

Indo-Islamika

JOURNAL OF ISLAMIC SCIENCES



**Hubungan Perdagangan Indonesia-Persia (Iran)
pada Abad ke-7-17 M. dan Dampaknya terhadap
Beberapa Unsur Kebudayaan**

Uka Tjandrasasmita

**Perkawinan Mazhab Kekuasaan:
Melacak Selera Politik Hukum Perkawinan di Indonesia**

Khaeron Sirin

**Human Cloning in Islam
(An Ethical and Jurisprudential Analysis)**

Saleh Partaonan Daulay & Mhd. Syahnan

Islamist Thinkers vis-a-vis Muslim Liberal Thinkers:

Yusuf Rahman

**PROGRAM PASCASARJANA
UIN SYARIF HIDAYATULLAH JAKARTA**

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

Indo-Islamika

JOURNAL OF ISLAMIC SCINCES

Indo-Islamika

JOURNAL OF ISLAMIC SCIENCES

Volume 2, Number 2, 2005/1426
ISSN 1978-0869

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Contents

Pengaturan Alasan-alasan Poligami (Studi Komparatif terhadap Hukum Keluarga di Indonesia, Malaysia, Iran, Somalia, dan Tunisia)

Toha Andiko - 183

Hubungan Perdagangan Indonesia-Persia (Iran) pada Abad ke-7-17 M. dan Dampaknya terhadap Beberapa Unsur Kebudayaan

Uka Tjandrasasmita - 205

Sketsa Gerakan Pembaharuan Islam di Indonesia Abad ke-20

Sofiah MS - 226

Perkawinan Mazhab Kekuasaan: Melacak Selera Politik Hukum Perkawinan di Indonesia

Khaeron Sirin - 250

Problematika Pencatatan Perkawinan Islam di Indonesia

Mahmudi Asyari - 266

Revitalisasi dan Reaktualisasi Bahasa Arab sebagai Bahasa Pendidikan

Muhbib Abdul Wahab - 283

Kontribusi Syaltût dalam Reformasi Hukum Islam

Zainal Abidin Alawy - 298

Strategis Dakwah Rasulullah: Dari Kerabat Menuju Kesatuan Umat

M. Yunan Yusuf - 312

Human Cloning in Islam (An Ethical and Jurisprudential Analysis)

Salah Partaonan Daulay & Mhd. Syahnun Nasution - 323

Islamist Thinkers vis-à-vis Muslim Liberal Thinkers: Responses of Egyptian Islamists to Nashr Hâmid Abû Zayd's Ideas and Method of Interpretation

Yusuf Rahman - 338

Indeks - 368

HUMAN CLONING IN ISLAM (AN ETHICAL AND JURISPRUDENTIAL ANALYSIS)

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LECTURER AT IAIN RADEN FATAH PALEMBANG AND
LECTURER AT IAIN OF NORTH SUMATRA

Abstracts

Islam sebagai *way of life* mengatur segala aspek kehidupan manusia. Karena itu, setiap muslim, harus mengikuti dan menerapkan ajaran Islam, baik yang bersifat vertikal maupun horizontal. Namun demikian seiring dengan kemajuan ilmu dan teknologi, ada beberapa permasalahan yang tidak dapat diselesaikan dengan mudah. Karena itu umat Islam memerlukan *'ijma (consensus)* dan *qiyas (analogy)*.

Salah satu permasalahan yang belum ada nash yang jelas adalah masalah kloning. Dalam artikel ini, penulis mengulas secara jelas masalah kloning dari perspektif Islam, termasuk dari aspek masalah dan madharatnya. Menurut penulis, yang lebih penting adalah bukan perdebatan boleh atau tidak melakukan kloning manusia, tetapi bagaimana umat Islam menyikapi dan merespon kemajuan sains dan teknologi, termasuk dalam hal kloning tersebut.

Keywords

Way of life, 'ijma, qiyas, al-adillât al-syar'yyât al-asâsiyât, ijtihâd, istinbât al-ahkâm, maṣlahât, 'usr wa haraj

Prolog

Islam is a way of life that mankind or at least a Moslem has to obey the will of God by the discovery of, and loyalty to, its own ideal self, and by consciously conducting individual and corporate life according to the fundamental pattern ordained for them. Specifically a man is required to perform his activity according to the principal sources of Islam (*al-adillât al-syar'yyât al-asâsiyât*), that is al-Qur'an and al-Hadith. This set of rule is deemed applicable until the end of time, as is the popular maxim "Islam is applicable in all space and time". This tautology appears to guarantee that solutions to all human problems could be resolved by referring to such sources of Islamic law.

