SCIENCE IN SOCIETY

Cloning Plan Spawns Ethics Debate

He seemed an unlikely "man of the hour," as ABC anchor Ted Koppel referred to him in a *Nightline* interview last week. But when a gangly 69-year-old physicist named Richard Seed aired his plans to launch a human cloning clinic in Chicago, he became an overnight sensation. Seed, who is unaffiliated with any university or research institution, has told reporters that a hand-picked team of physicians will attempt in the next few months to use newly developed cloning techniques to enable an infertile couple to have a child. In the face of nearly universal unease with the prospect of human cloning, the brazen pronouncement has fired debates over the ethics of cloning—and the dynamics of science journalism, too.

CHARLES BENNETT/AP PHOTO

A giant leap? Seed offered to clone ABC's Ted Koppel.

Many scientists view human cloning as a tantalizing, if distant, prospect for helping infertile couples have children. It's possible "that some cloninglike technology will be the only therapy that will allow an infertile couple to have a genetically related child," says Sean Tipton, a spokesperson for the American Society of Reproductive Medicine. But given that nobody has been able to reproduce the feat that resulted in Dolly the sheep—cloning an animal from an adult cell—many experts are skeptical that what Seed has set out to do can even be done. And even if it were feasible, "the chance of abnormal offspring is high," says Roger Pedersen, a physician at the University of California, San Francisco, and a major proponent of a voluntary moratorium on human cloning that many scientific groups have pledged to adhere to.

Still, Seed's face, voice, and words were a big hit for news organizations worldwide. He has declined to disclose the names of the four couples who he said have volunteered or of the physicians he said have agreed to work on the project. But Seed, who received a Ph.D. in physics from Harvard in 1953, has not skimped on rhetoric: He told National Public Radio (NPR) that "cloning and the reprogramming of DNA are the first serious steps in becoming one with God." This and similarly eyebrow-raising statements—he even offered to clone ABC's Koppel—have drawn deep skepticism from the scientific community. "This guy should have been ignored," says Dorothy Nelkin, a sociologist at New York University. Seed could not be reached for comment.

Indeed, at first, Seed's plans were mostly ignored. Seed announced his intentions last month at a conference in Chicago on science and law, but only the *Milwaukee Journal Sentinel* and a few other regional papers covered the story; he also got a mention in a commentary in this month's issue of *Nature Biotechnology*. "I wasn't convinced he had the resources or the people to do it," says Rick Weiss, a science writer at *The Washington Post* who was at the conference but decided to lay off the story. "I didn't want to just give him a free pulpit to [raise] his venture capital."

The media snowball began rolling after NPR sent out press releases touting a story on Seed on its 6 January evening news show, *All Things Considered*. Joe Palca, who reported the story, says he was skeptical initially until Seed took him to meet some of the physicians he had lined up for the project. Palca says he hoped his story would raise public consciousness about human cloning. Many news organizations, including *The Washington Post*, felt compelled to follow NPR's lead. "I didn't want to get scooped on a story I had known about for a month," says Weiss. Ronald Kotulak, a science writer at the *Chicago Tribune*, decided reluctantly that the newspaper couldn't ignore what had become "a national sensation." The *Tribune* put a half-dozen reporters on the story.

Even the White House jumped into the fray. In his Saturday radio address on 10 January, President Bill Clinton reiterated his determination to pass legislation that would place a 5-year moratorium on human cloning research. Ironically, some opponents of human cloning in Congress may benefit from Seed's announcement: It "certainly could help, and definitely would not harm, my efforts" to get legislation passed to ban cloning, Representative Vernon Ehlers (R–MI) told *Science*.

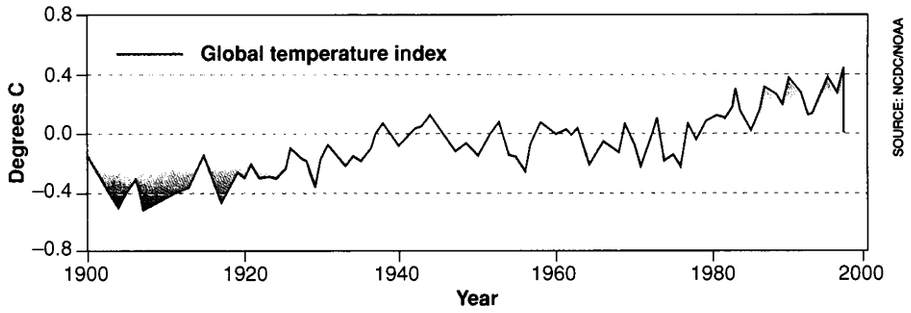
What worries some observers is that a rush to judgment could torpedo nonhuman cloning efforts. "Hastily drafted legislation," warns Carl Feldbaum, president of the Biotechnology Industry Organization, a Washington, D.C.–based lobby, could "inadvertently ban legitimate research" on topics such as the regeneration of nerve tissue or skin for burn victims. It's a shame, Nelkin adds, that the episode hasn't seeded a more worthwhile discussion about the risks and benefits of cloning.

–David Kestenbaum

GLOBAL CHANGE

The Hottest Year, By a Hair

Last week, government climatologists hailed 1997 as the warmest year of the century, citing it as another sign that greenhouse warming is real. But it might have been worse. Although last year's upward creep of the thermometer could help make the 1990s the warmest decade on record—warmer than the scorching '80s—computer climate models have called for the rising levels of greenhouse gases to be having a bigger effect on global climate. Reality may catch up with the models, however. By the turn of the century, researchers say, some factors that have slowed global warming so far will dissipate, and it will arrive in earnest.



A slow burn. The 1990s are running warmer than the '80s did, with 1997 the warmest on record. The warming—charted relative to the 1961–90 mean—has been tempered by pollutants and natural forces.

Boosted by one of the most powerful El Niño warmings of the tropical Pacific Ocean in this century, 1997 grabbed the title of warmest year from co-holders 1995 and 1990, according to a global record of land