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Religious Schools, Home Schools, and the Timing of First Marriage and First Birth

Jeremy E. Uecker · Jonathan P. Hill

Abstract   The timing of individuals' family formation is important for a number of socioeconomic and health outcomes. We examine the influence of religious schools and home schools on the timing of first marriage and first birth using data from the Cardus Education Study Graduate Survey ($N = 1,496$). Our results from life tables and event-history regression models show that, on average, graduates of evangelical Protestant schools—but not Catholic school or homeschool graduates—have earlier marriages and births than public school graduates. Catholic school students have later first births on average than public school graduates. Models interacting schooling type with age and age-squared suggest that evangelical schoolers' higher odds of marriage stem from higher odds of marrying at ages 21–30, and their higher odds of first birth stem from higher odds of births from ages 25–34. Catholic school and nonreligious private school students also have higher odds of marrying in the mid-20s and early-30s than do public school students. Evangelical, non-religious private, and Catholic school students all have lower odds of teenage births than public school students but higher odds of birth later in the life course. Home-schoolers do not differ on either outcome at any age. Our findings suggest that schools socialize their students with distinctive attitudes toward family formation that influence their behavior even many years after graduation, though these schools do not appear to be particularly harmful to life chances in terms of fostering marriage or childbearing at very young ages.

Keywords   Religious schools · Home schools · Family formation · Marriage timing · Fertility timing · Religious socialization

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Introduction

Family life in the United States has undergone dramatic changes over the last 50 years. Among these changes, Americans are forming families at later ages than at any other time in US history. The median age at first marriage is now at an all-time high, reaching 28.7 for men and 26.5 for women in 2011 (United States Census Bureau 2011). The median age at first birth for women is also increasing, but at a much slower rate, and in 2009 stood at age 25 (Arroyo et al. 2012). Nevertheless, a fair number of young adults marry and bear children at young ages. For example, 25 % of young women and 16 % of young men marry before age 23 (Uecker and Stokes 2008). About 18 % of young women have a child before the age of 20 (Martinez et al. 2011). The timing of marriage and first birth has important consequences for individuals' life outcomes. According to the life course perspective, the effect of roles and transitions is contingent on their timing (Elder 1985). In some cases, "the timing of an event may be more consequential than its occurrence" (Elder 1985:114). Indeed, younger ages at marriage and first birth have been tied to poorer mental and physical health, increased risk of divorce, lower earnings, and lower educational attainment (McCarthy and Menken 1979; Moore and Waite 1981; Teachman et al. 1986; Hofferth et al. 2001; Heaton 2002; Martin 2004; Dupre and Meadows 2007; Henretta 2007; Loughran and Zissimopoulos 2009; Pudrovska and Carr 2009; Carlson 2011).

Research has shown religion is associated with these family formation outcomes. Studies suggest that religious affiliation, religious commitment, and religious beliefs all influence marital timing, with religious conservatives and the more devout tending to marry earlier than their counterparts (Lehrer 2000, 2004; Xu et al. 2005; Thornton et al. 2007; Uecker and Stokes 2008; Eggebeen and Dew 2009). Religious commitment is also associated with timing of first marital births: Women who are more religiously active in their youth are more likely to have earlier first marital births (Pearce 2010). Religion, however, is linked to lower risk of premarital births. Those who attended religious services more frequently as youths are less likely to have a premarital birth (Wildeman and Percheski 2009; Pearce 2010).

Underlying these distinctive family behaviors are the pro-nuptial and pro-natalist attitudes often fostered by religion (Pearce and Thornton 2007). These values are most effectively transmitted in contexts where "religious institutions have the means to communicate values to their members and to institute mechanisms to promote compliance and punish nonconformity"(McQuillan 2004:32). Primary and secondary religious schools are able to serve these functions and may help form a plausibility structure—along with families and religious congregations—that sustain religious worldviews and beliefs (Berger 1967). Indeed, religious organizations and parents have long been interested in educating their children in schools that promote their values and beliefs (Sikkink 1999). Approximately nine percent of the school-age population in the United States attends a private religious school,[1] and an

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[1] The National Center for Education Statistics estimates that 10 percent of students were enrolled in private schools in 2009–10, and 88 percent of these private school students were enrolled in religious private schools.

additional three percent are educated at home (Aud et al. 2013). A growing literature has begun to document the lasting effects of these religious schooling contexts (at least into young adulthood) on their students in a number of domains, including religiosity (Uecker 2009; Vaidyanathan 2011), abortion decisions (Adamczyk 2009), attitudes about science (Longest and Smith 2011), and volunteering (Hill and den Dulk 2013). The effects of schooling environments on family formation, however, have not been explored.

In this study, we explore the role that religious schools and home schools—as socialization mechanisms available to religious institutions and individuals—play in these family formation processes. Using data from the Cardus Education Survey, a nationally-representative survey of 1,496 24–39-year-old high school graduates (including oversamples of graduates from non-public schools), we examine the influence of schooling type on the timing of first marriage and the timing of first birth. We also explore potential mediators of these relationships and how this influence may vary by age across young adulthood. These analyses shed light on how adolescent religious socialization processes impact the life course transitions of young adults. Before turning to the present analysis, we first review extant literature on religion and family formation and develop hypotheses for schooling effects on family formation.

Religion and Family Formation

Detailed theoretical examinations of religion and family formation date back at least to Goldscheider (1971), whose most tested explanation for religion's role—particularly that of religious affiliation—in fertility processes was labeled the particularized theology hypothesis. This explanation attributes different fertility patterns to differences in religious teachings on the topic of fertility. Thus, tradition-specific teachings, such as the Roman Catholic prohibition on contraceptives and general pro-natalist orientation,[2] are thought to be responsible for observed differences in the number of children born to women with different religious affiliations. This type of explanation features prominently in the literature on religion and marriage as well. In perhaps the most detailed exploration of religion and marriage timing to date, Xu et al. (2005) explicate several explanations for religious differences in marriage timing, including the extent to which each group emphasizes and valorizes marriage. They draw a link between conservative Protestant and Mormon teachings on marriage and their earlier ages at first marriage, though this relationship is not tested.

Zhang (2008) expands on Goldscheider's thinking by drawing on the socialization hypothesis to explain religion's influence. According to this hypothesis, religious institutions expose members to other members who adhere to certain religious doctrines regarding fertility and are influenced by the fertility behavior of

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[2] As an example of pronatalism, the Catechism of the Catholic Church (2373) states, "Sacred Scripture and the Church's traditional practice see in large families a sign of God's blessing and the parents' generosity."

other group members. Thus, it is not only religious tradition that matters, but one's immersion in a religious community and the importance of religion to the individual. Theoretical perspectives such as reference group theory have emerged in the religion and fertility literature (Hackett 2008), as demographers have begun to take seriously the role social exposure and interaction play in individuals' applying the teachings of their denomination (Zhang 2008). Indeed, religious service attendance has been linked to earlier marital births (Pearce 2010) and higher fertility (Frejka and Charles 2008), and religious salience is associated with higher fertility among women (Frejka and Charles 2008; Hayford and Morgan 2008; Zhang 2008), even as differences in fertility among religious groups have diminished (Mosher et al. 1992). Moreover, religious attendance and salience are tied to marriage timing, with more religious individuals marrying earlier in the life course (Thornton et al. 2007; Uecker and Stokes 2008; Eggebeen and Dew 2009). In sum, it is argued that religious institutions influence family formation by offering distinct messages about family life and socializing their adherents to apply these messages to their family lives. Socialization processes, per this explanation, are at the heart of religious influence on family formation.

Religious Schooling, Socialization, and Family Formation

Religious socialization is typically understood as taking place among families, religious congregations, and peers (Cornwall 1988; Erickson 1992). However, because even the most devoutly religious adolescents spend more time in educational settings than religious ones, recent research has begun to detail the contribution of schools to religious socialization (Regnerus et al. 2004; Barrett et al. 2007; Uecker 2008, 2009), as well as in shaping attitudes about family-related attitudes and behaviors such as abortion (Adamczyk 2009) and premarital sex (Regnerus 2007). Schools (with the exception of home schools) socialize students in at least three ways. First, schools expose students to peers who are increasingly important socialization agents and reference groups during adolescence (Coleman 1961; Brown 1990). In this way, schooling's socialization is indirect through peer groups. As (Adamczyk 2009) explains, young people adopt the attitudes and behaviors of those to whom they are exposed (Bandura 1977; Miller and Fox 1987). Adolescents may also align their attitudes and behaviors with peers, even while rejecting the rationale for the attitudes and behaviors, in an effort to attain a higher standing among peers or to maintain a sense of self (Kelman 2006; Barrett et al. 2007). Religious school students—particularly Protestant school students, but also Catholic school students—are considerably more religious than students who attend secular schools (Uecker 2008), suggesting that students may conform their attitudes and behaviors to those of their religious peers.

These communities of religious peers may aid not only in religious socialization, but may also aid in assortative mating. Religious schools may serve as marriage or sex markets where individuals are surrounded with potential mates. Less is known, however, about how home schools affect students' networks and search for partners both in adolescence and after they graduate high school.

