Gender in African Population Research: The Fertility/ Reproductive Health Example

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Abstract

We survey the literature on sub-Saharan Africa to identify how gender has factored into explaining fertility levels and behavior. Tracing the development of male role theory, we argue that despite increasing awareness of men's authority, fertility research continues to focus almost exclusively on women and treats gender as a property of individuals instead of as a system of inequality. The mainstream fertility literature generally overlooks the decision-making nexus wherein men's authority seemingly overrides women's preferences. Positing that male authority in the reproductive and sexual arenas is predicated on cultural rights negotiated at marriage—and undergirded by bridewealth payments—we contend that attempts to understand (and change) reproductive behavior will hardly be sustainable without attention to this contextual realm. In that vein, we speculate that efforts to empower women (via increased education, occupational opportunities, microcredit schemes, etc.) may hardly yield sustainable outcomes without concurrent efforts to alter cultural distributions of gendered power.

INTRODUCTION

That pervasive gender inequality is intimately intertwined in the fabric of sub-Saharan African society is hardly disputable. Some have even argued that the entrenchment of unequal gender relations may be nowhere more deleterious than in this world region (DeRose & Dodoo 2006). Scholars have linked this inequality to a plethora of outcomes such as domestic violence; HIV/AIDS and sexual health more generally; fertility decisions and the population explosion; and maternal and child health, well-being, and mortality (Caldwell 1990, DeRose et al. 2002, Lary et al. 2004, Maman et al. 2002, Shen & Williamson 1999). As in other developing regions, women's contributions to household decisions that affect their own welfare and that of their families are frequently marginalized, reflecting deep connections between gender inequalities and multiple population and health outcomes.

Despite the insidious impact of gender inequality, nowhere are the flagship American sociological journals more silent on gender relations than on Africa. Perhaps in part a result of the real barriers sociology has faced in incorporating feminist perspectives into the mainstream of the discipline over the past four decades within the U.S. context (Sprague & Zimmerman 1993; Stacey & Thorne 1985, 1996), or because Africa is itself fairly invisible in the top journals, sociology remains notably silent on gendered analyses of the African context. The broader neglect of sub-Saharan Africa from our discipline's discourses has been observed by Bates et al. (1993) and characterized by Dodoo & Beisel (2005) as more exclusionary in this regard than all the other social sciences. Still, among sociology's subdisciplines, the field of demography[1]—or, perhaps more astutely, population studies—has stood out as a leader in its consideration of Africa (Zuberi et al. 2003). The state of the literature affords us an opportunity to examine how gender has informed population research in Africa.

Although demography is a forerunner insofar as commentary on Africa in the social sciences is concerned, the discipline has concurrently been slow to incorporate gender theory and feminist perspectives (McDaniel 1996; Presser 1997; Riley 1998, 1999; Watkins 1993). Riley (1999) argues that, because demography represents a stable field with a strong funding support base, researchers are less likely to question its assumptions and practices; such questioning is a necessary step in the adoption of a feminist perspective. Presser (1997) considers this an "ideological constraint" on demography (p. 296) and goes further to state that demography is losing ground in the international policy arena because of its delayed incorporation of gendered perspectives.

Demography has, in the past 15 years, grown in its appreciation of men's influence on demographic outcomes, especially in the African realm (Bankole 1995; Dodoo 1993, 1998; Ezeh 1993; Isiugo-Abanihe 1994b; Ngom 1997). Still, despite the progress in highlighting the importance of male influence, the core of demographic scholarship has not embraced a truly gendered paradigm in which negotiation and power inequities are treated as central to decision making. Demography frequently treats gender as a comparison of differences between men and women instead of examining the structural, societal, and cultural constructions of gender. Gender is an organizing system found in every society that differs by context and always involves power differentials and inequality (Riley 1999). Thus, at the intersection of sociology and population studies exists a sociological community endowed with feminist perspectives but with little entrée into sub-Saharan Africa and a demography community steeped in ameliorating disadvantage in Africa, yet in need of a greater gendered orientation.

It is from this perspective that we offer this review of gender and population issues in sub-Saharan Africa. In so doing, we assess the validity of the theoretical perspectives on Africa and the promise they hold—with their attendant

[1]Although demography is a subset of the broader field of population studies, demography and population studies are used interchangeably throughout this review.

assumptions about gender—for understanding population problems and, specifically, those regarding fertility and reproductive health. We do so by raising questions that provoke reflection about the nonconsideration, or insufficient consideration, of gender. Simultaneously, we challenge demography to incorporate feminist perspectives further. In reviewing the treatment of gender in the fertility and reproductive health discourse on Africa, we restrict ourselves to the geographic space bounded to the North by the Sahara desert and to the South by the Republic of South Africa.[2]

POPULATION AND AFRICA

Historically, the study of Africa's demography found its genesis in concerns about the continent's excessive mortality and morbidity, high fertility, and the growing rural to urban migration flows of the mid-twentieth century. The study of mortality and morbidity became a central focus of post–World War II development initiatives. As improvements in medical care and services spread through Africa, however, socioeconomic development did not directly follow (Zuberi et al. 2003). Not surprisingly, fertility decline, a process strongly associated with fundamental societal change brought about through economic development, has been extremely tenuous on the continent. Rural to urban migration has also grown substantially in the past 50 years, contributing to sub-Saharan Africa becoming the fastest urbanizing of all world regions by the end of the last century (United Nations 2001). Consistent across the region, Africa's problematic demographic regimes have confounded scholarly understanding by their sheer intransigence vis-à-vis the efforts to alter the prevailing population trends. Yet, despite limited success in rectifying these challenges over the course of the last half century or so, demographic policy interventions have largely been considered to have been beneficial to the region.

