

# Journal of Women of the Middle East and the Islamic World 8 (2010) 247–273



# Gamete Donation and the Role of Religious Leaders in Iran

#### Heshmat S. Moinifar

Assistant Professor, Faculty of World Studies, University of Tehran hmoinifar@ut.ac.ir

### Amir Ashraf Vaghefi

M.A. Graduate, Department of Islamic Philosophy & Theology, University of Tehran
amir\_vaghefi@yahoo.com

#### Abstract

In recent years, infertility has been considered as a medical problem as well as a social problem, thus couples have sought medical assistance to overcome childlessness. The introduction, however, of a third party in the creation of a child is supposedly highly problematic in many developing countries, including Iran. After the Islamic Revolution in Iran in 1979, the government dismantled family planning programs, although at the time there were no serious debates and policies on assisted reproductive technologies (ARTs). In 1989, the government reversed its policies and since then has had one of the most successful family planning programs in the region. In this regard, other than socio-economic factors, opinion of jurists have influenced family planning programs and related issues like ARTs in Iran, thus the position of religious leaders has had a direct effect on how Iran has achieved its development goals including ARTs. Iran is the only Muslim country in the world in which ARTs using donor gametes and embryos have been legitimized by religious authorities and passed into law. This has placed Iran as a Shiʻa-dominant country in a quite distinguished position vis-à-vis the Sunni Islamic world, where all forms of gamete donation, based on many studies, are strictly prohibited.

In this article, the "Iranian ART Revolution" that has allowed donor technologies to be admitted as a form of assisted reproduction technology will be examined. In this regard, an attempt is made to explore religious leaders' positive and negative views toward this issue. Thus, the verdicts or fatwas of mojtahedin in the context will be discussed. After providing a brief review of different opinions of mojtahedin, these differentiations through in-depth interviews with two prominent mojtaheds, Ayatollahs Mousavi Ardabili and Sobhani in 2007 on ARTs will be discussed to enrich the argument.

DOI: 10.1163/156920810X549730

### Keywords

Iran, infertility, gamete donation, Islam, religious leaders, Shi'a

#### Introduction

Infertility, defined as the inability to achieve a viable pregnancy after 12 months of regular unprotected sexual intercourse, affects more than 15 percent of all couples around the world at some point in their reproductive lives (Vayena, Rowe & Griffin, 2002). In Muslim countries, religion still influences a lot of behaviors, practices and policies regarding reproduction. It is not surprising that science and religion have been interconnected since the beginning of human history.

Gamete donation has been considered as one of the most important factors of assisted conception, in which it somehow violates the established restrictions of biological and genetic reproduction between two people. Gamete donation represents a challenge of ideas regarding identity and has connotations for social reproduction, which go well beyond immediate marital relationships. It brings into play the creation of new and potentially distracting and disturbing relationships.

In Iran, infertility is a social burden for women, who are expected to produce children at an early age in marriage. There is a large population of infertile Iranians, based on recent government statistics it is estimated at 10–15 percent of all married couples, or almost 1.5 million couples. For cultural and religious reasons, the usage of gamete donation in infertility treatments is considered as a last choice treatment.

In this regard, religion plays an important role and currently remains the ultimate commanding source of indication in Iran. The interpretation of the law by religious authorities to use new reproductive technologies is in turn driven and defined by the high demand for such technology. There has been a race between religious rules in order to keep up with the technological innovations, and the high demand for infertility treatment, and the ever-increasing range of options offered by new reproductive technologies, has all led to situations in which rapid decisions have to be made regarding these issues.

Mojtahedin in Iran have shown remarkable open-mindedness and flexibility towards embracing innovations in science and technology, including the use of modern reproductive technologies. New 'fatwas' are being issued and passed to legitimize the use of technology and to adapt to change within an Islamic framework. New reproductive technologies, especially infertility treatment, are among recent technologies blooming in Iran, which require Islamic interpretations to make their use, for religious reasons possible.

#### Islamic Shariat

The Holy Qur'an encourages marriage, family formation and reproduction. The Verse says: "We sent, before you, and gave them wives and children" (Sura Al Ra'd, 13: 38, Holy Qur'an). Another Verse says: "And Allah has made for you mates from among yourselves, and has given you sons and daughters and grandchildren, and provides you sustenance of the best" (Sura Al-Nahl, 16: 72, Holy Qur'an). Regarding infertility among many couples it says: "He bestows (children) male and female, according to His will (and Plan), or He bestows both males and females, and He leaves barren whom He wills (Sura Al-Shura, 42: 50, Holy Qur'an). Through the advances in assisted reproduction, it has become possible to separate the bonding of reproduction from the sexual act. These advances enabled women to conceive without having sex. This may give a possibility of the involvement of a third party in the process of reproduction whether by providing an ovum, a sperm, an embryo or a uterus.

The Qur'an and the *sunna* are considered as the foundations of Islamic *Shariat* or law. Thus it is essential to follow them in the sense that they are the foremost reference in reaching any decision. Besides these original sources in Islam, there are two additional sources of Islamic jurisprudence: *ijma*' (consensus) among jurists and *qiyas* or analogy (a legal tool employed in *Sunnism* and rejected by *Shi'ism*). In addition, there are broad principles such as the rules that certain practices are permissible unless explicitly forbidden.

As Muslims are divided into two main groups, Sunni and Shi'a (Sunnism and Shi'ism comprise approximately 80 and 20 percent of the Islamic world respectively), each tends to follow different schools of fiqh. Some Muslim scholars and jurists have attempted to remove the differences and apparent contradictions in the rulings, and have tried to fit them into a consistent system. Distinct schools of Islamic jurisprudence evolved over time, each bearing the name of the leading jurist, Imam or founder. The schools represent different ways of interpretation and are not different religions or denominations. All schools of jurisprudence consider the Qur'an and the sunnat as their primary sources. Where they differ is in relation to some interpretations, the validity of other sources of jurisprudence and the methodology of formulating a ruling.

In deriving *Shariat*, the various schools of jurisprudence differ in the extent to which they allow *ijtihad*, and in the basis upon which such judgment can be developed. The *Shi'a* branch of Islam, which is dominant in

Iran, interposes *mojtahedin*, between the Qur'an and the people. *Mojtahed*, being considered as wise and learned person, has the authority to explain the teachings of Islam to *Shi'a* Muslims (Afshar, 1985: 256). But any new ruling has to be developed by a qualified *mojtahed*. The door of *ijtihad* is open but only for those who satisfy the qualifications of a *mojtahed*.

In Shi'a, unlike Sunni theology, there is no hierarchically organized clergy, nor a central authority that dispenses a single interpretation of the faith. This is true among clergies in Qum. This decentralization means that the various *mojtahedin* issue different *fatwas* that are sometimes dissimilar (Moinifar, 2007). For this reason, as it will be mentioned, there are different opinions of mojtahedin regarding ARTs.

