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Chapter 3

The Risks of Test-Tube Baby Making in Egypt

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Since 1978, when the world's first "test-tube baby," Louise Brown, was born in England, new reproductive technologies (NRTs)—particularly in vitro fertilization (IVF)—have rapidly gained acceptance in the Western world and are now routinely employed in most "developed" countries to overcome otherwise intractable infertility. Clearly, NRTs—and particularly the more controversial or sensational aspects of their deployment, including high-order multiple births, third-party gamete donation practices, and pregnancies in postmenopausal women—have attracted both media and scholarly attention in the West. Although the media have tended to glorify the successes of NRTs—including the "miracle babies" born to "desperate" infertile couples (Condit 1994; Franklin 1997)—many scholars, including feminist theorists, bioethicists, technoscience studies scholars, anthropologists, and even some health care practitioners engaged in the provision of NRTs, have been less sanguine, revealing how these technologies are both a blessing and a curse. Feminist scholars in particular have described in great detail all that is "wrong" with the NRTs,¹ often focusing on the risks of these technologies to women's bodies and to women's status when motherhood is pursued "at all costs," thereby upholding traditional patriarchal family forms (Thompson 2001).

My deepest gratitude goes to the many Egyptians—infertile women and their husbands, physicians specializing in infertility and NRTs, research assistants, Al-Azhar University faculty members, and staff of the Binational Fulbright Commission—who have participated in or in other ways facilitated my research over the past two decades. I am also grateful for the financial support provided by the U.S. Department of Education's Fulbright-Hays fellowship programs, the Fulbright Institute for International Education, and the National Science Foundation. My thanks go to Barbara Herr Harthorn and Laury Oaks for their insightful editorial comments on this chapter.

However, something important has been missing from these discussions, focusing as they do almost exclusively on EuroAmerican settings. Namely, neither the media nor scholars themselves have recognized the now massive global spread of NRTs to the “developing” societies of the non-Western world. Yet limited reports show that NRTs are swiftly but silently globalizing—moving from Western sites of global production (mainly the United States, Western Europe, and Australia) to non-Western sites of global consumption on the continents of Asia, Africa, and Latin America (Nicholson and Nicholson 1994; Okonofua 1996; Kahn 2000; Bharadwaj 2001; Handwerker 2001; Kahn 2001). The scholarly erasure of this global phenomenon is quite remarkable, considering the now voluminous literature on NRTs in the West. However, in this particular case, Western scholars themselves may be contributing in unfortunate ways to “stratified reproduction” (Ginsburg and Rapp 1995); they do so by privileging the experiences of white, Western (mostly middle- to upper-class) infertile women, who are often able to achieve their reproductive desires through the use of reproductive technologies (Sandelowski and de Lacey 2001), over the experiences of those in other global locations who are disempowered and even despised as reproducers.

Nonetheless, infertility is clearly a global health phenomenon; in fact, the risks of becoming infertile are much greater in parts of the developing world than they are in the West (Sciarra 1994; Hamberger and Janson 1997; Van Balen and Gerrits 2001; Inhorn 2002). Reproductive tract infection (RTI) leading to infertility is the world’s leading cause of *preventable* infertility, affecting nearly two-thirds of all infertile women in Africa and approximately 40 percent in Latin America (Cates, Farley, and Rowe 1985; World Health Organization 1987; Sciarra 1994, 1997). Africa, in fact, has the dubious distinction of having an “infertility belt” wrapped around its center, with nearly one-fifth to one-third of all couples in some populations unable to conceive after at least one year of trying (Collet et al. 1988; Larsen 1994; Ericksen and Brunette 1996; Larson 2000; Leonard 2001). Given the significant prevalence of infertility outside the West, it is not surprising that many Third World societies provide ready markets for NRTs,² even in the face of other more pressing health problems such as HIV/AIDS. NRTs are, in fact, the only solution for overcoming tubal infertility caused by RTIs and male infertility, the latter of which contributes to half of all cases of infertility and is often untreatable by any other means (Howards 1995; Devroey et al. 1998; Kamischke and Nieschlag 1998).

However, NRTs are accompanied by significant risks—risks that spread with the technologies themselves—and these risks may be exacerbated in Third World settings, where assisted reproduction centers operate under very different structural conditions. To date, no studies from the Third World have asked infertile individuals or couples to identify their concerns and worries regarding these technologies. Thus, local views of NRT risk—from the perspective of NRT users themselves—have yet to emerge from India, Egypt, Nigeria, Ecuador, China, and the many other global sites where IVF is now being regularly practiced.

NRTs are not transferred into cultural voids when they reach Third World sites. Local concerns—having to do with factors that may be biological, social, cultural, economic, or even political in nature—shape and sometimes curtail the ways in which these Western-generated technologies are both offered to and received by non-Western subjects. Examining the perceived risks and constraints facing IVF consumers wherever these technologies spread clearly serves to deconstruct the myth that NRTs are some sort of panacea, a miracle cure for infertility everywhere it occurs.

