Published in final edited form as:

Stud Fam Plann. 2013 September ; 44(3): 259–274. doi:10.1111/j.1728-4465.2013.00357.x.

Religious Denomination, Religious Involvement, and Modern Contraceptive Use in Southern Mozambique

Victor Agadjanian

Victor Agadjanian is Professor, Center for Population Dynamics, T. Denny Sanford School of Social and Family Dynamics, Arizona State University, Tempe, AZ 85287. vag@asu.edu

Abstract

The relationship between contraceptive use and religion remains a subject of considerable debate. This article argues that this relationship is rooted in context-specific institutional and organizational aspects of religious belonging and involvement. Drawing upon unique recent data from a population-based survey of women conducted in a predominantly Christian high-fertility area of Mozambique, this study examines the connections between religion and contraception from two complementary angles. First, differences in current use of modern contraceptives across main denominational groups are analyzed. The results show higher prevalence of modern contraceptive use among Catholics and, to a lesser extent, traditional Protestants net of other individual- and community-level factors. Second, an analysis of religious involvement reveals that frequent church attendance has a net positive association with modern contraceptive use regardless of denominational affiliation. These findings are situated within the historical context of religious, demographic, and socio-political dynamics of Mozambique and similar sub-Saharan settings.

The association between religion and reproduction has long attracted the attention of researchers and policymakers. Literature on fertility transition in Western Europe and North America has documented considerable variations in fertility along religious lines (Bouvier and Rao 1975; Anderson 1986; Parkerson and Parkerson 1988; Gutmann 1990; Derosas and van Poppel 2006), as have studies of more recent fertility transitions in developing countries (Sembajwe 1980; Chamie 1981; Bailey 1986; Johnson and Burton 1987; Jayasree 1989; Berhanu 1994; Kollehlon 1994; Gregson et al. 1999; Knodel, Gray, and Peracca 1999; Johnson-Hanks 2006). In a recent analysis of Demographic and Health Survey (DHS) data from 30 developing countries on three continents, Heaton (2011) reports large differences between Muslims and Christians but relatively small differences across Christian denominations.

Studies focusing on proximate determinants of fertility in Western settings have reported persistent differences in religious attitudes toward contraception and in contraceptive use despite the decline of fertility across all religious denominations in an increasingly secularized region (Goldscheider and Mosher 1988 and 1991; Brewster et al. 1998). In sub-Saharan Africa, an earlier study of mine (Agadjanian 2001) found differences in modern contraceptive prevalence across Christian denominations in Mozambique. Addai (1999) reported religious differences in contraceptive behavior in Ghana. Whereas much attention in sub-Saharan fertility research has focused on Christian versus Muslim differences (see, for example, Johnson-Hanks 2006; Heaton 2011), these differences are context-specific.

Thus, Agadjanian, Yabiku, and Fawcett (2009) observed higher contraceptive use among Christians than Muslims in Nigeria but an opposite tendency in Tanzania. Beyond the sub-Saharan region, Knodel, Gray, and Peracca (1999) reported higher contraceptive prevalence among Buddhists than among Muslims in Thailand. Yet in India, Iyer (2002) did not detect any differences between Hindus and Muslims in the decision to practice contraception.

The influence of religion on contraceptive use may not always align with differences between religious traditions or denominational differences within the same traditions. As Yeatman and Trinitapoli (2008) argued in their study in Malawi, the stance on family planning that individual church leaders take may be a stronger predictor of contraceptive use than denominational affiliation. Moreover, research regarding religion and fertility has stressed the importance of religiosity and religious involvement, rather than simply religious membership (Williams and Zimmer 1990; Amin, Diamond, and Steele 1997; Hayford and Morgan 2008; Zhang 2008). Studies focusing on contraceptive use in the United States have found that individuals who are more religious, regardless of their denominational affiliation, are less likely to practice contraception (Goldscheider and Mosher 1991; Brewster et al. 1998).

To better understand the association between religion and contraceptive use in contemporary non-Western contexts, especially in sub-Saharan Africa where the fertility transition is in its early stages, we need to consider both the roots and the recent dramatic transformation and diversification of the religious landscape, fueled to a large extent by the phenomenal growth of Pentecostal and charismatic Christianity (Meyer 2004). In today's sub-Saharan settings, this burgeoning religious diversity and the correspondingly large role that organized religion plays in everyday life create conditions within which religion strongly influences demographic and specifically reproductive behavior and outcomes (McQuillan 2004). Major demographic data collection in the subcontinent, such as that conducted through Demographic and Health Surveys, typically does not distinguish among Protestant denominations, let alone among Islamic traditions, thus limiting the analysis to Catholic/Protestant/Muslim comparisons. Yet more detailed denominational classifications have proven informative in the study of fertility and contraception in Western settings (Goldscheider and Mosher 1991) and in sub-Saharan Africa (Addai 1999; Agadjanian 2001). Importantly, the contemporary religious complexity of the subcontinent is defined not so much by theological variations among churches and denominations as by differences in their organizational characteristics and networks, social narratives, and public practices (Gifford 1998; Agadjanian 2001; Bompani and Frahm-Arp 2010). Accounting for this complexity is necessary for a better understanding of the role of religion in the sub-Saharan fertility transition. This study attempts to do so by examining religious influences on modern contraceptive use in a predominantly Christian but denominationally diverse high-fertility setting in Mozambique.

