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The Islamic Viewpoint On New Assisted Reproductive Technologies

Hossam E. Fadel*

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Abstract

This Article gives a brief overview of Islamic views on assisted reproductive technologies (ARTs). Islamic law is applied to ARTs to determine what may be lawful and/or moral and what may be impermissible. The article examines artificial insemination, in vitro fertilization, surrogacy and cloning.

KEYWORDS: religion, ethics, bioethics, science, medicine, assisted reproductive technologies

*M.D., FACOG; Director of Perinatology, University Hospital; Clinical Professor, Department of Obstetrics & Gynecology, Medical College of Georgia, Augusta, Georgia.

THE ISLAMIC VIEWPOINT ON NEW ASSISTED REPRODUCTIVE TECHNOLOGIES

*Hossam E. Fadel**

INTRODUCTION

The desire to have one's own offspring is a very strong human instinct. The *Quran*, the holy book of Muslims, documents this fact: "Wealth and progeny are the allurements of this world."¹ A common supplication of Muslims is, "And those who pray, Our Lord, grant unto us spouses and offspring who will be the comfort of our eyes."² On the other hand, Muslims believe that God ordained that some couples would be infertile. "He creates what He wills. He bestows male or female children to whom He wills. He bestows both male and female children (to some) and He leaves barren whom He wills."³

Islam also acknowledges that infertility is a significant hardship.⁴ The *Quran* gives the example of two prophets, Abraham and Zacharyya, peace be upon them, who were barren and described how they longed to have children of their own, even as they grew old and almost despaired of having children. "Then did Zacharyya pray to his Lord, saying, 'O my Lord! Grant unto me from You a progeny that is pure, for You are He that hears the Prayers.'"⁵ The method they used to achieve their goal was to ask God repeatedly and sincerely with humility and faith. Eventually God answered their prayers. "And the angels gave Abraham glad tidings of a son endowed with knowledge!"⁶

This does not mean that Islam asks the infertile couple only to pray to overcome this problem. A basic Islamic principle permits persons facing hardship to use all lawful means to solve their problem, while at the same time preserving their trust in God that He will help them achieve their goal. This is especially true in matters

* M.D., FACOG; Director of Perinatology, University Hospital; Clinical Professor, Department of Obstetrics & Gynecology, Medical College of Georgia, Augusta, Georgia.

1. HOLY QURAN 14:46 (Abdullah Yusuf Ali trans., 1982).

2. *Id.* at 25:74.

3. *Id.* at 42:49-50.

4. See Hossam E. Fadel, *Assisted Reproductive Technologies: An Islamic Perspective*, 25 J. ISLAMIC MED. ASS'N 14, 17 (1993).

5. HOLY QURAN, *supra* note 1, at 3:38.

6. *Id.* at 51:28.

of health and disease. Prophet Muhammad, the prophet of Islam, stated, "For every disease God has created a cure except senility [meaning death]. So progeny of Adam seek cure for your ailments!"⁷ This is conditioned on the use of lawful means and the sincere belief that God is the ultimate source of cure.⁸ As Abraham is reported in the *Quran* as saying, "And when I get sick it is He who cures me."⁹

Thus, it is clear that infertile couples are instructed and encouraged to seek cure of their infertility, but within the limits of what is permissible in *Shari'ah*.¹⁰ The command to seek cures for disease also applies to physicians and other healthcare providers. As a result, discovery of new methods for the treatment of infertility, as well as all other diseases, is, in principle, a perfectly legitimate pursuit, but with the caveat that harmful or illegitimate methods are not to be used.¹¹

The *Quran* describes as losers in the Hereafter those who "learn that what harms them and does not benefit them."¹² The Prophet's supplications include, "Oh God, teach me what is useful," and, "I seek God's refuge from all knowledge that is harmful."¹³

I. THE RISE OF MODERN REPRODUCTIVE TECHNOLOGY

Until recently, the treatment for fertility was mainly by medications to correct hormonal deficiency, or by surgery to correct anatomical defects. These treatments were mostly non-controversial from an ethical or religious point of view. The recent advent of assisted reproductive technologies ("ARTs"), however, changed this situation dramatically. These technologies transferred the process of procreation from a private, personal relation between husband and wife, into artificial means in a lab, and, in many instances, involving a third or fourth party in the process. These changes in

