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A Study on Human Cloning and its Incompatibility with Christian Belief

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Abstract

Over the past few decades, the inquisitive nature of human beings has contributed to some of the most mind-blowing revolutions in the field of science and medicine. Human cloning is one of them. Human cloning, which was once only confined to the realms of sci-fi movies, has now morphed into reality and is the concern of scientific, moral, and religious discussions. Cloning is one of the newly discovered techniques that brings out the possibility of developing a capacity to produce clone human beings without having sexual intercourse. The initial reactions of the leaders and common public to human reproduction was one of fear, anxiety, and ethical reservations concerning the abuse of God's power in creation. Therefore, the present study is an attempt to investigate what human cloning is, the methods, the purpose, and the bioethics in cloning. It will also focus on how cloning negatively impacts the sanctity of Christian belief, usurping God's position as the Almighty creator.

Keywords: Cloning, Christian belief, study, God, human.

1. What does cloning mean?

Human cloning can be explained as the intentional creation of genetically similar human being by means of asexual reproduction. The term *clone* has been originated from the Greek word 'Klon' meaning, a 'sprout' or a 'twig' (Jain, 2021). Every newly generated individual is considered to be the clone of the original. They hold similar sets of genetic material in the nucleus, as a result, the cells from two clones have the same DNA and chromosome in their nucleus.

Scientists use the term "cloning" to describe distinct procedures that involve in creating duplicates of biological material. In other words, it is a process through which a living being is created which has exactly the same nuclear DNA of another existing living being. According to Rugnetta (2023), "cloning means the copying of any kind of biological material for scientific research, such as a piece of DNA or an individual cell" (Rugnetta, 2023).

1.1. Characteristics of clones

The clones are characterized by the indistinguishable sets of genetic material (DNA) housed within the nucleus. However, it is vital to bear in mind that, in spite of sharing the genetic blueprint with the doner, the clones might not exhibit the same physical or observable features, because DNA is not the only factor that determines their behavioral pattern (National Academy, 2002). Clones are developed through nonsexual reproduction techniques like somatic cell nuclear transfer (SCNT) or embryo splitting.

1.2. Scientific advancement in cloning

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Undoubtedly, our understanding of genetics has significantly improved over the past few decades. In February 1997, history was made when the scientists of Scotland made a groundbreaking discovery by successfully cloning an adult sheep named Dolly. The Scottish sheep experimentation was different from earlier efforts to create similar offspring from a pair of adult animals. Unlike the previous methods, here the scientists used a cloning approach to produce an animal that was a genetic twin of an adult sheep. In other words, Dolly holds the genetic material of only one parent. This procedure of moving a nucleus from a somatic cell into an egg is an addition of investigations that had been in progress for over 40 years using nuclei derived from non-human embryonic and fetal cells. Dolly was represented as the first species to be cloned from adult cells. This achievement was a success only after 227 cell fusions.

The birth of Dolly was a remarkable scientific event with potentially extreme implications since it brought us near to the scope of developing clone human beings in an asexual manner. The unsuccessful attempt to clone a human embryo, in the year 2001 sheds light on some of the challenges and ethical concerns associated with the "machine model" (Francoise, 2000). Despite the unfavorable political and religious climate, scientists are of the view that the potential benefits of human cloning in treating infertility issues and several other diseases are much more advantageous than the dangers and moral concerns associated with it. The possibilities brought out by the cloning approach would certainly be unparalleled and that some would consider its use to be a truly radical step in the emerging medical technology.

In several instances, initial fears give way to cautious adoption, but a wariness lingers and it is easily aroused with each new breakthrough. For instance, artificial insemination by donor was regarded a form of infidelity when first introduced in the 1940s. However, today it is a widely used and accepted practice in the treatment of infertility. Furthermore, when prenatal diagnosis was introduced in the late 1960s, the people at once welcomed the opportunity to prevent lethal disease in newborns. The birth of Louise Brown in 1978, via in vitro fertilization was another significant event, providing a new and disputed means to parenthood (Rockville, 1997). With all these technical developments, there has been a continuous exchange of views about security, lawfulness, moral acceptability, and the government's right to intervene in private matters.