SETTING

The study site—Chibuto district of Gaza province in southern Mozambique—is typical of settings in the early phases of demographic transition. According to the 2003 Mozambique DHS, the total fertility rate (TFR) in Gaza province was 5.4 children per woman (INE and

Macro International 2005); the 2011 DHS reported Gaza's TFR as 5.3 (INE and MEASURE DHS 2013). Prevalence of modern contraceptives, which are available free of charge at state-run clinics, rose in the province from 15 percent in 2003, to 17 percent in 2008, to 18 percent in 2011 (INE and Macro International 2005; INE 2009; INE and MEASURE DHS 2013). Like much of Gaza and the rest of Mozambique's south, Chibuto is a predominantly Christian area with high levels of religious affiliation and considerable denominational diversity. Prior to Mozambique's independence from Portugal in 1975, Roman Catholicism was the colony's quasi-official religion. Yet the colonial era also saw considerable growth of mission-initiated, or "traditional," Protestant denominations such as Presbyterian, Anglican, and Methodist. The study area also has a considerable presence of other denominations, most of which are either indigenous to the region or heavily indigenized imports. Among such African-initiated churches, the so-called Apostolic churches constitute a large and growing group. Most remarkable, however, has been the explosive growth of Pentecostal-type denominations, especially of the churches popularly known as *Zione* (Zionist). Some of the Zionist churches were imported from South Africa, often by returning or retiring Mozambican labor migrants, but many are homegrown in southern Mozambique. In addition to Zionists, global Pentecostal denominations, such as the Assemblies of God and the Universal Church of the Kingdom of God have gained noticeable presence in the area's religious mix. Despite the considerable theological and organizational diversity across Apostolic, Zionist, and other Pentecostal denominations, and often overt and intense competition among them in the religious marketplace, these churches share a strong emphasis on miraculous solutions to health ailments and social misfortunes through direct intervention of the Holy Spirit, which set them apart from the traditional denominations.

The expansion of these new churches in the post-colonial era has been fueled largely by switching from the Catholic and traditional Protestant churches (Agadjanian 2012). Across these denominational groups are considerable variations in socioeconomic characteristics. Differences in educational attainment, an important predictor of contraceptive use, are among the most salient. The Catholic Church was assaulted with particular fervor by the socialist regime that replaced the colonial administration in 1975, and as a result has lost much of its earlier political clout and a large share of its membership to Pentecostal and Charismatic churches. Yet it has retained in its ranks a disproportionate number of relatively well-educated individuals. Traditional Protestants are similar historically to Catholics, even though their political rise was more recent and was associated with the national liberation struggle of the 1960s and 1970s. Like Catholics, traditional Protestants have seen their membership shrink in a fierce competition with Pentecostal and Charismatic churches, yet they also have managed to retain better-educated members.

Yet perhaps even more important for this analysis, Roman Catholics and traditional Protestants, despite their shrinking membership, have managed to retain strong ties to the state apparatus and to its health care branch in particular. Data from a survey of all public maternal and child care clinics, which are the primary if not the only source of modern contraceptives for a vast majority of Mozambican couples, illustrate these ties. The survey was conducted by a research team from Arizona State University and Mozambique's Eduardo Mondlane University in 2011 in Chibuto and three other contiguous districts of

southern Mozambique as part of an NIH-funded longitudinal study of childbearing dynamics in a setting of high HIV prevalence and massive ART rollout. The survey collected information on the clinics' infrastructure and services and the sociodemographic and ethnocultural characteristics of the clinics' nursing staff. Among all the nurses involved in the provision of family planning, 45 percent were Roman Catholic and 29 percent belonged to various traditional Protestant congregations; these proportions were several times higher than the respective shares of the two denominational groups in the general population. Most of these nurses were urban-born and relatively well-educated women who were socioeconomically and culturally distant from the majority of predominantly rural dwellers, including most of the Catholics and traditional Protestants whom they serve. Yet the nurses' denominational membership may connect them with their rural coreligionist clients in a special manner that goes beyond the standard bureaucratized and impersonal provider–client routines. In religious-congregation settings, family planning nurses may act as “opinion leaders” (Valente and Davis 1999) who informally usher in contraceptive tastes and practices among fellow parishioners and other members of their denominations with whom they interact during frequent multiparish services and other gatherings. Hence, whereas these special social relationships may not manifest themselves directly in the clinic setting, they can be consequential for rural women's contraceptive education outside clinic walls.

CONCEPTUALIZATION AND HYPOTHESES

The influence of religion on fertility has traditionally been examined within one of three conceptual frameworks: the particularistic theology perspective, the minority-group status perspective, and the characteristics perspective. The particularistic theology perspective searches for the roots of religious differences in fertility in theological tenets that directly or indirectly prescribe or proscribe certain types of marital, sexual, or contraceptive behavior that may be of consequence for fertility. The minority-group status perspective posits that minority groups adjust their fertility—upward or downward—either to compensate for their disadvantaged status or to protect their advantages in society. Finally, the characteristics perspective seeks to explain religious differences in fertility and contraception through other factors, or “characteristics,” most notably educational and wealth differences among religious groups (Goldscheider 1971; Johnson 1993).

My conceptual approach and hypotheses engage the three perspectives while also accounting for the historically developed ideological discourse and institutional connections of the area's religious organizations. The analysis examines use of modern contraceptives—primarily the pill and injectables and, to a lesser extent, other modern methods. Regardless of the subjective purpose of their use in most of sub-Saharan Africa—whether to temporarily suspend childbearing or to terminate it altogether—modern contraceptives are a novel social technology that connotes modern tastes and preferences and also ties to modern institutions and in particular to biomedical health services.

