

University of Nebraska - Lincoln

DigitalCommons@University of Nebraska - Lincoln

Sociology Department, Faculty Publications

Sociology, Department of


8-2014

Birth Cohort Changes in the Association Between College Education and Religious Non-Affiliation

Philip Schwadel

University of Nebraska-Lincoln, pschwadel2@unl.edu

Follow this and additional works at: <http://digitalcommons.unl.edu/sociologyfacpub>

 Part of the [Demography, Population, and Ecology Commons](#), [Educational Sociology Commons](#), [Family, Life Course, and Society Commons](#), [Social Psychology and Interaction Commons](#), and the [Social Statistics Commons](#)

Schwadel, Philip, "Birth Cohort Changes in the Association Between College Education and Religious Non-Affiliation" (2014).

Sociology Department, Faculty Publications. 248.

<http://digitalcommons.unl.edu/sociologyfacpub/248>

This Article is brought to you for free and open access by the Sociology, Department of at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in Sociology Department, Faculty Publications by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.



Birth Cohort Changes in the Association Between College Education and Religious Non-Affiliation

Philip Schwadel

pschwadel2@unl.edu

University of Nebraska–Lincoln

Abstract

This article examines the changing association between higher education and reporting no religious affiliation in the United States. I argue that increases in higher education have led to a decline in the individual-level effect of college education on religious non-affiliation. Results from hierarchical age-period-cohort models using more than three and a half decades of repeated cross-sectional survey data demonstrate that the strong, positive effect of college education on reporting no religious affiliation declines precipitously across birth cohorts. Specifically, a bachelor's degree has no effect on non-affiliation by the 1965–69 cohort, and a negative effect for the 1970s cohorts. Moreover, these across-cohort changes are strongly associated with aggregate growth in college education, and they vary considerably by religious origin. I conclude with a discussion of how the results relate to changes among the college-educated population, the religious deinstitutionalization of the non-college-educated, cultural diffusion across social statuses, and other cohort-appropriate social and cultural changes.

The assumption that education is a motivating force behind secularization has been integral to sociology since Comte, Durkheim, and Weber, and it remains ingrained in modern sociology (e.g., Ruiter and van Tubergen 2009; Wilson 1982). College or university education, in particular, is seen as a primary cause of secularization (Beckwith 1985; Halman and Draulans 2006; Stark 1963), leading the highly educated to be disproportionately likely to disaffiliate from organized religion (Baker and Smith 2009; Caplovitz and Sherrow 1977; Kosmin and Keysar 2009). In support of this view, recent trends in the United States include both increases in college education and increases in religious non-affiliation (Schwadel 2010; US Census Bureau 2007). The proportion of Americans reporting no religious affiliation doubled in the 1990s alone, and researchers suggest that rising levels of education are one cause of this growth in religious non-affiliation (e.g., Hout and Fischer 2002). Increases in religious non-affiliation may be indicative that widespread secularization has taken root in US culture (Marwell

and Demerath 2003). That highly educated Americans are disproportionately likely to be religiously unaffiliated—to manifest this form of secularization—is largely unquestioned.

In contrast, I argue that religious disaffiliation and non-affiliation may indeed be associated with aggregate increases in education, but that at the individual level of analysis the positive effect of higher education on religious non-affiliation has declined across generations, and this intergenerational decline should be associated with aggregate increases in higher education. This proposition is predicated on intergenerational transformations in the college-educated and non-college-educated populations, as well as the process of cultural diffusion across social statuses. With regard to changes among the college-educated, the disruption of social networks associated with higher education, which increase the likelihood of religious non-affiliation (Baker and Smith 2009; Maryl and Uecker 2011), should be less relevant in birth cohorts where large proportions of contemporaries have at least some college education. Similarly, the ability of higher education to act as a proxy for cultural capital, leading the highly educated to be disproportionately predisposed to non-affiliation (Wilson and Sherkat 1994; Wuthnow and Mellinger 1978), should be less relevant in birth cohorts with relatively high levels of education. With regard to the non-college-educated, the recent religious deinstitutionalization of non-college-educated Americans (Wilcox et al. 2012) suggests increases in religious disaffiliation among the less educated in particular. Finally, cultural diffusion research shows that the highly educated are often “early adaptors” and even “innovators” of new beliefs and behaviors (Rogers 2003), but that novel ways of believing and behaving then diffuse to less-educated segments of the population (Palloni 2001; Pampel and Hunter 2012), and this process manifests across generations (Edmunds and Turner 2002). Thus, the positive effect of higher education on religious disaffiliation should decline across generations, and higher education may even be negatively associated with religious disaffiliation in younger generations.

