Family Life Cycle Revisited

Age and Life Course Effects on Church Attendance at "Conventional" and Middle Age

Nehal A. Patel, University of Michigan-Dearborn
David Lilley, University of Michigan-Dearborn
Gerald Marwell, New York University

Abstract

We examined the effects of marital status and parenthood on church attendance using panel data from the 1975 and 1992 Wisconsin Longitudinal Study. Consistent with prior research, both cross-sectional and fixed effects ordered logit models indicated that marriage and parenthood were positively associated with church attendance. However, prior research has examined only adults in more "conventional" ages of family formation, and our findings indicated that the effects of parenthood extend into middle age. We also found support for prior notions that divorce/separation has negative effects on church attendance and that this effect is present among adults in their thirties as well as those in their fifties. However, using models that analyzed change over time while holding constant individual differences and prior church attendance, we found that *the act of getting divorced* had a significantly stronger negative impact on Catholics than Mainline Protestants. Similarly, with regard to parental responsibility, *the act of becoming a parent* was associated with increased church attendance while holding constant individual differences. Thus, our work builds on existing research by utilizing a methodology that allowed us to assess the effects of both family structural *status* and *changes* to family structure on church attendance.

Introduction

The changing family formation and religious participation of Americans over their life course has been a long-standing topic of debate among researchers and the public (Demerath and Hammond; Iannaconne; Wilson and Sherkat; Roof and McKinney; Argue, Johnson, and White; Uecker, Regnerus, and Vaaler; Mullins, Bradkett, McKenzie, and Bogie). In this paper we analyzed the church attendance of participants in the Wisconsin Longitudinal Study (WLS), the only data set that both included a large number of Americans and allowed us to follow their family formation and church attendance from their thirties into their fifties. Given previous research, we paid particular attention to the effects of marital status and children on religious behavior. As of 1992, over one-sixth of the WLS sample still had children under 18 years old, while the others primarily were empty-nesters. In this study, based on our sample and prior research, we defined middle age parents as over fifty, "conventional" parents as mid-thirties, and young parents as early twenties.

Past Theory and Research

Church attendance is high for people in traditional, nuclear families because religion in the United States primarily is a family-oriented phenomenon (Hadaway, Marlet, and Chaves). Prior research showed that marriage and parenthood have positive effects – while divorce/separation has a negative effect – on church participation. Specifically, prior literature supported a "Family Life Cycle" model, in which young married couples with children are more likely to join and participate in religious organizations than their unmarried, childless counterparts (Bahr).

Family Life Cycle explanations for religious behavior come from status theories of cultural choice, which claim that people choose religious groups that are comprised of similarly situated people (Sherkat and Wilson). Under this reasoning, increases in church attendance will be more likely for parents who fall into modal age categories because these parents receive social support from informal church social networks comprised of people with similar life circumstances. For instance, 32-year old married individuals with children have higher church attendance than their 22-year old counterparts (Stolzenberg, Blair-Loy, and Waite). Because it is more common for 32-year olds to be married with children, individuals in this age category are more likely to meet others similar to them at church, whereas their 22-year old counterparts are not of a "conventional" age and are less likely to find others at church in similar life circumstances. Therefore, 22-year old married parents find less social support from the church's informal networks relative to 32-year old married parents.

Prior research did not examine middle age parents to determine whether they resemble "conventional" parents or young parents. Although they are an atypical age, middle age parents would not be subject to the stigmas of early parenthood. Therefore, we expected them to resemble "conventional" parents rather than the younger parents. By this reasoning, we hypothesized that parental responsibility would be associated with increased church attendance among parents of middle age (Hypothesis 1).

Prior findings suggested that divorce/separation has a negative relationship with church participation (Thornton, Axinn, and Hill). Because church participation provides married

individuals with "emotional support and social contacts with other families" (Stolzenberg et al.: 86), divorced/separated individuals will be less likely to attend church because they are less likely to receive social support from traditional church communities. Prior research focused on young and recently married couples but did not examine people transitioning in and out of marriage later in life. We predicted that divorce/separation also would have a negative impact on church attendance for individuals who obtained a divorce/separation later in the life course. We tested the hypothesis that getting divorced/separated was associated with decreased church attendance among respondents of middle-age (Hypothesis 2).

Furthermore, we expected the effects of the church's informal social networks to be different between Catholics and Mainline Protestants.[1] Prior research found that the effect of age itself and gender differences in religiosity were stronger for Catholics than Protestants (Argue et al.). However, prior research did not assess differences in the relationship between church attendance changes and divorce/separation in middle age using longitudinal data. Moreover, prior research on family effects over the life course has not previously separated Protestants into their Mainline and Evangelical groups. The low number of Evangelicals in this sample did not allow for reliable comparisons between Evangelicals and other groups. However, separating Mainline and Evangelical Protestants allowed for a sensitivity analysis by comparing Mainline Protestants and Catholics.[2] Because of higher stigmas of divorce/separation among Catholics, we expected that divorce/separation would decrease church attendance more significantly for Catholics than for Mainline Protestants during middle age (Hypothesis 3).