This study takes a particular interest in the role of two dimensions of religion: religious membership and religious involvement. With regard to the first—the effect of religious denomination on modern contraceptive use—I derived a set of hypotheses that adapt the three main theoretical perspectives on the religion–fertility relationship to the socio-

historical context of the study area. The characteristics perspective, which seeks to trace religious differentials in fertility-related behavior to attributes unrelated to religion, suggests a straightforward hypothesis:

Hypothesis 1.1 Any difference in the likelihood of modern contraceptive use among women of different denominational affiliations (including nonaffiliated women), if detected, will result from church members' individual characteristics and, in particular, from differences in educational attainment.

The particularistic theology perspective invites us to look for possible differences among various denominations in explicit positions on family planning. The official position of the Roman Catholic Church on artificial birth control is well known. Assuming that this stance is fully shared by local clergy and enjoined on church members, one should expect Catholics to have the lowest contraceptive rate. It should be noted, however, that all church leaders, regardless of denomination, extol strong "family values" of which childbearing is a natural part. Although contraceptives may not enter the family-values narrative explicitly, one could expect that, at least implicitly, the pronatalist discourse would discourage family planning use in all denominations, compared with nonaffiliated women. Hence the second hypothesis:

Hypothesis 1.2 Contraceptive use will be lower among Roman Catholics than among members of other religious denominations and will be highest among nonaffiliated women.

To apply the minority-group status perspective, one first needs to define what constitutes a minority group in this socio-religious context. Based on the brief historical outline presented earlier, Catholics and traditional Protestants seem to fit this definition for two interrelated reasons. First, they have experienced a considerable loss of membership since the end of colonial rule, which has transformed them from numeric majorities to minorities. At the same time, they have maintained their privileged ties to the state in general and to its health care system in particular. Because modern family planning is a state-controlled and distributed resource, the connections that church members may have to the family planning establishment, however informal they might be, could yield an advantage in accessing family planning information and nurturing tastes for and enhancing practice of contraceptive use. This contextually adapted minority-group status perspective leads to the following hypothesis:

Hypothesis 1.3 Contraceptive use will be higher among Roman Catholics and traditional Protestants than among other denominational categories.

This study's second focus is on religious involvement. If religious involvement, approximated by church attendance, is a marker of greater religiosity, and greater religiosity is associated with greater pronatalism, as has typically been the case in contemporary Western societies, then religious involvement should be inversely associated with contraceptive use. For many women in rural and small-town sub-Saharan Africa, however, church provides the only viable channel for nontraditional (that is, not kinship- or marriage-based) social and civic inclusion and exposure to new ideas, practices, and preferences. Thus, if religious involvement introduces women to novel tastes and technologies, then, on

the contrary, it should be positively associated with the likelihood of modern contraceptive use.

Corresponding to the three main theoretical perspectives, three hypotheses concerning the association between religious involvement and contraceptive use can be postulated:

- Hypothesis 2.1** No net effect of religious involvement (characteristics perspective).
- Hypothesis 2.2** Negative effect of religious involvement (particularistic perspective).
- Hypothesis 2.3** Positive effect of religious involvement (modified minority-group status perspective).

In line with the conceptualization and hypotheses regarding denominational differences in modern contraceptive use, the association between religious involvement and modern contraception may also be denomination-specific: greater church involvement may reduce or boost modern contraceptive use only or mainly among members of some denominations but not others.

DATA AND METHODS

Data for this study were drawn from a representative population-based cluster survey of women aged 18–50 carried out by a research team from Arizona State University and Eduardo Mondlane University in 2008 in the Chibuto district of Gaza province in southern Mozambique. The survey was conducted in 82 randomly selected communities (clusters): 16 in urban areas (the district's administrative center and its suburbs) and 66 in rural areas. Thirty households were randomly selected in each urban cluster and 24 in each rural cluster. In each of those households, one woman aged 18–50 was randomly chosen for an interview. The survey had a participation rate of nearly 100 percent; of 2,021 selected women, only 2 refused to be interviewed. A structured survey instrument was used. In addition to standard socioeconomic, demographic, and cultural characteristics, the survey collected information regarding women's religious affiliation history and current religious involvement, fertility history, reproductive preferences, and current contraceptive use. (The survey instrument and related survey materials are available from the author upon request.)

The outcome variable is whether a woman was using a modern contraceptive method (the pill, injectables, IUD, condom, or tubal ligation) at the time of the survey. The question concerning contraceptive use was not asked of pregnant respondents (12 percent of the sample), who are therefore excluded from the analysis. Respondents' denominational affiliation is the first predictor of interest. Women with a religious affiliation and those without are included in the analysis. Despite clear instructions to interviewers to distinguish between membership and participation in a religious congregation, at least some of the surveyed women probably had difficulty making this distinction. Therefore, the nonaffiliated group is likely to include women who nominally belonged to a church but chose not to acknowledge this, based on their assessment of their church involvement. Respondents with a religious affiliation are subdivided into five denominational categories defined earlier: Roman Catholic, traditional Protestant (hereinafter also referred to simply as

“Protestant”), Apostolic, Zionist, and other Pentecostal (hereinafter “Pentecostals”). The analysis excludes 12 Muslim women and 3 Jehovah’s Witnesses. Although the resulting religious classification does not capture all the denominational distinctions in the area’s religious mosaic, it does reflect the denominational divides that are most relevant to the subject of this study. Similar classifications have been successfully used for the analysis of reproductive and HIV/AIDS-related behavior (Agadjanian 2001 and 2005). Although the hypotheses do not differentiate across all of these denominational categories, I include each of them as separate dummy variables in the statistical model to ensure that I do not miss any unexpected variations across them.