More recently, even the success stories of the continent have left much to be desired. Despite large gains in infant and child survival across much of sub-Saharan Africa, war-affected countries such as Sierra Leone, Liberia, Somalia, the Democratic Republic of the Congo, and Angola continue to manifest infant mortality rates between 117 and 158 infant deaths per 1000 live births. For other countries, such as Niger, high and persistent poverty is associated with infant mortality rates that are resistant to change. Additionally, despite gains in adult life expectancy from the 1940s to the 1980s, mortality has stagnated at levels much higher than it did on any other continent, and there are current signs of reversal in this trend across Africa, in large part as a result of the insidious AIDS epidemic in the region (Tabutin & Schoumaker 2004, Timaeus 2004). Between 1990 and 2007, only Western Africa experienced any improvement in life expectancy, with the regional average increasing from 48 years to 51 years. Conversely, in Southern Africa life expectancy has dropped rapidly, from 62 years in 1990 to 50 years in 2007 (see **Table 1**). With 19.3% of people ages 15 to 49 living with HIV/AIDS in Southern Africa and 6.2% of the same age group infected in Eastern Africa, the economic, social, and cultural costs of the disease are substantial. The HIV/AIDS epidemic, in conjunction with the very youthful population age structure on the continent (more than 40% of Western, Eastern, and Middle Africa is under the age of 15, and one-third of Southern Africa is the same), undermines the development of a healthy, working adult population.

Table 1 shows that fertility, too, has evidenced recent stagnation. The Western and Eastern African regions continue to have average total fertility rates of more than five births per woman, which is more than double the level of fertility those societies need to replace themselves. Middle Africa has an even higher total fertility rate of 6.3 births per woman, which has actually shown signs of

[2]The literature on South Africa dominates the continent, and with its unique history and sociology we felt that including that country in this review would confound our understanding of how the subject has been treated in the vast space beyond South Africa.

Table 1 Population and related characteristics for sub-Saharan African regions (for more detailed data, follow the Supplemental Material link from the Annual Reviews home page at http://www.annualreviews.org)

	Population (millions)		Natural increase (annual,%)		Urban population (%)		Population under age 15 (%)		GNI PPP per capita (US $)[1]	Population aged 15–49 with HIV/AIDS (%)	
	1990	2007	1990	2007	1990	2007	1990	2007	2006	2000	2005–2006
Sub-Saharan Africa[2]	**661.0**	**788.0**	**2.9**	**2.5**	**31.0**	**34.0**	**45.0**	**43.0**	**2,000**	**7.1**	**5.4**
Western Africa	206.0	283.0	3.0	2.7	30.0	40.0	46.0	44.0	1,330	4.1	3.0
Eastern Africa	199.0	294.0	3.0	2.5	18.0	22.0	47.0	44.0	1,180	10.4	6.2
Middle Africa	68.0	118.0	3.0	2.8	37.0	37.0	45.0	46.0	1,370	4.3	3.9
Southern Africa	45.0	55.0	2.7	0.8	53.0	50.0	40.0	33.0	11,210	13.5	19.3

	Total fertility rate[3]		Married women using modern contraception (%)		2002 mother's attitude toward recent births (%)[4]		Infant mortality rate[5]		Life expectancy at birth (years)	
	1990	2007	1990	2007	Wanted later	Not wanted	1990	2007	1990	2007
Sub-Saharan Africa[2]	**6.2**	**5.5**	**–**	**16.0**	**–**	**–**	**109.0**	**92.0**	**52.0**	**49.0**
Western Africa	6.6	5.7	2.0	8.0	18.0	4.0	119.0	98.0	48.0	51.0
Eastern Africa	6.7	5.5	–	20.0	21.0	12.0	116.0	83.0	50.0	48.0
Middle Africa	6.1	6.3	–	6.0	–	–	118.0	113.0	50.0	46.0
Southern Africa	4.7	2.8	42.0	58.0	–	–	61.0	46.0	62.0	50.0

[1]GNI PPP per capita is gross national income in purchasing power parity (PPP) divided by midyear population. GNI PPP refers to gross national income converted to "international" dollars using a purchasing power parity conversion factor. International dollars indicate the amount of goods and services one could buy in the United States with a given amount of money.
[2]Data from 1990 include North Africa.
[3]Average number of children born to a woman during her lifetime.
[4]Reflects data most recently available in 2002.
[5]Infant deaths per 1000 live births.
Sources: Popul. Action Int. 1998; Popul. Ref. Bur. 1990, 2000, 2002, 2007; UNESCO 2006

increase since 1990. Similarly, modern contraceptive use remains low in many countries; only 8% of married women in Western Africa and 6% of married women in Middle Africa use modern contraception. There have also been reversals in the fertility trends of a few countries that had evidenced some national transition (Bongaarts 2006, 2007; Shapiro & Tesfayi 2007). Not only have Ghana, Kenya, and Cameroon exhibited fertility stalls at four to five births per woman, four additional countries (Guinea, Mozambique, Rwanda, and Tanzania) have stalled at even higher levels of fertility—5.5 to 6 births per woman (Shapiro & Tesfayi 2007). In addition, reductions in mortality after World War II combined with a reticent fertility decline have created tremendous population momentum in Africa. The number of women in their childbearing years will rise from 52 million to 151 million in West Africa alone between 2000 and 2059 (Popul. Ref. Bur. 2004). Thus, even if the region experiences a significant reduction in fertility rates, the population will likely continue its current trajectory of growth. In the absence of an imminent fertility decline, the rates of natural increase that average 2.5% suggest that the population of the continent will double in 28 years; of course, this will be even faster in the poorer countries.

Further, there has been little success in curbing urbanization in Africa; whereas only 13% of the population lived in urban areas in 1950, more than one-third of the population is urban, with projections pointing to more than half of the population comprising urban residents by 2030 (Tabutin & Schoumaker 2004). Urbanization has been particularly strong in West Africa, where the population living in urban areas increased from 30% of the population in 1990 to 40% in 2007 (see **Table 1**). The cities created by such migration trends, coupled with recent fertility changes, do not necessarily generate opportunities for economic growth; sub-Saharan Africa remains the only continent whose urbanization has not coincided with any sustained economic growth (Zulu et al. 2002). Concurrently, rapid urbanization can exacerbate urban poverty, as the stagnant infrastructures of cities are unable to absorb the influx of migrants (Brockerhoff & Brennan 1998). At the same time, out-migration from the continent has provoked a brain drain of human capital and skills (Adepoju 2000) that has contributed to a stifling of the region's development. Despite increasingly strict immigration policies in developed countries, the overall number of migrants out of Africa to North America and Europe increased steadily through the 1990s (Hamilton 1997).

