



A Re-Examination of Human Cloning through Islamic Ethical Lens

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Abstract: Human cloning is one of the controversial topics in the present generation. Accommodating natural development, social changes and needs, Islam has left no aspect of human endeavours unregulated, including human cloning. However, emerging issues about human cloning signal little or no proper understanding of the concept by the Muslims leading to flagrant Islamic disavowal; hence, the need to re-examine the concept from Muslim’s perspectives. Drawing from *Maqāṣid Shari’ah* principles, including the rule of necessity for self-preservation and respect for human beings, this paper seeks to assess permissibility or otherwise of human cloning through the ethical lens of Islamic jurists. The paper argues that if human cloning could not be prohibited as such, it could still be opposed because it engenders various harmful consequences, which include family disorder, chaos in the clone’s family relationships, physical and mental diseases for clones and suffering of egg donors and surrogate mothers. However, human cloning for biomedical research and exploitation of stem cells from cloned embryos at the blastocyst stage for therapeutic purposes would be acceptable. The paper concludes that there is no ethical impediment to taking adventure in human cloning, whose probable benefit outweighs possible harm.

Keywords: Islam, Muslim, Ethics, Human and Cloning.

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Review Paper

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How to cite this paper:

Tijani Abdul-Lateef Aremu *et al*
(2024). A Re-Examination of
Human Cloning through Islamic
Ethical Lens. *Middle East J
Islam Stud Cult.*, 4(1): 20-26.

Article History:

| Submit: 26.01.2024 |
| Accepted: 28.02.2024 |
| Published: 11.03.2024 |

INTRODUCTION

Although since the 1970s, ethical issues associated with assisted reproductive technologies (such as in vitro fertilization) have been dealt with extensively by Muslim jurists, cloning (human in particular) remains a subject that deserves serious attention as the facts about it are still emerging. With the prospect of understanding cloning better while understanding impact it could have on how Muslims conceive of human life and subsequently their destiny, it is reasonable to expect revision in the ethical and legal assessment of these experiments among the Muslims especially the scholars of *Shari’ah*. Given the success rate of embryo duplication in a number of animal species, reproductive specialists seem to be confident that the technique will improve the success rates of assisted reproductive technology in humans (Campbell *et al.*, 1997). However, the legality of human embryo duplication by splitting has some ethical as well as theological issues, consequently, Muslim jurists still debate replication of natural creation through legitimate scientific means.

It must be emphasized that Islam does not place any restrictions on the freedom of scientific research, or place any obstacles in its way, because it is a means of

understanding the laws of Allah in His creation. However, the religion stipulates that everything, including scientific discoveries such as cloning be subjected to *Shari’ah* scrutiny to determine its legal status (UNESCO 2004). In other words, Islam legislates that man should not become the subject of experimentation, and scientific research should not impinge upon the unique identity of the individual and his distinct characteristics, or lead to disruption of the social framework or dissolution of the foundations of kinship and lineage, or the family structure that has been known throughout human history in the shade of Allah’s laws and on the solid foundation of His rulings (Azna *et al.*, 2016) Ethical issues related to cloning include an increase in birth size and a variety of defects in vital organs, such as the liver, brain and heart. Other consequences include premature aging and problems with the immune system. Another potential problem centers on the relative age of the cloned cell’s chromosomes.

Taking into account the impacts and implications of human cloning, for instance, upon the fundamental relationship between man and woman, and the procreational aspects of spousal relations that

culminate in parental love and concern for their offspring, this paper seeks to analyze, from a vantage position, the ethical positions of the Muslim scholars on the issues related to the possibility of technologically created incidental relationships that do not require spiritual and moral connection between a male and a female such as cloning.