To capture the association between participation in the life of a religious congregation and modern contraceptive use, I use frequency of religious attendance among women reporting a religious affiliation. These respondents were asked how many times in the two weeks preceding the survey they went to their church for whatever purpose (for example, Sunday service, weekday service, prayer or Bible-study group meeting, church women’s meeting). I do not distinguish between specific reasons for going to church because, as prior ethnographic explorations have suggested, these reasons are often overlapping. Frequency of attendance is operationalized as a set of dummy variables: did not attend church in the past two weeks, attended one or two times, and attended more than two times.

Because the outcome variable is dichotomous, binomial logistic regression is used for the multivariate analyses. The models control for standard sociodemographic characteristics measured at the time of the survey. These controls are: respondent’s age group—18–24, 25–34, and 35 and older (the use of age group rather than actual age is preferred because of possible reporting inaccuracies); coresident partner regardless of type of union (has a coresident partner versus otherwise); number of living children; desire for more children (wants more versus wants no more or unsure); educational attainment (none, 1–4 years of school, 5 or more years of school); nonagricultural work outside the home (yes or no); household material possessions index (a four-level scale reflecting household’s possession of a radio, bicycle, motorcycle, or automobile); and urban area of residence (district headquarters, including its suburbs) as opposed to rural. The models also control for access to maternal and child health clinics (the primary, and often only, source of free contraceptives in the study area), using as a proxy the distance in kilometers from the respondent’s house to the nearest clinic that provided family planning services. (All survey respondents’ residences and all the clinics in the study area were geocoded). To account for the level of socioeconomic development and cultural modernity of the community of residence, the models include the community female educational level, computed as the average number of school years completed by respondents in the respondent’s survey cluster. The distributions of the variables used in the multivariate analyses are presented in Table 1. Because respondents residing in the same survey clusters may share some unobserved characteristics, a random-intercept approach is employed to minimize the related bias in the estimates. All the statistical tests are fitted using the GLIMMIX procedure in SAS version 9.

RESULTS

The religious palette of the area is captured in the distribution of denominational affiliation of the 2008 survey respondents shown in Table 1. Catholics, once the dominant group, constitute 13 percent of the sample, traditional Protestants 10 percent, Apostolics 12 percent, and other Pentecostals 11 percent. Women representing a medley of Zionist churches make up a clear plurality—43 percent. Notably, 12 percent of survey respondents declare no affiliation with organized religion, and only one-tenth of women in that group report having been affiliated with a church in the past (although previous affiliation may have been under-reported). Table 2 shows the educational attainment of each denominational group and of nonaffiliated respondents. These statistics illustrate the educational edge of Catholics and, to a lesser extent, traditional Protestants, and also highlight the huge disadvantage of nonaffiliated women.

Table 3 presents the proportions of nonpregnant respondents who report using a modern contraceptive method, by individual religious characteristics. Clearly, women who belong to religious congregations (88 percent of all nonpregnant women) report a higher level of modern contraceptive use than do women who do not. The distribution of contraceptive users across the categories of denominational affiliation and involvement displays considerable variation. Yielding initial support to hypothesis 1.3 (“modified minority-group status”), on the one end of the range are Roman Catholics, among whom almost one-third report using a modern contraceptive method. On the other end of that range are members of Zionist and Pentecostal congregations, among whom only 20 percent report being current modern contraceptive users. Protestants are close to Catholics, whereas members of Apostolic churches gravitate toward Zionists and Pentecostals.

Among women who report an affiliation with organized religion, the prevalence of modern contraceptive use appears to increase with frequency of religious attendance, as would be suggested by hypothesis 2.3 (“minority-group status”). Thus, contraceptive prevalence reaches 28 percent among women who went to church more than two times in the two weeks preceding the survey, compared with 20 percent among those who did not attend church at all in the same time period. The intermediate group—those who attended only once or twice—stands in the middle but somewhat closer to nonattendees.

Multivariate results are presented in Tables 4 and 5. Table 4 presents the odds ratios from random-intercept logistic regression models predicting current modern contraceptive use among all nonpregnant respondents. Values greater than 1 indicate a positive effect of a given predictor, whereas values less than 1 indicate a negative effect. Both models includes dummies for religious affiliations—Roman Catholic, Protestant, Apostolic, Zionist—and for nonaffiliated women; Pentecostals are the reference category. The first column presents a baseline model that does not include any controls. The baseline model shows that Catholics are significantly different from Pentecostal women: the odds of using a modern contraceptive method among Catholics are 1.9 times higher than the odds among Pentecostals. The difference between Protestants and Pentecostals is also quite large (odds ratio [OR] = 1.6) although only marginally significant ($p = 0.06$). At the same time, the difference between Catholics and Protestants is not statistically significant (not shown).

Among Apostolic, Zionist, and nonaffiliated women, the differences from Pentecostals in the likelihood of using modern contraceptive methods are much smaller and are not statistically significant.

The second model in Table 4 adds control variables. Most of the controls are themselves powerful predictors of contraceptive use (although, interestingly, neither desire for additional children nor distance to the nearest clinic has a significant effect). Even though the effect of being Catholic diminishes somewhat in magnitude after the addition of controls (OR = 31.6), it remains statistically significant. The coefficient for Protestant affiliation barely changes and is now very close to that for Catholics, though it remains only marginally statistically significant ($p = 0.10$). None of the other three denominational groups nor the nonaffiliated is statistically distinguishable from Pentecostal women. In sum, these results provide minimal support for hypothesis 1.1 (“characteristics”), no support for hypothesis 1.2 (“theology”), and considerable support for hypothesis 1.3 (“minority-group status”).