To summarize, the Family Life Course Model states that parenthood increases church attendance because parents choose to access the family support networks provided by the church. Previous research has focused on adults in their late twenties and early thirties, since parenthood most often is associated with this stage of the life course. To extend this work, we examined adults in their mid-thirties and mid-fifties, a time for which there is relatively little theoretical discussion. An examination of the middle stage of the life course gave us the ability to draw conclusions about a particularly interesting and under-studied time in the Family Life Cycle. Prior research showed that parents at "conventional" ages for parenthood are more likely to attend church than parents in "deviant" age categories (Stolzenberg et al.). This raises the question of whether church attendance is more likely to increase or decrease for "deviant" 53-year olds who became parents between 1975 and 1992.

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[1] We used the list of categories developed by Friedreis and Tatalovich to code Mainline and Evangelical Protestants.

[2] The Wisconsin Longitudinal Study included Evangelical Lutherans and Evangelical Methodists in its Lutheran and Methodist categories. However, we were able to separate all other Evangelical categories from Mainline Protestants. When compared to including all Protestants in one category, this separation of Mainline and Evangelical Protestants is more desirable for a refined comparative analysis of Mainline Protestants and Catholics.

Data and Methods

Overview

We examined family life course effects by conducting both cross-sectional and fixed effects panel data regressions using two waves from the Wisconsin Longitudinal Study (WLS). This approach provided the opportunity to assess the relationship between church attendance and marital and parental s*tatus* at two static points in time as well as the effects of *change*s to these variables over time while holding other variables constant. In this manner we were able to conduct analyses that inquired as to whether the act of becoming a parent (changing parental responsibility) or getting married, divorced, or widowed (changing marital attachment) impacted church attendance when individual background differences and prior church attendance were held constant. The fixed effects panel data approach using two waves of data has been noted for its resemblance to classic pretest-posttest experimental design (Johnson: 1062) and is becoming increasingly popular in family research, especially to analyze transitions (Allison 1994; Argue et al.; Johnson; Halaby).

Unlike most models used in prior research on the Family Life Cycle, the fixed effects panel data approach offered substantial benefit because variables that remained stable over time, such as personality traits or genetic differences, did not need to be entered into the model (Allison 2005). Since our fixed effects models analyzed change over time for each individual, personal traits and attributes that did not change were automatically eliminated from analysis (Benson et al.). We employed a first difference fixed effects approach[3] that is conceptually illustrated below using *Gender* as the unchanging variable.

> ***1975:*** Church attendance = Parenthood + Marital Status + Income + ~~*Gender*~~

> ***1992:*** Church attendance = Parenthood + Marital Status + Income + ~~*Gender*~~

In the example above, when the values of each variable in 1975 are compared with those in 1992, *Gender* is eliminated because it does not change over time. In this manner, we controlled for *all* invariant characteristics and interpreted the obtained coefficients as the effects of a change in the independent variable on a change in the dependent variable (Allison 1990; Benson et al.). We utilized an ordered logit fixed-effects model that was appropriate for analysis of change with an ordinal dependent variable (Allison 1990). Further detail pertaining to the regression models employed can be found in the section labeled "Analytic Strategy" below.

Merits of the Data

The Wisconsin Longitudinal Study followed a randomly selected one-third of the Wisconsin high school graduating class of 1957, approximately 10,000 individuals. The first wave of data was collected in 1957, when most of the respondents were 18 years old; in the 1975 second wave they were 36; in the 1992 third wave they were 53. With a world-wide

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[3] A first-difference model also yields the same coefficients as those obtained in the more general fixed effect method where person-years are units, and dummies for "year"and "each person" are added to the model.

search, approximately 70% of the original sample responded to the third wave,[4] a remarkable achievement over this time-span (Hauser et al.).

In other longitudinal studies relevant to the present research, the ages for which data were collected were generally quite young. For instance, Stolzenberg et al., who used panel data from the National Longitudinal Study (NLS) on the high school graduating class of 1972, examined religious participation at three ages early in the adult life course: 22 (1976), 25 (1979), and 32 (1986). An exception is Argue et al., whose sample included individuals aged 18-67. However, all respondents were married at first interview in that study. We were able to examine respondents who were of any marital status in both their mid-thirties and early fifties.

The WLS data also allowed us to examine the Family Life Cycle in two ways that the prior research has not addressed. First, although prior research showed that married people are likely to decrease attendance as the pressures of parenthood decrease, there is no indication of how old parents are when they stop going to church and when or if they return. The data available in the WLS allowed us to examine respondents who still had children under 18 in their fifties. By examining parental responsibility later in the life course, this analysis could illustrate when and if the decline in attendance actually occurred. Second, prior research found that parents in "non-conventional" age categories were less likely to show up at church because of a lack of peer support and reinforcement of their life choices. The WLS data allowed us to examine whether changing church attendance depended on the presence of children not only at "conventional" ages, but also in later adulthood.

Two kinds of information on religion were available from the WLS: frequency of church attendance and denominational affiliation. Unfortunately, only the second and third waves of the WLS contained questions on the frequency of church attendance, which was the dependent variable for our analysis. Although this information on religion was limited, it compared quite favorably to any other available panel study with a very large sample. In comparison, Stolzenberg et al. had to rely on a dichotomy between "participation" and "no participation in the activities of a church" as their dependent variable. Instead of knowing only whether or not respondents participated in the church, we were able to determine whether respondents had differing likelihoods of changing church attendance across a set of ordinal categories that measured change along several independent variables.