Concept of Cloning

Cloning is defined as the process of generating a genetically identical copy of a cell or an organism. Cloning happens all the time in nature—for example, when a cell replicates itself asexually without any genetic alteration or recombination. Prokaryotic organisms (organisms lacking a cell nucleus) such as bacteria create genetically identical duplicates of themselves using binary fission or budding. In English, it is termed "cloning", whereas in French, it is "clonage", and "Istinsakh" in Arabic or copying. Clone is derived from the Greek root "*klon*" (Dornard 1985). So cloning means producing one or more living beings by transferring the nucleus of a body cell to an egg whose nucleus has been removed, or splitting a fertilized egg at the stage before the tissues and organs become distinct.

Cloning in Historical Perspective

The history of cloning is dated back to many centuries ago when a scientist named Jacques Loeb (1859-1924) focused his research on the process of parthenogenesis. Subsequently, Hans Spilman (1983) a German embryologist whose work on the salamander enjoyed universal fame, undertook the first animal cloning experimentations. He succeeded in dividing the embryo of a salamander until the 16th stage. In fact, he demonstrated that the cells reproduced from the first stages of an embryo could once more begin dividing to produce a complete salamander (Dow 2019). According to Gardner *et al.*, (2004), an English biologist, John Gurdon, in 1962, cloned a frog by taking the intestinal cells of a tadpole and transferring it to an oocyte whose genetic contents had been removed. Although the extent of success of these experimentations was limited, they positively persuaded researchers to attempt the same procedures on mammals. In 1978, the birth of Louise Brown in England through in vitro fertilization opened a new horizon in infertility and experimental biology and paved the way for mammalian cloning (Azna *et al.*, 2016).

In 1996, a British developmental biologist Ian Wilmut generated a cloned sheep, named Dolly, by means of nuclear transfer involving an enucleated embryo (that whose nucleus was removed) and a differentiated cell nucleus. This breakthrough was the first mammal created through cloning. However, this event was not announced to the public until February 23, 1997 when Dolly was seven months old. The reputation of Dolly, however, resulted from the impending probability of human cloning. Due to the seriousness of

the idea of mammalian cloning, there were various reactions worldwide (UNESCO 2004).

Process of Cloning

The cloning process consists of the following steps:

- Removing an egg cell from a female mammal.
- Extracting the nucleus of the egg cell to form an enucleated cell. The egg cell lacks all 23 types of chromosomes and also lacks genetic information regarding human beings. Of course, some genetic information can be found in its cytoplasm.
- Collecting a cell containing a nucleus from a second mammal, removing its nucleus and fusing it with the first enucleated cell, thus the enucleated cell now has all of the 46 chromosomes needed which all have come from the cell collected from the second mammal.
- Stimulating the egg cell using chemical medicines or electrical currents in order for it to grow and divide and finally form an embryo.
- Implanting the embryo into the uterus of a third mammal, which acts as a surrogate mother.
- The embryo turns into a foetus and the surrogate mother goes through a normal pregnancy and gives birth to a mammal that is a clone of the genetic donor. The newborn is almost genetically identical (97%) to its genetic donor and is of the same gender. The only difference between the two comes from the effects of the DNA of the mitochondria of the egg cell.

Types of Cloning:

Generally, cloning is divided into two categories namely: Reproductive and Therapeutic cloning, thus-

1. **Reproductive Cloning:** This involves the implantation of a cloned embryo into a real or an artificial uterus. The embryo develops into a foetus that is then carried to the complete term. Reproductive cloning experiments were performed for more than 40 years through the process of embryo splitting, in which a single early-stage. Two-cell embryo is manually divided into two individual cells and then grows as two identical embryos. Reproductive cloning techniques underwent significant change in the 1990s, following the birth of Dolly, who was generated through the process of "Somatic cell nuclear transfer" (SCNT). This process entails the removal of the entire nucleus from a somatic (body) cell of an organism, followed by insertion of the nucleus into an egg cell that has had its own nucleus removed (enucleation). Once the somatic nucleus is inside the egg, the egg is stimulated with a mild electrical current and begins dividing. Thus, a cloned embryo, essentially an embryo of an identical twin of the original organism, is created. The SCNT

process has undergone significant refinement since the 1990s, and procedures have been developed to prevent damage to eggs during nuclear extraction and somatic cell nuclear insertion. For example, the use of polarized light to visualize an egg cell's nucleus facilitates the extraction of the nucleus from the egg, resulting in a healthy, viable egg and thereby increasing the success rate of SCNT. Through this process, on December 27, 2002, Brigitte Boisselier held a press conference in Florida, announcing the birth of the first human clone, called Eve (*Ramsey 1970*).

