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Islamic masculinities



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12 | 'The worms are weak': male infertility and patriarchal paradoxes in Egypt

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Worldwide, between 8 and 12 per cent of couples suffer from infertility or the inability to conceive a child at some point during their reproductive lives (Reproductive Health Outlook 1999). However, in some non-Western societies, especially those in the 'infertility belt' of Central and Southern Africa, rates of infection-induced infertility may be high, affecting as many as one-third of all couples attempting to conceive (Collet et al. 1988; Larsen 1994; Ericksen and Brunette 1996). Unfortunately, the new reproductive technologies (NRTs) that may provide solutions to infertility for many Western couples are often unavailable in these settings, and modern healthcare services may themselves be of abysmally poor quality (Inhorn 1994a; Sundby 2002). Thus, it is not surprising that the infertile often turn to traditional remedies and healers (Inhorn 1994b), a pattern also found in the West (Van Balen et al. 1995).

A growing ethnographic literature also demonstrates that women worldwide bear the major burden of infertility (Abbey et al. 1991; Greil et al. 1990; Inhorn 1994b; Inhorn and van Balen 2002; Stanton et al. 1991; Van Balen and Trimbos-Kemper 1993). This burden may include blame for the reproductive failing; emotional distress in the forms of anxiety, depression, frustration, grief and fear (Greil 1997); marital duress leading to abandonment, divorce or polygamy; stigmatization and community ostracism; and, in many cases, bodily taxing, even life-threatening, forms of medical intervention. Infertility is a form of reproductive morbidity with profoundly gendered social consequences, which are usually more grave in non-Western settings than in the Western world (Inhorn and Van Balen 2002). In many non-Western societies, infertile women's suffering is exacerbated by strong pro-natalist social norms mandating motherhood. Yet policy-makers in these countries are often obsessed with curbing population growth rates, ignoring the sub-populations suffering because of their 'barrenness amidst plenty' (Inhorn 1994a, 1996).

Male infertility in global perspective

Infertility, like most reproductive issues, seems to be a 'woman's problem', and is conceptualized thus in indigenous systems of meaning and

in global health policy discussions. However, the biological etiology of infertility does not reside solely or even largely in the female reproductive tract. The most comprehensive epidemiological study of infertility to date – a World Health Organization sponsored study of 5,800 infertile couples at thirty-three medical centres in twenty-two countries – found that men are the sole cause or a contributing factor to infertility in more than half of all couples around the globe (Cates et al. 1985; Reproductive Health Outlook 1999).

The causes are manifold: (1) low total volume of the ejaculate; (2) irregularities in the pH of the seminal fluid; (3) hyperviscosity of the seminal fluid or presence of pus (from infection) in the seminal fluid (so-called pyospermia, a problem in countries where sexually transmitted diseases go untreated); (4) low sperm count (oligozoospermia); (5) a complete absence of sperm (azoospermia) because of defects in the hypothalamo-pituitary axis or because a varicose vein in the scrotum (a varicocele) has raised the temperature of the testes; (6) poor sperm motility (asthenozoospermia), or movement, including problems of total motility or progressive motility (ability to sustain vigorous forward motion); (7) abnormal sperm morphology (teratozoospermia), involving sperm with deformed heads and tails (including microcephalic heads, double heads, coiled tails or multiple tails); (8) autoantibody formation against one's sperm, and the presence of male-derived protein complexes on the surface of the sperm that may act as antigens, inducing an immune response from the female partner leading to premature destruction of the sperm cell within the female reproductive tract; (9) defects in the proteins of the acrosome that reduce the sperm's ability to tunnel through the zona pellucida of the ovum and engage in fertilization; and (10) various obstructive conditions of the ejaculatory seminal ducts in the male genitals, due to congenital abnormalities or acquired testicular damage, which may prevent sperm from being ejaculated into the female reproductive tract (McConnell 1993; Wood 1994). Although some of these examples can be diagnosed, the underlying pathogenesis of most causes of male infertility remains 'idiopathic', or unknown (Irvine 1998). Furthermore, conventional therapies to treat male infertility, including hormonal drugs, surgical varicocele correction and intrauterine insemination, are largely unproven and mostly ineffective (Devroey et al. 1998; Kamischke and Nieschlag 1998). Thus, for many men, 'infertility' has, in fact, equalled 'sterility', or the permanent inability to conceive.

Male infertility problems may be compounded by so-called erectile dysfunction (ED), or impotence, whereby sexual performance problems prevent intercourse from being completed or undertaken. Although infertility and impotence are not synonymous, the two may be conflated in popular con-

ceptions of male reproduction (Inhorn 1994a; Webb and Daniluk 1999). Furthermore, impotence may be a product of and a contributor to infertility; many couples experience sexual dysfunction as a result of the infertility experience (including sexually demanding, 'timed' treatment regimes). Such dysfunction, when manifest in obstacles to successful ejaculation, may diminish the chances of conception (Rowe et al. 1993).

Given the various factors and the recalcitrance of male infertility to treatment, it is fair to say that men contribute significantly to global patterns of infertility.¹ It is surprising, then, that men do not bear more of the social burden for infertility. The reasons appear obvious: women's bodies bear the 'proof' of infertility through their failure to achieve pregnancy and childbirth, whereas men's bodies hide the evidence of reproductive defects. But a nuanced cultural analysis is required to account for this inequity, one that examines patriarchy as a system of gender oppression (i.e. male domination/female subordination) and that implicates patriarchy in the gendered asymmetry that accompanies infertility. Although arguments for 'universal' patriarchal oppression of women are difficult to sustain and have been rejected as ethnocentric in critiques of radical feminism (Elshtain 1981; Jaggar 1983; Tong 1989), it is clear that women's suffering over infertility is linked to patriarchal formations. Nevertheless, such patriarchal systems are often culturally diverse and locally informed; therefore, their expression is variable.

The case of male infertility in Egypt – where sperm are popularly referred to as 'worms' and male infertility is glossed as 'the worms are weak' – cannot be understood without reference to patriarchy in its local form. In Egypt, approximately 12 per cent of all married couples experience difficulties conceiving (Egyptian Fertility Care Society 1995), but women are stigmatized for infertility – even in situations of confirmed male infertility – because of entrenched patriarchal gender ideologies and relations (Inhorn 1994a, 1996). Male infertility provides an excellent example of the ongoing nature of patriarchy in Egyptian social life and a lens through which patriarchal gender and conjugal relations may be viewed. Following a discussion of methodology, I describe two cases of infertility among men of different social classes, focusing on how the husbands' infertility affected their wives. Using this material and more general findings from two research projects on Egyptian infertility, I then analyse a series of 'patriarchal' paradoxes whereby infertile husbands enjoy various forms of privilege in their marriages, social relations and treatment experiences, often to the disadvantage of the wives who love and support them.