However, what emerges to be the problem is that not all problems faced often in line with the ideals (*das sollen*) expected in the Qur'an and the hadiths, and the reality (*das sein*) faced by man.¹ Although the circumstances at the time when the Qur'an and the hadiths were revealed have or must have been in concordance between the ideals and the reality, however, the situation faced by man today is evidently different from its *das sollen* because it is directly related the ever changing of space and time. To respond to this problem Muslim community of today need other sources of law which is (*al-adillât al-syar'yyât al-asâsiyât*) in Islamic jurisprudence is known as *ijma'* (consensus) and *qiyâs* (analogy).

The advancement of science and technology had shown that the Qur'an and sunnah as the main sources in Islam have not been able to give response to problems faced by the Muslim community. The requirement for carrying out human cloning, for instance, could not be found either in the Qur'an or in the Hadiths. Consequently, the contemporary jurist ought to have alternative references to extract laws related to such a given problem. The consequences in searching for other supporting arguments resulted in the emergence of a variety of opinion, some of which are not seldom very diverse and speculative as well. In an effort to unify the perception of jurist all over the world, the Saudi Arabian authority held International Seminar specifically discussing on cloning.² Considering such divergence of view points, the seminar recommended that cloning on animal and agriculture be accepted but rejecting it on human. Although the recommendation has its juridical power, however, since the exercise of *ijtihad* is open for discussion, the reconstruction of such problem is seen possible.

This paper is an attempt to analyse human cloning. The perspective, which is used, of course based on legal opinion of the jurists (*fuqahâ*), and then try to draw some conclusion. However, first of all, the authors need to point out

how the cloning process was done by the biotechnology expert to build a foundation for the topic under discussion.

A Brief History of Embryo Cloning

Cloning of embryos has been used in animal breeding since the late 1980's, in mice experiments since the late 1970's. The procedure split a single fertilized ovum into two or more clones, each of which is then implanted into the wombs of receptive females.

However, research into cloning of human embryos has been restricted in the United States and in some other countries. Pro-life groups that oppose have had considerable political power. They were able to have all human embryo research banned by the Regan and Bush Presidencies during most of the 1980's and into the early 1990's. During the first few days of President Clinton's presidency, the ban on public funding of human embryo and fetal research was lifted.

We may not know the individual or team who first performed cloning of human embryos. The methods used have been understood for many years and actually used to clone embryos in cattle and sheep. It is likely that someone successfully used the method on a human embryo in secret. The first publicly announced Robert did human cloning. J. Stillman and his team at George Washington Medical Center in Washington D.C. It took 17 flawed human embryos that would have died within days no matter how they were treated. They were derived from an ovum that had been fertilized by two sperm. This resulted in an extra set of chromosomes that doomed the ovum's future. None could have developed into a fetus. These ovum were successfully split in 1994, each producing one or more clones. The main motive of the experiment seems to have been to trigger public debate on the ethics of human cloning.

Dr. Steven Muller headed a panel in the US whose mandate was to produce preliminary cloning guidelines. These would be used by the Federal National Institutes of Health to decide which cloning research to fund. The panel recommended that studies be normally limited to the use of preexisting embryos those that developed during in vitro fertilization procedures that had been performed to assist couples in conceiving. Often, extra zygotes are produced that are either discarded or frozen for possible future use. New embryos would only be prepared and used if needed for compelling research. They further recommended that any studies be normally terminated within 14 days of conception. Some experiments might be authorized to continue until the 18th day, but no further. At that gestational age, neural tube closure

begins; this is the start of the development of a nervous system. They recommended that certain procedures be banned, including implanting human embryos in other species, implanting cloned embryos into humans, the transfer of a nucleus from one embryo to another, and the use of embryos for sex selection.⁴

Procedures and Mechanism of Human Cloning

“Clone” which is also spelled “clon”, is population of genetically identical cells or organisms that are derived originally from a single original cell or organism by asexual methods. Cloning is fundamental to most living things, since the body cells of plants and animals are clones ultimately derived from the mitosis of a single fertilized egg. To be more specific, a clone can be defined as an individual organism that was grown from a single body cell of its parent and that is genetically identical to it.⁵ The new individual is possibly created by cloning another individual, which designated as its parent (single parent).⁶ And it is this kind of process that distinguishes cloning from artificial insemination.

