

Chapter 165

Islam and Assisted Reproduction in the Middle East: Comparing the Sunni Arab World, Shia Iran and Secular Turkey

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165.1 Introduction

The birth of Louise Brown, the world's first *in vitro* fertilization (IVF) baby, in 1978 in the UK heralded a new dawn in the treatment of infertility. What made this baby so remarkable was the method of her conception, which occurred with techno-medical assistance outside of the female body, literally *in glass*. However, also remarkable has been this technology's rapid global spread and proliferation. In the years hence, an estimated five million "miracle babies" have been born using assisted reproductive technologies (ARTs) in many different countries. ARTs, despite the range of (financial, practical, emotional, psychological, as well as religious and moral) difficulties they may pose, have ultimately been embraced by many cultures because they address the fundamental desires of men and women to become parents. However, reproductive technologies have not been transferred into cultural voids: local considerations, be they cultural, economic, or political, have shaped and sometimes curtailed the way these Western-generated technologies are both offered to and received by non-Western subjects (Inhorn 2003a). In this chapter, we outline the global problem of infertility and the technological possibilities afforded by ARTs to remedy them. We then turn to a discussion of how Islam has responded to the novel

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ethical and social dilemmas created by assisted reproduction, and examine three different Muslim Middle Eastern contexts: the Sunni Arab world, Shi'a Iran, and secular Turkey. The comparative analysis of these contexts demonstrates that, while there are similarities there are also important differences, and thus an expectation of a monolithic "Islamic approach" to ARTs is misguided and over-simplistic. Our comparative approach of how Islam has influenced and impacted ART practice in three specific settings illuminates not only the extent to which religion must be constantly interpreted when faced with novel dilemmas, but also the inter-relationship between local and global considerations at the nexus of medicine, commerce, law, and family-making.

165.2 Infertility and Assisted Reproductive Technologies

Infertility is defined as the inability for a reproductive-aged couple to conceive a child after a year (or longer) of regular unprotected intercourse (Zegers-Hochschild et al. 2009). It is a universally occurring health problem that affects more than 80 million people worldwide, although its prevalence is subject to great global variation from less than 5 % in some countries to more than 30 % in others (Vayena et al. 2002). On average, one in ten couples will experience either primary or secondary infertility during their lifetime. The social science scholarship in this area has described stigmatization, social isolation, and gendered repercussions as central tenets of the infertility and involuntary childlessness experience; however, since the social meanings of infertility are always the discursive product of a hegemonic cultural system, the particulars of men's and women's experiences will change according to time and place, region and religion (Jenkins and Inhorn 2003).

The causes and etiology of infertility also present great global variation, from growing public health concerns surrounding delayed childbearing and age-related fertility problems in some developed countries, to the staggering frequency of iatrogenic infections in some developing nations. Indeed, a couple's involuntary childlessness can be caused by a range of physiologically male or female factors, ranging from low sperm count to azoospermia in men, and premature ovarian failure to blocked fallopian tubes in women. These underlying causes, however, may or may not receive social acknowledgment. For example, despite the widespread existence of male-factor infertility, accounting for around 50 % of all cases, globally the major blame and burden of infertility falls mostly on women's shoulders (Inhorn and Van Balen 2002). Infertile women, and increasingly infertile men, are massive users of biomedical health services. In fact, particularly in developing countries where health infrastructures are less comprehensive and resorted to less often, infertility is a leading cause of healthcare seeking behavior (Inhorn 2003b), although biomedical treatments may be accompanied or supplemented by a range of "ethnogyneological" practices (Inhorn 1994; Inhorn and Birenbaum-Carmeli 2008).

Different causes of infertility fluctuate not only in their prevalence in different regions, but also with regards to how they may be treated and how well they may



Fig. 165.1 Intracytoplasmic sperm injection (ICSI) being performed in a Lebanese IVF laboratory (Photo by Marcia Inhorn)

respond to treatment. IVF, a technology that was originally developed to address infertility caused by blockages of the fallopian tubes - by fertilizing eggs outside the body and then transferring them directly into the uterus - is now widely used in the treatment of a range of female factor and “unexplained” fertility problems. Intracytoplasmic sperm injection (ICSI), a variation of IVF developed in 1991 in Belgium, involves the injection of a single sperm into the egg under a high-powered microscope, and has revolutionized the treatment of male infertility problems (Inhorn 2011a) (Figs. 165.1 and 165.2). Both of these technologies can be used in conjunction with the freezing, storage, and subsequent thawing of sperm, eggs and embryos, enabling reproductive cells to be preserved over time and to travel across geographical distances. In sum, these techniques have helped millions of involuntarily childless men and women conceive their much longed-for children.

