



## The problem of infertility in high fertility populations: Meanings, consequences and coping mechanisms in two Nigerian communities

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### ABSTRACT

This paper examines how socio-economic contexts shape local meanings of infertility, how the prevalence of infertility affects these meanings, and how the above affect community responses, life experiences and infertility treatment-seeking behaviors in two African communities. The paper is based on interdisciplinary research conducted among the Ijo and the Yakurr people of southern Nigeria that included a survey of approximately 100 infertile women and a matching sample of 100 fertile women, as well as in-depth ethnographic interviews with infertile and fertile women in two communities: Amakiri in Delta State and Lopon in Cross River State.

In-depth interview results show that female infertility is more problematic among the Ijo in Amakiri, where kinship is patrilineal (traced through the father's side), than among the Yakurr in Lopon, where kinship is double unilineal (traced through both parents). Childless women in Ijo society are not only disadvantaged economically but are prevented from attaining full adult womanhood. They therefore leave the community more often than other members. In Lopon there is also a strong preoccupation with fertility as a central fact of life, but infertile women receive support from maternal kin as well as voluntary associations serving as support groups. Our survey data confirm that there are significant differences between the life experiences of infertile and fertile women and between the infertile women of the two communities.

The overall findings indicate that while there are variations in the extent to which infertility is considered problematic, the necessity for a woman to have a child remains basic in this region. Motherhood continues to define an individual woman's treatment in the community, her self-respect and her understanding of womanhood.

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### Introduction

After a long period of neglect, the problem of infertility around the globe and specifically in sub-Saharan Africa has finally gained the attention of demographers and anthropologists. There is greater awareness of infertility as a serious social and public health problem in Africa (Boerma & Mgalla, 2001; Feldman-Salvesberg, 1999; Inhorn & van Balen, 2002), and a growing body of literature demonstrates infertility's devastating effects, particularly for women. While the condition has been shown to be problematic across African cultures, we know little about the degree to which it

hardships, meanings, and consequences vary among different cultural contexts. Given this variability, there is a need to document local levels, trends and socio-demographic patterns of infertility and to understand its impact on individuals in differing fertility and infertility regimes.

This paper investigates local meanings of infertility as shaped by the larger social and cultural context; the impact of infertility on these meanings; and how the above influence community responses, life experiences and infertility treatment-seeking behaviors in two rural communities in southern Nigeria: Amakiri (pseudonym) in Delta State, an Ijo community, and Lopon (pseudonym) in Cross River State, a Yakurr community. One salient difference between these localities is that descent in Amakiri is patrilineal, traced through the father's side, whereas in Lopon it is double unilineal, traced through both parents' sides. In addition,

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high levels of infertility are historically documented in Lopon (Forde, 1964; Obono, 2001), whereas infertility levels in Amakiri are relatively low (Hollos & Larsen, 1992).

The major hypothesis guiding our research is that infertility in Lopon has less serious consequences for women than in Amakiri due to different descent systems and symbolic meanings of the infertile condition as it evolved historically.

## Background

### *Research on infertility in sub-Saharan Africa*

Our research builds on the foundation laid down by demographers and anthropologists who have shown how social and economic contexts influence local meanings of fertility and infertility. Much of this literature is situated in the broader anthropological discourse on reproduction (e.g., Ginsburg & Rapp, 1995). The research shows that regardless of the medical causes of infertility, in most cultures women suffer personal grief and frustration, ostracism, and often serious economic deprivation. They receive the major blame for reproductive mishaps, and infertility often leads to divorce, jeopardizing a woman's livelihood. For example, Feldman-Salvesberg (1999) reports that in Cameroon infertility is grounds for divorce among the Bangangte, causing a woman to lose access to her husband's land. Infertile women are treated as outcasts and their bodies are buried on the outskirts of town among the Ekiti Yoruba of Nigeria (Ademola, 1982) and among the Aowin of Ghana (Ebin, 1982). Among the Ewe and the Ashanti, a woman with no child is not considered fully adult and cannot be buried with full adult funerary ritual (Fortes, 1978). Fertility is important in women's progression through life stages and in their identity as mature persons (Suggs, 1993).

Previous research on the factors associated with infertility by demographers shows an association between infertility and a number of socio-economic and behavioral factors (Ruthstein & Shah, 2004). Muslims tend to have higher infertility than Christians in Tanzania, while there is no association between religion and infertility in Kenya, and in Nigeria and Cameroon the association varies by region of residence. The level of schooling did not matter significantly in Nigeria, Cameroon, Kenya and the Sudan in the 1970s (Larsen, 1989). In Nigeria, women with secondary and higher education had higher risk of infertility in the 1980s, and in Tanzania women with primary education had higher risks of secondary infertility in the 1990s (Larsen, 2000, 2003). Women married more than once had consistently higher infertility compared to women married only once. In the 1980s women in polygamous unions had higher infertility than monogamously married women in Cameroon, while the opposite pattern held in Nigeria (Larsen, 1995).