The important element of cloning process is DNA (*deoxyribonucleic acid*) and not sperm and ovum as in artificial insemination. DNA is an element to create new individual that is derived from the chromosomes of living creatures. The chromosomes of animal, plants, or human consist of seventy up to a hundred thousand genes that is possibly to be engineered. That DNA is then determine the characteristic of the new individual produced through cloning. The expertise of the scientist in engineering the DNA influence the existence of the life of the cloned living creatures.

Human embryo cloning starts with a standard in vitro fertilization procedure. Sperm and an egg cell are mixed together on a glass dish. After conception, the zygote (fertilized egg) is allowed to develop into a blastula (a hollow mass of cells). The zygote divides first into two cells, then four, then eight. . . . A chemical is added to the dish to removed the “zona pellucida” covering. This material provides nutrients to the cells to promote cell division. With the covering removed, the blastula is divided into individual cells, which are deposited on individual dishes. They are then coated with an artificial zona pellucida and allowed to divide and develop. The best results could be obtained by interrupting the zygote at the two-cell stage. Many of these pairs of zygotes were able to develop to the 32-cell stage, but no further. They might well have had the potential to develop further and even mature into a viable fetus,⁷ except that the original ovum was defective and would have died any way.

Whereas, cloning on human is undertaken in three forms. First, removing DNA (*nawat khibyat* or *khamid al-nawawi*) from a woman's body that then, after being engineered, is infused into another woman's womb. Second, removing DNA of a woman, which is followed by inserting it into the womb of the same woman. Third, taking DNA of a man that is then put into the womb of a woman.

From the explanation above, it is evident that human reproduction in the future might not necessarily be carried out through marriage. What's more, one day cloning may replace the function of womb in which it is no longer the deposit or place for development of cloning cell. The role of the womb might be replaced by microchip that is not in cognizance of gender. Consequently, this microchip will take over the role of motherhood in all cloned creatures. On the other hand, the rapid development of technology cannot be avoided, since scientific discoveries will go beyond the boundaries of ethics, moral, legal and religion. Islam as universal religion has to speak out in response to these phenomena. It is urgent that Muslim intelligentsia soon formulate the reform of Islamic law in order to anticipate that such development is not contrary to the universal values of Islam.

Human Cloning in the Perspective of Islamic Law

In order to formulate the legal aspect of inherent there in any case, jurists have often made reference to the main principal sources in extracting law (*istinbât al-ahkâm*) that is public interest (*maṣlahât*). To measure the extent to which public interest arisen from cloning, there are major subsidiary rules that can be applied, namely: 1) *'usr wa haraj* (protection against distress and constriction); 2) *la darar wa la dirar* (the necessity to refrain from causing harm to oneself and others), and 3) *dar'u al-mafâsid muqaddam 'alâ jalb al-maṣâlih* (the rule about averting causes of corruption has precedence over bringing about benefit).

From the above exposition, it is evident that to analyze an action which has implication towards determining legal ruling requires the examination of advantages (*maṣlahah*) and disadvantages (*mafsadah*) that may emerge. In the case of cloning there also exist these two diametrical aspects. The advantages that presumably obtained from cloning among others are:

1. The case of couples with infertility problems due to one of them suffers from illness. Therefore, they may rely on cloning in order to be able to have children.
2. By the process of cloning, the scientists might eliminate disease in the

DNA to ensure a healthy child.

3. Cloning may also gives opportunity for the scientist to determine the preferred characteristic, and not the least the mental and physical matters.¹¹
4. Cloning can also be used to analyzing ascendants of a person who is not known, which previously utilized four methods, namely sexual intercourse (in marital tie), namely: *al-frasy* (marital relation between husband and wife), *al-bayyinah* (proof), *al-igrar* (confession), and *al-qiyafah* (genealogy). Cloning method¹² is believed to be even more reliable than the last three mentioned.
5. In addition, cloning can be used as legal basis to determine whether a man committed adultery. The growing child in its mother's womb can be analyzed to designate its father.

