



The role of religion in union formation: An economic perspective*

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Abstract. Previous research has shown that the faith in which a young woman is brought up has important effects on the subjective costs and/or benefits of many decisions that she makes over the life cycle, including schooling, employment, and fertility. Based on this evidence, the present paper develops hypotheses regarding patterns of entry into marriage and cohabitation for the main religious groups in the United States: mainline Protestants, conservative Protestants, Catholics, Mormons, Jews, and the unaffiliated. The empirical results, based on young women from the 1995 National Survey of Family Growth, are generally supportive of the hypotheses.

Keywords: Cohabitation, Marriage, Religion, Secularization thesis

1. Introduction

This study examines the role of religion in two dimensions of women's transition to first union: the timing of such transition and whether it takes the form of marriage or cohabitation. Previous research has shown that religious affiliation has important effects on economic and demographic behavior: it has an influence on educational attainment (Lehrer 1999a, 2003; Darnell & Sherkat 1997; Chiswick 1988), attitudes toward pre-marital sex (Sweet & Bumpass 1990), fertility (Lehrer 1996a, 1996b; Thornton 1979), female employment (Sherkat 2000; Lehrer 1995) and the prevalence of divorce (Teachman 2002; Lehrer & Chiswick 1993). Based on this evidence, the present paper develops hypotheses regarding patterns of entry into marriage and cohabitation for the main religious groups in the United States: mainline Protestants, conservative Protestants, Catholics, Mormons, Jews, and the unaffiliated.

Much of what we know about the effects of religion on marriage and cohabitation is based on unions formed prior to the mid 1980s (Lehrer 2000; Sander 1993; Thornton et al. 1992). The present study uses more recent data on young women from the 1995 National Survey of Family Growth. This

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survey provides an opportunity to analyze entry into union formation for the post baby-boom cohort, a generation that has displayed a much higher prevalence of cohabitation and a tendency to delay formal marriage (Brien & Sheran 2003). This is also a generation that grew up after the end of the era of high Catholic fertility (Goldscheider & Mosher 1991; Mosher et al. 1986; Jones & Westoff 1979). With these data, it is possible to ascertain whether or not the distinctive Catholic pattern of delayed entry into marriage has also disappeared.

Another attractive feature of the 1995 NSFG is that it includes information on frequency of attendance at religious services during the years of adolescence. Previous data sets, including the widely used 1987–88 National Survey of Families and Households, have generally measured religious participation only at the time of the interview, a variable that is endogenous to union formation behavior. The present paper takes advantage of the information on religious participation during the formative years to study how it affects the linkage between religious affiliation and entry into first union, a question that has received little attention in the literature to date.

This paper contributes to the ongoing debate regarding the overall importance of religion in society. The prevailing view until recently was that the process of modernization – with the accompanying increases in standards of living, the progress of science and technology, and universal education – should lead to a decline in the role of religion (e.g., Wilson 1976). A growing body of empirical research has challenged this secularization thesis: several studies document that the observed patterns of religious beliefs and practices are inconsistent with its predictions (Stark 1999; Greeley 1989, 1972). Rational choice theory has led to the formulation of an alternative thesis – the view that in the highly pluralistic religious market of the American society, the expected condition of religion is one of vitality and vibrancy rather than decline (e.g., Warner 1993; Finke & Stark 1992; Iannaccone 1991). The analyses reported in this paper provide insights as to whether religious affiliation and religiosity continue to play an important role in one aspect of young women's lives: their decisions regarding entry into cohabitation and marriage.

2. Analytical framework

The faith in which a young woman is raised is likely to affect the perceived costs and/or benefits of various decisions made over the life cycle. Religious beliefs may influence the subjective benefits of having a large number of children and staying home to take care of them; they may affect the psychic costs of sharing living arrangements with someone without the formality of a marriage contract; they may have an impact on the subjective costs of dissolving

a marriage; the perceived benefits and costs of pursuing additional schooling may also be affected. The analyses in this paper are based on the premise that members of the various religious groups make choices that are consistent with these differences in perceived benefits and costs. These responses, in turn, lead to various channels of causality from religious affiliation to patterns of union formation. Each of these mechanisms is explored below, using mainline Protestants as the reference group in all comparisons.

The focus of the analysis is on the linkage between religious affiliation and (a) the timing of the first legal marriage and (b) the likelihood that the first union will take the form of cohabitation rather than formal marriage. The main difference between the two is the level of commitment that is involved: marriage is widely announced to all relatives and friends, the ceremony usually includes a statement along the lines of 'until death do us part', and a legal document is signed, which makes dissolution of the union more costly (Willis & Michael 1994).

2.1. *Fertility*

Some religions provide psychic and social rewards in the form of approval, social status, and blessings to those who have many children. As Stark and Finke (2000) have noted, the high fertility that Mormons have consistently displayed in the United States (Lehrer 1996b; Heaton 1986; Thornton 1979) can be interpreted as a rational response to such incentives. Similarly, the Catholic religion embodies strong pro-natalist ideologies, which until the 1970s had also been manifested in a distinctive pattern of very high fertility. More recently, adherence to the teachings of the Catholic church in this area has weakened markedly, with a corresponding decline in family size (Goldscheider & Mosher 1991; Mosher et al. 1986). Some aspects of conservative Protestant ideologies are also pronatalist, and the fertility of this group has been found to exceed that of mainline Protestants, but only by a small margin (Lehrer 1996b; Marcum 1981). At the other end of the continuum, Jews in the United States have consistently displayed unusually low fertility (Mosher & Hendershot 1984; Della Pergolla 1980; Goldscheider 1967). It has been suggested that Jews have faced a higher price of having an extra child, and may have therefore chosen to substitute expenditures per child ('quality') for quantity (Chiswick 1988).