However, IVF or ICSI with the gametes of the intending parents is not always possible; in intractable cases of male and female infertility, where viable gametes are unavailable or pregnancy to term proves impossible, couples may opt for “third-party reproductive assistance” using donor sperm, donor eggs or embryos, or commissioning a surrogate to gestate the fetus. Indications for the use of donor sperm include, for example, cases of male sterility, severe sperm abnormalities and genetic disorders. Egg donation may be indicated by genetic conditions, poor ovarian function, and advanced maternal age. The use of donor sperm is also growing as a means of family creation by lesbian couples and single women, and donor eggs and surrogacy are utilized by some gay and single men wishing to parent. In sum, the



Fig. 165.2 Clinic board of IVF baby pictures from Beirut, Lebanon (Photo by Marcia Inhorn)

technological possibilities offered by ARTs have been used in myriad ways, to enable procreation in ever expanding scenarios, including, for example, posthumous conception, pregnancy by women in their 60s and 70s, and the birth of high-order multiples. While these potential “treatments” are increasingly regarded as an acceptable option in some cultures, in others they remain prohibited, heavily stigmatized, or absolutely unacceptable.

Shifting the boundaries of our understanding of the creation of life and family formation, it is not surprising that ARTs present epistemological and ethical challenges and create new dilemmas for bioethicists, regulators, and religious leaders, as well as for men and women facing fertility problems. Although different countries have adopted various approaches to the regulation of ARTs - from legislation to professional guidance to a free market model (see Jones et al. 2007) - religious authorities have often expressed their views and sought to influence the (bio)ethical reasoning of both individuals and collective decision-makers (such as governments or regulators). Although Schenker rightly cautions that “it is often difficult to dissociate the influence of distinctly religious factors from other cultural conditions” (2005: 310), he argues that there are at least three factors that determine the influence of religious viewpoints on the practice of assisted reproduction: the size of the community; the authority of religious views within the population; and the unanimity or diversity of opinion present. As will become clear in the comparative discussion of the three different contexts in this chapter, depending on the wider socio-cultural conditions, religious rulings on ARTs can be both deterministic and surprisingly flexible.

165.3 Islam and Assisted Reproduction Technologies

Islam as a religion not only accepts, but positively endorses and encourages the seeking of biomedical treatment for infertility. In general, biomedicine and science are valorized, and in the case of infertility treatment in particular, Muslim couples are encouraged to create their own biological children through IVF. IVF is seen as a beneficial medical treatment and presents no significant ethical problems, as long as the gametes used for fertilization belong to a heterosexual married couple intending to parent (Clarke 2006a; Inhorn 2002, 2003a, b, 2012). This is particularly important since adoption of children is explicitly forbidden in the scriptures. (Infertile Muslim couples may foster an orphaned child, but permanent adoption is disallowed in family law in the vast majority of Muslim countries). In the absence of child adoption as a solution to infertility, IVF and related technologies are seen as the only options by many infertile Muslim couples. While there is broad agreement throughout Sunni Islam regarding which aspects of ARTs are and are not acceptable, and specifically on the prohibition of all forms of third-party reproductive assistance, there has been greater heterogeneity in Shia Muslim responses (Clarke 2007, 2008; Inhorn 2006a, b, c, d, 2012; Inhorn et al. 2010). This has led to a variety of ART practice in the Muslim Middle East, which includes the “Shia Crescent” within a majority Sunni Muslim region. The case studies below explore in greater depth the Islamic responses to assisted reproduction – comparing the Sunni Arab world with Shi Iran and secular Turkey – demonstrating the similarities and differences that exist between these three different Muslim contexts and revealing the over-simplicity of assuming a monolithic “Islamic response” to ARTs (Table 165.1).

