

## **Globalization and gametes: reproductive ‘tourism,’ Islamic bioethics, and Middle Eastern modernity**

Marcia C. Inhorn\*

*Department of Anthropology, Yale University, 10 Sachem Street,  
P.O. Box 208277, New Haven, CT 06520-8277, USA*

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‘Reproductive tourism’ has been defined as the search for assisted reproductive technologies (ARTs) and human gametes (eggs, sperm, embryos) across national and international borders. This article conceptualizes reproductive tourism within ‘global reprocapes,’ which involve the circulation of actors, technologies, money, media, ideas, and human gametes, all moving in complicated manners across geographical landscapes. Focusing on the Muslim countries of the Middle East, the article explores the Islamic ‘local moral worlds’ informing the movements of Middle Eastern infertile couples. The ban on third-party gamete donation in Sunni Muslim-majority countries and the recent allowance of donor technologies in the Shia Muslim-majority countries of Iran and Lebanon have led to significant movements of infertile couples across Middle Eastern national borders. In the new millennium, Iran is leading the way into this ‘brave new world’ of high-tech, third-party assisted conception, with Islamic bioethical discourses being used to justify various forms of technological assistance. Although the Middle East is rarely regarded in this way, it is a key site for understanding the intersection of technoscience, religious morality, and modernity, all of which are deeply implicated in the new world of reproductive tourism.

**Keywords:** globalization; assisted reproductive technologies; reproductive tourism; gamete donation; bioethics; Islam; Middle East

### **Introduction**

What motivates the global movements of infertile people searching for new reproductive technologies and human gametes? Inspired by recent developments in globalization theory, medical anthropology, gender studies, and science and technology studies, this article focuses on the newly described phenomenon of ‘reproductive tourism,’ also known as ‘fertility tourism,’ ‘procreative tourism,’ and ‘cross-border reproductive care’ (CBRC). Reproductive tourism is defined as ‘the traveling by candidate service recipients from one institution, jurisdiction or country where treatment is not available to another institution, jurisdiction or country where they can obtain the kind of medically assisted reproduction they desire. As such, it is part of the more general “medical tourism”’ (Pennings 2002, 337).

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\*Email: [marcia.inhorn@yale.edu](mailto:marcia.inhorn@yale.edu)

Little is known about the motivations of reproductive tourists in any part of the world. A front-page story in *The New York Times* on January 25, 2005, entitled 'Fertility Tourists Go Great Lengths to Conceive,' claimed that infertile Americans were seeking services abroad, 'in places like South Africa, Israel, Italy, Germany, and Canada, where the costs can be much lower' (Lee 2005, A1). However, economic factors may not be the sole consideration. Scholars who are beginning to theorize the relationship between nation-states, reproductive tourism, and global reproductive rights suggest that the causes of such transnational tourism may be manifold. Eight discrete, but often interrelated, factors promoting reproductive tourism have been cited in the existing literature: (1) individual countries may prohibit a specific service for religious or ethical reasons; (2) a specific service may be unavailable because of lack of expertise, equipment, or lack of donor gametes (eggs, sperm or embryos); (3) a service may be unavailable because it is not considered sufficiently safe or its risks are unknown, so that countries exercising safety precautions may prohibit procedures that are available elsewhere; (4) certain categories of individuals may not receive a service, especially at public expense, on the basis of age, marital status, or sexual orientation; (5) services operate on a market or quasi-market basis, particularly in relation to donor gametes, thus affecting both affordability and supply (including shortages and waiting lists); (6) services may simply be cheaper in other countries; (7) patients may have concerns about low-quality medical services; and finally, (8) privacy concerns may lead some patients to travel (Blyth and Farrand 2005; Deech 2003; Pennings 2002).

These 'causes' of reproductive tourism are still speculative, as little empirical research has yet to be undertaken. Yet, even in the absence of empirical data, a policy debate is growing over the desirability of national and international legislation to restrict reproductive tourism. As Penning notes in *The Journal of Medical Ethics*, 'The more widespread this phenomenon, the louder the call for international measures to stop these movements' (Pennings 2002, 337).

Most of the extant literature on reproductive tourism focuses on the West, particularly upon border-crossing between European Union nations (Storrow 2005). Little is known about reproductive tourism outside of Euro-America, or about the forces that motivate infertile persons to undertake international travel in their 'quests for conception' (Inhorn 1994). Only through in-depth, ethnographic analysis of the actual stories, desires, and migratory pathways of reproductive tourists themselves may scholars begin to shed light on the complex calculus of factors governing this global movement of reproductive actors.

This article examines the theoretical interplay between forces of globalization and reproductive tourism in the Middle East. It will begin with Arjun Appadurai's theory of global 'scapes,' which is highly relevant and useful in thinking about the global landscape in which assisted reproductive technologies (ARTs) are being rapidly deployed. But, Appadurai's work needs to be 'engendered' and expanded to include the complex 'reproscape' in which the multiple 'flows' of reproductive tourism occur. In the global reproscape, issues of bodily commodification are paramount, given that reproductive tourism may be undertaken explicitly to procure human gametes, both sperm and eggs, which are disassociated from men's and women's bodies and increasingly sold on the open market. Furthermore, the language of reproductive 'tourism' itself comes into question when the subjectivities of reproductive travelers themselves are taken into consideration. In short, a whole new vocabulary

is needed to represent the global flows and scapes surrounding ARTs in the new millennium.

