

Lineage and the Rights of Cloned Child in the Islamic Jurisprudence

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Abstract

Lineage in the Islamic law is one of the most basic human rights each individual inherits from his family. When modern assisted reproductive technologies appeared in recent decades, the issue of lineage and the child's rights did not encounter serious challenges. But with the advent of these technologies, the issue of the child's lineage resulting from new technologies has become the center of attention. These technologies have a large share in the field of medicine. A new technique known as cloning has entered the realm of science and technology. Considering the possibility of the widespread use of this technique, the subject of cloned child's lineage and his/her rights would be one of the major issues related to this subject. In this paper, the authors have examined the various aspects of the subject and the opinions of theologians in this regard in order to present a best solution to this issue.

In fact, the fundamental concern in this paper is to figure out the relationship between the cloned child, the cell donor, the egg donor and the owner of the uterus. In this paper, after considering the concepts of the parentage and identical twins' relationship would be explored and then a detailed analysis of the parental relationship and the Shiite jurisprudence scholars' opinion on these issues would be presented. Finally, the rights of cloned children would be taken into consideration.

Keywords: Human Reproductive Cloning, Identical twins, Lineage, Parent-child relationship, Relationship, Rights.

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Introduction

The rapid advance of science and technology and their entrance into various aspects of man's personal and social life, prompting an array of novel issues that scientific and religious communities have to be prepared to find a logical answer. Indeed, human reproductive cloning profoundly challenges our deepest and most cherished beliefs and opens vast new arenas for scientific investigation. This process is more visual than in other areas and the law is more glamorous, challenging, and imposing than other areas too (1). In addition, the main mission of the Shiite jurisprudence scholars is making judicial decisions about new issues that are obligatory, commendable, permissible, prohibited or discouraged activities that are not prohibited. And this is pos-

sible with the use of religious principles that have roots in individual and social needs. Cloning raises many new questions in different areas such as law, ethics, social sciences and theology and its impact needs to be assessed. By introducing cloning as a new reproductive technology into the field of family law, some certain fundamental issues must be addressed by every jurisprudential system and religion. Human reproductive cloning is recognized as a medical procedure which is designed to overcome infertility in the future. Therefore, we must presuppose the idea of reproductive cloning and it can be fully addressed only after the implications of the reproductive view are illuminated. In addition, we would have a better sense of what it means to be a parent in the age of clon-

ing. Matters such as lineage and the rights of the clones are crucial issues that must be analyzed (1).

The fine point about the scientific and technological innovations like human reproductive cloning is that the acceptance of this issue takes much time by societies. There is a degree of ambiguity about it for political leaders. Therefore, the modern world tries to solve bioethical issues such as human reproductive cloning and accepts them gradually and adapts to changes within their framework. It is worth mentioning that there is another idea which is against new technologies and does not accept either them or their impacts. Along with other countries and international organizations, different aspects of the issue and various consequences of new technologies must be considered. Then, Islamic legislators would be able to make perfect plans concerning the mentioned aspects (1).

Many countries forbid human reproductive cloning and do not discuss its results, but the Islamic law tries to find a solution to these problems and provide a definite answer to the related questions. It also tries to discuss its effects. By considering the possibility of the widespread use of this technique in the future, it is reasonable that we examine the various aspects of the subject (1). Many Islamic scholars speak and write about subjects like lineage and the rights of the cloned child. Although the majority of Shiite jurisprudence scholars believe that the human cloning process is prohibited, they discuss about it and its consequences. Researcher thinks the reason is because of their viewpoints regarding facing every new social problem or philosophical matters and their way of thinking. In fact they believe prohibition of the process cannot stop or prevent discussing about it (1). Four viewpoints are held by Shiite jurisprudence scholars in this respect: absolute prohibition, prohibition by secondary topic (most of them inclined to them), defined permission and permission (2).