At the same time, growth in higher education is accompanied by an array of social and cultural changes that are associated with greater levels of religious disaffiliation. Increases in college education lead to rising levels of political tolerance (Schwadel and Garneau 2014), support for diverse viewpoints (Williams, Nunn, and Peter 1976), and declines in religious authority (Balswick, Ward, and Carlson 1975). These cultural changes promote a social context that is more conducive to secular lifestyles, regardless of an individual’s level of education. Thus, in the aggregate, increases in higher education and religious disaffiliation should be strongly correlated.

In this article, I propose that aggregate growth in higher education in the United States has contributed to both increases in religious non-affiliation and, paradoxically, declines in the individual-level, positive effect of higher education on religious non-affiliation. Greater levels of college education have contributed to growth in non-affiliation by promoting a social context that is characteristic of what Taylor (2007) refers to as a “secular age,” and this social context influences people of all levels of education. At the same time, changes in the college-educated and non-college-educated segments of the population, and the diffusion of behaviors from the highly educated to the rest of the population, should have led

to a decline in the positive effect of higher education on religious non-affiliation. In particular, I argue that the relationship between college education and religious non-affiliation has declined across birth cohorts, and that this decline in the effect of education is associated with aggregate increases in education. I use hierarchical age-period-cohort models (Yang and Land 2006) and repeated cross-sectional survey data collected between 1973 and 2010 to test these propositions. Additional analyses examine differences between those with a bachelor's degree and a graduate degree, alternative measures of lack of participation in organized religion that incorporate both religious non-affiliation and abstaining from religious service attendance, and the impact of religious upbringing on changes in the association between higher education and religious non-affiliation.

Why the Effect of College Education Should Have Changed

Changes in the College-Educated Population

Social scientists posit three primary reasons why higher education leads to disaffiliation from religion. First, some researchers suggest that there is a conflict between what is taught in colleges and universities and the content of certain religious beliefs (e.g., Beckwith 1985; Johnson 1997; Stark 1963). This “conflicting worldviews” argument emphasizes that higher education focuses on knowledge, learning, and science, while religion focuses on mystery and revelation (Miller 1967), and these are seen as incompatible approaches to the world (Halman and Draulans 2006), particularly in the conservative Protestant community (Evans 2013). Second, since social networks provide much of the impetus for religious practice and affiliation (Cheadle and Schwadel 2012; Cornwall 1989; Iannaccone 1994), changes in social networks associated with higher education can lead to religious disaffiliation (Baker and Smith 2009; Maryl and Uecker 2011; Smith and Snell 2009). It is not just the initial change in social networks that accompanies the traditional move from high school to college, but also the different social networks available to the college-educated through the family, workplace, neighborhoods, and voluntary organizations (Marsden 1987). Third, higher education may act as a proxy for cultural capital, and those with high levels of cultural capital are disproportionately predisposed to religious non-affiliation (Wuthnow and Mellinger 1978). The cultural capital argument proposes that Americans who attend college come from high-capital homes, and these elite origins drive the association between higher education and religious non-affiliation (Wilson and Sherkat 1994).

The college-educated population, however, has changed considerably in recent generations as higher education has expanded. In 1970, only about a fifth of American adults had at least one year of college; by 2006, more than half of Americans had attended college for at least one year (US Census Bureau 2007). Variations in education generally occur across birth cohorts (Lauderdale 2001). Among younger birth cohorts, then, college education is the norm in many communities, rather than a privilege for the select few. This growth in higher education has little direct bearing on the conflicting worldviews argument, though researchers suggest that compartmentalization (e.g., Clydesdale 2007) and denominational

diversity (e.g., Stark and Finke 2000; Warner 1993) mitigate conflicts between religious beliefs and the content of higher education in the contemporary United States. On the other hand, intergenerational growth in higher education largely invalidates the social networks and cultural capital arguments.