The second half of the article turns to the author's empirical work on reproductive tourism in the Muslim Middle East, based on ethnographic research that was carried out there over the past 20 years, and particularly since the year 2003.<sup>1</sup> As will be argued, reproductive 'tourism' in the Middle East is inflected by local moral attitudes toward science, technology, and medicine, and particularly varying Islamic bioethical positions on the donation of human gametes. Furthermore, the implications of gamete donation for marriage, kinship, and gender relations are tremendous, perhaps especially for infertile Muslim couples. But first, it is important to situate this topic of reproductive tourism – and the search for human gametes in the Middle East – within the broader theoretical literature on globalization and specifically global flows.

### **Globalization and reproductive tourism: theorizing reoscapes**

Globalization can be understood, in a most basic sense, 'as the ever faster and ever denser streams of people, images, consumer goods, money markets, and communication networks around the world' (Schaebler and Stenberg 2004, xv–xvi). Anthropologists have contributed significantly to theorizing the nature of these global flows, and to providing numerous ethnographic examples of the 'glocal,' or the reception of things 'global' at various 'local' levels (Appadurai 1996; Basch, Glick Schiller, and Blanc 1994; Friedman 1994; Hannerz 1996; Inhorn 2003; Lewellen 2002; Ong and Collier 2005; Ritzer 2002).

One of the major anthropological theorists of globalization, Arjun Appadurai, has delineated a 'global cultural economy' in which global movements operate through five pathways, which he famously calls 'scapes' (Appadurai 1990, 1996). According to Appadurai, globalization is characterized by the movement of people (ethnoscapes), technology (technoscapes), money (financescapes), images (mediascapes), and ideas (ideoscapes), which now follow increasingly complex trajectories, moving at different speeds across the globe. Appadurai reminds us that this transnational movement of people, goods, and ideas is both a deeply historical and inherently localizing process. In other words, globalization is not enacted in a uniform manner around the world, nor is it simply culturally homogenizing in its effects.

The phenomenon of reproductive tourism clearly involves two of Appadurai's five scapes – namely, ethnoscapes and technoscapes. Ethnoscapes, according to Appadurai (1996, 33), involve 'the landscape of persons who constitute the shifting world in which we live: tourists, immigrants, refugees, exiles, guest workers, and other moving groups and individuals.' Technoscapes involve 'the global configuration, also ever fluid, of technology and the fact that technology, both high and low, both mechanical and informational, now moves at high speeds across various kinds of previously impervious boundaries' (Appadurai 1996, 34).

However, a consideration of reproductive tourism has the potential to expand upon Appadurai's theory of globalization. Despite the heuristic appeal of five discrete global scapes, one scape of significant medical anthropological interest – namely, the 'bioscape' of moving biological substances and body parts – might be added to Appadurai's list.<sup>2</sup> Using Appadurai's language of 'scapes,' reproductive

tourism might be thought of productively as a more complex ‘reproscape’ – a kind of ‘meta-scape’ combining numerous dimensions of globalization and global flows. To wit, reproductive tourism occurs in a new world order characterized not only by circulating reproductive technologies (technoscapes), but also by circulating reproductive actors (ethnoscapes) and their gametes (bioscapes), leading to a large-scale global industry (financescapes), in which images (mediascapes) and ideas (ideoscapes) about making lovely babies while ‘on holiday’ come into play. This reproscape entails a distinct geography traversed by global flows of reproductive actors, technologies, body parts, money, and reproductive imaginaries (e.g., the birth of ‘miracle’ babies).

Furthermore, this reproscape is highly gendered – with technologies enacted on men’s and women’s bodies in highly differentiated ways. Gender was never the focus of Appadurai’s original work on globalization. Yet, the ethnoscape of moving peoples, the technoscape of moving technologies, the bioscape of moving body parts, and the ideoscape of moving procreative scenarios are, indeed, highly gendered, and this is a feature of globalization that must be analyzed. Reproscapes also entail new forms of reproductive labor among reproductive ‘assistors,’ who, in many cases are women, and who undergo risky forms of hormonal stimulation and oocyte (egg) harvesting. However, reproductive assistance also has the potential to create kin-like female alliances, including between actual kin who donate their oocytes to relatives, as well as between unrelated women who ‘share’ their oocytes with other women in infertility clinics or donate them for a fee. Oocyte donation in particular invokes the notion of altruistic ‘gift exchange’ between women, even though oocytes are increasingly sold on the reproductive marketplace for up to \$50,000, especially for ‘Ivy League’ oocytes of presumed superior intelligence and other ineffable qualities. Indeed, the very language of ‘reproductive assistance’ is called into question, when assistance comes at such a high cost.

