

Appendix E -

UNIVERSITY HONORS PROGRAM
SENIOR PROJECT - APPROVAL

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PROJECT TITLE: Christian Response to Human Cloning

I have reviewed this completed senior honors thesis with this student and certify that it is a project commensurate with honors level undergraduate research in this field.

Signed: David Dungan, Faculty Mentor

Date: May 8, 2001

General Assessment - please provide a short paragraph that highlights the most significant features of the project.

Comments (Optional):

Smith's report is exceptionally well-written and articulate. Based on wide-ranging research (it is a brand new subject), Smith has presented a very well-expressed overview that is concise, accurate, and informative. All in all, an excellent job. Congratulations!

(DD)

The Christian Response to Human Cloning

By

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Recent scientific discoveries in the areas of reproductive technology and genetic manipulation have brought about human cloning as a possibility. With the ability comes many questions concerning the morality and ethics of cloning a human being. While there is some argument over animal cloning, human cloning is a much hotter debate. Both secular and religious views are involved, as well as a profound sense that the future of mankind will soon be decided. Cloning opens up a myriad of possibilities for good or bad. There are many religious views on cloning, and there is much debate over the many sub-issues. After looking at the scientific process of human cloning, I will look at each issue concerning cloning and the Christian reaction to each.

The process of human cloning is not an especially complicated one. While the techniques and methods used took time to develop, the actual procedure not hard to perform. With a little instruction, any laymen can perform the techniques. There are two forms currently for cloning. The first is to take a zygote in its initial stages of replication and separate the cells as they divide. From one zygote, multiple embryos can be formed. Scientists presently predict around 8 embryos can be made from one zygote. This division of cells is possible because the cells are stem cells at this point. A stem cell is one that is undifferentiated, so it can grow into a complete organism. Once cell division has occurred for some time, the cells begin to differentiate to specific cells. In short, one zygote can be cloned into several humans. These humans would essentially be twins.

(Cole 14)

The second method of cloning involves nuclear transfer to clone an individual from preexisting DNA of another person. Basically, DNA from a living (or dead) person could be used to clone a new individual. DNA can be obtained from cells anywhere

within the body, though certain cells are better than others are. Scientists are still studying the effectiveness of DNA from different cell types. For example, skin is a good source of DNA while blood cells are not. The entire nucleus is taken from the donor cell. (Cole 14)

Once the nucleus is obtained, it is injected into an unnucleated oocyte. An oocyte is a cell that has been made undifferentiated by starvation. It has the ability to form an embryo, but its nucleus has been removed. Once the nucleus is in the oocyte, the oocyte can be placed into a surrogate mother. In the future, artificial wombs may even be available, eliminating the need for surrogate mothers. In the womb, the oocyte will grow into an embryo and progress to birth.

The two forms of human cloning involve different techniques, but the result is the same. There will be a clone that was made from the DNA of another person, and that person could be alive, dead, or just a zygote. In the discussion of cloning that follows, distinguishment between the two types is not made. So far there is no real support or opposition to one without like opinion about the other. However, support for one but not the other is possible.

The techniques described above are very possible, though the success rate would be very low if human cloning was attempted at the present. Also, cloning would be very expensive at the present; only companies, organizations, governments, or wealthy individuals could afford to fund the procedure. Nevertheless, cloning could be successfully accomplished at any time; it may have already been done in secret (Alexander 125).

The debate over human cloning has been growing since the cloning of Dolly, a sheep, by Scottish scientists. The majority of the public, as well as many scientists, were surprised to learn that human cloning could be close at hand (Renick 259). The reaction to the idea of human cloning was vastly negative. Polls showed 75% in opposition to human cloning. A negative reaction also came from the US government and President Bill Clinton. With his recommendation, the National Bioethics Advisory Commission met to discuss human cloning and propose action to Clinton and congress. The commission listened to both secular and religious experts to ascertain the positives and negatives of cloning. The NBAC decided on a temporary ban on human cloning and the use of federal funds in research related to cloning. The sunset clause allowed the discussion to be reopened in five to seven years. (It has been 4 years since the ruling.) Clinton supported the ban. Several states have banned cloning also. Still, private research is still in progress in the United States.