165.3.1 *Sunni Arab World*

In 1980, only 2 years after Louise Brown’s birth, the Grand Shaikh of Egypt’s Al-Azhar University had issued the first *fatwa* permitting IVF to be practiced by Muslims. By 1986, the first IVF center had opened in Egypt, with the first Egyptian IVF baby, Hebbatallah Mohamed, born in 1987. By 1990, Egypt’s first experiment in state subsidization of IVF for the poor came to fruition with the birth of a full-fledged IVF clinic in a public maternity hospital in Alexandria (Inhorn 1994). Then, soon after its invention in 1991, ICSI spread across the Mediterranean to Egypt, where it was introduced in an IVF clinic in Cairo in 1994 (Inhorn 2003a). By 1996, Egypt already hosted ten private IVF clinics in major cities. By the year 2003, the Egyptian IVF industry had truly blossomed, with approximately 50 clinics, 5 of them at least partially state subsidized (Inhorn 2010). In 2003, Al-Azhar University itself, through its Department of Obstetrics and Gynecology and International Islamic Center for Population Studies and Research, had opened a state-subsidized IVF clinic to serve the Cairene poor and to provide training for physicians and embryologists. Similar stories of diffusion and expansion were found throughout

Table 165.1 Assisted reproduction in the Muslim Middle East: comparing Sunni Arab World, Shia Iran, and secular Turkey

	Sunni Islam	Shia Iran	Secular Turkey
Fertility treatment for married heterosexual couples	Yes	Yes	Yes
Fertility treatment for unmarried couples	No	No	No
Fertility treatment for same-sex couples	No	No	No
Fertility treatment for single women	No	No	No
Artificial insemination with donor sperm	No	Yes	No
IVF	Yes	Yes	Yes
ICSI	Yes	Yes	Yes
The cryopreservation and storage of sperm	Yes (for medical necessity)	Yes	Yes (for medical necessity)
The cryopreservation and storage of eggs	Yes (for medical necessity)	Yes	Yes (for medical necessity)
The cryopreservation and storage of embryos	Yes (for use in a future frozen cycle)	Yes	Yes
Use of donor sperm	No	Yes	No
Use of donor eggs	No	Yes	No
Use of donor embryos	No	Yes	No
Use of surrogacy	No	Yes	No
PGD	Yes (for genetic screening)	Yes	Yes
Saviour siblings	Yes	Yes	Yes
Pre-implantation sex selection	No	Yes	No
Multi-fetal pregnancy reduction	Yes	Yes	Yes
Posthumous conception	No		No
Post divorce conception	No		No
Post menopausal conception	Possibly, only with the use of own eggs	Yes	Possibly, only with the use of own eggs
Embryo research	Yes (up to 14 days post-fertilization)	Yes	
Human cloning	No		No
Cross-border reproductive care	Yes, but not if third-party reproductive assistance is not used	Yes	Yes, but not if third-party reproductive assistance is not used

Source: Authors

Sunni Muslim countries during this period. In 1997, a global survey of ART clinics in 62 countries was published; 8 Middle Eastern Muslim countries (Egypt, Iran, Kuwait, Jordan, Lebanon, Morocco, Qatar, and Turkey) and 3 South and Southeast Asian Muslim countries (Indonesia, Malaysia, and Pakistan) were represented. All of these Muslim countries were practicing IVF and ICSI, yet importantly, none

of them practiced donor insemination or any other form of third-party reproductive assistance. As noted by the study authors, the use of third-party reproductive assistance “is considered adultery and leads to confusion regarding the lines of genealogy, whose purity is of prime importance in Islam” (Meirow and Schenker 1997: 134). The ban on sperm donation and all other forms of third-party assistance has been clearly spelled out multiple times in *fatwas* and bioethical decrees issued in the Sunni Muslim countries.

Following the issuance in 1980 of the original Al-Azhar *fatwa*, the Islamic Fiqh Council issued a nearly identical *fatwa* banning all forms of third-party assistance in its seventh meeting held in Mecca in 1984. Subsequently, *fatwas* supporting ARTs but banning third-party assistance have been issued in Kuwait, Qatar, and the United Arab Emirates (Serour 2008). In 1997, at the ninth Islamic law and medicine conference, held under the auspices of the Kuwait-based Islamic Organization for Medical Sciences (IOMS) in Casablanca, a landmark five-point bioethical declaration included recommendations to prevent human cloning and to prohibit all situations in which a third party invades a marital relationship through donation of reproductive material (Moosa 2003). As noted by Islamic legal scholar Ebrahim Moosa (2003: 23):

In terms of ethics, Muslim authorities consider the transmission of reproductive material between persons who are not legally married to be a major violation of Islamic law. This sensitivity stems from the fact that Islamic law has a strict taboo on sexual relations outside wedlock (*zina*). The taboo is designed to protect paternity (i.e., family), which is designated as one of the five goals of Islamic law, the others being the protection of religion, life, property, and reason.

