

Primer on Ethics and Human Cloning

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Article highlights

Before cloning is considered permissible medicine for human infertility, society needs to resolve many questions, including:

- Is cloning unnatural self-engineering?
- Will failures, such as deformed offspring, be acceptable?
- Will cloning lead to designer babies who are denied an open future?
- Who is socially responsible for cloned humans?
- Do clones have rights and legal protection?

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A clone's DNA is exactly the same as that of the original organism.

- The starvation and implantation of DNA from specialized, non-sexual cells of one organism (e.g., cells specialized to make that organism's hair or milk) into an egg whose DNA nucleus has been removed.
- The resulting egg and nucleus are shocked or chemically treated so that the egg begins to behave as though fertilization has occurred, resulting in the beginning of embryonic development of a second organism containing the entire genetic code of the first organism.

Human cloning: the most controversial debate of the decade.

Mammalian cloning, through this nuclear transfer process, has resulted in the birth of hundreds of organisms to date. However, significantly more nuclear transfer generated embryos fail during pregnancy than would fail in sexual reproduction, and a **substantial**, or large, majority of cloned animals who have survived to birth have had some significant birth defect.

Reproduction, or perhaps more accurately, replication of an organism's DNA identity does not normally occur in mammals, with the exception of twinning, which always results in the simultaneous birth of siblings. Only plants reproduce through replication from one generation to another. The prospect of such replication for humans has resulted in the most controversial debate about reproduction ever to be taken up in western civilization.

Cloning Issues

It's an answer to infertility, claim supporters.

In addition to the obvious risks to the first child, noted below, those who **oppose**, or are against, argue that the freedom of children and nature of the family are in danger.

Proponents, or advocates, of cloning suggested it might serve as a new, unusual but perhaps effective treatment for infertility, enabling those unable to pass genes to future generations.

Failure, miscarriage, or deformed offspring likely in early experiments.
Some defects may not be revealed until a clone is mature.

Perhaps the most urgent ethical, legal and social issues about cloning arise in the context and process that may lead to the birth of a first human clone. This is so because, as has been pointed out by scholars and politicians, early human experiments are likely to result in a number of clinical failures and lead to miscarriage, the necessity of dozens or even hundreds of abortions, or births of massively deformed offspring. Recent study of mammalian cloning also suggests that a number of defects often created in the reprogramming of the egg do not **manifest**, or appear, themselves until later in the life of the resulting clone, so that mature clones have often undergone spectacular, unforeseen deaths.²

The dangers for early prospective clones are controversial and difficult to manage because

- in part, one is attempting to protect a future potential person against harms that might be inflicted by their very existence, and
- in part because societies around the world have indicated that they believe that the early cloning experiments will breach a natural barrier that is moral in character, taking humans into a realm of self-engineering that exceeds any prior experiments with new reproductive technology.

Can the law prevent the birth of a clone when it's our right to have children?

The dangers for the first clone pale in comparison to the ethical issues that will arise should cloning succeed in producing a healthy child, and become part of the repertoire of new reproductive technologies presently offered to those with **sufficient funds**, or lots of money.

Is a cloned embryo the same as a conceived embryo?

- The creation of Dolly the sheep at Roslyn, Scotland labs of biotechnology company PPL Therapeutics (and not-for-profit Roslyn Institute) did not involve any of the hallmarks of what is known socially, religiously, and scientifically, as

conception: the fusion of egg and sperm and the adhesion of the thus fertilized egg to the wall of the uterus.⁵

- The genetic and cellular material that led to Dolly indeed might not even qualify in traditional terms as an embryo, in that mammalian embryos are scientifically defined in part by how they come into being. It is quite difficult to divine “what is in the dish” where a “clone” is being created, a problem that plagues all those who would define and regulate the creation and research on embryonic clones.

Does a clone have parents, autonomy, or even a soul?

- a human clone lacks traits necessary for true independence from “parent” cells
- whether a clone is entitled by contrast to feel that a parent cell (genetically its monozygotic twin) is an appropriate parent
- and many in the general public in western nations identified the most important problem of cloning as whether a clone would have a soul.

What is parenthood or society in a world that includes clones?

In moral terms, the questions to be asked about cloning, were it shown to be safe and effective, are:

- Whether and how does cloning relate to other kinds of families?
- What sorts of boundaries of parenthood and social responsibility are challenged by cloning?

Can cloned children choose their own destiny?

Legal scholars have argued that cloning may violate, for example, a child’s “right to an open future.” A child born as a genetic copy of another may feel undue pressure to become like or different from its parent cell. Yet a right to an open future is difficult to validate by common law or analogy to ethical analysis about parenthood. What is parenthood, after all, but the teaching of values and knowledge to children in an act of stewardship? Perhaps children do not ever have fully open futures. Failing an absolute standard, society will have to find ways to reconcile differences among the many kinds and degrees of parental control and enhancement of children. While it is tempting to describe cloning as either a new form of parenting or as twinning, either analysis fails to take account of the need for new ways to integrate the problem of cloning into social institutions before it becomes an accepted form of reproductive medicine.

If humans “make” babies rather than “have” babies, are they playing God?

Conclusion

Cloning offers remarkable insight into the power of creation that humanity has taken into its fold. One theological analysis holds that humans are co-creators with God; perhaps it is more accurate to say that humans are moving ever closer to a posture of making babies,

rather than having babies. Cloning represents a remarkable test of human restraint, wisdom and institutional development, one that will in many ways identify the moral features of 21st century biotechnology.