This is where an anthropological perspective—informed by recent developments in globalization theory—becomes extremely useful. Globalization theory suggests that we should ask how Third World recipients of global technologies, including health technologies, resist their application or at least reconfigure the ways they are to be adopted in local cultural contexts (Ginsburg and Rapp 1995; Freeman 1999). In other words, globalization is not enacted in a uniform manner around the world, nor is it simply homogenizing—necessarily “Westernizing” or even “Americanizing”—in its effects (Appadurai 1996; Hannerz 1996). The global is always imbued with local meaning, and local actors mold the very form global processes take, doing so in ways that highlight the dialectics of gender and class, production and consumption, and local and global cultures (Freeman 1999). Moreover, anthropology—with its methodological tools of in-depth, field-based ethnography, its central concept of culture, and its attention to *la vie quotidienne*, or the everyday, lived experiences of others—represents a unique realm for examining these tensions and constraints, thereby revealing how local actors in specific cultural contexts confront, experience, and give shape to the forms of globalization.

THE RISKS OF TEST-TUBE BABY MAKING: EGYPTIAN PERSPECTIVES

This chapter focuses on the experiences and concerns of those who, by virtue of their intractable infertility, must “consume” and embody NRTs in the Middle Eastern Muslim country of Egypt. This chapter asks, What do infertile Egyptians themselves regard as the risks of NRTs? And how might these risks act as constraints on infertile Egyptian couples’ desires to make a test-tube baby? As we shall see, Egyptians’ notions of risk are not about risk per se but rather about many dimensions of treatment-seeking that make infertile Egyptians feel uncertain, worried, and afraid. Thus, in Egypt, at least, fear—as the emotional component of perceived risk—is what infertile women and men relate as they describe the tortuous “medical and emotional road of trials” on which they journey in search of a test-tube baby (Sandelowski, Harris, and Black 1992). As I will argue, in the case of Egypt, infertile women and men willing to consider the use of NRTs are confronted with numerous arenas of constraint, or structural, ideological, social relational, and practical obstacles and apprehensions surrounding

the use of these technologies. Some of these, such as the physical risks and low success rates associated with IVF, are similar to those faced by Western users of NRTs. However, many of the dilemmas and perceived risks of test-tube baby making experienced by infertile Egyptians themselves have little to do with Western discourses of risk; instead, Egyptian views of NRT risk are deeply embedded in local cultural understandings and practices.

Indeed, Egyptians themselves do not deploy the language of risk in the epidemiological sense of that term. Perhaps because epidemiology (as a basic public health discipline) is in an inchoate stage of development in Egypt,³ Egyptians are not confronted with daily messages about the many risks to their health and thus do not seem to view themselves as living in a threatening "risk society" (Beck 1992). Whereas some authors have suggested that Westerners now live in "cultures of fear" (Furedi 1997), where the media have helped promote an obsessional focus on health, safety, and survival leading, in turn, to many anxious and self-destructive individual behaviors and social effects (Freudenburg 1988), this sort of preoccupation with health and safety risks is much less evident in Egypt. To take but a few examples, seat belts are never worn; children do not ride in car seats; condoms are rarely used, and not for the practice of safe sex; most men smoke; "fitness fanaticism" has yet to take hold, even among elites;⁴ and, hence, urbanites are increasingly overweight, diabetic, and hypertensive (Amin 2001). Instead, in this predominantly Muslim setting, concepts of pervasive health risk are supplanted by indigenous notions of *rizq*, or beliefs in God's grace and sustenance of every individual He brings onto this earth. Indeed, for most Egyptian Muslims—and Middle Easterners in general—proof of God's generous sustenance is manifest in the very lifestyles (e.g., smoking, heavy meat consumption, lack of physical activity) that are now seen in the West as health-demoting and dangerous.

This does not mean, however, that Egyptians do not perceive dangers to their health and well-being, and this is especially true of those who are confronted, head on, with a significant health problem such as infertility. In fact, in the case of infertility, the Egyptian media have been heavily involved in increasing public awareness of this health and social problem and its potential "solution" through NRTs (Inhorn, forthcoming 2003). However, media publicity has had a dual and contradictory effect: On the one hand, the media have glorified the NRTs by spotlighting the "miraculous" births of Egyptian IVF triplets and even higher-order multiple births to long-term infertile couples. On the other hand, the Egyptian media have aroused public fear and anxiety surrounding the potential immorality of the test-tube baby making enterprise, largely by highlighting some of the most "notorious" cases in the West—including IVF doctors impregnating scores of patients with their own sperm, grandmothers bearing the test-tube babies of their own daughters, and the birth of test-tube twins of different races due to careless sperm admixtures in Western IVF laboratories. These signal events—all of which happen to be true and have subsequently been dramatized in some cases on Egyptian television—have led to what some theo-

rists in the West have called the "social amplification of risk" (Kasperson 1992; Slovic 1992), or far-reaching effects in Egypt on the perception of heightened risk surrounding these new technologies (Freudenburg 1988).