Individuals who report 'no religion' constitute a relatively small and heterogeneous group: it includes atheists, agnostics, and respondents who were raised without an affiliation due to other circumstances (e.g., being a child from an inter-faith marriage). Perhaps for this reason, results from earlier studies differ, some finding a pattern of low fertility for the unaffiliated

(Mosher et al. 1992), others reporting a family size similar to that of mainline Protestants (Lehrer 1996b).

The optimal timing of entry into first union and the form such union takes are intimately related to plans regarding family size. Women who expect to have a large number of children have an incentive to marry earlier; they also have an incentive to avoid the more fragile cohabiting arrangements, as a stable two-parent household is the optimal institutional arrangement for the raising of children (Willis & Haaga 1996; Weiss & Willis 1985). This reasoning implies that Mormon women should have a low probability of cohabitation and a pattern of early first marriage, and the opposite should hold for their Jewish counterparts.

2.2. *Educational attainment*

Studies on the linkage between religious affiliation and years of schooling among non-Hispanic whites show that educational attainment is highest for Jews, lowest for conservative Protestants, with Catholics and mainline Protestants at the center of the distribution (Lehrer 2003, 1999a; see also Sherkat & Darnell 1999; Darnell & Sherkat 1997; Chiswick 1993, 1988). Recent research has interpreted these differentials within a human capital framework: religious affiliation is viewed as reflecting distinctive features of the home environment that affect both the returns and costs of additional investments in education (Lehrer 1999a; Chiswick 1988). Less is known about the relative schooling levels of Mormons. Analyses based on a sample of women suggest that their attainment is around the center of the educational distribution (Keysar & Kosmin 1995).

It is often difficult to combine the roles of student and spouse (Thornton et al. 1995), and women who pursue more advanced schooling levels generally delay their entry into marriage (Michael & Tuma 1985). Religious groups that promote high levels of investment in secular human capital thus also encourage, indirectly, a late transition to marriage. This channel of causality implies that Jews would delay entry into marriage, while conservative Protestants would tend to marry early.

At the same time, a high level of schooling does not necessarily imply late entry into an informal partnership. As Chiswick (1998) notes, adult characteristics that are important in the marriage market may not be fully revealed (to oneself or a potential spouse) until after entry to the labor force and acceptance of financial responsibility. Furthermore, high-level careers often involve an initial period of uncertainty that encourages young people to avoid the stronger commitment of a legal union (Oppenheimer 1988). If so, the prevalence of cohabitation should be relatively high among Jewish women and relatively low among conservative Protestant women.

2.3. *Potential male earnings*

In their analysis of union formation, Willis and Michael (1994) find that the better the economic prospects of the male partner at the time of the formation of the union, the more likely it is that the partnership will take the form of marriage rather than cohabitation. They interpret this result as consistent with the view that as the level of male earnings rise, the gains from the partnership increase, implying stronger incentives to choose the arrangement that involves more commitment, i.e., legal marriage. A complementary interpretation is suggested in the sociological literature: it is still culturally required in our society that prior to entering a formal union, the male partner should have the ability to provide steady earnings, and in the absence of such ability, cohabitation provides the closest substitute arrangement (Cherlin 2000).

Little research has been done regarding the earnings of men with various religious affiliations. Mirroring the patterns found for educational attainment, unusually high earnings have been reported for Jews (Chiswick 1993, 1988, 1983), and there is also some evidence that earnings are relatively low for conservative Protestants (Keister 2001). Previous research has also noted that religion is a trait for which there is positive assortative mating in the marriage market, although for many religious groups the tendency for religious homogamy has weakened over time (Kalmijn 1998; Lehrer 1998). This channel of causality predicts that cohabitation should be least likely for Jews and most likely for conservative Protestants.

2.4. *Female employment*

The Mormon and conservative Protestant faiths make a sharp distinction between male and female roles, encouraging the traditional division of labor within the household. Consistent with the view that such religions provide institutionalized moral support and psychic rewards to mothers who stay home with their children, previous research documents a lower level of female employment among members of these faiths when young children are present (Sherkat 2000; Lehrer 1995, 1999b; Chadwick & Garrett 1995; Heaton & Cornwall 1989). At the other end of the spectrum, although Jewish women are known to be very responsive in their labor supply to the presence of young children (Chiswick 1986), their overall commitment to labor market activities is stronger than that of women of other affiliations (Hartman & Hartman 1996).