7. MISHKAT AL MASABIH 2:945-47 (James Robson, trans., Sh. Muhammad Ashraf, Kashmiri Bazar 1975).

8. See Fadel, *supra* note 4, at 17.

9. HOLY QURAN, *supra* note 1, at 26:80.

10. *Shari'ah*, Islamic jurisprudence, designates the rules and regulations governing the lives of Muslims, derived principally from the *Qur'an* and *Hadith*. 9 THE ENCYCLOPEDIA OF ISLAM 321 (2d ed. 1996).

11. Maher M. Hathout, *Surrogacy: An Islamic Perspective*, 21 J. ISLAMIC MED. ASS'N 105, 105 (1989); see also Fadel, *supra* note 4, at 17.

12. HOLY QURAN, *supra* note 1, at 2:102.

13. These are famous supplications of the Prophet Muhammad. See, e.g., al-Jazari, *al-Hisnul Hasin*, KARACHI 167 (1996); al-Jazari, *al-Hisnul Hasin*, KARACHI 277 (1993); see also ABRIDGED SAHIH MUSLIM 504, no. 1871 (3d ed. 1977) (Arabic).

the procreative process, challenge basic religious and ethical concepts.¹⁴

Before describing the specific reproductive procedures and the Islamic view of these procedures, how Muslim jurists derive their religious opinions on whether a certain procedure is permissible will first be explained.

A. Background of Islamic Law

The primary sources of Islamic law, the *Shari'ah*,¹⁵ are the *Quran*, the true word of God, and the Prophet's traditions and sayings that have been preserved over the centuries as His *Sunnah*.¹⁶ Laws governing topics that are not directly covered by these two sources are to be determined by a process of legal reasoning, or *Ijtihad*.¹⁷ The rules of *Ijtihad* are stipulated in a well-established methodology called *Usul-al-Fiqh*.¹⁸ This process of *Ijtihad* takes into consideration *Qiyas* (analogical reasoning),¹⁹ *Istihsan* (juristic preference),²⁰ *Maslahah Mursalah* (unrestricted public interest),²¹ *Sadd al-Dharai* (blocking the means),²² *'adat*²³ and *'urf*²⁴ (customary practice), and *istishab* (presumption of continuity).²⁵ The most important of these concepts in relation to the topics of this Essay are to be discussed below.

14. See Fadel, *supra* note 4, at 15.

15. See *supra* note 10.

16. The term *Sunnah* refers to the sayings and actions of the Prophet Muhammad, as distinct from the revelations that comprise the *Quran*. Council on Islamic Educ., at <http://www.cie.org> (last visited Oct. 10, 2002).

17. Council on Islamic Educ., at http://www.cie.org/resources/hbglossary_atoi.htm (last visited Oct. 10, 2002).

18. The science of Source Methodology in Islamic Jurisprudence, *Usul-al-Fiqh*, has been defined as the aggregate, considered per se, of legal proofs and evidence that, when studied properly, will lead either to certain knowledge of *Shari'ah* ruling, or to at least a reasonable assumption of *Shari'ah*; the manner by which such proofs are adduced, and the status of the adducer. See FAKHR AL DIN AL RAZI, AL MAHSUL FI' ILM USUL AL FIQH 1:94 (Dr. Taha Jabir al 'Alwani ed., Imam ibn Sa'ud Islamic Univ. 1979) (1399), available at http://www.witness-pioneer.org/vil/Books/TA_uaf/ch1.html (last visited Sept. 24, 2002).

19. 4 THE ENCYCLOPEDIA OF ISLAM 235-36 (1978).

20. *Id.*

21. 6 *Id.* at 738.

22. 8 *Id.* at 718.

23. 1 THE OXFORD ENCYCLOPEDIA OF THE MODERN ISLAMIC WORLD 19 (1995).

24. 4 *Id.* at 296.

25. 4 THE ENCYCLOPEDIA OF ISLAM, *supra* note 19, at 269; see also Mohd Daud Bakar, *Principles of Islamic Law in Contemporary Medical Issues*, 1 J. FIMA 1, 2 (1996).