Methodology

This chapter's findings and arguments are based on two periods of field research in Egypt, in which my focus of investigation was the problem of infertility. The first period lasted from October 1988 to December 1989 and involved mostly poor people living in and around Alexandria, Egypt's second largest city of more than five million inhabitants. Of the 190 women who formally participated in my study, 100 presented to the University of Alexandria's public ob/gyn teaching hospital for the treatment of infertility. There, I conducted in-depth, semi-structured interviews in the Egyptian dialect, eventually making my way into women's homes and communities, where I was then introduced to their husbands.² Forty per cent of husbands in this study had a diagnosed infertility factor, and an additional 10 per cent suffered from sexual dysfunction, which had led, in most cases, to procreative difficulties.

Returning to Egypt in 1996, I spent three months conducting participant observation and in-depth semi-structured interviewing in two private hospital-based in vitro fertilization (IVF) clinics located in elite suburbs of Cairo (Heliopolis and Maadi). In this study, involving sixty-six cases of infertility, most of my informants were educated, middle- to upper-class elites, who often presented to these IVF clinics as couples. Unlike my initial fieldwork, where women served as primary informants, the recent fieldwork involved male and female informants in nearly 40 per cent of cases. Of the male partners among these sixty-six couples, 70 per cent suffered from a diagnosed factor, including some severe cases (e.g. azoospermia).

This high percentage of male infertility cases in both studies reflects two sets of factors, one epidemiological and one clinical. With regard to epidemiological risk factors, Egyptian men are exposed to work and 'lifestyle' factors linked to increased rates of infertility. Manual and lower-class agricultural labourers are often exposed to high heat, pesticides and chemicals in their workplaces, all of which have been implicated in male infertility in Egypt (Inhorn and Buss 1994) and in other countries as well (Daniels 1997; Thonneau et al. 1998). Rural-born Egyptian men may also suffer the chronic effects of schistosomiasis, an endemic parasitic infection that affects reproductive function (Inhorn and Buss 1994; Yeboah et al. 1992). Finally, Egyptian men are heavy users of 'stimulants' like tea, Turkish coffee, high-nicotine cigarettes and tobacco-filled waterpipes (Inhorn and Buss 1994), all of which have been implicated in a reduced likelihood of conception (Curtis et al. 1997). These high numbers reflect the changing clinical nature of male infertility treatment in Egypt. With the introduction of new reproductive technologies over the past decade, some male infertility cases are now treatable in urban IVF clinics in Alexandria and Cairo.

Because my work was based in hospitals with IVF programmes, the number of male infertility cases is probably over-represented in my studies.

Nevertheless, the studies afforded me the opportunity to talk with men and women of various social classes. As with the rest of the world, male infertility in Egypt has been poorly investigated from a social science perspective. This chapter represents a first attempt to understand the gendered dimensions and consequences of male infertility in this patriarchal cultural setting, where this reproductive impairment is a profoundly emasculating and thus a delicate and 'invisible' subject.

Two cases of male infertility

Madiha and Ahmed Madiha³ is a diminutive, attractive, and brave twenty-three-year-old, married to her infertile, twenty-eight-year-old husband, Ahmed, for five years. Both are uneducated and poor, as his carpenter's salary brings them only LE 40 a month.⁴ Although Madiha worked in a textile factory before marriage and is willing to work again to improve their economic situation, Ahmed refuses this option, citing the problems of crowded transportation (with men who are 'strangers') and Madiha's potential neglect of the housework.⁵ Madiha has been seeking treatment for infertility since the third month of her marriage, when her mother- and sister-in-law insisted on taking her to a physician. Since then, she has endured countless 'treatments', both ethnomedical and biomedical. Her mother-in-law has brought her vaginal suppositories of black glycerine to 'bring out' any infection she might have in her vagina. Traditional healers and neighbours have performed painful 'cupping' on her back to draw 'humidity' out of her womb. Spiritist healers have said prayers over her and asked her to perform various rituals of circumambulation at religious sites. During one Friday noon prayer, she was asked by a female spiritist healer to urinate on top of an eggplant to 'unbind' an infertility-producing condition known as *kabsa* or *mushahara*.⁶

Simultaneously, Madiha has pursued biomedical treatment, at the urging of Ahmed and his relatives, with whom she has lived for most of her marriage. Two of the doctors she has visited have performed a procedure called tubal insufflation, in which carbon dioxide is pumped into the uterus without any anaesthesia. One of the doctors told her that her cervix and uterus might be 'small' and that 'the smallest uterus can't get pregnant'; the procedure might 'widen', or 'dilate' her. The other physician offered no reason for performing the procedure. In fact, although tubal insufflation is widely practised as a money-making procedure by Egyptian gynaecologists with no specialized training in infertility, this technique, once used to diagnose tubal obstruction, has no therapeutic value and may

actually produce infertility by forcing pathogenic bacteria from the lower into the upper genital tract (Inhorn 1994a; Inhorn and Buss 1993).

Madiha also underwent an operation under general anaesthesia to correct a 'folded' uterus. As she explained, 'I didn't want this operation, but my in-laws pushed me and gave me the money.' When the operation failed, the doctor asked Ahmed to go to a particular doctor for an 'analysis'. Ahmed complied, and was asked to repeat the analysis twice and to take treatment.

According to Madiha, it was only then that 'I knew I'm all right and something is wrong with my husband'. Yet, Ahmed refuses to believe he is the cause of the infertility, and thus rejects treatment. His family, furthermore, refuses to believe that the first son in the family to marry is responsible for the infertility. As Madiha put it:

Even my husband, when I tell him it's his problem, he doesn't answer me. When he went to the doctor for the first time, the doctor told him that he had pus and weakness in his *didan* [literally, 'worms' i.e., sperm]. But he never goes for treatment, even though he knows I want him to. Every time I tell his family that it's 'from him', they don't answer me. Instead, every time I tell them that I'm going to the doctor, they encourage me to, as if it's my problem. My family won't get involved. They know I'm not the reason and it's something wrong with Ahmed. They're 'relaxed' because they know it's his problem.