### *The situation in Nigeria*

Nigeria is located just outside the central African infertility belt, but recent evidence suggests that the country has high rates of infertility (Larsen, 1995; Okonofua, Harris, Odebiji, Kane, & Snow, 1997). Among sexually experienced women age 25–49, as many as 9.4% had no living children and 5.2% had never had a fertile pregnancy based on the 1999 Nigeria DHS (Ruthstein & Shah, 2004). According to the 1990 Nigeria DHS, about 4 percent of women over age 30 have never borne a child. Other community-based data suggest that up to 30 percent of couples in some parts of Nigeria have difficulties in achieving a desired conception after two years of marriage without the use of contraceptives (Adetoro & Ebomoyi, 1991). According to Okonofua et al. (1997:207), male and female disorders equally account for infertility and the male factor is

associated with a greater percentage of primary infertility (Kuku & Osegbe, 1989; Okonofua & Snow, 1995). As far as regional differences are concerned, Udjo (1987) reported that Nigerian infertility was highest among the Kanuri in the Bornu region in Northeast Nigeria. More recent evidence in the south indicates that infertility has been persistent among the Yakurr (Obono, 2001). Our pilot studies (Hollos, 2003; Obono, 2004) on infertile women's life histories in Amakiri and Lopon also underscore the variability of rates as well as the significance of fertility in the two communities.

The variability of the rates within the same country suggests that meanings of infertility may be locally specific. This indicates a need to investigate the meanings and consequences of infertility for individuals living under differing fertility and infertility regimes.

## Research settings and methodology

### *Setting*

The research was conducted in two communities in southern Nigeria, in Amakiri, an Ijo community and in Lopon, a Yakurr community.

### *Amakiri*

Amakiri is located on the western bank of the Forcados branch of the Niger River. Its population (based on a 2005 household survey) is approximately 7000; its seven villages or quarters are patrilineal descent groups comprising segments of the clan to which all Amakiri Ijo, as well as Ijo from surrounding villages, belong.

Amakiri residents live patrilocally, i.e., with the husband's male relatives. Inheritance is patrilineal for all immovable property, including building plots within the quarters, rights to farmland and fishing sites. Other rights inherited patrilineally include membership in the family council, the right to serve the paternal ancestors and the responsibility to marry widows.

Marriage is frequently polygynous. Since it is women who do the farming and provide for the everyday needs of the children, and since bride price amounts are low, acquiring additional wives is not considered difficult or expensive. On the contrary, since children represent an additional source of labor, it is believed that having many wives and therefore many children is a route to economic success. Divorce is relatively easy and frequent.

The economic base of Amakiri is horticulture, with a number of secondary occupations. The two primary economic activities, farming and fishing, are done almost exclusively by women. Most are also involved in marketing and trading. The few women not engaged in primary occupations work as seamstresses, shopkeepers or schoolteachers. Men hold most secondary and tertiary occupations. Because of relatively low cash intakes by males for daily needs, the household is to a large extent dependent on women's activities. The labor contribution of children of all ages is considerable.

### *Lopon*

Lopon is a local government headquarters with a population of about 120,000. The town is composed of five semi-autonomous divisions, which are the residential territories of patrilineal groups. Political organization within these areas follows patrilineal principles but, within the town as a whole, political authority resides with priests of fertility spirits representing 23 independent matrilineal clans. At the head of this theocratic council is a paramount chief with jurisdiction over the entire town.

Like other Yakurr, residents of Lopon are a double-unilineal people: they reckon descent through the matrilineal line for some

purposes (e.g., ritual observance, marriage payments and the inheritance of transferable wealth) and patrilineally for others (e.g., the use of land and houses and the provision of cooperative labor). Full siblings normally belong to the same patrilineage and matrilineage but, owing to the rules of exogamy, fathers belong to the same patrilineage but different matrilineage as their children, while mothers and their children belong to the same matrilineage but different patrilineages.

Marriage in Lopon is frequently polygynous. Polygyny was historically linked to the desire to produce many children, who are seen as sources of future wealth and economic security and, inherently, as wealth themselves; children have long been the primary reason for marriage.

While agriculture remains the main economic activity of its inhabitants and access to land is still determined by rules of kinship, Lopon has emerged as an important site in north–south distribution networks for perishable cash crops. Farming is performed on the basis of a sexual division of labor in which men are responsible for bush clearing and burning, while women do the planting, weeding and harvesting. Most trading is also done by women.

### Methods

This paper is based on extensive ethnographic and demographic research in both communities, spanning 15 years in Lopon (Obono) and 25 years in Amakiri (Hollos). In addition, between 2005 and 2007, we applied a combination of qualitative and quantitative methods focused specifically on the issue of infertility. We enumerated all households in all Amakiri's seven quarters and in selected clusters of Lopon's Ikpakapit division during the summer of 2005 and 2006, respectively. Seven of Ikpakapit's 14 clusters of residential units were randomly selected for enumeration. The enumeration entailed listing all households and their adult members, including the household head, his co-resident brother(s), if any, and their current wives as well as the wives' fertility history, in order to identify infertile women. We considered a household to consist of those individuals who regularly sleep in the same compound structure. A total of 966 households were registered in Amakiri, and 812 in Lopon. This enumeration was intended to serve as a sampling frame for the surveys, having identified the infertile women. When we conducted the surveys in 2007, we found that a large number of fertile women registered as infertile since they thought that infertile status would result in financial advantage from the survey. Consequently, the final sample for the surveys was selected by snowball sampling. In order to have a sufficient number of cases and to capture age-related differences, we included women in two age groups, 25–49 and 49 and above. These groups were further broken down into five-year age groups. Our sample of infertile women was matched by age and ward residence with fertile women. We chose a nested case-control design to reduce the required survey sample size. Sampling for the surveys and interviews was conducted by local teachers and elders, all of whom were known and respected in the communities and who knew the respondents and their life circumstances.