1. Istihsan—*Juristic Preference*

The first principle, the *Istihsan* (juristic preference) allows the jurists some leeway in interpreting the law to allow for something that is useful.²⁶ In such cases it will be permissible to allow the spirit of the law to prevail over the letter of the law.

2. Sadd al-Dharai—*Blocking the Means*

The second principle is the blocking of the means, which occurs in one of two situations. The first situation is when a lawful means is expected to lead to an unlawful (or harmful) result. The second situation is when a lawful means, which normally leads to a lawful result, is used to procure an unlawful end. In these cases, the means itself become unlawful.

3. Maslahah Mursalah—*Unrestricted Public Interest*

The third principle is “public interest.” In defining “public interest” the jurists have to weigh the benefit that may occur to an infertile couple by having a child, versus the harm that it may cause to the resulting child and any harm to society as a whole. In a case where the harm outweighs the benefit, that procedure becomes impermissible.

Public interest has to be defined by adhering to the five basic objectives of Islamic law, which are “preservation of faith, life, intellect, property and posterity.”²⁷ The discussion here centers on the preservation of posterity.

B. Preservation of Posterity

1. Family and Blood Relations

The family and blood relations in Islam have very important legal implications. The *Quran* emphasizes the centrality of the family unit.²⁸ The mutual decision of males and females to marry and have children is considered one of God’s bounties. God swears by the “parents and their progeny.”²⁹ The duties of parents towards their children and the children towards their parents are emphasized. Blood relations have a special status in legal matters. “And

26. 4 THE ENCYCLOPEDIA OF ISLAM, *supra* note 19, at 235-36.

27. WITNESS-PIONEER: A VIRTUAL ISLAMIC ORG., *Istihsan and Maslaha*, at http://www.witness-pioneer.org/vil/Books/SH_Usul/istihsan_and_maslaha.htm (last visited Oct. 10, 2002).

28. *See, e.g., supra* text accompanying notes 2-3.

29. HOLY QURAN, *supra* note 1, at 90:3.

those related by *arham* (kindred by wombs) have prior rights against each other in the book of God.”³⁰

Laws of marriage and inheritance are well defined and based on these family relationships.³¹ So it is essential, from an Islamic point of view, for every child to know the identity of her father and mother.³² This is a concern that is similar to the importance modern laws give the biological father and mother in contemporary parlance. The strict moral laws and the prohibition of fornication and adultery are part of the stress on the preservation of progeny (lineage).³³

In Islam, the family is based on marriage. The marriage is controlled by rules. The marriage contract has legal consequence of mutual rights and responsibilities of husband and wife vis-à-vis one another and vis-à-vis their progeny.³⁴ It is under this protective umbrella that children are to be born. In Islam, the right of legitimacy is a basic right, and every person has the right to be the legitimate child of her parents.³⁵ “And out of your ‘spouses’ He created children and grandchildren and provided for you out of His bounty.”³⁶ Violation of this closely-knit arrangement can run amok with society.

II. THE ISLAMIC VIEW OF CERTAIN ARTS

A. Artificial Insemination

Artificial insemination has been in use for a long time.³⁷ As long as it is the husband’s semen that is used to impregnate the wife, intrauterine insemination (“IUI”) is permissible.³⁸ Permissibility, however, is conditioned upon insemination occurring while the marriage remains intact.³⁹ Thus, the husband’s frozen semen cannot be used after divorce, or after the husband’s death.⁴⁰

30. *Id.* at 8:75.

31. See Fadel, *supra* note 4, at 17.

32. See Hathout, *supra* note 11, at 106.

33. See Fadel, *supra* note 4, at 17.

34. Council on Islamic Educ., at http://www.cie.org/resources/hbglossary_atoi.htm (last visited Oct. 10, 2002).

35. See Hathout, *supra* note 11, at 106.

36. HOLY QURAN, *supra* note 1, at 16:72.

37. See Fadel, *supra* note 4, at 14-15.

38. *Id.* at 17.

39. *Id.*; see also M. Partowmah, *Biotechnology Issues in the Opinion of Islamic Scholars*, 25 J. ISLAMIC MED. ASS’N 9, 10-11 (1993).