Globally, cloning has been banned by the majority of European countries (Uproar 76). However, many countries have no restrictions on cloning. Russia, China, India, and South Korea are three examples (Alexander 128 and Human 48). Heavy research is being done in these countries. With the lack of restrictions in many countries, there is nothing holding back the successful cloning of a human.

It is important to note that the NBAC heard arguments from religious leaders on the subject of cloning (Campbell 15 and Callahan 18). Christianity, like other religions, will be important in the debate. Cloning opens the door to many possibilities, and there are moral and ethical questions that must be considered. There are a vast number of issues surrounding cloning, but I will group them into five categories and discuss each.

The groups include cloning safety, utilitarian view of children, the possibility of discrimination, eugenics, and reproduction. With each group, I will look at arguments both for and against within the Christian community.

When looking into the Christian views of human cloning, realize that most of the arguments do not rely on Christian belief. In fact, the majority of the arguments stand on their own merit, so one does not have to share Christian belief to agree with the Christian view. Take this into account as the different sides of the issues are discussed.

Procedural Safety

Safety was one of the primary reasons for the NBAC's ruling (Cole 131). The procedure of human cloning is currently not safe to the embryo. The success rate of human cloning would be very low. For example, for Dolly the sheep to be cloned, it took 277 attempts. Only a handful of attempts reached the embryonic stage, and only one grew to be born (Kilner 11). With a more complex human, the success rate would be even lower. There is also some risk to the woman carrying the clone (Cole 5). As with any scientific/medical procedure, the efficiency of the procedure would increase over time. Take in vitro fertilization for example, it began as a very risky procedure, but is now more efficient-though still not risk free.

The prominent Christian view holds that the great loss of life needed to reduce the risk involved with cloning is too great a price (Kilner 11). The unethical deaths necessary in the early stages of cloning are reason enough to prohibit the procedure. Of course, there is debate over when an embryo becomes a "person." This is the same debate that is the core of the abortion debate. Christians that believe an embryo does not

become a child until later stages of development might have no problem with the loss of embryos in the development of cloning. However, fetuses would likely be lost at all stages of embryonic development. It is likely that differences of opinion will fall along the same lines as the liberal vs. conservative debate over abortion. Since this debate still rages, it is unlikely that the debate over safety in cloning will be resolved anytime soon.

Utilitarian Cloning

Another major issue of cloning is the predicted utilitarian view of children that could arise. If cloning becomes a reality, will the uses of cloning turn children into products and procreation into an instrument of personal gain? These are strong visions, but are they reasonable? The Christian responses shed light on the possible dangers of cloning that would lead to a purely productive view of children (Why 5). Let's look at the various projected uses of cloning.

There are many reasons why a person might want to clone. One projected use of cloning would be to replace a lost child. There are parents who are currently waiting for human cloning to become a reality so that they can clone a child who died at a young age. Car accidents, disease, trauma, etc. have taken children from their parents prematurely, and some of these parents want to clone their child. For example, an individual in Western Europe lost a son to disease, but saved tissue in order to clone his child. He plans to be one of the first to use cloning, and the procedure is going to be performed in China in the near future (Alexander 122).

There are several questions that arise. Will a clone really replace the lost child? Will the clone be subject to overwhelming parental expectations to "fill the shoes of the

dead child?" Will the clone be treated differently from a child born of natural means?