Indeed, in interviews I conducted among nearly 200 infertile women and men in two separate studies (in 1988–89 and 1996),⁵ I learned of the many fears and concerns confronting Egyptians who, by virtue of their failure to conceive, were contemplating treatment or had actually undertaken IVF or a related reproductive technology. Couching their concerns in the language of emotion, infertile women and men talked about what aspects of the NRTs frightened them, made them upset, or were suspected of posing dangers to their bodies or their IVF offspring. Although some individuals had only one or two major concerns, many women in Egyptian IVF centers could reel off lists of fears, or dimensions of IVF that made them or their husbands anxious and worried. Furthermore, as we shall see, numerous social and cultural forces, including indigenous views of reproductive biology, religious institutions and mores, gender relations and family politics, class structures, the culture of biomedicine and the pharmaceutical industry, and even the intimate politics of envy, influence the affective and cognitive dimensions of risk assessment regarding test-tube baby making in Egypt. Despite the high hope placed in these technologies by most infertile Egyptian couples and their IVF physicians, negative emotions—including worry, anxiety, fear, and pessimism—seem almost inevitable when one considers the socially and culturally regnant "dangers" of embarking on this particular line of therapy. Indeed, following Douglas (1992:46), who argues that "the very word 'risk' could well be dropped from politics" to make room for the more experience-near term "danger," I would argue that test-tube baby making is perceived as an inherently dangerous enterprise, eliciting numerous fears and concerns on the part of potential Egyptian IVF consumers. But what are these fears, and how are they produced?

Fears of Impoverishment

Although the prohibitive expenses of NRTs are typically recognized as a major constraint on their utilization, these high costs are "lived" by infertile Egyptians who must muster the financial resources to undergo IVF. In Egypt, the exorbitant expenses associated with IVF lead to very class-stratified access: Most poor and even middle-class infertile Egyptians are absolutely excluded from undertaking IVF by virtue of its expense—roughly \$2,500 to \$3,000 per treatment cycle in a country where the average per capita annual income in 1996 was only \$1,200 (Population Reference Bureau 1999). With only one exception (the University of Alexandria's Shatby Hospital, where I conducted my initial research), all Egyptian IVF centers today are private businesses, charging high prices for the procedures and drugs that patients pay for out of pocket. Health insurance is new and not widespread, and the Egyptian government has little interest in subsidizing NRTs in the country.

As a result, the only patients who can truly afford to utilize these technologies are Egyptian elites drawn from the upper-middle to upper classes. In a society where the majority of women remain illiterate and do not work in the formal sector, the women patients who present to IVF clinics today tend to be highly educated professionals who are employed as doctors, lawyers, architects, engineers, accountants, bankers, professors, tourism officials, and even movie stars. Furthermore, many of these women and their husbands are members of the Egyptian "brain drain" generation; namely, they move themselves from middle to upper-middle-class status by working in the petro-rich Arab Gulf countries, returning home annually on monthlong summer vacations to undertake one trial of IVF.

Many elites argue that they would never be able to afford IVF—and particularly not repeated trials of IVF—if they could not work as labor migrants outside the country. This "no labor migration = no IVF" equation is experienced as very stressful, given that it forces many infertile professionals to maintain residency outside Egypt for extended periods of time, thereby limiting access to IVF (and relatives) "back home." Furthermore, with the exception of the truly wealthy, most IVF patients worry about their ability to pay for repeated trials of IVF and fear that the expenses associated with repetition will literally bankrupt them over time. Indeed, in some cases, doctors, lawyers, engineers, and others of similar status end up depleting their savings and selling off personal possessions (such as gold jewelry, pieces of land, cars) to finance their infertility treatments. Thus, infertile Egyptians typically equate IVF with gambling, as both involve the expenditure of large amounts of money for very uncertain rewards. Whereas the truly wealthy, who represent only about 1 percent of Egyptian society, can afford to "play the game," as they put it, IVF is experienced by everyone else as a financially risky treatment that can destroy one's financial future and literally lead to downward social mobility in a society where most people are barely clinging to their current class positions. Thus, in a society where few can afford to "make" a test-tube baby, the financial risks of IVF are experienced as *the* major arena of constraint, keeping most infertile Egyptians out of the test-tube baby making business and depleting the resources of those who venture in.

Fears of Unnatural Procreation

Furthermore, for many infertile Egyptians, particularly those of the lesser-educated lower classes, NRTs are clearly cognitively disruptive, given that they challenge deeply held notions of how babies are to be made "naturally," according to God-given plans. NRTs require men to ejaculate their sperm into plastic containers and women to take powerful hormonal medications to stimulate their egg production for the purposes of harvesting. The embryos then formed through in vitro fertilization in a laboratory are placed back inside a woman's body after a brief period of extracorporeal development.

As such, this technology challenges the most basic beliefs about baby making held among lower-class Egyptians, who subscribe to what Delaney (1991) has called a "monogenetic" view of procreation. Namely, men are thought to be the sole procreators, carrying preformed fetuses in their sperm, or "worms," as sperm are called among the Egyptian poor. As the gestational nurturers of these man-made fetuses, women are not deemed to contribute biogenetic substance to their offspring—and particularly not eggs, which would make human females the equivalents of chickens. Thus, NRTs are profoundly challenging to deeply held beliefs about the nature of the human reproductive body and reproductive physiology in Egypt. Among lower-class individuals who are unfamiliar with the Western notions of duogenetic procreation that undergird these technologies, these technologies cause considerable confusion and profound disbelief that human scientists could be "playing God" by creating children in such an unnatural manner. These concerns—coupled with lingering questions about what happens to test-tube babies during the period in which they are in vitro (and perceived to be floating in giant test tubes or aquariums)—are deeply troubling to Egyptians of all social classes, keeping many dubious infertile couples from pursuing IVF treatment altogether.