Such a ban on third-party reproductive assistance of all kinds is effectively in place in the Sunni Muslim world, which represents approximately 80–90 % of the world’s more than 1.5 billion Muslims (Inhorn 2003a; Meirow and Schenker 1997; Serour 1996; Serour and Dickens 2001). In Sunni Egypt, as well as the Sunni-dominant Arab nations of North Africa (Algeria, Libya, Morocco, Tunisia), the Arab Gulf (Kuwait, Oman, Qatar, Saudi Arabia, United Arab Emirates, Yemen), and the Levant (Jordan, Palestine, Syria), third-party assisted reproduction is not practiced—at least knowingly—in IVF clinics. In the Sunni countries, this ban on donors and surrogacy has been instantiated through antidonation bioethical codes, antidonation professional codes for obstetricians and gynecologists, and antidonation laws that specify the punishments that will ensue if an IVF practitioner wrongfully undertakes any form of third-party assisted conception. Such punishments range from permanent clinic closing to confiscation of all profits derived from donation to physician imprisonment and even the death penalty (although this has never happened and is not bound by legislation).

Yet, the ban in the Sunni world seems to derive less from the threat of legal punishment than from the force of Islamic morality. Namely, the majority of Sunni Muslims—both physicians and their patients—ardently support the Sunni ban on third-party donation, for three important reasons: (1) the moral implications of third-party donation for marriage; (2) the potential for incest; and (3) the moral implications of donation for kinship and family life. With regard to marriage, Islam is a religion that can be said to privilege—even mandate—heterosexual marital relations.

As is made clear in the original Al-Azhar *fatwa*, reproduction outside of marriage is considered *zina* (adultery), which is strictly forbidden in Islam. Although third-party donation does not involve the sexual “body contact” of adulterous relations, nor presumably the desire to engage in an extramarital affair, it is nonetheless considered by Sunni Muslim religious scholars to be a form of adultery, by virtue of introducing a third party into the sacred dyad of husband and wife. It is the very fact that another man’s sperm or another woman’s eggs enter a place where they do not belong that makes donation of any kind inherently wrong—or *haram* (religiously forbidden)—and hence threatening to the marital bond. The second aspect of third-party donation that troubles marriage is the potential for incest among the offspring of unknown donors. Moral concerns have been raised about the potential for a single anonymous donor’s offspring meeting and marrying each other, thereby undertaking an incestuous union of half-siblings. In a small country such as Lebanon, with only four million inhabitants, such unwitting incest of the children of an anonymous donor is a real possibility, a moral concern that has also been raised in neighboring Israel (Kahn 2000). The final moral concern voiced by Sunni Muslims, including clerics, IVF physicians, and patients themselves, is that third-party donation confuses issues of kinship, descent, and inheritance. As with marriage, Islam is a religion that can be said to privilege—even mandate—biological inheritance. Preserving the biological “origins” of each child—meaning its relationship to a known biological mother and father—is considered not only an ideal in Islam, but a moral imperative. The problem with third-party donation, therefore, is that it destroys a child’s *nasab* (lineage or genealogy), which is immoral in addition to being psychologically devastating to the donor child.

It is important to emphasize that these moral concerns are taken very seriously. To our knowledge, not one single IVF clinic in a Sunni-dominant Muslim country practices third-party assisted conception. Although physicians are sometimes asked about gamete donation and surrogacy by IVF patients who cannot conceive a child in any other way, they tell them that it is “against the religion,” and therefore, not performed. Those patients who are committed to pursuing third-party assisted reproduction are told that they must travel “outside” to Europe, North America, or Asia. Such cases of Sunni Muslim “reproductive tourism” are certainly beginning to occur (Gürtin 2011; Inhorn 2011b), however, the vast majority of infertile Sunni Muslim couples abide by the religious ban on donation and surrogacy, agreeing with the moral justifications for it. For example, in ethnographic interviews undertaken by Inhorn with nearly 600 infertile individuals and couples in Egypt (1988–89, 1996), Lebanon (2003), United Arab Emirates (2007), and “Arab Detroit” (2003–5, 2007–8), only a handful of Sunni Muslim couples (<10) were willing to contemplate any form of third-party donation. Of the few men and women who “approved” of the practice, their approval was most often a “last resort” when no other ART option could be expected to solve the infertility problem. Furthermore, only egg donation was approved of, because it allowed the infertile wife to experience a pregnancy and could be compared to the *halal* (religiously permitted) practice of polygyny. Sperm donation, on the other hand, was not; it was said to confuse patrilineal descent and constitute a form of *zina*, or a wife’s “extra-

