

Designer Genes

[Lay Witness](#), September, 1999

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“We have reached a consensus on this point because current scientific information indicates that this technique is not safe to use in humans at this time.”¹

When the National Bioethics Advisory Commission (NBAC) gave their report to President Clinton in June 1997, the newspapers trumpeted the message: cloning was banned. However, not all the news reports mentioned the second half of the conclusion: “... clinical use of somatic cell nuclear transfer techniques to create a child should be preceded by research trials that are governed by the twin protections of independent review and informed consent, consistent with existing norms of human subjects protection.”² While the NBAC did not explain how it expected scientists to obtain their informed consent of a cloned child who had not yet been created, it is clear from the report that the NBAC *does* expect cloning to begin as soon as technical difficulties are removed.

Scientific Advances?

What are we to think about cloning, and how can we discuss the problem with friends or coworkers who might well support it? Be aware that cloning, while definitely a new technique, is not very original in purpose. First, let’s examine the four ways in which things can be cloned in the lab.

¹ *Cloning Human Beings*, National Bioethics Advisory Committee, Rockville, MD (June 1997), iii.

² *Ibid.*, iv.

Molecular cloning has been going on for quite some time. Inside of every nucleus float strands of tightly wrapped DNA. The nucleus itself floats inside of a cell that is 10 to several hundred times larger than itself. DNA is the target for cloning, but DNA doesn't function if it's removed from the nucleus. Once it is removed from a cell nucleus, it can't be put back in. But, by taking DNA out of the cell nucleus, and cloning thousands of copies, we can tell where it came from. For instance, when a rapist is convicted using DNA evidence, that evidence was probably obtained by extracting the DNA from spermatozoa at the crime scene and artificially copying it several thousand times, until sufficient quantities existed for normal chemical tests to identify whose DNA it was. This is called molecular cloning. Medical research has created medicines this way for close to a decade. This technology is morally acceptable because fertilized eggs are not destroyed in order to obtain the DNA – it comes from other body cells.

Individual cells which aren't egg or sperm make copies of themselves all the time in the body. These cells can also be made to do that in a petri dish. This is called *cellular* cloning. It, too, has a long history and is morally acceptable.

The problem lies with the remaining two types: *blastomere separation* and *nuclear transfer* cloning. In blastomere separation, the biologist fertilizes an egg in a petri dish and waits until it reaches the four- to eight-cell division stage. Then the biologist pries the cells apart with a very fine needle. The resulting cells are all theoretically capable of becoming a complete being, whether that being is a pig, a cow, or a human. This process isn't really cloning, it is really the forced generation of twins, triplets, quadruplets, etc. The process is not morally problematic with animals, but it is very problematic when done with human embryos.

Nuclear transfer cloning created the uproar. An unfertilized egg cell is harvested and its nucleus is removed. The nucleus from a normal cell is used to replace the egg cell's nucleus. The egg cell is then electro-shocked repeatedly until it uses the new nucleus and, acting like a fertilized egg, begins to divide. More than 99% of the time, this process fails. But every once in a great while, it succeeds. When it does, the resulting embryo is a genetic carbon copy of the being from which the nucleus was obtained.

Today, presidential policy *requires* every child to be a wanted child. Thus, every child is defined by his or her parents' expectations. When techniques exist to produce designer genes, and thereby designer children, cloning is just the next step toward defining children as a commodity. Until now, genetic testing and selective abortion provided a very crude method of selecting a child's characteristics. These methods have generally been used in a negative sense – destroy any child with undesirable characteristics, whether it be Down's Syndrome, a cleft lip, or the wrong sex.

In vitro fertilization (IVF) is somewhat more refined. By careful selection of the physical characteristics of the anonymous sperm and egg donors, a child can often be produced who essentially has the characteristics the parent(s) desire.