Fears of Immorality

Fears of procreating unnaturally are coupled in the minds of many Egyptians with fears of going against the explicit teachings of Islam. As early as 1980, Islamic religious scholars at Egypt's world-renowned Al-Azhar University condemned the NRT practices of third-party donation involving donor sperm, eggs, embryos, or surrogate uterus (Serour 1992, 1996). This religious view, which has been upheld since then throughout the Muslim world (Meirow and Schenker 1997; Blank 1998),⁶ considers third-party donation to lead to a morally illicit "mixture of relations" whereby blood ties between parents and their offspring are severed, issues of paternity, descent, and inheritance are hopelessly confused, and half-siblings from the same anonymous donor are likely to enter into unwitting incestuous relationships. Furthermore, surrogacy is believed to tamper with the God-given "natural maternal instinct" that emanates from a single mother to her biological offspring.

For Egyptian Muslims, then—as well as for Egyptian Coptic Christians, who make up between 6 and 10 percent of the total Egyptian population and whose church has followed the Muslim lead on this issue—the thought of using donor sperm, eggs, or embryos from a bank is simply reprehensible and is tantamount in their minds to committing *zina*, or adultery. Although most Egyptians believe that IVF physicians are good Muslims who would never practice third-party donation intentionally, many infertile patients who are considering IVF spend long hours worrying about accidental donation—namely, unintentional laboratory mix-ups of sperm, ova, or embryos. These fears and suspicions prevent some couples from undertaking IVF altogether, because once the products

of conception leave one's body, it is virtually impossible to know for sure whether these products will be returned untainted—as has happened now in several infamous cases of Western laboratory negligence that have been widely publicized in the Egyptian media (Robertson 1996). Although most Egyptian IVF physicians take elaborate measures to guard against this eventuality—as well as every opportunity to reassure patients about their own religiosity and vigilance—patients' fears of unknowingly doing something profoundly immoral “according to the religion” certainly keep some of them away from NRTs. Indeed, in public opinion, NRTs are widely construed as going against Islam, with test-tube babies themselves being viewed as “children of sin.” Thus, few IVF patients in Egypt disclose their treatment status for fear of being viewed—no matter how unjustly—as participating in practices that are inherently immoral.

Fears of Physicians' Characters

Given these moral anxieties, infertile Egyptians undergoing IVF must trust their physicians absolutely. But finding a sympathetic and trustworthy physician—and particularly one who is religious—can be a major challenge. Just as IVF patients spend hours worrying about potential mistakes being made in IVF laboratories, they spend many hours considering their physicians' characters—trying to assess whether the man is honest, devout, scrupulous, vigilant, technically competent, and ultimately caring for his patients.⁷ Because this is the man who will literally facilitate the creation of life, he must be seen as a servant of God as well as a brilliant technician who is savvy about the latest Western technologies. In other words, Egyptian IVF physicians themselves are expected to manage a delicate balancing act as both providers of high-tech global technologies and upholders of local religious and cultural traditions.

Some IVF physicians realize this and spend considerable time in patient counseling and rapport building (where they often accentuate their Muslim religiosity). Such physicians tend to develop “saint-like” reputations and, not surprisingly, attract large patient followings. However, some IVF physicians are less concerned with upholding their images than with their ability to move patients swiftly through the complicated IVF treatment system, thereby making large amounts of money for their clinics.

Encountering such a “greedy” physician is considered one of the major risks of undertaking IVF in Egypt. Many Egyptian IVF patients report bad experiences suffered at the hands of physicians who are perceived as “uncaring” and “only in it for the money.” Brusque communication styles, insensitive comments, frank technical incompetence, and outright rejection of clients who are seen as poor risks for the improvement of clinic success rates are experienced as profoundly demoralizing by patients already made emotionally fragile by years of intractable infertility. Such experiences—remarkably common in a country fraught with ongoing medical paternalism and characteristic authori-

tarian physician-patient communication styles (El-Mehairy 1984; Inhorn 1994)—lead to considerable “doctor-shopping” between IVF clinics as infertile couples seek a physician who makes them feel “comfortable” and “confident” in his abilities. In short, the inability to find a moral, competent, and caring physician—to whom an infertile couple can literally entrust their most precious gametes—continues to be one of the major risks of test-tube baby making in Egypt.

Fears of Divorce

For couples who find a good physician, one of the major risks of undertaking IVF is the effects of treatment on marital dynamics. Generally, infertile Egyptian women of all social classes live in fear that their marriages will collapse because Islamic personal status laws consider a wife's barrenness to be a major ground for divorce (Inhorn 1996).⁸ Although most husbands of infertile Egyptian women do not divorce their wives, thereby resisting tremendous family pressure, some men would rather “replace” their infertile wives than undergo the trials, tribulations, and expenses surrounding IVF.⁹ Furthermore, during the IVF treatment process, marriages sometimes come unglued under the intense physical and psychological pressures that this therapy typically exacts on couples—a social sequela of NRTs that has also been reported in the West (Greil, Leitko, and Porter 1988; Abbey, Andrews, and Halman 1991).

Perhaps the saddest new twist in marital politics in Egypt has occurred as a result of the recent introduction of intracytoplasmic sperm injection (ICSI), the newest of the new reproductive technologies. Since its introduction in the early 1990s, ICSI—which is a variant of IVF and involves microscopically guided “injection” of a single spermatozoon directly into an oocyte—has heralded a revolution in the treatment of *male* infertility. With ICSI, men with very poor semen profiles are now able to produce a biological child of their own as long as a single viable spermatozoon can be retrieved from their bodies, even through harvesting from the testis, which is required in the 15 percent of men who are azoospermic, or lacking sperm in the ejaculate (Hamberger and Janson 1997).