One of the major differences of the political structure of the Islamic Republic of Iran as a *Shiʻa*-dominant country compared to other Muslim countries is the form of the relationship between the government and religious powers. In Iran, before the Revolution, the religious leaders and schools with the leadership of *Shiʻa mojtahedin* were totally independent from the government. They were structurally and financially independent in such a way that their chosen policies disregarded government policies. After the Revolution, in which the religious leaders were considered as the Revolution's pioneers, their position in state policy was initiated and strengthened.

In this regard, by the Revolution of 1979, the doctrine of *velayat-e faghih* (guardianship of the Islamic jurists) was in place. According to this doctrine, one of the top religious leaders, appointed by the Council of Expertise (which is elected directly by the people), takes the highest politico-religious position of the state as valiye-e faghih. His main role is to legitimize the state and the government, which has already been elected by the people in direct vote. Hence, the government without the religious circles does not make any sense, as valiye-e faghih himself belongs to this circle. Nonetheless, the religious schools, which are still the foundation of religion in the country, have kept their structural and financial independence (however relatively less than pre-Revolutionary era). In fact, near the end of the Pahlavi era, mojtahedin were not only independent of the government but were also opposed to it mainly due to its anti-religious viewpoints and its political dependence to the west. Almost a decade after the Revolution, this rejection of the west changed to some extent, meaning that instead of a total rejection of western ideas, some western concepts have been accepted.

In other Muslim countries, mainstream religious circles have obeyed the government in form of associations (i.e. in Saudi Arabia, Kuwait, Tunisia, UAE, Sudan & Egypt). Some believe that the collaboration of *Sunni* religious leaders and their governments compared to the independence of *Shiʻa* leaders from the government is due to the differences exist between *Sunni* and *Shiʻa* schools of thought. Although this view may be criticized, history has shown that these two different tendencies have created two different mainstreams. In *Shiʻa* Islam, *ijtihad* (re-interpretation based on time and space) has provided a flexible situation for religious leaders to interpret new issues. In recent years, some Sunni religious leaders are using this concept to overcome some of the social problems (i.e. in Sudan). In Iran, on the subject of ARTs and contemporary methods, medical experts and government officials have visited *mojtahedin* and have explained the medical and socio-political aspects of these issues to gain their support for new methods.

Mojtahedin use ijithad to reinterpret their previous fatwas, or initiate new fatwas based on the realities of the day. It is worth mentioning that not all mojtahedin and religious leaders can issue verdicts on religious issues. To the public, it is only marja-e taghlid or grand Ayatollahs who issue religious fatwas to their followers. A jurisprudent that has not reached to the level of marja-e taghlid will follow his personal interpretations but may not issue written fatwas to others. It is worth mentioning that in the first decade of the Revolution, the influence of mojtahedin were strong on both the Iranian public and the Iranian government, but currently their influence is rather effective on government policies, meaning that their influence on the public has decreased.

Religious leaders in Iran have justified social challenges in several ways. They have generally argued that Islam is a religion of moderation and pointed to the principles of 'liberty' or 'permissibility' in Islam. There has been religious interpretation favoring legal or administrative changes regarding social issues such as ARTs as *mojtahedin* have a considerable role in policy making in post-Revolutionary Iran. Mosques and "Friday Prayers" throughout the country have become sources of propagation of the decisions made at the top, on major political or social issues. "Friday Prayers" are held in each city every week and the Imams receive a bulletin suggesting important social news or political decisions made by the leader, government, or Iranian Parliament (*majles*) that may affect people's lives and the country in general. Thus, most of the time, the Imams with justifying

religious arguments support such political decisions of government. This is backed by dissemination in the following days in newspapers and media broadcasts. Hence, the religious circles of the country (mainly in the city of Qom) support the state on major national policies without distorting their independence from the government.

# School of Thoughts in Islam and the Gamete Donation

The relationship between religion and fertility and fertility-related issues are not clear as to whether religious teachings favor high or low fertility, prescribe large or small families, approve or disapprove of ARTs. People with different religious affiliations will not necessarily have different fertility behavior, nor will people with the same religious affiliation necessarily have uniform fertility behavior. Thus dealing with the influence of religious values on these issues is a complex one.

In Islam, as well as other religions, adultery is forbidden. Leading Sunni scholars at Al-Azhar University, such as M.R. Uthman, draw analogies between gamete donation and adultery, and thus reason that it should be prohibited (Sekaleshfar, 2008). He has used the method of Qiyas to come up with this verdict. Qiyas is defined as the extension of Shariat from an original case to a new case, because the latter has the same effective cause as the former. In the absence of Qur'anic and traditional references, this method of reasoning has constituted the main drive in Sunni legal codes (save within hanbali school of jurisprudence). M.R. Uthman's rationale may be structured as follows: According to the texts, adultery is forbidden in Islam. The textually stipulated underlying principle for the above, being that two unrelated persons of opposite sexes are not allowed to execute copulation (this act being confined to legally married couples). In this regard, gamete donation involves scenarios whereby man A's sperm is fused in vitro with woman B's (who is not A's wife) egg (in Sekaleshfar, 2008). The conclusion by analogy is that gamete donation is therefore prohibited. This reasoning however is not faultless.

In the *Sunni* Muslim world including the *hanbali madhhab*, a ban on third-party donation is effectively in place, such that ova, sperm, embryo, and uterus donation (as in surrogacy) are all strictly prohibited (Serour, 1996; Meirow and Schenker, 1997; Eich, 2002; 2005; 2006; Moosa, 2003; Inhorn, 2003; 2006). Alhasanis (2007) argues that in the *Sunni* Muslim world, the basic guidelines for assisted reproduction are as follows. If ARTs

is indicated in a married couple as a necessary line of treatment, it is permitted during validity of marriage contract with no mixing of genes. If the marriage contract has come to an end because of divorce or death of the husband, artificial reproduction cannot be performed on the female partner even using sperms of the former husband. Besides, the embryo and sperm donation are also not allowed because of mixing the genes. In case of Bigamy (in case of marriage with two wives or more), there was a *fatwa* allowing the embryo donation within the same family, but this fatwa was not fully developed and now, even in bigamy this possibility is not permitted (ibid.).

According to most *Shi'a* religious authorities, however, gamete donation per se is not deemed illegal, and that has been approved by some *mojtahedin* for quite some years, although most *Sunni* authorities prohibit both. Nevertheless, questions of parenthood, inheritance and the observance of *hijab* (covering) regulations between genetically unrelated members of the opposite sex must be monitored under the general governing *Shariat* principles on these matters.