40. Fadel, *supra* note 4, at 17.

B. In Vitro Fertilization ("IVF")

IVF is a process by which a woman, through hormonal manipulation simultaneously produces several ova.⁴¹ These ova are needle aspirated at the proper time under ultrasonic guidance. In the lab, sperm fertilize these ova. Successfully fertilized ova (zygotes) reaching the four to eight cell stage⁴² are transferred into the uterus. At this point, the uterus has been prepared by hormones in order to begin implantation of the transferred zygotes (pre-embryos). The current success rate, measured by fertilizations resulting in a live birth, is between twenty and thirty percent.⁴³ IVF, with its various modifications, i.e., GIFT (Gamete intra-fallopian transfer),⁴⁴ ICSI (intracytoplasmic sperm injection)⁴⁵ etc., has been declared Islamically permissible,⁴⁶ only if the following conditions are satisfied. First, the IVF must involve a married couple. Second, the sperm must be from the husband, and the eggs from the wife. Third, this must occur within the context of a valid marriage. Fourth, the procedure must be conducted by a "competent team" in order to reduce the chances of failure. Further, there is a need for conscientious handling of the process so as to ensure that the gametes of the husband and wife are the ones actually being used in the procedure. Finally, no more than the appropriate number of fertilized eggs should be transferred to the uterus.⁴⁷ If more than the appropriate number are used, the risk of triplets and higher order multiple pregnancies increase, and as a result, the risks of miscarriage and pre-term delivery are great.

It is common to transfer only two to three fertilized eggs, although there are usually more fertilized eggs produced. Freezing the remaining fertilized ova is permissible as long as they are only used in subsequent cycles for the same couple, and the couple is still married.⁴⁸ To my knowledge, the fate of the unused eggs has not yet been decided upon. I tend to believe that it will be permis-

41. *Id.*

42. The stage at which fertilization has been successful and cleavage has started, usually within forty-eight to seventy-two hours after fertilization. *Id.* at 15.

43. *Id.* at 16.

44. GIFT is a procedure where gametes are deposited into the fallopian tube to allow fertilization to occur in vivo, instead of in vitro. *Id.*

45. See, e.g., Lisa C. Ikemoto, *The In/Fertile, the Too Fertile, and the Dysfertile*, 47 HASTINGS L.J. 1007, 1037 n.106 (1996) (defining intracytoplasmic sperm injection as a process by which which the doctor uses a tiny needle to manually insert a single sperm into an ova).

46. See Fadel, *supra* note 4, at 17; see also Partowmah, *supra* note 39, at 10-11.

47. See Fadel, *supra* note 4, at 17.

48. *Id.*

sible to use them for medical research with the consent of the couple and within the appropriate guidelines.

C. Donor Eggs, Donor Sperms, and Donor Embryos are Unlawful

The *Quran* states: "Then has He established relationships of lineage and marriage. . . ."⁴⁹ The use of donor sperm, eggs, or embryos will result in the biological father or mother being different from the "married couple." In Islamic law, this is similar to adultery in confusion of the lineage.⁵⁰ Unclear lineage may cause one to marry a brother, sister, or a close relative, even with the strictest guidelines in place to prevent this from happening.

If donor gametes are used despite the prohibition, Islamically, the following applies: in the case of donated sperm, the "husband" would be considered the legal father, although he is not the biological father. Moreover, if a donated egg is used, the birth mother is considered the legal mother, although she is not the biological mother.

D. Surrogacy

Another form of assisted reproductive technology is surrogacy. There are two types of surrogacy, partial and complete.⁵¹ In partial surrogacy, a couple will solicit or commission a woman to be artificially impregnated by the "husband" semen.⁵² The surrogate will then carry the pregnancy to term, and upon birth, give the baby away to the soliciting couple.⁵³ In this case, the child will have the rearing father as the biological father, a rearing mother, and a biological/birth mother.⁵⁴

In a complete surrogacy, the commissioning couple will undergo IVF.⁵⁵ The embryo created by IVF is transferred then to a surrogate woman. The surrogate gives the baby to the soliciting/rearing couple at birth.⁵⁶ In this case, the biological parents are the rearing couple, and the surrogate is the birth mother.⁵⁷ In still rarer situations, the surrogate mother is impregnated with a donor sperm or a