In-depth interviews with a sub-sample of approximately 25 infertile and 25 fertile women were conducted in each community in the summers of 2005 and 2006. The ages of the women selected for the life-history interviews ranged from 25 to 85.

The samples for the qualitative interviews as well as for the surveys were selected on the basis of the women's status at survey interview date as infertile or fertile. Infertility was measured by primary and secondary infertility. A woman was considered infertile if she did not have a child within a period of 24 months, she engaged in regular unprotected sexual intercourse, was not

postpartum amenorrheic and she wanted to have a child. Of these, childlessness or primary infertility pertains to women who have never had a child and secondary infertility to parous women. A woman was considered fertile if she had a child within the last 24 months from interview date. The fertile women were selected to match the infertile women by ward of residence and age.

The survey instrument, administered in 2007, was constructed on the basis of the information gained through in-depth life-history interviews. In the surveys women were asked about their age, parity and how long they have been trying to have a child, and what treatment they sought when they experienced problems. They were also asked about available treatment options and their effectiveness and about coping strategies. We also collected complete marriage and labor migration histories, along with information about contraceptive use, the value of children, socio-economic characteristics, and circumcision (including the age at which cutting was performed). Women were asked about disadvantages of infertility in the community, including inability to participate in certain activities, lack of advancement in age-appropriate life stages, as well as of possible alternative activities, including voluntary associations.

This study was approved by the Brown University and the University of Maryland's Institutional Review Board, and by the Ethics Committee of the University of Ibadan, Nigeria.

### Findings

#### *Qualitative findings: ethnographic data and in-depth interviews*

The interviews were conducted as life-history interviews. The narrative form of life histories provided a framework that made it possible for the informants to discuss intimate problems and enabled us to retrieve information they possessed but may not have been able to articulate explicitly. These interviews illustrate how community views on infertility affect the lives of infertile women, how they shape their evaluations of self-worth and the strategies they adopt to remedy the situation. The wide age range of the women also reveals changes between the experiences of the older and the younger women (see Hollos & Whitehouse, *in press*). The extensive ethnographic work preceding these interviews informed survey design and analysis. The following are the areas that emerged as particularly salient in the lives of these women, clearly showing the differences between the two community contexts.

#### *Life stages*

*Ijo*. The Ijo recognize a number of named stages in the life cycle. These are not well defined age grades in the sense conceived of in many other African cultures, where cohorts have specific functions. Rather, the Ijo label individuals as being capable of performing certain tasks and behaviors appropriate for them. While universal schooling introduced new age labels, age-appropriate behavior is still judged by traditional life-stage criteria.

For women, to attain the adult stage known as *erera*, a number of steps must be taken. Entry into the previous stage of *ereso*, around 14 years of age, coincided with first menstruation and defined the young woman as “nubile,” or ready for marriage.

The movement from *ereso* to *erera* was traditionally dependent on pregnancy, circumcision and the performance of a *seigbein*, a special dance during the town's annual spring festival, and some of this sequence is still kept. Circumcision is done in the seventh month of pregnancy. The male partner is responsible for paying the midwife's fee, buying a number of specified presents for the young woman and sponsoring a small celebration in her parents' home. If she had previously moved away, she returned for the operation and delivery of her first child. In recent times more and more girls prefer

to have their circumcision done prior to becoming pregnant and either pay for the operation themselves or ask their fathers to pay for it. Circumcision without pregnancy, however, does not satisfy the criteria for entering into the stage of *erera*. Earlier, the process was completed by the performance of the *seigbein*, which had to be performed by every woman before she died, whether or not she had borne children. If she died without doing so, the community's well-being was believed to be endangered unless her daughter danced in her place. For an infertile woman this presented a serious problem since her husband would not sponsor her in life, nor did she have a daughter who could perform the rite after her death. Recently, there has been a growing tendency toward delaying the *seigbein* because of the expenses associated with it. Today, virtually no young woman performs it after the birth of her first child and an increasing number simply refuses to do it since it is considered to be "un-Christian" by the revivalist churches which have mushroomed in the community during the last decade. Nevertheless, with or without the performance of the *seigbein*, circumcision and pregnancy are prerequisites for entry into *erera*, the stage of mature womanhood.

*Yakurr*. In Lopon, life stages exist but are not as discrete as among the Ijo. Gender terminological distinctions do not appear until adolescence. Adolescent girls are referred to as *ben-mono* (singular, *wen-mono*), while male adolescents are *ben-dom*. Corresponding gender distinctions are then maintained throughout the life course. Among Lopon women, *sanen*, or adult woman status, is achieved more commonly through marriage, although an unmarried woman is still viewed as such if she is old enough. Crucially, though, a married female teenager has her status upgraded from *wen-mono* to *sanen* by fact of her marriage or childbirth even if this occurred outside of marriage. It is said of the latter girl that "she has grown old." In this sense, childbearing outside marriage attracts subtle condemnation whereas entry into *sanen* through marriage is a form of promotion.