In addition, to use the language of ‘reproductive tourism’ to define this field of global flows is a bit of a misnomer (Inhorn and Patrizio 2009). It is important to note that, in some countries, ‘clinics that cater to fertility tourists appear to welcome the development of new markets and have undertaken to market their services so as to create a fantasy of conceiving a child during a romantic holiday’ (Storrow 2005, 326–327). But is overseas test-tube baby-making a holiday? In his excellent theoretical analysis of reproductive tourism, legal theorist Richard Storrow (2005) questions the trope of ‘tourism’ as an appropriate gloss for fertility travel. As he notes, tourism is a type of traveling that involves leisure, pleasure, and free time. Fertility tourism, on the other hand, is quite a different story:

Fertility tourism occurs when infertile individuals or couples travel abroad for the purposes of obtaining medical treatment for their infertility. Fertility tourism may also occur in the reverse, when the infertile import the third parties necessary for their fertility treatment. These definitions of fertility tourism are, on the one hand, difficult to harmonize with the idea of tourism as pleasure travel, particularly given that some infertile individuals describe their condition as devastatingly painful and their effort to relieve it as requiring enormous physical and emotional exertion (Storrow 2005, 300).

More neutral terms, such as ‘reproductive travel’ or ‘cross-border reproductive care’ are beginning to enter the clinical lexicon (Inhorn and Patrizio 2009). However, the use of the term ‘reproductive exile’ more accurately captures the feelings and experiences of many infertile couples who feel ‘forced’ to travel to seek ART

assistance across borders. Indeed, the term 'tourism' must be avoided, for it can never fully capture the stories of travel and hardship experienced by the infertile in their border crossings. The term 'tourism' will be dispensed with in the remainder of this article.

Moreover, the notion of 'stratified reproduction,' forwarded by medical anthropologists Faye Ginsburg and Rayna Rapp (1995), evokes the transnational inequalities whereby some well-to-do infertile couples are able to achieve their reproductive desires, including through resort to reproductive technologies and reproductive travel, while other infertile couples of lesser means are disempowered and even despised as reproducers. Only 48 of the 191 member states of the World Health Organization offer ARTs to their citizens, with less than 1% of the projected needs for ARTs met in the largest countries of the world (China, India, Pakistan, Indonesia, Egypt) (Inhorn 2009). In these countries, the average cost of one cycle of IVF exceeds the average income of half the population, making ARTs easily affordable only for elites (Inhorn 2003). In other words, the global 'reproscape' in which reproductive tourism takes place is an uneven terrain, in that some individuals, some communities, and some nations have achieved greater access to the fruits of reproductive globalization than others. The term 'stratified reproscape' might be added to the lexicon to describe the unevenness of ART access around the world.<sup>3</sup>

In the author's earlier studies of in vitro fertilization in Egypt, which were characterized as a 'quest for conception' (Inhorn 1994), she examined numerous local barriers to ART access, calling these 'arenas of constraint,' or the structural, ideological, social relational, and practical obstacles and apprehensions that constrain and sometimes prohibit altogether the uses of ARTs (Inhorn 2003). More than a decade later, little is known about the various arenas of constraint that face infertile couples in their 'transnational quests for conception.'

However, one of the major prohibitions cited by legal scholars who have written about reproductive tourism is the prohibition on access to human gametes (Blyth and Farrand 2005; Deech 2003; Pennings 2002). Several Western nations, including Italy, Norway, Canada, and Great Britain, have enacted strict legislation prohibiting some or all forms of gamete donation, especially anonymous gamete donation, as well as gestational surrogacy. Such restrictions have triggered European fertility tourism on a massive scale, mostly of infertile Western Europeans to the 'white' post-Soviet bloc of Eastern Europe (such as Russia, Slovenia, and Romania). There, clinics can 'employ the Internet to attract fertility tourists with promises of cut-rate in vitro fertilization, high success rates, liberal reproductive policies and little administrative oversight' (Storrow 2005, 307). Furthermore, young women in these countries may comprise a vulnerable population of egg donors, who are compelled out of economic necessity to sell their eggs in the local reproductive marketplace (Storrow 2005). Given the newly recognized category of the 'traveling foreign egg donor' who seeks economic mobility through the sale of her body parts (Heng 2007), Storrow points to the parallels between unregulated fertility tourism and sex tourism, as young women in the economically deteriorated post-communist societies discover that prostitution and egg donation offer economic rewards. As Storrow (2005, 327) argues, 'egg donation, like prostitution, will be especially attractive in regions of the world where large numbers of women with few choices want to improve their economic circumstances by any means available.'