Measures

Church Attendance. In the cross-sectional models for survey years 1975 and 1992, frequency of church attendance (the dependent variable) was coded into six ordinal categories (ranging from 0-5): never, less than a few times per year, a few times per year, one time per month, two or three times per month, and one time per week. In the fixed effects models, "change in church attendance" was developed in two stages. First, to avoid recoded attributes with low response rates, church attendance was recoded into three categories: at least once a week; less than once a week but at least once a month; and less than once a month or never. Next, first differencing was applied as appropriate for two-wave fixed

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[4] In total, 400 respondents, or 4 percent of the sample, had died by wave 3 of the study.

effects models (Allison 2005) by subtracting the recoded 1975 attendance of the respondent from the 1992 attendance. The result was five ordinal categories: strongly increasing, slightly increasing, stable, slightly decreasing, and strongly decreasing church attendance (Table 1).

Parental Responsibility. In the cross-sectional models for 1975 and 1992, a binary dummy variable was created for whether a respondent had a biological, step, or adopted child 18 years or younger in each survey year (1=yes). In the fixed effects models, "change in parental responsibility" was coded into dummy variables that reflected actions that resulted in a *gain or increase* in parental responsibility (1=having children under age 18 or younger for the first time in 1992) and *loss or decrease* in parental responsibility (1=no longer having children age 18 or younger in 1992). In this way, the effects of gaining or losing parental responsibility were disaggregated to determine whether change in church attendance was due to one or both Life Course actions.

Marital Attachment. In the cross-sectional models for 1975 and 1992, binary dummy variables were created for marital status: married, divorced/separated, widowed, or never married (1=yes). In the fixed effects models, "change in marital attachment" was coded into dummy variables that reflected Life Course changes: marriage for the first time, remarriage, getting divorced/separated, becoming widowed (1=yes).

Denominational Affiliation. The WLS inquired as to the religious preference of respondents in both years, allowing identification of Catholics, Protestants, as well as those with no religious preference. To distinguish Evangelical Protestants from Mainline Protestants, we followed the list of categories developed by Friedreis and Tatalovich.

Although the WLS data allowed classification of religious denomination into 75 subgroups, the categorization scheme presented two challenges with regard to Evangelicals. First, Lutherans of all types (e.g., Reformed Lutheran, Evangelical Lutheran) and Methodists of all types (e.g., United Methodist, Evangelical United Brethren) were coded together such that it was not possible to separate those that were Evangelical. Second, the number of Evangelicals in Wisconsin during the 1975-1992 era was quite small in comparison to their representation in other regions of the nation. Thus, although we included Evangelicals in many of our models, to aid in sensitivity analysis, generalization of results for this subgroup may not be appropriate. The primary focus of the current study with regard to denominational affiliation concerns differences between Catholics and Mainline Protestants.

Controls. In the cross-sectional models for 1975 and 1992, a variable that reflected the combined *income* of the respondent and spouse was created. In the fixed effects models, "change in income" was created by subtracting the sum of respondent's and spouse's 1975 income from their 1992 income. Race and gender were not included in the fixed effects models because fixed effects models control for variables that are constant over time. However, in the cross-sectional models, gender and number of years of education were included as controls, and race was inherently controlled in our all-white sample.[5]

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[5] We lost almost no respondents by using an all-white sample. In the original 1957 Wisconsin sample "there are only a handful of African American, Hispanic, or Asian persons" and there were "minuscule numbers of minorities in Wisconsin at the time the study began" (Hauser et al.: 4).

Multicollinearity diagnostics were run between all variables and no multicollinearity was found.

Analytic Strategy

   Cross-sectional Models. To gain an understanding of the relationships between family status and church attendance over a long duration, our analysis began with cross-sectional regressions of the panel at two points in time, 18 years apart. Analyzing marital status and parental responsibility when respondents were in their mid-thirties and again in their early fifties allowed us to determine whether the relationship changed as the cohort approached middle age and provided insight into whether attitudes toward divorce/separation became more liberal or remained stable over time. These panel data cross-sections also provided insight into broader trends pertaining to church attendance during the 1970s and early 1990s and allowed us to assess the relative contributions of stable respondent characteristics (e.g., gender) as well as the influence of denominational affiliation (Catholic, Mainline Protestant, Evangelical) over time.

   In separate cross-sectional models, denominational affiliation was interacted with variables pertaining to marital status and parenthood. A key goal of these cross-sectional regressions was to identify the influence of marriage, divorce, and parental responsibility among Catholics and Mainline Protestants while controlling for income, education, gender and race (via the sampling methodology).

   Fixed Effects Models. Although cross-sectional regressions provided insight into *status*, fixed effects panel models allowed assessment of *change resulting from actions* by respondents to answer the following question, "Did the act of getting divorced/separated or gaining parental responsibility impact church attendance when individual background differences and prior church attendance were held constant?" Our basic strategy to answer this question was to regress changes in church attendance on changes in family formation and controls. We achieved this by employing an ordered logit fixed-effects model that was appropriate for analysis of change with an ordinal dependent variable (Allison 1990), based on the following equation:

$$\text{Log}\left(\frac{p(y_i \leq j)}{1 - p(y_i \leq j)}\right) = \tau_j - bx_i$$

Where y_i has j responses, $p(y_i \leq j)$ is the cumulative probability of y_i, x_i is the value of x for the *i*th person, and b is the coefficient of x_i.