A childless married woman is still considered *sanen* but may be disparaged as *odom* (a man) in reference to her inability to bear children. In other words, nominal womanhood appears to be achieved by age or marriage, but full *sanen* status only by a combination of marriage and childbirth. While it is clear that a married or adult woman may not be referred to as *wen-mono*, the conditions of marriage and childbirth are required for full adult female status to be achieved.

In neither community is child fostering considered to be sufficient for a woman to attain full adult status. This may explain why more infertile women do not take in foster children.

#### Marriage process

*Ijo*. In Amakiri, marriage is a long and elaborate process with several steps. It begins with libations presented by the groom's male relatives to the bride's family and continues with a number of cash payments and gifts to the bride and her parents. Traditionally, these payments and gifts were substantial; more recently, the bridewealth has been set at a symbolic amount of one hundred naira (about \$1.00 US), the major part of which is paid to the father of the bride. Smaller amounts are given to her mother and the bride as consent fees. The significant expenses associated with marriage payments come at the time of first childbirth when the child's father is required to present the mother with a number of specified gifts, and with the wife's performance of the *seigbein*. Childless women whose husbands did not have to make the birth payments and refused to pay for the dance are unable to attain full adulthood and are not considered to be properly married. This reflects poorly not only on the woman but on her family as well.

*Yakurr*. In Lopon, marriage is a similarly complex process occurring between members of exogamous matrilineages. Traditionally, courtship could last up to two years, and bridewealth was divided into six components, each of which had to be paid before sexual relations could take place. The bride relocated to the groom's household only upon getting pregnant, and the marriage ceremony was performed during pregnancy. After circumcision and pregnancy, a woman's transition from childhood to adulthood was celebrated; she was incorporated into her husband's lineage gradually, and only completely left her parents' household well after the birth of her first child. Behavior with respect to courtship and marriage has been changing in recent years; women today are less likely to be associated with many customary institutions including circumcision, not least because they perceive them as incompatible with Christianity.

Women who were unable to conceive children with their husbands are seen as anomalous, and many of our childless informants reported that husbands and in-laws insulted them as "men" once it became clear that they could not bear children. The community, however, reserved particular rituals to help infertile women conceive and thus achieve full married status. While all new brides had to undergo circumcision (*kukpol*), a special form of circumcision known as *kekpolpam* was reserved for women who did not become pregnant, and included additional prayers and sacrifices offered to chase away the wife's presumed infertility. This practice is evidence of a more supportive social environment for infertile women in Lopon than in Amakiri.

#### Polygamy

*Ijo*. Polygamous marriages were frequent in Amakiri in previous generations and a number of households still exhibit this pattern. The number of wives in the polygynous unions range from two to six, with two wives being by far the most common number. Having plural wives does not represent a particularly heavy expense for men, since bridewealth payments are relatively low and since women do most farming and provide for the needs of their own children. On the contrary, having many wives, and therefore many children, is seen as one way for a man to achieve both social and economic success. Co-wives in polygamous unions compete against one another in producing children, particularly sons, who represent shares in the family estate. An infertile woman in this context finds herself at a serious disadvantage not only with her husband but also vis-à-vis her co-wives who frequently disrespect her and can make her life very unpleasant. Thus, infertile women most frequently leave these unions and either migrate out of the community or return to their natal compounds. If a woman is the first wife and finds herself infertile—which eventually results in the husband taking a second wife—she will invariably leave the marriage. This may account for fewer polygamous marriages in the current generation and for the fact that none of the childless women in our interview sample were at the time of the interview married polygamously.

*Yakurr*. In Lopon, anthropologists have long observed a high incidence of polygyny and there has been no formal limit on the number of wives a man may take. Most women we interviewed in Lopon grew up in polygynous households. Incentives to take additional wives included the need for farming labor and the desire to expand one's prestige within the lineage through increased fertility. These have been offset in recent years by the rising cost associated with larger households, but polygamy remains common especially for older, established males. While it is not difficult for *Yakurr* wives to leave their husbands, a wife who proves infertile often remains married to her husband even after he takes another wife, possibly because these women do not seem to be ostracized by their in-laws or co-wives.

### Divorce

*Ijo.* In the patrilineal society of Amakiri, where the major purpose of marriage is the replenishment of the lineage, divorce is among the most prominent consequences of infertility. If a woman fails to give birth or bear enough children, divorce inevitably follows. Divorce can be initiated by husband or wife, but most frequently by the wife, either because she finds her marginalized position in the household unacceptable, or because she hopes to get pregnant by a new partner. Thus, an infertile woman's life course is characterized by multiple marriages or by multiple partners and often risky sexual behaviors.

*Yakurr.* Divorce is similarly frequent in Lopon, and has been at least since the first half of the twentieth century (Forde, 1951). Both husbands and wives could initiate divorce. As noted above, neither infertility nor her husband's taking another wife automatically results in a woman's divorce. It remains true, however, that infertile women are more likely than fertile women in Lopon to be divorced from their first husband, and usually at the latter's request. Divorced women tend to return to their paternal households until they can remarry.