Regarding the mentioned facts, a discussion about results and effects of cloning on the family law is necessary. This subject is an important issue in this era and is named "the debate of century", so the importance of proposing it is clear for investigators.

Before starting our discussion, we need to introduce some conception such as sources of Islamic law and Lineage according to Shiite jurisprudence scholars.

Sources of Islamic laws: Islamic laws are derived from Quran, Sunnah (the practice of the religion by Prophet Muhammad and Imams), Ijma (consensus reached, on a specific issue, by religious or legal scholars) and wisdom.

These sources of Sharia'h (the codes of conduct or religious laws of Islam) constitute and regulate the relationship between human beings and the Divine legislator (God). Islamic jurisprudence concerning the laws of Sharia'h has developed over a period of 14 centuries and continues to do so in this age. Although there are several interpretations of the Islamic laws, the generally accepted schools of Islamic jurisprudence are Maleki, Hanafi, Shafi and Hanbali along with jurisprudence that has been developed by jurists of the Shiite sect known as Fegh Jafari (Jafari Jurisprudence) (3).

The various interpretations of Sharia'h, by the above said schools, have significant influence upon the thoughts and actions of muslims in their daily lives which includes new issues such as human cloning.

Lineage according to Shiite jurisprudence scholars: According to Islamic ruling, kinship would be ascertained through three ways: consanguinity (relationship by birth in the same family), marriage and fostering (relationship by breast-feeding in infancy). The meaning of family lineage or lineage is affinity, relationship, human race, nearness of blood and the consanguinity between two individuals (4).

According to the presumptions of valid traditional common laws of Islam, lineage means one person's creation of another's gamete or two people's creation of another's gamete (5).

Lineage, in technical terms, is divided into two general and specific concepts.

According to the general concept, lineage is "the genetic and lawful relationship existing between two people".

This meaning is also mentioned in the Civil Law of Islamic Republic of Iran.

In the specific concept, lineage is "the relationship existing between two people wherein one of them is born from her/him" (6).

In this paper some scholars have defined lineage as follows:

Emami describes lineage as an affair established by conception. The lawful and genetic relation establishes the maternity and paternity (7).

Boroujerdi describes lineage as the relation be

tween two people born from one person or one born from the other (8).

Katoozian expresses that lineage is a lawful and legal consanguinity that relates a father and mother to their children. Therefore, it is called maternity and paternity (9).

Shahidi says that lineage, regarding terminology and valid traditional common law presumptions, is the established relation wrest from the coming into existence of a person from others (10).

So in Islamic law, lineage is the most fundamental rights of child in the family. It is the base of other child's rights which prevents bringing shame on one when the father denies paternity. Indeed, in Islam, there is a famous quotation from holy Prophet Mohammad (p) about this right which says: "One of child's rights is that his/her father would not deny his/her paternity". On the contrary, we encounter another viewpoint in the world which insists lineage is not the right of a child. As a matter of fact, in many European countries and United States; courts establish parentage without considering biological relationship. In their legislations, three kinds of parents are considered lawful and legal: Social parent, Legal parent and biological parent.

The purpose of this paper is to explain that the judicial decision of the genealogy and the rights of the clone, like other discussions in the Islamic law (Feqh), is based on deduction and analysis.

The sources of this paper include English articles, and Persian and Arabic books on the subject.

After considering the meaning of some technical terms, some theories will be considered. Firstly, the relationship of identical twins will be discussed. Secondly, the parental relationship in this issue will be explained. Finally, the rights of the clone in the Islamic law will be analyzed.

Discussion

The issue of cloning is open for discussion in many scientific areas, but in this paper it has been discussed from the point of Islamic law. In analysis of the implications of cloning by the Islamic law, two distinctly different problems need to be resolved. The first one discusses whether cloning is permissible or prohibited (impositive obligation that shows the legal status of cloning) and the situational law that explains the legal status of its effects. Both of these judicial decisions must be fulfilled according to both sorts of cloning (reproductive and therapeutic cloning), but in this paper

the situational law on human reproductive cloning is discussed.

