Law& Ethics

Cloning and Culture

Legislation at Home and Abroad

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The human cloning debate often elicits a picture of two polar arguments: one rooted in science, the other in religion. This picture is misleading. Although both science and religion are key factors in the debate, the full range of cultural perspectives across countries also drives legislative decisions on human cloning. This survey of worldwide cloning legislation will pro vide a framework for understanding the diverse perspectives on cloning and the cultural contexts that generate those perspectives. Understanding these variables is key to cooperation in crafting international standards.

The variety of existing perspectives makes the debate over international standards important. Without an international consensus, human cloning practices will lapse into a laissezfaire context. Each country will determine its own rules, and nothing will prevent governments with few ethical barriers from engaging in human cloning practices that the international community considers detrimental. Without consensusdriven policies, international standards will, by default, slip to the lowest common denominator. Perhaps the lowest denominator would ultimately be the right choice, but it would be unwise to let these standards be set by default. Whatever consensus may emerge, it should be determined by informed debate and exchange, not a race to the bottom. David A. Prentice is Professor of Life Sciences at Indiana State University. He researches stem cells, cloning, and bioethics.

Terminology is important in defining any legislation, and the debate on human cloning is particularly susceptible to def initional errors. This is partly due to the confusing use of technical terms. Confu sion regarding the biology and terminology of human cloning is not limited to non-scientists. A recent survey of over sixteen hundred scientists (mostly from the United States and Europe) found that 92 percent of American and 85 percent of European and other scientists favored therapeutic cloning. Yet, 73 percent and 78 percent, respectively, considered creating human embryos for research unethical.¹ Since therapeutic cloning first requires creation of an embryo for research, this contradiction reflects misunderstanding in the scientific community. It is possible, however, that this contradiction reflects a perceptual difference of what is being cloned, an embryo or cells.

The cloning procedure most widely debated is called "somatic cell nuclear transfer" (SCNT). In this process, the nucleus of a somatic (body) cell is transferred into an egg cell that has had its material (chromosomes) genetic removed. The technique creates a new single-celled embryo (zygote) that is the virtual genetic duplicate of the individual who donated the somatic cell. At this point, the formation of the new organ ism is completed, and the question becomes a matter of motives: what will the embryo be used for as it develops? After several days, the embryo could be transferred to a womb (reproductive cloning) or disaggregated to harvest its embryonic stem cells for research purposes (therapeutic cloning).

The moral status of the human embryo is a key consideration in how countries view human cloning. Some argue that cloning pits traditional values of reproduction against modern technology that manipulates human life in the production of "designer babies." But religion and scientific progress alone should not define the debate. Other salient issues include: cultural traditions regarding respect for human life, human dignity, and human rights; cultural traditions regarding reproduction such as relationships between generations, childrearing, continuity of life, and continuity of family; and attitudes toward regulation of science, perceptions of the medical and economic values of cloning, and balance between individual and cor porate identity.

The United States, Australia, and Canada. The United States is one of the few industrialized countries that does not have national legislation regarding human cloning, although the prohi bition on the use of federal funds for human cloning research provides some effective restrictions. With support of the Executive Branch, the House of Representatives passed two bills that would have prohibited all human cloning in July 2001 and February 2003. These bills did not pass in the Senate, perhaps because of the United States's cultural diversity.

American media often cast the cloning debate as a replay of the abortion debate. This is far from accurate. Those opposed to all types of human cloning do include vocal pro-life advocates who view embry onic human life as sacred. But opponents also include pro-choice feminists and environmentalists, who protest the potential exploitation of women and heath risks and perceive a slippery slope to genetic manipulation of the human germ line.