Second, schools convey norms and values through formal curricula (Barrett et al. 2007). Many parents of school-aged children—especially fundamentalist Protestants, charismatic Protestants, and Pentecostals—feel alienated by the secular humanism they believe pervades the curriculum in public schools (Sikkink 1999). Though many evangelical Christians support public schools and perceive it as their religious duty to educate their children there (Smith 2000), others perceive Christian schools as ways of instilling Christian values (Rose 1988). For example, the Association of Christian Schools International—the largest evangelical school association in the United States—includes as part of its mission statement the desire to "inspire students to become devoted followers of Jesus Christ" (Association of Christian Schools International 2013). Similarly, Catholic schools are intended to "provide young people with sound Church teaching through a broad-based curriculum, where faith and culture are intertwined in all areas of a school's life…[to] ensure that they have the foundation to live morally and uprightly in our complex modern world" (United States Conference of Catholic Bishops 2005).[3] A significant minority (and plurality) of homeschool parents (36 %) also cite a desire to provide religious or moral instruction as their *primary* reason for choosing to educate their children at home, and 83 % cite this religious reason as an important factor in their decision (Planty et al. 2009).

The extent to which religious schools on the ground attempt to inculcate religious values is unclear, but data from the National Center for Education Statistics may provide some clue. About two-thirds of conservative Christian school principals in 1990–91 reported that religious development of their students is their most important educational goal. Around 40 % of Catholic school principals report the same (Baker et al. 1996). Thus, we might expect conservative Christian schools to be more focused on instilling their religious values than Catholic schools, but differences in students in these schools from students in public schools might be evident for both groups. If 83 % of homeschool parents are teaching religious values to their children, these students might also be distinct, although perhaps not after accounting for their parents' religious characteristics.

Third, and finally, religious schools (again, not including home schools) surround adolescents with religious adults in the form of teachers, administrators, coaches, and peers' parents. Adolescents desire relationships with non-familial adults who are potentially important agents of religious socialization (Smith and Denton 2005). The role models provided by religious schools may act as spiritual models or exemplars whom teenagers seek to emulate. Indeed, the spiritual modeling explanation has found empirical support as a mechanism through which parents influence adolescent religiosity (King et al. 2002; King and Mueller 2004), though no research of which we are aware links non-familial models to adolescent religiosity. In addition to providing spiritual modeling, the close-knit communities of religious schools are characterized by closed social networks (Coleman 1988) which may lead to increased monitoring and reinforcement of parental values (Smith 2003).

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[3] For an examination of the state of Catholic schools in the United States, see (MacGregor 2012).

While religious schools may influence family formation timing through their promotion of pro-nuptial and pro-natal values, they may also promote other attitudes and behaviors that affect family formation. In particular, religion can foster distinct views of educational attainment, premarital sex and cohabitation, and gender roles. Conservative Protestants and biblical literalists have lower educational attainment (Keyser and Kosmin 1995; Darnell and Sherkat 1997; Glass and Jacobs 2005), resulting in part from their skepticism about its value (Darnell and Sherkat 1997; Sherkat and Darnell 1999). At the same time, however, more religiously committed adolescents do better in school (Regnerus 2000; Muller and Ellison 2001) and accumulate more years of schooling (Loury 2004). Research suggests that Catholic schoolers are more likely to finish high school and attend college (Evans and Schwab 1995; Altonji et al. 2005). Those with more educational attainment marry later, become parents later, and are less likely to have nonmarital births (Rindfuss and St. John 1983; Goldstein and Kenney 2001; Kennedy and Bumpass 2008).

Different schooling settings may also influence attitudes about nonmarital sex. Lehrer (2004) points out that conservative Protestants and Mormons are more traditional in their attitudes toward premarital sex and cohabitation, and Jews and the unaffiliated are more accepting of these behaviors. Eggebeen and Dew (2009) find that childhood religious service attendance and fervor are negatively associated with cohabitation, and that religiously committed conservative Protestants are less likely than all other young adults to believe that cohabitation without plans to marry is acceptable. Pearce and Thornton (2007) likewise find that religious service attendance and salience are associated with less favorable attitudes toward cohabitation and premarital sex, and evangelical Protestants also view premarital sex less favorably. These negative attitudes may incentivize marriage and childbearing at earlier ages. Catholics, despite official teachings proscribing nonmarital sex, do not have more negative views of premarital sex or cohabitation than those from other religious traditions (Pearce and Thornton 2007). Nevertheless, those educated in Catholic schools may internalize some of these more traditional attitudes toward nonmarital sex.

Lastly, evangelical schooling environments may promote traditional gender roles and a separate spheres ideology where men are the breadwinners and women the homemakers. These attitudes may disincentivize career investment among women and lead to earlier family formation (Lehrer 2004; Xu et al. 2005).

Based on the foregoing discussion, we formulate the following hypotheses:

H1a–b: Evangelical Protestant schoolers, Catholic schoolers, and home-schoolers will (a) marry earlier and (b) have births earlier than their public school counterparts.
H2a–b: Selection by parental religious characteristics will partly explain the relationship between schooling type and (a) timing of marriage and (b) timing of first birth.
H3a–b: Evangelical and Catholic schooling will affect (a) marriage timing and (b) fertility timing in part by making adolescents more religious.
H4a–b: Evangelical schoolers' (a) earlier marriage timing and (b) earlier fertility will be explained in part by their lower educational attainment, while

the effect of Catholic schooling will be suppressed by their higher educational
attainment.
    H5a–b: Evangelical and Catholic schoolers' (a) earlier marriage timing and
(b) earlier fertility will be explained in part by their lower rates of cohabitation.
    H6a–b: Evangelical schoolers' (a) earlier marriage timing and (b) earlier
fertility will be explained in part by their more traditional gender roles.

Although we do not formulate specific hypotheses about variations in schooling
type by age, we further detail the hypothesized relationships between schooling type
and family formation by interacting these variables with age and age-squared.

Data, Measures, and Methods

Data

Our analyses use data from the Cardus Education Study Graduate Survey (CESGS).
CESGS is a nationally representative sample of high school graduates ranging in
age from 24 to 39 with an oversample of private school and homeschool graduates.[4]
Knowledge Networks (KN), a survey firm with a reputation for high quality data
collection, fielded the survey between February and April 2011. Initial screeners
were sent out to 8,375 respondents participating in the KN research panel (known as
KnowledgePanel[®] [5]). The cooperation rate from the nationally representative panel
was 62 %, for a total of 5,200 completed screeners. Of those screeners 29 % were
selected to participate in the full survey for a final sample size of 1,496 respondents
(in order to oversample alumni of private schools and homeschooling, a majority of
those who attended public schools were not selected to complete the full survey).

Measures

Dependent Variables

Our analyses focus on two outcomes: (1) timing of first marriage, and (2) timing of
first birth. For respondents who were currently married or reported ever having been
married, we created a variable for age at first marriage based on the year they report
first getting married and their current age. For respondents who report having at
least one child (including adopted and step-children),[6] we created a variable that
calculated the respondents' age when their oldest child was born based on the year

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[4] We refer to respondents throughout this article as "graduates" and "students" from various types of
secondary schools even though the survey technically asks respondents what type of secondary school
they "primarily attended." These terms, although not precise, are less cumbersome than the alternatives.

[5] For more on the recruitment and sampling methods used to generate KnowledgePanel[®], please consult
http://www.knowledgenetworks.com/knpanel/docs/KnowledgePanel(R)-Design-Summary-Description.pdf.

[6] Unfortunately, the survey does not allow us to differentiate among biological, adopted, and step-
children.

of birth and the respondents' current age. We transform our data into person-year files, with respondents contributing one observation per year in the data beginning with age 16.[7] Thus our dependent variables are dichotomous measures indicating the occurrence of (1) marriage and (2) first birth in a given person-year.

Key Independent Variable

Our primary independent variable is a measure of secondary schooling type. Respondents indicated whether they primarily attended a public, Catholic, religious (not Catholic), private nonreligious, or homeschool for high school. If they indicated religious (not Catholic), they were asked to indicate whether this was evangelical Protestant or "Christian school", other Protestant, Jewish, or other (specify).[8] Based on these categories, we created a final variable with the categories of public ($N = 873$), Catholic ($N = 283$), evangelical Protestant ($N = 126$), homeschool ($N = 82$), private nonreligious ($N = 109$), and other religious ($N = 23$). Although we do not theorize about these latter two categories, we include them for comparative purposes and in order to have public schoolers as a homogeneous reference group.

Explanatory Variables

Our multivariate models include a measure of parent worship service attendance that represents the average reported attendance of both the primary mother and primary father figure with higher values indicating more frequent church attendance.[9] We also include a measure of the frequency of "talk about God, the scriptures, or other religious or spiritual things" within the respondents' families during high school (seven response categories ranging from "never"—coded 1—to "more than once a day"—coded 7). We include a measure of the religious tradition in which the respondent was raised. This variable is created from the denomination or tradition that the respondent reported their primary mother figure to identify with growing up (in over 95 percent of the cases, this is the biological mother of the respondent).[10] These denominations/traditions (a total of nineteen categories) were re-coded to match the RELTRAD coding scheme (Steensland et al. 2000).[11]

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[7] Those marrying or having a child prior to age 16 are considered to have married or had a child at age 16 ($N = 4$ for marriage and $N = 13$ for having a child). Additionally, a small number of cases had implausible values and were deleted from our analyses ($N = 8$ for having a child and $N = 2$ for marrying).

[8] Four of the seven "other" cases were moved to the "evangelical Protestant" category based on the denomination specified. The remaining three were left in the "other religious" category.

[9] For the few cases that reported having no primary mother figure, only the primary father's attendance was used. For those cases that reported having no primary father, only the primary mother's attendance was used.

