

# WHAT HUMAN GENETIC MODIFICATION MEANS FOR WOMEN

Supporters of the new eugenics want it framed as an issue of “choice.”  
But feminists know we can support abortion rights  
and still oppose eugenics.

**S**educed by the medical promises of genetic science or fearful of losing reproductive autonomy, many feminists have been slow to oppose human genetic engineering. But GE is a threat to women, and in the broadest sense a feminist issue. Here’s why.

If anyone should be wary of medical techniques to “improve” ordinary reproduction—as GE purports to do—it’s women. History is full of such “progress,” and its grave results. When limbless babies were born to mothers who took thalidomide, the drug was recalled. But the deadly results of another “pregnancy-enhancing” drug, DES, showed up only years later, as cancer in the daughters of DES mothers. The high-estrogen Pill was tested first on uninformed Puerto Rican mothers, some of whom may have died from it.

Today’s fertility industry takes in \$4 billion a year, even though in-vitro fertilization (IVF) succeeds in only 3 of 10 cases. Virtually unregulated and highly competitive, these fertility doctors often undertake experimental treatments. Recently, the Institute for Reproductive Medicine and Science at New Jersey’s St. Barnabas Medical Center announced the success of a new fertility “therapy” called cytoplasmic transfer, in which some of the cellular material outside the nucleus

of one woman’s egg is transferred into the egg of another woman who is having difficulty sustaining embryo survival. The transferred cytoplasm contains mitochondria (organelles that produce energy for the cell), which have a small number of their own genes. So the embryo produced with cytoplasmic transfer can end up with two genetic mothers. This mixing, called “mitochondrial heteroplasmy,” can cause life-threatening symptoms that don’t show up until later in life. When the Public Broadcasting Service’s *Nova* enthusiastically reported on the procedure, complete with footage of its cute outcome, Katy, it mentioned no risks.

Didn’t these patients give informed consent? Yes and no. Most read warnings and signed their names. But with genetic therapies there’s no such thing as “informed,” says Judy Norsigian of the Boston Women’s Health Collective, “because the risks can’t be known.” Adds biologist Ruth Hubbard, the deadliness of DES was discovered “only because it showed itself in an otherwise very rare condition. If the effects [of human genetic engineering] are delayed, and if they are not associated with a particularly unusual pathology, it could take quite a long time to find

out.” Or indeed, “we might never know.”

**“PERFECTING” HUMAN GENETIC MODIFICATION WOULD REQUIRE EXPERIMENTATION ON WOMEN AND CHILDREN.**

Scottish biologist Ian Wilmut, the “father” of the famously first-cloned sheep Dolly, provided these sta-

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## THE ROLE OF NORTH AMERICAN WOMEN

Mainstream American women's and reproductive rights organizations have been slow to understand species-altering technologies as their issues. This hasn't been true in Europe and the global South, or among indigenous women in North America. In 1992, for instance, European Green Party women discovered a patent application from a U.S. biotech company for a process to synthesize nonhuman "biological active agents" in human mammary glands, from which they'd be secreted in milk and transmitted to nursing infants. To dramatize the commodification of women that lurked in this idea, the women's propaganda featured the image of a pregnant belly with a bar code emblazoned across it. It was one of the first feminist campaigns against patenting a life form, and it was successful. But if such success is to have any chance of being parlayed into a comprehensive global ban, given the aggressive rush of U.S. industry toward this lucrative new trade, more active intervention will be needed from Americans—and especially from American women.

When proposals to ban human cloning were introduced in the U.S. House of Representatives a year ago, progressive opponents of genetic engineering were only partly pleased. The problem was, the legislation did not come from other progressives, or their friends. Rather, the bills were all sponsored by hard-right

Republicans like Florida Congressman David Weldon and Pennsylvania's James Greenwood, and the bills' loudest supporters were anti-abortion fundamentalists.

This demanded fast and tricky politicking. The sponsors' sympathies, showing more tenderness toward blastocysts than toward living women and children, made pro-choice representatives want to run in the other direction. "The problem with the Weldon bill was Dave Weldon," said Judy Norsigian, executive director of the Boston Women's Health Collective, after lobbying the House on behalf of that bill. The press fanned moderates' misgivings by characterizing the debate as one of science versus religion, or of medical progress versus Luddite alarmism.