Concerned about her ongoing childlessness, one of Madiha's paternal uncles, who had read about the University of Alexandria's new infertility programme at Shatby Hospital, convinced her to go. At Shatby, Madiha underwent more tests, including laparoscopy, a surgical procedure to assess the condition of her fallopian tubes. There, the doctors told her that there was absolutely nothing wrong with her reproductive tract. Instead, another analysis showed Ahmed's sperm to be of 'poor quality' in terms of count and motility. The physicians encouraged Madiha to undergo artificial insemination using her husband's sperm (so-called AIH, because AID using donor sperm is religiously prohibited). The first attempt failed, but, at the time of my interview, she was mustering additional resources and nerve to try again.

She reported feeling sad and lonely, not only because she has no children to care for, but because she lacks support in her 'search for children', either from her husband, his relatives, or her family, who do not want to make trouble as long as there is no threat of divorce. 'One day,' she said, 'I got fed up. So I told him, "If you want to get married again, just go! I don't want any more treatments."' Although Ahmed does not admit to being infertile,

she thinks some part of him must believe this, as he did not accept her offer of divorce and continues to be nice to her. Thus, even though Ahmed is a poor man, an unsatisfactory lover, and a traditional male who will not let Madiha work to fill her lonely days, Madiha believes that Ahmed loves her – more than she loves him – and that he will not divorce her, even if ongoing childlessness is 'God's will'. Madiha is literally *miskina* (a poor little thing) whose chances of becoming a mother remain slim because of the intractable infertility and truculent attitude of her husband.

Shahira, Mohammed and their ICSI twins Shahira is the twenty-five-year-old wife of Mohammed, a forty-three-year-old lawyer whose father was once a powerful politician. In addition to his legal practice, Mohammed rents a villa to a foreign embassy and owns a business centre run by Shahira. She is Mohammed's second wife, married to him now for ten months. Before this, Mohammed was married for seventeen years to Hala, a woman now in her forties, whom he divorced two years ago because of their childlessness.

Early in his first marriage, physicians told Mohammed that he suffered from severe male-factor infertility, involving low sperm count and poor motility. He underwent repeated courses of hormonal therapy, none of which improved his sperm profile. Ultimately, he and Hala underwent several cycles of artificial insemination using concentrates of his sperm, and five cycles of in vitro fertilization (IVF), three times in Germany and twice in Egypt. Each trial was unsuccessful.

It was obvious to the Egyptian physicians who undertook one of the trials that Mohammed and Hala's marriage was deteriorating during the course of therapy – a deterioration they implied had something to do with Hala's 'strong personality'. Shahira seemed to agree:

In Egypt, if a man knows he doesn't get his wife pregnant, he's always upset. And if you're pushing him all the time, and he's the reason for the problem, he feels like giving up [on the marriage], because there are no children to keep in the house. In my husband's case, he preferred to divorce her because their relationship became bad. They had different attitudes and behaviours, and the major reason for the divorce was that he knows he's the reason for no pregnancy. He's kind, and she's nervous and always asking too many questions.

Although Hala has not remarried, Mohammed remarried in little over a year. He chose Shahira, a Christian, after knowing her for five months. Mohammed was less interested in Shahira's 'pedigree' (a college degree in tourism, with fluency in French and English) and in her religion (a Muslim man is allowed to marry a Christian woman), than in her youth, potential

fecundity, acceptance of his infertility problem, and her willingness to try additional treatments with him. He told her, 'I want to marry you, but you are a young lady, and I'm sure you want a baby.' Shahira needed a 'father figure' and felt that Mohammed could be 'both a husband and a father'. (Her father works in the United Arab Emirates, and she has not seen him for eight years. Her mother died when Shahira was ten, and she has 'lived alone' with her younger brother and sister and two servants since their father emigrated in the early 1990s.) As Shahira stated:

I need someone older, like a father, caring for me. And I'm sure he needs me, because he will think about pregnancy all the time, and he was bad, psychologically bad. And he needs someone to care for him as a wife. If I married a young man, he will ask first about himself. He wants to live with his wife alone. But my husband sees my case [i.e. she is like the 'mother' to her younger siblings], and he accepts my case. But I accept his [infertility]. He's feeling for me – I can't separate from them [her siblings] – and he loves this in me. Because he says, 'If you care for your sister and brother, you will care for me.'

I took my decision in two months, without love before marriage, but with my mind. But love has grown – 100 per cent. An important thing in marriage is understanding, feeling secure. That's more important than love. He's kind and when I'm sick, he'll sit beside me and ask how I'm feeling. When I married him, I accepted 100 per cent that I will not have children, and I wouldn't push him. But since I knew his case before marriage, I told him I'd be willing to try [IVF] more than once because he's kind. I was afraid, but I'll try.

A few months into their marriage, Shahira went to a gynaecologist in Maadi, an elite suburb. The physician told her: 'You are young and you haven't anything wrong, but the lab report of your husband is bad.' She asked the physician about IVF, and he said: 'No way, because your husband is a very bad case.' Mohammed, meanwhile, underwent five months of drug therapy. His andrologist told him: 'Your wife is young. ICSI [intracytoplasmic sperm injection] may be successful, because she's young and has no problem. Don't hesitate. You should use any time you have.'

Mohammed took Shahira to one of the two Egyptian IVF clinics where he had also taken his first wife. The physicians confirmed that because Shahira was young, with no known reproductive impairments, their chances of conceiving with ICSI, the newest variant of IVF, were greater than in Mohammed's previous attempts. With ICSI, as long as a single viable spermatozoon can be retrieved from a semen sample or directly from the testicles, it can be injected through so-called 'micromanipulation' tech-

niques into the ovum, thereby 'helping along' the fertilization process. Thus, with ICSI, men with severe forms of infertility – for which all other forms of therapy, including standard IVF, are unsuccessful – are able to conceive biological offspring. In other words, ICSI heralds a revolution in the treatment of male infertility, although it is accessible only to those who can afford it (at approximately £E10,000, or \$3,000, per trial).

Mohammed was delighted that Shahira and he were candidates for ICSI, but Shahira's reaction was different: 'I'm afraid of any operation, or anything. I was so afraid, and I was not thinking it was going to be successful. But [the doctor] told me, "Don't be afraid. It's easy. A small operation. It will be successful."'