Unfortunately, for many of the wives of these infertile Egyptian men, the presence of ICSI poses new marital risks. Most middle-age women, who have stood by their infertile husbands for years, even decades in some cases, have grown too old to produce viable ova for the ICSI procedure. Because contemporary Islamic opinion in Egypt forbids both donor eggs and surrogacy, couples with a “reproductively elderly” wife face four difficult options: first, to remain together permanently without children; second, to legally foster an orphan, which is rarely viewed as a tenable option by Egyptians; third, to remain together in a polygamous marriage, which is rarely accepted these days by Egyptian women; or finally, to divorce so that the husband can remarry a younger, potentially more fertile woman. Unfortunately, more and more highly educated Egyptian men are choosing the final option of divorce—believing that

their own reproductive destinies may lie with younger, more fecund wives allowed to men under Islam's personal status laws. In short, the recent introduction of ICSI—coupled with ongoing personal status legislation in Egypt—places infertile Egyptian women and the “old” wives of infertile Egyptian men in an extremely precarious position vis-à-vis their reproductive and marital futures.

Fears of “Aging Out”

Many women at Egyptian IVF centers desperately fear the passage of time and the possibility that they will “age out” of IVF or ICSI treatment. For Egyptian women, the age of 40 marks a key watershed, because ovulatory function typically begins to decline precipitously at this point. Because many women in their forties do not respond well to ovulation induction as they enter the perimenopausal period, they are less likely to be successful with NRTs of all kinds. As a result, many Egyptian IVF centers—concerned about boosting their own success rates for presentation to other prospective clients—refuse to take female patients above the age of 40, arguing to them that they are wasting their time and money on probably futile efforts to become pregnant.¹⁰

Although some Egyptian IVF physicians justify this exclusion of older women as a compassionate restriction, women in their late thirties live in fear of this eventuality and often see themselves as engaging in a “race against time.” Given that NRT technologies are viewed as a last resort in Egypt, it is not surprising that most women do not reach IVF centers until many years of marriage and many failed treatment attempts have already passed. Thus, women on the cusp of turning 40 are extremely prevalent in Egyptian IVF centers, where their angst about aging is palpable. In the context of NRTs, fears of aging in general and “aging out” of treatment in particular are pronounced in a society where IVF physicians turn away older women from their clinics and where donor egg technology and surrogacy are both strictly prohibited on religious grounds.

Fears of Hormonally Induced Weakness

Egyptian women who do not face these age restrictions are often fundamentally ambivalent about taking the powerful hormonal agents required before any trial of IVF or ICSI. Their fears have to do with culturally entrenched beliefs about the bodily “weakness” produced by hormones of any kind. “Weakness” is a common cultural illness idiom in Egypt (DeClerque et al. 1986; Early 1993) and is rife in popular Egyptian reproductive imagery. The medications women are given prior to an IVF or ICSI cycle are generally viewed as “strengtheners,” capable of stimulating ovarian function even in the “weakest” ovaries. However, the paradoxical problem with these agents is that they may overcome weakness in the ovaries only to produce a more generalized bodily “weakness” apparent in

the noticeable list of side effects that they produce. These include generalized enervation, muscular weakness, loss of appetite, and even fainting. Furthermore, women receiving pre-IVF hormonal injections often experience more immediate debilitating side effects, such as pain, bruising, and swelling at the site of injections; abdominal bloating, fluid retention, and weight gain; breast enlargement and tenderness; nausea and vomiting; headaches, dizziness, lightheadedness; and general feelings of moodiness and depression.

Women are understandably concerned about whether such bodily weakness is temporary, lasting, or even permanent, and many of them worry that even worse problems, such as grave diseases like cancer, may be produced by these agents in the long term. Such concerns are especially pronounced for women who have experienced literally years of hormonal therapies for their infertility and are now faced with repeated cycles of ovulation induction prior to IVF. Thus, the hormones that are part and parcel of the IVF experience are of great concern to Egyptian women. This is particularly true given deeply entrenched beliefs that hormones of any kind (including the oral contraceptives, Depo-Provera injections, and Norplant contraceptives that have been “pushed” on Egyptian women by Western-backed population control programs) cause powerful, debilitating, and lasting side effects that are best to be avoided (DeClerque et al. 1986).

Fears of Drug Shortages

In addition to these concerns about the weakening effects of hormones on their bodies, Egyptian women have faced ongoing concerns about their ability to obtain these hormonal agents before they embark on scheduled trials of IVF or ICSI. Although Egypt has a well-developed pharmaceutical industry, with pharmacies appearing on virtually every city block, the hormonal agents used with the NRTs have never been widely available in Egyptian pharmacies and have often been limited to particular “specialty” pharmacies whose owners make occasional drug-purchasing trips to foreign markets, usually in Europe (Inhorn 1994). Furthermore, because many of these agents are imported to Egypt, the Egyptian NRT drug market has been, at times, at the mercy of global fluctuations in drug availability, resulting in chronic shortages of some of the most important hormonal agents.