Last summer, U.S. feminists began to catch up. More than 100 groups and individuals—from the National Women's Health Network to the National Latina Health Organization, and from disability rights feminist Adrienne Asch to anti-globalization activist Naomi Klein—signed the Boston Women's Health Collective petition supporting a ban on reproductive cloning and a moratorium on embryo cloning. The leadership of the Health Collective's executive director was emblematic as well as real: as the prospect of human genetic engineering looms, the title of the feminist classic her group wrote—*Our Bodies, Ourselves*—assumes more urgent meaning.

tistics in 2001: Of the 31,007 sheep, mice, pig, and other mammal eggs that had undergone somatic cell nuclear transfer (cloning), 9,391 viable embryos resulted. From those embryos came 267 live-born offspring. In these animals, *The New York Times* reported, "random errors" were ubiquitous—including fatal heart and lung defects, malfunctioning immune systems, and grotesque obesity. In all, "fewer than 3 percent of all cloning efforts succeed." Dolly may be a victim of accelerated aging, another problem in cloned animals. In January, it was reported that she has arthritis, at the unusually early age of five and a half. Mothers of clones are endangered too, since their bodies have trouble supporting the abnormally large fetuses

Valhalla, is that if it works on a mouse, it is likely *not* to work on a woman: "Every species presents a new set of problems." How might the process be perfected in humans? In clinical trials?

"The degree of risk to be taken should never exceed that determined by the humanitarian importance of the problem to be solved by the experiment," reads the Nuremberg Code, drawn up after World War II to forbid future torturous experiments of the sort Nazi "scientists" inflicted on concentration-camp inmates. What is the humanitarian importance of creating a faster 100-meter sprinter? Or even curing a disease with genetic engineering when other options are still untried? The science to find "safe" means of



that cloning often produces.

It's likely that scientists will get better at cloning animals, and at the more complex procedures required to produce inheritable genetic alterations. Then, as health activists quip, if it works on a mouse, they will try it on a woman. The problem, warns Stuart Newman, a cell biologist at New York Medical College in

human GE, says Newman, would constitute "an entirely experimental enterprise with little justification." In other words, "We can't get there from here."

### WE ARE NOT OUR GENES.

When the Human Genome Project finished its map of our DNA, its press releases called it the "blueprint" of

humanity, the very Book of Life. The newspapers had already been filling up with reports of the discovery of a “gene for” breast cancer, and a “gene for” gayness. Many people had begun to believe our genes determine who we become.

This line of thinking should sound familiar to women. Not long ago, we were told that hormones, not sexism, explained why there has never been a U.S. female president (she might start a nuclear war in a fit of PMS). A decade after that came the notion that gender is “hard-wired” into the brain. Not incidentally, these claims were made just when social movements were proving Simone de Beauvoir’s adage that women are not born but made. Now the old determinism is raising its ugly head once again, with genetics. As “non-traditional” families finally bring legitimacy to social parenting, proponents of inheritable genetic modification tell us not only that we can pre-determine the natures of our children, but that cloning is the only means by which gays and lesbians can become real parents. “Real” parental ties, they imply, are biological, genetic.

“Genetic determinism” is not biologically accurate. “It is very unlikely that a simple and directly causal link between genes and most common diseases will ever be found,” writes Richard Horton, editor of the British medical journal *The Lancet*. If this is true of disease, it is even more true of musicality, optimism, or sexual orientation. The more complex a trait, the less useful genetics are to explain it. Hubbard writes, “The lens of genetics really is one of the narrowest foci to define our biology, not to mention what our social being is about.”

**GENETIC MODIFICATION IS NOT A REPRODUCTIVE “CHOICE.”**

For feminists, one of the most galling aspects of the debate about human genetic manipulation is the way its proponents have hijacked the language of “choice” to sell its products. IVF clinics and biotech research shouldn’t be regulated, say the companies that run them, because that would impinge on “choice” (for

the paying customers, if not for their unsuspecting offspring). The Book of Life is becoming a “catalogue” of “consumer eugenics,” says sociologist Barbara Katz Rothman.

Some ethicists, too, have posited a reproductive “right” to prenatal baby design. People decide whether or not to reproduce based on an expected “package of experiences,” wrote John Robertson, an influential bioethicist, in 1998. “Since the makeup of the packet will determine whether or not they reproduce...some right to choose characteristics, either by negative exclusion or positive selection, should follow as well.” Already, selective abortion is widely accepted after prenatal genetic screening uncovers an “anomaly.” Although some (notably disability rights activists) critique such “negative eugenics,” many people accept this practice for serious medical conditions. In any case, selecting from among a small number of embryos is a far cry from rearranging the DNA of a future child to achieve some preferred traits.

