

MORAL ASPECTS OF HUMAN CLONING

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MORAL ASPECTS OF HUMAN CLONING

INTRODUCTION

Cloning offers many applications, especially in medicine; however, in spite of many advantages many people still consider human cloning, or cloning at all, to be immoral. This opinion, though, is rarely based on a careful analysis of facts and often only a spontaneous reaction. Because this technology has so much potential for doing good, research in human cloning should continue, although some applications of it may need to be restricted.

CLONING

Cloning is the process of extracting the DNA out of a donor's cell and implanting this genetic code in another cell in order to grow a being with identical genes, thus virtually duplicating the donor. The term "clone" refers to the new being that has identical genes to the donor.

History of Cloning

Research in cloning began as early as 1952 when researchers in Pennsylvania succeeded in cloning a frog from an embryonic cell. This practice is called embryo twinning and is commonly used in the cattle industry. Despite these early successes, advances in cloning stagnated because it is much more difficult to extend the full DNA from adult cells than from cells in an embryonic stage. In the 1980s biologists at the Allegheny University of Health

Sciences came extremely close, though. The team tried to clone frogs from adult red blood cells, and healthy tadpoles developed; halfway through the metamorphosis from tadpoles to frogs they died.

A group of British researchers recently succeeded in "unfolding" the whole DNA from an udder cell of a grown-up sheep, and subsequently cloned the ewe. The clone now is seven months old and perfectly healthy.

Cloning, though, is still far from being perfected: Before the experiment finally became a success two hundred and seventy-seven tries failed¹.

Applications and Abuses of Cloning

One area that will certainly profit from cloning is medicine and medical research. With cloning it would be possible to provide patients having terminal illnesses with replacement organs that match them perfectly. This, for example, could be practiced by cloning a sick child and allowing parents to raise a second child with identical genes, who could then donate an organ. Of course, nobody proposes to take a vital and unique organ like the heart from the clone. The future of this application may be to grow just the organ that is needed. In medical research cloning could give deep insights to problems concerning spinal chords, heart muscles, or brain tissue that will not regenerate after an injury. Finally, it may help understanding some cancer cells that return to an embryonic stage and grow uncontrolled.

¹ J. Madeleine Nash, "The Age of Cloning," Time, March 10, 1997, p. 65.

Cloning or embryo twinning can also be of great value when helping infertile couples to have a child because the procedure of gathering the zygotes becomes much easier and shorter.

Lisa Geller, a neurobiologist from Harvard University, states that cloning is so similar to in vitro technology, which has been used for nearly two decades now, that there should be no moral objections.²

Aside from applications to humans, cloning could help in agriculture. A farmer could clone his best cows or sheep and drastically increase production. Scientists also investigate the use of cloning for an artificial increase of the population of endangered animal species. Nevertheless, it is possible to imagine abuses of cloning. A common fear is that of clone armies or thousands of clones working in labor camps. This, however, is almost impossible to do since cloning still requires surrogate mothers, and it is unlikely to find enough women willing to undergo the procedure for this kind of purpose. Even plans to take cells out of corpses in order to resurrect the dead must fail; cloning requires living cells.³

As Harold Shapiro, President of Princeton University and President of the Federal Bioethics Advisory Commission, has recently recognized, the technology of cloning is startling and poses many questions; he, however, is confident that "this affair is going to end up producing a lot more benefits than costs."⁴

² Jeffrey Kluger, "Will We Follow the Sheep?", Time, March 10, 1997, p. 70.

³ Charles Krauthammer, "Special Report on Cloning," Time, March 10, 1997, p. 61.

⁴ Barry Came, "The Prospect of Evil," Maclean's, March 10, 1997, p. 59.

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Whether human cloning is ethically justifiable or not has long been a question. In the 1970s, however, scientists seriously believed that cloning using adult cells was impossible, and the discussion about cloning virtually stopped. The successful cloning of the ewe Dolly has started the discussion again, and because the technology is extremely close to human applications it is more intense than ever.

The result of a Time telephone poll was that more than 70 percent of the people asked seem to oppose human cloning, and the reactions range from uncertainty to total rejection; nearly nobody is able to explain this opinion and support it with facts, though. Many religious groups have a negative attitude towards the cloning of humans because "it just is morally wrong," as Most Reverend Adam Exner, Roman Catholic Archbishop of Vancouver, said.⁵ He is unable to explain his opinion exactly, but refers to a breach of the law of nature. The fact, however, is that cloning is possible and does not violate any physical law.

Another wide-spread opinion is that cloning creates a perfect copy of the cell donor, thus pre-determining the life and all the characteristics of the clone. This practice "forces a human being into a genetic straitjacket"⁶ and violates a human diversity, which is considered a fundamental human characteristic.

This again is completely wrong. The clone and the cloned would be genetically no closer than twins, their genes being almost identical but both twins being emotionally definitely two different beings. The small genetic differences between twins are introduced by mutations, but they are usually minor and insignificant, which proves that human psychology and behavior are not mainly regulated by genes but instead by experiences and knowledge

⁵ Barry Came, "The Prospect of Evil," Maclean's, March 10, 1997, p. 59.

⁶ Jeffrey Kluger, "Will We Follow the Sheep?", Time, March 10, 1997, p. 70.

acquired during a whole lifetime. This means that to create a perfect copy of a human being, it is necessary to analyze the person's life and re-create all experiences this person had, which is nearly impossible. The differences between two twins would be even more subtle than between the clone and the cloned because the cell donor and the clone would be raised at different times, maybe many decades apart.

Achievement is under even weaker genetic control than behavior. This view is supported by Rabbi Moshe Tendler, a professor of biology and biblical law at Yeshiva University in New York: " I can make myself an Albert Einstein, and he may turn out to be a drug addict."⁷

Most likely a clone and the cell donor would look identical since most physical characteristics are defined by genes, but not even this is necessarily the case. Mutations in the donor cell may alter the genetic code and make it impossible to create a perfect clone, and further mutations can be introduced during the process of cloning. The largest effect on the way a person looks, though, have the experiences this person has. The actions taken and the reactions received strongly shape the character and behavior, which in turn change the way a person appears to others.

With the fact established that cloning is very similar to the natural phenomenon of twins, the second argument also proves to be wrong. The unfounded fear and rejection of cloning that a large part of society exhibits today is very similar to the reactions towards early experiments with organ transplants, back in the 1700s. Nobody will doubt that these once dreaded experiments have brought many profits; they were only condemned because the majority was afraid of the new.

⁷ Jeffrey Kluger, "Will We Follow the Sheep?", Time, March 10, 1997, p. 71.

CONCLUSION

Like organ transplants, the technology of cloning applied to humans will certainly improve the standard of living, simplify existing procedures, and save many lives. Since the common arguments against cloning can easily be refuted, the only reason why some people might oppose cloning is because they are afraid of a new technology, as stated before. "Here is an opportunity to take control of technology and guide its direction," said Leon Kass of the University of Chicago.⁸ I have to agree that these events are very startling, but also promising. And as long as clones are treated as equal beings, cloning can only help.

⁸ Jeffrey Kluger, "Will We Follow the Sheep?", Time, March 10, 1997, p. 70.

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