# Opinions of Shi'a Religious Authorities on Gamete Donation

In Iran, the Supreme Leader, Ayatollah Ali Khamene'i, issued a fatwa in the late 1990s, effectively permitting donor technologies, both egg and sperm donation, to be used. Thus, unlike all other Muslim countries (with the exception of Lebanon, which is following the Iranian lead) (Clarke, 2006; Inhorn, 2006a), third-party gamete donation is currently available in Iran. The Islamic Consultative Assembly approved this act in 2002. Regardless of the official act, and the decree by the Iranian supreme leader, the situation for Shi'a Muslims in Iran (and elsewhere) is actually much more complicated. As mentioned, Shi'a religious authorities give considerable precedence to a form of individual religious reasoning known as ijtihad. As Clark argues, Sunni Muslim clerics tend to favor scriptural sources over individual moral reasoning. Shi'a, on the other hand, pride themselves on the greater freedom of their religious authorities to exercise ijtihad (Clarke, 2006; 2007). As many scholars of Shi'a have noted (Cole, 2002; Tremayne, 2005; 2006a; 2006b; 2008), the practice of ijtihad has allowed a certain flexibility and pragmatism toward new technological developments, including IVF and a number of other new medical technologies (e.g., contraception, organ transplants, transgender surgery and so on).

Furthermore, *ijtihad* has ultimately led to great heterogeneity of opinion and practice within the *Shi'a* community.

Additionally, the *Shi'a* allows a form of temporary marriage called *mut'a* (also called *sigheh* in Iran), which is not recognized by *Sunni* religious authorities (Zulu, 1992). In *Shi'ism, mutt's* which is practiced in Iran as well as in other parts of the *Shi'a* world, is a union between an unmarried (single or divorcee) Muslim woman and a married or unmarried Muslim man, and is contracted for a fixed time period. For this reason, through *mutt's* marriage, gamete donation is possible as well.

Within this context of *ijtihad* and *mut'a*, divergent opinions on gamete donation are beginning to emerge in the *Shi'a* Muslim world. Various *Shi'a mojtahed* have reached conclusions regarding the acceptability of gamete donation, with or without *mut'a*. Some *Shi'a* clerics, alongside with the *Sunni* majority, continue to forbid gamete donation for their followers, while others have allowed it under certain conditions. Some, but not all, *Shi'a* clerics have invoked *mut'a* to make egg donation legal within the parameters of marriage; they argue that the husband should contract a *mut'a* marriage with the egg donor for the period of time in which the whole procedure (from egg retrieval to embryo transfer) takes place. Because polygyny is legal in Islam, *mut'a* marriage avoids the implications of adultery, which would occur if the husband did not marry the egg donor (Inhorn, 2006b).

These disagreements of opinion have played out in interesting ways. As shown in anthropologist Morgan Clarke's recent research on the Shi'a religious discourses surrounding gamete donation, Ayatollah Khamenei clearly states in his fatwa on gamete donation that mut'a marriage is not required, and the married women can donate her eggs as well, for he believes that adultery requires the physical act of intercourse. Yet, some Shi'a jurists do not agree with Ayatollah Khamenei's position, neither with his permissive fatwa on donor technologies. For example, Ayatollah Muhammad Husayn Fadlallah, Lebanon's most prominent Shi'a religious authority, did not agree with Ayatollah Khamenei's permission of sperm donation, because, according to Fadlallah, a married woman should not accept sperm from another man (Clarke, 2006; 2007; 2008). Furthermore, because a married Shi'a Muslim woman cannot marry another man other than her husband (since polyandry is illegal in Islam), she cannot contract a mut'a marriage with a sperm donor to make the donation legal. The child born of a sperm donor would be an out-of wedlock child, without a family name and without a father. Thus, in theory, only widowed or otherwise single women should be able to accept donor sperm, in order to avoid the implications of adultery. However, in other Muslim countries, single motherhood of a donor child is unlikely to be socially acceptable (Zuhur, 1992; Inhorn, 1996; 2006b).

It is important to note that Ayatollahs Ali al-Sistani and Muhammad Said al-Tabataba'i al-Hakim, both *Shi'a* religious authorities in Iraq, advise caution against third-party donation practices, viewing them as largely unacceptable (Clarke, 2006; 2008). Indeed, Ayatollah al-Sistani's son, Muhammad Rida al-Sistani, has devoted an entire volume of richly documented legal analysis to this debate, providing "an invaluable resource for other scholars" (Clarke, 2006: 26). According to Clarke, "Sistani's work, while perhaps posing more questions than clear answers, opens up for other scholars a fascinating window into this area of *Shi'a* jurisprudential debate, at a time when the Western media are just waking up to the vibrant engagement *Shi'a* scholars have had with other such new technologies".

# Parentage Preservation (Hifz-e-Nasab) and the issue of Gamete Donation

Hifz-e-Nasab has been one of the critical concerns of Islamic Jurisprudence. There are several supplementary rules in order to prohibit mixture (vagueness) of parentage, including necessity of observing *iddah* (the waiting period after divorce) and the fact that polyandry is forbidden. (Rahmani Manshadi, 2007) Regarding this issue, some of the cons of surrogate uterus consider the following probable consequences of this act as a reason for its juristic prohibition:

- If gamete donor is unknown, it is possible to inseminate the sperm of a man to his parentage relatives (his mother, sister, daughters, etc.) or, for example, to a couple of sisters, all of which lead to forbidden marriages in Islam.
- 2. In addition, engagement of a third person in the process of procreation makes the parents-child relation vague. Who are the parents? What are their relationships with the uterus owner and her husband? More generally, what is the relationship between the gamete donors, the uterus owner, and the child?

A general answer to such a problem is that hifz-al-ansab is a result, rather than the cause, of legislation of marriage and prohibition of adultery; in other words, we can't say that something is forbidden only because it may have some corrupt consequences. Moreover, with the developments of genealogy and biology, it is determinable what gametes have been involved in the process, so there is no vagueness in many cases (Rahmani Manshadi, 2007). However, the problem becomes more complex, when we see that the law has its specific rules in certain cases, like zina (adultery) and rida (suckling), although it has not introduced a new definition for parentage and has accredited the conventional conception of parentage and relationship (natural, biologic parenting). For instance, almost all of Sunni and Shi'a scholars believe that the child of adultery belongs to the legal husband of adulteress, not the adulterer. Therefore, if all or some parts of our problem are prohibited because of being instances of adultery, for a jurist, then the parentage status of the fertilized child in these situations will be completely different with the other ones (Rahimi, 2008). Notwithstanding this specific assumption, many of mojtahedin examine and solve the problem of parentage vagueness, regardless of their idea upon prohibition or legitimization of the act. As a whole, their suggested methods are as follows:

## 1) Motherhood:

The Uterus Owner: Based on the verse 2, surah mujadilah, "... their mothers are only the ones who have given birth to them..." It has been said that the mother is the bearer of the child (mojtahedin such as Ayatollah Khuyi, Ayatollah Rohani from Shi'a, and Sheikh Muhammad Zohrah from Sunnis) (Khalfi1, 2006).

The Egg Owner: Most of the scholars do not accept such interpretation of that verse for some reasons; they believe that the mother is the egg owner, based on the genesis of the child from it (like Ayatollah Khomeini, Sistani, Montazeri, Hakim, Tabrizi) (ibid.).

The Owner of both Uterus & Egg: Some of them believe that the child has two mothers: the egg owner and the uterus owner (like Ayatollah Ardabili, Araki, and Sistani in Iran as Shi'a have conservative idea regarding this issue; and Sheikh Sanad from Sunnis, too).