In impositive obligation, different theories exist. Four theories have been developed by Shiite jurisprudence scholars: Permission, defined permission, absolute prohibition and second prohibition. They will not be discussed in this article. Now we discuss about identical twins' relationship and then a detailed analysis of parental relationship in Shiite jurisprudence scholars' view.

1. Identical twin relationships: It has been suggested that the relationship between the clone and the DNA donor is that of the siblings and not of the parents. While this argument seems to have a genetic basis, as does the relationship between the donor and the clone, it most closely resembles the relationship between identical twins. This means that the parent of the DNA donor is the clone's parent.

An informed geneticist also believes that the genetic relation between the DNA donors and their clones is the same as genetic relation between that of identical twins¹. A relationship of genetic identity is not the right sort of relationship to ground a claim to parenthood on. Clones share too much genetic material with their donors to be their children (11).

It is clear that this situation poses many problems and difficulties to the clone in society (12). On one hand, the clone has a different soul from the DNA donor. So, she/he is certainly a different individual from the DNA donor. On the other hand, they do not share the same uterus with a common mother. Therefore, she/he is not the identical twin of the DNA donor. The definition of the term 'sibling' found in the Islamic law is either based on a common mother or a common father or both. Thus, clones and DNA donors are not siblings. Donating the DNA, the male donor would be the father of the clone, because the DNA plays the role of the sperm in creating the child. It can even be said that the DNA has more impact than the sperm, because it is all the material that is grown and becomes a perfect fetus and then a baby (13). The theory of the relationship between the clone and the DNA donor is not accepted by Shiite jurisprudential scholar (12). Because many of them have the opinion that the clone, at least,

1- This geneticist believes that although we do not think that the relationship which identical twins have is such as to ground the claim that they are each other's genetic parents.

has a mother or a father or she/he does not have any relatives or parents.

In Jewish law, there appears to be significant Halachic (Jewish law and jurisprudence, based on the Talmud) problems with this analysis. The definition of sibling found in the Jewish law is based on either a common mother or a common father or both. Therefore, it would be difficult to establish parentage (14). According to the Jewish law, the relationship between the DNA donor and the clone would be a sibling type of relationship, given the complete absence of a common parent (14).

2. Parental relationships: You can consider four possibilities wherein reproductive human cloning might have happened in wedlock:

1) When a woman provides the ovum and her uterus to carry the fetus to term, the woman's somatic DNA, uterus and ova can be used in the cloning process.

2) If the woman is unable to make a genetic contribution to the genotype of a child because of her failure to produce viable ova, her somatic cells (DNA) can be used along with the donor's ova in the cloning process. Then, the fertilized egg would be implanted into the first woman's womb.

3) The woman is capable of producing gametes, while the man is not. The man's somatic DNA and the woman's ova could be used in the cloning process, which means that she would have made a material contribution to the birth of the child and also has contributed a small amount of mitochondrial DNA. If she is capable of bringing the child to term, the fertilized egg is transferred back into the uterus of the wife (15).

4) If the woman is unable to bring the child to term, her somatic cells and ova can be used in the cloning process. Then, a surrogate mother would be used (16).

A) The establishment of paternity and human reproductive cloning from Shiite jurisprudence scholars' perspectives

Jurisprudence scholars' opinions regarding the status of the clone are divided as follows:

1- According to presumptions of valid traditional common law of parentage (parental relationships are granted to the natural parent) and its divine legislator's approval, school of Shiite jurisprudence believes that the clone does not have a father at all. This means that the paternity is not assigned to a man, because the paternity of the child is established by the genetic relationship between the child and the father. Thus, the donor of the sperm is the father. This position is advocated by

clergies such as Javahri (17), Makarem Shirazi (18), Mousavi Ardebili, Bayat (19) and Hakim (20). The mentioned people give the following reasons for their theories:

1- The presumptions of valid traditional common law maintain that paternity is assigned to the man from whom the sperm comes. In such a case, there is no sperm and consequently the child has no father (17).