These demographic trends have combined to keep Africa the continent with the fastest-growing population in the world (Zuberi et al. 2003), a notoriety that reinforces its status as the poorest and least developed continent with the greatest level of income inequality (Firebaugh 2004, World Bank 2004). HIV/AIDS, urban poverty, international debts, and the resulting environmental degradation from rapid population growth (Cropper & Griffiths 1994) promise to keep Africa at the core of global development attention. The irony is that despite the quantum of development aid over the past six decades, the region remains in need of even further assistance. According to Easterly (2007), $568 billion, in current U.S. dollars, have been invested in Africa over the past four decades, in large part to address these population issues and stimulate economic development. However, the per capita growth of the median African country during this same period has been close to zero.

Feminist scholars have argued that a more valid specification of gender is essential for better comprehension of demographic behavior (Greenhalgh 1995; McDaniel 1996; Presser 1997; Riley 1998, 1999; Watkins 1993). Zuberi et al. (2003), too, have argued that a more structural understanding of sub-Saharan Africa's dilemmas is a prerequisite for attaining development goals. Against the backdrop of the literature on marriage—with the attendant sexual and reproductive arrangements that generally pertain to African society—we trace how, despite the increase in the consideration of men that has occurred over the last decade

and a half, fertility research on Africa remains underdeveloped insofar as gender is concerned, and how this compromises our ability to understand and thereby effect behavioral change in reproductive and sexual health that is so critical to the well-being of women, children, and societies at large.

GENDER IN FERTILITY THEORIES

Since the middle of the twentieth century, sub-Saharan Africa has retained notoriety for the highest and most resistant levels of fertility in the world (Zuberi et al. 2003). A plethora of explanations has been advanced for the fertility levels, differentials, and trends that undergird what are also the highest levels of population growth in the world. Classical demographic transition theory, wealth flows theory, and diffusion/innovation theory have all been extended to the African context, with marginal to moderate explanatory success. These mainstream fertility theories could all be enhanced by a better conceptualization of the influence of gender.

African fertility has been a central focus of demography since the revitalization of pessimistic Malthusian population predictions by Frank Notestein and Kingsley Davis in the 1940s and 1950s (Hodgson 1983). Notestein and Davis individually argued that the population explosion in developing countries presented two significant problems. First, they believed that the world as a whole could not support post–World War II population growth rates, and, second, they argued that population growth hinders socioeconomic growth. As a result, fertility in developing countries came to the fore of both demographic research and policy recommendations. Presser (1997) argues that this emphasis on fertility reduction and persistent fear of the population explosion have kept the discipline from moving toward more gendered analyses. In other words, any greater emphasis on women has been thought to take resources away from the provision of family planning resources.

Attempts to explain the earliest fertility declines in global memory (the European fertility transition) yielded classical demographic transition theory (Notestein 1945). This descriptive argument about the relationship between economic development and population posits that improved economic circumstances reduce infant mortality, which in turn provokes lower fertility. However, despite mortality declines that can be traced back to the post–World War II period, fertility remained stagnant across the sub-Saharan African region until the 1980s, in part because significant development efforts during this period were focused on reducing mortality and neglected the corresponding phenomenon of high fertility (Zuberi et al. 2003). The applicability of classical transition theory to fertility in Africa was also undermined by worsening or, at best, stagnant economic conditions, which intensified in the 1970s and 1980s. Additionally, in recent decades, as the fertility declines of the early 1990s have stalled, classical transition theory has become even less useful for explaining African fertility. It does not accommodate midtransitional variations in fertility (such as the stalls in Kenya and Ghana) and simultaneously presupposes that all countries will follow the same downward path to replacement fertility once mortality has dropped and socioeconomic improvements are in place (Hirschman 2001).

Coale's (1973) synthesis of the evidence from European fertility research subsequently derived three preconditions necessary for fertility decline. Fertility has to be considered to be within the calculus of individuals' conscious choice, contraception needs to be readily available, and smaller families have to be deemed advantageous. Within the African context, it is questionable whether Coale's preconditions for fertility decline have been met. Many African women continue to articulate their desired number of children with phrases such as "whatever God gives me" (Bledsoe et al. 1998, p. 17). Women are also likely to defer to their husbands' opinions when presented with such a question (Bledsoe et al. 1998). Therefore, it cannot be assumed that fertility decision

making is fully within women's calculus of conscious choice. In contexts in which marriage is virtually universal and decision-making authority over the number of children born into a marriage or relationship resides with men, the relative paucity of data to assess men's preferences represents a glaring neglect in population studies (Dodoo & van Landewijk 1996).

With regard to Coale's second precondition, access to contraception, substantial investments in family planning in sub-Saharan Africa date back at least to the 1960s. These investments were predicated on the perception that considerable unmet need[3] for contraception existed on the continent, as evidenced by multiple surveys across space and time in the developing world, including in Africa (Westoff & Bankole 1995). However, the lack of any appreciable fertility change by the 1980s called into question the efficacy of such efforts. Large segments of the female population in Africa were indicating that they did not want more children than they had (but were then not using contraception) decades after the family planning revolution began to flood the region with contraceptives. The uptake of contraception remained low, and there was hardly a blip in fertility, raising the question in some circles of whose unmet need for contraception was being documented in the surveys.

Notwithstanding a flurry of articles on the male role and the importance of men in the mid- to late 1990s, the bulk of fertility analysis and programs remains wedded to the old-school model that privileges women-centered approaches (Bankole 1995; Dodoo 1993, 1998; Ezeh 1993; Isiugo-Abanihe 1994b; Ngom 1997). Even today, efforts to incorporate the male perspective in the explication of fertility outcomes or behavior remain the exception rather than the norm (DeRose & Ezeh 2005, Takyi & Dodoo 2005). Consequently, despite decades of financial investments into family planning in Africa, and even the growing call to attention about the influence of men, we do not fully appreciate how men's and women's attitudes interact to influence contraceptive use behaviors.