To examine the effect of religious involvement on the likelihood of modern contraceptive use, I exclude the respondents who did not report a religious affiliation at the time of the survey, because those respondents were not asked about their church attendance. Table 5 displays the results of a pair of models that includes denominational affiliation (with Pentecostals again as the reference category) and frequency of religious attendance in the two weeks preceding the survey interview. As in the previous set of models, the first model includes only the religious variables, whereas the second model adds controls. For the effects of religious denomination, the results are similar to those in Table 4, despite the exclusion of nonaffiliated women and a corresponding reduction in the size of the analytic sample. Catholics and, to a lesser degree, Protestants are significantly different from Pentecostals in their likelihood of currently practicing modern contraception, whereas Apostolics and Zionists are not.

Most interestingly, mirroring the earlier observed bivariate pattern, the likelihood of modern contraceptive use is positively associated with high frequency of religious attendance. Whereas women who attended their churches one or two times in the two weeks before the survey were not significantly different from women who did not attend at all, the odds of using modern family planning were 1.6 times higher than those among nonattende

The addition of controls slightly diminishes the denominational differences: Catholics remain significantly different from Pentecostals, whereas Protestants drop to being marginally significantly different ($p = 0.07$). At the same time, the inclusion of controls does not affect the difference between those who frequently attend church and those who never do. This result yields support to hypothesis 2.3 (“minority-group status”). Importantly, contrary to my supposition, the effect of frequent attendance does not vary across denominations (not shown). (The results of the model that includes interactions between denomination and frequency of attendance are available upon request.)

DISCUSSION

Although limited to one sub-Saharan setting, this analysis has produced informative results that have broad relevance and implications. At the bivariate level, women with any religious affiliation, taken as a whole, were more likely to be practicing modern contraception than were nonaffiliated women, but this difference concealed denominational variation among affiliated women. Catholics and (to a lesser degree) traditional Protestants showed a greater likelihood of modern contraceptive use than Pentecostals. The detected denomination-based differences in contraceptive use are nontrivial in magnitude and persist after the inclusion of a battery of individual sociodemographic factors and community characteristics.

Catholics' "contraceptive advantage" may seem counterintuitive given the Church's official position on use of artificial methods of birth control. Although as Hirsch (2008) illustrated with her study in rural Mexico, most Catholics, even those living in religiously conservative settings, find ways to reconcile contraceptive use with their faith and the Vatican's official guidelines. Furthermore, in sub-Saharan Africa, higher contraceptive prevalence among Catholics and Protestants, compared with other religious groups, is not unusual (Heaton 2011). What makes Roman Catholics and Protestants more receptive to contraceptive technologies? I propose that their contraceptive edge owes to a large extent to their connections with the state and especially the local medical establishment.

The similarity of historical trajectories and resulting political positioning of the Catholic and traditional Protestant churches has translated into similar receptiveness of novel social technologies, including those in the area of reproductive regulation, and these are still doled out largely, if not entirely, by the government. I do not claim that religion is used by the government as a policy instrument or plays a role in the allocation of state resources, akin to what Weinreb (2004) described as ethnically biased health policies in Kenya. Rather, I contend that membership in the Catholic Church or a traditional Protestant Church offers an informal yet potentially significant advantage for individual access to and appropriation of contraceptive tastes and technologies. The "traditional Protestant" category is, of course, denominationally heterogeneous, which may explain the weaker statistical effect of being Protestant on modern contraceptive use, but the relatively small size of this group in the survey sample does allow for its breakdown. Yet, denominational nuances notwithstanding, both Catholics and Protestants can be construed as "minority groups" with privileged access to the state, the main catalyst and dispenser of technological and social innovations in the health care system. Importantly, as in conventional minority-group status interpretations, a minority group's unique status does not necessarily produce a conscious and concerted effort on the part of its members to secure or alter this collective status. Reproductive and contraceptive decisions are still made by individuals and couples and are guided by perceived benefits for their families and households (Goldscheider and Uhlenberg 1969; Johnson and Burton 1987). Hence, the informal privileged access to contraceptive services among Catholics and Protestants affords opportunities rather than creating imperatives.

Whereas these findings can be theoretically framed within a contextually adapted minority-group status perspective, any connections with the particularistic theology perspective seem much less compelling. In the study setting, the articulated doctrinal repertoires of most

church leaders are remarkably similar. Rarely do local church leaders—Catholic, Protestant, or any other—discuss and promote family planning at church services or other congregation events (perhaps with the exception of condoms in the context of HIV/STI prevention). Contraceptive use is simply outside of the agenda of most religious leaders. If anything, the standard messages that praise parenting, and especially mothering, are more likely to discourage fertility regulation, even if indirectly, in all religious congregations. As Yeatman and Trinitapoli (2008) show in their study in Malawi, some church leaders may explicitly approve or disapprove of family planning (even if sometimes contrary to their church's official stance), and that (dis)approval rather than denominational identity is what is of greatest consequence for church members' contraceptive behavior. Yet, as I also contend, attending church exposes women to more than the teachings they hear from the pulpit. Church events, such as women's weekly group meetings (in which congregations' top male leaders rarely participate), may become arenas for exchanging information and experiences regarding contraception, especially in Catholic and traditional Protestant congregations, where such meetings are often attended and even led by local or visiting nurses and other health care workers. But even informal communication with, and learning from, fellow church members on the margins or outside of the church's official routine can be as consequential for women's contraceptive education and uptake (see Kohler 1997; Rutenberg and Watkins 1997) as for other health-related attitudes and behaviors (Agadjanian 2002; Agadjanian and Menjivar 2008). Possibly, Catholics' and some Protestants' higher receptiveness to contraceptive use may also be facilitated by what I have previously (Agadjanian 2001) described as greater ideological flexibility of their congregations, but the data do not allow for exploring this pathway directly.