With regard to Catholics, early studies found that they made a sharp distinction between appropriate male and female roles (McMurry 1978; Meir 1972). More recent analyses, however, suggest that Catholics have become more egalitarian (Brinkerhoff & MacKie 1984), and indeed somewhat less

traditional in this regard than either group of Protestants (Brinkerhoff & MacKie 1985). The direction of this change mirrors transformations that have taken place in the behavior of Catholics in issues related to childrearing (Alwin 1984), and is also consistent with evidence on patterns of labor supply by religion. Data on married women with a child under age 6 from the 1987–88 National Survey of Family Growth show that the probability of being out of the labor force is lowest for Catholics (0.36) and highest for conservative Protestants (0.55), with mainline Protestants in between (0.43) (Lehrer 1995).

Young women who plan to orient their efforts to home rather than labor market activities have incentives to form their unions early, and to do so via marriage rather than cohabitation, as the former provides greater economic security (Grossbard-Shechtman 1993). Willis and Michael (1994) find empirical support for the notion that women who are less involved in the labor market are indeed more likely to form marital rather than cohabiting unions. This line of reasoning predicts early marriage and a low probability of cohabitation for Mormon and conservative Protestant women, and the opposite pattern for their Jewish counterparts.

2.5. *Costs of divorce*

Since religions are generally family oriented, affiliation with any faith would increase the costs of marital dissolution. This effect should be particularly pronounced in the case of Catholicism, as it prohibits divorce. Empirically, most studies find that Catholic marriages are less likely to end in dissolution than other unions (Teachman 2002; Sander 1993; Michael 1979; Christensen & Barber 1967), although there is some evidence that this religious differential may be disappearing (Lehrer & Chiswick 1993). The higher cost of making a mistake for Catholics implies a tendency to search longer for a spouse and predicts a later age at entry into marriage.

2.6. *Attitudes regarding premarital sex*

While most religions encourage marriage and place a high value on family life, often with proscriptions against pre-marital sex, conservative Protestants and Mormons are most traditional in this regard. The level of approval of cohabitation has been found to be lowest for these groups, and highest for Jews and the unaffiliated (Sweet & Bumpass 1990). These differences by religion in the subjective costs of living with a partner without the formality of a marriage contract predict corresponding differences in the probability that the first union would take the form of cohabitation.

2.7. *Summing up*

The various mechanisms outlined above suggest several hypotheses regarding differences by religion in patterns of entry into formal marriage. Women brought up as conservative Protestants and as Mormons are expected to marry early, because their faith encourages an orientation to home activities and also encourages very high fertility in the case of Mormons. The relatively low schooling level of conservative Protestants is another factor operating in the same direction. At the other extreme, Jewish women are expected to delay entry into marriage for several interrelated reasons: their high educational attainment, their low desired level of fertility, and their strong commitment to the labor market.

Analyses based on earlier cohorts provide empirical support for these predictions and suggest that the magnitudes of the effects are sizeable (Lehrer 2000; Sander 1993; Thornton et al. 1992). For the more recent post baby-boom cohort that is the focus of the present study, it is anticipated that the relationships outlined above will continue to prevail, although it is unclear a priori whether the magnitudes of the influences will remain large.

In the case of Catholics, however, the situation may have changed. Among earlier generations, the high cost of divorce for this group implied incentives for a longer period of marital search and a low probability of an early transition to marriage; at the same time, the pro-natalist norms of the Catholic theology, which encourage marriage, suggested a low likelihood of a late transition. Based on these countervailing influences, Michael and Tuma (1985) hypothesized that affiliation with the Catholic faith should have a non-linear impact, promoting an intermediate timing of marriage as opposed to one that is very early or very late. Empirical analyses for a cohort of women born in the decade after World War II confirmed such non-linearity (Lehrer 2000). For the post baby-boom cohort studied in this paper, the convergence of Catholic fertility to the mainline Protestant pattern suggests that the second of these effects no longer operates, implying that Catholics no longer avoid a very late entry to marriage. As to the first effect, it is unclear based on the evidence to date whether it is still relevant. Although the Catholic religion prohibits divorce, a recent study finds that Catholic individuals are dissolving their unions at the same rate as members of other religious groups (Lehrer & Chiswick 1993). To the extent that Catholics no longer perceive the costs of divorce as particularly high, there would be little reason to expect a continued pattern of delayed transition to first marriage.

Given that the behavior of Catholics has converged to the mainline Protestant pattern in virtually all other dimensions of family life, they are expected to follow roughly the same pattern of entry into cohabitation as mainline Protestants. A low probability of cohabitation is predicted for Mormons be-

cause of their conservative attitudes toward premarital sex, their high fertility, and the tendency of mothers to stay home with their young children. At the other extreme, the subjective costs of sharing living arrangements without a legal contract are relatively small for the unaffiliated, implying a high level of cohabitation.

Countervailing influences are present for the other religious groups. In the case of Jews, their liberal attitudes toward premarital sex, their low fertility, and their high levels of female education and employment, all combine to predict a high prevalence of informal unions. However, the elevated earnings of Jewish men imply the contrary and, a priori, the net effect is theoretically ambiguous. For the opposite reasons, the net impact is also ambiguous for conservative Protestants.

Empirically, an earlier analysis (which excluded individuals with no religious affiliation) found that cohabitation is least likely for Mormons and most likely for Jews (Lehrer 2000). Willis and Michael (1994) also report an unusually high rate of cohabitation for Jews.