(Childress 10)

It is important to understand here that it is impossible to make a copy of a person through cloning. While the nuclear DNA is the same, mutations occur that slightly alter it. Furthermore, the mitochondrial DNA found in the oocyte affects the embryo in its development and characteristics (Hopkins 8). The extent of its affect is currently being studied, but it does have a role in development. The womb environment also affects the child, and this too is being studied. Finally, the environment in which the child is raised and his/her experiences shape them into the person they become (Cole 17). This is the classic nature vs. nurture debate, but in cloning both genetics and environment could affect the growth and development of the clone.

All this is to say that it is theoretically impossible to make an exact copy of a person. In actuality, "parents who want to clone a dying child in order not to lose the child will still in fact lose the child" (Hopkins 8). The same is true for already dead children; a clone would not be the lost child and would be essentially the same as having another child. Only the DNA would be the same.

The "replacement child" may also be saddled with undue expectations to be like the lost child. While natural birth children may be burdened by parental expectations, how will a clone react to expectations to grow up to be like a dead child? The majority Christian view recognizes that a clone cannot replace a dead child anymore than a natural child could, so the possible burden seems a strong negative on top of an already futile attempt at replacement (Cole 30 and Cloning 1117).

Along the same lines as replacing a dead loved one, there are individuals who will attempt to achieve immortality through cloning (Hopkins 10). By donating DNA, you could have a clone of yourself made. The idea is to grow another "you" so that you essentially live forever. Some point to the danger of megalomaniacs trying to gain immortality. One example often given is cloning a dictator like Saddam Hussein to continue his reign. While it is possible this could be attempted, it falls into the same false logic as the cloning a dead loved one; the clone is not identical to the original person. The clone is a unique individual who may or may not grow to have the same abilities and desires of the one whose DNA he/she was created from.

This same logic applies to the idea of cloning famous or talented individuals in order to help society. Would a clone of Michael Jordan even like basketball? Would the pressure to be great turn him off to the sport altogether? Would a clone of Einstein be any good at physics? He may hate math! It is not certain that a clone will be anything like the original. True, there may be similarities and inclinations, but the outcome of each individual's growth and development (clone or natural birth baby) is unknown.

Another use for cloning that could be labeled utilitarian is the child cloned for transplantation (Cole 38). There are instances in modern society when a couple has a child in order to have a genetic match to a preexisting child for reasons of transplantation of organs, tissue, fluid, marrow, etc. While the child is most likely still loved and cared for by the parents, there is still debate as to the psychological and physical impact this has on the second child. Cloning raises the possibility of creating a child that is even more closely related genetically to the ill child. The transplant could be a very good match. Some Christians will point to the possible negative impact on the clone as reason for

opposition (Cole 38). However, others see this as one of the more justifiable reasons for cloning. Brent Waters of Oxford University states, "Cloning an ill child to secure bone marrow, for instance, may very well express a genuine parental love for a child who will otherwise die. Yet despite the sincerity of this motive, a cloud would nonetheless hang over the birth of a cloned child" (Cole 86).

A final use of cloning that could create an attitude of utility towards clones is experimentation. Cloning, along with genetic engineering, could be used to develop gene therapy to treat and prevent genetic diseases (Wolf 12). Genetic engineering brings the ability to observe and manipulate genes to create a baby free of genetic disease. Cloning is important in this process because of the ability to split dividing cells to create multiple copies to be used in engineering.

The results of genetic engineering may seem very positive and desirable, but there are doubts within the Christian community. Once again there is the issue of safety and the loss of human life necessary for scientific progress. This is the same debate as with the general safety of the cloning procedure. There is another issue, however. How far will genetic engineering be taken? Will society begin to push for designer babies that meet the specifications of the parents? The majority Christian view opposes cloning in experimentation due to the inevitable loss of human life. The Christian view on genetic engineering and cloning to produce designer babies will be discussed later because it relates to the field of eugenics.