2. Methods of Human Cloning

In biology, live mammalian clones are created using two procedures: Cloning via Somatic cell nuclear transfer (SCNT) and *embryo splitting* (IVF). Both the methods require implanting embryo in a uterus and allowing the required time for gestation and birth.

2.1. Somatic cell nuclear transfer (SCNT).

The process begins by transferring an extracted nucleus from a somatic cell of the individual to a recipient mature oocyte of a similar species. The cell could be procured straight from the doner or from the chilled tissue. The egg is then stimulated under the conditions of the laboratory, further the cell begin to divide and it results in the development of a blastocyst or an early-stage embryo. The created embryo is implanted into the uterus where it develops until birth. "The number of times a particular person can be cloned, completely depends on the number of eggs that can be procured to accept the somatic cell nuclei and the number of females available to accept developing embryos" (National Academy, 2002).

Somatic cell nuclear transfer method was used in 1997 to create Dolly, the cloned sheep. It resulted in an animal that was a genetic twin - although delayed in time - of an adult sheep (Rockville, 1997). This procedure of moving a nucleus from a somatic cell into an egg that produced Dolly was an addition of experiments that had been in progress for over 40 years. These investigations focused on understanding how development of an animal from a single fertilized egg could be carried out.

2.2. Embryo splitting (IVF).

The division of embryo is one of the newly discovered procedures in procreative biotechnology, in which the zygote is formed via in vitro fertilization. The zygote goes through division, leading to the formation of two and subsequently four identical genetic cells. Although the cells are divided, they could

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be permitted to grow into distinct but genetically identical blastocysts, which is then instilled in a uterus. Due to the limited potential for growth of the cells, the procedure cannot be repeated, hence, embryo splitting can bring forth only two identical mice and scarcely four identical humans. Rahbaran (2021) states that, IVF is a procedure, which is broadly used in procreative medicine studies, like exploring human illness, addressing infertility, embryo matching, and gene therapy.

IVF is a widely used technology in the area of assisted reproduction. It encompasses a number of parental and biological situations, that is, donor and recipient relationships. Most often, an infertile couple seeks treatment through either artificial insemination or in vitro fertilization using sperm from either the male or a secret donor, an egg from the woman or a donor, and in certain occasions surrogacy. In such cases, where both individuals of a couple are sterile or the prospective father has non-functional sperm, one might consider using cloning of one member of the couple's nuclei to produce a child.

3. The purpose of human cloning.

Cloning has a welcome opportunity in many dimensions, such as addressing issues of infertility, cell grafting, or protecting the offspring from certain hereditary diseases or harms. It could be greatly beneficial for infertile couples who wish to have genetically identical children. Additionally, cloning could be beneficial for those grieving parents, who suffered the loss of their child, and for people who are in desperate need of organ transplant. The therapeutic benefits of human cloning include treatment of various cardio vascular disease, neurological issues, immune system disorders and AIDS. Despite the religious and political objections, human reproductive cloning could be justified based on the degree of impotence and seriousness of the issue. For instance, the use of human reproductive cloning method by genetically infertile individuals might be considered more reasonable than an attempt by a sexually fertile person seeking to select a particular genome.

Furthermore, "molecular biologists routinely make clones of deoxyribonucleic acid (DNA), the molecular basis of genes" (Rockville, 1997), and these DNA fragments containing genes are duplicated and expanded in a host cells. Many scientific experiments are possible with the availability of large quantities of similar DNA. This process is called molecular cloning, and it has led to the manufacturing of some important medicines such as, insulin to heal diabetes, tissue plasminogen activator to dissolve blood clots after a heart attack, and erythropoietin to treat chlorosis linked with dialysis for kidney disorder. Additionally, many severe human diseases are treated effectively by organ or tissue transplantation, and it can be taken from the donor without much risk, e.g. bone marrow, blood, kidney, etc.

