## **Human Cloning**

**1. Cloning:** In 1996, Dolly the sheep became the first successfully cloned species. Since then, we have cloned dozens of others, including cats, rats, pigs, dogs, and even primates – e.g., the macaque monkey in 2018 (source). It is time to think about the moral status of human cloning.

Specifically, I want to focus on a particular kind of cloning, called "somatic cell nuclear transfer" – i.e., a method involving the replacement of the nucleus of an unfertilized human egg, activation of cell division, followed by the transfer of the newly created human embryo to a woman's uterus, where it will then proceed as a normal pregnancy. Would it be morally permissible to engage in such an experiment?

[Clearing up some mis-conceptions: (1) Note that clones begin as embryos. If you clone yourself today, your clone will NOT be the same age as you—rather, they will be a newborn infant 9 months from now. (2) Note that clones ONLY share their DNA with their clone parent. To the extent that "nurture" plays a role in the kind of person that we become, clones will NOT inherit the personality, beliefs, goals, preferences, etc. of their clone parent—and certainly not their memories! Essentially, having a clone would be the same as having an identical twin—only, rather than being born mere *minutes* later, your cloned twin would be born YEARS later than you.]

## **2. Why Clone?:** Here are some of reasons in favor of cloning:

- Couples who are unable to reproduce (e.g., infertile and/or same-sex couples) would be able to have a child who is biologically related.
- Couples where one partner has some hereditary disease would be able to have a biologically related child without the risk of passing on that disease.
- People who have lost a child could clone their dead child, and having a genetic duplicate of them might give them some consolation or peace.
- Pursuing research on human cloning will help to advance scientific knowledge about human development, reproduction, genetics, and so on.
- People with diseases could clone themselves in order to harvest potential lifesaving tissues (e.g., bone marrow, kidneys).

[Merely "farming" human beings like cattle for their organs is clearly wrong. But, consider the case of the Ayalas, who purposely conceived a child in the hopes that the child would be a suitable bone marrow donor for their daughter, who was dying of leukemia. Was this morally permissible? The Ayalas were criticized by some for "baby farming", yet others praised them for saving their daughter's life. Would it be morally permissible to clone one's self for similar reasons?]

[For my Bioethics students: Philosopher Dan Brock also lists several rights, which many believe to be fundamental to all human beings:

- (1) A right to reproduce.
- (2) A right to some choice about what kind of child we will have.
- (3) A right to direct the lives of our offspring as we see fit (within certain limits).

Cloning, he says, is just a new technology that expands these three rights.]

- **3. Objections:** Reasons to believe that cloning a human being would be morally wrong:
  - (1) Cloning harms the clones: Cloning is "unethical experimentation" due to imperfections in the cloning process. For instance, in order to create Dolly the sheep, 277 eggs were fertilized, 29 embryos were implanted for pregnancy, and only one sheep was born. Furthermore, Dolly herself only lived half the life expectancy of a healthy sheep, and suffered from arthritis and lung disease. Similar results are expected for the first human clone (in part, because clones are born with "old" cells i.e., with short telomeres).

<u>Reply:</u> Is this true? Let's start by considering what it means to **harm** someone. Here's a plausible account of harm:

**Harm** = To make someone worse off than they otherwise would have been.

Imagine that the first human clones will not have lives worth living, but will merely live a few short years of intense suffering and agony. It is easy to see how bringing this sort of individual into existence harms them. For, arguably, 10 years of agony **is worse** than never being born in the first place; giving someone 10 agonizing years DOES make them worse off than they otherwise would have been, had they never existed at all.

...But, can the same be said if the clone's defects are no worse than those of Dolly the sheep? (i.e., half the normal life expectancy, early onset arthritis) Imagine that we have cloned, and we sit down to ask our clone—a girl named Pebbles: "Pebbles, are you glad that we cloned?" She responds, "Oh yes. I mean, I'm sad that I'm going to die young, but I've tried to make the most of it. And I'd rather be here and die young, than never have existed at all."

Is it clear that we have **harmed** Pebbles by bringing her into existence? No. Arguably, we have made Pebbles BETTER off by bringing her into existence, rather than ever creating her at all – and in that case, we have actually benefitted her—in which case, assuming that the first clones will live lives similar to that of Pebbles' life, the objection above fails. [What do you think?]

(2) Clones would experience unique psychological hardships: Cloning may result in psychological trauma to the clone because the clone will be a genetic duplicate of an already existing person. This may cause confusion about identity and individuality. "Who am I?" the clone may ask, and find no simple answer. After all, they're a genetic duplicate of someone else.