Indeed, ‘bodily commodification’ – namely, selling gametes and other body parts for the purposes of reproduction and medical research – has become one of the major areas of study in both medical anthropology and science and technology studies (Cohen 1999, 2002; Lock 2001; Schepers-Hughes 2000, 2002a, 2002b; Sharp 2000, 2006). Bodily penetration, fragmentation, and commodification are clearly operative in the world of assisted reproduction, a world that has evolved dramatically since the birth of Louise Brown, the world’s first ‘test-tube baby,’ in 1978. Since then, the invention of in vitro fertilization (IVF) to overcome female infertility has paved the way for:

- intracytoplasmic sperm injection (ICSI) to overcome male infertility;
- third-party gamete donation (of eggs, sperm, embryos, and uteruses, as in surrogacy) to overcome absolute sterility;
- multi-fetal pregnancy reduction to selectively abort high-order IVF pregnancies;
- ooplasm transfer (OT) to improve egg quality in perimenopausal women;
- cryopreservation, storage, and disposal of unused gametes and embryos;
- preimplantation genetic diagnosis (PGD) to select ‘against’ embryos with genetic defects and to select ‘for’ embryos of a specific sex;
- embryonic stem cell research on unused embryos for the purposes of therapeutic intervention; and
- the future possibility of asexual autonomous reproduction through human cloning.

With virtually all of these technologies, sperm and eggs are retrieved from bodies, embryos are returned to bodies, and sometimes they are donated to other bodies or used for the purposes of stem cell and other forms of medical research (Franklin 1996; Kahn 2000; Kirkman 2003; Konrad 1998). As noted earlier, ARTs exact a significant physical toll on the body, especially for women as both recipients of ARTs and as oocyte donors (Inhorn 2003, Kahn 2000; Lorber 1989; Storrow 2005; van der Ploeg 1995). Furthermore, despite the existence of national and international statements opposing the commercialization of ART services, significant commodification has occurred as gametes and embryos are increasingly sold on the open market through Internet websites and college newspapers (with such advertisements as ‘Sperm Donors Needed – We Will Pay!’) (Blank 1998; Braverman 2001; Carmeli and Birenbaum-Carmeli 2000; Pollock 2003; Shanley 2002; Thompson 2005). In her article on ‘Reproductive Tourism in Europe,’ Ruth Deech (2003, 425) questions the human rights implications of the documented massive global transfer within the European Union of sperm, eggs, and embryos ‘passed from country to country in search of one that permits the desired treatment or allows the chosen gametes to be used.’

The Middle East is different from the EU countries in terms of its attitudes toward commodification and bodily transfer of human gametes. In the Middle East, an ART industry is flourishing, with hundreds of IVF clinics in countries ranging from the small Arab Gulf states to the larger but less prosperous nations of North Africa (Inhorn 2003; Serour 1996, 2008; Serour and Dickens 2001). This development of a mostly private Middle Eastern ART industry is not surprising: Islam encourages the use of science and medicine as solutions to human suffering

and is a religion that can be described as ‘pronatalist,’ encouraging the growth of an Islamic ‘multitude’ (Brockopp 2003; Inhorn 1994; Musallam 1986).

Yet, relatively little is known about Islam and technoscience, if technoscience is defined broadly as the interconnectedness between science and technology through ‘epistemological, institutional, and cultural discursive practices’ (Lotfalian 2004, 1). As noted by Lotfalian (2004, 6) in his recent monograph on *Islam, technoscientific identities, and the culture of curiosity*, there is a glaring lacuna in the literature on science and technology in cross-cultural perspective, particularly from the Islamic world, where there are ‘really only two strains of relevant work’ – first, on the Islamic medieval sciences and, second, on philosophical arguments for civilizational differences between Islamic and Western science and technology. This dearth of relevant scholarship clearly applies to the cross-cultural study of ARTs. For example, in the second edition of the seminal volume on *Third party assisted conception across cultures: Social, legal and ethical perspectives* (Blyth and Landau 2004), not a single Muslim society is represented among the 13 country case studies.

Clearly, the time has come to examine the globalization of ARTs to diverse contexts in the Muslim world, particularly given the rapid development and deployment of these technologies. In addition to examining the ART ‘technoscape,’ it is equally important to examine the ‘ethnoscape’ of reproductive actors as they move across the Middle East. ARTs in the Middle East bespeak a complex reoscape of moving peoples, technologies, gametes, money, images, and ideas involving the pursuit of conception. That infertile couples are willing to participate in this Middle Eastern reoscape bespeaks the love, commitment, and ardent desire for children that characterize most couples in the Middle East, but which are rarely emphasized in the Western media discourses about the purported violence, fanaticism, and cruelty of Arab men to women (Inhorn 2007). As will be shown in the story of an infertile Syrian couple that follows, the romantic love and conjugal commitments between many infertile Muslim couples are fueling the IVF industry in the Middle East. Love, commitment, and the desire to become parents are also causing some couples to venture abroad in search of gametes.

### **The Middle Eastern reoscape: understanding Islamic local moral worlds**

What motivates infertile Middle Eastern couples to travel overseas in search of ARTs? Although there are a wide variety of motivating factors behind reproductive travel (Inhorn and Shrivastav 2010), anthropologists and other scholars studying ARTs in the Middle East have called attention to Islam and the so-called ‘local moral worlds’ of Middle Eastern Muslim infertile couples. Indeed, nearly a dozen scholars are now participating in this scholarly endeavor (Inhorn and Tremayne, in press).