While religious perspectives play a sig-

nificant role in the United States, health considerations and social factors including human rights also are important to the debate. The diversity in viewpoints surfaced in the 2002 President's Council Report on cloning and the 1997 National Bioethics Advisory Commis sion report, which point out that not all arguments against cloning are religious and not all religious thinkers oppose human cloning.² The United States holds a pragmatic, almost utilitarian view of scientific research and the human embryo that weighs costs against potential health and economic benefits. U.S. atti tudes are also shaped by a cultural tradition of "rugged individualism" that emphasizes autonomy and rights of the individual. Other important issues include: calls for cloning research to meet the health needs of patient groups; incentives for possible economic growth and investment; opposition to regulation of scientific research; and a belief that technology is a panacea. The lack of national legislation is likely due in part to active lobbying by groups concerned with these issues.

Australia and Canada have a similar tradition of individualism and pragmatism. Yet, following extensive debate, both Australia and Canada passed laws in survey of couples with frozen embryos at fertility clinics.⁴ While few couples were inclined to donate embryos for research, those who did were motivated by the desire to avoid wasting embryos, to help infertile couples, or to advance scientific knowledge. Those disinclined to donate expressed stronger religious views. They saw the embryo as a potential child and raised concerns about both justifying the research and what they perceived as a lack of research controls.

Europe. While European countries have come closer to settling this issue than the United States, Europe reflects the entire range of legislative approaches toward human cloning. Religious traditions play a large role: majority Protestant nations are likely to adopt more liberal views on cloning, and primarily Catholic countries favor more restrictive legislation.⁵ Within European countries, cultural attitudes are less fragmented than in the United States; they have passed more legislation regulating both cloning and scientific research in general.

In 2001, the United Kingdom passed what became one of the most liberal laws on human cloning. The law allows cloning and growth of human embryos up to fourteen days for research purpos-

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2002 and 2004 respectively that prohibit cloning human embryos for any pur pose, but that allow research on "unused" embryos from fertility clinics.³ This compromise reflects a pragmatic culture. One indication of attitudes toward human embryos among Australians is a es, but prohibits the transfer of cloned embryos to a woman's womb. This approach emphasizes tight regulation and oversight. A decade before the legislation passed, the government had created the Human Fertilization and Embryology Authority to license laboratories conducting embryo research. Legislative decisions were primarily pragmatic, the result of a recognition of the potential benefits of scientific developments for the individual and a desire to allay public anxiety about safety and commercial exploitation. Public concerns about human cloning are related largely to confidentiality, consent, and safety. In this pragmatic paradigm, disease research using cloning is ethically acceptable. Respect given to embryos is not consid ered absolute, but rather is weighed against potential research benefits.⁶

France has taken a middle ground between liberal and restrictive laws. France's pragmatism is similar to Australia's and Canada's. Pending legislation would prohibit all human cloning but allow research with unused embryos from fertility clinics. Sweden also falls in this category, although there is a move to liberalize and move closer to the position of the United Kingdom.

More restrictive European countries have strong religious and human rights traditions that influence political decisions and cloning legislation. Ireland, Austria, Italy, and Germany prohibit any embryo experimentation. Norway bans all human cloning, and France is expect-

duction. In addition, Germany's philo sophical perspectives are shaped by the eighteenth century philosopher Immanuel Kant, whose concept of human dignity requires that human beings not be used as a means to an end.⁷ These factors led to the German Embryo Protection Act of 1990, which provides constitutional protection of human dignity and rights to unborn human life. In this respect, protecting the embryo from the moment of con ception is a symbolic move that represents the will to protect all humans who cannot defend themselves or argue for their own defense.⁸ This attitude stems from fears of potential manipulation and abuse of human embryos.