marital” acceptance of another man’s sperm. Most importantly, men argued that a donor child “won’t be my son” (Inhorn 2006b, 2012): in their view, sperm donation would be like “raising another man’s child.”

165.3.2 *Shia Iran*

In opposition to the Sunni rulings on assisted reproduction, leading clerics in Iran have legitimized third party donation in all its forms: sperm, egg, and embryo donation, and surrogacy. However, there is great heterogeneity within Shia Islamic responses to assisted reproduction. Unlike Sunni scholars, Shia scholars in Iran are reluctant to engage in formal collective deliberations on issues of global importance and prefer instead to rely on individualistic independent reasoning. It is this individualistic practice of *ijtihad* that has paved the way for the Shia to engage dynamically with most forms of biotechnology (Inhorn and Tremayne 2012), and has in this case resulted in the development of a wide diversity of opinions among Shia *marja’s* (sources of emulation). These opinions can sometimes disagree and take opposing views on the interpretation of the Qur’an, which has historically led to senior *marja’s* forming their own groups of followers. However, this diversity has also led to considerable “flexibility” for the Shia in the regulation and practice of ARTs.

Although initially both Sunni and Shia religious authorities restricted the use of ARTs to married couples using their own gametes (Mahmoud 2012), by the beginning of the new millennium, the Iranian Shia had found solutions within the religious rules that allowed the use of all forms of ARTs, including most importantly third-party donation. To be able to practice third-party donation within religiously sanctioned parameters, the Shia in Iran extended the definition of marriage to include *mut’a* marriages, a form of “temporary marriage” that is only practiced by Shia Muslims (Haeri 1989). They ruled that if a donor became a legitimate – albeit temporary - spouse, then eggs or sperm could be donated within the confines of legal marriage, but without any sexual contact taking place between the donor and the recipient (Inhorn 2003a, b; Clarke 2006b; Tremayne 2009). Several Iranian religious leaders engaged in further debates, legally approving of embryo donation and surrogacy on the same grounds. Such approval has most recently been extended to allow stem cell research in Iran, and has been applied to other forms of biotechnological advances, including organ donation and transgender surgery. Indeed, it could be argued that the Shia have gone further in embracing all forms of third-party donation than most Western Christian countries (Inhorn et al. 2012).

To understand the reasons for and the speed by which such “liberal” (Clarke 2009) decisions have been made and accepted into practice in Iran, it is essential to realize the constitution of the legislative councils which have made them. These councils are themselves a part of Iran’s theocratic regime, made up of political as well as religious leaders, and the decisions they pass become “official.” However, those who do not wish to abide by these decisions can turn instead to their own

marja' without the worry of breaking any rules. Furthermore, in deciding on the legitimacy of various ARTs, religious leaders do not necessarily act alone; instead, they engage with experts from various disciplines including specialists in Islamic law, medicine, and psychology, to explore the legal and bioethical ramifications of these biotechnologies on society, the family, marriage, and potential children. The approval of third-party donation, for example, was the result of many years of intensive interdisciplinary debate among several *marja's*. Having said this, it must be noted that it was the endorsement of the supreme religious leader, Ayatollah Khamene'i, that gave third-party donation "official" legitimacy in 1999. However, approval or disapproval by Ayatollah Khamene'i does not mean that all Shia leaders are in agreement with him; Shia religious leaders are deeply divided among themselves on this and other divine matters. To date, no definitive, universal conclusion has been reached among the Shia jurists on ARTs. Indeed, there may never be a consensus among Shia leaders about whether or not third-party donation should be permitted and herein lies the potential for great flexibility in ART practice: Shia Muslims are free to adhere to the views of different *marja'* as they see fit, regardless of the "official" decision.