Furthermore, this may result in the parents having certain **expectations** of their child, and parents might coerce their cloned child to pursue certain hopes or dreams that the parents have, and want to fulfill vicariously through their child. After all, why would we even WANT a genetic duplicate of someone else unless we had certain pre-conceived expectations in our minds about what the child would (should?) end up like?

The clone may also experience constant comparison to his/her "parent," especially if that parent is someone gifted or famous. This may cause people to place unwarranted expectations on the clone, and it may be difficult for the clone if they don't "live up to" the successes or reputation of their parent. Finally, clones who encounter difficulties or failures of their own may blame their "parent" for their own shortcomings.

Reply: Once again, ask: Even if this is true, has the clone been HARMED?

Furthermore, identical twins DO already exist. Are present twins faced with confusion about identity or individuality, or comparison to their twin? Likewise, kids are often ALREADY compared to their parents or experience pressure to "live up to" their parent's successes. Would the pressures created by cloning be so very different?

<u>Rebuttal:</u> Twins live at the same time (they are the same age), but being a clone may be more traumatic, because you have a "sneak preview" of the life you could live (because your clone-parent is much older). Furthermore, the pressures placed on clones by parents would be exacerbated because the clone would be an EXACT duplicate of one of them.

Currently, when we reproduce, the result is random—rooted in the genes of the parents, yes, but ultimately random. The resulting child, then, knows that they have an independent, open life ahead of them. But, making a child in our own image may cause the child feel as if their future is pre-determined, and it may make them less spontaneous or willing to pursue their own goals, etc.

[Do you think this would happen? Would it matter morally if it did?]

(3) Cloning will turn procreation into manufacture: Since clones will be produced by scientists in a lab—their exact genetic features selected and known in advance—this may foster a sense of control or even ownership over the child. It is possible that clones will be viewed as the "property" of their makers, rather than human beings with full moral status. This is because, clones will be "manufactured" and not "begotten." Whenever we MAKE things, we have a tendency to feel superior to our creations; we are the MASTERS of them; we OWN them.

There is a very real risk that clones would be seen as things that are manufactured, rather than human beings. It is possible, even, that they will be treated as a commodity to be bought or sold—a dehumanizing result.

Brave New World: There is the further worry that such manufacture would—combined with genetic engineering—lead to a sort of new eugenics, where parents hand-pick the traits they want in order to create the "perfect" child; and we have no idea what such a practice would do to society.

<u>Reply:</u> We already use artificial insemination, in-vitro fertilization, and so on to procreate. Have these practices changed the way we view children, or resulted in children who are seen as commodities?

Even if the present worries are well-founded, do they constitute a reason not to clone? Why or why not? Could we take steps to prevent such things?

(4) Cloning would be a perversion of the parent-child relationship: Clones would be an exact duplicate of one person. Thus, a woman could be the "mother" of her "twin sister." This is a perversion of the child-parent relationship. Clone/clone-parent relationships would differ from all existing parent-child relationships (even those of adoptive parents and children); and we have no idea what effects this would have. This might be undesirable, for instance, because it would blur the lines of incest. Your nephew is also your cousin; your grandson is also your son; your sister is also your daughter; etc.

<u>Reply:</u> Same as the previous. Also: We already adopt, use sperm donors, egg donors, divorce, re-marry, and so on—such that many children in some sense have 1, or 3, or 4 parents, etc. Have these facts perverted the parent-child relationship?

(5) <u>Is cloning "playing God"?:</u> Leon Kass briefly mentions the following worry, which seems to also be a common thought among the public: namely, that cloning would be a case of "playing God"—and many think that it is morally wrong to "play God".

Reply: Do you think it is wrong to "play God"? What might the definition of "playing God" be? We must be careful here, for a definition as broad as "**intervening in the course of nature**" might rule out life-saving medications or surgeries. Isn't removing a tumor a case of "intervening in the course of nature"?

If we restrict our definition to be "**creating life in an unnatural way**", then this might rule out artificial insemination, or in vitro fertilization—practices typically thought to be permissible. So, what exactly is it about cloning in particular that is objectionable?

[Brainstorm: Perhaps the thing we find objectionable about "playing God" is simply the worry that, when we meddle with really complicated things that we don't fully understand, we run the risk of unleashing a catastrophe upon the planet? For instance, some fear that the CDC's meddling around with viruses for the purpose of study may someday result in them accidentally unleashing a pandemic that will wipe out mankind. Similarly, might meddling around with procreation and the human genome potentially result in something like the zombie apocalypse? Maybe.]

Watch a video on human cloning here.