Whereas the results for religious affiliation highlight the special position of the Catholic and Protestant minorities vis-à-vis family planning, frequent attendance of church activities is associated with increased modern contraceptive use regardless of denomination. This latter finding challenges the more conventional, Western-centered notion that religious involvement discourages contraceptive use. It also lends support to the idea that active social involvement with organized religion, regardless of the particular denomination, may be conducive to faster learning and adoption of novel technologies such as modern contraceptives in less developed settings. The finding fits with the general conceptualization of religious involvement as a major, if not the only, form of social participation outside of lineage-based networks available to rural and small-town sub-Saharan women. The finding is also in line with earlier research that characterizes church participation in developing countries as a modern practice (see, for example, Cosper 1975) and, more broadly, with the historical view of Christianity in sub-Saharan Africa and elsewhere in the developing world as a conduit for Western modernity (see, for example, Keane 2007).

If the experience of fertility transition in the Western world is of any guidance to sub-Saharan Africa, religion-based differences in fertility are likely to diminish and perhaps entirely disappear—as did, for example, the Catholic–Protestant fertility differences in the United States in the second half of the twentieth century (Westoff and Jones 1979; Mosher, Williams, and Johnson 1992). In the same way, greater religious involvement, regardless of denomination, might eventually become strongly associated with marital and reproductive choices that are conducive to relatively high fertility (Williams and Zimmer 1990; Hayford

and Morgan 2008; Berghammer 2012). For the time being, however, religion may exert a nontrivial and peculiar impact on reproductive behavior and outcomes as it does on many other aspects of life in the sub-Sahara.

Acknowledgments

The support of the Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD) is gratefully acknowledged.

References

- Addai, Isaac. Does religion matter in contraceptive use among Ghanaian women? *Review of Religious Research*. 1999; 40(3):259–277.
- Agadjanian, Victor. Religion, social milieu, and the contraceptive revolution. *Population Studies*. 2001; 55(2):135–148.
- Agadjanian, Victor. Informal social networks and epidemic prevention in a Third World context: Cholera and HIV/AIDS compared. In: Levy, Judith A.; Pescosolido, Bernice A., editors. *Advances in Medical Sociology, Volume 8 (Social Networks and Health)*. London: JAI-Elsevier Science; 2002. p. 201–221.
- Agadjanian, Victor. Gender, religious involvement, and HIV/AIDS prevention in Mozambique. *Social Science & Medicine*. 2005; 61(7):1529–1539. [PubMed: 15869833]
- Agadjanian, Victor. Joining, switching, and quitting: Denominational differences and socioeconomic correlates in a sub-Saharan setting. Paper presented at the Annual Meeting of the Society for the Scientific Study of Religion and the Religious Research Association; Phoenix. 9–11 November.; 2012.
- Agadjanian, Victor; Menjivar, Cecilia. Talking about the ‘Epidemic of the millennium’: Religion, informal communication, and HIV/AIDS in sub-Saharan Africa. *Social Problems*. 2008; 55(3):301–321.
- Agadjanian, Victor; Yabiku, Scott T.; Fawcett, Lubayna. History, community milieu, and Christian-Muslim differentials in contraceptive use in sub-Saharan Africa. *Journal for the Scientific Study of Religion*. 2009; 48(3):462–479.
- Amin, Sajeda; Diamond, Ian; Steele, Fiona. Contraception and religiosity in Bangladesh. In: Jones, Gavin W.; Douglas, Robert M.; Caldwell, John C.; D’Souza, Rennie M., editors. *The Continuing Demographic Transition*. Oxford: Clarendon Press; 1997. p. 268–289.
- Anderson, Barbara A. Regional and cultural factors in the decline of marital fertility in Western Europe. In: Coale, Ansley J.; Watkins, Susan C., editors. *The Decline of Fertility in Europe*. Princeton: Princeton University Press; 1986. p. 293–313.
- Bailey, Mohamed. Differential fertility by religious group in rural Sierra Leone. *Journal of Biosocial Science*. 1986; 18(1):75–85. [PubMed: 3944153]
- Berghammer, Caroline. Family life trajectories and religiosity in Austria. *European Sociological Review*. 2012; 28(1):127–144.
- Berhanu, Betemariam. Religion fertility differentials in Shewa, central Ethiopia. *Journal of Family Welfare*. 1994; 40(1):22–29.
- Bompani, Barbara; Frahm-Arp, Maria. *Development and Politics from Below: Exploring Religious Spaces in the African State*. London: Palgrave Macmillan; 2010.
- Bouvier, Leon F.; Rao, SLN. *Socioreligious Factors in Fertility Decline*. Cambridge, MA: Ballinger; 1975.
- Brewster, Karin L.; Cooksey, Elizabeth C.; Guilkey, David K.; Rindfuss, Ronald R. The changing impact of religion on the sexual and contraceptive behavior of adolescent women in the United States. *Journal of Marriage and the Family*. 1998; 60(2):493–504.
- Chamie, Joseph. *Religion and Fertility: Arab Christian-Muslim Differentials*. Cambridge: Cambridge University Press; 1981.