### Associations

*Ijo.* In Amakiri, there are a number of women's associations at the town, quarter and family level. Members of town and quarter associations are women in the life stages of *erera* and *okosiotu*. The latter are women over the age of 70; they serve as spiritual leaders whereas the *erera* do the work of organizing festivals, dancing and cooking for burials and occasionally mediating disputes between local women. Associations allow select infertile women, such as successful business women, to participate, but have no support functions regarding infertile women, whom they generally ignore.

Family meetings are held for all extended family members with a depth of several generations. Sons and daughters of the family can attend whether they live in Amakiri or elsewhere. The issues the meetings handle include land disputes with neighbors, allocation of common family land, and the burial of members. While infertile women are eligible to attend, they rarely do so and claim that they are not regarded as equal members. Rather, they are considered a burden on the family which must pay for their burials.

*Yakurr.* Formal associations are an extremely important part of the social landscape for Lopon women today. In the past, these were composed of customary groups such as age grades and initiatory societies with highly ritualized functions, but most contemporary associations are of a voluntary nature. They include rotating savings associations, co-ops and church-based groups as well as "cultural associations" such as dance troupes which perform for ceremonial occasions. One customary association of particular note is the *kekonakona* society for infertile women from specific matrilineages, which has played an active role in community festivals and rituals. While the explicit mission of *kekonakona* is to help members conceive through supernatural means, it also acts as a support group for infertile women and provides an avenue for participation in community life. Members have benefited from a highly visible presence at town events, including the annual *leboku* (first fruits) festival during which members receive a blessing from the town's paramount chief. Today the *kekonakona* has all but died out: its two surviving members are both very elderly, and younger women we interviewed were disinterested in the group (see Hollos & Whitehouse, in press). Its existence, however, symbolizes the fact that infertility is publicly acknowledged as a condition that needs support and help.

Other groups also enable childless women in Lopon to take part in town life, and perhaps because of these groups informants generally believed that even a woman with no children could be "an important member of the community." While there are

mothers' associations in Lopon for which fertility determines eligibility, other groups including cultural, church, and credit associations do not bar childless or infertile women from their ranks and serve as an important outlet for infertile women with special musical or dancing abilities.

### Migration

*Ijo.* In Amakiri, a frequent consequence of infertility and subsequent divorce is outmigration from the community, usually in search of a cure or because the woman finds her position untenable. Because of this tendency to migrate, it is likely that many younger infertile women are absent from the community, and only from the stories of the older infertile women who have returned toward the end of their lives can these life paths be revealed. It appears that infertile women spend much of their lives moving from one place to another, from smaller towns to increasingly larger ones. Most women migrated as petty traders and eke out a marginal living. Some did become successful regional traders and managed to amass considerable wealth. Much of this wealth, however, was spent to find a cure for their condition and thus when they returned to the community, they were usually penniless.

*Yakurr.* By contrast, women in Lopon appear considerably less likely to leave their home town even in the event of childlessness and divorce. While women may go elsewhere for schooling or to accompany their husbands (particularly when the latter are in the army or national police force), none of the women we interviewed described having left Lopon on their own, whether for trade, medical treatment, or any other reason. After divorce, infertile women usually live in their fathers' household, even if their fathers had passed away.

### Old age and death

*Ijo.* Eventually, most migrant women from Amakiri return to the home community in their old age. For infertile women, where to live in their later years is among their major concerns. Not having a son means not having a rightful place as an older person in this society. A wife has no residence rights in her husband's place after his death except through her son. Although daughters of a family can be welcomed back to their paternal compound where they have a right to be, this is usually a difficult situation for them. There they live in marginal conditions, often barely tolerated and sometimes maltreated by their brothers and brothers' wives. In several cases, there is a striking discrepancy between the economic level of the infertile woman and the rest of her extended family members. The women feel uncared for and disrespected by their wider kin. They also complain that children they fostered do not, as a rule, come forward to help them in their old age.

The problem also extends to their burial which usually takes place in their paternal compound and which, in the case of individuals with many children, are elaborate feasts. In earlier days, infertile women could not be buried on town land, since it was believed this would harm the land's fertility, and they were consequently disposed of in the forest. This is no longer the case, but the burial of infertile women remains a problem since burial expenses are usually borne by the women's sons. Their funeral costs are consequently paid for by their paternal kin, resulting in very small-scale and quiet burial rites.

*Yakurr.* Elderly women in Lopon also rely on support from kin, particularly their children. Childless women are therefore in an especially precarious position. While informants almost universally stated that divorced, childless women return to their fathers' households to live, many also emphasized that such women may seek assistance from maternal relatives, i.e., members of their

matrilineage. In this way the Yakurr double-unilineal system affords multiple options to vulnerable women. Moreover, unlike in Amakiri, there are and have been no restrictions in Lupon on where a childless or infertile woman may be buried.