2- The basis of the establishment of paternity is not the creation of one's sperm. It is more than that and in this case paternity has no role (17).

3- The presumptions of valid traditional common law introduce the basis for the establishment of paternity. God, the divine legislator, approves the idea of the presumptions of valid traditional common law in the genealogy of a child's case. Therefore, it is essential to study the Islamic Law. Hence, it is clear that the relationship between the clone and the DNA donor is not lawful and their similarities must not be considered. Regarding this matter, they are strangers and do not have any consanguinity or close relationship (20).

This group believes that the clone will never have a father. Therefore, we enable him to fit into the category of being a father. However, this view cannot be adopted because in Islamic law there is a principle that calls the creation of a child under wedlock or *Firash*¹. The child follows the *bed* (*Firash*), that is the paternity of a child born in lawful wedlock belongs to the husband of the mother without any acknowledgement or affirmation of parentage on his part and such child follows the status of the father. According to this norm, if the relationship between a child and his/her father is not clear, the child is for the woman's husband because the child has been born in wedlock (2). According to this formula, if someone goes to the court and denies his paternity of the child, it would not be a valid claim.

Because of this important principle, there is no need for the child to be from the sperm of his father: *e.g.*, according to Shirazi's point of view, both paternity and maternity are established in the case of cloning (2). In regard to above-mentioned theory, Abolghasem Georgi believes that "Family relationships have lawful aspects, not real aspects". This means that they are either subjective or arbitrary (21). In his opinion, if the presumptions of valid traditional common law accept that

1- Prophet Mohammad (SAW) is reported as saying, "The child is for the bed".

the clone is related to the couple, inheritance rights can be established (21).

According to the Jewish and Christian laws, the same theory is regarded as mentioned above. Assessments of reproductive technologies, such as human reproductive cloning vary considerably from Christian to Christian. Roman Catholic moral reasoning tends to resist any technology that removes conception from the immediate context of loving and sexual intercourse between the husband and wife (22). While conception does not occur through sexual intercourse of the husband and wife, the conception does take place in the context of the flesh relationship of marriage in which sexual intercourse is a normal part (23). The Catholic Church would still oppose reproductive cloning, as it opposes many other reproductive techniques, because it believes in human reproduction from sexuality point of view (24). On the other hand, some Christians point out the widely accepted practice of adoption and ask, "If the adoption of a child whose genetic origin is completely outside wedlock can be a suitable way to create a family, why would we reject the procreative technologies simply because they use gametes or DNA material from outside wedlock?" One response to this question is that the practice of adoption provides only an imperfect analogy with reproductive technologies (22). There are some authorities who maintain that in the case of the absence of a sexual relationship, there is no paternity; certainly those authorities rule that no paternity is established in the case of cloning (14).

2- Some Shiite jurists make different judicial decisions (Fatwa). According to this view, in the third above-mentioned scenario, paternity is assigned to a man who owns the DNA. If the owner of somatic cell is a woman, the maternity of the child will be established, not his/her paternity. This means that the one who fertilizes the egg by providing all the chromosomes, in the case of cloning, should be considered as mother or father, not both (25, 26). Some other scholars in this group believe that there are no differences between using the husband's cells or those of a stranger's in the cloning procedure. In both cases, scholars like Haeri (25), Mosavi Sabzevari (27) and Makarem Shirazi believe that the clone has a father. This group bases the following reasons on their own opinions:

1. Islamic traditions from Mohammad bin Mos

lem about lesbianism/tribadism¹ by which a girl became pregnant. In that situation, it was decided that the child belonged to the woman's husband. There is another tradition that read: "The child belongs to the owner of sperm and the wife is like a vessel" (27).