Cloning for replacement children, immortality, transplantation, and experimentation lead many Christians to see cloning as leading to a loss of value of human life and an increase in the objectification of children as products. Ted Peters of

the Pacific Lutheran Theological Seminary states, "God loves each of us regardless of our genetic makeup, and we should do likewise. This religious commitment has a secular companion principle, namely, that we should treat each person as an end and not merely as a means for something more valuable" (Cole20). Abigail Ryan Evans of Princeton Theological Seminary believes cloning "fosters a reductionistic rather than a holistic view of human nature while treating people as means not ends" (Cole 25). Christianity values the dignity of man and the creation of man in the image of God. Many Christians fear the loss of such dignity for clones because of the utilitarian means by which they would be created. There is also a greater danger that could result from the decrease in dignity-discrimination against clones.

Discrimination

It would be nice to think that humanity has proceeded past the point of racism and discrimination, global society reminds us daily that these issues are still prominent. Would clones be seen as something less than human, slavish, or as a subclass within society? Already in history, people have been discriminated against because of their genetic makeup (skin color being one example). Many Christian leaders find it plausible that clones could be viewed as a subclass and treated accordingly (Cole 45).

Ronald Cole-Turner of the Pittsburgh Theological Seminary states, "All too readily in the past, we human beings have used our ideas about natural order to justify racism" (Cole 128). Any negative perspective of clones could lead to discrimination.

The negative view could be based beliefs about the utilitarian creation of clones, or unnatural process by which clones are made.

Much of the initial opposition to cloning could be due to the “eerie” feeling that many people have to the idea of cloning (Renick 260). Clones are a new reality to the public in general, and might be seen as an abnormality within nature (Renick 263). This widespread repulsion concerning cloning might decrease as time goes by, but it could still lead to “racism” against clones if cloning is accomplished.

It is debatable whether or not discrimination is a logical reason to prohibit slavery. It can be argued that racism is the problem, not cloning. However, it is important in Christian theology to study the nature of man in case cloning becomes legal in America or is performed in other countries. As stated earlier, Christians view each person as unique in God’s creation, made in His image, and having a soul. There is no argument from mainstream Christianity for clones lacking a soul. If cloning proceeds, the Christian Church would support the uniqueness, individuality, dignity, and humanity of clones (Cole 17). However, that is not to say that all Christians believe that clones would not be harmful to humanity; clones could be a vital part of eugenics-the perfection of man through science and knowledge.

Eugenics

Cloning and genetic engineering can be used to create therapeutic genes, eliminate unwanted genes, babies to parental specifications, and cures to genetic diseases. With this ability, some see scientists and doctors being able to eliminate most diseases

and increase potential of man. Some even claim that we can use these technologies to perfect mankind. It is easy to see how cloning falls into the area of eugenics.

Roger L. Shinn of Union theological Seminary compares cloning for eugenics to the ancient tower of Babel. "Here ambition, the desire to be like God, combined with technological power brought historical chaos" (Cole 117). Shinn is just one of many Christians leaders that point to cloning in eugenics as a futile and immoral attempt by man to achieve perfection. In Christian theology, man is by nature sinful and imperfect. Any attempt by man to overcome this imperfection will end in failure. Only through Jesus Christ can man overcome sin and imperfection, and this change is the work of God, not man. Cloning for eugenics directly opposes perfection in Christ by attempting perfection through science.

There is an emerging non-Christian religious group that embraces cloning as part of its theology and future. This group is the Raelians. They believe that the *Elohim*, a race of benevolent space aliens, visited earth long ago and created man. The Raelians believe cloning is the means of personal immortality, and will be an important step in the transcendence of man and the continued scientific progress that will lead to space travel (Bozeman 154). The Raelians are a good example of an attempt by man to achieve perfection without Jesus Christ. Christian scholars often use the Raelians as proof that eugenics through cloning could be very dangerous.