Arthur Kleinman (1995, 45) has called local moral worlds ‘the commitments of social participants in a local world about what is at stake in everyday experience.’ Understanding the rapidly evolving moral-religious climate surrounding ARTs in the Muslim world is imperative. To do so requires examining *fatwas*, or non-legally binding but authoritative religious decrees, as well as the subsequent ethical and legal rulings that are being issued to enforce or, in some cases, overturn these *fatwa* rulings (Inhorn and Tremayne, in press; Moosa 2003; Tremayne 2009). However,

understanding local moral worlds also involves asking what Muslim ART-seekers think about IVF and specifically donor technologies. When faced with the need for donor gametes to overcome infertility, what do Muslim IVF patients do? Is the search for human gametes one of the major motivating factors for reproductive tourism in the Middle East, as suggested by the theoretical literature on this phenomenon? At this point, these questions provide compelling material for a study of what might be called ‘technoscience in practice.’

As explained in the forthcoming volume *Islam and assisted reproductive technologies: Sunni and Shia perspectives* (Inhorn and Tremayne, forthcoming), major divergences in Islamic juridical opinion between Sunni and Shia religious authorities have led to striking differences in the practice of ARTs, particularly with regard to the use of donor gametes. These differences in practice have led to new local moral worlds among Muslim IVF patients, as well as new transnational reflows across Middle Eastern borders. The differences in the dominant Sunni position on ARTs will be briefly described, before turning to Shia innovations that have had major moral and practical implications for Muslim couples in their quests for donor gametes.

### *Sunni Islam and IVF*

To begin with Sunni Islam, the Grand Shaikh of Egypt’s famed religious university, Al Azhar, issued the first *fatwa* on medically-assisted reproduction on March 23, 1980. This initial *fatwa* – issued only two years after Louise Brown’s birth in England, but a full six years before the opening of Egypt’s first IVF center – has proved to be truly authoritative and enduring in all its main points. In fact, the basic tenets of the original Al-Azhar *fatwa* on IVF have been upheld by other *fatwas* issued since 1980 in Egypt, Saudi Arabia, Malaysia, and beyond, thereby achieving wide acceptance across the Sunni Muslim world (Inhorn, Patrizio, and Serour, in press; Serour 2008).

The Sunni Islamic position on assisted reproduction clearly permits in vitro fertilization, using eggs from the wife with the sperm of her husband and the transfer of the fertilized embryos back to the uterus of the same wife. However, since marriage is a contract between the wife and husband during the span of their marriage, no third party should intrude into the marital functions of sex and procreation. This means that a third party donor is *not* acceptable, whether he or she is providing sperm, eggs, embryos, or a uterus (as in surrogacy). 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.

As a result, at the ninth Islamic law and medicine conference, held under the auspices of the Kuwait-based Islamic Organization for Medical Sciences (IOMS) in Casablanca, Morocco, in 1997, a landmark five-point 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). Such a ban on third-party gamete donation is effectively in place



in the Sunni world, which represents approximately 80–90% of the world's 1.4 billion Muslims (Inhorn 2003, 2005; Meirou and Schenker 1997; Serour 1996, 2008; Serour and Dickens 2001).

In interviews conducted by the author with hundreds of Sunni Muslim IVF patients, they agree completely with the religious prohibitions on gamete donation, arguing that gamete donation: (1) is tantamount to adultery, by virtue of introducing a third party into the sacred dyad of husband and wife; (2) creates the potential for future half-sibling incest, if the offspring of the same anonymous donor should happen to meet and marry; and (3) confuses kinship, paternity, descent, and inheritance in the emphatically patrilineal societies of the Muslim Middle East. According to them, preserving the '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. For Muslim men in particular, ensuring paternity and the 'purity' of lineage through 'known fathers' is of paramount concern. The problem with third-party donation, therefore, is that it destroys a child's *nasab*, or lineage, which is considered immoral in addition to being psychologically devastating. The child will be deemed illegitimate and stigmatized even in the eyes of its own parents, who will therefore lack the appropriate parental sentiments (Inhorn 2006).

This firm conviction that parenthood of a 'donor child' is an impossibility is clearly linked to the legal and cultural prohibitions against adoption throughout the Sunni Muslim world (Inhorn 1996; Sonbol 1995; Zuhur 1992). The original Al-Azhar *fatwa* prohibiting third-party gamete donation also prohibits adoption of orphans, considering both of them unallowable. As a result, few Sunni Muslim IVF patients will contemplate adopting an orphan, stating with conviction that it is 'against the religion.' According to Arab men, an adopted child, like a donor child, 'won't be my son' (Inhorn 2006).