[10] If the respondent did not have a primary mother figure, we used the religious tradition of the primary father figure (29 cases).

[11] The majority of those raised with evangelical Protestant backgrounds had mothers who were Baptist or Pentecostal, while the majority of those we coded as coming from mainline Protestant backgrounds had mothers who were Episcopalian/Anglican, Disciples of Christ, Lutheran, Methodist, Presbyterian, or Reformed.

To tap adolescent religiosity, CESGS collected retrospective measures of religion when the respondent was in high school. We include a retrospective measure of importance of faith and religious worship service attendance during high school. The importance of faith measure includes five possible response categories ranging from "not important at all" to "extremely important," and the frequency of religious worship service attendance measure contains eight possible response categories ranging from "never" to "more than once a week." Both variables are coded such that higher values indicate higher religiosity.

Other key explanatory variables include a measure of educational attainment, which ranges from high school degree to professional or doctorate degree, a dichotomous measure of whether the respondent ever cohabited outside of marriage, and two attitudinal measures about gender roles within marriage. The gender role items ask respondents to rate their level of agreement (Likert scales with seven response categories) with the following two statements: "It is better if the man earns the living and the woman takes care of the home and family" and "If a husband and wife disagree about something, the wife should give into her husband." Higher values on these variables indicate more agreement with these statements.

Control Variables

All multivariate models include controls for age, age squared, race/ethnicity, parents' educational attainment, age at interview (to account for possible period changes in the effect of schooling types), and family structure during high school (two biological/adopted parents versus other family forms). Table 1 contains the means, standard deviations, and ranges for all variables used in our analyses. These descriptive statistics are based on the individual-level data, not the person-year file used in the analyses. Standard listwise deletion would result in 246 cases (16 %) removed due to "don't know" or "refused" responses on the independent variables. Instead of deleting these cases, we use multiple imputation methods that allow us to use all of the data available in the independent variables.

Methods

We begin by analyzing figures that graph results from life tables showing the cumulative proportion married and having a first birth by school type between the ages of 16 and 39. These graphs provide helpful initial descriptive maps of the timing of these family formation events. We follow these figures with two tables that present the results from event history models that specify the effect of secondary schooling type on the timing of (a) first marriage and (b) first birth. In all of these models, the unit of analysis is person-year of exposure to risk of each of the above events occurring. Data are censored at the event for those for whom the event has occurred, and at age at interview for those who have not experienced the event. As described above, the outcome is a dichotomous measure indicating whether the event occurred or did not in a given person-year. We proceed with seven models in each table. The first model includes only the schooling type variables and the age

Table 1 Mean, standard deviation, and range of variables, unweighted

Variables	N	Mean	SD	Min	Max
Dependent variables					
Ever married	1,466	0.68		0	1
Age at first marriage	998	24.14	3.96	13	37
Ever had baby	1,454	0.58		0	1
Age at first birth	850	25.97	4.92	11	39
Ever had premarital birth	1,444	0.13		0	1
Age at premarital birth	181	21.11	4.33	11	34
Ever had marital birth	1,444	0.43		0	1
Age at marital birth	627	27.43	3.99	17	39
Control variables					
Age	1,496	32.48	4.48	24	39
Race/ethnicity					
White, non-Hispanic	1,496	0.73		0	1
Black, non-Hispanic	1,496	0.06		0	1
Other, non-Hispanic	1,496	0.08		0	1
2+ races, non-Hispanic	1,496	0.02		0	1
Hispanic	1,496	0.12		0	1
Region					
Northeast	1,496	0.17		0	1
Midwest	1,496	0.28		0	1
South	1,496	0.31		0	1
West	1,496	0.24		0	1
Parents' education	1,496	3.96	2.53	1	8
Lived with two bio/adopt parents in HS	1,496	0.70		0	1
Independent variables					
Secondary schooling type					
Public	1,496	0.58		0	1
Private nonreligious	1,496	0.07		0	1
Catholic	1,496	0.19		0	1
Evangelical Protestant	1,496	0.08		0	1
Homeschool	1,496	0.05		0	1
Other religious	1,496	0.02		0	1
Importance of faith in HS	1,496	2.86	1.33	1	5
Church attendance in HS	1,496	4.85	2.53	1	8
Religious tradition in HS					
Evangelical Protestant	1,496	0.16		0	1
Mainline Protestant	1,496	0.16		0	1
Catholic/Orthodox	1,496	0.41		0	1
LDS	1,496	0.02		0	1
Other Christian (not Catholic)	1,496	0.11		0	1
Other religion (not Christian)	1,496	0.04		0	1
Spiritual but not religious	1,496	0.02		0	1

Table 1 continued

Variables	N	Mean	SD	Min	Max
No religion	1,496	0.08		0	1
Independent variables					
Parents' church attendance	1,496	4.69	2.51	1	8
Frequency of religious talk in home	1,496	3.31	1.97	1	7
Educational attainment					
High School degree	1,496	0.10		0	1
Some college, no degree	1,496	0.19		0	1
Associate's degree	1,496	0.10		0	1
Bachelor's degree	1,496	0.39		0	1
Master's degree	1,496	0.17		0	1
Professional or doctorate degree	1,496	0.04		0	1
Ever cohabited	1,496	0.52		0	1
Man should be the breadwinner	1,496	3.58	1.84	1	7
Man should make final decisions	1,496	2.55	1.64	1	7

Source Cardus Education Survey, 2011

and age-squared variables to establish any baseline associations between these variables and the family formation outcomes. The second model includes the dummy indicators for secondary schooling type (with public school as the reference category) along with the standard control variables. Model 3 introduces measures of parent religiosity as a potential source of spuriousness. Here we are trying to separate out the influence of family-level religious factors that are both associated with attending certain types of schools and the timing of family formation. Parental religiosity is widely considered to be the best predictor of offspring religiosity (see Smith and Denton 2005), and previous studies of religious schooling have taken this approach to selection (Uecker 2008, 2009; Hill and den Dulk 2013). Model 4 through Model 7 introduce a number of variables that we consider to measure possible mediating factors through which schooling type influences family formation. Model 4 tests whether the effect of secondary schooling type can be partially accounted for by the higher religiosity of students in these types of schools. Model 5 tests whether greater or lesser likelihoods of further educational attainment beyond high school explain schooling type differences. Model 6 introduces a measure of cohabitation, which is strongly associated with several of the family formation outcomes we are analyzing. To the extent that secondary schooling type leads to differential rates of cohabitation, we might expect that this partially accounts for the effect of school type. Lastly, we include two measures of gender attitudes that we expect to be associated with family formation behavior and that could potentially be part of an indirect pathway to family formation from schooling type.

In Table 4, we examine interaction effects between schooling type and the age and age-squared variables to determine how the effect of schooling type may vary across ages 24–39. These models represent our best attempt at eliminating spurious influences and estimating the unique age-graded pattern of family formation for each schooling type. We graph these findings in Figs. 3 and 4 in order to help interpret the interaction models in Table 4.

All analyses are weighted to match the characteristics of the national population of 24–39-year-olds.

Results

Figure 1 presents the cumulative proportion married between the ages of 16 and 39, broken out by secondary schooling type.[12] Although adolescent marriage is rare, homeschool adolescents appear slightly more likely to be married at this early age than adolescents from other school types. Overall, though, homeschool graduates are actually most similar to public school graduates. By their early twenties it is also apparent that graduates of both Catholic and nonreligious private schools are *less* likely to be married than graduates of other schools. By around age 23 we also notice another trend: evangelical Protestant school graduates become more likely to be married compared to other groups. They maintain a higher cumulative proportion all the way until age 39, although the gap between these graduates and others is greatest during their late twenties. Lastly, we notice that both Catholic and private nonreligious school graduates, who were less likely to be married in their early twenties, surpass public and homeschool graduates in the total proportion married by their late twenties. When we consider the ages at which 50 percent of graduates from these schools are married, which serves as a reasonable measure of central tendency for this type of analysis, the starkest difference is between evangelical school graduates and all others—half of these graduates are married by age 24, compared to age 26 for homeschool graduates, age 27 for public and Catholic school graduates, and age 28 for nonreligious private school graduates.

Figure 2 presents the life table results for age at first birth. Once again, the group most similar to public school graduates is, somewhat surprisingly, homeschool graduates. Examining Fig. 2, it is clear that both are more likely than other graduates to have children during adolescence and their early twenties, and both follow a similar trajectory all the way until the end of the graph. While the other three groups remain at the bottom of the figure during their teens and early twenties, by around age 24 evangelical Protestants clearly break away and are increasingly more likely to have a child. By age 29 evangelical Protestant graduates are substantially more likely than all other school graduates to have had their first child. Catholic and nonreligious private school graduates catch up to homeschool and public school graduates by their early thirties and surpass them by their mid- to late

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[12] We do not include "other religious" in these figures because there are too few cases ($N = 23$) and because the category itself does not represent a distinctive schooling type.
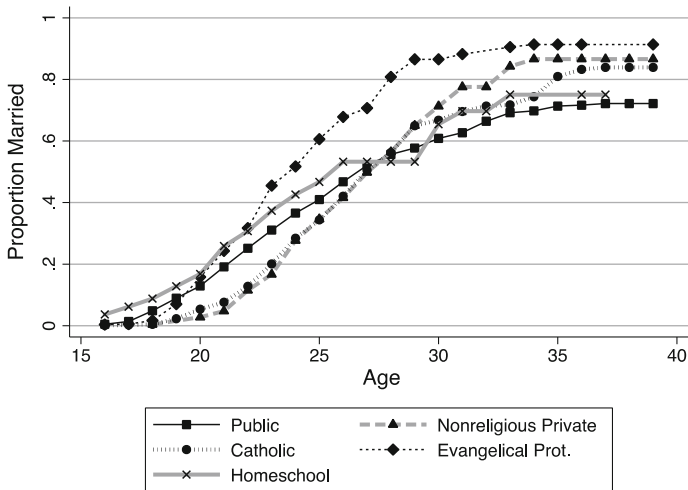
Fig. 1 Cumulative proportion married by secondary schooling type, weighted. *Source* Cardus Education Survey, 2011

30s.[13] The ages at which half of graduates have a child is most clearly divergent for Catholic and nonreligious private school graduates, who do not reach this mark until age 32. Graduates of other types of schools are fairly similar, with half of evangelical school graduates having children by age 28 and half of public school and homeschool graduates having children by age 29.