2.8. *The role of religiosity*

The above discussion suggests that the doctrines of a particular religion influence union formation because they have an impact on the perceived costs and benefits of various decisions. The effects should therefore be stronger for those individuals who adhere more closely to the teachings of their faith. For example, the likelihood that a Mormon woman will have many children and stay home with them when they are young probably increases with commitment to the religion, implying a corresponding variation by religiosity in the effect of Mormonism on age at entry into marriage and on the likelihood of cohabitation.

Very little empirical research has been done to quantify these relationships. An important exception is the case of attitudes toward pre-marital sex, which have been found to vary considerably by religiosity. In their analyses of mainline Protestants, conservative Protestants, and Catholics, Petersen and Donnenwerth (1997) find that for each of these religious groups, individuals who attend church frequently have a much more traditional stance regarding the acceptability of sex outside of marriage, implying a higher subjective cost of cohabitation. For members of these faiths, the probability of entering an informal union should thus vary inversely with religiosity.

3. Methods

3.1. *Data and variables*

The empirical analysis uses data from Cycle 5 of the National Survey of Family Growth. The survey was conducted in 1995 by the Research Triangle Institute, under contract from the National Center for Health Statistics (see Kelly et al. 1997 for a description of the methodology). The questionnaires were addressed to a nationally representative sample of 10,847 civilian, non-institutionalized women ages 15–44 years of age of all marital statuses living in the US. The interviews included questions on socioeconomic and family background variables, as well as detailed cohabitation, marriage, and fertility histories.

The sample is restricted in three ways. First, patterns of union formation differ greatly by race and ethnicity (Brien 1998, Smock 2000); only non-Hispanic white respondents are included in the present analysis. Second, as noted in the Introduction, the focus of this paper is on the post baby-boom generation (women born after 1967). These respondents, ages 15–28 at the time of the survey, had not all experienced their first transition to a union, a factor taken into account by the Cox proportional hazards technique used in the empirical analysis. And third, the sample only includes individuals whose religion of upbringing is one of the six major religious groups in the US: Roman Catholic, mainline Protestant, conservative Protestant, Jewish, Mormon, and unaffiliated. The resulting sample size is $n = 2,169$.

The mainline Protestant group includes Episcopalians, Methodists, Presbyterians and Lutherans; the conservative Protestant category includes Baptists and other, smaller fundamentalist Protestant groups. The 1995 NSFG uses the same code for all Baptists, so it is not possible to make finer distinctions. In his research on the classification of Protestants into fundamentalist, moderate, and liberal groups, Smith (1987) distinguishes between seven different Baptist denominations, classifying six of them as fundamentalist and one as moderate.

This limitation of the data implies that the respondents classified in the present paper as conservative Protestant include a small number of non-fundamentalists, suggesting a bias toward zero in the coefficient on the conservative Protestant dummy variable. Thus the positive effect of membership in conservative Protestant denominations on the speed of entry into first marriage documented in the next section is more pronounced than indicated by the present estimates.

Previous research suggests that current religious affiliation and religiosity are determined simultaneously with education, fertility, and other economic and demographic variables (Lehrer 1998; Sander 1995; Waters et al. 1995).

The variables used in this analysis, namely, the faith in which the individual was raised and religious participation measured at age 14, are less affected by problems of endogeneity.

Table 1 provides definitions and means for the religion variables as well as for the factors used as controls in the empirical analysis. These include the parents' average years of schooling, whether the mother worked on a full-time basis during most of the respondent's childhood, the size of the family of origin, dummy variables for family structure at age 16, and region of residence at the time of birth. It would have been preferable to control for region during the late adolescent/young adult years; it would also have been desirable to control for the rural-urban nature of the place of residence, as there are pronounced differences by religion in this distribution. Unfortunately, this information is unavailable. To the extent that life in urban areas is conducive to later marriage, the present estimates may overstate the effect of affiliation with the Jewish and Catholic faiths in delaying marriage, as these groups are disproportionately represented in big cities and their suburbs; the coefficients of the other religion variables may likewise be affected by omitted variables biases.

3.2. *The statistical model*

The key variable in the Cox proportional hazards model is survival time, the interval until a certain event happens; in the present context, the time until union formation. The hazard function is expressed as follows:

$$h(t, z) = h_0(t) \exp(\beta'z)$$

where $h_0(t)$ is an unspecified time-dependent function, z is a vector of covariates, and β is a vector of unknown coefficients. The risk of union formation is thus allowed to vary with time and with the exogenous variables. When all the elements in z are 0, the hazard function equals $h_0(t)$. If β_k (the coefficient associated with explanatory variable z_k) is positive, an increase in z_k raises the value of the hazard function and therefore decreases survival time. A positive β_k thus implies that as z_k rises, the probability that union formation has taken place at each duration becomes higher. When the explanatory factor is specified as a 0–1 variable, a positive β_k means that when z_k takes the higher value, 1, the likelihood of union formation is greater.