#### Searching for remedy

*Ijo.* It appears from the life histories of infertile women in Amakiri that much of their lives is geared toward the objective of having children. Women with primary and secondary infertility lead complicated lives in which their inability to have (enough) children forces them to switch directions many times. In addition to divorce, remarriage and migration, these women incessantly seek remedies for their condition. Most of them begin locally, with a therapist who promises conception by massaging the uterus. Many therapists also prescribe herbal remedies. Older women (those in their 80s and 90s) used to sacrifice to a deity across the Niger called *Benekurukuru* who is supposed to be the patron of infertile women. When these attempts fail, most women look for medical practitioners, starting at the local hospital, then moving to health centers in neighboring towns and eventually to Benin City and even Lagos. The wealthier women subject themselves to D & C's and tubal X-rays. The less affluent take medications to promote ovulation. As these are costly remedies, many of the resources that infertile women manage to accumulate through trading or other work are spent on them.

Many of the women also consider the newly popular revivalist churches to be a source of help. The pastors of these churches seem to be more sympathetic to the plight of infertile women than those of the traditional Anglican and Catholic churches. A number of interviewees said they joined these churches because the pastors convinced them that their prayers would be instrumental in making them pregnant.

*Yakurr.* Infertile women in Lupon also resort to local healers as well as to modern biomedicine in their efforts to conceive children. Each matriclan has a shrine and an associated priest, and in the past women having trouble conceiving made sacrifices at their matriclan shrine and sought the intervention of their priests. Today, however, very few informants report consulting matriclan priests, with most instead preferring biomedical treatment, local healers and herbalists, or some combination of these. In interviews, women often expressed frustration with conflicting medical diagnoses and with treatments that were expensive but ineffective. Many placed their hopes in the power of prayer, and said that fertility is beyond human control and a matter only for God to decide. In this community, the Catholic Church remains by far the most popular for infertile and fertile women alike, but revivalist churches have been growing in recent years, and their leaders have staked out hostile positions toward certain Yakurr customs. These churches instill the notion that only through Christian spiritual development—"seeking the face of God," as many informants put it—can a woman's problems be solved. While Lupon women may pursue various options, then, their search does not appear desperate and they seldom spend their last naira searching for remedies.

*Survey findings.* Rates of infertility could not be calculated on the basis of our household enumeration since, as mentioned earlier, the rates were inflated in many cases by fertile women registering as infertile. Historically, as documented by Forde (1951) and Obono (2004), infertility rates were about 8 percent in Lupon, higher than in Amakiri (Hollos & Larsen, 1992). Since the household enumeration conducted in the previous year turned out to be unreliable, it could not be used as a sampling frame.

The final snowball sample for the surveys consisted of 107 infertile women in Amakiri and 120 in Lupon. We believe that in

Amakiri this represents the universe of infertile women. In Lupon, the sample almost certainly represents an incomplete selection of infertile women in the two selected clusters of Ikpakapit. The fertile sample was selected by matching the infertile sample by residence and by five-year age groups. Table 1 displays various characteristics of the sample for both communities, including age distribution, education and current occupation.

In comparing the two communities, some of the differences between the samples are noteworthy. The age distribution shows fewer women in the youngest age group in Amakiri than in Lupon, probably due to higher levels of outmigration in the former. There are more women with primary infertility in Lupon than in Amakiri, confirming the historical findings of high rates of the condition in Lupon. With respect to occupations, there are more traders in Amakiri than in Lupon among both fertile and infertile groups, probably due to Amakiri's location on an important commercial route.

#### Marriage, divorce, polygyny, and child fostering

Infertile women in Amakiri are more likely than women in all other categories to have been married at least twice (Panel E). Forty-five percent of infertile women in Amakiri reported having been married two or more times, compared to 35 percent of infertile Lupon women, 20 percent of fertile Amakiri women, and just 11 percent of Lupon fertile women. In Lupon and Amakiri alike, having an infertile wife makes a man significantly more likely to take a second wife (Panel F). This trend is especially pronounced in Lupon, where 48 percent of infertile women reported that their husbands had taken another wife subsequent to their own marriage (compared to 13 percent of fertile Lupon women). In Amakiri, the difference is not as great, in part because polygyny levels appear to be relatively high even for husbands of fertile women. Forty-two percent of infertile Amakiri women reported

**Table 1**  
Sample characteristics.

	Lupon (fertile)		Lupon (infertile)		Amakiri (fertile)		Amakiri (infertile)	
	n	%	n	%	n	%	n	%
<b>A: Age distribution</b>								
25–34	34	28	34	28	23	21	23	21
35–49	39	33	39	33	52	49	52	49
50 and older	47	39	47	39	32	30	32	30
<b>B: Children ever born</b>								
None	2	2	58	48	0	0	27	26
One	7	6	30	25	3	3	26	25
Two to three	23	19	24	20	12	11	34	32
Four or more	88	73	8	7	92	86	18	17
<b>C: Education</b>								
None	28	23	30	25	27	26	17	18
1–6 years	29	24	25	21	27	26	31	32
7–12 years	38	32	28	23	28	27	25	26
More than 12 years	25	21	37	31	21	21	24	25
<b>D: Current occupation</b>								
Trading	32	29	23	20	51	53	40	42
Farming	54	50	49	43	22	23	25	27
Teaching	13	12	16	14	5	5	8	9
Nursing	3	3	3	3	1	1	0	0
Office work	1	1	15	13	14	14	16	17
Other	6	5	9	7	4	4	4	4
<b>E: Number of times married</b>								
Still in 1st marriage	100	83	58	49	69	67	41	40
1st marriage ended, hasn't remarried	7	6	20	17	14	14	16	16
Twice	11	9	27	23	17	17	42	41
3 or more	2	2	14	12	3	3	4	4
<b>F: Marriage type</b>								
Husband later took another wife	16	13	57	48	33	31	45	42
<b>G: Fostering</b>								
Has taken in foster children	58	49	66	55	63	60	69	66

that their husbands had later taken another wife, as against 31 percent of fertile Amakiri women.