In order to see whether these effects can be accounted for by other background characteristics or subsequent life course events, we ran multivariate event history analysis models. Table 2 presents odds ratios from the results of several models predicting the "risk" of marriage during a given person-year. Model 1 includes only the schooling type and age (and age-squared variables).[14] Only evangelical Protestant schoolers in Model 1 stand out from public schoolers. Evangelical Protestant schoolers have about 87 percent higher odds of marrying in a person-year than do public schoolers. Model 2 includes indicators for secondary schooling type (public school as the reference category) along with controls for age, age squared, race/ethnicity, region of residence, parents' educational attainment, and family structure during high school. While all school types are associated with higher risks of marriage compared to public school graduates, only evangelical Protestant graduates are at a substantially higher (nearly two times as high), and statistically significant, risk of first marriage. If anything, the association seen in Model 1 is suppressed by these controls. Model 3 suggests that some of this effect is due to the higher religiosity of the respondent's parents growing up, namely their increased

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[13] The sudden increase between age 38 and 39 in cumulative proportion with first birth for Catholic school graduates is almost certainly a statistical anomaly because there are so few cases by this age.

[14] Including both age and age squared as control variables allows us to specify the additional influence of high school type beyond the general curvilinear pattern of first marriage associated with age for the entire high school graduate population.
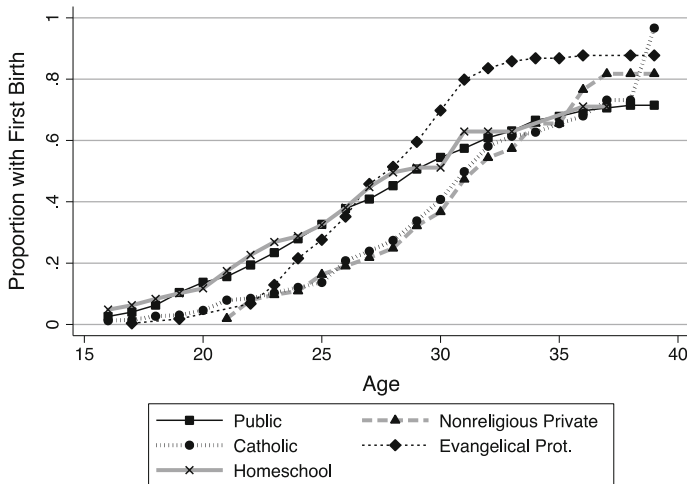
Fig. 2 Cumulative proportion with first birth by secondary schooling type, weighted. *Source* Cardus Education Survey, 2011

religious service attendance. Even after controlling for parent religious characteristics, however, evangelical Protestant graduates still have an estimated 82 percent higher odds of marriage in a given person-year. Thus, Model 3 suggests differences in marriage timing for evangelical students are not merely about selection into this schooling environment by their more religious parents.

Model 4 examines the first of four mediating factors, adolescent religiosity, that we expect to partially account for the indirect influence of school type. Accounting for the heightened religiosity of evangelical school graduates during adolescence diminishes the odds of marrying earlier to 71 percent higher than those for public school graduates. Still, the direct effect of evangelical schooling remains statistically and substantively significant. Model 5 adds the second mediating variable, educational attainment. This reduces the evangelical Protestant school effect slightly such that in Model 5 graduates of these schools have 65 percent higher odds of marrying in a given person-year. Including cohabitation history in Model 6 does not explain any of the evangelical school difference. Finally, Model 7 shows only a slight reduction in the odds of evangelical Protestants marrying vis-à-vis public schoolers. Even after considering gender role attitudes, evangelical Protestant school graduates have 58 percent higher odds of marrying earlier. None of the other school types differ greatly from Model 1 in this final model, and none are statistically different from public school graduates.

We repeat the same modeling strategy for predicting odds of first birth in Table 3. Consistent with Fig. 2, private nonreligious and Catholic school graduates are at lower risk of first birth in Model 1 compared to public school graduates. Neither evangelical Protestant schoolers nor home schoolers differ significantly from public schoolers in timing of first birth in Model 1. Once controls are added in Model 2, the effect of private, nonreligious schooling is no longer significant and the

Table 2 Odds ratios from event history analysis predicting timing of first marriage among high school graduates age 24–39, weighted

	(1)[a]	(2)[a]	(3)[a]	(4)[a]	(5)[a]	(6)[a]	(7)[a]
Secondary school type[b]							
Private nonreligious	1.023	1.229	1.272	1.292	1.246	1.267	1.212
Catholic	0.974	1.011	0.986	0.943	0.913	0.909	0.892
Evangelical Protestant	1.874***	1.984***	1.822***	1.710**	1.645**	1.662**	1.579*
Homeschool	1.167	1.206	1.119	1.112	1.145	1.177	1.122
Other religious	1.018	1.079	1.144	1.119	1.166	1.165	1.089
Age	3.093***	3.162***	3.186***	3.183***	3.180***	3.176***	3.183***
Age squared	0.979***	0.979***	0.979***	0.979***	0.979***	0.979***	0.979***
Adolescent religious environment							
Parent church attendance			1.064*	1.045	1.040	1.042	1.041
Freq. of religious talk in home			1.015	0.993	1.005	1.005	1.005
Religious tradition of parent[c]							
Mainline Protestant			1.143	1.147	1.132	1.136	1.175
Catholic/Orthodox			1.213	1.237	1.204	1.193	1.242
LDS			2.608***	2.389**	2.232*	2.295*	2.069*
Other Christian (not Catholic)			1.329	1.343	1.338	1.348	1.428†
Other religion (not Christian)			1.618†	1.706†	1.615	1.633†	1.700†
Spiritual but not religious			1.460	1.542	1.480	1.493	1.606
No religion			1.253	1.316	1.250	1.253	1.332
Importance of faith in HS				1.061	1.057	1.069	1.015
Church attendance in HS				1.027	1.022	1.022	1.022
Educational Attainment[d]							
Some college, no degree					1.152	1.146	1.195
Associate's degree					0.977	0.985	0.983

Table 2 continued

	(1)	(2)[a]	(3)[a]	(4)[a]	(5)[a]	(6)[a]	(7)[a]
Bachelor's degree					1.295	1.303	1.380†
Master's degree					1.310	1.325	1.487*
Professional or doctorate degree					1.090	1.095	1.158
Ever cohabited						1.118	1.195†
Gender Roles in Marriage							
Man should be breadwinner							1.171***
Man should make final decisions							0.983
Person-years	16,339	16,339	16,339	16,339	16,339	16,339	16,339
N	1,466	1,466	1,466	1,466	1,466	1,466	1,466
Pseudo R^2	0.06	0.07	0.08	0.08	0.08	0.08	0.09

† $p < 0.10$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

[a] Controls for race/ethnicity, age at time of interview (period effect), region, parents' education, and family structure during high school are not shown

[b] Reference category is public

[c] Reference category is evangelical protestant

[d] Reference category is high school degree

Catholic schooling effect is reduced to marginal significance. There is also a suppression effect in Model 2, such that evangelical Protestant school graduates are an estimated 41 percent more "at risk" for having a child than public school graduates once demographics are controlled, and this difference is statistically significant at the $p < 0.05$ level. Homeschool graduates are similar to public school graduates throughout all of the models, and "other religious" school graduates are less likely to have a child, although there are too few in this category to provide much confidence in this effect. Additional models do little to mediate these differences. The marginally significant difference between Catholic school graduates and public school graduates is no longer statistically significant once adolescent religiosity is accounted for in Model 4. The difference between evangelical Protestant school graduates and their public school counterparts remains across models, and the only factors that reduces the size of the difference are parental religious characteristics and gender role attitudes, but even these reductions are very slight. Our hypothesized mediating influences do not help us account for the evangelical Protestant school difference.

Tables 2 and 3 present results that examine the risk of family formation events by schooling type, controlling for the overall age-graded pattern of family. However, we recognize that the influence of schooling type is likely not constant across age (especially given the results in Figs. 1, 2), and different schooling experiences may result in unique age-graded patterns of family formation. To model this, we run interactions of schooling type by age and age-squared. The results from these models are presented in Table 4. Both models include all independent variables from Model 3 in Tables 2 and 3 (but are not shown to conserve space). The age variable is centered at age 25 to make the coefficients for schooling type more meaningful to interpret. Models including all independent variables in Model 7 do not differ meaningfully from those presented here, again suggesting that our mediators do not explain much of the effect of schooling on the timing of first marriage and birth.