2. **Therapeutic Cloning:** This is intended to use cloned embryos for the purpose of extracting stem cells from them, without ever implanting the embryos in a womb. Therapeutic cloning enables the cultivation of stem cells that are genetically identical to a patient. The stem cells could be stimulated to differentiate into any of the more than 200 cell types in the human body. The differentiated cells then could be transplanted into the patient to replace diseased or damaged cells without the risk of rejection by the immune system. These cells could be used to treat a variety of conditions, including Alzheimer disease, Parkinson disease, diabetes mellitus, stroke, and spinal cord injury. In addition, stem cells could be used for in vitro (laboratory) studies of normal and abnormal embryo development or for testing drugs to see if they are toxic or cause birth defects (UNESCO 2004).

Advantages of Cloning

- 1) Cloning helps a sick child by providing healthy organs such as bone marrow, or a kidney (overcome organ rejection).
- 2) Couples who are carrying serious genetic diseases, worried about passing on their diseases to their children by natural sexual reproduction, can opt for such a technique.
- 3) It can be a solution to some infertility cases etc.

Disadvantages of Cloning

Some of cloning's disadvantages and the problems it causes or might cause are as follows:

- 1) The mixing up of generations and lineages
- 2) Vagueness and ambiguity in family relationships
- 3) Vagueness in who he/she inherits from or who inherits from him/her
- 4) Chances of deformation in some clones
- 5) Unexpected and unwanted diseases
- 6) The abandonment of marriage and establishment of a family
- 7) Chances of illegitimate and *haram* relationships
- 8) The loss of motherhood
- 9) The propagation and spreading of homosexuality

Islamic Ethical Approach to Human Cloning

Essentially, Muslim scholars have argued that Islamic ethical approach on any matter is incomplete without making recourse to some five issues. For instance, no justice can be done from an Islamic point of view on the issue of cloning except through the lenses of the five issues which are discussed below, thus-

A. Islam's Ethical Conscience on Cloning (*Ad-Damiru Al-Khulqiy*)

According to 'Umar at-Tumi as-Shaybani, ethical conscience refers to the inner push or drive that shapes human actions. In other words, it is the conscience that influences and judges human activities in life. Generally, Muslims are required to align their actions, activities and decisions with Allah's commands. To this extent, the Qur'an unequivocally states that Allah is the sole creator of heavens and earth as well as their inhabitants. One of the glorious names of Allah in Islam is "*Al-Khaliq*" which means "**the Creator**". Therefore, the whole concept of cloning is tied around the belief that Allah is the creator and all that is related to it must be geared towards this reality as far as Islam is concerned. The Qur'an states:

He is Allah, the Creator, the Evolver, the Bestower of Forms (or Colours). To Him belong the Most Beautiful Names: whatever is in the heavens and on earth, doth declare His Praises and Glory: and He is the Exalted in Might, the Wise (Q59V24)

Allah is the Creator of all things, and He is the Guardian and Disposer of all affairs (Q39V62)

Who makes most excellent everything that He creates. Thus, He begins the creation of man out of clay. Then He causes him to be begotten out of the essence of a humble fluid. And then He forms him in accordance with what he is meant to be, and breathes into him of His spirit: and [thus, O men,] He endows you with hearing, and sight, and feelings as well as minds: [yet] how seldom are you grateful! (Q32V7-9)