- Cosper, Ronald. Attendance at mass and fertility in Caracas. *Sociological Analysis*. 1975; 36(1):43–56.
- Derosas, Renzo; vanPoppel, Frans, editors. *Religion and the Decline of Fertility in the Western World*. Dordrecht, the Netherlands: Springer; 2006.
- Gifford, Paul. *African Christianity: Its Public Role*. Bloomington: Indiana University Press; 1998.
- Goldscheider, Calvin. *Population, Modernization, and Social Structure*. Boston: Little Brown; 1971.
- Goldscheider, Calvin; Mosher, William D. Religious affiliation and contraceptive usage: Changing American patterns, 1955–82. *Studies in Family Planning*. 1988; 19(1):48–57. [PubMed: 3363605]
- Goldscheider, Calvin; Mosher, William D. Patterns of contraceptive use in the United States: The importance of religious factors. *Studies in Family Planning*. 1991; 22(2):102–115. [PubMed: 1858103]
- Goldscheider, Calvin; Uhlenberg, Peter R. Minority group status and fertility. *American Journal of Sociology*. 1969; 74(4):361–372.
- Gregson, Simon; Zhuwau, Tom; Anderson, Roy A.; Chandiwana, Stephen K. Apostles and Zionists: The influence of religion on demographic change in rural Zimbabwe. *Population Studies*. 1999; 53(2):179–193. [PubMed: 11623883]
- Gutmann, Myron P. Denomination and fertility decline: The Catholics and Protestants of Gillespie County, Texas. *Continuity and Change*. 1990; 5(3):391–416.
- Hayford, Sarah R.; Philip Morgan, S. Religiosity and fertility in the United States: The role of fertility intentions. *Social Forces*. 2008; 86(3):1163–1188.
- Heaton, Tim B. Does religion influence fertility in developing countries. *Population Research and Policy Review*. 2011; 30(3):449–465.
- Hirsch, Jennifer S. Catholics using contraceptives: Religion, family planning, and interpretive agency in rural Mexico. *Studies in Family Planning*. 2008; 39(2):93–104. [PubMed: 18678173]
- Instituto Nacional de Estatística (INE). Final Report. Maputo, Mozambique: 2009. Mozambique Multiple Indicators Cluster Survey 2008.
- Instituto Nacional de Estatística (INE) and Macro International. Final Report. Maputo, Mozambique and Calverton, Maryland: Instituto Nacional de Estatística and Macro International; 2005. Mozambique Demographic and Health Survey 2003.
- Instituto Nacional de Estatística (INE) and MEASURE DHS. Final Report. Maputo, Mozambique and Calverton, Maryland: Instituto Nacional de Estatística and MEASURE DHS; 2013. Mozambique Demographic and Health Survey 2011.
- Iyer, Sriya. Religion and the decision to use contraception in India. *Journal for the Scientific Study of Religion*. 2002; 41(4):711–722.
- Jayasree, R. *Religion, Social Change and Fertility Behaviour: A Study of Kerala*. New Delhi, India: Concept Publishing; 1989.
- Johnson, Nan E. Hindu and Christian fertility in India: A test of three hypotheses. *Social Biology*. 1993; 40(1–2):87–105. [PubMed: 8146697]
- Johnson, Nan E.; Burton, Linda M. Religion and reproduction in Philippine society: A new test of the minority-group status hypothesis. *Sociological Analysis*. 1987; 48(2):217–233.
- Johnson-Hanks, Jennifer. On the politics and practice of Muslim fertility: Comparative evidence from West Africa. *Medical Anthropology Quarterly*. 2006; 20(1):12–30. [PubMed: 16612991]
- Keane, Webb. *Christian Moderns: Freedom and Fetish in the Mission Encounter*. Berkeley: University of California Press; 2007.
- Knodel, John; Gray, Rossarin S.; Peracca, Sara. Religion and reproduction: Muslims in Buddhist Thailand. *Population Studies*. 1999; 53(2):149–164.
- Kohler, Hans-Peter. Learning in social networks and contraceptive choice. *Demography*. 1997; 34(3):369–383. [PubMed: 9275246]
- Kollehlon, Konia T. Religious affiliation and fertility in Liberia. *Journal of Biosocial Science*. 1994; 26(4):493–507. [PubMed: 7983100]
- McQuillan, Kevin. When does religion influence fertility? *Population and Development Review*. 2004; 30(1):25–56.

- Meyer, Birgit. Christianity in Africa: From African Independent to Pentecostal-Charismatic churches. *Annual Review of Anthropology*. 2004; 33:447–474.
- Mosher, William D.; Williams, Linda B.; Johnson, David P. Religion and fertility in the United States: New patterns. *Demography*. 1992; 29(2):199–214. [PubMed: 1607048]
- Parkerson, Donald H.; Parkerson, Jo A. 'Fewer children of greater spiritual quality': Religion and the decline of fertility in nineteenth-century America. *Social Science History*. 1988; 12(1):49–70.
- Rutenberg, Naomi; Watkins, Susan Cotts. The buzz outside the clinics: Conversations and contraception in Nyanza Province, Kenya. *Studies in Family Planning*. 1997; 28(4):290–307. [PubMed: 9431650]
- Sembajwe, Israel. Religious fertility differentials among the Yoruba of Western Nigeria. *Journal of Biosocial Science*. 1980; 12(1):153–164. [PubMed: 7372696]
- Valente, Thomas W.; Davis, Rebecca L. Accelerating the diffusion of innovations using opinion leaders. *Annals of the American Academy of Political and Social Sciences*. 1999; 566(1):55–67.
- Weinreb, Alex A. First politics, then culture: Accounting for ethnic differences in demographic behavior in Kenya. *Population and Development Review*. 2004; 27(3):437–467.
- Westoff, Charles F.; Jones, Elise F. The end of 'Catholic' fertility. *Demography*. 1979; 16(2):209–217. [PubMed: 456702]
- Williams, Linda B.; Zimmer, Basil G. The changing influence of religion on U.S. fertility: Evidence from Rhode Island. *Demography*. 1990; 27(3):475–481. [PubMed: 2397825]
- Yeatman, Sara E.; Trinitapoli, Jenny. Beyond denomination: The relationship between religion and family planning in rural Malawi. *Demographic Research*. 2008; 19(55):1851–1882. [PubMed: 20463916]
- Zhang, Li. Religious affiliation, religiosity, and male and female fertility. *Demographic Research*. 2008; 18(8):233–262.