### 2) Fatherhood:

Almost all the scholars attach the child to the sperm owner (i.e. Ayatollahs Khomeini, Khoyi, Rovhani, Montazeri, Hakim, Sistani, Araki, Tabrizi, Makarem) (Ibid). However, this classification is not efficient for the case that gamete owners are unknown or unreachable (such as Gamete Bank); it seems that the answers are not concerned with such situations, and it seems that examination of the relationships have been lost in these cases, namely fertilization of gamete of two strangers, considering its prohibition.

It should be mentioned that there is another theory upon parentage based on the right of ownership or possession of the man related to his body and its appurtenance, and the theory of 'Volition and Refusal'. According to the theory, one has the right to deliberately reject and disavow its ownership or possession related to something that belongs to or holds with him. On the other side, one is the owner or holder of its gamete, or the use of it, and, in any case, has the right to transfer its ownership or possession to others, or totally disown it. Subject to this, in a case such as Gamete Bank (comparing to "Hiring Uterus" status) the gamete owners reject their ownership/possession related to their gametes, thus the child of donated gametes belongs to the receivers of gametes, namely uterus owner and her husband.

To sum up, comparing the classification with the tables (1 to 5), it's revealed that most of the scholars accept most of the situations and, consequently, the legitimate parentage for gamete owners. The most important situations are:

- 1. Fertilization for gamete of a legitimate couple, any method used, in any situation of surrogate uterus.
- Fertilization for gamete of two strangers, or non-legitimate couple, subject to mistake/ignorance of them related to the prohibition of the function (based on the majority idea of prohibition of such fertilization), any method used, in any situation of surrogate uterus.

On the contrary, there is another situation in which there is a serious disagreement regarding its legitimacy and the verification of the statuses that endanger from them which is fertilization for gametes of two strangers, or non-legitimate couple, subject to mistake/ignorance of them, subject to their awareness of prohibition of the act (based on the majority idea of prohibition of such fertilization), and deliberation.

Although most of *mojtahedin* believe that fertilization for gamete of two strangers is prohibited, there are two major different views about the parentage status of the child among them. Some of them regard the relationship between gamete owners and the child as valid and relate it to them, while others, according to the famous view about the child of adultery, consider it invalid and without common legal effects. (Zar rokh, 2007)

Anyhow, to avoid such problems, according to the first provision of the law for embryo donation to unfertilized couples, acted at August 2001 of Islamic Consultative Assembly (Parliament of Iran), the donors should be legal couples and lawful parents will be the gamete/sperm owners. It should be mentioned that according to the 3rd provision of the law, the obligations of the embryo receivers as the same as the real parents (Rahimi, 2008).

# Issue of Infertility in Iran

In Iran, having children remains a fundamental drive for many married couples. Both religious and cultural norms and values reinforce such perceptions (Sarokhani and Raf'atjah, 2004). Iranian culture generally considers children as "divine gifts," and producing such children is one of the fundamental reasons for marriage among many couples. Thus, having children is generally regarded as strengthening the institution of the family and as a sign of commitment to Iranian cultural values. Given this pronatalist view, it is not surprising that infertility clinics are present in most provinces of Iran, attempting to help infertile couples to conceive.

Iran currently boasts about 50 IVF clinics, one of the highest numbers of clinics in the Middle East, and similar to Egypt in this regard (Inhorn, 2003). Although the majority of Iranian IVF clinics are located in Tehran, which is generally believed to have better medical facilities with more experienced physicians, there are, nevertheless, IVF clinics in such provincial cities as Yazd (Abbasi-Shavazi et al., 2008, P: 3).

As in many Islamic countries, in Iran for all groups of people there is a strong contrast in perceptions of egg and sperm donation. For both men and women, and all ethno-religious groups, the emotional and relational risks involved receiving donated eggs are far fewer than those attached to using donated sperm. Using donated egg is felt to be a much 'safer' option than donated sperm, which is viewed as being very risk laden (Haimes, 1993). The use of donated egg is considered to be an inclusive technique, which allows both parents to have 'ownership' over the process of concep-

tion, and for the child to be 'connected' to both parents. Embodied motherhood means that women bond and connect with the child through gestation and birth. Women are seen to 'cope' with the fact of having their own gametes substituted, since they would carry the pregnancy, 'nurture' the fetus and thereby generate a 'biological' link between mother and child. "A woman is more adaptable and the woman will feel that 'I have borne the child, and nurtured it for nine months. I've given birth, so this is gonna be mine. They won't feel as much as the men would feel" (ibid.). This means that it is the father's sperm that fertilized another's woman eggs that his wife would carry. While on the other hand, if the woman is infertile, she cannot receive sperm of someone other than her husband.

Given these moral controversies, especially surrounding sperm donation, it is important to note that a recent law on embryo donation has been passed in Iran (Tremayne, 2008), making it the only Middle Eastern Muslim country to enact such legislation. The law passed in *majles* and later in 2003 was approved by the Guardian Council (shoraye negahban), a religious body that must endorse a bill before it becomes law. Even though the law is brief (less than one page), it states clearly who can and cannot donate and receive gametes and embryos. Egg donation is allowed, as long as the husband marries the egg donor permanently or temporarily, thereby ensuring that all three parties are married. Sperm donation, on the other hand, is legally forbidden, because a sperm donor cannot temporarily marry an already married woman whose husband is infertile. However, quite interestingly, embryo donation, which involves both sperm and egg from another couple, is allowed in order to overcome both male and female infertility. Because an embryo comes from a married couple and is given to another married couple, it is considered *halal* (religiously permissible). The social and biological implications of embryo donation are quite interesting. For Iranian couples unable to produce a child because of male infertility, embryo donation allows them to bypass the problem of the husband's weak (or absent) sperm. However, embryo donation does not allow a presumably fertile wife of an infertile husband to contribute her own ova, in effect severing her biological ties to the donor child. Furthermore, and most strikingly, embryos donated from another married couple involve both egg and sperm donation. Even though direct sperm donation is bypassed, embryo donation still disrupts male paternity and involves the acceptance by an already married woman of another man's sperm (and woman's eggs). Whether the religious and legal authorities in Iran have carefully thought through the social ramifications of embryo donation remains unclear (Tremayne, 2008). Meanwhile, in the absence of effective enforcement of this new law, some IVF physicians in Iran—as well as in Shi'a-dominant Lebanon, which is closely following the Iranian lead—are capitalizing on the relaxed regulatory environment and the original "permissive" fatwa of Ayatollah Khamenei to practice all forms of gamete donation among their desperate infertile patients. As noted by Clarke (2006: 26), "Doctors keep Khamenei's fatwa collection on the shelves of their surgeries to demonstrate the permissibility of such procedures to skeptical Muslim patients; and many such patients have profited from it to undertake donor sperm and egg procedures, even surrogacy arrangements, with a clear conscience." As a result of these legal-moral-medical ambiguities, sperm donation is, in fact, practiced in some clinics in Iran, without clear legal consequences for either couples or physicians (Garmaroudi, n.d.; Tremayne, 2008). To alleviate moral concerns, some women divorce their infertile husbands before undertaking sperm donation; then remarry them after a three-and-a-half month waiting period (i.e., iddah, the period required to establish the pregnancy) (Tremayne, 2008). With all forms of sperm, egg, and embryo donation, the donor child inherits from the infertile parents. Furthermore, the donor couple should be married, legally and religiously, and should undergo medical testing for physical and mental health, IO tests for normal intelligence, and screening for drug and alcohol addiction. Donors who receive payment for their gametes generally remain anonymous to the recipients. However, as shown by both Tremayne (2005; 2008) and Garmaroudi (n.d.), donation between kin, especially sisters, remains common and is even preferred by many couples in Iran. The same may be true of surrogacy. Garmaroudi (n.d.) found that gestational surrogacy as a solution to infertility is becoming increasingly popular in Iran, and among the majority of Shi'a legal authorities, it is an acceptable form of assisted reproduction. Despite the availability and legality of this panoply of assisted reproductive techniques, the question remains that if most infertile Iranian women actually resort to these morally controversial technologies and the answer is no. Due to the prohibitive factors as well as a variety of social, religious, legal, and medical barriers, ARTs of all types remain out of reach for most non-Western women, as well as minority women within Western societies (van Balen and Inhorn, 2002). Inhorn (2003: 16) has called these multiple barriers "arenas of constraint," or the "various structural, social-cultural, ideological, and practical obstacles and apprehensions" that accompany the global spread of ARTs.