   We also wanted to assess family formation variables by religious preference. Since we were interested in Mainline Protestant-Catholic differences, we conducted several fixed effects models that included interaction terms with four mutually exclusive categories: respondents who were Catholic in both survey years, respondents who were Mainline Protestant in both survey years, respondents who were Evangelicals in both survey years,

and an "Other" category[6] in which respondents reported Atheism/Agnosticism/No Religion in both survey years or switched religious preference. The interactions of denomination and family variables allowed us to determine the extent to which the statistical effects of getting divorced, remarried, or becoming a parent differed for Catholics and Mainline Protestants. To obtain a fuller picture of these differences we employed logit fixed effects models where interaction terms were included and each of these denominations was separately used as a reference category.

Results

Descriptive Statistics

During the initial time period (1975) when the panel was in its mid thirties, a substantial majority of respondents (88%) were married and most (79%) were also responsible for the care of at least one child under the age of 18 (Table 1). Slightly more than one-half (51%) of respondents indicated that they attended church at least once per week. The mean level of education was 13.6 years with a median income of $15,126.[7]

With regard to changes that occurred between 1975 and 1992, the church attendance of a majority of respondents (66%) remained stable (Table 2). However, 12% of individuals reported an increase and 22% reported that attendance had decreased. In addition, nearly 8% of respondents reported that they got divorced or separated during this time period.[8] Finally, the most noteworthy change involved parental responsibility in that approximately 75% of parents from 1975 reported that they no longer had a child under the age of 18 in 1992.

Parental Responsibility and Church Attendance

By utilizing both cross-sectional and fixed-effects panel data approaches, we were able to assess the effects of both family *status* and *changes* to family structure on church attendance. Cross-sectional regressions of the panel clearly indicated that the *status* of having responsibility for at least one child under the age of 18 was associated with higher church attendance for both Mainline Protestants and Catholics in their mid thirties and early fifties (p<.001; Table 3a-b). The positive coefficients in these ordered logit models indicate that parental responsibility was associated with an increase in the log of the odds of frequent church attendance. These values can be more easily understood by translation into an odds ratio by taking the exponent of the coefficient. For example, the coefficient for the parental

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[6] The inclusion of the "Other" category allows statistical comparison of the full spectrum of respondents via the logit models and is not intended to reflect a cohesive conceptual subgroup.

[7] The 1975 combined spousal median income of $15,126 was equivalent to approximately $39,400 in 1992 currency ($64,518 in 2012) using inflation calculations from the Bureau of Labor Statistics.

[8] Our analyses assess individual-level changes which are not equivalent to mean group-level changes. For example, mean group-level differences in divorce (Table 1) suggest an increase of about 5% in the total divorce/separation of respondents in 1992. However, the true individual-level change in divorce/separation was approximately 8% because some respondents got remarried or reconciled with their spouses.

Table 1. 1975 & 1992 Means for Variables Used in Cross-Sectional Regression Analyses; Original 1957 Cohort, Wisconsin Longitudinal Study

Variables	1975 Proportions	1992 Proportions
Church Attendance		
Never	0.0720	0.1430
Less Than a Few Times Per Year	0.0377	0.0749
A Few Time Per Year	0.1299	0.0980
One Time Per Month	0.0750	0.0735
Two or Three Times Per Month	0.1788	0.1308
One Time Per Week	0.5065	0.4798
Religious Preference		
Catholic	0.4091	0.3991
Mainline Protestant	0.4382	0.4618
Evangelical Protestant	0.0373	0.0426
Other	0.1129	0.0232
Marital Status		
Divorce/Separation	0.0528	0.1016
Widowhood	0.0042	0.0244
Never Married	0.0623	0.0434
Marriage (Reference)	0.8807	0.8306
Gender (1=Female)	0.5233	0.5319
Parenthood	0.7888	0.1721
Education*	13.6441 (2.0154)	13.5903 (1.9917)
Income**	15,126.0	49,983.0
	N=8106	N=7020

*Standard deviation reported in parentheses. Value for both years obtained from 1964 questionnaire.
**Median values reported considering that mean values are sensitive to outliers.

responsibility dummy variable for Catholics during the 1975 cross-section was .5053. Taking the exponent of this figure gives $e^{.5053} = 1.66$. In other words, the odds that church attendance would be among the higher categories (e.g., weekly or 2-3 times per month) were nearly 1.7 times greater for Catholics with at least one child in 1975 while controlling for education, gender, and income. Similarly, for Mainline Protestants with at least one child, the odds that church attendance would be among the higher categories were 1.6 times greater than attendance for those without children.