What feminists mean by “choice”—the ability to control fertility with safe and legal birth control and abortion—is far more concrete. It confers existential equality on the female half of the human race, which is why women worldwide have sought it for centuries. But genetic engineering designs in inequality: it will artificially confer heritable advantages only on those who can afford to buy them. Performed prenatally, moreover, it affects the new person without that person’s prior consent and possibly to her physical or emotional detriment. “Ending an unwanted pregnancy is apples, and mucking around with genes is oranges,” says Marcy Darnovsky of the Center for Genetics and Society. “We support abortion rights because we support a right to not have a child—or to have one. But we don’t support a woman’s right to do anything to that child once it’s alive, like abuse it or kill it.” Ironically, as Lisa Handwerker of the National Women’s Health Network has pointed out, anti-choice, anti-GE forces share with GE’s proponents an obsessive focus



**Thousands of cloning experiments on mammals have yielded these results so far: for every 3.3 cloned eggs, 1 viable embryo, and for every 35 viable embryos, 1 live-born offspring. Ratio of eggs to live offspring: about 116 to 1. Most of the offspring suffered from grave defects. To get better at cloning will require much more experimentation. To get good at cloning humans, or performing other genetic operations on them, will require experimenting on women, men, and children—and accepting the inevitable failures.**

on the embryo as an independent entity, while they both virtually ignore the pregnant woman and the child she may bear.

**BANS ON DANGEROUS GENETIC TECHNOLOGIES DO NOT GIVE FETUSES “RIGHTS.”**

Some choice advocates fear that any perceived concern about embryos will cede territory to anti-abortionists,

who want full legal protection of embryos and fetuses. U.S. Congressman Henry Waxman reflected this confusion when he said at a Congressional hearing, "I do not believe that the Congress should prohibit potentially life-saving research on genetic cell replication because it accords a cell—a special cell, but only a cell—the same rights and protections as a person."

But pro-choice opponents of cloning do not propose to give cells rights. Rather, we worry that cloned embryos might be implanted by unscrupulous fertility entrepreneurs into desperate women, where they'll grow into cloned humans. And from cloning, it is not a big step to designing children.

For legal, political, and philosophical reasons, University of Chicago medical ethicist Mary Mahowald proposes clarifying the pro-choice position. "It does feminist support for abortion no good to confuse life with personhood," she told me. "We can admit that the embryo is life and therefore afford it respect—the respect, for instance, of not exchanging its genes with those of another cell. But respecting life is not the same as granting rights. Rights are reserved for living persons."

**INDIVIDUAL FREEDOM MUST BE BALANCED WITH SOCIAL JUSTICE.**

"We're against bans," said a member of a coalition of mainstream reproductive-rights groups, explaining why the coalition was reluctant to join a campaign against human cloning. This reaction is not surprising in the United States, where defense of personal freedom can often trump the public interest.

Women's liberation means more than personal freedom, though. Rooted in the Left,



feminism is a critique of all kinds of domination and therefore a vision of an egalitarian world—racially and economically, as well as sexually.

In the case of species-altering procedures, social justice must prevail over individual "choice." Arguing for an international ban on reproductive cloning and regulation of related research, Patricia Baird, chair of Canada's Royal Commission on New Reproductive Technologies, put it this way: "The framework of individual autonomy and reproductive choice is dangerously incomplete, because it leaves out the effects on others and on social systems, and the effects on the child and future generations." The good news is that good public policy protects individuals

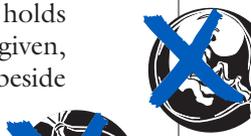
too. Baird offered the example of overfishing, which might benefit the fisherman in the short run but deplete the fishery for everyone, including that fisherman, in the long run. Regulation sustains his and his children's livelihoods. "We all have a stake in the kind of community we live in," Baird said.

**FEMINISTS CAN WORK ALONGSIDE ANTI-ABORTION CONSERVATIVES AGAINST SPECIES-ALTERING PROCEDURES.**

"We are repelled by the prospect of cloning human beings...because we intuit and we feel, immediately and without argument, the violation of things that we rightfully hold dear," wrote Leon Kass, conservative social critic and chair of President Bush's committee to investigate stem-cell research.

Not every feminist holds dear what Kass holds dear: the "sanctity" of the family based in God-given, "natural" forms of reproduction. Still, Kass sat beside Judy Norsigian and Stuart Newman to testify before the U.S. Congress against cloning.

The genetic engineering debate has made strange bedfellows. But it has also rearranged the political definitions that made those bedfellows strangers. "Social conservatives believe [genetic engineering] is playing God and therefore unethical, while anti-biotech activists [of the Left] see it



as the first step into a brave new world divided by biological castes," writes social critic Jeremy Rifkin. "Both oppose the emergence of a commercial eugenics civilization." Others suggest that the new political landscape divides differently, between libertarians and communitarians. Whether of the Left or the Right, the former would support an individual right to choose just about any intervention on one's own body or one's offspring, whereas the latter esteem public health and social equality and would reject those interventions, including GE, that endanger them.

Choice activists may at first be surprised when they find that their anti-cloning and anti-eugenics sentiments are shared by opponents of reproductive rights. But passionate arguments for the same position from historically sworn enemies can only make a legislator, or any citizen, listen up. Feminists need sacrifice no part of the defense of women's reproductive autonomy when we champion health and social justice for the future human community.