TABLE 1

Percentage of nonpregnant respondents, by selected characteristics, Chibuto, Mozambique, 2008

Characteristic	Percent
Uses a modern family planning method	22.3
Religious affiliation	
Roman Catholic	12.8
Traditional Protestant	10.0
Apostolic	12.2
Zionist	42.9
Pentecostal	10.5
Nonaffiliated	11.5
Attended church in past two weeks a	
Did not attend	26.0
1–2 times	42.7
3+ times	31.3
Age (years)	
18–24	26.6
25–34	36.6
35+	36.8
Has a coresident partner	61.8
Number of living children (mean)	2.86
Wants more children	47.7
Years of schooling	
0	33.9
1–4	37.2
5+	28.9
Works outside the home	31.4
Household material possessions index (mean)	2.05
Lives in district headquarters or its suburbs	24.9
Distance from home to nearest FP clinic (mean km)	7.03
Community female educational level (mean years of schooling)	2.88
(N)	(1,757)

^aIncludes only participants having a religious affiliation (n = 1,551).

TABLE 2

Percentage distribution of nonpregnant respondents, by religious affiliation, according to educational attainment, Chibuto, Mozambique, 2008

Religious affiliation	Education (years)		
	0	1–4	5+
Roman Catholic	15.6	34.2	50.2
Traditional Protestant	21.6	36.9	41.5
Apostolic	27.4	44.2	28.4
Zionist	39.2	38.5	22.3
Pentecostal	28.7	33.5	37.8
Nonaffiliated	56.9	32.2	10.9
Total	33.9	37.2	28.9

TABLE 3

Percentage of nonpregnant women practicing modern contraception, by religious affiliation and frequency of church attendance, Chibuto, Mozambique, 2008

Characteristic	(n)	Practices modern contraception (percent)
Religious affiliation		
Affiliated with a religion or church (any denomination)	(1,554)	23.6
Roman Catholic	(225)	32.4
Traditional Protestant	(176)	30.1
Apostolic	(215)	23.3
Zionist	(753)	20.1
Pentecostal	(185)	20.0
Nonaffiliated	(203)	13.8
Attended church in past two weeks ^a		
Did not attend	(411)	20.2
1–2 times	(668)	22.9
3+ times	(488)	27.5
Total	(1,757)	22.3

^aIncludes only participants having a religious affiliation (n = 1,567).

TABLE 4

Odds ratios from random-intercept logistic regression models predicting current modern contraceptive use among all nonpregnant women, Chibuto, Mozambique, 2008

Characteristic	Baseline (odds ratio)	Full (odds ratio)
Religious affiliation		
Roman Catholic	1.883**	1.642*
Traditional Protestant	1.622	1.637
Apostolic	1.181	1.220
Zionist	1.028	1.220
Pentecostal (r)	1.000	1.000
Nonaffiliated	0.690	1.016
Age (years)		
18–24 (r)		1.000
25–34		0.598**
35+		0.219**
Has a coresident partner		1.457**
Number of living children		1.376**
Wants more children ^a		0.926
Years of schooling		
0 (r)		1.000
1–4		1.445*
5+		2.563**
Works outside the home		1.335*
Household material possessions index		1.169*
Lives in district headquarters or its suburbs		1.485*
Distance from home to nearest FP clinic (km)		0.992
Community female educational level (mean years of schooling)		1.255**
Model chi-square	1,650	1,769
(N)	(1,752)	(1,752)

* Significant at $p = 0.05$;

** $p = 0.01$.

(r) = Reference category.

^a Reference category is “Does not want more children or is unsure.”

TABLE 5

Odds ratios from random-intercept logistic regression models predicting current practice of modern contraception among women having a religious affiliation, Chibuto, Mozambique, 2008

Characteristic	Baseline (odds ratio)	Full (odds ratio)
Religious affiliation		
Roman Catholic	1.989**	1.754*
Traditional Protestant	1.717*	1.615
Apostolic	1.119	1.145
Zionist	1.034	1.206
Pentecostal (r)	1.000	1.000
Attended church in past two weeks		
Did not attend (r)	1.000	1.000
1–2 times	1.160	1.191
3+ times	1.595**	1.599**
Age (years)		
18–24 (r)		1.000
25–34		0.613**
35+		0.224**
Has a coresident partner		1.569**
Number of living children		1.374**
Wants more children		0.926
Years of schooling		
0 (r)		1.000
1–4		1.434*
5+		2.387**
Works outside the home		1.355*
Household material possessions level		1.147*
Lives in district headquarters or its suburbs		1.546**
Distance from home to nearest FP clinic (km)		1.001
Community female educational level (mean years of schooling)		1.270*
Model chi-square	1,478	1,617
(N)	(1,551)	(1,551)

* Significant at $p = 0.05$;

** $p = 0.01$.

(r) = Reference category.