Many Egyptian patients whose IVF/ICSI cycles have been scheduled literally scour the pharmacies of Egypt in sometimes futile efforts to obtain the prescribed medications. In other cases, patients must resort to a kind of transnational “suitcase trading,” whereby family members, friends, and even flight attendants are enjoined to obtain these agents abroad and fly the drugs back to Egypt in special refrigerated coolers (although they are rarely apprised of the exact uses of these drugs, for reasons I will describe later). These extraordinary efforts to obtain NRT medications create levels of uncertainty, frustration, and despair among infertile Egyptian couples that have rarely been described in

Western treatment settings. This is particularly true among couples whose scheduled trials of IVF or ICSI are cancelled due to lack of medication, and who must then watch from the sidelines as other patients with the required drugs move up on the clinic's waiting list.

Fears of Failure

Given the great lengths to which many Egyptians must go to access hormonal medications and NRTs themselves, they are clearly concerned about whether their efforts will be fruitful—whether placing one's body at risk and enduring periods of forced income-generating exile from the country will lead, ultimately, to a successful pregnancy and birth of a precious "baby of the tubes." Consequently, patients are keen to know percentages of success, and they spend long hours worrying about whether undergoing IVF or ICSI is worth the price, monetary and otherwise, of failure. Unfortunately, because of the various technical obstacles and lack of training and technique in many Egyptian IVF centers (Inhorn 2002, forthcoming 2003), local success rates in Egypt—except in the very best centers—may be comparatively diminished; yet they are rarely presented as such to patients. Instead, patients are routinely quoted inflated success rates—generally in the 30 to 40 percent range—to maintain their hope and willingness to undergo NRT procedures (cf. Becker 2000). Such percentages are high, even by Western standards, a fact that is suspected by some savvy Egyptian IVF patients who are conscious of their position in the global arena.

Furthermore, many patients are given false hope that a first trial of IVF or ICSI will be successful. Given all the hardships described, it is not surprising that patients ardently hope to avoid repeated trials of IVF and are usually devastated when pregnancy is not achieved on the first trial. With very few exceptions, most Egyptian patients hope that the first trial of IVF will lead to multiple births, ideally twins or even triplets. Because of the cultural unacceptability of a one-child family, low-order multiple births mean the "ideal" Egyptian family size of at least two but not more than three children can be achieved without having to resort to future IVF or ICSI trials. Thus, among Egyptian IVF hopefuls, multiple births are considered one of the great benefits of IVF—a true embarrassment of riches and of God's *rizq*—rather than one of the most serious risks of the procedure as argued by medical experts (Okonofua 1996; Scholz et al. 1999).

Fears of Losing a Pregnancy

Even if Egyptian IVF patients welcome, rather than fear, multiple-order pregnancies, the state of pregnancy achieved by some IVF patients is not necessarily experienced as overwhelmingly joyous. Instead, from the moment of embryo transfer, many IVF patients live in fear of losing the pregnancy and

take extraordinary measures to guard against this possibility. Egyptian women who have undergone embryo transfer tend to immobilize themselves, barely moving from bed during the two-week period until the pregnancy test is performed. Women hope that by remaining "still" and inactive, the embryo will "stick" or "hang" (i.e., implant) and will not "fall." Those days in bed are rarely restful for women, who tend to brood excessively about whether the IVF trial has been successful.

The lucky few who do become pregnant may spend the rest of their pregnancy on bed rest—rarely reflecting doctors' orders but rather following widely held Egyptian injunctions about avoiding pregnancy loss through overexertion. Western warnings about the need for healthful diets and exercise during pregnancy are rarely if ever heeded in Egypt. Rather, the opposite injunctions—to move as little as possible and to eat rich foods and gain weight to take care of oneself and one's test-tube baby—are much more likely to be followed. In other words, pregnancy, if achieved through NRTs, engenders a particular local form of bodily discipline—one marked by self-enforced and socially reinforced inactivity, immobilization, and inertia. More than anything, Egyptian women who have succeeded in conceiving through IVF or ICSI fear losing their precious "baby of the tubes" through physical activity that could have been avoided. So, to the extent that they can, they and their husbands pamper their bodies through prolonged rest and inactivity. That such bodily restriction may actually produce pregnancy complications is an open question but one that points to potential conflicts between local Egyptian cultural logics of well-being and the actual embodiment of Western-generated reproductive technologies.

Fears of Envy

Moreover, widespread cultural notions of *hasad*, or "envy"—resulting in harm to the pregnancy or to the test-tube baby itself—come into play even among educated Egyptian elites. Egyptians of all social backgrounds abide by the notion that those who covet one's success, including in pregnancy, may direct an envious glance (the so-called evil eye), thereby harming or "ruining" another's good fortune. As a result, most Egyptians are never boastful—even hiding or lying about particular accomplishments, good health, and good fortune.

As has been widely documented throughout the Middle East, *hasad* is considered to be a major etiological factor in childhood illness, and covetous infertile women are considered to be major perpetrators of the evil eye (Inhorn 1996). Although they may not intend to harm a child, these women are seen as incapable of controlling their feelings of envy and are sometimes accused of causing childhood misfortunes. As a result, infertile women are often avoided by others with children, and infertile women themselves are often sensitive about attending rituals and celebrations where many children are present.

Given that infertile Egyptian women know all too well how society views them, they are likewise concerned about revealing their own good fortune when they eventually become pregnant through IVF or ICSI. Many infertile women who achieve pregnancies tell no one and attempt to hide their pregnancies for as long as possible, fearing that envious others who know about the pregnancy might harm them. In practical terms, this means that pregnant IVF patients often fear attending IVF centers, where high numbers of potentially covetous infertile patients are to be found. As a result, some ask to see their IVF physicians for prenatal care at their private Ob/Gyn offices, and others are simply "lost to follow-up" after pregnancy is achieved—leaving behind unpleasant memories of IVF clinics and the envy of the not-yet-pregnant.