4. Bioethics in cloning.

Bioethics of cloning refers to several ethical issues concerning the practice and possibilities of cloning, particularly human cloning. The supporters of human cloning provide their argument on numerous curative benefits of cloning, and the most important among them are tissue regeneration and organ transplantation. On the contrary, the opposers are of the view that human cloning is opposed to the principles of human dignity. Moreover, there is uncertainties regarding the parentage and relations between the cloned individuals and their origin. Considering, the ethical uncertainties on the one hand, and the medical advantages of human cloning on the other hand, international laws have been enacted to limit the possible abuse of somatic cell nuclear transfer and to ease the medical application. UNESCO declares in the first article that, "the human genome is the basis of the fundamental unity of all members of the human family, as well as the recognition of their inherent dignity and distinction" (Rahbaran, et al. 2021).

Embryonic stem cell research, approved by a United Kingdom institute, aim to produce cells for studying the causes of motor neuron disease. They were granted permission to create cloned human embryos for investigating this awful disease. The institute's efforts might achieve major medical breakthroughs, that it would provide a long-term supply of cells which carry this untreatable disease, but "is this reason enough to be unethical and to make cloned embryos?" (Pincock, 2004). It appears that we no longer care about if something is morally correct or not, if it brings money in our pockets. The biotech

companies want to commercialize human life; they clone human beings and then kill them within weeks of gestation to gather their stem cells. This could be called biotech child sacrifice. These organizations might be paying women to take in their eggs and cloning human beings to harvest their fetal tissue. This sort of commodification of human life devalues us all, and it is a threatening step to take. The beneficiaries of embryonic stem cell research are the rich who are able to afford it, and the victims are the poorest women who will be under pressure to sell their eggs to "stem cell brokers" (Gralla. et al. 2004).

Embryonic stem cell research is nothing less than the destruction of developing embryos. To dissect members of our species for the so-called therapeutic or experimental reasons is a form of brutality that we should to avoid. Sometimes the motive may be good, but if it is legalized, there will be an "explosion of political pressure to allow more and more cases of killing innocent lives for other alleged good reasons" (Hauerwas.et al. 2004).

5. Fears and objections about cloning

As segments of human DNA or human cells became the focal point of research and the objects of exploitation, some of the most publicized fears and misunderstandings among the common public are: how these materials are procured, modified, and, used to develop commercial products. Other fears stemmed from questions about regard for persons and their body, and the ethical values to be placed on cells and tissues. The objections to human cloning, however, are strongly based on philosophical principles, deep cultural devotions, and religious beliefs. These grievances need to be addressed with careful considerations, because these disapprovals reflect deeply held beliefs about the value of human individuality and personal autonomy; the importance of family and the worth of a child; due regard for human life and the natural world; and the protection of the integrity of humanity.

Many political and religious leaders responded to the report about the cloned sheep Dolly with immediate and strong denunciation of any effort to clone human beings in the similar manner. They claimed that cloning of human beings is a serious breach of basic human rights and human nobility. The reactions worldwide were similar, with many nations namely, Argentina, Australia, Great Britain, Denmark, Germany, and Spain passing laws banning the cloning of human beings. The universal public aches and pains, even disgust, about cloning human beings deserves the best verbalization possible; it is a task that require considerable reflections of various groups of people, religious and political leaders across the world.

5. Christian Perspectives on Human Cloning

Most religion, particularly the Christian faith consider human cloning as the biological manufacturing by man, not creation by God. Several Roman Catholic and Protestant thinkers have repeatedly raised oppositions and warnings against reproductive cloning in view of the fact that "life is a gift from God" (Frazzetto, 2004). Furthermore, Allen Verhey, made greater claims that 'an account of the good life in a family is "inhospitable" to the cloning of humans' (Rockville, 1997). The religious leaders thought it was especially important to denounce cloning because it would negatively influence the moral views of the believers and the teachings of the Bible. When the then President of US was asked to take up the issue of the cloning of human beings he reprimanded that "any discovery that touches upon human creation is not simply a matter of scientific inquiry, it is a matter of morality and spirituality as well" (Rockville, 1997).