In Iran, the pressure to have children is so intense that even those couples that decide to voluntarily postpone pregnancy or to control birth intervals may need to reconsider their decision (Abbasi-Shavazi, Asgari-Khanghah & Razeghi-Nasrabad, 2005). Concerned relatives and friends usually offer suggestions about both traditional and modern infertility treatments. If couples refuse to seek treatment or fail to have children despite therapeutic intervention, the pressure to conceive may lead some couples, even those who love each other, to consider divorce or remarriage by the husband. Iranian law, in fact, sanctions such eventualities. According to Article 9 of the Iranian Family Protection Law, the spouse of an infertile person can file for divorce on the grounds of the infertility (ibid.).

Since the arrival of ARTs, thousands of Iranian women have benefited from these technologies, including older women in need of donor eggs. However, for many Iranian women, including the infertile poor, the new forms of assisted reproduction now available in Iran do not provide easy answers to their infertility. In spite of the veritable revolution in ART modalities in Iran—placing the country on the "cutting edge" of assisted reproduction in the Muslim world—the benefits of this revolution are not so clear. In fact, significant arenas of constraint, both moral and material, continue to deter Iranian women from visiting IVF clinics and utilizing the panoply of ARTs offered there. The main constraint continues to be a class-based, economic one; namely, IVF and its variants are prohibitively expensive for many Iranians, just as they are for most poor infertile couples around the world (Inhorn, 2003). Furthermore, ARTs, especially with third-party donation, do not rest neatly within the "local moral worlds" (Kleinman, 1992) of all Iranians, including infertile ones. Indeed, Iran is now the Middle Eastern hub of so-called reproductive tourism, as Muslim women from other countries, including Iraq and the Arab Gulf states, travel to Tehran in search of donor gametes (Shirin Garmaroudi, personal communication, August 2007; Inhorn 2006b).

In the realm of religion, even though many *Shiʻa* religious authorities have sanctioned donor technologies and a law has been passed in Iran to support embryo donation, not all infertile couples are willing to utilize donor technologies. Many Iranians—including some infertile women who are unfamiliar with the permissive legislation by religious authorities—still consider gamete and embryo donation (which are still relatively new) sinful. Furthermore, "technological" stigma and fears for the future of the

ART-conceived and especially donor child, accompany all of the ARTs, including even the most basic form of IVF, (Inhorn, 2003). Thus, women who undertake ARTs often do so in secrecy, maintaining a "cult of silence" that operates outside the walls of the clinic (ibid.).

# Categorization of Iranian Mojtahedin's View on Gamete Donation

In vitro fertilization of an egg from the wife with the sperm of her husband followed by the transfer of the fertilized embryo back into a third person's uterus is allowed by Grand Ayatollahs Sobhani and Ardebili, and the resulting child is the legal offspring of the couple. Grand Ayatollah Sobhani states: "In vitro fertilization of an egg from another woman with the sperm of the man, the husband should do a mut'a marriage with the egg donor for the period of time in which the whole procedure (egg retrieval to embryo transfer) is taking place, because polygyny is legal in Islam and avoids the implications of adultery if not, the procedure is forbidden and the resulting child is considered to be an illegitimate child". Grand Ayatollah Ardebili takes the same stand point of view but without the need of mut'a stating: "In vitro fertilization of an egg from an infertile wife with a fertile husband, the egg of another female is taken and inserted into the uterus of the wife is allowed and the resulting child is the legal offspring of the couple" (Personal Interview, Qom, 2007).

If there is an infertile wife with an infertile husband, the point of view of Grand Ayatollah Ardebili is: "The sperm of another man is taken and fertilized with another woman's egg made outside in the lab environment and is inserted into the wife's uterus is allowed. The resulting child is the legal offspring of the couple (ibid.).

Different views of *mojtahedin* regarding different cases of gamete donation can be classified as follows. The details are in the following Tables 1 to 5, in which the agreed and disagreed *fatwas* of these following four groups of *mojtahedin* in various cases of gamete donation have been notified.

1. There is a consensus among some *mojtahedin* for accepting gamete donation in all its different cases. These *mojtahedin* include Grand Ayatollah Khamenei, Grand Ayatollah Mohammad Mousavi Bojnurdi, Grand Ayatollah Seyyed Hasan Tabatabayi Ghomi, Grand Ayatollah Mohammad Yazdi. The reason for this agreement is that there is no specific *hadith* or law that has been stated for its prohibition. In this

- regard it's better not to copulate with an unrelated donor's sperm and avoid any unnecessary acts leading to haram should be avoided.
- 2. Some of the mojtahedin who believe that gamete donation is forbidden in all its cases even if the act is crucial and critical, include: Grand Ayatollah Borujerdi, Grand Ayatollah Millani, Grand Ayatollah Bahjat, Grand Ayatollah Tabrizi, Grand Ayatollah Fazel Lankarani, Grand Ayatollah Seyed Hasan Mar-ashi Shushtari. From the Sunni mojtahedin, Sheikh Rajab Tamimi, Sheykh Ebrahim Shaghre, Sheikh Abdollah ibn Ziyad Al e Mahmoud forbid any case or forms of gamete donation and Sheikh Abdo latif Ferfur, Abu bakr Zeyd Mohammad Sharif Ahmad can be stated. (Mir Hashemi, 2005)

Their reason for forbidding gamete donation is according to Islamic *hadith* and Versus of Qur'an and the other reason that they bring is the negative consequences of this act such as looking at private parts of a stranger without any essential reason.