Shahira suffered uncomfortable side effects from the medication used to stimulate ovulation. Her gastric ulcer symptoms were exacerbated, and she felt abdominal cramping and pain throughout the treatment. 'It's too difficult doing this ICSI,' Shahira explained. 'I take all these injections, I come to the hospital every day, I prepare for the operation, I see the anaesthesia, the doctors. It's frightening. My husband – they just take the semen from him.'

Once the ICSI procedure was completed, Shahira was still unconvinced of its efficacy. Thus, when she was scheduled for a blood test to determine her pregnancy status, she refused. She was so intransigent that Mohammed finally called the laboratory and had a doctor sent to their home to draw the sample. The next day, Mohammed and Shahira went to the laboratory, where the physician told them: 'Congratulations. I wanted to tell you personally.' Repeated pregnancy tests, along with three ultrasounds, confirmed that Shahira was pregnant with twins, in separate amniotic sacs.

Now Mohammed is in a state of disbelief. Every day he looks at Shahira's expanding belly and says, 'Now I can't believe I will have children. I will believe it if I touch my son or daughter by myself.' Shahira hopes that the birth of his twins will make Mohammed stop smoking three packs of cigarettes a day. Shahira is also concerned about the potential difficulties associated with a twin pregnancy and caesarean childbirth,⁷ and the demands of taking care of two infants simultaneously. She hopes that at least one of the infants will be a girl, although Mohammed hopes for a son he can name 'Ahmed'. If God wills, and the twins are born healthy, Shahira says, she won't do ICSI again: 'Once is enough. One operation, one delivery. It's too difficult and too frightening.'

Egyptian patriarchy

The cases of Madiha and Ahmed and Shahira and Mohammed illustrate the relationship of male infertility to patriarchy in Egyptian culture. In

Egypt, patriarchy involves relations of power and authority of males over females which are (1) learned through gender socialization within the family, where fatherhood gives men power; (2) manifested in inter- and intra-gender interactions within marriage, the family and other interpersonal milieus; (3) engrained in pervasive ideologies of inherent male superiority; and (4) institutionalized on legal, political, economic, educational and religious levels (Inhorn 1996: 3-4). Although I do not intend to suggest that Egypt is somehow more patriarchal than other societies, patriarchy operates on many levels in Egyptian society today. Furthermore, patriarchal ideologies cut across social classes, religious boundaries and household types. However, as seen in the case of Madiha and Ahmed, manifestations of patriarchy are often more pronounced among the rural and urban lower classes living in extended family households.

Indeed, as suggested by other feminist scholars (Kandiyoti 1988, 1991; Joseph 1993, 1994), patriarchy in the Middle East is operationalized in the classic patrilineal, patrilocally extended family household. There, the senior male has total authority. For young women, subordination to both men and senior women (the latter of whom 'buy into' patriarchy) is profound. This is particularly clear when young wives are unable to produce children, thereby threatening the social reproduction of the household and the husband's patrilineage at large. Exploring patriarchal relations in Middle Eastern households is thus crucial to understanding the social dimensions, inter- and intra-gender dynamics, and conjugal relations surrounding infertility. While it is clear why infertile women might suffer under such conditions of classic patriarchy, it is less clear what happens to women whose husbands are infertile. Yet, as shown in the case studies above, the condition of male infertility also threatens the happiness, health, security and lives of Egyptian women. I argue that women suffer over men's infertility because of the nature of Egyptian patriarchy and the kind of patriarchal support Egyptian men receive in their family lives, even when they are infertile. Male infertility in Egypt creates four main 'patriarchal paradoxes': (1) who gets blamed for infertility in a marriage; (2) whose gendered identity is diminished by infertility; (3) who suffers in an infertile marriage; and (4) who pays the price for infertility treatment.

Patriarchy and procreative blame

The first paradox is seen in the realm of procreative theory, or how Egyptians conceive of the 'coming into being' of human life (Delaney 1991; Inhorn 1994a). In contemporary Western reproductive biology,⁸ procreation theories are 'duogenetic', in that men and women are seen as contributing equally to the hereditary substance of the foetus, formed through the union

of a woman's ovum and a man's spermatozoon. However, even with the widespread penetration of Western biomedicine and education around the world in the past half-century, the globalization of such a duogenetic model is incomplete. Rather, in Egypt and in other parts of the Middle East (Crapanzano 1973; Delaney 1991; Good 1980; Greenwood 1981), lesser-educated people believe procreation is 'monogenetic', assigning men, the 'givers of life', primary responsibility for procreation. Specifically, most poor urban Egyptians believe that men are the creators of pre-formed foetuses, which they carry in their sperm and which are then ejaculated and 'caught and carried' by women's waiting wombs. In this scenario, women are not only marginalized as reproducers, but the products of their reproductive bodies, particularly menstrual blood, are seen as polluting to men and the foetuses they create. Although the notion of women's 'eggs' is beginning to gain credence, even some educated Egyptians argue that men's sperm are reproductively dominant to women's eggs in terms of biogenetic input into the foetus.

Given this ideology of male procreation, it is a true patriarchal paradox that women, rather than men, are blamed for procreative failure. In this masculinist pre-formation model, men cannot be blamed for failures of procreation, unless, because of impotence or premature ejaculation, they are unable to pass their worm-enveloped children into women's wombs. In other words, barring sexual inadequacy, men cannot fail reproductively so long as their bodies are the least bit spermatogenic. But women's bodies may be plagued by numerous problems that bar the facilitation of male procreation or result in an unsuitable gestational 'home' for the child that a man 'brings' in his ejaculate. This is why every act of sexual intercourse does not result in pregnancy. This is also why women are seen as suffering from many infertility conditions, both ethno- and biomedical (Inhorn 1994a, 1994c). These conditions are thought to impede women's ability to provide adequate reception and nurturance of the foetuses men make. In other words, just as men are seen as giving life, women are seen as taking it away because of wombs that fail to facilitate the most important act of male creation. Men, on the other hand, are seen as immune to infertility-producing bodily pathology. As long as a man can ejaculate his worm-borne foetuses into a woman's womb, he is deemed both virile and fertile.