The tables that follow report the estimated values of β , the corresponding t-statistics, and also the estimated value of $\exp(\beta)$. For continuous variables, the percentage change in the hazard associated with each unit change in the explanatory variable z_k (other covariates held constant), is equal to 100 ($\exp(\beta_k) - 1$). For dummy variables, the term $\exp(\beta)$ can be interpreted as

Table 1. Definitions and means of explanatory variables

Control variables		
Parents' education	= 1 if the average years of schooling completed by the respondent's (R) father (or father figure) and mother (or mother figure) is in category indicated ^a	
<12 years		0.21
12 years		0.26
(13–15 years – benchmark)		(0.34)
≥ 16 years		0.19
Mother worked full time		
	= 1 if R's mother (figure) worked full time during most of R's childhood (ages 5–15)	0.46
Non-intact family		
	= 1 if R did not live with both biological (or adoptive) parents at age 16 for the reason indicated:	
Death	death of one of the parents	0.05
Divorce or separation	parents' divorce or separation	0.33
Other	R never lived with both biological (or adoptive) parents	0.05
(Intact family of origin – benchmark)		(0.57)
Family size	number of children born to R's mother (or mother figure)	2.90
Residence at birth	R's region of residence at time of birth	
Northeast		0.19
(Midwest – benchmark)		(0.33)
West		0.18
South		0.28
Foreign		0.02

Table 1. Continued

Religion variables	
Catholic	0.29
Conservative Protestant	0.25
(<i>Mainline Protestant - benchmark</i>)	(0.29)
Mormon	0.04
Jewish	0.01
No religion	0.12
n	2169

^aIf the respondent was raised by some other 'mother figure', such as a step-mother or grandmother, the information for that individual was used, and the same was done in the case of the father. If educational attainment was missing for the father (figure) or the mother (figure), the value for the other person was used.

the ratio of the estimated hazard for those with a value of 1 to the estimated hazard for those with a value of 0 (controlling for other factors) (Teachman 1982; Allison 1997).

The survival function in the Cox model is

$$F(t, z) = (F_0(t))^{\exp(\beta'z)}$$

where

$$F_0(t) = \exp\left\{-\int_0^t h_0(u)du\right\}.$$

Evaluating the survival function at specified durations and values of the covariates permits an assessment of the absolute magnitudes of the various effects. Exposure to the risk of union formation is assumed to begin at age 13.

4. Empirical results

Following previous work by Thornton et al. (1992), four Cox proportional hazards models are estimated to study union formation. The first two panels of Table 2 present models of cohabitation and marriage, treating the other state as a competing risk. The marriage regression shown in the third panel ignores cohabitation; in this model those who first cohabited and then went on to formal marriage are included in the ranks of the married. The last model considers the hazard of union formation defined as either marriage or cohabitation, whichever happened first.

Table 3 shows predicted probabilities of early cohabitation and early marriage (by age 20) based, respectively, on the competing-risk models of panels 1 and 2 in Table 2. These estimates, obtained from the complement of the survival function evaluated at $t = 7$ for selected values of the covariates, illustrate the absolute magnitudes of the various influences.

4.1. Religion effects

Focusing first on the case of formal marriage, the results in panel 2 of Table 2 strongly confirm the hypotheses outlined in the previous section. Affiliation with the Catholic faith delays marriage ($t = -3.4$); the probability of having entered first marriage by age 20 is only 0.05 for Catholics, compared to 0.09 for mainline Protestants. The point estimate for a Jewish upbringing yields an even more pronounced effect: a probability of marriage by age 20 of only 0.02. However, the number of Jews in the sample is small ($n = 22$), and the coefficient attains significance only at the 15% level. In contrast, two

Table 2. The effects of religious upbringing on union formation: Cox proportional hazards models

	Panel 1 Cohabitation (marriage as competing risk)			Panel 2 Marriage (cohabitation as competing risk)			Panel 3 Marriage (ignoring cohabitation)			Panel 4 Total union formation		
	β	t	exp(β)	β	t	exp(β)	β	t	exp(β)	β	t	exp(β)
Control variables												
Average education												
<12 years	0.407	4.0**	1.5	0.379	2.7**	1.5	0.266	2.7**	1.3	0.394	4.7**	1.5
12 years	0.209	2.1**	1.2	0.142	1.0	1.2	0.147	1.5	1.2	0.188	2.3**	1.2
≥ 16 years	-0.491	-3.7**	0.6	-0.750	-3.8**	0.5	-0.767	-5.4**	0.5	-0.573	-5.3**	0.6
Mother worked full time	0.132	1.7*	1.1	-0.075	-0.7	0.9	-0.068	-0.9	0.9	0.068	1.0	1.1
Non-intact family												
Death	0.506	3.3**	1.7	0.169	0.7	1.2	0.172	1.0	1.2	0.402	3.1**	1.5
Divorce	0.587	6.9**	1.8	-0.235	-1.7*	0.8	0.176	2.1**	1.2	0.327	4.6**	1.4
Other	0.920	6.0**	2.5	0.411	1.7*	1.5	0.386	2.4**	1.5	0.741	5.7**	2.1
Family size	0.037	1.5	1.0	0.057	1.6*	1.1	0.052	2.2**	1.1	0.043	2.1**	1.0
Residence at birth												
Northeast	-0.285	-2.5**	0.8	-0.185	-1.0	0.8	-0.332	-2.6**	0.7	-0.257	-2.6**	0.8
South	-0.298	-2.7**	0.7	0.253	1.7*	1.3	0.093	0.9	1.1	-0.105	-1.2	0.9
West	-0.049	-0.4	0.9	0.326	1.9*	1.4	0.165	1.4	1.2	0.071	0.7	1.1
Foreign	0.218	0.9	1.2	0.093	0.2	1.1	0.280	1.2	1.3	0.172	0.9	1.2
Religion variables												
Catholic	-0.259	-2.5**	0.8	-0.588	-3.4**	0.6	-0.296	-2.7**	0.7	-0.343	-3.9**	0.7
Conservative Protestant	-0.054	-0.5	0.9	0.644	4.3**	1.9	0.431	4.0**	1.5	0.221	2.4**	1.2
Mormon	-0.529	-1.9*	0.6	0.634	2.5**	1.9	0.548	2.8**	1.7	-0.011	-0.1	1.0
Jewish	-0.078	-0.2	0.9	-1.538	-1.5	0.2	-0.993	-1.7*	0.4	-0.344	-1.1	0.7
No religion	0.230	1.8*	1.3	-0.111	-0.5	0.9	0.062	0.5	1.1	0.150	1.4	1.2
χ^2 , 17 df	201.6**			177.0**			213.3**			262.4**		
n (% censored)	2169 (69%)			2169 (84%)			2169 (68%)			2169 (53%)		