And then We create out of the drop of sperm a germ-cell, and then We create out of the germ-cell an embryonic lump, and then We create within the embryonic lump bones, and then We clothe the bones with flesh - and then We bring [all] this into being as a new creation, hallowed, therefore, is God, the best of artisans!(Q23V14)

When we think of the act of creation we think of God's attributes: Al-Khaliq (the Creator), Al-Bari (the Producer) and Al-Musawwir (the Fashioner). In this regard, Al-Ghazali (1999) explains that Allah's creation involves planning, organizing and bringing into being

from nothingness, and then fashioning it in the best image and best way possible 17.

Most importantly, the question of procreation must be seen as a divine arrangement which is controlled by the Creator, Allah. He says:

The dominion of the heavens and the earth belongs to Allah. He creates whatever He pleases. He grants females to whomever He pleases and males to whomever He pleases, Or grants them a mix of males and females, and causes whomever He pleases to be barren. He is All- Knowing, All-Powerful. (Q42V49-50)

B. Islam's Ethical Injunction on Cloning (*Al-Hukmu Al-Khulqiy*)

In view of Qur'an injunctions, Muslim scholars are divergent on the permissibility or otherwise of cloning in Islam, while some view it as an attempt to change human nature and thus breaks the boundaries, by interfering and retouching Divine laws that regulate man's creation (Tabatabayi 1997). The main argument by the opponents of cloning is contained in the following verse, thus:

Allah has cursed Satan who said, 'I will surely take of Your servants a settled share, and I will lead them astray and give them [false] hopes, and prompt them to slit the ears of cattle, and I will prompt them to alter Allah's creation.' Whoever takes Satan as a guardian instead of Allah has certainly incurred a manifest loss (Q4 VS 118-119).

They state that cloning changes human nature and thus breaks the boundaries, by interfering and retouching Divine laws that regulate man's creation, as well as it is submission to the apparent and hidden devils. They emphasize the phrase: "and I will prompt them to alter Allah's creation". Besides, it is forbidden to change creation according to the Glorious Qur'an where Allah says:

The nature made by Allah in which He has made men; there it is no altering of Allah's creation, that is the right religion, but most people do not know (Q30 V 30) (10).

Therefore, they concluded from these two verses that altering Allah's creation is forbidden (unlawful or haram).

In contrast, according to Manafi *et al.*, (2016), some jurists present many proofs to reject this reasoning and state that it is incorrect to prove prohibition of cloning through these verses. They claim that cloning in the general sense is not altering Divine creation but it is applying a type of Divine creation by way of discovery which is correspondent with the Divine creation. Therefore, suggesting that the procedure of cloning or SCNT is not a Divine creation. However, the process is similar to insemination and in vitro or in vivo

fertilization, which results in the development of healthy individuals (Evans 2002). Similarly, another scholar who rejected this idea has stated that there is no reason to forbid alternation of the creature in general because if it were forbidden, then any type of alternation in nature should be forbidden as well (Sayyina 2015).

Owing to its central implication on the submission on cloning in Islam, a literary review of the phrase "*khalq-al Allah*" (God's Creation) in the mentioned verse is carried out, thus:

- In Arabic lexicon "*Lisanul-Arab*" the word ***khalq*** in respect of the verse changing Allah's creation (*Falayughayyirunnakhalq-al Allah*) is interpreted as ***Dinul-Allah*** (changing the religion of God) (Ibn Mansur 1985)
- Furat al-Kufi (1990), in his Tafasir under this verse, narrated from Imam Bakir: "The connotation of *khalq-ul Allah* is religion and commands of Allah..."
- Sheikh Tusi (1959), after quoting different views on this issue, states: "The most compelling explanation of the verse, considering the verse *falayughayyirunnakhalq-al Allah* (changing Allah's creation) (verse 30:30), is *Dinul Allah* (changing the religion of Allah)".
- Tabrisi (1959) comments that alternation of the creature as alternation of the lawful and unlawful of God.
- Bin Kathir quoted from bin 'Abbas, 'Akramah and Mujdahid that, by the virtue of the verse 30:30, *khalqul-Allah* means *Dinul-Allah* (Ibn Kathir 2000).
- As-Suyuti (1984) in his al-Durr al-Manthur reports from bin 'Abbas that it means religion of God.
- From the above points of view, this verse and its key words, "***Falayughayyirunnakhalq-al Allah***", which is considered to be cloning by some scholars, is referred to as the alteration of Divine religion and commands and not physical changes. Moreover, it is not mentioned in general to cover all changes with the result of turning many permitted acts (***Mubah*** or lawful) into unlawful ones. Breeding plants and animals are common practices throughout history, which could be interpreted as altering God's creation according to this theory. Therefore, in vitro fertilization and cloning (particularly therapeutic), which are implications of natural biological mechanisms, are considered to be permissible acts by the majority of jurists (Shirazi 1974)

Based on the discussion above, the following inferences can be deduced, thus:

- That human cloning using the two methods mentioned, or any other method that leads to reproduction of human beings is haram

- If there is any transgression of the *Sharī'ah* ruling mentioned above, then the consequences of that should be discussed to explain the *Sharī'ah* rulings concerning such cases.
- All scenarios in which a third party may be added to the marital relationship are forbidden, whether that involves a womb (surrogacy), eggs, sperm or cells for cloning.
- It is permissible in Islam to use the technology of cloning and genetic engineering in cases of germs and microscopic creatures, plants and animals, within the limits and guidelines of *Sharī'ah* for the purpose of serving interests and warding off harm.

C. Islam's Ethical Obligation on Cloning (*Al-Ilzamu Al-Khulqiy*)

This simply refers to the nature of divine commands regarding cloning as well as the individual's sense of compliance with such ethical commandments. This also has to do with the considerations that engender feeling of religious obligation in an individual. Primarily, Islam stipulates that whatever decision made by Allah and His Prophet on a matter is binding on the true believers (see Q33V36). Consequently, the debate on human embryonic cloning centers essentially around three key arguments. First, does cloning conflict with Islamic beliefs and to what degree is it permitted? Second, what are the consequences of cloning in societies? And third, at what stage is an embryo considered a living being? Almost all believe that reproductive cloning is prohibited. Many also are of the view that therapeutic cloning should also be prohibited. However, everyone agrees that scientific research and the generation of new knowledge, particularly when it is in the interests and benefit of mankind, must go on. To stifle such efforts would be contrary to the basic tenets of Islam (Albar 2002). Therapeutic cloning therefore is viewed by many scholars as belonging to this category; having potential to benefit mankind. Some argue that cloning cannot be considered contrary to religion, because the knowledge advancement is ordained by God; just as man cannot be the creator of the plant by sowing its seed, similarly man cannot ever be considered as creator of life. Therefore, cloning is a phenomenon considered as divine blessing as long as it is not intended for nor lead to reproduction human beings (Al-Aqeed 2005).

D. Islam's Ethical Responsibility on Cloning (*Al-Mas'uliyatu Al-Khulqiyah*)

Ethical issues specific to human cloning include the safety and efficacy of the procedure, cloning for destructive embryonic stem cell research, the effects of reproductive cloning on the child/parent relationship, and the commodification of human life as a research product. Consequent upon these, Muslim scholars (*fuqaha*), view human cloning as *haram* for theological, juridical, ethical, social, psychological and scientific reasons (Shirazi 1974). From ethical point of view, for

instance, they see human cloning as a means of weakening religious beliefs, violating human dignity, disturbing family life, and bringing heritage and lineage regulations into disarray. Therefore, they hold cloning even for partners living together to be illegitimate, showing unanimity on this ruling. To this extent, the ban on human cloning has been expressed in several declarations, *fatwas* and resolutions. Islamic organisations and independent Islamic bodies have repeatedly emphasised its stance on banning cloning.