While it may seem predictable that infertile women in each community would be much more likely than fertile women to take in foster children, we observed only a slight difference between fertile and infertile women in this regard (Panel G). Amakiri women were somewhat more likely to foster in children than Lopon women, however.

**Lineage system**

Our survey instrument included several questions intended to uncover differences between the two communities in the ways women related to their kinship groups Table 2.

Differences were greater when comparing the infertile women of both towns. Responding to the question “Whom do you feel closest to in your family?” (Panel A), Lopon infertile women reported feeling closest to mother (29 percent) and sister (21 percent), while Amakiri infertile women reported feeling closest to mother (22 percent) and brother (20 percent).

Responding to the question “If you had economic problems, whom would you approach for help?” (Panel B), infertile Lopon women chose their sister with about the same frequency (17

percent) as their brother (18 percent). Infertile Amakiri women, however, were twice as likely to choose their brother (22 percent) as their sister (11 percent).

These differences underscore the difference between the descent systems in the two communities: Lopon women emphasize the matrilineal connection (sister), whereas those from Amakiri emphasize the patrilineal (brother).

Given the question “Who in your family would be most likely to ask you for help?” (Panel C), the most common choice for infertile Lopon women was sister (26 percent), while infertile Amakiri women were most likely to choose their mother (20 percent).

With respect to the question “Who will take care of your burial?” (Panel D), infertile Lopon women preferred maternal kin (47 percent) to paternal kin (28 percent), while infertile Amakiri women preferred paternal kin (31 percent) to maternal kin (5 percent).

We also asked women having taken in foster children who the parents of those children were (Panel E). Lopon women were significantly more likely to take in sister’s children than brothers’ children, while Amakiri women took in brothers’ and sisters’ children with roughly equal frequency. Maternal kin were more likely than paternal kin to be the birth parents in Lopon while the opposite was true in Amakiri, but in both cases the differences were slight.

**Table 2**  
Community and kin relations.

	Lopon (fertile)		Lopon (infertile)		Amakiri (fertile)		Amakiri (infertile)	
	n	%	n	%	n	%	n	%
<b>A. Whom do you feel closest to?</b>								
Mother	14	14	32	29	21	20	23	22
Father	9	9	5	4	4	4	5	5
Sister	7	7	24	21	11	11	16	16
Brother	5	5	18	16	10	10	21	20
Son	22	23	15	13	16	15	19	19
Daughter	19	20	8	7	21	20	8	8
Other	21	22	10	9	21	20	10	10
<b>B. Whom would you ask for help?</b>								
Mother	19	18	21	19	13	13	15	15
Father	11	10	10	9	9	9	9	9
Sister	7	7	19	17	3	3	11	11
Brother	9	9	20	18	18	17	22	22
Son	15	15	11	10	14	13	9	9
Daughter	8	8	1	1	10	10	4	4
Other	36	36	30	27	36	35	30	30
<b>C. Who would ask you for help?</b>								
Mother	19	19	20	18	13	13	20	20
Father	1	1	5	5	0	0	2	2
Sister	28	27	29	26	13	13	19	19
Brother	11	11	24	22	13	13	13	13
Son	11	11	9	8	16	16	18	18
Daughter	22	22	12	11	22	22	12	12
Other	10	10	11	10	21	21	17	17
<b>D. Who would take care of your burial?</b>								
Sons	100	83	28	23	90	84	40	37
Daughters	66	55	12	10	62	58	19	18
Foster children	0	0	0	0	0	0	2	2
Brother’s children	7	6	23	19	0	0	5	5
Sister’s children	8	7	21	18	0	0	0	0
Other maternal kin	54	45	56	47	0	0	5	5
Other paternal kin	41	34	47	28	18	17	33	31
Non-relative	3	3	6	5	0	0	0	0
Other	6	5	8	7	7	7	5	5
<b>E. Whose children did you foster?</b>								
Sister	28	48	33	50	22	35	23	33
Brother	16	28	13	2	21	33	22	32
Paternal kin	4	7	4	6	7	11	7	10
Maternal kin	9	16	9	14	5	8	8	12
Husband’s kin	20	34	13	20	16	25	17	25
Husb. w/other woman	8	14	9	14	17	27	18	26
Non-relative	5	9	5	8	1	2	7	10
Other	1	2	1	2	2	3	4	6

**Seeking remedy**

Treatment-seeking behaviors differed noticeably between the two communities. In Amakiri, women with secondary infertility are more likely to seek treatment than their counterparts in Lopon Table 3 (Panel A).