49. HOLY QURAN, *supra* note 1, at 25:54.

50. See Hathout, *supra* note 11, at 106.

51. See Fadel, *supra* note 4, at 16.

52. See Hathout, *supra* note 11, at 105.

53. *Id.*

54. See Fadel, *supra* note 4, at 16.

55. See Hathout, *supra* note 11, at 105.

56. *Id.*

57. See Fadel, *supra* note 4, at 16-17.

donor embryo. In such cases, there will be a rearing couple, biological parents, and a surrogate (birth) mother.⁵⁸ If the surrogate (birth) mother is married, her husband also can be considered a father of the child.

There are several objections to surrogacy from an ethical standpoint. The primary objection is that it results in the commodification of motherhood.⁵⁹ Motherhood is reduced from a value to a price. As a result, children become a commodity and the process of procreation becomes a business enterprise.⁶⁰ There are also many legal problems associated with surrogacy. The main problem is deciding who the parents are, and who is legally responsible for the rearing of the resulting child.⁶¹ The severity of the problem increases when a dispute arises among the parties regarding the surrogate agreement, whether it be before or after the delivery. Many examples of this type of problem have become well-known to the public.⁶² States are divided on whether surrogate contracts are legal, and therefore, enforceable.⁶³ There is also a question as to whether adoption laws could be enforced in these surrogacy cases.

Under Islamic law, surrogacy is prohibited.⁶⁴ Linguistically and Islamically, the Arabic word for "to give birth" is *Walad*, and for "mother" it is *Walidah*, or the "one who gives birth."⁶⁵ A verse from the *Quran* states that, "None can be their mothers except those who gave them birth."⁶⁶ Even if there is an agreement between the parties, the confusion of lineage, which is inevitable in these surrogacy arrangements and which is of major importance in Islamic law, prohibits surrogacy.⁶⁷ If surrogacy is still done despite the prohibition, it is the consensus of Islamic scholars that the birth mother is the "real" mother.⁶⁸

58. *Id.*

59. See Hathout, *supra* note 11, at 106.

60. *Id.*

61. *Id.*

62. See, e.g., *In re Baby M.*, 537 A.2d 1227, 1255 (N.J. 1988) (voiding a contractual agreement to abandon parental rights).

63. Some states simply deny enforcement of all such agreements. See, e.g., D.C. CODE ANN. § 16-402(a) (1997). Some states have exempted surrogacy agreements from provisions making it a crime to sell babies. See, e.g., IOWA CODE § 710.11 (1997). A few states have explicitly made unpaid surrogacy agreements lawful. See, e.g., NEV. REV. STAT. § 126.045 (1998).

64. See Hathout, *supra* note 11, at 106.

65. *Id.*

66. HOLY QURAN, *supra* note 1, at 58:2.

67. See Hathout, *supra* note 11, at 106.

68. *Id.*; see also Fadel, *supra* note 4, at 16-17.

E. Cloning

The successful cloning of Dolly the ewe in 1997 created world-wide excitement, bewilderment, and controversy.⁶⁹ The technique involved taking a somatic cell⁷⁰ from the udder of an adult Finn Dorset ewe, and starving it so its cell cycle development was arrested.⁷¹ Simultaneously, a mature ovum from the ovary of an adult Scottish Black Face ewe, was obtained, and its nucleus removed.⁷² This denucleated ovum and the somatic cell were subjected to an electric stimulus that caused them to fuse.⁷³ The somatic nucleus, with its full genetic complement of forty-six chromosomes thus became inserted inside the ovum.⁷⁴ Similar to the process of fertilization, the ovum started to divide.⁷⁵ When the resulting "zygote" reached the morula stage,⁷⁶ it was transferred to the uterus of a different Scottish Black Face ewe that eventually gave birth to Dolly.⁷⁷ Dolly was the identical genetic copy of the adult Finn Dorset ewe from which the original somatic cell was obtained.⁷⁸

Notwithstanding the success of animal cloning, there is no guarantee that human cloning will be successful. Nonetheless, privately funded experiments in the United States and abroad continue. Although claims of success are advertised every now and then, the reality of true human cloning seems to be a long way away.