Coale's third precondition for fertility decline is also contestable in the African context. Are smaller families considered advantageous, and if so, by whom? This question provokes a deeper investigation of the African sociocultural milieu. Many have argued that the socioreligious culture in Africa provokes high fertility demand, as the agrarian context fosters high labor demand. Also, family and kinship systems including obligations to ancestors perpetuate high fertility, and the extended family system minimizes the costs of childbearing to individuals (Caldwell 1982, Lesthaeghe 1989). The lack of a fertility response by the 1980s contributed to the thinking that African fertility was unlikely to decline before the twenty-first century. So entrenched was this thinking within the field that even when Demographic and Health Survey data first provided evidence of fertility change in Kenya in 1989, demographers instead initially questioned the validity of the data (Ezeh & Dodoo 2001).

Additionally, relatively little research disaggregates the fertility desires of men and women. Men and women are likely to have significantly different perspectives on desired family size as a result of the different social positions they occupy in the highly gendered African context. Whereas Bawah et al. (1999) found among men in Ghana that those who do not have children are more deeply pitied than childless women because their lineages will not continue, McDaniel (1996) argues that fertility is a principal resource to women for achieving economic and social goals in a way that men do not experience. The cost associated with gender, too, varies dramatically with gender. Gender necessarily and differentially influences what individuals perceive to be advantageous. The literature clearly begs the question of which partner's (or spouse's) preference for smaller families is more germane and calls for an examination of Coale's preconditions through a gendered lens.

[3] Unmet need is defined in its simplest sense here: the proportion of women in a population who say they want no more children but are not using contraception (and thus have an unmet need for contraception).

Easterlin's (1975) microeconomic theory of fertility laid the foundation for Caldwell's (1982) wealth flows argument, which perhaps presents the most tailored explanation for African fertility. In Easterlin's (1975) model, demand for children, the potential supply of children, and the psychic, social, and monetary costs of contraception combine to influence fertility decision making. By incorporating the supply of children (described as the number of children that couples would bear in the absence of fertility regulation) into demand models of fertility operationalized by economists in the 1950s and 1960s, Easterlin conventionalized the theoretical notion of supply and demand for children (Mason 1997). The supply of children varies culturally by differential exposure to conception and biologically by levels of fecundity as a result of disease, malnutrition, and development (Robinson 1997).

Caldwell's (1982) wealth flows theory argues that, at some point in the development process, the costs of increasingly normative, if not mandatory, schooling, the implementation of child labor laws, and other efforts to reorganize the family structure will reverse the flow of wealth between generations. In other words, the net benefit to parents of having children, where for example they worked on parental farms, reverses to make children a less profitable investment. This shift from the familial economic system to a capitalist economic system favors a nuclear family unit; thus, fertility desires will decline, resulting in lower fertility (Caldwell 1982). In this vein, Caldwell argues that fertility behavior in both pretransitional and post-transitional contexts is economically rational. In the African context, there is some evidence of this; Stecklov (1997) argues that even though they remain costly in high fertility settings, long-term investments in children may still present the best opportunity for parents to secure future financial stability.

Widespread education and the costs incurred by families to send children to school are intimately connected to the wealth flows process. Although traditional patriarchal values and the productive value of children support high fertility, mass education (based on Western models) induces a restructuring of family relationships (Caldwell 1982). As Dow et al. (1997) determined in rural Kenya, between 1981 and 1992, when Kenya saw its most appreciable drop in fertility, the reversal of actual wealth flows and greater family nucleation explained only a small portion of the variance in women's desired number of children. Instead, the expansion of education was critical to the reduction in desired number of children. However, the rising cost of education had less of an impact than the expansion of an acceptance of the obligation to provide access to education by parents, particularly fathers. Thus, a shift in attitudes and expectations concerning the costs of children, in particular the perceived rather than the actual cost, appears to have the greatest impact on desired fertility (Mason 1997). Additionally, because school fees remain the cultural obligation of men, unlike many of the other costs of childbearing, it is plausible that the cost of schooling impinges on men's high fertility goals. It is not surprising then that in a country such as Kenya, where fertility decline has stalled, school fees pressures on men may have been attenuated somewhat in recent years by factors that include a government push towards fee-free schooling. In fact, when Kenya abolished school fees in 2002, 1.5 million children who had previously been out of school returned to class, pushing the average number of students per classroom from 40 to 120 in some areas (IRIN 2003).

The household and family concepts on which Caldwell's wealth flows and Easterlin's economic framework depend are theoretically underspecified (McDaniel 1996). The field of population studies has little understanding of how men and women variously distribute and maintain family resources, and differentials in decision-making power by gender are frequently ignored (McDaniel 1996). Additionally, feminists critique Easterlin's (1975) household models because they ignore gendered power dynamics and treat male household heads as altruistic in the division of resources. Mothers and fathers can utilize money very differently.

Indeed, there is some evidence that women spend a higher percentage of their income on children than do men, indicating that women incur a greater financial burden in childrearing (England 2003). In essence, the family is an arena of tension between support and exploitation (Barker & Feiner 2004). Marriage and bearing children help many African women achieve economic and social goals; yet, marriage may at the same time be in direct conflict with their self-interests (McDaniel 1996). Simultaneously, nonmarriage exposes women to a whole host of additional forms of marginalization. Interestingly, no effort has been made to explore the viability of separately examining wealth flows to women and men, as they have separate financial responsibilities to, and benefits from, childbearing.