2. The establishment of paternity and maternity is legal and a religious marriage contract is not irrevocable because the legal marriage contract is indispensable when the husband's sperm and wife's egg are joined and create a child. Thus, every aspect of legal parentage of a clone is very clear, because of the generality of establishing a legal and lawful lineage. The effects of lineage are also established for the offspring because there is a clear establishment of maternity and paternity on the part of participants in the cloning process. Therefore, the monopoly of the proof of lineage over legitimate lineage through marriage is because of the conditions of ancient eras where paternity and maternity were established only through joining the husband's sperm and wife's egg (25, 28).

It must also be said that entering into a gestational agreement is strictly forbidden for a married woman because it is in violation of her husband's rights. Only if her husband consents to it, it becomes permissible, because it is not clear if the issue of paternity is established through "Firash" or "the principle of marriage and having children to insure ones posterity". If the owner of the DNA comes from an adulterated source, adultery destroys a child's lineage and leads to an unlawful mixture of relations (28).

However, Shirazi firmly opposes this idea and believes that human reproductive cloning between couples and not a man or women is legal and if it happens between strangers other than the husband and wife, the child is "Valad Shobheh" (a questionable child) (29, 30). Other Shiite jurists believe that if the DNA donor is a man, he would be considered the father and the clone also would have a mother; Jannati (31), Maarefat (31), Zanjani (31), Taskhiri (32), Sistani (29) and Mosavi Sabzevari (27) subscribe to this viewpoint.

If the owner of the womb, the egg and the DNA is a woman, absolutely she would have the status of the clone's mother and her maternity is established, but paternity would not and the case would be referred to as "valad Li'an" (mutual cursing).

1- A woman engages in tribadism and the girl became pregnant, or a lesbian relationship with a girl.

According to the Islamic law, after the placement of Li'an¹ between wife and husband before the court, his paternity is denied and consequently the child will have no father. In this case, the paternity of the DNA donor is established by "the principle of marriage and having children to ensure ones posterity" formula or "Ferash" and the clone would be considered his child in all respects (27).

The same view is held by the Jewish law. According to Halacha, a person who donates the sperm is the father, whether he is the husband of the women who carries the embryo or a stranger. However, no Halachic definition of fatherhood does exist yet in a case where the male does not give the sperm but rather some other genetic material, such as the nucleus of a mature cell (33).

A secondary issue: If the husband's DNA is taken and transferred to his wife's passive egg, then frozen, can it be placed in her womb after death of the husband? Moreover, can it be put in the uterus of the husband's prohibited family or another woman? Placing the embryo in the womb of his wife or another woman is allowed even after his death (13).

B) The establishment of maternity and human reproductive cloning from the standpoint of Shiite jurisprudential scholars

There are different theories on this issue. Different groups have their own set of theories. In the other reproductive techniques, it is possible for two women to participate; while in human reproductive cloning there is the possibility of participation for three women. In fact, in the other reproductive techniques, the owner of the womb and the egg exists, but in human reproductive cloning, the owner of the womb, the passive egg and the DNA or somatic cells are all present. Thus, in this section, there are different viewpoints on the establishment of maternity in human reproductive cloning. Some Shiite scholars believe that legal maternity is established but some do not.

Based on the above-mentioned statements, there are two basic theories used in Islamic law to analyze the establishment of maternity in the case of cloning:

a) Maternity assigned to one or two women

This view includes two categories:

- The theory of having only one mother:

The group holding this theory believes that there is no difference between the cases in which the owner of the uterus, egg and somatic cell is one woman or more. This theory falls into three categories:

1. Maternity is assigned to the gestational mother: Some are inclined to label the gestational mother as the legal mother of the clone, because they focus on parturition-labor, delivery and birth. Moosavi Ardebili, Bayat (19) and Seyed Sadiq Shirazi (29) adhere to this view.

This idea is neither perfect nor complete, because without any doubt and according to the valid traditional common law presumptions, the real mother is the owner of the egg. The criteria for establishing maternity are clear and they hold the idea that the child belongs to the egg-donor woman. The same is true for the sperm-donor man who would be considered the father of the child. The verse (Mojadelhe: 2) is used to prove that the idea does not show the real mother is the gestational mother. This verse is about the juridical design on Zihar², and not the establishment of legal maternity (25).