As a result of the diversity of *marja'* opinions, potential Shia Muslim users of third-party donation (that is, doctors and patients) have been able to exercise a great degree of agency and control over actual clinical practices, reinforcing independent understandings of what constitutes kinship and relatedness (Tremayne 2009). Such practices have led to some surprising and counter-intuitive outcomes. For example, siblings of both sexes may donate and receive gametes from each other to make embryos (Garmaroudi Naef 2012). Although this would, in theory, be a breach of kinship rules, in particular the prohibition on sibling incest, the prescription that donation is allowed "as long as no bodily contact or touch and gaze takes place between the parties involved" (Ayatollah Khamenei 1999) is extended to include any two parties acting as a gamete donor and recipient. The ensuing ethical and legal problems in these and other similar cases are abundant. In discussing the validity of the ethical decisions made in Iranian fertility clinics, Tappan (2012) raises serious questions about Shia "flexibility" and bioethics. He argues that while Islamic law, presented as *fatwas*, or legal opinions of Islamic scholars, plays a key role in Islamic bioethics, the assertion that "Islamic bioethics" is synonymous with *fatwas* does not bear out in Iranian fertility clinics. There, clinicians and ethical committees consider a wide range of sources, including civil law, Western bioethical notions, and *ijtihad* and do not limit themselves to *fatwas*. These efforts, in Tappan's view, are part of the wider articulation of Islamic bioethics that includes, but goes beyond, mere reference to Islamic law. Yet, Tappan argues that Iranian clinicians and jurists have failed to unfold deeper, more foundational grounds for Islamic bioethics, and for the application of important theological, ethical, and legal principles. For example, the rights of the future child, to be born from third-party donation, are rarely invoked in clinical discussions.

The justification for allowing the use of third-party reproductive assistance in Iran has been to ensure the stability and happiness of the family through the birth of children, and thereby to reduce the suffering of infertile couples. Indeed, the focus

throughout these Shia jurisprudential debates has remained on the family, which is considered the foundation of society. Nonetheless, the dynamic array of ART practices that are allowed in Iran has opened the way for myriad bioethical, legal, and personal dilemmas. Research on the impact of third party gamete donation has shown that lawmakers, physicians, and patients - each with their own concerns and agendas—are not always equipped to deal with the complex ethical and interpersonal problems that may be generated (Tremayne 2012). Religious texts and authorities cannot always solve these contemporary dilemmas; particularly with regards to the use of sperm donation, for example, religious permissibility may not translate into cultural acceptance or social approval. Thus, Iranian couples who resort to sperm donation may make great efforts to do so “secretly,” and continue to struggle personally and emotionally with their actions, leading to unfavorable outcomes that may have drastically negative implications for the family, for the women, and for the donor-conceived children (Tremayne 2012).

165.3.3 Secular Turkey

Although Turkey is a country committed to secularism in medical ethics (Arda, 2007), its pattern of ART regulation can be thought of as distinctly “Sunni Muslim in character” (Inhorn et al. 2010). As has been described for the Sunni Arab world earlier in this chapter, in Turkey too, the use of assisted reproduction occurs within the strict parameters of heterosexual marriage. The Assisted Reproduction Treatment Centers Directorate, under the Ministry of Health, regulates the practice of ARTs in accordance with a comprehensive piece of legislation which provides definitions, outlines prohibitions, and details all the necessary requirements (including building and physical environment specifications, equipment, materials, and personnel) for clinics to obtain an ART practice license. This Statute on Assisted Reproduction Treatment Centers was first introduced in 1987 (Official Gazette 19551, 21 August 1987), as a pre-emptive framework for ART practice in Turkey, and has subsequently been updated five times, with the latest changes taking place in March 2010 (Official Gazette no. 27613, 6 March 2010). This legislation makes it clear that ARTs are confined to the treatment of married heterosexual couples using their own gametes, and all forms of third-party reproductive assistance are forbidden. In fact, in 2010 Turkey also banned its citizens from seeking treatment with donor gametes in other jurisdictions, thereby becoming the first country to regulate against reproductive tourism (Gürtin 2010, 2011).