- 3. Some of the *mojtahedin* believe that gamete donation in all its cases is acceptable except for the case in which an unrelated sperm of a man is inserted inside the wife's uterus. These *mojtahedin* include: Grand Ayatollah Sanei, Grand Ayatollah Mohammad Momen Ghomi. The only case in which gamete donation is forbidden is the case which an unrelated sperm of a man is directly inserted into the woman's uterus, that is if a sperm and ovum of two strangers are copulated inside the uterus, other than that the copulation of sperm and ovum of two unrelated strangers in a lab environment is not forbidden.
- 4. Some of *Mojtahedin* accept the use of gamete donation through the sperm and ovum of the husband and wife and prohibit the use of an unrelated gamete (copulation of sperm other than the husband's. These *mojtahedin* include: Grand Ayatollah Khomeini, Grand Ayatollah Khoyi, Grand Ayatollah Montazeri, Grand Ayatollah Safi Golpaygani, and Grand Ayatollah Makarem Shirazi.

From Sunni *mojtahedin*, scholars such as Sheikh Mostafa Zargha, Sheikh Abdollah Basam, Sheikh Abdollah Ebadi, Sheikh Abdol Halim, Sheikh Ali Salus have similar view (Mir Heshemi, 2005). For the *mojtahed*, whether the act is forbidden or accepted in all its cases and forms depend entirely on the interference of the unrelated donor and the different methods (Copulation in the uterus or in lab environment) have no effect on its legitimacy (Tables 1 to 5).

Table 1 Different Views of Mojtahedin on Gamete Donation, The Case of Fertile Wife

Group of	Disagreed by Group of Mojtahedin	Copulation	Uterus	Sperm	Ovum
	1, 2, 3, 4	Lab Environment	Fertile Wife	Fertile Husband	Fertile Wife
	1, 2, 3, 4	Lab Environment	Substitute	Fertile Husband	Fertile Wife
			uterus		
	1, 2, 3, 4	Inside the uterus	Fertile Wife	Donor	Fertile Wife
				(unrelated man)	
	1, 2, 3, 4	Lab Environment	Fertile Wife	Donor	Fertile Wife
				(unrelated man)	
	1, 2, 3, 4	Lab Environment	Substitute	Donor	Fertile Wife
			uterus	(unrelated man)	

Source: The authors based on the Resalehs of Mojtahedin

All disagreed cases by the four groups of *Mojtahedin* have not been clear answers or *fatwas*. However, the authors have come to this conclusion of disagreements, using the answers of these *Mojtahedin* to other sets of related questions. The logic to reach to this conclusion refers to the fact that all these cases are not included from emergency cases or *Osr-o-Haraj* (hardship and urgency).

Table 2 Different Views of Mojtahedin on Gamete Donation, The Case of *Mut'a* of Fertile Husband

Agreed by Group of Mojtahedin	Disagreed by Group of Mojtahedin	Copulation	Uterus	Sperm	Ovum
	1, 2, 3, 4	Inside the uterus	Substitute uterus	Fertile Husband	Donor (mut'a of the fertile Husband)
	1, 2, 3, 4	Lab Environment	Substitute uterus	Fertile Husband	Donor ( <i>mut'a</i> of the fertile Husband)

Table 3 Different Views of Mojtahedin on Gamete Donation, The Case of Unrelated Woman

Group of Mojtahedin Agree	Group of Mojtahedin Disagree	Copulation	Uterus	Sperm	Ovum
	1, 2, 3, 4	Inside the uterus	Substitute uterus	Fertile Husband	Donor (unrelated Woman)
	1, 2, 3, 4	Lab Environment	Substitute uterus	Fertile Husband	Donor (unrelated Woman)
	1, 2, 3, 4	Lab Environment	Fertile wife	Donor (Unrelated woman's husband)	Donor (unrelated woman)
	1, 2, 3, 4	Lab Environment	Fertile wife	Donor (unrelated man)	Donor (unrelated woman)
	1, 2, 3, 4	Inside the uterus	Substitute uterus	Donor (Unrelated woman's husband)	Donor (unrelated woman)
	1, 2, 3, 4	Lab Environment	Substitute uterus	Donor (Unrelated woman's husband)	Donor (unrelated woman)
	1, 2, 3, 4	Inside the uterus	Substitute uterus	Donor (unrelated man)	Donor (unrelated woman)
	1, 2, 3, 4	Lab Environment	Substitute uterus	Donor (unrelated man)	Donor (unrelated woman)
1, 3	4, 2	Inside the uterus	Infertile Wife	Infertile Husband	Donor (unrelated woman)
1, 3	2, 4	Lab Environment	Infertile Wife	Infertile Husband	Donor (unrelated woman)

Table 3 (cont.)

Group of Mojtahedin Agree	Group of Mojtahedin Disagree	Copulation	Uterus	Sperm	Ovum
1, 3	2, 4	Inside the uterus	Substitute uterus (Husband's mut'a or 2nd wife)	Infertile Husband	Donor (unrelated woman)
1, 3	2, 4	Lab Environment	Substitute uterus (Husband's mut'a or 2nd wife)	Infertile Husband	Donor (unrelated woman)
1	2, 3, 4	Inside the uterus	Substitute uterus	Infertile Husband	Donor (unrelated woman)
1, 3	2, 4	Lab Environment	Substitute uterus	Infertile Husband	Donor (unrelated woman)
1, 4	2, 3	Inside the uterus	Infertile Wife	Donor (Unrelated woman's husband)	Donor (unrelated woman)
1, 3, 4	2	Lab Environment	Infertile Wife	Donor (Unrelated woman's husband)	Donor (unrelated woman)
1	2, 3, 4	Inside the uterus	Infertile Wife	Donor (unrelated man)	Donor (unrelated woman)
1, 3	2, 4	Lab Environment	Infertile Wife	Donor (unrelated man)	Donor (Unrelated Woman)

Table 3 (cont.)

Group of Mojtahedin Agree	Group of Mojtahedin Disagree	Copulation	Uterus	Sperm	Ovum
1, 3, 4	2	Inside the uterus	Substitute uterus of infertile wife (unrelated woman)	Donor (Unrelated woman's husband)	Donor (unrelated woman)
1, 4	2, 3	Inside the uterus	Substitute uterus of (infertile wife)	Donor (Unrelated woman's husband)	Donor (unrelated woman)
1, 3, 4	2	Lab Environment	Substitute uterus of(Infertile wife)	Donor (Unrelated woman's husband)	Donor (unrelated woman)
1	2, 3, 4	Inside the uterus	Substitute uterus of infertile wife (unrelated woman)	Donor (unrelated man)	Donor (unrelated woman)
1, 3	2, 4	Lab Environment	Substitute uterus of Infertile wife (Unrelated woman)	Donor (unrelated man)	Donor (unrelated woman)
1	2, 3, 4	Inside the uterus	Substitute uterus of Infertile wife	Donor (unrelated man)	Donor (unrelated woman)
1, 3	2, 4	Lab Environment	Substitute uterus of Infertile wife	Donor (unrelated	Donor (unrelated woman)