In the Jewish law, a theory like the above-cited verse is considered and the authorities view the gestational mother as the only legal mother (14). In western legal systems, a group called "gestationalists" considers this theory, too. Gestationalism is the characteristic given to a person who actually gives birth to a baby (11).

2. Maternity is assigned to the egg owner: According to some cases, maternity like paternity is irrevocably established as belonging to the natural parent. Thus, the legal mother is the owner of egg. Javaheri (17), Haeri (25) and Sistani (29) appear to have adopted this theory.

3. Maternity is assigned to a woman who is the DNA owner: In this view, the DNA owner is the mother of the clone, because the egg donor will

2- This is a reference to the pre-Islamic Arabian custom called Zihar, whereby a husband could divorce his wife by simply declaring "Thou art henceforth as unlawful to me as my mother's back". In pagan Arab society, this kind of divorce was considered final and irrevocable, but a woman thus divorced was not allowed to remarry and had to remain forever in her former husband's custody. The specific injustice of this kind of divorce was that the woman virtually became a household slave. She would lose all her rights and the status as a spouse, but was not free to marry anyone else. Prophet Mohammad (S.A.W) abolished this kind of divorce.

1- If a man is convinced or strongly suspects, although without having proof, that his wife has had sexual relations with another man and is carrying his child, he can take the case to a Muslim judge. The judge will ask the man and his wife to invoke the curse of Allah on one another in the manner prescribed in Surah al-Nur. Then, the two shall be separated permanently and the child shall be identified by his/her mother's name.

make no genetic contribution to the cloning process other than the mitochondrial DNA. This group includes Jannati (31), Momen (13) and Maarefat (31). They cite some reasons to support their viewpoints as it follows.

a) The presumptions of valid traditional common law are inclined to label the owner of somatic cell as the father or mother of a clone. However, according to the Islamic law, there is no evidence for disapproval of this presumption. Therefore, we can trust the presumptions of valid traditional common law in the establishment of paternity and maternity in this matter. According to this law, the male owner of somatic cell is the father and the female owner of somatic cell is the mother (28).

b) Some members of this group believe that by referring to terminological and Islamic books, it can be understood that the term "Al-Oom" means "the base of everything". This criterion closely appears to conform to the owner of the egg who brings the child to term. Considering the literal meaning of the term "Al-Oom" and the approval of God (because God approved the idea of the presumptions of valid traditional common law in this subject) there would be no adultery, therefore the lineage of this child is established (27).

According to Christian beliefs, the child would be fully the child of a parent who has provided the complete double set of genetic instructions (22); accordingly the genetic link belongs to only one of the parents (23).

b) The theory of possibility of having multiple mothers at the same time for the clone:

According to this theory, it is possible for a child to have two mothers. In the last five years a quite robust discussion among Jewish people has developed as to whether a child can Halachically have two or more mothers. According to J. David Bleich, a number of Halachic authorities would be inclined to rule that it is possible for a child to have two or more mothers in regard to Jewish law (34). According to Shiite scholars this theory falls under four categories:

1- Maternity is assigned to both the owners of the egg and the uterus: This group is inclined to label the egg owner, who gives birth to the child, as the legal mother.

This idea can be analyzed in three categories:

- Both egg and uterus are necessary to establish maternity at the same time. By analyzing the concept of maternity Mousavi Sabzevari, states that the woman who contributes the egg and the uterus is undoubtedly the mother of the child (27).

- Either the owner of the egg or the owner of the uterus is considered as the single mother of the child. This group believes that both women are considered the mother of the child.

- Both the owner of the egg and the owner of the uterus are mothers in the presumptions of valid traditional common law. This group is inclined to name both of them as foster mothers and not relatives or real mothers (34).