The extent of the influence of Islam on Turkey’s ART regulation is a controversial topic without an easy answer (see debates from the Ethics, Law and Moral Philosophy of Reproductive Biomedicine conference in 2006 reported in Gürtin 2012). While on the one hand Turkey is a secular country, on the other it has a predominantly (Sunni) Muslim population whose views on such fundamental and ethical matters are undoubtedly shaped by their religious affiliation and by the broader aspects of a Muslim culture. Indeed, some commentators have argued that the ART

law “was created by a committee established by the ruling government without the necessary consideration for, or consultation with, couples requiring third-party reproduction. Two fears were integral to the decision made by the committee: the fear produced by the incomprehension of the new technology and the religious issues of a country with a predominantly Muslim culture” (Isikoglu et al. 2006: 321). Turkey’s highest religious authority, The Presidency of Religious Affairs, lends support to the regulation of ARTs, explaining that IVF “is no longer permissible if a foreign element is included, meaning if the sperm, eggs or womb belong to a person outside of the husband-wife couple; because according to the general principles of the religion of Islam, there is an imperative for a legitimate child to belong, whether by sperm or egg or womb, to a wedded husband-wife couple” (Presidency of Religious Affairs, 2006, author’s translation).

It would, however, be over-simplistic to stipulate a homogenous position against third-party assisted reproduction among Turkish men and women informed solely by Muslim morality and culture, since individuals do not always care about, follow, nor even have an accurate knowledge of the teachings of their religion. While it is generally true that third-party reproductive assistance (particularly the use of donor sperm) is a stigmatized taboo in Turkey, there have been reports for years of Turkish couples surreptitiously crossing borders to nearby Cyprus and Greece in order to access ARTs with donor gametes, particularly donor eggs. Indeed, according to Irfan Şencan, the director of the Ministry of Health’s Treatment Services department, the ban on reproductive travel was introduced in 2010 as a response to the growth of this phenomenon in recent years. Although it is difficult to quantify the occurrence of such activities or even to gain an accurate picture of public opinions on assisted reproduction and third party reproductive assistance (since there are only a small number of studies on this subject, with some methodological limitations, see Baykal et al. 2008; Isikoglu et al. 2006; and Kilic et al. 2009), the available evidence points to a diversity of opinions among Turkish people.

According to the first available data from Turkey regarding public opinion towards egg donation, there are high rates of approval for this form of fertility treatment, with only 15 % of respondents showing “complete objection” (Isikoglu et al. 2006). Moreover, more than half of the women and two-thirds of the men (wrongly) thought that their religion (i.e. Islam) would allow egg donation if they needed it, and more than half stated that they would prefer egg donation to adoption. Acceptance of egg donation was also shown to vary according to different scenarios, with medical conditions receiving highest rates of approval (from 81.03 % of women and 79.76 % of men); followed by age-related infertility (68.10 % and 60.12 %); inherited medical or mental problems in the family (45.26 % and 54.76 %); and finally the existence of a previous child with disability (49.57 % and 42.86 %). However, Baykal et al. (2008) and Kilic et al. (2009) both found significantly lower levels of acceptance for egg donation than Isikoglu et al. (2006) in their studies of infertile Turkish women, at 23.3 % and 26 % respectively, which suggests more clarification is required.

Baykal et al. (2008) investigated the attitudes of 368 women who had applied for infertility treatment using self-completion questionnaires consisting of 38 items

determining socio-demographic status, previous history with infertility, and opinions. They found acceptance rates of 23.3 % for egg donation, 15.1 % for surrogacy and only 3.4 % for sperm donation. These highly differential rates reflect the different statuses traditionally attributed to the role of men and women in procreation in Turkey, but also more generally in Muslim cultures (Inhorn 2006b), and have also been shown to exist to some extent among Turkish communities living in Europe (Gürtin-Broadbent 2009). However, it is difficult to know how to interpret what is meant by “acceptance” in this study, since they also report that when asked what they would do if their IVF treatment failed, 59.7 % of respondents answered that they would “do nothing,” 38.3 % would pursue adoption, and only 2 % would consider gamete donation. Similarly, Kilic et al. (2009) presented a sample of 250 women who had applied for infertility treatment with a questionnaire containing 7 socio-demographic items and 5 questions on attitudes towards surrogacy and egg donation, for which they found acceptance rates of 24 % and 26 % respectively. Although the acceptance rates for egg donation among infertile women in the studies by Baykal et al. (2008) and Kilic et al. (2009) are consistent, there are also a range of confusing divergences. For example, in the study by Kilic et al. (2009) patients’ (anticipated) responses to IVF failure suggested adoption to be the preferred solution (59.6 %), followed by accepting egg donation (26 %), doing nothing (25.6 %), and accepting a surrogate mother (24 %). Interestingly, Turkey is one of the very few Muslim countries—along with “secular” Tunisia and Shia Iran—to allow child adoption, which is otherwise widely prohibited across the Sunni Arab world.