The *Majma' al-Buhūth al-Islamiyyah* of the Al-Azhar University in Egypt, has issued a *fatwa* in defiance of human cloning, asking the governments of the world to prevent it in whatever form it might be practised. The European Council on proclamation of decree "and Research" has also called human cloning *haram*. Also, the office of *Rabitatu al-'Alam al-Islami*, based in Mecca, Saudi Arabia, has condemned human cloning as *haram* and asked for a worldwide law to be drafted against it.

Furthermore, a seminar held in Morocco in 1997 ended with several recommendations, one of them calling for the prohibition of human cloning by the transfer of stem cell of body to the nucleus-free ovule (Avazi 1997). The final declaration of the Council of Islamic *Fiqh* clearly reflects this unanimous viewpoint. After a preamble about man's position in the order of being and Islam's encouragement to the pursuit of knowledge and scholarship, this declaration asks for a "ban on human cloning by any method that leads to the increase of mankind. On a whole, the Health Ministers of the Gulf Cooperation Council have declared their total objection to human cloning, calling it the biggest crime that is irreconcilable with medical and religious ethics.

E. Islam's Ethical Reward on Cloning (*Al-Jaza'u Al-Khulqiy*)

This simply refers to the outcome of human actions or activities in life. Indeed, Islam emphasizes that no action of man is without an effect which attracts either punishment or appreciation (reward). The glorious Qur'an confirms that even an atom's weight of good deed will be ignored by Allah just like He will punish evil deed no matter how infinitesimal it may be (see Q99 V7-8). From the fore-going, cloning, especially when intentionally carried out to reproduce human beings or alter Allah's creation, is a gross violation of divine law of nature and a way of submitting to dictate of the devil (*Shaytan*). In a clear term, Allah has laid curse on such venture in the glorious Qur'an, thus:

Allah has cursed Satan who said, 'I will surely take of Your servants a settled share, and I will lead them astray and give them [false] hopes, and prompt them to slit the ears of cattle, and I will prompt them to alter Allah's creation.' Whoever takes Satan as a guardian instead of Allah has certainly incurred a manifest loss (Q4 VS 118-119)

However, according to Al-Aqeed (2005), therapeutic cloning which Muslim jurists consider permissible is a blessing as it provides succor especially to those who have infertility challenge. Although, there are more rationales behind institution of marriage in Islam, Allah wishes that every couple procreate and have children and grandchildren. Therefore, an attempt using therapeutic cloning means to ensure this divine wish cannot be unrewarded by Allah especially when carried out with absolute reliance and trust in Allah. The Qur'an says:

And Allah has made for you mates (and companions) of your own nature, and made for you, out of them, sons and daughters and grandchildren, and provided for you sustenance of the best: will they then believe in vain things, and be ungrateful for Allah's favours?

CONCLUSION

From the fore-going, it is understood that technologically assisted reproduction in Islamic tradition is legitimized only within the lawful male female relationship to help alleviate infertility, somatic cell nuclear transplant cloning from adult cells for therapeutic purposes will have to abide by the general criterion set for this technology. In the case of cloning specifically for the purposes of relieving human disease, there is no ethical impediment to stop such research, whose probable benefit outweighs possible harm. I believe that research into human cloning from adult cells in the course of reproductive treatment should be allowed, with necessary regulatory clauses to restrict abuse under penalty. My opinion is based on the principle that averting (and not interdicting) causes of corruption has precedence over bringing about that which has benefit. In our religiously and ethically pluralistic society where there is a search for a universal ethical language that can speak to the adherents of different religious and cultural traditions, Islamic tradition, with its experience in dealing with matters central to human interpersonal relations in diverse cultural settings, can become an important source for ethical deliberations dealing with the ideals and realities of human existence.

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