Note that IVF doesn't require two parents. With sperm donation, virgins can and often do conceive. In the industry, it's called "the Virgin Mary syndrome." With egg donations and surrogate mothers, men who want children can contract them into existence for about as much trouble as adopting and significantly less than planning a corporate merger. In fact, IVF techniques produce many embryos for each successful pregnancy: It must, because the technique often fails. Generally, a couple will have six

to eight embryos created and attempt to implant each in turn until they have a successful pregnancy. Once they have their child, the IVF lab is stuck with whatever embryos weren't used. As a recent *Pittsburgh Post-Gazette* article stated, "Some embryos are custom made by doctors, while others have been made... and then not used." These embryos are up for adoption and quietly marketed to couples who are looking for specific looks and/or ethnicity.³

Multiplying Parents

Where does cloning fit in? As Dr. Mark Sauer said, "It's normal human nature [to want to choose donors of eggs and sperm.]"⁴ The essential difference between IVF and cloning: the commissioning parent has a very clear idea of what the child will look like. Nutrition and environmental factors may alter the child's looks and capabilities somewhat, but probably not to a dramatic extent. The major difference is simple: the child will grow up in a culture 30 years later, and be faced with a myriad of challenges his or her much older twin didn't face. To that extent, the parent(s) will have a unique child. But what, exactly, does the word "parent" mean in these contexts? Isn't it time, as Catholics, to re-think exactly what is going on with the definition of parenthood and, perhaps, force society to consider carefully the direction in which it is headed?

Imagine identical twin brothers, Fritz and Fred. Fritz grows up to be an *in vitro* fertilization specialist. Fred grows up to be a carpenter. After Fred has been married a few years, he and his wife decide to have a child. Fred asks Fritz, the doctor, to artificially impregnate Fred's wife, and Dr. Fritz readily agrees. Fred gives Dr. Fritz his

³ Gina Kolata, "Infertile Couples Can Go Shopping," *Pittsburgh Post-Gazette*, from *The New York Times* wire article (Sunday, November 23, 1997), A-3.

sperm, Dr. Fritz extracts an egg from Fred's wife, fertilizes it with sperm, and implants it into her womb.

Who is the father? Is it Fred, the carpenter? Why? After all, Dr. Fritz used sperm genetically identical to his own and impregnated Fred's wife. Doesn't that make Dr. Fritz the father? He did everything a father does, except have sex. Is Dr. Fritz responsible for child support? If not, then why is Fred? When procreation is treated as an action separate from the sexual act, the understanding of responsibility must play catch-up, assuming it manages to survive at all.

Keep in mind that child support laws have been revised because of IVF. The sperm donor cannot legally be held for child support in this country. Even though he is genetically the father of several children, none can claim to be his dependent unless he chooses to formally adopt. IVF, sperm donation, egg donation, and surrogate motherhood have ripped apart society's idea of parenthood. The NBAC report speaks of future cloned children having up to eight parents: four genetic parents – the egg cell donor, the nucleus donor, and the genetic parents of the nucleus donor – and four additional non-genetic parents – the gestational mother, her husband, and the rearing parents, that is, the man and woman (or man and man or woman and woman) who commissioned the child's creation. Be very clear on this point: society *has already* divorced the procreative act from the sexual act, but it continues to tie all financial responsibility to the sexual act or the "commissioning".

⁴ *Ibid.*

Turning up the Heat

If society insists on doing insane things, it must be forced to follow its own logic. At least one scientist testifying before the NBAC in support of cloning said, "If objectors to cloning can identify no greater harm than a supposed affront to the dignity of the human species, that is a flimsy basis on which to erect barriers to scientific research and its applications."⁵

Clearly, scientists' respect for human dignity is at an all-time low. Given that response, shouldn't Catholic respect for scientists' sense of responsibility be equally poor? Catholic opposition to cloning might well respond, "If scientist can identify no greater harm than a supposed affront to the freedom of scientific inquiry, that is a flimsy basis on which to erect barriers to human dignity and its applications. It is also a weak understanding of scientific responsibility." If the children of this age can't be prevented from playing with fire, then it is at least appropriate that we make sure they experience some of the heat.

Doctors are creating children in the laboratory. Since time immemorial, people who create children have been called parents. Is it not reasonable to ask these parents to bear at least the financial aspects of their responsibility?

Christian concerns are being treated with great disdain. Let us treat the concerns of scientists with the utmost dignity. Let us dignify their work with the title and the responsibilities befitting their work. IVG specialists and doctors devoted to cloning should be treated as the parents they truly are. Every child brought successfully to term as a result of their work should be able to expect 18 years of financial support from the men and women who created them in the petri dish and implanted them in the womb –

their true parents. In a world in which sex is divorced from procreation, the man who unites egg and sperm in a dish is the father, and the woman who implants that fertilized egg into a womb, even if it is not her womb, is the mother. At the state and federal level, especially in those states where human life is defined as beginning at conception, we should be pressing for revisions of the child support laws in order to reflect the new realities.

⁵ Macklin, 1997, NBAC, 71.