BEYOND CLASSICAL THEORIES

Diffusion/innovation theory has also contributed to explaining fertility in the African context. The diffusion/innovation framework links fertility change to cultural and linguistic explicators, whereby ideas, new behaviors and attitudes spread from innovative segments of the population to more resistant peers (Casterline 2001). Typically, women in urban areas with higher levels of education are first to adapt their fertility, before the innovative behaviors pass on to their more rural and less educated counterparts. The process of diffusing information is simultaneously a group decision and an individual one (Kirk 1996), which occurs at multiple levels through local, national, and global channels (Bongaarts & Watkins 1996). Cleland (2001) has characterized the diffusion framework as the lubricant of the fertility decline engine; however, diffusion/innovation theory has less predictive strength for determining the timing of the onset of fertility declines than do classical demographic transition theory or wealth flows theory. There is also less clarity about how men influence, or are influenced by, the transmission processes.

The stagnation of economic growth in Africa portends more latitude for diffusion/innovation theory to influence fertility decline, although it is constrained in its ability to explain fertility behavior change fully. As Bongaarts & Watkins (1996) determined from investigation of 69 developing countries from 1960 to 1990, there is a threshold of socioeconomic development, albeit a moving one, that countries must achieve before fertility decline takes hold. For countries that are late to transition within a region, the threshold shifts downward, whereas for earlier transition countries it is higher (Bongaarts & Watkins 1996). It was thus anticipated that the declines in Ghana and Kenya would spread through surrounding nations. However, declines started in these countries before they had reached the anticipated prerequisite socioeconomic threshold, raising questions about how the onset of fertility decline first occurred in Ghana and Kenya and how this has influenced subsequent fertility stalls (Bongaarts 2006).

Simultaneously, diffusion/innovation theory offers an opportunity for population studies to expand beyond individual-level analysis and thereby improve how gender is incorporated into theoretical models. As Behrman et al. (2002) argue, demographers often treat individuals as separate entities with whom reproductive health workers have isolated interactions. This approach limits the collection of data on social interactions and ignores the way information is spread among women and men, between spouses, and within communities. Similarly, feminists critique the field of population studies for its emphasis on the individual level; frequently gender is poorly conceptualized as a characteristic of individuals, when it is in fact a prevailing system of social organization that structures the lives of individuals (Riley 1999). Rutenberg & Watkins (1997) assert that the efficacy of family planning programs could be improved if both providers and clients were conceptualized not only as individuals but also as participants in informal networks through which information regarding family planning, both accurate and inaccurate, is passed.

Proponents of diffusion/innovation theory have explored the processes through which

information is spread, particularly among women, but have not given the same emphasis either to the negotiating, strategizing, and compromising that occur within marital relationships or to how this information is passed on within networks or influences the reproductive decision making of other couples. For example, given the opportunity, women will explain in detail the negative ramifications they face when they use contraception without the permission of their husbands (Bawah et al. 1999, Watts & Mayhew 2004). Although many never incur such ramifications, the vast majority of women are aware that such negative outcomes are a real possibility, as stories of domestic violence, arguments, and shaming of women pass through communities (Bawah et al. 1999). With few data on the diffusion processes among the male half of reproductive decision makers, as well as among discordant couples, the ability to interrogate the influence of gender on the spread of contraception in Africa is compromised.

When by the early 1990s Africa's fertility transition was acknowledged to be underway, instead of revisiting the culturally grounded hypotheses of high, intractable fertility in Africa described above, demographers rushed to attribute fertility decline to the success of family planning programs (Ezeh & Dodoo 2001, Ross & Maudlin 1996). Not surprisingly, leaning on the proximate determinants framework—an accounting schema first proposed by Davis & Blake (1956) and operationalized by Bongaarts (1978) to help explicate fertility differentials and change—the use of modern contraception was determined to be the most important precursor of subsequent fertility transition in sub-Saharan Africa (Bongaarts & Potter 1983, Kirk & Pillet 1998). As a consequence of this assumed triumph of family planning, fertility theory remained underspecified on the continent through the 1990s.

Implicit in the earlier generation of fertility explanations (demographic transition theory, wealth flows theory, and diffusion/innovation theory) is the assumption that couples live as "unified entit(ies) with common shared interests" between female and male spouses (Dodoo 1998, p. 231). These theoretical approaches, consistent with the household economics model (Becker 1981) and the microeconomic model (Easterlin 1975) discussed above, logically prescribe the virtually exclusive collection of fertility data from women. Yet, the validity of this articulation must be questioned for much of sub-Saharan Africa. Fapohunda & Todaro (1988), for example, clarify how women and men, with strong commitments of obligation to their own kin or families of origin, maintain separate budgets in the household. Particularly among matrilineal ethnic groups, spouses not only keep their monies separate but may even refuse to share (with their spouse) information about their earnings (Adams & Castle 1994, David 1997). Although this would seem to invalidate conceptual models that are predicated on the household economics framework, the discourse on fertility seemingly remains wedded to the concept of a unitary household utility function.

In Africa, men's and women's fertility decision-making power in the family is hardly equal and operates asymmetrically. According to Ezeh (1993), men's fertility attitudes influence those of their wives, and not vice versa. Dodoo (1998) found for Kenya that the odds of a couple enacting fertility stopping behavior were 50% greater when the male, rather than the female, preferred such behavior. Not only do men have leverage in marriages, but they also influence the most crucial period in marriages, that for reproduction. Bankole (1995) demonstrated in Nigeria that men tend to have more say over the conception of children during the first ten years of marriage, whereas if women want additional children, their opinion takes greater precedence after the first ten years of marriage. Thus, men have more control over the births that are most critical to fertility decline; typically four births can be expected within the time frame that men have control (Bankole 1995). More recently, DeRose & Ezeh (2005) found that even men's level of education impacts wives' fertility attitudes. Whether this is a selection effect (e.g., men with more education marrying a certain type of

woman who is less inclined to have a large family) or whether men's attitudes influence their wives' attitudes within the context of marriage has yet to be determined. However, regardless of the exact nature of this relationship, it is obvious that African men have considerable decision-making authority in their marriages vis-à-vis fertility.