Whereas, the disadvantages resulted from cloning can be looked upon in at least three dimensions of theology, ethics and juridical. As for theological dimensions, they are:

1. The process of human creation is an act of God alone (The Divine Will). By utilizing cloning, man has interfered the prerogative of God.
2. The scientists who are carrying out the cloning do not seem to believe in God as the Best Creator (*ahsan al-khâliqîn*) for His Creatures. Cloning undertaken is aimed at accelerating God's Perfection.¹⁴
3. God has permanently appointed that the creation of living creatures on earth be based on diversity. By cloning, the diversity may disappear by itself so that the cloning effort is indirectly in contrast to the Will of God (*sunnah Allâh*).¹⁵

Whereas, disadvantages resulted from ethical dimensions among others are:

1. The achievement of all due efforts in cloning would results in scientists to compete with one another to create a more complete leaving creature. Consequently, it is inconceivable that the outcomes of the cloning become commodity. This kind of activity is in contradiction with ethical principles convinced by all human being, but even causing a great social risk.¹⁶
2. In Undertaking the cloning process, a scientist will arbitrarily control the whole steps of development and change. Of course, this control is against the very fundamental ethical basis, since it makes other's living freedom checked. The development of the newly created individual is dependant on the activities done by the scientists.

3. The process of cloning requires a number of experiments each of which cannot be guaranteed to gain success. In the case of Dolly, for instance, it took 277 attempts and from the entire cell fused only thirty began to develop. Even worse, of the nearly thirty failed pregnancies it ended up only with one success. How many abnormal babies would have to be produced to get one right. There are sufficient unknowns about physical problems in pregnancy with cloned sheep and cattle to suggest that human cloning experiments would violate normal medical practice, and let alone that such practice contravenes human lives.¹⁷
4. There are a number of reasons why human cloning might be ruled out for the psychological dangers involved. No one knows what would be the effects on human identity and relationship of creating someone who is the twin of their father or mother, but born in a different generation and environment. Would the clone feel that he or she was just a copy of someone else who's already existed and not really themselves? Am I really someone else but put into a different womb? What will be my relationship to the one I was cloned from? No one can predict with any degree of assurance what the response would be.¹⁸

In addition, the disadvantage resulted in juridical dimensions is directly related to the possibility of the established law in Qur'an and Hadiths can be marginalized, some of which are:

1. Marriage. As has been mentioned before cloning enables man to have reproduction without going through sexual process. In fact, the process is contrary to the tenets of Qur'an and hadiths that legislate marriage as a means of having children through sexual relation. God even created the two different genders in order to be united in a marital bond. The denial of the sacredness of marriage may consequently lead to the collapse of Islamic law such as the laws of *thalaq* (repudiation), *'iddah* (waiting period), *khul'* (divorce at the instance of the wife), *li'an* (oath of condemnation) and others. Such regulation is explained by using terminology of *qath'iy al-dalalah*.
2. Bequest and genealogy. The cloning process would result in the vagueness of the genealogy of the child produced. He will not be able to know the origin of his mother to the mother carrying him or to the one who donated DNA to him. This obscurity, of course, has implication to the determination of inheritance succession found in the Qur'an

and hadits. Whereas the vagueness of genealogy could also overrule some established legal rulings related to families, and not the least important in defining the relation of *mabram* in marriage.

3. Raising children. The uncertainty of the *nasy* in itself would not lead to the vagueness of who is responsible for providing up bringing and education of the child. In addition, who would be taking care of his humanistic need as for the love and care from its parent? Unfortunately, cloning cannot answer to these two questions.¹⁹

Taking into account the advantages and disadvantages of cloning issue lead us into conclusion that disadvantage inherent there in is far outweighs its advantages. From the above exposition it becomes evident that the three dimensions related to disadvantage is not in balance with public interest (*maslahat*) put forward by cloning. By using the three jurisprudential maxims (*qawa'id usūliyah*) mentioned above, it is obvious that the legal ruling of human cloning is prohibited (*haram*).

The conclusion of such ruling is also supported by applying the approach of *maqâsid al-syar'iyah* (the trace of wisdom in which a particular ruling is reached). The jurists (*fuqaha*) maintain that *maqâsid syar'ah* is closely related to the five principles that have to be maintained (*al-kulliyat al-khams*), namely, maintenance of religion, life, intellect, genealogy, and possession (*hifz al-din, al-nafs, al-'aql, al-nasl, and al-mâl*).²⁰ In order to reach a ruling of a particular case, the five elements are divided into three categories, they are *daruriyyat*, *hajiyat*, and *tahsiniyat*. As for the first category, it means maintaining essential needs of human life. The essential needs is maintaining the above-mentioned *al-kulliyat al-khams*, or to put it differently, their existence has to be fulfilled. Second, maintaining the *hajiyat* has implication to providing aspects required by man to protect him against distress and constiction. Third, *tahsiniyat* means maintaining the supporting needs²¹ in up-lifting one's prestige proper both within society and in front of God.