As college education has become more widespread, it can no longer serve to distinguish between those with greater and lesser amounts of cultural capital, between those who are and are not disproportionately predisposed to religious decline. In support of this perspective, while older research generally found that students exhibit large declines in religiosity while in college (e.g., Feldman 1969), recent research suggests that college students do not report particularly low levels of religious belief (e.g., Hill 2011). In fact, contemporary college students are more likely to report a strengthening of religious faith than a weakening of faith during their college years (Lee 2002) and, most importantly, they are relatively likely to be affiliated with a religion (Uecker, Regnerus, and Vaaler 2007).

Similarly, if the social networks argument is valid, then the growth of higher education should lead to a decline in the effect of college education on religious non-affiliation. Even secular universities are now conducive to the practice of religion (Cherry, DeBerg, and Porterfield 2001; Sherkat 2007), with considerable opportunities for students to attain greater levels of education *and* maintain vital social relationships with religiously similar associates (Braskamp 2007; Perry and Armstrong 2007; Schmalzbauer 2007, 2013). The relevant changes are not limited to college campuses. Among younger generations, a large proportion of contemporaries have college degrees. Consequently, religious communities, both denominations (Wuthnow 1988) and congregations (Schwadel 2009), are now educationally diverse. Thus, college-educated religious affiliates are now less likely to be outliers in their own religious communities, and they are less likely to be disconnected from other religiously affiliated Americans because of their education. As Wuthnow (2007, 87, italics in original) notes in his analysis of post-baby-boomer religion, "The link that had once associated being nonreligious with being better educated was now broken ... it was possible to be religious *and* educated, rather than feeling as inclined to become nonreligious if one was educated."

Changes in the Non-College-Educated Population

Changes in the non-college-educated population further suggest disproportionate increases in non-affiliation among those without a college degree. Economic opportunities for Americans without a college education have declined considerably in recent decades (Fischer and Hout 2006). This economic downturn has been accompanied by a decline in traditional family formation among less-educated segments of the population (Cherlin 2009). Wilcox et al. (2012) argue that these demographic changes have led to "religious deinstitutionalization" among less-educated Americans in particular.

Americans without a college education may now feel alienated from religious organizations for a variety of reasons. As Wilcox et al. (2012) point out, the emphasis on familism in mainstream congregations (Edgell 2006), which once at-

tracted less-educated Americans, now discourages attendance among those without a college education. The high levels of class diversity in contemporary congregations (Schwadel 2009) may also lead to religious deinstitutionalization among the less educated. Americans with low levels of education often feel uncomfortable in congregations with large numbers of middle- and upper-class attendees (Schwadel 2012; Sullivan 2011), and therefore they may become less likely to affiliate. The religious deinstitutionalization of Americans without a college education is supported by recent research examining the effects of education on religious participation (e.g., Schwadel 2011; Wilcox et al. 2012).

The Diffusion of Innovation

Along with changes among the college-educated and non-college-educated populations, the process of cultural diffusion should lead to intergenerational declines in the effect of higher education on religious non-affiliation. Religious non-affiliation is a key religious innovation (Tamney, Powell, and Johnson 1989), and cultural innovations often originate among the highly educated (Elias 2000). Since the highly educated are frequently “early adapters” and “innovators” of cultural innovations (Rogers 2003), it is not surprising that they were relatively likely to have no affiliation when few Americans were unaffiliated.

As new behaviors become more established, however, they tend to diffuse to less-educated segments of population (Pampel and Hunter 2012; Young and Willmott 1973). This diffusion becomes a self-sustaining process once the new behavior reaches a certain threshold (Palloni 2001). Eventually, less-educated segments of the population should adopt these behaviors in large numbers. Rogers (2003) refers to the less educated as “laggards” in this process of cultural diffusion; and, as generational research emphasizes, this process is likely to manifest across birth cohorts (Edmunds and Turner 2002). In sum, various social processes that involve changes among the college-educated, religious deinstitutionalization among those without a college degree, and cultural diffusion from highly educated to less-educated segments of the population suggest that the effect of higher education on religious non-affiliation has declined across generations.