Human rights and human dignity are preeminent concerns throughout Europe.⁹ There is a common fear, especially in more conservative and religious states, that the acceptance of therapeutic cloning will lead to reproductive cloning and human rights abuses. Europe has made attempts to codify cloning prohibi tions on a regional level. The Council of Europe's Convention on Human Rights and Biomedicine specifically forbids human cloning. While twenty-eight countries have signed the Convention

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ed to pass a ban on all human cloning in 2004. In these countries, the human embryo is given a weightier status, and human dignity is thought to begin at conception. Germany's position is root ed in the historical context of the Nazi regime, whose human rights abuses included experiments related to reproand twelve have ratified it, thirteen have not signed, including Germany, Ireland, and the United Kingdom.¹⁰ At the EU level, no document or provisions take a stand on cloning on behalf of all member countries, reflecting the diverse legal traditions of member states. Yet, the European Parliament has passed a resolution that "reiterates its call for a worldwide ban on the cloning of humans, and sup ports Costa Rica's initiative in this con nection and the UN General Assembly's decision to work on a corresponding convention in 2004."^{II}

The Middle East. The strength of the Jewish precept to help the sick translates into a liberal attitude on therapeutic cloning in Israel. While there is no single Jewish perspective on life issues, Jewish tradition usually considers human life to begin 40 or 120 days after conception; life commences with "quickening" (the movement of the fetus in the womb) or the appearance of a recognizable human form (prior to that being "as water"). The current Israeli law, adopted in 1999 and set to expire in 2004, states that only tissues can be cloned for purposes other than the creation of a human being. A new law under consideration, modeled after that of the United Kingdom, reflects a more liberal view that prohibits cloning for reproductive purposes, but allows it for medical ones. Some Israelis have complained that, unlike in the United Kingdom and elsewhere, the public debate on cloning in Israel has not been sufficient, as decisions regarding the legislation are made by three bioethics committees composed of most ly scientists and doctors.¹²

In the Arab world, the lack of consensus on cloning has resulted in both scant national laws and demands from most Arab countries to delay UN consideration of a ban on human cloning. Just as the Jewish tradition, Islamic tradition considers the beginning of human life to occur between 40 and 120 days after conception. Islamic tradition also values the accumulation of knowledge and emphasizes helping others, especially the weak. However, there is also a tradition of opposing anything that might be consid ered "unnatural." This could encompass cloning, at least in terms of reproduction, and thus complicate consensus on life issues such as the moral status of an embryo or use of advanced biomedical techniques. There have been only a few declarations by Muslim scholars of what is haram (prohibited) and what is halal (allowed) in the arena of cloning.

There has been some scientific debate regarding the use of stem cells and cloning at the Muslim World League's Council of Islamic Fiqh Academy. Muslim scholars announced sever al conclusions in December 2003. Research with unused embryos from fertility clinics was allowed, but specific creation of embryos for research, whether by fertilization or by cloning, was forbidden. This would also seem to forbid all human cloning by Islamic fat was.¹³ Recently, recommendations to form consensus bioethics panels and to train scholars and students to address biomedical issues were also made.¹⁴

ASIA. There is a great diversity of values and religions and no consensus on cloning among Asian countries. While some have suggested forging consensus by using guidelines outlined by the UN Educational, Scientific and Cultural Organization (UNESCO), which broadly prohibits reproductive cloning, the region resembles Europe's fragmented legislative landscape.¹⁵ Singapore follows the British model and encourages investment in research and development. South Korea and Japan prohibit reproductive cloning but allow unused embryos to be used for research. Legislation in Hong Kong and the Philippines forbids all uses of human cloning.

Despite India's great religious diversity, there is virtually no opposition to stem cell research based on spiritual concerns. India's spiritual and cultural traditions emphasize life cycles rather than individual lives. India has imposed a ban on human cloning, but allows use of embry onic stem cells. Interviews with eighteen major Hindu leaders and scholars revealed that, with regards to both cloning and stem cell research, most of them thought it fundamentally unwise to tamper with nature.¹⁶ One leader noted cloning, and the country has been char acterized as "probably the most liberal environment for embryo research in the world."¹⁸ Chinese embryo research enjoys positive media, little government over sight, and little popular opposition.