Table 2. Means for Variables Used in Fixed Effects Regression Analyses Calculated from 1992 & 1975 Survey Years; Original 1957 Cohort, Wisconsin Longitudinal Study

Change Variables	Proportions
Changes in Church Attendance	
Strong Increase	0.0237
Slight Increase	0.0969
Stable	0.6616
Slight Decrease	0.1630
Strong Decrease	0.0548
Religious Preference	
Remained Catholic	0.3634
Remained Mainline Protestant	0.3983
Remained Evangelical Protestant	0.0253
Other or Switched Religious Preference	0.2129
Changes in Parental Responsibility	
Gained Parental Responsibility	0.0205
Stable	0.2284
Lost Parental Responsibility	0.7511
Changes in Marital Attachment	
Losing Marital Attachment	
Getting Divorced/Separated	0.0791
Becoming Widowed	0.0232
Gaining Marital Attachment	
Getting Married (for the first time)	0.0148
Getting Remarried	0.0265
Stable (No change)	0.8564
Change in Income	$34,857
	N=7834

Although the cross-sectional regressions allowed us to assess the relationship between church attendance and the *status* of having parental responsibility, we conducted further analyses using fixed effects regression to model the effects of *change*s to parental responsibility (e.g. the act of having children) when individual background differences and prior church attendance were held constant (Table 4). The resulting coefficients in these fixed effects models can be interpreted as the odds that a change in church attendance would

be associated with a change in parenthood over the two-wave time period. In this regard, although the coefficients for both Catholics and Protestants were positive, the value for Catholics was not significant. We explored possible reasons for this non significant finding and discovered that it was due to the low number of Catholics who became parents for the first time after their mid thirties.[9] With the exception previously noted, our results confirmed Hypothesis 1, that parental responsibility was related to increased frequency of church attendance.

Table 3a. Estimated Coefficients from Ordered Logit Cross-Sectional Models; Regressing Church Attendance on Changes in Income, Education, Marital Status, and Parenthood; Original 1957 Cohort, Wisconsin Longitudinal Study, 1975

	1975 Basic Model		1975 Interaction Model	
	All Respondents	All Respondents with Religion	Mainline Protestants (Reference)	Catholics (Reference)
Gender (1=female)	0.6006 (0.0428)***	0.5881 (0.0452)***	0.5853 (0.0452)***	0.5851 (0.0452)***
Income	0	0	0	0
Education	-0.035 (0.0107)*	0.0505 (0.0114)***	0.0501 (0.0114)***	0.0501 (0.0114)***
Marital Status:				
Never-Married	-0.3372 (0.0963)**	-0.1938 (0.1004)	-0.3453 (0.1464)	0.0467 (0.1890)
Divorced/Separated	-1.189 (0.0906)***	-0.7814 (0.0964)***	-0.8103 (0.1377)***	-1.2907 (0.1889)***
Widowed	-0.3897 (0.3334)	-0.1104 (0.3613)	0.3127 (0.5710)	-0.4633 (0.5925)
Parenthood	0.4758 (0.0563)***	0.458 (0.0592)***	0.4675 (0.0833)***	0.5053 (0.1063)***
Mainline Protestant				-1.5248 (0.1244)***
Catholic		1.5644 (0.0520)***	1.5492 (0.1248)***	
Evangelical Protestant		1.1042 (0.1262)***	0.8287 (0.2789)*	-0.6996 (0.2848)
Other		-2.8438 (0.0804)***	-2.7826 (0.1632)***	-4.3110 (0.1749)***
Interactions: Catholic*				
Divorced/Separated			-0.5079 (0.2337)	
Widowed			-0.7886 (0.8223)	
Never-Married			0.3983 (0.2406)	
Parenthood			0.0262 (0.1355)	

[9] Approximately 600 Catholic respondents had children under age 18 in 1992. However, only 59 of them became *first-time parents* after 1975 (when most respondents were approximately age 36). Since fixed effects models analyze change, this smaller number of first time parents (59) was insufficient to result in statistically significant findings. In contrast, 2,123 Catholics reported that they had children under 18 in 1975. This finding may be related to church prohibitions pertaining to birth control.

Evangelical Protestant*				
Divorced/Separated			0.6416 (0.5036)	1.1221 (0.5199)
Widowed			16.5337 (7972.881)	17.3107 (7978.953)
Never-Married			0.0020 (0.5445)	-0.3899 (0.5574)
Parenthood			0.3038 (0.3109)	0.2659 (0.3178)
Mainline Protestant*				
Divorced/Separated				0.4686 (0.2344)
Widowed				0.7779 (0.8224)
Never-Married				-0.4070 (0.2390)
Parenthood				-0.0432 (0.1351)
Other*				
Divorced/Separated			0.4751 (0.2331)	0.9556 (0.2666)**
Widowed			-0.7929 (0.9688)	-0.0164 (0.9815)
Never-Married			0.1756 (0.2632)	-0.2163 (0.2890)
Parenthood			-0.1794 (0.1711)	-0.2172 (0.1834)
Intercept 1	2.1927 (0.0733)***	2.5083 (0.0882)***	2.5118 (0.1007)***	4.0401 (0.1185)***
Intercept 2	1.7153 (0.0691)***	1.8433 (0.0816)***	1.8489 (0.0950)***	3.3771 (0.1136)***
Intercept 3	0.7313 (0.0649)***	0.4111 (0.0725)***	0.4171 (0.0873)***	1.9451 (0.1063)***
Intercept 4	0.3329 (0.0644)***	-0.1286 (0.0715)	-0.1240 (0.0867)	1.4038 (0.1050)***
Intercept 5	-0.4603 (0.0645)***	-1.1645 (0.0728)***	-1.1634 (0.0880)***	0.3650 (0.1035)**
Number of cases	8106	8106	8106	8106
Log-Likelihood	-11275.5161	-9732.3122	-9720.0172	-9723.7593

