farms” or “hatcheries.” If this is really the justification for outlawing embryo cloning, then one possible compromise is to develop a regulatory system that could guard against the creation of stockpiles of embryos, outlaw the freezing and storing of research embryos, permit their use only by a limited number of qualified researchers, and in addition, as all the bills do, outlaw the implantation of embryos that have been cloned for the purposes of research.

Probably the most effective way to regulate research involving embryos (using either cloned embryos or those created for in vitro fertilization) is to build on the example of the British Human Fertilisation and Embryology Authority, which has exclusive power to authorize and oversee all research involving human embryos in both the private and public sectors. Since the United States has a market in human eggs, it would also be useful to outlaw the purchase and sale not only of human embryos, but also of human eggs, both to prevent the commercialization of research involving embryos and to limit the total supply of human eggs available for such research. In
addition, to prevent pregnancies involving cloned embryos, it would be prudent not only to make it a crime to implant a cloned embryo, as all the bills do, but also specifically to disqualify anyone who is involved in activities related to in vitro fertilization or other infertility treatments from doing research with cloned embryos.13

The other possible route to a legislative compromise is a ban on reproductive cloning coupled with a moratorium on research cloning. Opting for such a moratorium would make it unnecessary to draft regulations (which might prove to be a very difficult task), but it would introduce two additional problems. First, a decision would have to be made about whether the moratorium should end when a time limit was reached (perhaps five years) or when an event occurred (such as exhausting the research possibilities of stem cells derived from the spare embryos originally created for in vitro fertilization). Second, the entire question of the ban would have to be revisited at the end of the moratorium.

There is strong support for research cloning from both the biotechnology industry and the scientific community, and both are firmly opposed to reproductive cloning.14-16 If the Bush administration objects to the creation of cloned human embryos for research under any circumstances, even in the private sector, then it may not be possible to reach a compromise.

An additional reason to seek a compromise is that it would enable the United States to take a leadership role in crafting an international treaty to ban reproductive cloning. The United Nations held its first meeting on this proposed treaty in February 2002, and the United States took the same position internationally that the President has taken domestically: no ban on reproductive cloning without a ban on research cloning. The world's countries overwhelmingly support a ban on reproductive cloning, and the Administration's position linking this ban to one on research cloning has almost no international support. As important as the issue of reproductive cloning is itself, even more important is the opportunity it gives the global community to take a unified position on a major bioethical issue, thereby making it plausible that the global community can debate and regulate other complex bioethical matters, including those presented by germ-line genetic engineering research. The United States should be a leader in the global bioethics arena, not an obstructionist outsider.

In Hawthorne's story, Aylmer's real crime was that he was unable to separate his love for his wife from his love of science, and that in combining them, he killed her. Combining reproductive and research cloning in one bill is likely to kill the anticloning legislation as well. If a compromise cannot be reached, no law will pass, and unscrupulous persons in the United States will continue their efforts to create a cloned child, a result no member of Congress supports.

REFERENCES