With the advent of semen analysis in Egypt over the past three decades, however, the blame for infertility has shifted slightly. In fact, 'worm' pathology is a titillating topic of conversation among poor urban Egyptians. Virtually every Egyptian has now heard of the problem of so-called 'weak worms'. 'Weakness' is a common cultural illness idiom in Egypt (DeClerque et al. 1986; Early 1993) and is rife in popular reproductive imagery. Most

Egyptians now accept the idea that men, too, may be infertile because the 'worms' are slow, sluggish, prone to premature death or absent altogether. Because men's worms are considered living animals, they are seen as suffering the problems of other animals, including excessive somnolence, natural death and even murder (by other microbes or by some substance in the woman's body). The problem of not having enough worms is also recognized as important. Some men are seen as having 'no worms at all', 'a low percentage of worms', 'too few worms' or, in a fusion of popular and biomedical imagery, 'a low worm count'.

Accepting male infertility in theory is not the same as accepting it in practice. Although Egyptians are willing to discuss the possibility of weak worms when a couple is childless, they are less willing to accept male infertility as the absolute cause of any given case. Even when men are acknowledged as having worm problems, such problems are seen as correctable through various medications thought to invigorate, even enliven, the most moribund of worms. The severity of many male infertility problems, which rarely respond well to drug therapy, remains unrecognized by most Egyptians.

Rather, women are blamed for the failure to facilitate male procreation. Women's reproductive bodies are seen as containing three types of 'equipment' – the uterus, fallopian tubes and ovaries – mechanically fragile and thus subject to injury and failure. Women are viewed as having 'many things that can go wrong' with their reproductive bodies, a view supported when women seek biomedical infertility treatment and are subjected to numerous diagnostic and therapeutic procedures. Women are usually blamed for having more severe, intractable infertility problems, and the degree to which Egyptian women view their reproductive bodies as fragile, potentially malfunctioning and difficult to treat is remarkable. Indeed, the persistence of women-blaming cannot be overstated. Women who are given a clean bill of health continue to be condemned as infertile by their husbands' relatives, neighbours and sometimes husbands themselves – even when the husbands suffer from serious male-factor infertility. Many women willingly accept and internalize patriarchal ideologies of reproductive blame, under the assumption that something must be wrong with them, too.

Among poor women unable to obtain high-quality, up-to-date infertility care, quests for conception typically involve painful and tortuous therapies that are obsolete in the West and that may create infertility problems where none existed. The quest is encouraged, even mandated, by husbands and husbands' families, who taunt a childless wife as 'useless', 'worthless', 'barren', 'incomplete', 'unwomanly'. As one woman explained: 'They always blame the woman and say she's like a tree without dates. Usually when it's

known to be from the husband, they don't tell him anything, because it would make him feel embarrassed and his manhood would be shaken.'

Patriarchy and masculinity This brings us to the second paradox: whereas infertility always mars a woman's femininity, no matter which partner is the 'cause' of the problem, male infertility does not similarly redound on a man's masculinity. There are several reasons for this. First, there is widespread disagreement about the degree to which male infertility can be emasculating. The dominant view is that male infertility is profoundly emasculating, particularly given two major connotations: first, of infertility with virility or sexual potency; and second, of virility with 'manhood', the meanings of which are closely linked in North Africa (Ouzgane, personal communication). In Egypt, infertile men are said to 'not be good for women', to have their 'manhood shaken', or to be 'weak' and 'incomplete', not 'real men'. Thus, infertility casts doubt upon a man's sexual and gender identities – that is, whether he is a 'real' man with the normal masculine parts, physiological processes, requisite 'strength' of body and character, and appropriate sexual orientation. Furthermore, infertility threatens personhood itself or the acceptance of a man as a 'whole' human being with a normal adult social identity and self-concept. Indeed, infertility, a condition over which Egyptian men (like men everywhere) have no control, threatens 'norms of being' (Goffman 1963) – those attributes of a man felt to be so ordinary and natural that failure to achieve them leads to feelings of shame, incompleteness, self-hate and self-derogation. Given the threat of infertility to normative masculinity, it is not surprising that the condition is deeply stigmatizing and the source of profound psychological suffering for Egyptian men who accept their infertile status.⁹ Because male infertility is glossed as spermatic 'weakness', many infertile Egyptian men seem to take this cultural idiom to heart, feeling that they are somehow weak, defective and even unworthy as biological progenitors. Many infertile Egyptian men seeking treatment at IVF centres bemoaned their 'weakness' and wondered out loud whether they would 'pass their weakness' on to their children.

On the other hand, an alternative view voiced by many Egyptians of all social classes is that 'a man is always a man', whether or not he is infertile, because having a child doesn't 'complete a man as it does a woman'. Indeed, whereas a woman's full personhood can be achieved only through attainment of motherhood, a man's sense of achievement has other potential outlets, including employment, education, religious/spiritual pursuits, sports and leisure, friendship groups and the like. Egyptian men may delay marriage and parenting for many years as they pursue education, seek employment at home or abroad, and accrue resources to

set up a household. Although more and more women in Egypt are entering the workforce (MacLeod 1991), the notion of a married 'career woman' who remains childless by choice is unthinkable. Thus, while men and women in Egypt, almost without exception, eventually marry and expect to become parents, the truly mandatory nature of parenthood is experienced much more keenly by women, whose other avenues for self-realization are limited and who are judged harshly when they are unable to achieve motherhood early in their married lives.¹⁰

Infertile men rarely receive the criticism and social scrutiny that infertile women experience. In fact, men who learn that they are infertile needn't fear much for their reputations, for male infertility is rarely exposed to others in Egyptian communities. Why? For one, semen analysis is fraught with difficulty in Egypt: some men refuse to undergo the analysis, others disbelieve the negative results, others hide their bad results from their wives and families, and some bribe laboratory technicians for false reports. Furthermore, infertility specialists bemoan the technical quality of semen analysis, which varies from lab to lab and may thus be unreliable.