Yet despite the relatively recent development of a theoretical perspective that advocates recognition of the male role—that is, the significant influence that men wield in the specific realms of reproduction and fertility (Bankole 1995; Dodoo 1993, 1998; Ezeh 1993; Isiugo-Abanihe 1994b; Ngom 1997)—the general thrust of mainstream fertility research seems to continue unabated, with men's perspectives a peripheral concern. For instance, the most recent dialogue on African fertility (Agyei-Mensah 2005; Bongaarts 2006, 2007), which documents the stalling of fertility transitions in the handful of countries that unexpectedly initiated national-level transitions within the past two decades, continues to underestimate the gender disaggregation that is implied by male role proponents. This neglect continues despite the thrust of the 1994 International Conference on Population and Development in Cairo that advocated such disaggregation (McIntosh & Finkle 1995). Given what we know, any analysis of reproductive behavior in sub-Saharan Africa today that overlooks the male perspective (and the relative authority of men) is incomplete. Assessments of the viability of wealth flows theories for explaining behavior could, for example, disaggregate flows to/from both female and male spouses in considering how fertility preferences, desires, or behavior are determined.

THE MARRIAGE CONTRACT AND DERIVATIVE SEXUAL POWER

Marriage is virtually universal across sub-Saharan Africa, with considerable social stigma accruing to nonmarriage (and particularly spinsterhood) and childlessness (Adepoju & Mbugua 1997, Caldwell & Caldwell 1990, Lesthaeghe 1989, Tetteh 1967). With ancestral lineage and descent representing the core of sub-Saharan African society, marriage is generally understood to bring together two kin groups, rather than just the couple (Bleek 1987, Caldwell & Caldwell 1987, Fortes 1978, Isiugo-Abanihe 1994b, Kayongo-Male & Onyango 1984). The production of children is the raison d'être of these familial mergers (Philips 1953). Among other things, children have value as a source of old age security, as a labor resource, and as a vehicle for continuing lineages. Because the social organization privileges the lineage bond over the conjugal one, the principals in marriage generally owe greater allegiance to their respective kin than to their partners, which explains why spouses generally do "not operate as a unified entity in marriage" (Dodoo 1998, p. 230). Such lineage-based systems also give greater fertility decision-making authority to men who tend to hold more pronatalist attitudes than women (Mason 1987, 2001). Additionally, the overarching importance of extended family systems to African fertility regimes cannot be overstated. As Smith (2004) discovered in his qualitative investigation of family networks and fertility decision making in Nigeria, even urban couples who openly discuss their desires and agree to limit childbearing experience the social pressures of extended family members who remain in rural communities. Some women interviewed by Smith internalized the pressure for additional children exhibited by a mother or mother-in-law and then, subsequent to a birth, would rationalize the outcome by reporting the child as desired even when they had previously indicated wanting no more births.

Differences in lineage type (patrilineal versus matrilineal) also facilitate varying sexual practices and influence women's sexual decision making. Whereas matrilineal men are only responsible for ensuring their children are educated and receive some form of job training, patrilineal fathers and their lineages are more fully responsible for the financial needs of their children (Manuh 1997). Not unrelated,

patrilineal groups tend to have earlier marriage, less premarital sex, and no cohabitation, in order to provide assurance of paternity (Meekers 1992). This additional control over women in patrilineal systems limits women's decision-making autonomy.

Across much of sub-Saharan Africa, the payment of bridewealth lies at the heart of the marriage contract (Goody & Tambiah 1973) and reinforces gender inequity within marriage, marginalizing women's decision-making power (Davies 1999). For well over half a century, anthropologists have attributed the centrality of these payments to control over women's fertility. Not only do bridewealth payments compensate a woman's family of origin for the domestic (and farm) labor now owed to her husband, but in the patrilineal context that exists in much of sub-Saharan Africa, they also turn a woman's offspring into members of her spouse's lineage and convey exclusive sexual rights (over her) to her spouse (Caldwell & Caldwell 1990, Comaroff 1960, Fortes 1962, Goody & Tambiah 1973). As Boni (2001) describes it, "the woman shifts subordinate role: from being a dependent of the household of the father/mother/mother's brother to the one of the husband. The man's rights over the wife comprise the benefit from her labor in the form of household chores and partly in the husband's cash-oriented enterprise. Moreover, the wife has to obey and show respect to the husband" (Boni 2001, p. 22). Thus, the traditional contract conveys to men significant control over fertility decision making in Africa, and they anticipate such authority in their marriages. Frost and Dodoo (Frost 2007, Frost & Dodoo 2006) argue that even young children—male and female—who have only just entered their teen years already arrange their lives in anticipation of the imminent male dominance.

Bridewealth payments can also prevent women from leaving abusive marriages (Maundeni 2002). Although bridewealth payments are accrued by the woman's family, they are also exchanged with another family to acquire a wife for a brother or uncle of the woman. Thus, the families of women who have married do not generally experience a net gain in resources (Goody & Tambiah 1973). If the cost of bridewealth increases over time, women may be forced to remain in abusive marriages because their families are unable to return the full sum of payment to the husband's family, as is often expected with divorce (Isiugo-Abanihe 1994a).

Polygyny, which presumably affords women relatively greater autonomy (Kandiyoti 1988), also perpetuates male control over reproduction. DeRose et al. (2002) demonstrate among adolescents in Ghana that both males and females plan to acquiesce to the desires of the pronatalist spouse during their future marriages. However, because men can take an additional wife if they desire more children and women cannot take an additional husband, women are more likely to give in to the pronatalist desires of their husbands rather than vice versa. Additionally, there is evidence that domestic violence may be more prevalent in both implicitly polygynous and explicitly polygynous marriages than in monogamous marriages (McCloskey et al. 2005).

Clearly, there can be little debate that much of the fertility decision making in Africa lies in men's hands. Because men's control over fertility is so enduring that domestic violence can be a legitimate response to women's use of contraception without their husbands' approval (Bawah et al. 1999, Watts & Mayhew 2004), advocates of secret contraception, then, potentially put women at risk of retaliation from husbands who strive to maintain their traditionally imbued control over women's fertility.