### ***Shia Islam and IVF***

Having said this, it is very important to point out how things have changed for Shia Muslims since the beginning of the new millennium. Shia is the minority branch of Islam with its center in Iran. The countries of Iraq, Lebanon and Bahrain are thought to have Shia majorities, and Shia minority populations are also found in Syria and the eastern coast of Saudi Arabia, which is an otherwise ardently Sunni Muslim country. Shia populations can also be found in the South Asian countries of Afghanistan, Pakistan, and India, where the Ismaili and Bora Shia communities form distinct subgroups.

Many Shia religious authorities support the majority Sunni view: namely, they agree that third-party donation should be strictly prohibited. Iraq's Ayatollah Sistani, for example, has opposed any form of third-party donation (Clarke 2009). However, in the late 1990s, the Supreme Leader of the Islamic Republic of Iran, Ayatollah Ali Hussein Khamene'i, the chosen successor to Iran's Ayatollah Khomeini, issued a *fatwa* effectively permitting donor technologies to be used under certain conditions (Clarke 2006, 2009; Inhorn and Tremayne, forthcoming; Tremayne 2009). With regard to both egg and sperm donation, Ayatollah Khamene'i stated that *both* the donor and the infertile parents must abide by the religious codes regarding parenting. However, the donor child can only inherit from the sperm or egg donor, as the infertile parents are considered to be like 'adoptive' parents.

However, the situation for Shia Muslims is actually much more complicated than this. Because the Shia valorize a form of individual religious reasoning known as *ijtihad*, various Shia religious authorities have come to their own conclusions about sperm and egg donation (Mahmoud, in press; Tremayne 2009). As a result, there are now major disagreements about:

- (1) whether third-party donation truly constitutes *zina*, or adultery, if no actual gaze or touch takes place with the gamete donor;
- (2) whether the child should follow the name of the infertile father or the sperm donor in cases of male infertility;
- (3) whether donation is permissible at all if the donors are anonymous;
- (4) whether the husband of an infertile woman needs to do a temporary *mut'a* marriage with the egg donor, then release her from the marriage immediately after the embryo transfer, in order to avoid *zina*, or adultery. Such *mut'a* marriages are condoned in Shia, but condemned in Sunni Islam; and
- (5) whether a Shia Muslim woman married to an infertile man can do a *mut'a* marriage with a sperm donor, which would constitute an illegal state of polyandry.

In theory, only widowed or otherwise single women – who are not currently married – should be able to accept donor sperm, in order to avoid the implications of *zina*, or adultery. However, in the Muslim countries, single motherhood of a donor child is unlikely to become socially acceptable. Indeed, Iran has disallowed sperm donation, although surrogacy has been permitted and is now widely practiced (Garmaroudi, in press). To get around this problem of sperm donation, some Iranian Shia women are temporarily divorcing their infertile husbands, temporarily marrying the sperm donors, ending the temporary marriage once the pregnancy is firmly established, and then remarrying their infertile husbands (Tremayne 2009). As Tremayne notes, such sperm donation in Iran does not necessarily make ‘happy families,’ suggesting the need to think through the future well-being of both women and the children conceived in this manner (Tremayne, in press).

Given these moral ambiguities and uncertainties, those married infertile Shia couples who are truly concerned about carrying out third-party donation according to religious guidelines find it difficult to meet these various requirements, particularly regarding sperm donation. Yet, having said that, in Iran and Lebanon, at least some Shia couples are beginning to receive donor gametes, as well as donating their gametes to other infertile couples. In Iranian clinics that follow Ayatollah Khamene'i's lead, all manner of egg, sperm, and embryo donation, as well as surrogacy, continue to take place, with his *fatwa* prominently displayed as moral justification (Garmaroudi, in press). Indeed, since the new millennium, donor gametes are now being donated, shared, and even purchased by infertile couples in IVF clinics in Shia-majority Iran and Lebanon, the only two countries in the Muslim world to allow this practice (Inhorn, Patrizio, and Serour, in press). For infertile Shia couples who accept the idea of donation, the introduction of donor technologies has been described as a ‘marriage savior,’ helping to avoid the ‘marital and psychological disputes’ that may arise if the couple's case is otherwise untreatable.

Who is the source of these donor gametes? In the Lebanese IVF clinics in this study, some of the donors were other IVF patients (mostly Shia Muslims who accept the idea of donation), some were friends or relatives (including egg-donor sisters),

and some were anonymous donors, who provided their oocytes for a fee. In at least one clinic catering to a largely conservative Shia clientele, some of these donors were young non-Muslim, American women, who travel from the Midwest to Lebanon for extra payment in order to anonymously donate their eggs to infertile Lebanese couples. Ironically, those most likely to receive these 'American eggs' are conservative Shia couples, who accept the idea of donation because they follow the teachings of Ayatollah Khamene'i in Iran. In Lebanon, at least, such Shia recipients of American eggs are likely to be members of or sympathizers with Lebanon's Hizbullah political party, which is officially described by the US administration as a terrorist organization!

