What about human cloning?

Before evaluating human cloning, it is crucial that we take a moment to clarify what is meant by the term and what it has historically referred to. By definition, cloning is “the process of generating a genetically identical copy of a cell or an organism.” Thus, human cloning is the creation of an organism that is genetically identical to another human.

In 1996, Dolly the sheep was successfully cloned by researchers. Almost immediately, people began speculating about using this technology to clone humans, what doing so would mean for us, and where this technology might lead us in the future. In 1998, scientists successfully isolated human stem cells, another necessary step towards human cloning. It was not long after, however, that most scientists, ethicists, and lawmakers opted against this direction for research and medicine. In 2002, the President’s Council on Bioethics unanimously recommended an outright ban on cloning for the purpose of creating children and on research for that specific purpose. In 2005, the General Assembly of the United Nations adopted the UN Declaration on Human Cloning, calling on member nations to “prohibit all forms of human cloning inasmuch as they are incompatible with human dignity and the protection of life.” Furthermore, according to the president’s Council on Bioethics, “There seems to be no ethical way to try to discover whether cloning-to-produce-children can become safe, now or in the future.”

Although there certainly could be benefits to pursuing this method, the high rates of morbidity and mortality make this avenue of research unacceptable. Dolly, for instance, was only one of hundreds of failed attempts to clone sheep, and even she had to be euthanized due to a progressive lung disease.

If cloning-to-produce-children is, at least for the time being, off the table, then what is the real issue? Cloning-for-biomedical-research, or therapeutic cloning. As some have pointed out, there are good reasons to dispute this category based on how some forms of cloning actually work. Due to the term’s prevalence in scientific literature, however, it will suffice for this article.

The goal behind this kind of cloning is to improve our understanding of biological systems and to find new medical treatments for conditions such as Alzheimer disease, Parkinson’s disease, diabetes, heart failure, and degenerative joint disease. This is accomplished by generating stem cells, which are capable of differentiating into many other
kinds of body cells and are capable of prolonged self-replication. These two traits make them highly desirable for research purposes.

Stem cells are generally sought after for two major uses: regenerative medicine and disease models. Due to their ability to differentiate, transplanted stem cells (derived from clones of the patient so as to safeguard against rejection of the new tissue) have been successfully used to restore a measure of vision in patients with deteriorating eyesight and could possibly one day be used to restore entire organs. Alternatively, stem cells can be used to create cellular models with which to better understand diseases without risking the health of the patient.

Thus far we have not encountered anything that most would find morally unacceptable. Stem cells in and of themselves are not considered off-limits by the vast majority of experts. The problem for many, however, arises in precisely how these stem cells are generated. As of this article’s publication, two techniques are practiced: somatic cell nuclear transfer (SCNT) and induced pluripotent stem cells (iPSCs).

With SCNT, an unfertilized egg cell (or oocyte) has its nucleus removed and replaced with that of an adult body cell (in the case of Dolly, a sheep mammary cell). The composite cell is then stimulated to begin dividing like an ordinary fertilized egg (or zygote). As the zygote divides and becomes an embryo, stem cells are produced, which are then collected by destroying the embryo (hence, embryonic stem cell research). This method was used to make Dolly and was used in 2013 to generate viable human embryonic stem cells.

The central issue with SCNT is that by replacing the nucleus of an oocyte with a full genome, one has effectively created a new human being. While the exact nature of human embryos and the philosophical implications of creating them is beyond the scope of this article, many have given very good reasons to believe that these embryos are indeed fully human and deserve to be treated with the same sanctity and respect afforded to the rest of us.

iPSCs, on the other hand, work differently. Rather than creating a new zygote from which to harvest stem cells, adult cells that already differentiated become stem cells by exposing them to chemical factors that influence what genes are expressed by the cell. These stem cells are highly similar to embryonic stem cells, though they do retain some of their original, differentiated features. iPSCs also have the advantage of being completely genetically identical to the donor or patient, making rejection highly unlikely. Additionally, iPSCs do not require an oocyte.

It is important to note that while iPSCs are acquired through acceptable means, they can still be used for unethical experimentation. For example, they could be used to create sperm or egg cells (gametes), which could only be tested for effectiveness by fusing them with an opposite gamete, creating a zygote. Because current US law requires the destruction of embryos created during research, this brings us back to the ethics of using embryos for research in the first place.