*p<.01, **p<.001, ***p<.0001 Standard errors are in parentheses

Table 3b. Estimated Coefficients from Ordered Logit Cross-Sectional Models; Regressing Church Attendance on Changes in Income, Education, Marital Status, and Parenthood; Original 1957 Cohort, Wisconsin Longitudinal Study, 1992

	1992 Basic Model		1992 Interaction Model	
	All Respondents	All Respondents with Religion	Mainline Protestants (Reference)	Catholics (Reference)
1975 Attendance	.9096 (.0184)***	0.8485 (0.0187)***	0.8485 (0.0188)**	0.9018 (0.0185)***
Gender (1=female)	.2690 (.0494)***	0.2893 (0.0500)***	0.2876 (0.0502)***	0.2783 (0.0497)***
Income	0	0	0	0
Education	.0447 (.0126)**	0.0608 (0.0128)***	0.0597 (0.0129)***	0.0454 (0.01220)**

Marital Status				
Never-Married	.0857 (.1205)	0.0009 (0.1216)	-0.2448 (0.1588)	0.3183 (0.1755)
Divorced/Separated	-0.6766 (.0791)***	-0.6952 (0.0798)***	-0.5079 (0.0997)***	-1.1109 (0.1199)***
Widowed	-0.2056 (.1559)	-0.25 (0.1567)	-0.0048 (0.2024)	-0.3827 (0.2456)
Parenthood	0.6291 (.0672)***	0.5853 (0.0681)***	0.6028 (0.0873)***	0.6682 (0.1017)***
Mainline Protestant				-0.3321 (0.0591)***
Catholic		0.7424 (0.0539)***	0.7709 (0.0637)***	
Evangelical Protestant		1.4125 (0.1475)***	1.6493 (0.1872)***	1.1798 (0.1908)***
Other		0.1856 (0.1532)	0.2818 (0.1915)	-0.1326 (0.1952)
Interactions: Catholic*				
Divorced/Separated			-0.5080 (0.1693)*	
Widowed			-0.5110 (0.3276)	
Never-Married			0.8171 (0.2756)*	
Parenthood			0.0270 (0.1432)	
Evangelical Protestant*				
Divorced/Separated			-0.7111 (0.4370)	-0.0942 (0.4479)
Widowed			-0.5634 (0.7222)	-0.1691 (0.7407)
Never-Married			-0.3962 (0.6826)	-0.9215 (0.6915)
Parenthood			-0.6974 (0.3986)	-0.7497 (0.4066)
Mainline Protestant*				
Divorced/Separated				0.8415 (0.1616)***
Widowed				0.3975 (0.3226)
Never-Married				-0.4496 (0.2494)
Parenthood				-0.0455 (0.1373)
Other*				
Divorced/Separated			-0.2836 (0.4039)	0.3628 (0.4143)
Widowed			-22.4241 (8593.063)	-22.0755 (8552.096)
Never-Married			-0.4633 (0.7220)	-0.9254 (0.7334)
Parenthood			0.1379 (0.4603)	0.0707 (0.4673)
Intercept 1		-1.2516 (0.0835)***	-1.2619 (0.0846)***	-1.0233 (0.0889)***
Intercept 2		-2 (0.0848)***	-2.0127 (0.0859)***	-1.7700 (0.0905)***
Intercept 3		-2.7921 (0.0885)***	-2.8059 (0.0896)***	-2.5584 (0.0943)***
Intercept 4		-3.3071 (0.0916)***	-3.3215 (0.0926)***	-3.0705 (0.0972)***
Intercept 5		-4.1327 (0.0967)***	-4.1494 (0.0977)***	-3.8835 (0.1013)***
Number of cases	7020	7020	7020	7020
Log-Likelihood	-8871.4743	-8741.4661	– 8722.3390	-8800.3931

*p<.01, **p<.001, ***p<.0001 Standard errors are in parentheses

Table 4. Estimated Coefficients from Ordered Logit Fixed-Effects Models; Regressing Change in Church Attendance on Changes in Income, Marital Attachment, and Parental Responsibility; Original 1957 Cohort, Wisconsin Longitudinal Study, 1975 and 1992

	All Respondents	Mainline Protestants (Reference)	Catholics (Reference)
Change in Income	0	0	0
Changes in Marital Attachment			
Losing Marital Attachment			
Getting Divorced/Separated	-0.4130 (0.0870)***	-0.1942 (0.1392)	-0.7835 (0.1539)***
Becoming Widowed	0.0205 (0.1520)	0.171 (0.2355)	-0.0329 (0.2506)
Gaining Marital Attachment			
Getting Married (for the first time)	-0.2301 (0.1973)	-1.0001 (0.3116)*	0.2175 (0.3520)
Getting Remarried/Reconciled	0.1447 (0.1579)	-0.1592 (0.2569)	0.0319 (0.3585)
Changes in Parental Responsibility			
Gaining Parental Responsibility	0.5032 (0.1721)*	0.9095 (0.2814)**	0.0539 (0.2782)
Losing Parental Responsibility	-0.4702 (0.0571)***	-0.5295 (0.0662)***	-0.5707 (0.0675)***
Interactions: Catholic*			
Getting Divorced/Separated		-0.5893 (0.2061)*	
Getting Remarried		0.1912 (0.4406)	
Becoming Widowed		-0.204 (0.3433)	
Getting Married (for the first time)		1.2175 (0.4664)*	
Gaining Parental Responsibility		-0.8557 (0.3902)	
Losing Parental Responsibility		-0.0412 (0.0622)	
Evangelical Protestant*			
Getting Divorced/Separated		-1.4243 (0.6138)	
Getting Remarried		-0.1721 (0.8576)	
Becoming Widowed		-0.2625 (0.7883)	
Getting Married (for the first time)		3.4782 (1.5293)	
Gaining Parental Responsibility		-3.4268 (1.5383)	
Losing Parental Responsibility		0.1839 (0.1728)	
Other*			
Getting Divorced/Separated		-0.1891 (0.2120)	
Getting Remarried		0.5211 (0.3546)	
Becoming Widowed		-0.4254 (0.4306)	
Getting Married (for the first time)		0.9593 (0.4499)	
Gaining Parental Responsibility		-0.1239 (0.4121)	