*p < 0.10; **p < 0.05.

Table 3. Predicted probabilities based on competing-risk models of Table 2

	Cohabitation by age 20	Marriage by age 20
Reference case ^a	0.20	0.09
Selected cases:		
Parents' Education		
<12 years	0.29	0.13
12 years	0.23	(0.11)
≥ 16 years	0.13	0.04
Mother worked full time	0.23	(0.09)
Non-intact family		
Death	0.31	(0.11)
Divorce or separation	0.33	0.07
Other	0.43	0.14
Family size		
2	0.19	0.09
4	0.21	0.10
Residence at birth		
Northeast	0.15	(0.08)
South	0.15	0.12
West	(0.19)	0.13
Foreign	(0.24)	(0.10)
Religion		
Catholic	0.16	0.05
Conservative Protestant	(0.19)	0.17
Mormon	0.12	0.17
Jewish	(0.19)	0.02
No religion	0.24	(0.08)

Note: Figures in parentheses correspond to coefficients that did not attain significance at the 15% level.

^a The reference woman has the following characteristics: her religious affiliation is mainline Protestant; the average education of her parents is in the 13–15 years category; she grew up in an intact family; her mother did not work on a full-time basis during most of her childhood; residence at birth was in the Midwest; the total number of siblings in the family of origin is 3. The other cases differ from the reference case in only one characteristic, as shown in the stub.

groups display a pattern of very early entry into first marriage: conservative Protestants ($t = 4.3$) and Mormons ($t = 2.5$); the probability of marriage by age 20 is fully 0.17 for members of these groups, almost twice the value for the reference category.

Panel 3 of Table 2 displays results for analyses that ignore cohabitation. Differences between the effects reported in panels 2 and 3 can be traced to (a) how the variable in question affects the probability of cohabitation (the sign and magnitude of the influence) and (b) the relationship between this variable and the likelihood that cohabitation is quickly followed by marriage. As Brien et al. (1999) observe, some cohabiting partnerships are quickly formalized into marriage, others are not. The results in panel 3 are qualitatively the same as those in panel 2, although the magnitudes of the influences differ somewhat. Overall, the estimated effects of religious affiliation on the timing of entry into formal marriage provide strong support for the hypotheses.

With regard to cohabitation, the first panel of Table 2 shows that this arrangement is most likely for the unaffiliated ($t = 1.8$); the probability of entering an informal union by age 20 is 0.24 for this group, compared to 0.20 for mainline Protestants. At the other end of the spectrum, informal co-residential arrangements are least likely for Mormons ($t = -1.9$), who have a probability of cohabitation by age 20 of only 0.12. Both of these influences are consistent with the hypotheses. Although this had not been anticipated, affiliation with the Catholic Church is also found to decrease the likelihood of cohabitation ($t = -2.5$), but not by as much: the probability of cohabitation by age 20 is 0.16. For conservative Protestants and Jews, the theoretical analysis identified countervailing influences. Empirically, the coefficients are found to be insignificant, suggesting that such effects are canceling each other out.

Two groups stand out in the union formation model. Catholics display a late entry into union formation ($t = -3.9$), reflecting their tendency to delay both cohabitation and marriage. Conservative Protestants have a pattern of early entry ($t = 2.4$), a result of the positive coefficient in the marriage equations and the insignificant effect in the cohabitation regression. Opposing influences are observed in the case of Mormons: a tendency to cohabit less but to enter marriage earlier; the net impact of affiliation with the Mormon faith on union formation broadly defined is zero. No significant effects are discerned for Jews or the unaffiliated.

Comparing the present results with those based on earlier generations, the post baby-boom cohort is characterized by a clear pattern of later entry into marriage for all religious groups. A study based on a sample of Jewish, Catholic, mainline Protestant, conservative Protestant, and Mormon women born in the decade after World War II, reports that the probabilities of early marriage (by age 18) are, respectively: 0.04, 0.08, 0.12, 0.20, and 0.23 (Lehrer

2000). Even though the corresponding figures in the present paper are based on early marriage defined as marriage by age 20, they are uniformly lower: 0.02, 0.05, 0.09, 0.17, and 0.17.