GENDER, POWER, AND HIV

That control over women's reproduction is inextricably linked to the marriage contract also has implications for nonmarital sexual behavior, sexually transmitted infections (STIs), and HIV, the disease that has decimated much of the region over the past quarter century. Authority over fertility spawns a more general control of women's sexuality because the fundamental need to trace paternity may be as important

as reproduction itself for lineage continuance. In other words, because men of patrilineal descent (the majority of sub-Saharan Africa) and their families must be sure about the parentage of wives' offspring, marriage confers broader control over sexuality; hence, the asymmetrical marriage contract gives men virtually unilateral sexual authority over their wives (Dodoo 1998, Meekers 1992).

Considerable anthropological evidence suggests that men's relative influence over women's sexuality transcends marriage and spills over to affect premarital sexual relations (Broude 1975, 1981; Caldwell et al. 1989; Gage-Brandon & Meekers 1993; Goody 1976; Meekers 1992; Schlegel 1991). Goody (1976), for instance, has argued that

> where property is transmitted to women . . . there will be a strong tendency to control their marriages . . . [and that] if one is attempting to control marriage, it is important to control courtship too . . . by arranging a good marriage . . . . In order to accomplish this end . . . there will be a tendency to taboo sexual intercourse [between unmarried persons] (pp. 13–14).

However, waiting until marriage for sexual intercourse is often not possible. More than occasionally, the financial support girls and women receive from their sexual partners can be essential for economic survival (Cornwall 2002). Premarital relationships in the region are generally characterized by large age gaps between men and women that compound male dominance and engender transactional elements whereby women and girls receive gifts or money from their partners (Luke 2003). As a result, girls have more negotiating power regarding when sexual relationships begin and end, but significantly less power to assert preferences (such as condom or contraceptive use) within the parameters of a relationship (Luke 2003). In addition, gender dynamics dictate that sex is a means through which men legitimize their masculinity (Gorgen et al. 1998, Matthews et al. 1995). Focus groups with male adolescents in Guinea, Kenya, and South Africa have shown that men believe sexual activity to be an "integral part of initiation into manhood," and those who do not pursue multiple sexual partnerships are often teased or ostracized by their peers (Nzioka 2001, pp. 110–11).

Numerous reports of women in the literature state that they consider themselves powerless to refuse sex or even enforce condom use even when they know or suspect their partners may be infected by an STI (Wendo 2004). Refusing sex can result in domestic violence, and the fear of such provocation leads many women to acquiesce to their husbands' desires. This powerlessness, in combination with wide acceptance of men having extramarital partners (Cornwall 2002, McGrath et al. 1992), combines to create significant vulnerability for women. Women's inability to protect themselves from sexual risk is effectively a death sentence and contributes in no small way to the raging epidemic of HIV on the continent.

At the same time, men's general reluctance to use condoms—which some have compared to eating candy with the wrapper on—is widely known (Veldhuijzen et al. 2006). Condom use rates are generally in the single digits across the region, and greater knowledge about the disease does not always correlate with higher rates of condom use (Zellner 2003). Although campaigns to increase condom use among sex workers have demonstrated relative success (Ghys et al. 2002), the condom is seen as an "intruder" within marriage (Chimbiri 2007), making it no surprise that women's risk of contracting HIV actually increases with marriage. As Caldwell (2000) pessimistically argues, despite significant amounts of international aid to Africa to combat the HIV/AIDS epidemic, few political leaders tackle the issue, in large part because there is little public support for the social change required to address the spread of the disease. Changing deeply entrenched African family characteristics, such as multiple sexual partners and male dominance, is not a strategy with which leaders can win reelection. Still, as Watkins (2004) notes in Malawi, men are willing to take certain steps, such as choosing extramarital

partners more carefully or using condoms with the riskiest partners, to lower their chances of disease contraction. Simultaneously, monogamy or condom use within marriage—approaches that would protect the vast majority of African women—are not common strategies.

Although men's clear need for sexual health services (including HIV-related services) has rightfully attracted attention, and perhaps more so than in the fertility realm, there has not been equivalent attention to tackling the cultural bases upon which men's authority rests: the arena of sexual negotiation. With women's risk of infection arguably even higher after entering marriage (Bracher et al. 2003), the literature has readily appreciated the importance of men in this context. Despite studies of discordance, however, the related aspects of power and negotiation generally remain relatively underdeveloped.

DISCUSSION

The foregoing presentation argues that although the field of population studies in Africa has increasingly recognized the importance of both men's and women's experiences, an understanding of men's influence has yet to be fully incorporated into the fertility and reproductive health arenas in both policy and research. Additionally, the field has been slow to embrace a gendered approach to studying behavior. Many scholars focus on the comparison of male and female experiences, rather than giving necessary consideration to overarching gendered power structures. The demography (and sociology) of Africa has to incorporate the study of the cultural context and factor in how gender power influences negotiation and decision making about sex and related outcomes.

Against the backdrop of the cultural portrait painted above—effectively, one that argues that there is a cultural-legal contract entered into with marriage—how viable is it that improving female schooling levels, a choice empowerment intervention, will enable women to negotiate sexual and/or reproductive outcomes that are more favorable to them, if said contract remains unchanged? A perhaps simplistic conceptual parallel from the U.S. context is whether gender, race, and ethnic equity would be plausible in the United States—and this in no way suggests that there is equity on these counts—without changes in the legal framework. The answer to this question is, of course, no, even in a country of inalienable rights, unless the legal context reflected in the U.S. Constitution is changed to permit such. Certainly, no one can legitimately argue that American society is today devoid of inequity, be it gender, racial, ethnic, or otherwise. But it would also be difficult to contest the gains made in specific spheres and the contribution of legislation to women's and minorities' ability to expect, seek, or demand remedies for inequities in both the public and private spheres. In Africa today, domestic violence and marital rape remain issues on which even the courts do not give women consistently fair treatment.

This is not to suggest that development has not obscured inequalities in Africa (Simmons 2005) or worsened them in some situations by layering Western sexisms over African ones. Indeed, we caution the uncritical allegiance to specific remedies that seem to have worked in the West—such as those predicated on the hypothesis that increased education should help resolve what are domestic/sexual sphere contestations—without also tackling the cultural-legal bases of the particular inequities. Would improved educational and occupational attainment of women have been as beneficial even to Western women without the attendant legal remedies?