Second, many women will go to great lengths to uphold their infertile husbands' reputations – shouldering the 'blame' for the infertility in public to avoid the stigma, psychological trauma and possible marital disruptions such disclosure is likely to instigate. Egyptian women, understanding all too well the androcentric norms of their society, are not inclined to undermine their husbands' authority or standing as potential patriarchs, whose ability to produce children must remain unquestioned, particularly by other men. Indeed, masculinity in the Middle East is largely a homosocial enactment performed before and evaluated by other men. Thus, at the core of masculinity in the Middle East is homosocial competition and hierarchy – men's needs to prove themselves to other men (Ouzgane 1997: 11–12). When male infertility does occur – wreaking havoc on a man's paternity, his ability to monogenetically procreate and prove his societal position as a patriarch, or father figure to his biological children – then such infertility is rejected as implausible, or hidden from public scrutiny by infertile men themselves and the women who share their 'secret'. So stigmatizing is male infertility to prevailing 'hegemonic masculinity' (Connell 1995: 76) that most Egyptian men would rather 'live a lie' – enforcing or tacitly accepting a cover-up on the part of their wives and families – than risk exposure of their emasculating 'defect' to their male peers. Themselves the victims of dominant masculinity norms, infertile Egyptian men thus pay the heavy price of diminished self-concept and profound psychic suffering over their 'secret stigma'. But, I would argue, the burden may be even greater for such men's wives: by feeling compelled to shoulder the blame, they ensure that

male infertility remains 'invisible' and hegemonic masculinities remain intact. At the same time, such a 'patriarchal bargain' (Kandiyoti 1988) means that wives of infertile men must endure the social ostracism that comes with this stigmatizing condition, and the psychic and physical toll of medical treatment for a condition located outside their own bodies.

Patriarchy and infertile marriages That such women's marriages are threatened points to a third paradox: infertility stemming from a husband rarely leads to wife-initiated divorce and may, in fact, strengthen marital bonds. Yet, infertility may lead to husband-initiated divorce or polygynous remarriage, whether or not female infertility can be proven.

Egyptian men who acknowledge their infertility are unlikely to replace their wives in a futile attempt to prove their fertility. Knowledge of their 'secret failing' often makes infertile men extremely solicitous of their wives, largely because of the guilt they feel over depriving their wives of children. In turn, wives of infertile men typically express profound sympathy and care, and rarely deem the infertility a striking blow to their marriages. Indeed, marriages affected by male infertility are often some of the best. Infertile husbands are often reported by their wives to be exceptionally kind and loving. Women, for their part, often feel relief in knowing that their marriages are secure, and they generally (although not necessarily)¹¹ reciprocate their husbands' kindnesses with mutual affection and support, even 'baby-ing' their husbands in the ways mothers do their children. Furthermore, wives' willingness to accept the blame publicly is often impressive to their husbands, cementing the marital bonds further.

Egyptian women are socialized to be care-givers, and they often boast of the superior compassion that comes with being a woman. Given the opportunity, women will play this role with their husbands, even if a husband's condition leads to permanent childlessness in the marriage. When a man's condition seems hopeless, some men take pity on their wives and offer to 'free' them from the childless union. However, unlike men known to leave their wives over childlessness, few women choose this route. Not only is a woman's decision to leave a marriage considered bad form, but many women feel profound sympathy for their husbands' plight and are even more loving as a result. As one woman explained:

After the diagnosis, [my husband] told me, 'If you want to leave me, you can.' I was upset, and I went to talk to my mother – she's like my friend – and my mother wanted me to leave him! After thinking a lot, I refused. My mother got upset and told my brothers and sisters. They didn't – and can't – push me, but I felt all of them wanted me to leave my husband. And that's

'The worms are weak'

up to me to decide. For example, my sister whose husband is sick has three children. I told her, 'Can you leave your husband because you know he's sick? My husband, too, is sick. It's a sickness. You leave your husband and I'll leave mine!' A few times [my husband] told me, 'If you want me to leave you, I will. I'll leave you the apartment and everything. I just don't want to upset you.' He said he'd go to live with his father. He feels he's depriving me. I act at home as if he's my son, and I cuddle him a lot. And if strangers ask me from whom it is, I say, 'Both of us are well and that's up to God.'

When a wife is known to be infertile, on the other hand, men at least consider their Islamically condoned options of polygynous remarriage or divorce – even though most men ultimately reject this option (Inhorn 1996). Husbands in Egypt typically experience significant family pressure to replace their infertile wives and perpetuate the patrilineage. Thus, even when men choose not to divorce their infertile wives, thereby resisting the patriarchal scripts engendered by Egyptian family life, a wife's infertility still leads to marital disruption and insecurity. Many infertile women live in fear that their marriages will collapse, for Islamic personal status laws consider a wife's barrenness as grounds for divorce. Although Islam also allows women to divorce if male infertility can be proven, initiation of a divorce continues to be so stigmatizing that women rarely choose this option unless their marriages are truly unbearable. Thus, as seen in the case of Mohammed and his first wife, Hala herself did not initiate the divorce. It was Mohammed who left the marriage to try his reproductive luck with a younger, more 'sympathetic' woman. Hala, meanwhile, was blamed for the divorce, by virtue of her 'strong' (qua emasculating) personality which further 'weakened' Mohammed's psyche and his commitment to his marriage. Hala was deemed by all to have 'brought the divorce upon herself' by reminding Mohammed too often of his diminished masculinity.

Patriarchy and new reproductive technologies Mohammed and Hala's case also points to the fourth paradox: the new reproductive technologies to treat infertility have actually increased the potential for divorce in Egypt. Thus, the final paradox involves the ways in which reproductive technologies themselves may serve particular patriarchal ends in this cultural setting.

The newest reproductive technology known as ICSI has now entered the Egyptian landscape; with ICSI, cases of seemingly intractable male infertility can be overcome, and the arrival of this revolutionary treatment has led to the flooding of Egyptian IVF clinics with male-infertility cases. But many of the wives who have stood by their infertile husbands for years arrive at

Egyptian IVF centres as 'reproductively elderly' women in their forties, too old to produce viable ova for the ICSI procedure. Unfortunately, because of declining success rates for IVF/ICSI in women aged forty and above, most Egyptian IVF centres refuse to accept these women into their patient populations. Some Egyptian IVF doctors argue that this is a compassionate restriction, since it prevents older women from suffering the economic, physical and psychic hardships of likely futile attempts.

However, these age restrictions have proven devastating for Egyptian wives of infertile husbands. Because contemporary Islamic legal opinion forbids ova donation, surrogacy and adoption, couples with a reproductively elderly wife face four difficult options: (1) to remain together permanently without children; (2) to raise orphaned foster children; (3) to divorce so that husbands can try their reproductive luck with younger women; or (4) to partake in a polygynous marriage. Polygyny is unacceptable to most Egyptian women; yet the first and second options are unacceptable to a significant portion of Egyptian men, including the highly educated, upper-class men presenting themselves for male infertility treatment to IVF centres.¹² Thus, cases of male-initiated divorce between infertile men in their forties and fifties and the once-fertile but now elderly wives who have stood by them for years, are beginning to grow.