Although human cloning will probably be outlawed, we still need to consider its ethical and religious implications. Human cloning, if ever achieved, will result in the "creation" of a human being that is genetically identical to another. In that context, it has

69. See, e.g., Peggy Scheckel, *The Prospect of Cloning Human Beings: Has Knowledge Leapt Ahead of Wisdom?*, 2 DEPAUL J. HEALTH CARE L. 605, 607-10 (1999).

70. Somatic cells are normal body cells that contain two sets of chromosomes and are diploid, as opposed to gametes that contain a single set. T.H. Milby, *The New Biology and the Question of Personhood*, 9 AM. J.L. & MED. 31, 34 (1983).

71. Allison M. Mays, Note, *Cloning: Now That We've Got It, What Do We Do With It?*, 22 LAW & PSYCHOL. REV. 287, 290-91 (1998).

72. *Id.*

73. *Id.*

74. *Id.*

75. *Id.*

76. Morula stage is the point at which the zygote has divided several times into a cluster of cells. This takes place two to three days after fertilization. Milby, *supra* note 70, at 35.

77. See Mays, *supra* note 71, at 290-91.

78. *Id.*

been declared Islamically unlawful.⁷⁹ There are many ethical objections to cloning, such as:

1. *Cloning, as a Method of Procreation, is Contrary to God's Ordained Way*

God intended creation to be a mixture of male and female genetic material and not to be a duplication of one another. Moreover, in natural procreation, there is significant selection in the process. Only one in a billion sperm will fertilize a single ovum, which is produced from one of the multiple follicles that grow in each menstrual cycle. Only some of the morulas/blastocysts that reach the uterine cavity eventually implant. The remaining miscarry. It is estimated that fifty percent of fertilized eggs are miscarried even before pregnancy is recognized (preclinical miscarriage). These natural selection processes are meant to allow only the "most fit" embryos to continue developing into a fetus and then a newborn. These processes are undermined in some forms of ART procedures, and more so in cloning.

2. *Individuality*

God intended human beings to be physically, intellectually, and spiritually different. Cloning will make humans copies of one another.

3. *Legal Status*

There is no legal definition of a clone. For example, would he be considered a twin brother, or the son of the man whose somatic cell was used? Further, would he be a husband to the woman whose egg was used or her son, even though he has none of her genetic contributions?

4. *Human Dignity*

The cloning process is degrading to human dignity ordained by God.

5. *Potential Harms*

There are many foreseeable harms to the human race should cloning become a common practice. For example, clones would

79. Hossam E. Fadel, *Cloning: The Role of Muslim Scientists and Scholars*, 29 J. ISLAM MED. ASS'N 51, 51-53 (1997); Symposium, Soc'y of Islamic Med. Scis., Jordanian Med. Syndicate, *Contemporary Medical Topics in the Light of Islamic Shari'ah* (discussing cloning).

have a shorter life span, significant increase in genetic diseases, and an imbalance of sex ratio, etc.⁸⁰

6. *Potential Benefits*

Although there are many potential harms to cloning, there are also some potential benefits. Cloning animals or plants for therapeutic purposes may be useful and permissible within specific guidelines. Using cloning techniques to generate human tissues or organs is labeled "therapeutic cloning."⁸¹ If therapeutic cloning becomes possible, it will be permissible only if it is conducted within guidelines that guarantee the dignity of the human cells used in the process and with the consent of the parties involved. Creating human embryos for the sole purpose of using them in therapeutic cloning procedures, however, is not permitted.⁸²

80. See Fadel, *supra* note 79, at 53.

81. See Cass R. Sunstein, *Is there a Constitutional Right to Clone?* 53 HASTINGS L.J. 987, 987-1005 (2002). Therapeutic cloning is a process in which:

An embryo would be created and allowed to grow for a short period, perhaps fourteen days. Its stem cells would then be extracted and grown into human tissue or a complete human organ for transplant. The result of the process would not be a human being, but a piece of nerve tissue, or a replacement organ, or a certain amount of skin. The goal would be to grow replacement organs from a sample of someone's DNA.

Id. at 1001.

82. See Fadel, *supra* note 79, at 53.