The non-interacted school type coefficients in Model 1 show the differences in the probability of getting married at age 25 for young adults who attended each secondary schooling type. The age and age-squared coefficients represent the curvilinear pattern of age at first marriage for those who attended public school. The interaction effects in this model tell us that evangelical Protestant school graduates are the only group that we can confidently say is different in both the linear and quadratic effects of age on marriage from the pattern for public school graduates. Both Catholic and private nonreligious school graduates have a marginally significant ($p < 0.10$) difference from public school graduates in the linear effect of age. Because interaction effects with both linear and quadratic effects can be difficult to interpret on their own, we include plotted predicted probabilities from these interactions, holding all other variables apart from schooling type and age at their mean. This is presented in Fig. 3 (graduates of "other religious" schools are not shown due to their small sample size).

It is clear from this graph that the increased probability of marriage for graduates from both evangelical and nonreligious schools is restricted to a certain age range, although this range peaks approximately two years earlier for

evangelical school graduates than nonreligious private school graduates. The peak, approximately at age 27 for evangelical school graduates, is similar to the peak for public and homeschooled young adults, but the probability of actually getting married at this peak is considerably higher for evangelical school graduates. Indeed, according to ancillary analyses (not shown),[15] evangelical schoolers are statistically significantly more likely than public schoolers to marry at ages 21–30. The peak in the probability of marriage for nonreligious private and Catholic school graduates is similar (approximately age 29), but the former have a higher probability of marriage at this peak age than the latter. Nonreligious private schoolers are significantly more likely to marry than public schoolers at ages 25–34, and Catholic schoolers are more likely than public schoolers to marry at ages 26–33. Notably, nonreligious private schoolers are less likely than public schoolers to marry at ages 16–21, and Catholic schoolers are less likely than public schoolers to marry at ages 16–22. Lastly, we note that young adults who were homeschooled and young adults who attended public school have remarkably similar predicted marriage trajectories.

Model 2 of Table 4 repeats the same procedure for timing of first birth. In this case, it is clear that those who attended evangelical Protestant secondary schooling are distinctively (and significantly) different in both the linear and quadratic influence of age compared to public school graduates. We cannot be statistically confident that those who attended other schooling types have different age *trajectories* for the timing of first birth (with the exception of a marginally significant linear age effect for "other religious" schooling). Once again, we graphically depict these results in Fig. 4, holding variables not shown at their mean. Evangelical Protestant school graduates are clearly distinct from the other young adults in their timing of first birth. This group peaks at approximately age 30 where they are substantially more likely to have a child compared to other graduates. Evangelical schoolers are significantly more likely than public schoolers to have a first birth not just at age 30, but at ages 25–34. However, in their teens and early twenties (ages 16–21) they are less likely to reporting having a child compared to graduates of public schools. Nonreligious private school graduates and Catholic school graduates have similar fertility timing: Nonreligious private schoolers are statistically less likely than public schoolers to have a first birth at ages 16–23, and Catholic schoolers are statistically less likely than public schoolers to have a first child at ages 16–25. Nonreligious private school graduates are more likely than public schoolers, however, to have a first child at ages 30–36. Catholic school graduates are more likely than public schoolers to have a first child at ages 31–39. Similar to the results of Fig. 3, the graduates that exhibit the most similar trajectory to public school graduates are, somewhat surprisingly, homeschooled young adults.

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[15] The statistical significance of the differences in Figs. 3 and 4 discussed here and below are based on results from separate regression models centering age at each value from 16–39 and looking at the *p* value of the non-interacted school type coefficients.

Table 3 Odds ratios from event history analysis predicting timing of first birth among high school graduates age 24–39, weighted

	(1)	(2)[a]	(3)[a]	(4)[a]	(5)[a]	(6)[a]	(7)[a]
Secondary school Type[b]							
Private nonreligious	0.663*	0.809	0.837	0.833	0.901	0.925	0.877
Catholic	0.715**	0.780†	0.772†	0.809	0.869	0.863	0.851
Evangelical Protestant	1.305	1.406*	1.404†	1.462*	1.588*	1.614*	1.562*
Homeschool	1.056	1.190	1.231	1.205	1.168	1.211	1.183
Other religious	0.516†	0.535	0.529	0.524	0.493	0.481†	0.502
Age	1.602***	1.642***	1.643***	1.647***	1.671***	1.679***	1.673***
Age squared	0.993***	0.992***	0.992***	0.992***	0.992***	0.992***	0.992***
Adolescent religious environment							
Parent church attendance			0.991	1.015	1.023	1.025	1.022
Freq. of religious talk in home			1.031	1.035	1.020	1.020	1.019
Religious tradition of parent[c]							
Mainline Protestant			0.794	0.787	0.763	0.758	0.788
Catholic/Orthodox			0.936	0.909	0.887	0.872	0.952
LDS			1.786†	1.787†	1.810†	1.868*	1.950*
Other Christian (not Catholic)			0.830	0.834	0.784	0.788	0.842
Other religion (not Christian)			0.959	0.882	0.880	0.892	0.964
Spiritual but not religious			0.593	0.583	0.584	0.567	0.673
No religion			0.618†	0.598†	0.602†	0.601†	0.651
Importance of faith in HS				1.031	1.033	1.056	1.007
Church attendance in HS				0.946	0.949	0.948	0.945
Educational attainment[d]							
Some college, no degree					1.179	1.160	1.197
Associate's degree					0.837	0.851	0.862

Table 3 continued

	(1)	(2)[a]	(3)[a]	(4)[a]	(5)[a]	(6)[a]	(7)[a]
Bachelor's degree					$0.717^{\dagger}$	$0.723^{\dagger}$	0.756
Master's degree					0.744	0.756	0.859
Professional or doctorate degree					$0.581^{\dagger}$	$0.582^{\dagger}$	0.630
Ever cohabited						$1.219^{\dagger}$	1.323*
Gender Roles in marriage							
Man should be breadwinner							1.139***
Man should make final decisions							1.032
Person-years	18.781	18.781	18.781	18.781	18.781	18.781	18.781
N	1,454	1,454	1,454	1,454	1,454	1,454	1,454
Pseudo R^2	0.04	0.06	0.06	0.06	0.07	0.07	0.08

$\dagger$ $p < 0.10$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

[a] Controls for race/ethnicity, age at time of interview (period effect), region, parents' education, and family structure during high school are not shown

[b] Reference category is public

[c] Reference category is evangelical Protestant

[d] Reference category is high school degree

Table 4 Interaction effects (odds ratios) for high school type by age and age squared from event history analysis predicting timing of first marriage (model 1) and timing of first birth (model 2) among high school graduates age 24–39[a], weighted

	(1) Marriage	(2) Birth
Secondary school type[b]		
Private nonreligious	1.585*	0.801
Catholic	1.184	0.666*
Evangelical Protestant	2.470***	1.802**
Homeschool	0.873	1.068
Other religious	1.345	0.356*
Age (centered at 25)	2.838***	1.630***
Age squared (centered at 25 squared)	0.980***	0.992***
Secondary School Type[b] × Age (centered at 25)		
Private nonreligious × age	2.194[†]	1.565
Catholic × age	1.680[†]	1.002
Evangelical × age	2.034*	3.916***
Homeschool × age	0.645	0.788
Other religious × age	1.757	0.474[†]
Secondary School Type[b] × Age Squared (centered at 25 squared)		
Private nonreligious × age squared	0.988	0.994
Catholic × age squared	0.992	1.002
Evangelical × age squared	0.987[†]	0.978**
Homeschool × age squared	1.008	1.005
Other religious × age squared	0.988	1.013
Person-years	16,339	18,781
N	1,466	1,454
Pseudo R^2	0.09	0.08

Source Cardus Education Survey, 2011

[†] $p < 0.10$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

[a] Controls for race/ethnicity, age at interview (period effect), region, parents' education, family structure during high school, parents' church attendance, frequency of religious talk in the home, and the religious affiliation of the parent are not shown

[b] Reference category is public

Ancillary Analyses

Our analysis of the timing of first birth does not differentiate between marital and premarital births. The context of births matters for both child and maternal well-being. Children born into single-parent homes are at increased risk of poorer school achievement, poorer social and emotional development, and poorer health (Waldfogel et al. 2010). Single mothers are at higher risk of depression than married mothers (Nomaguchi and Milkie 2003; Evenson and Simon 2005). We performed separate analyses (results not shown) examining the odds of both marital and premarital births. In these analyses, we found divergent effects of evangelical
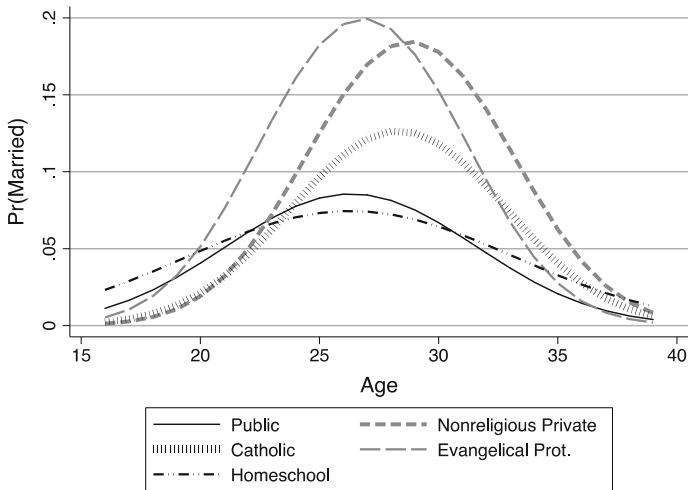
Fig. 3 Plotted predicted probabilities from interaction effects in Model 1 Table 4, weighted[a]. *Source* Cardus Education Survey, 2011. [a]All independent variables from Model 3 of Table 2 are controlled for and held at their mean (with the exception of age and school type which are allowed to vary)