2- Maternity is assigned to the owner of DNA and womb together: Zanjani is inclined to label the owner of womb and DNA as the legal mother (31). Makarem Shirazi has also adhered to this idea in his last "fatwa" or "Islamic religious ruling".

3- Maternity is assigned to the owners of the cell and the egg: Saafi has adhered to this idea.

4- Maternity is assigned to the owners of the nucleus and the cytoplasm: Mohammad Shirazi and Javaheri maintain this theory (29, 17).

Maternity is assigned to the woman who is the owner of egg. Consequently, in human reproductive cloning, maternity is assigned to women who are the owners of nucleus and cytoplasm. If it is said that the presumptions of valid traditional common law do not accept the theory of having more than one mother at the same time, in response it can be said that the mentioned law accepts this concept, but it makes mistake in providing instance. There would be no validity for this mistake in providing instances with the acceptance of that concept (17).

This theory is challenged by Momen. The cytoplasm nourishes the nucleus; therefore, the cytoplasm cannot grow but supply food. This cell is then implanted into an ovum with the removed nucleus; the nucleus uses the cytoplasm to control gene expression and mediate the replication of DNA during the cell cycle. Genetic transcription occurs in the nucleus and it is segregated from the location of translation in the cytoplasm, allowing levels of gene regulation. Then, nucleus starts the process of cellular division. Being implanted into the uterus of a gestational mother, zygote develops into a fully formed fetus which will eventually be born of its gestational mother. In fact, the important part in this process is the nucleus. Thus, the idea that maternity is assigned to the woman who is the owner of egg is not true. Regarding this case, maternity is assigned to women who are the owners of the nucleus and the cytoplasm. Establishment of maternity involves not only the ovum, but also the growth of the egg. Therefore, mate is

assigned to the woman who is the owner of the nucleus, not the cytoplasm. This idea is based on the fact that only the nucleus can grow, not the cytoplasm (13).

b) Maternity is not assigned to any one at all

A minority of religious authorities assert that the clone's progeny is not considered the donors' son at all. From this viewpoint, maternity and paternity are not established in human reproductive cloning and the clone clearly would lack mother, father and relatives. Some members of this group include Makarem Shirazi (18), Saafi, Hakim (20) Beheshti (35) and Mousavi Tabrizi (29).

This group proves their theory by providing some of their reasons as it follows:

a) Some of them who are inclined to see the owner of the egg as the legal mother say that maternity is assigned to the woman who is the owner of the egg. Therefore, in human reproductive cloning, maternity is not assigned to the woman who is the owner of egg with a removed nucleus. Thus, the clone does not have any rights and does not have a mother (20).

b) Some of them view the owner of the uterus as the legal mother of the clone¹ and they are inclined not to assign any at all. This group believes that the adverb in this verse shows that maternity is irrevocably established as belonging to the gestating mother. Moreover, the clone does not have a mother because she or he has not been conceived naturally.

This claim can be rejected, because this verse is a judicial decision for certain situations (Zihar). Moreover, although it is not about the establishment of maternity it shows the general principle about the establishment. Therefore, cloning is not an obstacle for establishing maternity (27).

Based on the theories of most Shiite jurists on this issue, a criterion can be concluded for the establishment of maternity and paternity. However, the last perspective is not completely true, because in the case of human reproductive cloning, it does not consider the combination of the genetic materials of the two individual –the father and the mother– as the genetic material is identical to the genetic makeup of the one who donates the DNA.

The male and female partners who reproduce through sexual intercourse are considered the father and mother according to the Islamic law. In this case the man or the woman contributes all the

nucleic genetic material that appears to be adequate enough to label the person as the father or mother, if both maternity and paternity cannot be established here, at least one of (maternity or paternity) can be.

From the Sunnite scholar's perspectives, there is only one scenario that is not strictly forbidden and that is when the cloning process only involves wife and husband. According to these scholars, a third party donor is not acceptable whether he or she is providing the sperm, egg, embryo, uterus or a somatic cell. The use of a third party is tantamount to adultery (Zena).