Losing Parental Responsibility		0.3423 (0.0774)***	
Mainline Protestant*			
Getting Divorced/Separated			0.5893 (0.2061)*
Getting Remarried			-0.1912 (0.4406)
Becoming Widowed			0.204 (0.3433)
Getting Married (for the first time)			-1.2175 (0.4664)*
Gaining Parental Responsibility			0.8557 (0.3902)
Losing Parental Responsibility			0.0412 (0.0622)
Evangelical Protestant*			
Getting Divorced/Separated			-0.8350 (0.6171)
Getting Remarried			-0.3633 (0.8934)
Becoming Widowed			-0.0585 (0.7927)
Getting Married (for the first time)			2.2607 (1.5379)
Gaining Parental Responsibility			-2.5711 (1.5376)
Losing Parental Responsibility			0.2251 (0.1733)
Other*			
Getting Divorced/Separated			0.4002 (0.2217)
Getting Remarried			0.3299 (0.4339)
Becoming Widowed			-0.2215 (0.4389)
Getting Married (for the first time)			-0.2583 (0.4784)
Gaining Parental Responsibility			0.7317 (0.4103)
Losing Parental Responsibility			0.3835 (0.0787)***
Intercept 1	-3.4263 (0.0890)***	-3.4278 (0.0839)***	-3.4278 (0.0839)***
Intercept 2	-1.6833 (0.0610)***	-1.686 (0.0527)***	-1.686 (0.0527)***
Intercept 3	1.6454 (0.0606)***	1.6443 (0.0524)***	1.6443 (0.0524)***
Intercept 4	3.2279 (0.0737)***	3.23 (0.0674)***	3.23 (0.0674)***
Number of cases	7834	7834	7834
Log-Likelihood	-8083.5686	-8081.0129	-8081.0129

*p<.01, **p<.001, ***p<.0001 Standard errors are in parentheses

Marital Attachment and Church Attendance

Cross-sectional regressions of the panel clearly indicated that the *status* of being divorced/separated was associated with lower church attendance for both Mainline Protestants and Catholics in their mid thirties and early fifties (p<.001). The coefficient for the divorce/separation dummy variable for Catholics during the 1975 cross-section was -1.2907. Thus, the odds that church attendance would be among the lower categories (e.g., never, a few times per year) were more than 3 times greater for Catholics who were

divorced/separated in 1975 while controlling for education, gender, and income. Similarly, for Mainline Protestants, the odds of lower reported church attendance were 2.24 times greater for respondents who were divorced/separated.

Although the cross-sectional regressions allowed us to assess the relationship between marital *status* and church attendance, we conducted further analyses using fixed effects regression to model the effects of *change*s to marital attachment (e.g. the act of getting divorced) when individual background differences and prior church attendance were held constant. The resulting coefficients in these fixed effects models can be interpreted as the odds that a change in church attendance was associated with a change in marital attachment over the two-wave time period. In this regard, although the coefficients for both Catholics (-.7835) and Protestants (-.1942) were negative, the value for Protestants was not significant.[10] In addition, the interaction coefficient (-.5893) confirmed that getting divorced/separated was a stronger deterrent to church attendance for Catholics than for Protestants (p<.01). Taken together, these results confirmed Hypothesis 2, that divorce/separation was associated with lower frequency of church attendance. Hypothesis 3 was also confirmed in that church attendance was more negatively related to divorce/separation for Catholics.

One problem in comparing these findings to those of prior studies is the fact that each study used different measures of religious participation. This methodological difference made our results incommensurate with some prior studies (Sherkat and Ellison). For instance, some prior research on the "conventional family effect" examined "participation," which included a broader set of activities than church attendance alone (Stolzenberg et al.). Although our results are not directly comparable, we believe our results suggest a need to revisit the notion of the "conventional family effect," particularly in regards to whether middle age parents are part of the more "conventional" group of parents that seeks support from the church due to parenthood.

Another limitation in our ability to assess the "conventional family" effect was that the sample was drawn from a different cohort than the sample used in Stolzenberg et al. The WLS sample was not Stolzenberg et al.'s cohort at middle age. This made it difficult to conclude whether the effects of parental responsibility we found in this study were part of a life course effect or a cohort difference. A future study that spans the entire time from early to later adulthood – combining the time period covered in this study and that of Stolzenberg et al. – can hold cohort effects constant and more adequately study life course effects.