Table 4 Different Views of Mojtahedin on Gamete Donation, The Case of Infertile Wife

Group of Mojtahedin Agree	Group of Mojtahedin Disagree	Copulation	Uterus	Sperm	Ovum
1, 3, 4	2 8	Inside the	Substitute uterus (wife)	Infertile Husband	Infertile Wife
1, 3, 4	2	Lab Environment	Substitute uterus (wife)	Infertile Husband	Infertile Wife
1, 4	2, 3	Inside the uterus	Substitute	Infertile Husband	Infertile Wife
1, 3, 4	2	Lab Environment	Substitute uterus	Infertile Husband	Infertile Wife
1	2, 3, 4	Inside the uterus	Infertile Wife	Donor (unrelated man)	Infertile Wife
1, 3	2, 4	Lab Environment	Infertile Wife	Donor (unrelated man)	Infertile Wife
1, 3	2, 4	Inside the uterus	Substitute uterus (Husband)	Donor (unrelated man)	Infertile Wife
1, 3	2, 4	Lab Environment	Substitute uterus (Husband)	Donor (unrelated man)	Infertile Wifex
1	2, 3, 4	Inside the uterus	Substitute uterus	Donor (unrelated man)	Infertile Wife
1, 3	2, 4	Lab Environment	Substitute uterus	Donor (unrelated man)	Infertile Wife

Table 5 Different Views of Mojtahedin on Gamete Donation, The Case of mut'a of Infertile Husband

Group of Mojtahedin Agree	Group of Mojtahedin Disagree	Copulation	Uterus	Sperm	Ovum
1, 3, 4	2	Inside the uterus	Infertile Wife	Infertile Husband	Donor (mut'a of the Infertile Husband)
1, 3, 4	2	Lab Environment	Infertile Wife	Infertile Husband	Donor ( <i>mut'a</i> of the Infertile Husband)
1, 3, 4	2 8	Inside the uterus	Substitute uterus (Husband's wife)	Infertile Husband	Donor ( <i>mut'a</i> of the Infertile Husband)
1, 3, 4	2 8	Lab Environment	Substitute uterus (Husband's wife)	Infertile Husband	Donor ( <i>mut'a</i> of the Infertile Husband)
1, 3, 4	2 8	Inside the uterus	Substitute uterus (Husband's <i>mut'a</i> or 2nd wife)	Infertile Husband	Donor ( <i>mut'a</i> of the Infertile Husband)
1, 3, 4	2 8	Lab Environment	Substitute uterus (husband's <i>mut'a</i> or 2nd wife)	Infertile Husband	Donor ( <i>mut'a</i> of the Infertile Husband)
1, 4	2, 3	Inside the uterus	Substitute uterus	Infertile Husband	Donor (mut'a of the Infertile Husband)
1, 3, 4	2	Lab Environment	Substitute uterus	Infertile Husband	Donor (mut'a of the Infertile Husband)

Due to the social problems concerning the infertility issue in Iran, most of *mojtahedin* in Iran have partially or fully changed their *fatwas* concerning the forbiddance of gamete donation. Therefore the Guardian Council has ratified the issue of gamete donation for infertile couples. It can be concluded that most of the present *mojtahedin* agree on the legitimacy of gamete donation. From the five cases mentioned above, the first and fourth cases are entirely legitimate, although unnecessary physical touch and gazing should be avoided. Regarding other cases, an individual should refer to the law and from the religious point of view should follow his *mojtahed*'s *fatwa*.

For those individuals that their *mojtahed* has entirely forbidden gamete donation, this act is only permitted if there is a sexual intercourse between the sperm donor and the substitute uterus of the mother of the child, however, the only case that is permitted by all *mujtahedin* is that the woman with the substitute uterus be a single woman in which she has become the *mut'a* (temporary wife) of the man for a period of time.

#### Conclusion

Although both sects (*Sunni* and *Shiʻa*) have very similar philosophies in relation to embryo and soul, their verdicts on gamete donation, surrogacy, human cloning and other reproductive technologies differ dramatically. In fact, it may come as a surprise that Iran is the only Muslim country in which gamete donation, embryos, and surrogates have been legitimized by religious authorities or *mojtahedin* and passed into the law. This has placed Iran, a *Shiʻa*-dominant country, in a unique position vis-à-vis the *Sunni* Islamic world, where religious leaders strictly prohibited all forms of third-party donation.

Since the 1979 Islamic Revolution in Iran, the influence of religion has taken into considerable importance in the diffusion or suppression of new family planning ideas. In fact, with the increased availability of new medical techniques for transplantation, organ donation, in vitro fertilization, etc., the clinics in Iran have found it necessary to create a more official channel for obtaining *mojtahedin's* supports through new *fatwas* and publicizing these *fatwas* on various aspects of medical practices, to be able to practice such methods without public and religious rejection.

Assessment of applying ART methods in Iran, in particular from jurisprudential point of view, is among the main prerequisites to make such a therapeutic approach to this technology. Concepts like Assisted Reproductive Techniques (ARTs), IVF, direct transfer of donated gamete into the uterus and its comparison with the formation of embryo from donated gamete, in the laboratory is possible. Also the consequent embryo transfer to the uterine cavity are among the fundamental and initial concepts for familiarization of religious schools and jurisprudents with the application of donated gametes in treatment of infertile couples, which together have provided a new view point in *Shiʿa* jurisprudence in confronting treatment of infertility.

Divergent gamete donation practices are beginning to emerge in the *Shiʻa* Muslim world, as religious authorities come to their own conclusions about third-party donation. Among *Shiʻa* religious scholars, the major disagreements, or religious "sticking points," revolve around the following set of issues which can be discussed through further readings:

- 1. Whether sperm donation should be allowed at all; or whether donation is permissible at all if the donors are anonymous;
- 2. Whether the child should follow the name of the infertile father or the sperm donor;
- 3. Whether the child should inherit from the infertile father or the sperm donor;
- 4. Whether donor children and their "social" parents are related at all, and, if not, whether they could potentially marry each other, which has implications for proper comportment in domestic life (e.g., bathing, veiling, etc.);
- 5. Whether a financial transaction should be allowed between gamete donors and recipients:
- 6. Whether the husband of an infertile woman needs to do a temporary *mut'a* marriage with the egg donor, then divorce her after the embryo transfer (48 to 72 hours later), in order to avoid adultery. For his part, Ayatollah Khamane'i clearly stipulates that *mut'a* marriage is not required, for he believes that adultery requires the physical act of intercourse (Clarke, 2006).

# References

Abbasi-Shavazi, M.J., A. Asgari-Khanghah, and H.B. Razeghi-Nasrabad. "Women and the Infertility Experience: A Case Study in Tehran (in Persian)," *Pajohesh zanan* (Journal of women's studies), 3 (3) (2005): 91–113.