It appears that the process of human creation by cloning does not bring with it negative impact on the existence of religion and it also does not cause the loss of life, and what's more it does not reduce the existence and the function of intellect (*'aql*). However, human cloning as has been explained above can have negative implication for it endanger the purity and sacredness of genealogy (*nasl*). The negative implication may overrule some established legal ruling of *qath'iy al-dilalah* in various legal cases such as *munakahat*, *mawarits*, and *hadhanab*. The elimination of some of those tenets is due to the indifference of maintaining *nasl* as one of the main principles of *maqâsid al-syar'iyah*.

According to this analysis, it is evident that cloning is contrary to *maqâsid al-syar'iyyah* that it has to be prohibited. In addition, should cloning be used as a means of spending a large amount of expenditure, this of course, will let the money go for something trivial. In this sense, cloning should be banned. On the contrary, should the advantages acquired are greater or at least in balance with the cost spent, then cloning is perhaps justifiable.

Argument used to support prohibition of cloning based on explanation above will not ultimately lead to the prohibition of cloning for all circumstances. There are situations that might justify human cloning, they are:

1. Human cloning by using the means which is not in contrast with *maqâsid al-syar'i'ah* (the purpose of legislation). This kind of cloning can be undertaken by way of removing DNA of a man to be engineered which then inserted into the womb of woman (within a legal marital bond). The argument raised to justify this process is precisely similar to those arguments used by jurists to consider artificial insemination permitted, in which sperm and ovum are removed from husband and wife in marital tie. However, the permissibility of carrying out cloning in these circumstances has to consider two things. First, cloning such this is only done after assurance that human cloning is positively certain to be undertaken, and based on speculation as in the case of "Dolly." This consideration is aimed at avoiding the emergence of abnormal babies due to procedural failure. Second, that the cloning does not attempt to engineer specific characteristic alien to the inherited characteristic of the father's DNA. This is meant to eliminating unjust human intervention, exceeding the prerogative of God in creating perfect human being.
2. Human cloning done to avoid some hereditary diseases inherited by the parent to be (donors). Based on medical explanation a man suffered from thalassemia and AIDS appears to be possibly infected to his children. In order to avoid such genetically transmitted disease, cloning can be used as a means of engineering DNA of its parent to prevent his children from being infected from such a disease. Cloning in these regards has also to consider two kinds of parameters as has been mentioned in point one above.

Epilog

Cloning, translated as *istinsakh* in Arabic, as an outcome of development in science and technology is hoped to contribute for the benefit of human

kind on earth. This expectation appears to become closer to reality when experts are making experiment on animals and plantation. The success achieved from the application of such technology is filled with enthusiasm due to both a better quality and increase of product. Therefore, it is not surprising to find that some moralist and ethicists support the idea to develop this invention.

However, problem arose when some geneticists make an attempt to apply the method of cloning by justifying improving the quality human creation process. Such an effort spontaneously gained negative reaction especially from those of ethical and religious leaders. Eventually, these two groups come to an agreement to ban human cloning. It appears that this prohibition make the scientists lose their courage to continue the research. However, there is no guarantee that this project will automatically stop with such a ban and criticism.

Whatever the answer to such question may be is not something necessary to discuss. What is more relevant to be raised is whether the Muslim is well prepared to determine steps to anticipate developments resulted from the advancement of science and technology. Cloning is one of the petty examples of the product of science and technology. It is believed that the project of science and technology in years to come will be more advanced and more promising. It is therefore, such predictive steps is as an accurate means of contextualizing the tenets of Islam in order that it can face with the dynamics of social changes. Similarly, contextualization is required to guarantee the teaching as well as the Muslim community will not be driven by the ever-changing space and time. *Wallâhu a'lam bi al-ṣawâb.*