Although members of all religious denominations are entering marriage later, the differences by religious affiliation in patterns of entry into marriage and cohabitation have remained remarkably stable. Conservative Protestants and Mormons continue to display an early entry into marriage, while Jews and Catholics continue to delay such entry. It is noteworthy that although the behavior of Catholics has converged to the mainline Protestant pattern in fertility and most other domains of family life, their distinctive behavior in the area of union formation persists. The finding that Catholics continue to delay marriage, by a substantial margin, suggests that their marital search behavior is still influenced by their faith's proscription against divorce. Since this study follows women only up to their late twenties, it is not possible to ascertain here whether Catholic women are also avoiding a very late entry into marriage, as they used to.

As to cohabitation, the finding from earlier research that the prevalence is lowest among Mormons continues to hold (Lehrer 2000). The patterns of change over time for Jews are less clear. Analyses based on earlier cohorts had found that Jews stand out for their high prevalence of cohabitation (Willis & Michael 1994; Lehrer 2000). In contrast, the present results suggest that Jews do not differ from mainline Protestants in this area; however, these findings must be interpreted with caution because of the small sample size. Analyses of larger samples will be needed to establish whether the likelihood of cohabitation for Jews has indeed diminished over time.

4.2. *Effects of the control variables*

Cohabitation is found to be most common among women brought up in homes of low socioeconomic status, by parents with less than a high school education ($t = 4.0$). As the level of parental education rises, the likelihood of cohabitation declines ($t = 2.1$; $t = -3.7$). The daughters of highly educated parents tend to delay marriage as well ($t = -3.8$; $t = -5.4$). These effects reinforce each other and produce a strong negative relationship between the level of parental education and age at entry into first union ($t = 4.7$; $t = 2.3$; $t = -5.3$).

Having a mother who worked full time has no impact on entry into formal marriage, but it does increase the likelihood of cohabitation ($t = 1.7$). A non-intact family of origin has a marked effect on the probability of cohabitation in the case of the death of a parent ($t = 3.3$) or divorce ($t = 6.9$); the influence is also significant ($t = 6.0$) and especially large in magnitude for respondents whose biological parents never married. Such respondents also have a pattern

of early entry into marriage ($t = 1.7$; $t = 2.4$). While the variable for a parental divorce has a negative effect in the marriage equation when cohabitation is treated as a competing risk ($t = -1.7$), the coefficient is positive when cohabitation is ignored ($t = 2.1$). This result reflects in part the high prevalence of informal living arrangements among respondents who grew up in a home broken by separation or divorce; a large number of these unions appear to be quickly formalized into marriage.

The size of the family of origin has a positive coefficient in the cohabitation equation ($t = 1.5$) and also in the marriage models ($t = 1.6$; $t = 2.2$). Some of these influences are only marginally significant, and the sizes of the effects are small. The results also suggest variation in patterns of union formation by place of birth, with respondents born in the northeastern states having the latest entry into some form of union ($t = -2.6$).

The influences of the control variables noted above are generally consistent with results from earlier research (Smock 2000; Lehrer 2000; Axinn & Thornton 1992). These effects provide a way to assess the relative importance of religion as a determinant of entry into formal marriage. Among the family background factors, the parents' schooling and a non-intact family of origin have the largest influences. An increase in average parental education from under 12 years to 16 years or more lowers the probability that the first marriage will take place early, by age 20, from 0.13 to 0.04 – a difference of 9 percentage points. Similarly, the probability of an early first marriage is 0.14 if the respondent never lived with both biological parents, compared to 0.09 if her family of origin was intact – a difference of 5 percentage points. By comparison, the corresponding difference between conservative Protestants and Catholics is 12 percentage points, and the difference between Mormons and Jews is fully 15 percentage points. The effects of religion rival in magnitude the influences associated with family structure and the parents' educational attainment. Similar types of comparisons reveal that the impact of religious affiliation on cohabitation is also substantial.

4.3. *Variations by religiosity*

The analyses that follow utilize information in the 1995 NSFG on the respondents' frequency of attendance to religious services at age 14. This is a measure, albeit an imperfect one, of commitment to religion during the adolescent years. Differences by religiosity can only be studied for mainline Protestants, conservative Protestants, and Catholics, as the sample sizes for the other religious groups are small. Individuals who attended religious services 1–3 times per month or more frequently are classified in the high religiosity category; others are placed in the low religiosity group.

The percentage of respondents in the first category is 78% for conservative Protestants, 74% for Catholics, and 68% for mainline Protestants.

Table 4 reports the Cox models re-estimated with the low religiosity-mainline Protestant group as benchmark. The corresponding probabilities in Table 5 show more clearly the magnitudes of each religiosity effect. The results indicate that patterns of entry into formal marriage do not vary significantly by frequency of attendance to services for any of the religious groups considered here. This finding marks a departure from results documented for earlier periods. In their (pooled) analyses of Catholics and Protestants, Thornton et al. (1992) report a pattern of delayed entry into marriage among those who are less religious.

Thornton et al. (1992) also found that a higher level of religiosity is associated with a lower rate of cohabitation, and the present results show that this effect continues to be strong. For each faith, the probability of cohabitation is lower by a wide margin for those in the high frequency group ($t = -3.2$; $t = -2.8$; $t = -4.3$). The difference is especially pronounced for conservative Protestants: the probability of cohabitation by age 20 falls by about half, from 0.31 to 0.16, when comparing conservative Protestants who attended church less than 1–3 times per month at age 14 to their counterparts who were more observant at that stage in life. This heterogeneity within religious groups highlights the importance of taking into account differences by religiosity in studying the linkage between religious affiliation and union formation.