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[10] We explored possible reasons for the non-significant result pertaining to Mainline Protestants who got divorced or separated after 1975. Although the reasons for this singular finding are not entirely clear, a substantial 18% of Mainline Protestants who got divorced no longer affiliated with the Mainline Protestant faith in 1992 such that their attendance would have been coded as zero. However, the fixed effect methodology required that these individual be removed from analysis, potentially reducing the statistical significance of the coefficient.

Discussion

Quality of the Model. This paper is the first to assess changes in church attendance as predicted by changes in marital attachment and parental responsibility over time while holding constant individual differences and prior religious participation. These fixed effects models of *family change* resemble classic pretest-posttest experimental design and enhance our analysis of *family status* based on more static cross-sectional regressions (Johnson). Furthermore, most prior longitudinal analyses of Family Life Cycle effects have focused on adolescence and early adulthood, when people traditionally begin to enter marriage and parenthood. In this paper, we have extended this research into later adulthood, when family life course variables may have effects that differ from those found in the prior studies involving young adults.

Family life cycle effects extend into middle-age. In previous work, Stolzenberg et al. argued that parents attend church to obtain access to the support network of similarly situated parents of similar conventional age. However, our results suggest that the assertion that life course effects apply only to conventional parents of similar ages be revisited. Our results showed that the church attendance of middle age parents was affected significantly by parental responsibility. Our findings suggest that the effect of being a parent – uninfluenced by the age of the parent – keeps church attendance high from "conventional" to middle age.

Furthermore, the social stigma hypothesis applies to *early* childrearing but not to *late* childrearing. The "conventional family" effect explains low church attendance among *young* parents by saying that young parents carry the stigma of teen pregnancy and irresponsibility. Because this stigma is so widely associated with religious institutions, young parents may not seek and receive social support from church communities.[11] However, new middle age parents are not the target of these stigmas. Many of their middle age peers have incentive to maintain social networks at the church and already have strong ties to the church, partly due to being parents in their thirties (Marler). As a result, new middle age parents have the benefit of churches providing social networks that support families and also are for middle age adults. Therefore, like "conventional" parents, middle age parents gain the opportunity to meet other parents *and* to meet people their own age. We encourage additional research that examines the parent/age effect to verify our conclusion that the religious participation of middle age parents resembles the participation of "conventional" parents.

Catholic-Mainline Protestant Differences. The interaction models confirmed that the negative effect of divorce/separation was significantly stronger for Catholics. This may have been the result of more negative attitudes towards divorce among Catholics than among Mainline Protestants. Mainline Protestants have generally liberal views about divorce that make the stigma of divorce less salient than for Catholics (Roof and McKinney). Catholic Church communities also may provide divorced/separated individuals less emotional and social support than Mainline Protestant church communities, making divorced/separated Catholics less likely to attend church than Mainline Protestants.

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[11] This is consistent with prior notions that churches tend to hold generally negative opinions of pregnancy early in the life course but have little, if anything, to say about late childrearing (Houseknecht and Pankhurst).

Greater pressures against divorce exerted by the Catholic Church may also be influential (D'Antonio; Fontelas and Nunes; Wilde). Mainline Protestant churches generally recognize divorce, while the Catholic Church does not issue divorces or recognize divorces issued by other institutions. The Catholic Church only sparingly grants annulments that allow individuals to remarry in the Church (D'Antonio; House; Wilde). These stricter rules against divorce in the Catholic Church may deter divorced Catholics from seeking support from the church.

People in their fifties do not attend church purely because of "decades-long investment" in the church. Our findings also revisited two prior explanations for why middle age Americans go to church. One explanation involves middle age adults' pre-existing investments in the church. This explanation describes two primary groups that go to church in America: One is the conventional-aged married couple with children, who seek service from the church rather than to serve. Presumably because they have the pressures of dual-income family life and the pressures of rearing children, these couples look to the church for support for themselves and for the sake of their children. The second group of high church-attenders is the middle age, empty-nested couple, who once used to be the young, married couple with kids. They now have a decades-long investment in the church and continue to participate for the church's sake (Marler). In contrast, our findings indicate that some middle age respondents presumed to have high church attendance due to "decades-long investment" are actually like their conventional-aged counterparts with children who look to the church to alleviate the pressures of child-raising.

Our results showed that there is much to be learned about parental responsibility and close ties to the church in later adulthood. Some commentators have suggested that future studies on the presence of grandchildren in the home will reveal previously unexamined incentives for new grandparents to remain avid church-goers (Burke; Futterman, Dillon, and Haugh; Tornstam; Copen and Silverstein; Bengtson, Copen, Putney, and Silverstein). Our research encourages new questions on American families and American religion during the period of the life course extending to middle age and beyond.

collected by the University of Wisconsin Survey Center. A public use file of data from the Wisconsin Longitudinal Study is available from the Wisconsin Longitudinal Study, University of Wisconsin-Madison, 1180 Observatory Drive, Madison, Wisconsin 53706 and at http://www.ssc.wisc.edu/wlsresearch/data. The opinions expressed herein are those of the authors. This research was conducted with the assistance of the University of Wisconsin-Madison Social Science Computing Cooperative and the Northwestern University Social Science Computing Cluster.

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