Protestant schooling depending on the context. We found strong, positive, and statistically significant effects of evangelical schooling on timing of first marital birth (ranging from an odds ratio of 2.058 in Model 2 to 1.754 in Model 7). In other words, evangelical Protestant school graduates were much more likely to have an earlier first marital birth. On the other hand, we found strong negative (but not statistically significant) effects of evangelical schooling on the odds of a premarital first birth (treating marriage as a competing risk). We also found interesting differences for Catholic school graduates. Whereas the odds of marital first births are similar for Catholic school and public school graduates on average, Catholic school graduates have much lower odds of having a premarital birth (with statistically significant odds ratios of 0.341 in Model 2 and 0.526 in Model 7). Thus, the effects on birth timing for evangelical school graduates in Table 3 are driven by strong positive effects on marital birth timing being somewhat muted by negative effects on premarital birth timing. For Catholic school graduates, the lower odds of first birth in Table 3 stem from their avoidance of premarital births—not differences in marital birth timing. Moreover, a model predicting timing at first birth including a dummy variable for being married in the person-year reduces the evangelical schooling effect to nonsignificance, suggesting earlier marriage is responsible for evangelical school graduates' earlier births.[16] These findings also make sense in light of our models that examine differences in the effect of schooling type across different ages (with evangelical and Catholic schoolers being less likely to have

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[16] Some of this might be attributable to a heightened proclivity of evangelical school graduates to "legitimize" births through marriage, but previous research has not found a link between religious conservatism and "shotgun" marriages (Manning 1993), so we suspect this is not the primary mechanisms at work here.
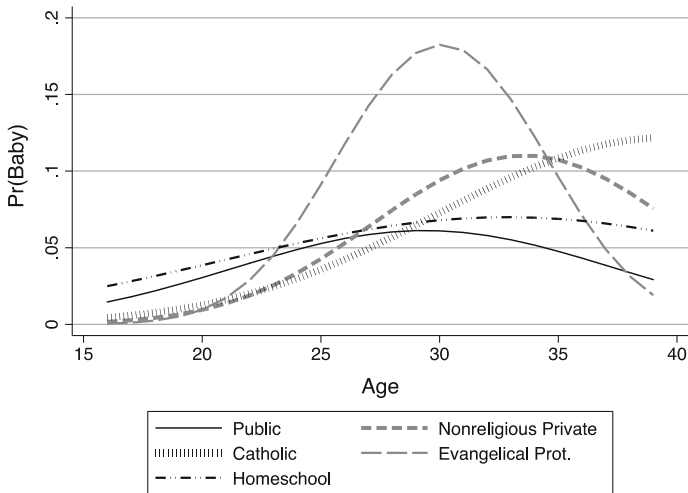
Fig. 4 Plotted predicted probabilities from interaction effects in Model 2 Table 4, weighted[a]. *Source* Cardus Education Survey, 2011. [a]All independent variables from Model 3 of Table 3 are controlled for and held at their mean (with the exception of age and school type which are allowed to vary)

teenage births or births in the early 20s but more likely to have births later in the life course).

We also ran models interacting gender with schooling type in order to test for gender differences in these effects. No consistent differences were observed. Additionally, models excluding African Americans—to ensure the racial composition of schools is not driving their effect—yielded substantively similar findings to the models presented here. If anything, the effects of evangelical schooling are larger in models excluding African Americans. For example, in Model 1 of Table 3 (predicting odds of first birth), the evangelical Protestant schooling effect (an odds ratio of 1.309) was marginally significant when African Americans were excluded. Thus, we are confident race is not driving the findings presented in our main analyses.

Finally, not all homeschoolers are homeschooled for purposes of religious socialization. Although we do not know the reasons motivating their homeschooling, we did conduct analyses restricting the homeschoolers to those whose parents attended religious services weekly or more. These homeschoolers do appear to marry earlier than public school graduates in the first two models, but the difference is explained away by their parents' religiosity. There are no differences between these homeschoolers and public school graduates in terms of the timing of their first birth.

Discussion

Religious schools and religious homeschooling environments serve as socialization agents for religious institutions and parents. We examined the extent to which these

schooling environments influence the timing of family formation among their graduates. Drawing on the religion and marriage and religion and fertility literatures, we developed several hypotheses about the relationship between different schooling types and the timing of family formation. We predicted, given the positive relationship between religiosity and earlier family formation, that those who attended religious schools and those who were homeschooled would be more likely to marry and have children at younger ages (H1a–b). We also predicted that this would be partially spurious, owing to heightened parental religiosity (H2a–b), but also that these effects would be mediated by adolescent religiosity (H3a–b), educational attainment (H4a–b), cohabitation history (H5a–b), and gender role attitudes (H6a–b). Our results provide support for some of these hypotheses, but not others.

Evangelical Protestant school graduates are indeed more likely to marry earlier and to have children earlier in the life course, which accords with H1a and H1b. Part of the effect of evangelical schooling on early marriage is spurious, owing to the heightened religiosity of these graduates' parents, as H2a predicts, but this is not the case with timing of first birth (which does not support H2b). Similarly, there may be a slight mediating effect of adolescent religiosity and educational attainment on the evangelical school and early marriage relationship, but not enough to claim any real support for H3a or H4a. Nor does cohabitation mediate the relationship at all (establishing no support for H5a). Gender role attitudes do reduce the evangelical schooling effect on marriage, but again, this mediation is only slight and should not be interpreted as solid evidence of H6a. With respect to timing of first births, none of the explanatory variables mediate the evangelical school effect, lending no support to H3b, H4b, H5b, or H6b (though gender role attitudes slightly diminishes the schooling effect in Model 6).

Evangelical school students, then, do exhibit distinct family formation patterns. They marry and have children earlier. Our life table analysis and interaction models reveal some nuance to this association. Evangelical school graduates are not typically marrying in their teen years. They do not surpass public school graduates in the proportion married until age 20, and the difference is not sizable until age 23. They do not surpass public schoolers in the proportion having a first birth until age 27. The difference appears to be that evangelical school graduates are much more likely to marry from about age 21 to age 30, and are much more likely to have a child in their mid-20s and early 30s. Given that teenage marriage is especially problematic for marital success (Glenn et al. 2010), evangelical school graduates may avoid some of the pitfalls associated with early marriage (and early childbearing). Instead, evangelical schools seem to foster a view of the normative life course that includes marriage in the 20s and childbearing in the late 20s and early 30s.

Unfortunately, we are less certain about how these schools attain this than we are about the fact that they do. The direct effects of evangelical schooling likely indicate that evangelical schools are effective socializing agents and are able to effectively transmit the values of the religious tradition to youth. These schools maintain a religious plausibility structure for which marriage and family are a more central aspect of life (Wellman and Keyes 2007). These schools likely promote

these values in "Bible" classes, mandatory chapel services, and the examples provided by faculty and staff. Evangelical school students likely internalize these values and have these values reinforced by their peers. Alternatively, these schools may serve as marriage markets where students are matched to religiously similar spouses. This explanation seems less plausible, however, given that the positive effects of marriage do not appear until age 21 (and not until age 25 for childbearing). Nevertheless, it could be that some of these early-20s-marriages are the result of romantic relationships begun in high school.

The story is somewhat different for Catholic school graduates. These students differ significantly from public schoolers in their marriage timing in different ways at different ages. They are less likely to marry as teenagers or in their early 20s, but are more likely to marry in their late 20s and early 30s. Thus, the findings for Catholic schoolers and marriage timing with respect to our hypotheses are somewhat mixed. Catholic schools do not foster early marriage, but they do foster marriage at later ages. In terms of the timing of first births, the findings for Catholic school graduates are also mixed. On average, Catholic school graduates are less likely to have earlier births, which contradicts H1b. The other hypotheses for Catholic schoolers and first birth receive little support here as well. But the average timing of first births masks what is happening: Catholic school graduates are less likely than public schoolers to have a first birth at ages 16–25, but more likely at ages 31–39. This suggests that for both marriage and fertility, Catholic schools—compared to public schools—foster fewer early births but more later births.

Interestingly, the marriage and fertility timing of graduates of Catholic schools are more similar to those of nonreligious private school graduates than to any other group. Some have argued that Catholic schools have become elite academies focused on academic excellence rather than on the religious education of Catholic youth (Baker and Riordan 1998). In terms of these family outcomes, that appears to be the case. Catholic school graduates have adapted the life course model of the upper socioeconomic classes; this is perhaps not surprising, given that Catholics as a group have ascended to the upper rungs of the SES ladder in the United States (Keister 2011). Catholics as a group tend to delay marriage and fertility (Eggebeen and Dew 2009; Pearce, 2010), so perhaps socialization in Catholic schools includes informal learning and absorption of norms about prioritizing career over family formation in one's 20s, which is normative in the United States. Catholic schools may also set students on a high educational trajectory that requires lengthy degree programs and delayed family formation. If Catholic schools are indeed filled with high-achieving, career-minded students (and faculty), the same socialization processes at work in evangelical schools may not hold in Catholic schools. Instead, immersion in these high-achieving contexts during adolescence seems to delay family formation—but it is a delay rather than a foregoing, as Figs. 1 and 2 show.