Furthermore, quite interestingly, in multi-sectarian Lebanon, the recipients of these donor eggs are not necessarily only Shia Muslim couples. Some Sunni Muslim patients from Lebanon and from other Middle Eastern Muslim countries such as Egypt and Syria are quietly slipping across transnational borders to 'save their marriages' through the use of donor gametes, thereby secretly 'going against' the dictates of Sunni Muslim orthodoxy. That such reproductive travel is done in secrecy – usually under the guise of a 'holiday in Beirut' – is quite important, given the moral condemnation of gamete donation in the Sunni Muslim countries. Although such Sunni Muslim gamete seekers may have made peace with their own moral decisions to use donor technologies, they often remain extremely concerned about maintaining anonymity and confidentiality, in order to avoid moral censure of themselves and their future donor offspring. The story of Hatem and Huda, a long-term infertile Muslim couple, bespeaks the complexities within the Middle Eastern reprocure.

### **The story of Hatem and Huda's secret egg quest**

Hatem and Huda were patients in a hospital-based IVF clinic in Beirut that catered to all of the religious sects found in multi-sectarian Lebanon. However, Hatem and Huda were not Lebanese, having traveled from rural Syria to Beirut in order to undergo a cycle of IVF. Like most Syrian reproductive tourists, Hatem was convinced that Lebanese IVF clinics were superior to the fledgling clinics in neighboring Syria, a Middle Eastern nation-state that has long been isolated from, and even sanctioned by, the West. Thus, he had been bringing his wife to Beirut for IVF since 1997. Hatem had another reason for bringing Huda to Lebanon: there, they could access donor eggs, which were unavailable in the Sunni-dominant country of Syria, where third-party gamete donation is strictly prohibited.

First cousins married for 17 years, Hatem and Huda clearly loved each other, despite the perplexing dilemma of her premature ovarian failure. Although Huda was only 36 at the time, she had entered menopause in her 20s, and required hormonal stimulation followed by IVF in order to achieve a pregnancy. After five unsuccessful trials of IVF, the IVF physicians in Beirut recommended egg donation as the most likely successful option. As Sunni Muslims, Hatem and Huda knew that egg donation was forbidden in the religion. Yet, as Hatem explained, they rationalized their use of donor eggs in a previous IVF cycle in the following way,

As long as the donor agrees, then this would reduce the *haram* [forbiddenness] based on our religion. Because she, the donor, is in need of money, she gave nine to ten eggs, and the doctor divided the eggs between that couple and us. We took five, and that couple,

who were recently married, took five. And I personally entered into the lab to make sure that *my* sperm were being used. It's okay because it's *my* sperm.

Indeed, Huda became pregnant with donor twins, a male and a female, in 1999. At six months and 17 days of pregnancy, she began to miscarry, and Hatem rushed her to a hospital in Syria. As Hatem recounts,

They opened her stomach [by cesarean], and there were twins, who still lived for 48 hours. They had lung deficiency because they were little and not fully developed. The girl died twelve hours before the boy.

After this traumatic experience, Huda could no longer accept the idea of egg donation. According to Hatem, who spoke for Huda as she sat quietly in the room,

She was tortured [during the pregnancy]. She stayed four months vomiting whatever she ate, and she lost weight – from 88 kilograms to 55 kilograms. And she was under a lot of stress because of our social environment in Syria. In our [farming] community, they stare at babies and see if they resemble the mother and father. We are not living in a city of 4–5 million. We are in a closed community of 15,000 people. And so, the first time, when we had twins, they did a blood test and everyone was surprised. Their blood group was AB, and it didn't match ours. Now everyone will *really* examine the personal traits of this [donor] baby if we do it again. They will look at us suspiciously. Not the doctors; they keep everything confidential. But people in the community who might come to visit and look at us curiously.

For his part, Hatem is willing to accept donor eggs again and has already made inquiries about finding a willing Shia Muslim egg donor in Syria. On the day of his interview, he also spoke about the possibility of finding a willing donor within the Beirut IVF clinic. Hatem saw no other way to achieve parenthood, given that he loves his wife and refuses to divorce her. Although Hatem is an affluent farmer from a large family of 20 children (by one father and three co-wives), he continues to resist all forms of social pressure to divorce or marry polygynously. His commitment, he says, is based on his deep love for Huda. As he said,

Had I not loved her, I wouldn't have waited for seventeen years. I would have married another. By religious law, I can remarry, but I don't want to. She told me I should marry another woman, and she even offered or suggested that she would get me engaged, because we're already old. We've reached middle age without kids. We're living in a large family with six of my brothers, and they all have children. That's why she's feeling very depressed and very angry that she's alone without children, although she's always surrounded by children. But, of course, she keeps these feelings to herself.

The love between us – I love her *a lot*. I was the one who considered going for IVF, for her sake. But we must keep it secret, because if my parents knew about us having an IVF child, the child would be marginalized and living a lonely life. So we keep everything secret, and we just mention to our families that she's receiving treatment.