Forty-seven percent of Amakiri women with secondary infertility reported having sought treatment, whether on their own (28 percent) or together with their husbands or partners (19 percent). By comparison, just 22 percent of Lopon women with secondary infertility had sought treatment, including 14 percent on their own and 8 percent with husbands or partners. Treatment-seeking behaviors were more similar for women with primary infertility in both communities (24 percent in Lopon, 22 percent in Amakiri).

When we sort respondents into age groups, we find that Amakiri women in two of the three age groups are also more likely than their Lopon counterparts to have sought treatment (Panel B). Thirty-two percent of infertile Amakiri women aged 25–34 had sought treatment by themselves, compared to 22 percent of infertile Lopon women. For infertile women aged 50 and above, the community effect is especially striking: 26 percent in Amakiri had sought treatment by themselves, but only 4 percent in Lopon.

**Table 3**  
Treatment seeking.

	Lopon (primary infertile)		Lopon (secondary infertile)		Amakiri (primary infertile)		Amakiri (secondary infertile)					
	n	%	n	%	n	%	n	%				
<b>A. Has sought medical help for infertility (sorted by infertility status)</b>												
No	40	56	35	70	12	24	33	47				
Yes, w/partner	12	17	4	8	5	10	13	19				
Yes (self only)	17	24	7	14	11	22	20	28				
Yes (partner only)	2	3	4	8	2	4	4	6				
	Lopon (25–34)		Lopon (35–49)		Lopon (50+)		Amakiri (25–34)		Amakiri (35–49)		Amakiri (50+)	
	n	%	n	%	n	%	n	%	n	%	n	%
<b>B. Has sought medical help for infertility (sorted by age group)</b>												
No	19	59	18	46	37	82	10	45	20	43	15	48
Yes, w/partner	6	19	5	13	5	11	3	14	9	19	6	19
Yes (self only)	7	22	15	38	2	4	7	32	16	34	8	26
Yes (partner only)	0	0	1	3	1	2	2	9	2	4	2	6

## Discussion

The major hypothesis guiding this research was that infertility, while clearly a problem, would have less serious consequences for women in Lupon than in Amakiri, due to differences in lineage structure and infertility rates, leading to historically different treatment of the condition in the two communities. This hypothesis was confirmed by both qualitative and survey findings.

Although unfortunately we could not reconfirm the current rates of infertility for either community, previous findings show that infertility in Lupon was consistently high when compared to Amakiri. We do not know the etiology of these differences and the present research was not directed at understanding them. We found no evidence, however, to contradict earlier findings.

The differential effects of the lineage system and of the two communities' attitudes toward infertility are seen both in the interview and survey data. From interviews we found a number of significant differences in the lives of infertile women in these communities. These included the succession to an adult life stage, completion of the marriage process, divorce, outmigration and association membership; in all of these areas Amakiri women were more disadvantaged than Lupon women. Childless women, and particularly those who had never delivered a child, bore the primary burden. Yet women who by our survey criteria would be considered to have secondary infertility, but had not had a live child or only had a single girl child, were also found to share many of the disadvantages of childless women. While these women's succession to adult life stages was assured, their marriages often ended in divorce, their membership in associations was problematic and they suffered deprivation in their old age.

The survey data further demonstrated the differential effects of the lineage system by showing that Lupon women were more likely than Amakiri women to rely on maternal kin for assistance, for foster children and for burial. The survey also confirmed our in-depth interview data regarding the effects of infertility on remarriage, divorce, polygyny, fostering and treatment-seeking behaviors. In all these areas, Amakiri women were again found to be more disadvantaged than their Lupon counterparts.

While we cannot test the chain of causality that may have led to these differences in the two communities' conceptualization and treatment of infertility, we can speculate that they emerged in response to historically differential infertility rates. This, in combination with a matrilineal emphasis in Lupon, may have brought about the current attitudes and practices regarding the condition.

Overall, our findings confirm that infertility is a major life-altering problem in sub-Saharan Africa. Community mechanisms and family structures, however, can go a long way toward mitigating its effects. While infertile women in Lupon also suffered the consequences of their condition, in them we did not observe the desperation exhibited by the Amakiri women. As a consequence, we found Amakiri women to be more agentive in attempting to remedy their situation, pursuing multiple coping strategies. These included frequently switching partners, migrating, fostering children and seeking traditional and biomedical remedies. Some women have been quite successful in overcoming the difficulties associated with their infertility and in developing alternative life paths. Nevertheless, all these women claimed that they would gladly give up whatever success they may have achieved or worldly goods accumulated to have a child. The same could be said of the infertile women in Lupon who, despite their more welcoming community and family context, find that their lives without children are less meaningful. In neither community did foster children, while valuable sources of labor, substitute for having a child of one's own in terms of social status, emotional satisfaction, or care-giving in later life.

In closing, the findings indicate that regardless of variations in local meaning and treatment of infertility, the necessity for a woman to have a child remains basic in this region. The achievement of motherhood represents a milestone for women as it confers on them an adult identity and represents normative fulfillment of what is considered to be female destiny. In communities like Lupon and Amakiri, there is clearly an unmet need for governments and family planning organizations alike to help women overcome not only the problems of excessive fertility but the problems of infertility as well.

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