For their part, Egyptian physicians performing ICSI realize this potentially untoward outcome, but remain divided in their approach. Some believe that these 'scientific developments' give infertile men the God-given, patriarchal right to conceive their biological children, regardless of the marital repercussions; thus, they inform their male patients about ICSI, regardless of a wife's age or marital vulnerability. Others argue for a less scientific but more 'compassionate' approach, refusing to inform either partner that ICSI is possible. But given the way such information quickly spreads, partly as a result of multimedia forces, men turned away at one clinic may simply seek another (there are now thirty-six in Egypt) with a new, more fecund wife.

That more and more affluent, educated men are choosing this route, with little consideration for their first wives' feelings or futures, is the latest sad twist to the male infertility story in Egypt. Thus, the gendered dimensions of this new reproductive technology reveal the ongoing nature of Egyptian patriarchy and the ways in which cases of male infertility serve to expose it.

Conclusion

I have focused on male infertility in Egypt, highlighting the patriarchal paradoxes posed by this condition. I have sought to demonstrate how

women living under a particular patriarchal regime suffer over men's infertility. Not only are they blamed for the infertility, but their gender identities and marriages suffer as a result. Furthermore, women pay the price of male infertility treatment; not only the physically taxing embodiment of such treatment, but actual abandonment by husbands when such treatment is no longer an option for elderly wives.

Other stories could be told of how male infertility plays out in men's and women's lives in Egypt. Such stories must attend to infertile men's perspectives on their marriages, identities and experiences as members of a society in which men themselves are subject to stressful, competitive, hierarchical forms of hegemonic masculinity. Male infertility presents a crisis of masculinity for Egyptian men, one in which their manhood is shaken to its deepest core. But, as demonstrated in this chapter, the effects of such masculine crises do not end there: they redound in multiple, often profoundly detrimental ways on the lives of the women who, by virtue of marriage, must share infertile men's secrets and uphold their masculinity at all costs.

Notes

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1 An ongoing debate in the clinical-epidemiological literature questions whether sperm concentrations have decreased globally over the past fifty years because of environmental toxins and global warming. While some investigators support the so-called 'big drop' thesis, others do not.

2 For further details of the study methodology and sample, see the appendices in Inhorn (1994b).

3 Names used here are pseudonyms.

4 In 1988, this was the equivalent of a little more than US\$15, one of the lowest monthly household incomes in my sample of 100 women and their husbands.

5 Despite their poverty, many lower-class Egyptian men do not permit their wives to work. For a full explanation, see Inhorn (1996).

6 For full descriptions and interpretation of this cultural illness category, see Inhorn (1994a, 1994c).

7 Pregnancies with multiple fetuses are at greater risk of complications. In Egypt, all IVF and ICSI pregnancies result in caesareans, or 'surgical births'.

8 Although contemporary Western biological models of procreation are duogenetic, monogenetic models, including notions of foetal pre-formation in male sperm, have a long intellectual history in the West, dating from the time of Aristotle to the 1700s (Inhorn 1994a; Laqueur 1990).

9 Studies in the West have found that male infertility is more stigmatizing than female infertility (Becker, forthcoming; Van Balen et al. 1995).

10 Egyptian women may marry as early as their teens and usually by their twenties. Men often marry in their thirties, forties or even later.

11 Some Egyptian IVF physicians have expressed concern that my research does not reflect well enough the ways in which elite women may exert psychological power over their infertile husbands and generally make their lives miserable.

12 The permanent fostering of orphans, tantamount to 'adoption' in the West, is unpopular among Egyptians for several cultural reasons (Inhorn 1996). In my studies, middle- and upper-class Egyptians seemed less willing to entertain this possibility than did lower- and lower-middle-class infertile couples.

References

- Abbey, A., F. M. Andrews and L. J. Halman (1991) 'Gender's Role in Responses to Infertility', *Psychology of Women Quarterly*, 15: 295–316.
- Becker, G. (2002) 'Deciding Whether to Tell Children about Donor Insemination: An Unresolved Question in the United State', in M. C. Inhorn and F. van Balen (eds), *Interpreting Infertility: Childlessness, Gender, and New Reproductive Technologies in Global Perspective*. Berkeley: University of California Press.
- Cates, W., T. M. M. Farley and P. J. Rowe (1985) 'Worldwide Patterns of Infertility: Is Africa Different?', *The Lancet*, 14 September 14: 596–8.
- Collet, M., J. Reniers, E. Frost, F. Yvert, A. Leclerc, C. Roth-Meyer, B. Ivanoff and A. Meheus (1988) 'Infertility in Central Africa: Infection is the Cause', *International Journal of Gynaecology and Obstetrics*, 26: 423–8.
- Connell, R. (1995) *Masculinities*. Berkeley: University of California Press.
- Crapanzano, V. (1973) *The Hamadsha: A Study in Moroccan Ethnopsychiatry*. Berkeley: University of California Press.
- Curtis, K. M. et al. (1997) 'Effects of Cigarette Smoking, Caffeine Consumption, and Alcohol Intake on Fecundability', *American Journal of Epidemiology*, 146: 32–41.
- Daniels, C. R. (1997) 'Between Fathers and Fetuses: The Social Construction of Male Reproduction and the Politics of Fetal Harm', *Signs: Journal of Women in Culture and Society*, 22: 579–616.
- DeClerque, J., A. O. Tsui, M. F. Abul-Ata and D. Barcelona (1986) 'Rumour, Misinformation and Oral Contraceptive Use in Egypt', *Social Science and Medicine*, 23: 83–92.
- Delaney, C. (1991) *The Seed and the Soil: Gender and Cosmology in Turkish Village Society*. Berkeley: University of California Press.
- Devroey, P., M. Vandervorst, P. Nagy and A. Van Steirteghem (1998) 'Do We Treat the Male or His Gamete?', *Human Reproduction*, 13 (Suppl. 1): 178–85.
- Early, E. A. (1993) *Baladi Women of Cairo: Playing with an Egg and a Stone*. Boulder, CO: Lynne Rienner.
- Egyptian Fertility Care Society (1995) *Community-based Study of the Prevalence Of Infertility and Its Etiological Factors in Egypt: (1) The Population-based Study*. Cairo: Egyptian Fertility Care Society.

