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The Ethics of Cloning

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Last week's announcement from South Korea of the successful cloning of human embryos exposes sharp divides in public opinion. To some, cloning opens vast new frontiers of medical research. To others, it threatens to create dangerous humanoid deviants. On one point, however, all agree: Human cloning raises some of the most profound ethical issues of the age.

These issues center on the distinction between reproductive cloning, intended to create new humans, and therapeutic cloning, intended to advance research and cure disease. Reproductive cloning is almost universally condemned, not only because it smacks of playing God but because, even in the eyes of many scientists, it could create disease-prone life-forms. Therapeutic cloning, however, is a means of creating stem cells, the undifferentiated building-block cells that medical researchers believe may lead to breakthroughs in treatment and prevention of disease. Despite this clear distinction, public opinion remains deeply unsettled, and the U.S. Congress remains stalled over several bills that, in some versions, would outlaw reproductive cloning but legalize cloning to produce stem cells.

That stall reflects an ethical knottiness. It centers largely on the assumption that there is a slippery slope between these two camps. Will useful research slide irreversibly into designer babies? If sound arguments exist to justify a limited intervention -- like creating embryos for research -- what's to prevent those same arguments from applying to larger interventions like making babies? Those who favor therapeutic cloning will need to respond to an arsenal of slippery-slope arguments that will be lobbed at them by their opponents:

- **The ends justifies the means.** This widely discredited pseudo-ethical formula, if used by their antagonists to explain the motivations of the therapeutic researchers, could prove damaging. Do researchers care only about the results, heedless of the ways they get them? Is the production of stem cells so important that it becomes an "anything goes" proposition? Researchers need to keep reiterating the larger principles, rather than just the immediate ends, that are front and center in their reasoning.
- **The analogies are frightening.** Science fiction is rife with medical fiends bent on controlling the world by creating Frankenstein-like monsters. More to the point, the name of research also has been invoked by those as different as Nazi doctor Josef Mengele at Auschwitz during World War II and the creators of the Tuskeegee Syphilis Studies in the United States in the 1930s. These are blatantly extremist analogies, to be sure. But they unfortunately will be used to focus attention on the perils of human-subject research. Researchers must make a convincing case that these comparisons don't apply.
- **Good intentions aren't enough.** The ethical argument commonly heard on the pro-research side -- that we intend only to do research and will never use this methodology to create humans -- will hit the same moral wall that crumples many similar arguments about intentions. The protestations of the alcoholic ("I didn't intend to destroy my family") or the teenager ("I didn't mean to hurt anyone by driving recklessly") demonstrate that while motives matter, they aren't always the final determinant of rightness or wrongness. Researchers need to recognize that if reproductive cloning becomes the reality despite their best intentions, the public won't hold them guiltless and won't accept a "don't blame me" response.

Behind these arguments, however, lies a larger and more complicated line of reasoning that, if not addressed, could terminate therapeutic cloning altogether. It involves the assertion, approvingly stated by the researchers, that they never allow embryos to grow into full humanhood before harvesting them for their stem cells. Those opposing the research will have a field day with this one, restating it to say that the researchers promise to kill all would-be babies before they mature. That leaves the researchers appearing to justify the creation of a life-form for the explicit purpose of destroying it.

But is it a life-form? When does life begin? Is a cloned human blastocyst in a petri dish alive, and is it human? If it isn't, how should the researchers explain their interest in it? If it is, how do they refute the charge of murder? As with the abortion debate, the core ethical question here centers on the exact point at which a group of cells becomes a human. That question probably has no scientific answer, but depends instead on theological, metaphysical, and social arguments lying well beyond the professional expertise of the researchers.

There may be no area of science so tightly entangled with questions of ethics. Find the answers, and the research may be allowed to continue. Leave them unanswered, and the science, however exciting, may be squelched. In this matter, the ability of a few thinkers, needing nothing more than some paper and pencils, may determine the fate of billions of dollars of scientific experimentation. Science may be the key to human progress. But ethics, increasingly, is the key to science. Cloning reminds us how important it is that we get it right.