The scientist's motive or intentions behind cloning might be good – to heal disease, but this is a change in status – God alone is the Creator and we are only stewards to Gods' Creation, not the owners. Hence, as long as we are not the owners, we have no permission to kill or experiment with the life God has Created. Therefore, the Catholic Church has become the dominant voice against any form of recreation and even against the creation of human embryonic stem-cell lines from surplus in vitro fertilization embryos. They considered cloning as "contrary to the moral law, since it is in opposition to the dignity both of human procreation and of the conjugal union" (Frazzetto, 2004).

5.1. The mysteries of life belong to God.

The choice about a new life is completely in the hands of God, rather than scientists. Hence human beings should not try to explore the secrets or mysteries of life. Scientists do not have the power to decide on the beginning or ending of life. Human cloning questions God's power as the Almighty Creator. In this context, Genesis, chapter 1: 27 is very significant: "So God created man in his own image, in the image of God he created him, male and female he created them, and God said to them, 'Be fruitful and multiply, and fill the earth and subdue it; and have dominion over the fish of the sea and over the birds of the air and over every living thing that moves upon the earth" (Revised Standard Version). It is to be noticed here that emphasis on the words 'subdue' and 'dominion' in the Bible should not be understood as permission to treat the rest of God's creation carelessly. Furthermore, we are called to be stewards of all creation, but we are not creators or owners; we are only entrusted to protect the gift of life from the Creator.

Cloning ignores divine involvement in the formation of the unborn baby and tampers with God's creation. We may be brilliant or smart, but we must bear in mind that what we are and what we have is a gift from God the creator. At the same time, we are created in God's image and likeness in a special and wonderful way. We should make the best use of our physical and mental abilities in their fullness as we respond to our call to stewardship. Does this mean that we can get involved in cloning? Certainly not. We, human beings have a special role to play in caring for the rest of God's creation.

5.2. Human cloning: a threat to sanctity of life

Human cloning poses a challenge to the sacredness of life and it ignores God's plan for human parenthood. Cloning is the ultimate reduction of human life to a mere 'object,' or a 'product' that has no value except for the use someone else chooses for it. Pope John Paul II, in his world day peace message condemned the grave evil of such experiments, calling them "atrocities" that are "unworthy of man" (Doerflinger, n. d.). The Biblical account of the creation of humans is clearly stated in Psalms 100:3, "Know that the Lord is God. He created us and we are his people." Therefore, it is not surprising to find that the Christian leaders are the major voices concerning any form of human cloning. They are of the opinion that "Any attempts at cloning are a violation of the dignity of the human embryo, which is granted the status of a person from the point of fertilization of the oocyte" (Frazzetto, 2004). These objections reflect deeply held beliefs about the value of individual integrity, regard for people's life and the protection of human species.

In sexual procreation, the man and woman unite in an affectionate relationship that expresses their love for each other, and is at the same time open to collaborating with God to create a new person the two will love and care for together. It is evident from the very nature of our procreative act; we respect God's creative role. Additionally, the parents respect for their children, welcoming them as free and equal members of the family. However, human cloning adopts the path of depersonalized procreation; it involves no meeting of male and female at all. In fact, a child produced this way has no "mother" or "father" in the real sense, it is only a 'template' or a 'model.' Here, the genetics expert "plays the role of God, driving humanity to self-evolve into a superior race" (Doerflinger, n. d).

Unfortunately, the scientists are blind to the conflicts in this grand scheme. When God makes humans in His image and likeness, He creates a limitless variety of people who reflect different facets of the Creator's infinite goodness. However, when humans try to take the act of creation in their hands, they can only replicate one narrow set of traits already provided to us by God the Creator.

6. Conclusion

To sum up, having been exposed to the procedures and features of human cloning, some of the seemingly worthy scenarios for duplicating ourselves for reasons such as, organ transplant, to comfort the grieving parents of a deceased child, and to help infertile couples to have a baby etc., could be justified to a certain extent. However, in some way or other, these possibilities trifle with reducing individuals to DNA, a mere object rather than a subject. In this context, as a Christian believer, I personally disregard human cloning in the light of Christian ethics. The scientists must consider the strong sense of resistance on the

part of political and religious leaders and resolve the conflict between science and religion. It is believed that "All things were made through Him, and without Him nothing came to be. Whatever has come to be, found life in Him" (John 1: 3 – 4).

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