In other words, although educational and occupational attainment will enhance equity in professional and other public sphere arenas, and also improve national development chances, it will likely take more than schooling, improved economic status, or any other empowerment vehicle for women to gain control over this particular sphere of their lives. Demographers continue to miss this point in large part because of their neglect of how gender works

in the specific context. As well, the mechanisms through which education works to reduce fertility do not alter male-dominated gender dynamics; instead, education tends to reduce fertility through delaying marriage and childbearing (Riley 1997). Simultaneously, schooling environments have been documented to perpetuate gender inequality; sexist curricula and harassment from teachers and male peers alike can lead to detrimental outcomes for girls in school (Mensch & Lloyd 1998). Although Obare et al. (2006) reported that education appears to impact the gender attitudes that girls hold, they also found that older girls were more likely to agree with the statement that "wives should ask their husbands permission for everything." Perhaps as girls get older and closer to marriage and have more personal experience with the gendered nature of intimate relationships, they become more realistic about what marriage portends in their cultural domains.

Furthermore, all of this says nothing about how the implementation of relative improvement in girls' schooling is closing the gender gap in education in large part because of the stagnation of investments in boys' education (Lloyd & Hewett 2003), something that—in a context of relative male dominance—can hardly portend favorable relationship outcomes. In fact, in East Africa evidence suggests that stagnating economic opportunities have disproportionately affected men, leading to increased domestic violence, drinking, and extramarital affairs among men (Silberschmidt 2005). In part because men are socialized within a patriarchal framework, increased gendered tensions can arise when they are unable to fulfill their expectations of power and control (Silberschmidt & Rasch 2001).

There are also questions about whether the preferred intervention of girls' education that is aimed at improving women's say in the use of their bodies can be rationalized by the strong coefficients seen in demographic analyses. Further, with the low levels of female schooling in sub-Saharan Africa, current investments in education are unlikely to dramatically improve levels of girls' secondary and tertiary education, where the greatest benefits of schooling for women emerge in empirical analysis. Then there is the question of whether the influence of education may be overstated: Many of the outcomes credited to education may, for instance, be a result of the selectivity of the particular women who advance in schooling (Johnson-Hanks 2006). As Desai (2000) and Kravdal (2002) explain, fertility and mortality changes that are attributed to individual-level effects as a result of improvements in girls' education are often more appropriately attributed to community-level effects. Women, regardless of their own educational attainment, have varying access to health and contraceptive resources as a result of the communities in which they live.

Indeed, our point is not to suggest either that empowering women through education is not a useful agenda, or that behavioral change is impossible without effecting cultural change. After all, we believe that educational improvements and empowerment of women are essential for national development in countries in the region. With the former, it is the impact of schooling on reproductive and sexual health outcomes—in the absence of cultural change—that we question. Similarly, even though behavior change has proven feasible without cultural transformations, we question what the magnitude of such change can be and also how sustainable it will be. HIV infection rates in Uganda and Senegal, long the stars of the continent for respectively dramatically reducing and keeping a lid on infection rates in the 1980s and 1990s, have begun to regress. In the case of Uganda, the March 29, 2007, issue of the *Washington Post* reported that "the efficacy of Uganda's HIV prevention programs is decreasing because a new generation of young people are no longer receiving the messages of fidelity that helped curb the country's HIV epidemic in the late 1980s and early 1990s" (Timberg 2007). Promoting sexual fidelity and a fear of the virus constituted the impetus for behavior change two decades ago. Unfortunately, today, the proportion of Ugandan men with multiple

sexual partners has doubled. Also, STIs among women have increased, a sign of increasingly risky sexual behavior. New HIV cases are being recorded five times faster than physicians are able to provide antiretroviral drug access for the newly diagnosed (Timberg 2007).

Regarding research directions, we forward a call for greater attention to and specification of the gendered context and the implied relationships of marriage in sub-Saharan Africa, by developing a greater working knowledge of the African cultural institutions that reinstitute gender inequality within marriage. This would be consistent with the global position emanating from the 1994 International Conference on Population and Development, where an alliance between feminists from the global North and South emerged to dictate the centrality of gender inequality to population and health programmatic success (McIntosh & Finkle 1995). Even so, on both the scientific and programmatic fronts there has been little effort to tackle directly the cultural bases of male authority beyond educational equity interventions and female empowerment programs. As in the fertility literature, the theoretical frameworks that are brought to bear on health behavior hardly recognize the peculiar context in which men's and women's relative authority in decisions about sex are, culturally, not equivalent.

The thinking that educational or occupational advancement is sufficient to erode the benefits to men of what is essentially a cultural-legal contract may be overly simplistic. With contraceptive use remaining in the single digits in most countries, despite half a century of attention to family planning, something has clearly gone wrong. Attention needs to be paid to why men are reluctant to use condoms as well as why women are unable to manifest their preferences. Further, we must interrogate the role that the broader gendered context—and particularly the marriage contract—plays in precluding reconciled behavior and preferences for women. Tackling the cultural milieu should be considered neither out of bounds nor impractical. In Ghana, for instance, in just the past two decades women have attained considerable rights under an intestate succession law that, ironically, also essentially addresses an offshoot of the marriage contract, i.e., the status of a woman in her husband's family and what her (versus their) inheritance rights are to his property after he dies.

Sociology has much to contribute in this regard, certainly not the least its "rich set of tools in gender, inequality, and family sociology" (Dodoo & Beisel 2005). As well, the wealth of knowledge in the field about culture and institutions can only enhance the study of African populations. Although we argue that redressing the gendered contract in marriage is essential for significant and sustained improvement in women's lives in the sexual and reproductive arenas, we hardly pretend to know specifically how this must be done. Our goal here is to convince our sociological and demographic communities that this is where the crux of the problem lies. We have full confidence that, once greater consensus is gained, resolving how to proceed will be feasible. Correctly specifying the nature of any problem is definitely a necessary condition for successful redress thereof.

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The authors are not aware of any biases that might be perceived as affecting the objectivity of this review.

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