Fears of Weak Offspring

Whereas Egyptian women worry about losing the pregnancy either through overexertion or envy, Egyptian men, and particularly those with severe forms of male infertility, worry about the physical health of the offspring conceived through ICSI. Because male infertility problems are glossed as weakness of the sperm (or, among the lower class, "weak worms"), many infertile Egyptian men seem to take this cultural idiom to heart, feeling that they themselves are somehow weak, defective, and even unworthy as biological progenitors (Inhorn 2003). Indeed, many men in Egyptian IVF centers are openly concerned about whether they will "pass their weakness" on to their children, and this is particularly pronounced among men with spermatoc deformities, who wonder if their children will suffer from congenital malformations and other genetic defects. These fears, furthermore, are not abated by prenatal genetic testing in Egypt, which is essentially absent in the country. Although this lack of prenatal testing appears rather ironic, given the enthusiasm for other forms of "high-tech" reproductive medicine, it clearly reflects cultural ambivalence about and the continuing criminalization of abortion in the country (Lane 1997).

However, given the growing evidence that ICSI offspring are just as normal as any other population of children conceived through NRTs, Egyptian physicians who perform ICSI often attempt to reassure their male patients that their offspring will be healthy and normal. Nonetheless, these lingering doubts about the general health and well-being of offspring conceived "from weakness" plague many men—up to and even beyond the birth of their own evidently physically normal ICSI babies.

Fears of Social Ridicule and Disclosure

Even when test-tube babies are born physically normal, they arrive in the world with an "abnormal" social status—not as socially valorized "miracle babies," but rather as stigmatized oddities, fashioned in test tubes with unknown

and perhaps immorally mixed biogenetic substances. Thus, test-tube baby making continues to engender wild speculation and moral uncertainty in Egypt, casting doubt on the very humanity of such children.

Egyptian parents of test-tube babies are well aware of this social reception and therefore are extremely concerned about future social ridicule and stigmatization of their children. Although some hope that views of NRTs may "become better," normalizing over time, they realize that this day has yet to come in Egypt. Thus, to protect their children's futures—sparing them from the taunts of schoolmates and even lack of future marriageability—parents of test-tube babies engage in extraordinary measures to guarantee the privacy of this procedure, usually disclosing to no one or to only the closest family members that IVF is being undertaken. Indeed, test-tube baby making in Egypt is shrouded in mystery, with patients themselves describing the entire affair as "top secret."

In this local world marked by fear, envy, and the paranoia of being found out, infertile couples who attempt NRT procedures must go it alone in both social and emotional isolation. Fears of disclosure and envy clearly militate against the formation of patient-run support groups (such as RESOLVE in the United States). Although many Egyptian IVF patients admit that self-help groups would be extremely beneficial for the purposes of information-sharing and alleviating many of the fears described in this chapter, they are quick to point out that these will "never happen" in Egypt, where fears of social stigmatization render test-tube baby making—and test-tube babies themselves—socially invisible.

CONCLUSION

This chapter has asked how the risks of test-tube baby making are lived by Egyptian users of NRTs. By entering the "local moral worlds" of infertile Egyptians (Kleinman 1992), it becomes clear that what Egyptians themselves fear about NRTs may or may not accord with Western notions of risk. Rather, the landscape of fear surrounding test-tube baby making in Egypt is a unique terrain, marked by cultural logics and practices that are deeply locally embedded.

These findings suggest that the global spread of NRTs to new local sites in non-Western societies such as Egypt requires careful investigation. As this chapter has shown, the utilization of these technologies is highly dependent upon local considerations, including indigenous perceptions of what makes these technologies inherently risky and frightening. To take the case of Egypt, the perceived risks of test-tube baby making are manifold, probably preventing many infertile couples from availing themselves of these technologies and worrying those who do. Indeed, in the course of my research, I never found an infertile woman or her husband who did not express at least one of these fears.

Although the main worries were clearly religious and financial in nature, most Egyptian IVF patients had multiple concerns that varied in specific configuration from informant to informant. In other words, each woman I met in an Egyptian IVF clinic could tell me her particular story of fear and suffering, stories that were often different from one another. Ultimately, I came to conclude that the very presence of these women and their husbands in Egyptian IVF clinics was a remarkable sign of courage, involving a giant leap of faith into the brave new world of Egyptian test-tube baby making.

In closing, since the birth of Louise Brown more than two decades ago, there have been many critics of NRTs, who have argued that these technologies should not be used at all and especially not in the "overpopulated" Third World. Yet the rapid globalization of these technologies to countries far from the producing nations of the West bespeaks the powerful desire of Third World infertile couples in places such as Egypt to overcome their childlessness through, in many cases, the only available technological means. To deny infertile people access to such technologies based on their social location in the global hierarchy of rich and poor nations seems, in my view, patently unfair and even bespeaks a kind of neo-Malthusian rationing of reproductive rights. Clearly, there is a need for these technologies in parts of the world where tubal infertility—and, increasingly, male infertility—take their extraordinary tolls on both physical and social reproduction. There are many costs inherent in this global transfer of NRTs, and one of these is the social and cultural amplification of risk in places such as Egypt. As seen in this chapter, the world of test-tube baby making in Egypt is an inherently risky cultural terrain, where only the bold dare to venture.