5. Summary and directions for future research

A considerable body of literature documents that religion has important effects on the economic and demographic behavior of individuals and families. The present study has built on this earlier research to develop and test hypotheses regarding the role of religious affiliation as a determinant of union formation. The basic premise underlying the analysis is that religion has an impact on the perceived costs and/or the perceived benefits of various decisions that individuals make over the life cycle, including education, fertility, and employment. These decisions, in turn, influence choices regarding marriage and cohabitation. This perspective has shed light on the various channels through which religion may affect patterns of entry into union formation, and has provided a clearer interpretation of results previously reported in the literature.

The present empirical findings, based on data on the post baby-boom generation, show that religious affiliation continues to have a sizeable effect on entry into marriage and cohabitation. The probability of having entered marriage by age 20 ranges from a low of 0.02 for Jews and 0.05 for Cath-

Table 4. Variations by frequency of attendance to religious services: Cox proportional hazards models^a

	Panel 1 Cohabitation (marriage as competing risk)		Panel 2 Marriage (cohabitation as competing risk)		Panel 3 Marriage (ignoring cohabitation)		Panel 4 Total union formation	
	β	t	β	t	β	t	β	t
Mainline Protestant-high	-0.457	-3.2**	0.148	0.6	-0.027	-0.2	-0.297	-2.4**
Catholic-low	-0.258	-1.5	-0.414	-1.2	-0.222	-1.1	-0.263	-1.7*
Catholic-high	-0.687	-4.8**	-0.497	-1.9*	-0.349	-2.2**	-0.653	-5.2**
Conservative Protestant-low	0.194	1.1	0.857	2.8**	0.483	2.5**	0.367	2.4**
Conservative Protestant-high	-0.543	-3.5**	0.733	3.0**	0.392	2.5**	-0.075	-0.6
χ^2 , 20 df	234.8**		177.7**		214.2**		285.2**	
n	2168		2168		2168		2168	

^a All the control variables are included in these regressions; the models also include dummies for Jewish, Mormon, and unaffiliated. Note that the t-statistics reported in this table refer to comparisons against the reference category, mainline Protestants who had a low level of attendance to religious services. Table 5 reports the t-values for low-high religiosity comparisons within each religious group.

*p < 0.10; **p < 0.05.

Table 5. Predicted probabilities by frequency of attendance to religious services based on competing-risk models of Table 5

	Cohabitation by age 20 probability		Marriage by age 20 probability	
		t-test ^a		t-test ^a
Mainline Protestant				
Low frequency vs.	0.27	-3.2**	0.08	0.6
high frequency	0.18		0.10	
Catholic				
Low frequency vs.	0.21	-2.8**	0.06	-0.5
high frequency	0.14		0.05	
Conservative Protestant				
Low frequency vs.	0.31	-4.3**	0.18	-0.3
high frequency	0.16		0.17	

^aThe t-tests are calculated by comparing the corresponding coefficients in Table 4, using information on the variance-covariance matrix.

**p < 0.05.

olics, to a high of 0.17 for conservative Protestants and Mormons; mainline Protestants and the unaffiliated are at the center of the distribution, with a probability of 0.08–0.09. Although the behavior of Catholics has converged to the mainline Protestant pattern in most domains of family life, this group has retained its distinctive behavior in the area of entry into marriage. With regard to cohabitation, Mormons continue to display the lowest probability of entering an informal union by age 20. The results suggest that the tendency that Jews displayed in the past to cohabit at unusually high rates may have disappeared, but additional research based on larger data sets is needed to confirm this finding.

The present results underscore that religiosity also continues to be an important determinant of entry into cohabiting relationships. The analyses reveal that for both groups of Protestants and for Catholics, individuals who attended religious services frequently during their adolescent years have a relatively low probability of cohabitation by age 20, in the 0.14–0.18 range; for their less religious counterparts, the range is 0.21–0.31. The effect of religiosity is especially pronounced among conservative Protestants. The priority placed on religion during the formative years clearly affects the perceived costs of cohabitation and plays a major role in the decision of whether or not to enter an informal union. In contrast, for individuals raised as Catholics,

mainline Protestants, or conservative Protestants, differences in religiosity no longer have a significant effect on patterns of entry into formal marriage.

This study focused on women who were part of the post baby-boom cohort, following them up to their late twenties. With Cycle 6 of the National Surveys of Family Growth currently underway, it will be possible to observe this cohort into the thirties and determine whether the patterns documented here follow a linear path or whether significant non-linearities emerge (e.g., groups that delay marriage the most may not necessarily display the lowest probability of eventual marriage). Another important item in the agenda for future research will be to go beyond the reduced-form estimates presented in this paper, which measure total effects, and begin efforts to quantify the relative importance of the various channels linking religious affiliation and religiosity to union formation within the framework of a structural model. Finally, very little is known at present about these relationships for the case of African-Americans, Hispanics, and other racial and ethnic minorities. Efforts to fill this gap in the literature are currently in progress (Wilcox & Wolfinger 2003).

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