Two aspects of Asian culture bear on potential regulation of human cloning. One is related to world prestige and economics: scientific development in biotechnologies is often viewed as a vehi cle to raise a country's global visibility and attract investment. Another impor-

The best way to bridge cultural differences is to use a human rights framework for international decisions on biomedical research.

that economic incentives resulting from technological advances may cloud moral judgment. Another emphasized that knowledge can be used or misused, and that the real issue is whether knowledge is applied for commercial purposes or applied, without harming others, because of an essence of love. These cul tural and religious views have led India to draft guidelines to ban the export of all human embryonic material for fear that their assisted fertility industry could become a global source for human embryonic stem cells.¹⁷

There are few moral objections to human embryo research in China, and this country has subsequently emerged as a growing leader in cloning and embryo research. Views of embryo research focus largely on potential benefits to science and opportunities for commercialization and growth on the world stage. While China has banned reproductive cloning, its legislation permits therapeutic

tant cultural consideration is that, unlike Western nations which place great value on individualism, many Asian cultures place a greater value on a person's contribution to society. Doctors Woo Suk Hwang and Shin Yong Moon of Seoul National University, the lead authors of a recent study on human embryo cloning, attribute their success to a supportive cultural environment, well-funded laboratories, and legislation that permits the cloning of human embryos for research.¹⁹ The supportive cultural environment included the ability to obtain large num bers of human eggs from sixteen women who volunteered to donate without compensation as part of the research, a situation that would be virtually impossible in Western nations. Dr. Hwang also noted that due to cultural norms there is a paucity of organ donation in South Korea, and this lends impetus to research that might create alternative sources of transplant tissue.

Conclusion. The search for a global consensus on cloning has been difficult, but using a human rights framework for international decisions on biomedical research is probably the best way to bridge cultural differences.20 Indeed, basic principles that recognize the inherent rights and worth of all human beings could create a universal consensus on the human cloning debate. The 1997 UNESCO Universal Declaration on the Human Genome and Human Rights was one attempt to establish a global norm of basic human rights protection. It states that "practices which are contrary to human dignity, such as reproductive cloning of human beings, shall not be permitted."21

The 1997 UNESCO Declaration stimulated debate at the UN. Many African nations favor total prohibition of human cloning. Their concerns stem from cultural norms that value a broad definition of human life, as well as fears that African women could be exploited as resources for eggs. Costa Rica, in keeping with its Catholic tradition and

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3 President's Council on Bioethics, "Human Cloning and Human Dignity: An Ethical Inquiry," (Washington, DC: 2002). National Bioethics Advisory Commission, "Cloning Human Beings," (Rockville, MD: National Bioethics Advisory Com mission, 1997).

4 Senate Community Affairs Legislation Commit tee, "Provisions of the Research Involving Embryos and Prohibition of Human Cloning Bill 2002," (Canberra, Australia: Parliament of the Commonwealth of Australia, 2002).

5 Catherine A. McMahon et al., "Embryo Dona tion for Medical Research: Attitudes and Concerns of Potential Donors," *Human Reproduction* 18 (2003): 871–877.

6 Lori P. Knowles, "A Regulatory Patchwork – Human ES Cell Research Oversight," *Nature Biotechnol* ogy 22 (2004): 157–163. history of human rights advocacy, has also taken a lead in proposing a global prohibition on all human cloning. Its resolution drew a large number of cosponsors that spanned diverse cultural perspectives. The Sixth Committee, the UN body that focuses on legal issues, placed little emphasis on science during the debates. Rather, most speakers based their arguments on the concepts of human rights, human dignity, and pro tection of all humans from exploita tion.²² The UN passed a measure to delay consideration of the Costa Rican proposal to ban human cloning by only one vote (80-79).²³

These efforts have opened a window for further consideration of the complex perspectives regarding human cloning before the UN debate re-opens in September 2004. Supporters of a global framework for cloning, an issue with important scientific, medical, ethical, and commercial implications, hope that the uniting principals of human rights and dignity can bridge cultural perspectives on cloning.

NOTES

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13 "Go Cautiously on Cloning," *Ha'aretz* (7 March 2004).

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