The results for homeschool graduates do not support H1a–b or H2a–b. They do not differ significantly from public schoolers on either outcome in the study at any age. It is of course beyond the scope of our data to understand what exactly is happening here, but clearly homeschooling does not have the same influence on family formation that evangelical schooling or Catholic schooling does. Whether this is a function of socialization—homeschoolers lacking the extrafamilial

reinforcement of values that religious schools provide—or selection—some unobserved characteristics of homeschoolers that make them less likely to marry than evangelical schoolers or Catholic schoolers—is impossible to say. The homeschool population remains an understudied group, and information about this growing group of people would be timely.

In general, our findings suggest that different types of religious schools produce different family formation outcomes among their graduates. Evangelical schools produce graduates who marry mostly in their 20s and bear children mostly late 20s and early 30s. Catholic schools produce graduates who marry and have children mostly in their late-20s and early-to-mid-30s. While we hypothesized that these schools would have similar effects on their students by fostering particularly pro-nuptial and pro-natalist attitudes, as well as higher religiosity and different attitudes about education, premarital sex, and gender roles, this was not the case. Evangelical schools make students "more" evangelical in their family formation—they marry and have children earlier (but not as teenagers), even after accounting for the religious tradition they were raised in. Catholic schools make students "more" Catholic in their family formation—they delay family formation, even holding constant the fact that they were raised by a Catholic parent. Thus, despite the pro-nuptial and pro-natalist attitudes of official Catholic teachings promoted by Catholic schools, Catholic schoolers reflect the norm for American Catholics more generally.

These findings contribute to our understanding of cultural effects on family formation timing, the literature of which is primarily focused on structural and economic explanations for these outcomes (e.g., Oppenheimer 1988). That religious schools, but not homeschooling, influences family formation speaks to the socialization power of schools during adolescence. One's social context during teenage years leads to different family formation patterns many years later. In terms of religious socialization, findings such as these suggest that religious schools—as well as parents, peer groups, and religious congregations—can be effective at transmitting religious values and religiously-motivated behaviors. Schooling environments in general should be given more attention in terms of considering life outcomes.

There are many questions that remain unanswered by this study. In particular, we were unable to demonstrate empirically the exact mechanisms through which evangelical and Catholic schools influence marriage timing. We have interpreted the direct effects in our models to be the result of attitudinal differences. Though this seems most plausible, there may be other explanations. For example, evangelical schools may channel students into evangelical colleges, which may function more like marriage markets than secular colleges, or evangelical schools may function as marriage markets themselves. These types of explanations will require further research, including qualitative studies that may shed more light on the mechanisms underlying these relationships.

We also have some data limitations. It would be ideal to have prospective data on these processes, but no other data set of which we are aware has ample numbers of religious school graduates to perform such an analysis. Nor does any other data set (such as the National Study of Youth and Religion) follow graduates through their 30s, an age by which most adults have formed families. We are also unable to

control for school-level characteristics. Factors like school size might explain some of the differences in socialization across school types. Moreover, different types of Catholic schools (e.g., diocesan, parish, religious order, independent) or evangelical schools (e.g., Lutheran Church-Missouri Synod, Reformed, non-denominational) may be more or less influential in family formation. We are also unable to restrict our data on first births to biological children. If there are systematic differences by school type in age of stepchildren or adopted children, these could bias our findings.

Despite these limitations, our findings suggest a strong association between evangelical schooling and early family formation and a modest association between Catholic schooling and delayed fertility. These findings speak to the enduring effects of adolescent social context on family formation many years hence. Religious schools can be effective institutions for transmitting religious values to youth.

References

Association of Christian Schools International. 2013. http://www.acsi.org/about-acsi/vision-and-mission. Accessed 31 May 2013.

Adamczyk, Amy. 2009. Understanding the effects of personal and school religiosity on the decision to abort a premarital pregnancy. *Journal of Health and Social Behavior* 50: 180–195.

Altonji, Joseph G., Todd E. Elder, and Christopher R. Taber. 2005. Selection on observed and unobserved variables: Assessing the effectiveness of Catholic schools. *Journal of Political Economy* 113: 151–184.

Arroyo, Julia, Krista K. Payne, and Wendy D. Manning. 2012. Crossover in median age at first marriage and first birth: Thirty years of change (FP-12-03). *National Center for Family & Marriage Research.* Retrieved from http://ncfmr.bgsu.edu/pdf/family_profiles/file107893.pdf.

Aud, Susan, Sidney Wilkinson-Flicker, Paul Kristapovich, Amy Rathbun Xiaolei Wang, and Jijun Zhang. 2013. *The condition of education 2013* (NCES2013-037). U.S. Department of Education, National Center for Education Statistics. Washington, DC. http://nces.ed.gov/pubsearch. Accessed 31 May 2013.

Baker, David, Mei Han, and Stephen P. Broughman. 1996. *How different, how similar? Comparing key organizational qualities of American public and private secondary schools.* NCES 96–322. Washington, D.C.: U.S. Department of Education.

Baker, David P., and Cornelius Riordan. 1998. The 'eliting' of the common American Catholic school and the national education crisis. *Phi Delta Kappan* (September): 16–23.

Bandura, Albert. 1977. *Social learning theory*. Englewood Cliffs: Prentice-Hall.

Barrett, Jennifer B., Jennifer Pearson, Chandra Muller, and Kenneth A. Frank. 2007. Adolescent religiosity and school contexts. *Social Science Quarterly* 88: 1024–1037.

Berger, Peter L. 1967. *The sacred canopy: Elements of a sociological theory of religion*. Garden City: Doubleday.

Brown, B.Bradford. 1990. Peer groups and peer culture. In *At the threshold: The developing adolescent*, ed. S.S. Feldman, and G.R. Elliott, 171–206. Cambridge: Harvard University Press.

Carlson, Daniel L. 2011. Explaining the curvilinear relationship between age at first birth and depression among women. *Social Science & Medicine* 72: 494–503.

Catechism of the Catholic Church. 2011. http://www.usccb.org/beliefs-and-teachings/what-we-believe/catechism/catechism-of-the-catholic-church/epub/index.cfm#. Accessed 31 May 2013.

Coleman, James S. 1961. *The adolescent society*. New York: Free Press.

Coleman, James S. 1988. Social capital in the creation of human capital. *The American Journal of Sociology* 94: S95–S120.

Cornwall, Marie. 1988. The influence of three agents of religious socialization: Family, church, and peers." In *The religion and family connection: Social science perspectives*, ed Darwin L. Thomas, 207–231. Religious Studies Center, Brigham Young University.

Darnell, Alfred, and Darren E. Sherkat. 1997. The impact of Protestant fundamentalism on educational attainment. *American Sociological Review* 62: 306–315.

Dupre, Matthew E., and Sarah O. Meadows. 2007. Disaggregating the effects of marital trajectories on health. *Journal of Family Issues* 28: 623–652.

Eggebeen, David, and Jeffrey Dew. 2009. The role of religion in adolescence for family formation in young adulthood. *Journal of Marriage and Family* 71: 108–121.

Elder Jr, Glen H. 1985. *Life course dynamics: Trajectories and transitions 1968–1980*. New York: Cornell University Press.

Erickson, Joseph A. 1992. Adolescent religious development and commitment: A structural equation model of the role of family, peer group, and educational influences. *Journal for the Scientific Study of Religion* 31: 131–152.

Evans, William N., and Robert M. Schwab. 1995. Finishing high school and starting college: Do Catholic schools make a difference? *The Quarterly Journal of Economics* 110: 941–974.

Evenson, Ranae J., and Robin W. Simon. 2005. Clarifying the relationship between parenthood and depression. *Journal of Health and Social Behavior* 46: 341–358.

Frejka, Tomas, and F. Westoff Charles. 2008. Religion, religiousness and fertility in the US and in Europe. *European Journal of Population* 24: 5–31.

Glass, Jennifer, and Jerry Jacobs. 2005. Childhood religious conservatism and adult attainment among black and white women. *Social Forces* 94: 555–579.

Glenn, Norval D., Jeremy E.Uecker, and W.B. Love Robert Jr. 2010. Later first marriage and marital success. *Social Science Research* 39: 787–800.

Goldscheider, Calvin. 1971. *Population, modernization, and social structure*. Boston: Little, Brown.

Goldstein, Joshua R., and Catherine T. Kenney. 2001. Marriage delayed or marriage forgone? New cohort forecasts of first marriage for U.S. women. *American Sociological Review* 66: 506–519.

Hackett, Conrad P. 2008. Religion and fertility in the United States: The influence of affiliation, region, and congregation. Ph.D. dissertation, Princeton University.

Hayford, Sarah R., and S.Philip Morgan. 2008. Religiosity and fertility in the United States: The role of fertility intentions. *Social Forces* 86: 1163–1188.

Heaton, Tim B. 2002. Factors contributing to increasing marital stability in the United States. *Journal of Family Issues* 23: 392–409.

Henretta, John C. 2007. Early childbearing, marital status, and women's health and mortality after age 50. *Journal of Health and Social Behavior* 48: 254–266.