Overall, these studies, despite their limitations, clearly suggest heterogeneity in the views of Turkish infertile men and women and the general public with regards to third-party assisted reproduction. These views cannot simply be equated with a “Sunni” or “Shia” position, but reveal that, particularly in this secular context, individuals must deliberate according to their own local moral worlds to reach decisions which may or may not be aligned with the official position of their religion.

165.4 Concluding Remarks

In this chapter we have examined the globalization of ARTs with a specific focus on Islamic perspectives to these technologies. The comparisons provided here – between the Sunni Arab world, Shi Iran, and secular Turkey – demonstrate clearly that there is not a single monolithic “Islamic” response to ARTs. Rather, Islam has provided a multiplicity of responses to the practice and regulation of assisted reproduction, engaging with the novel ethical, social, and relational dilemmas of these technologies, while simultaneously taking account of religious scriptures and contemporary contexts. Indeed, although there are similarities, there is also variation at the regulatory, practice and attitudinal levels between different “Islamic” contexts. Most importantly, there is a divergence between Sunni and Shia authorities: while the former have unanimously prohibited all forms of third-party reproductive

assistance as a crucial caveat to the use of fertility treatments, the latter have provided a diversity of opinions enabling the use of donor eggs, donor sperm, donor embryos and surrogacy. This difference of opinion between Sunni and Shia Islam, as well as between the *fatwas* of different Shia clerics, has resulted in fascinating social choreographies, whereby desperate infertile men and women switch their allegiances to more permissive clerics, non-Muslim practitioners display *fatwas* absolving their practices on the walls of their clinics (Clarke 2008), and Sunni couples from surrounding Middle Eastern countries engage in surreptitious trips for cross-border reproduction using third-party assistance (Inhorn 2009, 2012; Inhorn et al. 2010). Interestingly, in secular Turkey, despite a legal ban on third-party reproductive assistance, predominantly Sunni Muslim men and women have displayed a variety of opinions and personal attitudes towards gamete donation.

Comparisons, although relatively infrequent in the scholarly literature on ARTs, are an interesting and useful way to get a deeper insight into many of the central questions surrounding the expansion and spread of ARTs. Such comparisons – based on law, religion, culture, politics, practice, and attitudes – demonstrate the rate and pace of globalization of ARTs, help to delineate the similarities and differences of ART practice in different global locations; and promote an understanding of the underlying reasons (moral, legal, economic, etc.) that lead to the heterogeneity of ART practice around the world (Inhorn et al. 2010). In this chapter, we hope to have shown that the similarities and differences between the Sunni Arab world, Shia Iran and secular Turkey demonstrate that while religion is an extremely important factor in generating personal and cultural responses to new technologies and their social applications, these responses are not over-determined by religion. Thus, to imagine that all Muslims or all Islamic authorities will respond in an identical manner to emerging dilemmas would be to misunderstand how religion informs ethical, moral and social deliberations at both a collective and an individual level, and to miss the crucial nuances in how religion and culture interact.

Our work, and the work of colleagues in the field of medical anthropology and beyond, seeks to ethnographically explore some of these nuances with respect to assisted reproduction (see Inhorn and Birenbaum-Carmeli 2008 for a survey of this scholarship): Inhorn's research spans Egypt, Lebanon, the United Arab Emirates and Arab America; Tremayne focuses on Iran; and Gürtin on Turkey and on Turkish migrants in the UK. Some of the questions we have pursued include the stigma and disruption of involuntary childlessness (for example, Inhorn 1994); attitudes towards assisted reproduction (for example, Inhorn 2003a); changing gender identities and relations in these regions as a result of ARTs (for example, Inhorn 2012); the reproductive experiences and opinions of diasporic or migrant populations from these regions (Gürtin-Broadbent 2009; Inhorn and Fakhri 2006; Tremayne 2012); and practices of cross-border reproductive care (e.g. Gürtin 2010, 2011; Inhorn 2009, 2010; 2011a, b). However, significant gaps remain regarding academic research into the reproductive experiences of Muslim men and women, particularly in Europe, South and South East Asia and North Africa. We encourage new researchers to address these gaps, to explore the impact of emerging technological and social possibilities, and to contribute to a vibrant, fast-developing field of scholarship.

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