NOTES

1. For examples of this feminist literature, see Corea et al. (1987); Spallone and Steinberg (1987); Stanworth (1987); Klein (1989); Overall (1989); Ratcliff (1989); Rothman (1989); McNeil, Varcoe, and Yearley (1990); Scutt (1990); Rowland (1992); Raymond (1993); Squier (1994); Van Dyck (1995); Farquhar (1996); Hartouni (1997); Lublin (1998); and Andrews (1999).

2. I use the term "Third World" here interchangeably with "developing," as in "developing country." Third World bespeaks the global politics of difference and hierarchy whereby nations such as Egypt become located on the global periphery in relation to wealthy "First World" nations. "Developing," on the other hand, bespeaks evolutionary discourses of modernization whereby resource-poor countries are expected to be developing toward the superior example set by the "modern, developed" countries. Such development discourses have been heavily criticized in anthropology, including by scholars of Egypt (Mitchell 1991).

3. There is only one school of public health in Egypt (one of two in the entire Middle Eastern region) and only a few departments of community medicine where epi-

demology is taught. Because of the dearth of trained epidemiologists in the country, the Centers for Disease Control and Prevention (CDC) in Atlanta has entered into a cooperative arrangement with the Egyptian Ministry of Health to offer a Field Epidemiology Training Program (FETP), teaching Egyptian physicians how to engage in disease investigation and surveillance.

4. However, diet clinics catering to elites are increasingly prevalent in urban areas of Egypt (Basyouny 1997).

5. In 1988–89 during the "early period" of IVF in Egypt, I conducted 15 months of anthropological fieldwork on the problem of infertility in Egypt, basing my research in the University of Alexandria's large public Ob/Gyn teaching hospital, which was initiating the only public IVF program in the country. There I conducted in-depth semi-structured interviews in the Egyptian colloquial dialect of Arabic with 100 infertile women and a comparison group of 90 fertile ones, the vast majority of whom were poor, uneducated, illiterate housewives (Inhorn 1994, 1996). Returning to Egypt in the mid-1990s during the IVF "boom period," I spent the summer of 1996 conducting semi-structured interviews with 66 mostly middle- to upper-class, highly educated professional women in two of the most well-established private IVF centers in Cairo. In 40 percent of these interviews (in marked contrast to my earlier research), husbands were present and participated often enthusiastically in interviews, half of which were in Arabic and half in English (Inhorn 2003).

6. Only recently, the minority Shi'a branch of Islam, found in Iran, parts of Lebanon, and the Arab Gulf, has approved the use of donor egg technology (Dr. Michael Fakhri, personal communication 2002). However, in all branches of Islam, the use of donor sperm is strictly forbidden.

7. The male pronoun is used here because virtually all Egyptian IVF physicians (with the exception of some laboratory personnel) are male, reflecting the ongoing male domination of obstetrics and gynecology in Egypt.

8. Although Islamic personal status laws in Egypt also allow women to divorce if male infertility can be proven, a woman's initiation of a divorce continues to be so stigmatizing in Egypt that women rarely choose this option unless their marriages are truly unbearable. In Egypt, such personal status laws cover issues of marriage and divorce, child custody and fosterage, and rights of inheritance, which, when in dispute, are taken to religious (as opposed to civil) courts to be heard.

9. Although patterns of divorce have, to my knowledge, never been systematically studied in Egypt, divorce can occur among Muslim couples of any social class, urban versus rural background, degree of educational attainment, or level of religiosity. However, divorces are usually initiated by the husband, for the reason cited in footnote 8. Only among Egyptian Coptic Christians is divorce explicitly forbidden. For that reason, infertile Coptic couples with adequate financial resources are particularly avid users of NRTs, given that divorce and remarriage to a fertile partner are never viable options.

10. The turning away of older infertile women, with women's ensuing "panic" over becoming forty and "aging out" of NRT treatments, occurs in other global sites as well, including the United States, as recently described by Becker (2000).

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Chapter 4

The Politics of Health Risk Warnings: Social Movements and Controversy over the Link between Abortion and Breast Cancer

Laury Oaks

INTRODUCTION

This chapter examines controversy in the United States over antiabortion advocates' efforts to link abortion with another highly visible, politicized, and emotionally laden women's health issue: breast cancer. Drawing on scholarship that emphasizes the politics of risk perception, assessment, and communication, I analyze both how antiabortion activists have supported their claims and how women's health and abortion rights advocates have responded to antiabortion campaigns that publicize the putative "fact" that abortion increases a woman's risk of subsequently contracting breast cancer. Whether abortion and breast cancer are linked in this way has been labeled by some medical professionals as "one of the most controversial and important questions in women's health today" (Bartholomew and Grimes 1998:708) and identified by others as "scientifically complex and politically charged" (Gammon, Bertin, and Terry 1996).¹ Health professionals and advocates who represent both sides of the abortion debate have analyzed evidence of the risk of breast cancer associated with abortion on both scientific and political terms. Controversy over antiabortion advocates' campaign to publicize the "scientific fact" that abortion increases a

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RISK, CULTURE, AND HEALTH INEQUALITY

Shifting Perceptions of Danger and Blame

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