Hill, Jonathan P., and Kevin R. den Dulk. 2013. Religion, volunteering, and educational setting: The effect of youth schooling type on civic engagement. *Journal for the Scientific Study of Religion* 52: 179–197.

Hofferth, Sandra L., Lori Reid, and Frank L. Mott. 2001. The effects of early childbearing on schooling over time. *Family Planning Perspectives* 33: 259–267.

Kelman, Herbert C. 2006. Interests, relationships, identities: Three central issues for individuals and groups in negotiating their social environment. *Annual Review of Psychology* 57: 1–26.

Kennedy, Sheela, and Larry Bumpass. 2008. Cohabitation and children's living arrangements: New estimates from the United States. *Demographic Research* 19: 1663–1692.

Keister, Lisa A. 2011. *Faith and money: How religion contributes to wealth and poverty*. New York: Cambridge University Press.

Keyser, Ariela, and Barry A. Kosmin. 1995. The impact of religious identification on differences in educational attainment among American women in 1990. *The Journal of Psychology and Christianity* 12: 312–328.

King, Pamela Ebstyne, and Ross A. Mueller. 2004. Parental influence on adolescent religiousness: Exploring the roles of spiritual modeling and spiritual capital. *Marriage and Family: A Christian Journal* 6: 413–425.

King, Pamela Ebstyne, James L. Furrow, and Natalie Roth. 2002. The influence of families and peers on adolescent religiousness. *Journal of Psychology and Christianity* 21: 109–120.

Lehrer, Evelyn L. 2000. Religion as a determinant of entry into cohabitation and marriage. In *The ties that bind: Perspectives on marriage and cohabitation*, ed. Linda J.Waite, Christine Bachrach, Michelle Hindin, Elizabeth Thomson, and Arland Thornton, 227–252. New York: Aldine de Gruyter.

Lehrer, Evelyn L. 2004. The role of religion in union formation: An economic perspective. *Population Research and Policy Review* 23: 161–185.

Longest, Kyle C., and Christian Smith. 2011. Conflicting or compatible: beliefs about religion and science among emerging adults in the United States. *Sociological Forum* 26: 846–869.

Loughran, David S., and Julie Zissimopoulos. 2009. Why wait? The effect of marriage and childbearing on the wages of men and women. *Journal of Human Resources* 44: 326–349.

Loury, Linda D. 2004. Does church attendance really increase schooling? *Journal for the Scientific Study of Religion* 43: 119–127.

MacGregor, Carol Ann. 2012. *School's out forever: The decline of Catholic education in the United States.* Ph.D. dissertation, Department of Sociology, Princeton University, Princeton, NJ.

Manning, Wendy. 1993. Marriage and cohabitation following premarital conception. *Journal of Marriage and the Family* 55: 839–850.

Martin, Steven P. 2004. Delayed marriage and childbearing: implications and measurement of diverging trends in family timing. In *Social inequality*, ed. Neckerman Kathryn, 79–119. New York: Russell Sage.

Martinez, Gladys, Casey E. Copen, and Joyce C. Abma. 2011. *Teenagers in the United States: Sexual activity, contraceptive use, and childbearing, 2006–2010 National Survey of Family Growth.* Vital Health Statistics: National Center for Health Statistics. 23.

McCarthy, James, and Jane Menken. 1979. Marriage, remarriage, marital disruption and age at first birth. *Family Planning Perspectives* 11: 21–30.

McQuillan, Kevin. 2004. When does religion influence fertility? *Population and Development Review* 30: 25–56.

Miller, Brent C., and Greer Litton Fox. 1987. Theories of adolescent heterosexual behavior. *Journal of Adolescent Research* 2: 269–282.

Moore, Kristen A., and Linda J. Waite. 1981. Marital dissolution, early motherhood, and early marriage. *Social Forces* 60: 20–40.

Mosher, William D., Linda B. Williams, and David P. Johnson. 1992. Religion and fertility in the United States: New patterns. *Demography* 29: 199–214.

Muller, Chandra, and Christopher G. Ellison. 2001. Religious involvement, social capital, and adolescents' academic progress: Evidence from the National Education Longitudinal Study of 1988. *Sociological Focus* 34: 155–183.

Nomaguchi, Kei M., and Melissa A. Milkie. 2003. Costs and rewards of children: The effects of becoming a parent on adults' lives. *Journal of Marriage and Family* 65: 356–374.

Oppenheimer, Valerie Kincade. 1988. A theory of marriage timing. *American Journal of Sociology* 94: 563–591.

Pearce, Lisa D. 2010. Religion and the timing of first births in the United States. In *Religion, families, and health: Population-based research in the United States*, ed. Christopher G.Ellison, and Robert A. Hummer, 19–39. New Brunswick: Rutgers University Press.

Pearce, Lisa D., and Arland Thornton. 2007. Religious identity and family ideologies in the transition to adulthood. *Journal of Marriage and Family* 69: 1227–1243.

Planty, Michael, William Hussar, Thomas Snyder, Grace Kena, Angelina KewalRamani, Jana Kemp, Kevin Bianco, and Rachel Dinkes. 2009. *The Condition of Education 2009* (NCES 2009-081). Washington, DC: National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education.

Pudrovska, Tetyana, and Deborah Carr. 2009. Age at first birth and fathers' subsequent health: Evidence from sibling and twin models. *American Journal of Men's Health* 3: 104–115.

Regnerus, Mark D. 2000. Shaping schooling success: Religious socialization and educational outcomes in metropolitan public schools. *Journal for the Scientific Study of Religion* 39: 363–370.

Regnerus, Mark D. 2007. *Forbidden fruit: Sex and religion in the lives of American teenagers.* New York: Oxford.

Regnerus, Mark D., Christian Smith, and Brad Smith. 2004. Social context in the development of adolescent religiosity. *Applied Developmental Science* 8: 27–38.

Rindfuss, Ronald R., and Craig St. John. 1983. Social determinants of age at first birth. *Journal of Marriage and the Family* 45: 553–565.

Rose, Susan D. 1988. *Keeping them out of the hands of Satan: Evangelical schooling in America.* New York: Routledge.

Sherkat, Darren E., and Alfred Darnell. 1999. The effect of parents' fundamentalism on children's educational attainment: Examining differences by gender and children's fundamentalism. *Journal for the Scientific Study of Religion* 38: 23–25.

Sikkink, David. 1999. The social sources of alienation from public schools. *Social Forces* 78: 51–86.

Smith, Christian. 2000. *Christian America? What evangelicals really want*. Berkeley: University of California Press.

Smith, Christian. 2003. Theorizing religious effects among American adolescents. *Journal for the Scientific Study of Religion* 42: 17–30.

Smith, Christian, and Melinda Lundquist Denton. 2005. *Soul searching: The religious and spiritual lives of American teenagers*. New York: Oxford University Press.

Steensland, Brian, Jerry Z. Park, Mark D. Regnerus, Lynn D. Robinson, W. Bradford Wilcox, and Robert D. Woodberry. 2000. The measure of American religion: Toward improving the state of the art. *Social Forces* 79: 291–318.

Teachman, Jay D., Karen A. Polonko, and John Scanzoni. 1986. Family demography: Recent trends and developments in the field. In *Handbook of marriage and the family*, ed. Marvine D. Sussman, and Suzanne K. Steinmetz, 3–36. New York: Plenum Press.

Thornton, Arland, William G. Axinn, and Yu Xie. 2007. *Marriage and cohabitation*. Chicago: University of Chicago.

Uecker, Jeremy E. 2008. Alternative schooling strategies and the religious lives of American adolescents. *Journal for the Scientific Study of Religion* 47: 563–584.

Uecker, Jeremy E. 2009. Catholic schooling, Protestant schooling, and religious commitment in young adulthood. *Journal for the Scientific Study of Religion* 48: 353–367.

Uecker, Jeremy E., and Charles E. Stokes. 2008. Early marriage in the United States. *Journal of Marriage and Family* 70: 835–846.

United States Census Bureau. 2011. Estimated median age at first marriage, by sex: 1890 to the present. http://www.census.gov/population/socdemo/hh-fam/ms2.xls. Accessed online 2 Jan 2013.

United States Conference of Catholic Bishops. 2005. *Renewing our commitment to Catholic elementary and secondary schools in the third millennium*. http://old.usccb.org/bishops/schools.pdf. Accessed online 15 Nov 2013.

Vaidyanathan, Brandon. 2011. Religious resources or differential returns? Early religious socialization and declining attendance in emerging adulthood. *Journal for the Scientific Study of Religion* 50: 366–387.

Waldfogel, Jane, Terry-Ann Craigie, and Jeanne Brooks-Gunn. 2010. Fragile families and child wellbeing. *The Future of Children* 20: 87–112.

Wellman, James K., and Matthew Keyes. 2007. Portable politics and durable religion: The moral worldview of American evangelical missionaries. *Sociology of Religion* 68: 383–406.

Wildeman, Christopher, and Christine Percheski. 2009. Associations of childhood religious attendance, family structure, and nonmarital fertility across cohorts. *Journal of Marriage and Family* 71: 1294–1308.

Xu, Xiaohe, Clark D. Hudspeth, and John P. Bartkowski. 2005. The timing of first marriage: Are there religious variations? *Journal of Family Issues* 26: 584–618.

Zhang, Li. 2008. Religious affiliation, religiosity, and male and female fertility. *Demographic Research* 18: 233–261.