Catatan Akhir

- ¹ In order to understand whether the Qur'an is in line between its ideals and realities when it was first revealed, especially legal-related verses, it needs to trace the occasions or causes of revelation (*asbāb al-nuzūl*). The reality faced by muslim community at that time had always been directly monitored by the Law Giver (*nyari*) so that it was very often that the Qur'an had been revealed to throw lights on the reality that it matched the intended ideals of God. See generally, S. Waqar Ahmed Husaini, *Islamic Environmental System Engineering* (London: McMillan, 1980), pp.16-33.
- ² The meeting that entitled "Islamic Fiqh Academy" was held on June 28 until July 3, 1997 in Makkah al-Mukarramah. The seminar was participated by 125 members who composed by jurisprudents (*fuqahā*) and bio-technologists from around the globe. For detail see *The 1997 Meeting: Islamic Fiqh Academy*, in <http://www.jamiat.org.za/c.facademy.html>.
- ³ See homepage: "History of Embryo Cloning" in <http://www.theanimist.netgazer.net.av/pq000012.htm/>.
- ⁴ [Http://www.pandora.nia.gov.au/mpg-arch/1999/q1999-Feb-1/](http://www.pandora.nia.gov.au/mpg-arch/1999/q1999-Feb-1/).
- ⁵ *Encyclopedia Britannica 2002* in <http://www.britannicaonline.com>. The Arabic term used for the process of cloning and genetical engineering is translated as al-istinsakh and al-bashmah al-waratsiyah or al-handatsah al-waratsiyah. For detail On this see : *The 1997 Meeting: Islamic Fiqh Academy*, in <http://www.jamiat.org.za/c.facademy.html>.
- ⁶ See "What is Cloning?" In <http://www.medicalissues.com>. This site provides more information on cloning some of which are on history and the inventors of cloning. The writer of the article is not designated for it is prepared by a number of experts of an institution dealing with genetic engineering (Social Monitoring for Genetic Engineering).
- ⁷ "What is Cloning?" In <http://www.medicalissues.com>.
- ⁸ Raf'at Utsman, "al-Istinsakh al-Basyari bayna al-Rafd wa al-Qabul", at <http://www.Islam-online.net/arabic/science/2001/03/article4.shtml>.
- ⁹ Steering Committee of the faculty of engineer, Muhammadiyah University of Jakarta, *Al-Islam & Iptek*, book II (Jakarta: PT. Raja Grafindo Persada, 1998), p. 61.
- ¹⁰ Abdulaziz Sachedina, "Cloning in the Qur'an and Tradition; Islamic Perspective on Human Cloning", at <http://www.people.virginia.edu/~aas/article/article4.htm>. For more detail on theory and application of legal maxims (*qawā'id fiqhiyah*), see in general 'Alī Ahmad al-Nadwi, *al-Qawā'id Fiqhiyah* (Damaskus: Dār al-Qalam, 1991).
- ¹¹ Ayman Nawash, "Cloning: Friend or Foe", at <http://www.jamiat.org.za/c.facademy24org>.
- ¹² S. Messad, "al-Bashmah al-Waratsiyah wa Qadaya al-Nasb al-Syar'i", at www.islam-online.net/iol-arabic/qadaya/qd2.asp.
- ¹³ There is still divergence of opinion amongst jurisprudents (*fuqaha*) to use genetical method as proof for one who has committed adultery. The debate is stemming from the explicit wordings of the verse of the Qur'an on the necessity to present four witnesses in the case of charging of committing adultery. Those who have strict interpretation in understanding the verse of *qath'i al-dalalah*, will, of course, refute genetical process as proof. On the contrary, those who are loose in understanding the verses will give room to supplanting such a method.
- ¹⁴ Abdulaziz Sachedina, "Islamic Perspective on Cloning", at www.people.virginia.edu/~aas/issues/cloning.htm.
- ¹⁵ Yūsuf Qardhawi, "al-Istinsakh al-Basyri wa Tada'iyatuhu", at www.islam-online.net/

fatwa application/arabic/display.asp?hFatwaID=13986.

¹⁶ Ayman Nawash, *Cloning: Friend or Foe*.

¹⁷ Donald Bruce, "Should We Clone Humans?", at <http://www.pandora.nla.gov.au/npl-arch/1999/Q1999-Feb-1/>.

¹⁸ *Ibid.*

¹⁹ Yûsuf Qardhawi, "al-Istinsakh al-Basyri wa Tada'iyatuhu", in the same homepage.

²⁰ Muḥammad Taqy al-Dîn Qundail, "Mauqif al-Islâm min al-Istinsakh", in www.tadawi.com/htm/estinsakh.HTM.

²¹ See generally Al-Ghazali, *Al-Muṣṭasyfa min 'Ilm al-Ushul* (Beirut: Dâr al-Fikr, n.d.) pp. 284-287.