When discussing cloning, we must also keep in mind how scientific research is actually carried out: not as a small number of cells reluctantly sacrificed, but rather, according to Gilbert Meilaender, professor of Christian Ethics and member of the President’s Council on Bioethics, “an industry of embryo research – the production of countless numbers of embryos
for use in research. This is simply the nature of how research must be conducted if it is to be quickly and efficiently carried out.

Some may have concerns about using medicine derived from unethical cloning practices. If you are diagnosed with a disease and the doctor recommends a certain therapy, and if this therapy was discovered through research on embryonic stem cells, should you refuse the treatment? While this concern is noble, it may not be feasible to act upon. It can be difficult, especially for those not uniquely knowledgeable about biomedical research, to discern what medical knowledge and treatments come from which experimental practices. Scientists routinely utilize the data of other scientists, even if they find the methods used abhorrent. In cases where it is obvious, such as the use of embryonic stem cells for transplantation, there is good reason to believe that Christians should not recommend or accept that particular treatment.

At the end of the day, Christians need to ask themselves, “Who do I trust to heal me?” God regularly works through human action, and medicine can certainly be a way that healing comes to the world. God has already spoken, however, that the intentional taking of innocent life is unacceptable (Exodus 20:13; 21:12; Matt. 5:21). When we intentionally make use of methods that are clear violations of His will, we are in effect saying that we trust ourselves and our methods before we trust God. As believer’s seeking to be obedient, we must not do this, even if it means not accepting treatment that could ease or even eliminate suffering.

But what about public policy? Few would protest individuals declining these already questionable treatments, but does that mean we should seek to make them illegal for those who hold no such convictions? Yes, for the following reason: while Christians should not expect non-Christians to conform to biblical ethics, wrongful killing is still wrongful killing.

Virtually everyone, regardless of religious affiliation, believes murder is wrong. While some Christians believe that human embryos ought not to be considered human beings immediately following conception, the majority do. And if the scientific evidence is not clear, which is the more grievous mistake to make: not treating in the name of preserving life, or killing in the name of providing treatment? While few would find either option desirable, killing an innocent, no matter how much good can come from it, is not an appropriate decision for humans to make.

Some would say that we are obligated to do what we can to improve the health and lives of those suffering from sickness and disease. This, too, is a noble desire, but we need to carefully consider our relationship to the sick and to God. While we are responsible for the well-being of those who suffer from sickness, we should not think that we are responsible to them. It is not our duty to use every conceivable means available to cure them. One could rob banks to collect money for poverty relief, but that would still be stealing. Even if those stolen from were so wealthy as to not even notice, it is still theft.

In summary, the use of cloning is not necessarily wrong. There are ways of pursuing it that are morally acceptable, and there is good reason to believe that this is a fruitful direction for biomedical research. Cloning in order to create children has long since been dismissed by the majority of experts, while “therapeutic cloning” remains a major bioethical issue.
SCNT, which involves the destruction of human embryos, is unacceptable to most Christian experts. SCNT also requires oocytes from donors, the procurement of which poses risks to the health of donors. We who live comfortably ought to have special concern for those who do not, who may be desperate for a means by which to support themselves, and who live in parts of the world where exploitative policies are not foreign.

iPSCs, on the other hand, can be derived from cells as common and accessible as adult skin cells, requiring neither the destruction of embryos nor harvesting oocytes. While the technology is still being perfected, this is a promising direction of research that Christians should not oppose. Nevertheless, both techniques can be used for both ethical and unethical research. And while we should seek to help those who suffer from disease, we should not think of disease as our greatest foe, against which we must fight at all costs.

Further Reading:


The Time has Come to Outlaw Human Cloning. Wesley Smith. http://www.firstthings.com/web-exclusives/2013/05/the-time-has-come-to-outlaw-human-cloning

CREDITS: Our thanks to Matthew Williams for researching and writing this article while serving as an intern with Life Matters Worldwide.

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viii Similar arguments are made justifying the destruction of human embryos. By virtue of their inability to experience pain or pleasure, they are thought to not truly be harmed by their destruction.