While eugenic beliefs push for the perfection of man genetically, there is debate over the benefits of cloning and genetic engineering in this field. There is an argument that in the long run, cloning would decrease the genetic diversity of humans. If certain favorable genes were cloned, the genetic diversity of man would decrease. Also, since

cloning is technically asexual reproduction, it takes away the natural combining of genes from two individuals that create and foster genetic diversity. If cloning becomes widespread, it is foreseeable that genetic diversity could decrease in both humans and animals.

“One of the most characteristic features of God’s creation is its variety. Where God opens up boundless possibilities for the whole life of an animal, humans would reduce them to a narrow blueprint, for their functional value” (Cole 6). It is reasonable to extend this reductionistic view of genetic diversity to humans if cloned on a large scale. While the actual genetic results of cloning would depend on the regulation and use of cloning, the possibility of harm to genetic diversity is an important argument for Christians against cloning.

Reproduction

Cloning could be used as a means for reproduction for gays, lesbians, and individuals that could not otherwise have children. Cloning as a means for reproduction is an issue with widespread disagreement within the Christian community. Those who support reproductive cloning see it as a method by which infertile couples, individuals, or homosexual couples could have a child that is genetically related to themselves. While the child would only be genetically related to one person in the couple, it is better than not having a child at all. Cloning has been argued to be a procreative right for homosexual couples, especially by lesbians. Karen Lebacqz of Pacific Lutheran

Theological Seminary claim that cloning is important in attaining "equal rights to everyone, including gays and lesbians" (Cole53).

More conservative Christians that oppose homosexuality argue that cloning for homosexual reproduction is completely immoral and should be illegal. Furthermore, some Christians desire a complete ban on cloning, even for heterosexual reproductive means, because of the negative results of cloning stated in previous sections, most prominently the argument against cloning safety. Still, cloning for reproduction one of the more positive uses of cloning put forth by individuals in the Christian community.

It is appropriate to discuss here one final argument against cloning found within Christianity. Christians have long struggled against the degradation of the family in American society. Many see cloning as a danger to the family structure. Abigail Evans of Princeton states, "Most of the new reproductive technologies separate love, the conjugal act, parenting, and family. Parenthood becomes redefined, and no male is necessary in cloning. Neither are love or sex. Reproduction and progeny are not connected. Furthermore, cloned individuals may have difficulty determining who their parents are" (Cole 31). Males, sex, family, etc. are unnecessary in cloning. Also, a clone is actually genetically the brother/sister of the person it is cloned from and the genetic child of the parents of the person it was cloned from. How would this affect the family structure? Would the usual unconditional belonging associated with a family be lost? Or would culture adapt and reshape the meaning and structure of the family to accommodate clones? Individuals and denominations within the Christian community differ in their views regarding the fate of the family, and since much speculation is involved, this issue will likely stay unresolved among Christians for the present.

Christianity in the Public Debate

The majority of Christian opinion is in opposition to cloning. Reasons include safety, the rise in the “productivity” of children, immoral uses in eugenics, and reproduction for homosexuals. These reasons are also stated as secular arguments against cloning, so the Christian view is not drastically different from the secular one. The majority of the secular public also opposes cloning. I believe this is one reason why the specifics of the Christian view are not widely known in the public. Since the Christian and secular views are alike, the Christian view may get lost in the shuffle.

If the secular opinion begins to change, however, the Christian view will become more prominent in the debate. While I have not researched the views on cloning of other religious groups, it is reasonable that the majority will oppose cloning. Lee M. Silver of Cambridge believes that the secular view of cloning will turn in favor as the facts of cloning come to light and the debate continues. He states that then “only religious objections will remain” (Silver 172).

If this is true, then it will be important for the Christian community to stand strong behind their beliefs about cloning. The sunset clause of the NBAC ruling will reopen the debate in the near future, and the religious voice should be influential. Furthermore, if cloning is legalized, there is the inevitable discussion of regulation of its various uses. Once again, religious beliefs will play a key role. The Christian arguments for and against cloning are strong, and the future of cloning will largely hinge on the Christian reaction.

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