- Elshtain, J. B. (1981) *Public Man, Private Woman*. Princeton, NJ: Princeton University Press.
- Ericksen, K. and T. Brunette (1996) 'Patterns and Predictors of Infertility among African Women: A Cross-national Survey of 27 Nations', *Social Science and Medicine*, 42: 209-20.
- Goffman, E. (1963) *Stigma: Notes on the Management of Spoiled Identity*. Englewood Cliffs, NJ: Prentice-Hall.
- Good, M.-J. D. (1980) 'Of Blood and Babies: The Relationship of Popular Islamic Physiology to Fertility', *Social Science and Medicine*, 14B: 147-56.
- Greenwood, B. (1981) 'Perceiving Systems: Cold or Spirits? Choice and Ambiguity in Morocco's Pluralistic Medical System', *Social Science and Medicine*, 15B: 219-35.
- Greil, A. L. (1997) 'Infertility and Psychological Distress: A Critical Review of the Literature', *Social Science and Medicine*, 45: 1679-704.
- Greil, A. L., T. A. Leitko and K. L. Porter (1990) 'Infertility: His and Hers', *Gender and Society*, 2: 172-99.
- Inhorn, M. C. (1994a) *Quest for Conception: Gender, Infertility, and Egyptian Medical Traditions*. Philadelphia: University of Pennsylvania Press.
- (1994b) 'Interpreting Infertility: Medical Anthropological Perspectives', *Social Science and Medicine*, 39: 459-61.
- (1994c) 'Kabsa (a.k.a. Mushahara) and Threatened Fertility in Egypt', *Social Science and Medicine*, 39: 487-505.
- (1996) *Infertility and Patriarchy: The Cultural Politics of Gender and Family Life in Egypt*. Philadelphia: University of Pennsylvania Press.
- Inhorn, M. C. and K. A. Buss (1993) 'Infertility, Infection, And Iatrogenesis in Egypt: The Anthropological Epidemiology of Blocked Tubes', *Medical Anthropology*, 15: 217-44.
- (1994) 'Ethnography, Epidemiology, and Infertility in Egypt', *Social Science and Medicine*, 39: 671-86.
- Inhorn, M. and F. van Balen (eds) (2002) *Interpreting Infertility: Childlessness, Gender, and New Reproductive Technologies in Global Perspective*. Berkeley: University of California Press.
- Irvine, D. S. (1998) 'Epidemiology and Aetiology of Male Infertility', *Human Reproduction*, 13 (Suppl. 1): 33-44.
- Jaggar, A. M. (1983) *Feminist Politics and Human Nature*. Totowa, NJ: Rowman and Allanheld.
- Joseph, S. (1993) 'Connectivity and Patriarchy among Urban Working-class Arab Families in Lebanon', *Ethos*, 21: 452-84.
- (1994) 'Brother/Sister Relationships: Connectivity, Love, and Power in the Reproduction of Patriarchy in Lebanon', *American Ethnologist*, 21: 50-73.
- Kamischke, A. and E. Nieschlag (1998) 'Conventional Treatments of Male Infertility in the Age of Evidence-Based Andrology', *Human Reproduction*, 13 (Suppl. 1): 62-75.
- Kandiyoti, D. (1988) 'Bargaining with Patriarchy', *Gender and Society*, 2: 274-90.
- (1991) 'Islam and Patriarchy: A Comparative Perspective', in N. R. Keddie and B. Baron (eds), *Women in Middle Eastern History: Shifting Boundaries in Sex and Gender*. New Haven, CT: Yale University Press, pp. 23-42.
- Laqueur, T. (1990) *Making Sex: Body and Gender from the Greeks to Freud*. Cambridge, MA: Harvard University Press.
- Larsen, U. (1994) 'Sterility in sub-Saharan Africa', *Population Studies*, 48: 459-74.
- McConnell, J. D. (1993) 'Diagnosis and Treatment of Male Infertility', in B. R. Carr and R. E. Blackwell (eds), *Textbook of Reproductive Medicine*. Norwalk, CT: Appleton and Lange, pp. 453-68.
- MacLeod, A. E. (1991) *Accommodating Protest: Working Women, The New Veiling, and Change in Cairo*. New York: Columbia University Press.
- Ouzgane, L. (1997) 'Masculinity as Virility in Tahar Ben Jelloun's Work', *Contagion: Journal of Violence, Mimesis, and Culture*, 4: 1-13.
- Reproductive Health Outlook (1999) *Infertility: Overview and Lessons Learned*. Website: <www.rho.org>
- Rowe, P. J., F. H. Comhaire, T. B. Hargreave and H. J. Mellows (1993) *WHO Manual for the Standardized Investigation and Diagnosis of the Infertile Couple*. Cambridge: Cambridge University Press.
- Stanton, A. L., J. Tennen, G. Affleck and R. Mendola (1991) 'Cognitive Appraisal and Adjustment to Infertility', *Women and Health*, 17: 1-15.
- Sundby, J. (2002) 'Infertility and Health Care in Countries with Less Resources: Case Studies from Sub-Saharan Africa', in M. C. Inhorn and F. van Balen (eds), *Infertility around the Globe: New Thinking on Childlessness, Gender, and Reproductive Technologies*. Berkeley: University of California Press.
- Thonneau, P. et al. (1998) 'Occupational health Exposure and Male Fertility: A Review', *Human Reproduction*, 13: 2122-5.
- Tong, R. (1989) *Feminist Thought: A Comprehensive Introduction*. Boulder, CO: Westview Press.
- Van Balen, F. and T. C. M. Trimbos-Kemper (1993) 'Long-term Infertile Couples: A Study of Their Well Being', *Journal of Psychosomatic Obstetrics and Gynaecology*, 16: 137-44.
- Van Balen, F., J. E. E. Verdurmen and E. Ketting (1995) *Caring about Infertility: Main Results of the National Survey about Behaviour Regarding Infertility*. Delft: Eburon.
- Webb, R. E., and J. Daniluk (1999) "'The End of the Line": Infertile Men's Experiences of Being Unable to Produce a Child', *Men and Masculinities*, 2: 6-25.
- Wood, J. W. (1994) *Dynamics of Human Reproduction: Biology, Biometry, Demography*. New York: Aldein de Gruyter.
- Yeboah, E. D., J. M. Wadhwani and J. B. Wilson (1992) 'Etiological Factors of Male Infertility in Africa', *International Journal of Fertility*, 37: 300-7.