As in so many IVF stories, Huda and Hatem were ultimately unsuccessful in their seventh attempted IVF cycle. Huda's own eggs failed to mature under hormonal stimulation, and no egg donors were currently available at the clinic. Thus, Hatem and Huda returned home quietly to Syria, with little remaining hope of achieving parenthood, but with the love that had kept them together for nearly twenty years.

## Conclusion

The arrival of donor technologies in both Lebanon and Iran – the only two Middle Eastern countries to offer these services at the present time – has led to a brave new

world of reproductive possibility never imagined when ARTs were first introduced there exactly 25 years ago. These technologies have engendered significant medical transnationalism and reproductive tourism; mixing of gametes across national, ethnic, racial, and religious lines; and the birth of thousands of donor babies to devout infertile Muslim couples. For their part, at least some infertile Muslim couples, both Shia and Sunni, have begun to reconsider traditional notions of *nasab*, or the meaning of biological lineage, even if 'social parenthood' of a donor child is still not widely embraced in the Middle Eastern Muslim world (Inhorn 2006). Nonetheless, because donor technologies are now widely available in both Iran and Lebanon, the power of the Sunni Muslim ban on third-party donation is being weakened across the region, with some infertile Sunni Muslim couples such as Hatem and Huda reconsidering their own anti-donation moral stances. As a result of these social processes, Shia gametes are finding their ways into Sunni bodies, despite the current regional tensions and sometimes outright antagonisms between these branches of Islam. Indeed, in the new millennium, hundreds – perhaps even thousands – of infertile Sunni Muslim couples are traveling abroad in search of such Shia donor gametes.

As suggested by the Middle Eastern reproscape, reproductive travel is a growing global phenomenon (Blyth and Farrand 2005; Deech 2003; Pennings 2002), one that needs to be studied by medical anthropologists. Anthropologists are exceptionally well positioned to gather important ethnographic information from reproductive travelers themselves, thereby understanding the motivations that compel them to seek ARTs outside their own countries. In doing so, our discipline can serve to humanize the legal and policy discourses on this subject, and to shed light on both the macro-and micro-level dynamics of the global reproscape, which is still shrouded in mystery.

The author's own multi-sited ethnographic investigation of the Middle Eastern reproscape has begun to uncover the motivations of a diverse set of infertile men and women as they travel to and from ART sites within the region and beyond. Indeed, global travel is part and parcel of the modern-day quest for conception among Middle Eastern Muslim couples. The deployment of the most high-tech forms of assisted reproduction is a facet of Middle Eastern modernity that is rarely emphasized in either the sparse literature on Islamic technoscience (Lotfalian 2004), or in Western polemics on the 'backwardness' of the region (see also Deeb 2006). Moreover, such modernity is being supported by Islamic juridical and bioethical discourses, which are being used to justify various forms of technological assistance, while limiting others (Inhorn and Tremayne, in press). Islamic bioethics have caught the attention of a new generation of Middle Eastern Studies scholars, who in recent years, have compiled four edited volumes on this subject (Brockopp 2003; Brockopp and Eich 2008; Hamid and Grewal 2011; Inhorn and Tremayne, in press). In short, although the Middle East is rarely regarded in this way, it is a key site for understanding the intersection of technoscience, religious morality, and modernity, all of which are deeply implicated in the Middle Eastern reproscape.

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## Notes

1. This article is based on long-term ethnographic fieldwork conducted in multiple Middle Eastern countries, including Egypt, Lebanon, United Arab Emirates, Iran, and ‘Arab Detroit,’ and representing nearly 600 Middle Eastern couples (primarily from Egypt, Lebanon, Syria, Palestine, the United Arab Emirates, Iraq, and Yemen). This article is based primarily on the author’s two most recent studies, one on male infertility carried out in Beirut, Lebanon in 2003, and the other on reproductive tourism carried out in the United Arab Emirates in 2007. In addition, fieldwork among infertile Arab Americans took place from 2003–2005 and 2007–2008.
2. The term ‘bioscope’ is the author’s own, but bespeaks the strong Foucauldian influences in medical anthropology, where terms such as ‘biopower,’ ‘biopolitics,’ ‘biocitizenship,’ ‘bioavailability,’ and ‘biocrossings’ are becoming common parlance.
3. Thanks to one of the reviewers for suggesting this composite term.

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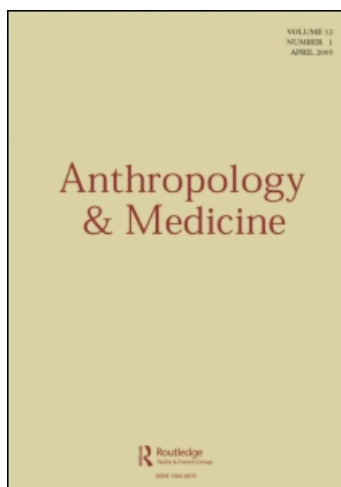
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### Globalization and gametes: reproductive 'tourism,' Islamic bioethics, and Middle Eastern modernity

Marcia C. Inhorn<sup>a</sup>

<sup>a</sup> Department of Anthropology, Yale University, New Haven, CT 06520-8277, USA

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