Nevertheless, the authors believe that their claim is not completely acceptable because no adultery can occur unless there is a physical union between a man and a woman.

Finally, we regard intentionalism (the belief that the meanings of a text are determined mainly by the stated or implied intentions of the author) as the last theory of western legal systems, which considers P as the parent of any person. Fexists because P has intended to create and rear a child (11).

Although the theory of new reproductive technologies such as human reproductive cloning is maintained by the western legal system, viewpoints of religions such as Islam, Christianity and Judaism, do not consider the argument of intent to have any validity or applicability to the problems under discussion.

Rights of the clone according to Shiite jurisprudential scholars' viewpoints

It must be stressed that if cloning is successful, a cloned individual will possess the same human rights, freedom, dignity and correlative legal protection as any other member of the human community, regardless of his or her biological or technological origin. His or her similarity to a person does not have any effect on his or her human nature and it cannot violate his or her rights. General rights such as right to privacy, freedom and health, as much as cultural, social, economic and political right are reserved for him or her. The abolishment of these rights causes responsibility (15). Thus, the clone has all fundamental rights such as right to life and right to liberty, freedom of expression, right to vote, and property and civil rights. The right to live is followed by other rights such as the prohibited trade of the cloned body and his or her organs and the legal prohibition of

1- According to the second verse of Mojadeheh in Quran

clone trade as a slave. Therefore, the clone is eligible to enjoy all kinds of human rights.

Private rights are divided into financial and non-financial ones. The clone has financial rights including property rights and so on. The clone can own tangible and intangible properties. Therefore, he or she can retain his or her right to ownership. If the clone comes of age, she or he can participate in trading cases. Nevertheless, non-financial rights are different. The major portion of non-financial rights is related to family law and legal parentage.

There are different conflicting theories about the establishment of paternity and maternity those help to set up the following discussion. Non-financial rights are divided into two groups:

The right that is related to the legal parentage, including custody, the right of provinces, education, alimony, inheritance and other rights that are irrelevant to legal lineage such as the right of parity.

Based on different visions about the clone's legal lineage, there are different views about his or her rights that are related to parentage. Some Shiite scholars believe that he or she does not enjoy these rights because, in this case, maternity and paternity are not assigned to anyone. Others believe that she or he enjoys rights such as custody, education, alimony and inheritance, because maternity and paternity are established in this case.

If she or he marries, she or he will enjoy all inheritance rights. As a wife, she will also have the right of alimony. Shiite jurisprudential scholars also believe that if she or he is killed, retribution or blood money is received for her or him.

In Iran, there is not a perfect state legislation regarding this issue. In fact, it needs to be amended by investigating the discussed theories.

Conclusion

In conclusion, arguments for cloning as a reproductive technology must rely on cases in which couples are unable to become parents by any other means. It can be claimed that Shiite jurisprudence scholars try to provide solutions for this problem although they don't have similar ideas. Given the Shiite jurisprudents' different perspectives on this issue, it must be emphasized that the best choice is giving the assignment of the above-mentioned child to his/her father and a mother, but if for any reason this is not possible, the assignment of this child to one of the parties is inevitable. Thus, it appears that the idea of reproductive cloning un-

dermines the view of parenthood. Because in sexual reproduction, there are two sources (sperm and egg) to establish paternity and maternity, but in human reproductive cloning there is only one source. Therefore, maternal and paternal relationships could be established in this case. In the authors' opinion, each of these solutions can help solve this dilemma. A better choice is to consider the status of the clone in the family. It is also essential to protect the cloned person and safeguard his or her rights. A clone is absolutely a human being and like others should enjoy all human rights and his or her rights as a human being must be respected. Furthermore, these theories would help illustrate all the aspects of lineage in the other reproductive techniques.

Conflict of Interest

Authors declare no conflict of interest.

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