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*Part Five*

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## Recommendations

Cloning-to-produce-children is inherently unethical. It would confound family structures and badly distort the relationship between the generations; transform procreation into manufacturing; and accelerate the dangerous trend toward treating children as products that can be made to order instead of as new and unique beings. Furthermore, the first instances of cloning-to-produce-children would be dangerous and unpredictable experiments that are medically unnecessary for the human subjects—the children being created—and to which they could not consent.

Cloning-for-biomedical-research is also inherently unethical, involving as it does the intentional creation of embryonic human beings for the purpose of destroying them by using them as a source of research material. Cloning research requires the harvesting of large numbers of egg cells, which means subjecting women to dangerous hormone treatments. And it risks sending us down a path toward fetal farming, artificial wombs, genetic engineering, and other immoral activities.

The justification for engaging in cloning-for-biomedical-research is weaker than ever before, thanks to the availability of viable alternative sources of pluripotent stem cells. And yet experiments have continued, bringing us closer to the day when a pregnancy can be initiated with an embryo created through cloning. The practice of science in a free society is not exempt from democratic oversight, and in the case of cloning, such oversight is urgently needed. The time to act is now.

### I. Congress Should Prohibit All Forms of Human Cloning and the Creation of Embryos for Research

Congress should pass and the president should sign legislation that:

- (1) makes it unlawful for any person or entity, public or private, in or affecting interstate or foreign commerce, knowingly to clone a human being (defined as the act of creating an embryo that, as a result of the manipulation of human reproductive material, including any human cells, genes, or their parts, or an *in vitro* embryo, contains a diploid set of chromosomes obtained from a single—living or deceased—human being, fetus or embryo);**

[The measure above would effectively prohibit both cloning-to-produce-children and cloning-for-biomedical-research. The conceptual definition provided here would prohibit cloning by somatic cell nuclear transfer, the most common method used for human cloning today, as well as other existing techniques for cloning, such as the deliberate splitting of embryos, and also speculative techniques for human cloning such as tetraploid complementation—but without prohibiting ethically acceptable research that scientists sometimes identify as “cloning,” such as the “cloning” of DNA molecules or human cells.]

**(2) makes it unlawful for any person or entity, public or private, in or affecting interstate or foreign commerce, knowingly to create a human embryo (defined as any organism that is derived by fertilization, parthenogenesis, cloning, or any other means from one or more human gametes or human diploid cells) or embryos for research purposes;**

[The measure above would effectively prohibit the creation of embryos for research—which is always an unethical exploitation of human life, lays the groundwork for many of the same unethical technologies that human cloning might make possible, and requires the collection of human egg cells, putting women at risk.]

**(3) prohibits the Department of Health and Human Services from providing funds for the creation of a human embryo or embryos for research purposes, or research in which a human embryo or embryos are destroyed, discarded, or knowingly subjected to risk of injury or death greater than that allowed under existing federal regulations and codes governing research involving pregnant women or fetuses;**

[The measure above would make the Dickey-Wicker Amendment, which today must be renewed with each federal appropriations cycle, permanent. While this measure would to some extent be redundant with previous portions of our recommendations, it would provide an additional means of preventing unethical research if the other portions of the legislation recommended here were struck down. Subsequent congressional appropriations specifying funding contrary to this measure would override it, but unless such appropriations were enacted, this measure would hold.]

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**(4) prohibits the Department of Health and Human Services from funding biomedical research in any state in which all forms of human cloning have not been prohibited;**

[Although this measure, too, might seem redundant in light of the general prohibition recommended above, it would provide an incentive for state governments to pass legislation restricting human cloning, thereby reducing the possibility that cloning could proceed on an intrastate basis.]

**(5) prohibits the United States Patent and Trademark Office from issuing patents on claims directed to or encompassing a human organism (at whatever stage of development), for methods of creating human embryos (including cloning), and for any products derived from or necessitating the destruction of human embryos (including embryonic stem cell lines), and voiding any such patents already issued.**

[This measure would extend current restrictions on the U.S. Patent and Trademark Office in the America Invents Act of 2011 and in the Weldon Amendment, which today is renewed with each federal appropriations cycle. While this measure may seem largely redundant given the preceding portions of these recommendations, it would provide an additional means of discouraging human cloning and embryo research in case other measures in these recommendations were struck down.]

The constitutional authority for these provisions is discussed in Part Four of this report.

## **II. States Should Also Prohibit Human Cloning and the Creation of Embryos for Research**

State governments should enact laws that:

**(1) make it unlawful for any person or entity, public or private, knowingly to clone a human being (defined as the act of creating an embryo that, as a result of the manipulation of human reproductive material, including any human cells, genes, or their parts, or an *in vitro* embryo, contains a diploid set of chromosomes obtained from a single—living or deceased—human being, fetus or embryo); and**

**(2) make it unlawful for any person or entity, public or private, knowingly to create a human embryo (defined as any organism that is derived by fertilization, parthenogenesis, cloning, or any other means from one or more human gametes or human diploid cells) or embryos for research purposes.**

As described in this report's Appendix, several states have already passed laws that permit the creation through cloning of human embryos but that forbid the transfer of such embryos to women's uteri. Such an approach is tantamount to a legal requirement that human embryos created through cloning must be frozen indefinitely or destroyed. Legislators in states that have adopted such "clone-and-kill" laws should repeal and replace them. While comprehensive laws prohibiting human cloning, of the sort outlined here, are ideal, even altering some of the language in state laws prohibiting cloning-to-produce-children could make them less morally troubling. As noted in Part Four, a bill in the U.S. House of Representatives sponsored by Representative Brian D. Kerns in 2001 would have prohibited creating cloned embryos with the intent of implanting them into a uterus. Such a law would not prohibit the cloning or destruction of human embryos for research, but it would likewise not require the destruction of cloned embryos. Although we do not endorse this proposal, it is a less morally problematic way to prohibit cloning-to-produce-children than through "clone-and-kill" laws.