- Abbasi-Shavazi, M.J., Marcia C. Inhorn and Razeghi-Nasrabad H.B, and Ghasem Toloo. "The Iranian Art Revolution: Infertility, Assisted Reproductive, Technology, and Third-Party Donation in the Islamic Republic of Iran," *Journal of Middle East Women's Studies* 4 (2008): 2.
- Afshar, Haleh. "Women, State and Ideology in Iran," *Third World Quarterly* 7 (2) (1985): 256–278.
- Alhasanis, S. "Islamic Consideration (in Sunni School) regarding Bioethics & Art," *Payeh* 6 (4) (2007): 379–384.
- Cole, Juan. Sacred Space and Holy War: The Politics, Culture and History of Shi'ite Islam. London: I.B. Tauris, 2002.
- Clarke, Morgan. "Shi'ie Perspectives on Kinship and New Reproductive Technologies," ISIM Review 17 (2006): 26–7.
- ——, "Children of the Revolution: Ali Khamene'i's "Liberal" Views on In Vitro Fertilization," *British Journal of Middle Eastern Studies* 34 (2007): 287–303.
- ——, Islam and New Kinship: Reproductive Technology, Anthropology, and the Shari'ah in Lebanon. New York: Berghahn Books, 2008, in press.
- Eich, Thomas. "Muslim Voices on Cloning," ISIM Review 12 (2002): 38-9.
- ———, Islam und Bioethik: Eine kritische Analyse der modernen Diskussion im Islamischen Recht. Heidelberg: Reichert, 2005.
- ———, "Changing Concepts of Kinship in the Islamic World," Paper presented at the Society for Applied Anthropology/Society for Medical Anthropology Meeting, Vancouver, British Columbia, April 1, 2006.
- Garmaroudi, Shirin N.d. Kinship Intimacy in the Age of Assisted Conception: An Ethnographic Account of the Assisted Reproduction Technologies in Iran. Master's thesis, Institute of Social Anthropology, University of Berne, Switzerland.
- Haeri, Shahla. Law of Desire: Temporary Marriage in Shi'i Iran. Syracuse, NY: Syracuse University Press, 1989.
- Haimes, E. "Issues of gender in gamete donation," *Social Science and Medicine* 36 (1) (1993): 85–93.
- Inhorn, Marcia C. *Infertility and Patriarchy: The Cultural Politics of Gender and Family Life in Egypt.* Philadelphia: University of Pennsylvania Press, 1996.
- ———, "Local Babies, Global Science: Gender, Religion and In Vitro Fertilization in Egypt," *Journal of Middle East Women's Studies* (2003) New York: Routledge.
- ———, "The Worms are Weak: Male Infertility and Patriarchal Paradoxes in Egypt," *Men and Masculinities* 5 (3): 236–58.
- ——, "He Won't Be My Son: Middle Eastern Muslim Men's Discourses of Adoption and Gamete Donation," *Medical Anthropology Quarterly* 20 (1) (2006a): 94–120.
- ———, "A More Open Mind Toward Iran," *Chronicle of Higher Education*, June 23, B12. Khalfi, Moslem, "Gamete Donation in Islamic Jurisprudence and Law," *Journal of Women*
- Studies 33 (1), (Fall 2006, Tehran, Iran) (in Farsi).
  ———————, "Gamete Donation in Islamic Jurisprudence and Law," *Journal of Women Studies*

34 (2) (Winter 2006, Tehran, Iran) (in Farsi).

- Kleinman, Arthur, "Local Worlds of Suffering: An Interpersonal Focus for Ethnographies of Illness Experience," *Qualitative Health Research* 2 (1992), (2): 127–34.
- Mir Hashemi, Sorour. "Journal of Research of Women's Section of Imam Sadegh University," *Quarterly of Islamic Law and Jurisprudence 36* (2005).

- Meirow, D., and J.G. Schenker. "The Current Status of Sperm Donation in Assisted Reproduction Technology: Ethical and Legal Considerations," *Journal of Assisted Reproduction and Genetics* 14 (3) (1997): 133–8.
- Moinifar, Heshmat S. Personal Interviews with Grand Ayatollah Sobhani & Mousavi Ardabili, Qum, Iran, Unpublished, 2007.
- ——, "The Role of Religious Leaders on Family Planning in Iran," *Journal of Iran and the Caucasus* 11 (2), (Leiden: Brill Academic Publishers, 2007).
- Moosa, Ebrahim. "Human Cloning in Muslim Ethics," *Voices Across Boundaries* (Fall): 23–6.
- Rahimi, Habibollah. "The Civic Responsibility for Embryo Replacement," *Journal of Fertility and Infertility* (Summer 2008).
- Rahmani Menshadi, Hamid. "Legitimacy of Gamete donation in jurisprudence of Shi'a Islam," *Journal of Medical Ethics*, Year 2, Number 3 (Winter 2009).
- ———, Hamid. "The Responsibility of Embryo Replacement in Jurisprudence," *Journal of Medical Ethics*, Year 2, Number 3 (Spring 2008).
- Sarokhani, B., and M. Raf'atjah. "Sociological Determinants of Redefining Women's Social Identity," Women's Research Quarterly (2004) 1:71–93 (in Persian).
- Sekaleshfar, Farrokh B. "Islamic Perspective on the embryo of gamete donation," *Bionews* 4 (8) (2008).
- Serour, Gamal I. "Bioethics in Reproductive Health: A Muslim's Perspective," *Middle East Fertility Society Journal* (1996) 1:30–5.
- Tremayne, Soraya. "The Moral, Ethical, and Legal Implications of Egg, Sperm, and Embryo Donation in Iran," Paper presented at the International Conference on Reproductive Disruptions: Childlessness, Adoption, and Other Reproductive Complexities, University of Michigan, Ann Arbor, May 19, 2005.
- ———, "Whither Kinship? New Procreative Practices, Authoritative Knowledge, and Relatedness: Case Studies from Iran," Paper presented at the Conference on Gamete and Embryo Donation for Infertility Treatment, Avesina Research Institute and University of Tehran, Iran, March 2, 2006a.
- , "Not All Muslims Are Luddites," Anthropology Today 22 (3) (2006b): 1–2.
- ——, "Law, Ethics, and Donor Technologies in Shi'a Iran, in *Assisting Reproduction, Testing Genes: Global Encounters with New Biotechnologies*, ed. Daphna Birenbaum-Carmeli and Marcia C. Inhorn. New York: Berg-hahn Books, in press.
- Van Balen, Frank, and Marcia C. Inhorn. Introduction: Interpreting Infertility: A View from the Social Sciences, 2002.
- Vayena, E., P.J. Rowe, and P.D. Griffin. "Current Practices and Controversies in Assisted Reproduction: Report of a Meeting on 'Medical, Ethical and Social Aspects of Assisted Reproduction,' Held at WHO Headquarters in Geneva, Switzerland, 17–21 September 2001. Geneva: World Health Organization, 2002.
- Zar rokh, Ehsan. Gamete Donation in the Realm of Jurisprudence and Law, 2007.
- Zuhur, Sherifa. "Of Milk-Mothers and Sacred Bonds: Islam, Patriarchy, and New Reproductive Technologies," *Creighton Law Review* 25 (1992): 1725–38.