Aggregate Association between Higher Education and Non-Affiliation

The preceding discussion focuses on declines in the individual-level, positive effect of higher education on religious non-affiliation, and is partially predicated on the growth of higher education. Aggregate growth in higher education, however, may still be correlated with increases in religious non-affiliation. Taylor (2007) argues that secularity in the United States manifests in widespread social acceptance of the right to choose to believe or not to believe, to affiliate or not to affiliate, and growth in higher education brings about societal changes that influence the choice to affiliate or not affiliate with a religion. For instance, regardless of an individual’s level of education, aggregate growth in education is associated with greater political tolerance of the nonreligious (Schwadel and Garneau 2014). Additionally, increases in higher education promote support for diverse

viewpoints (Williams, Nunn, and St. Peter 1976) and declines in religious authority (Balswick, Ward, and Carlson 1975), which should also lead to greater social acceptance of religious non-affiliation. Consequently, growth in college education may explain some of the period-based increases in religious non-affiliation (Schwadel 2010), while the influence of college education on an individual's decision to disaffiliate declines across birth cohorts.

Primary Hypotheses

The individual and aggregate trends discussed above suggest four primary hypotheses. First, changes in cultural capital and access to religious-based social networks among the college-educated, as well as the diffusion of behaviors from highly educated to less-educated segments of the population, suggest *Hypothesis 1: The positive effect of bachelor's degree on religious non-affiliation declines across birth cohorts.* Second, along with changes in the college-educated population, the religious deinstitutionalization of the non-college-educated suggests *Hypothesis 2: Those without a bachelor's degree are the most likely to report no affiliation in the youngest birth cohorts.* Third, social and cultural changes associated with aggregate growth in higher education suggest *Hypothesis 3: Aggregate (period and/or birth cohort) growth in the proportion of the population with a bachelor's degree is positively associated with non-affiliation.* Fourth, changes in the population of college-educated Americans that accompany aggregate growth in higher education suggest *Hypothesis 4: The decline in the positive effect of bachelor's degree on non-affiliation is associated with aggregate (cohort) growth in higher education.*

Additional Considerations: Post-Bachelor's Education, Religious Participation, and Religious Tradition of Origin

The above hypotheses do not directly address the role of a post-bachelor's education. Though little contemporary research focuses specifically on the effects of a post-bachelor's education, Tamney, Powell, and Johnson's (1989) analysis of aggregated data from 1973 to 1985 shows almost no difference in non-affiliation between those with a bachelor's degree and those with a graduate degree. Changes in the college-educated population discussed above, however, may not apply to those with a graduate degree. To address this possibility, I present additional analyses that examine intergenerational changes in the effects of both bachelor's degree and post-bachelor's degree on religious non-affiliation.

I incorporate religious service into the analyses to address alternative ways of conceptualizing abstaining from organized religion. It is important to note that religious non-affiliation is not always accompanied by not attending religious services, and vice versa (Lim, MacGregor, and Putnam 2010). Grouping non-practicing affiliates with other religiously affiliated respondents may therefore bias the results, as may grouping practicing non-affiliates with other non-affiliated respondents. Thus, I examine two alternative measures of lack of interaction with organized religion: either reporting no religious affiliation *or* not attending reli-

gious services, which represents a much larger proportion of the population than non-affiliation alone, and both reporting no religious affiliation *and* not attending religious services, which represents the segment of the population with little to no interaction with organized religion.

Finally, the religious tradition in which people are raised should influence changes in the association between education and religious non-affiliation. For instance, there has been considerable growth in being raised with no affiliation (Schwadel 2010), and those raised with no affiliation are relatively likely to continue to have no affiliation in adulthood (Lim, MacGregor, and Putnam 2010). Additionally, the impact of education may be limited among evangelical Protestants when the cultural influences of higher education and evangelical Protestantism conflict with each other (McFarland, Wright, and Weakliem 2011; Schwadel 2011; Vaisey 2008). Americans raised in evangelical Protestant homes are also relatively unlikely to disaffiliate (Wilson and Sherkat 1994). I address the influence of religious origin by presenting separate models for respondents raised with any affiliation, raised with no affiliation, raised evangelical Protestant, raised main-line Protestant, raised black Protestant, and raised Catholic.

Data and Methods

I use 1973–2010 General Social Survey (GSS) data to examine the relationship between education and reporting no religious affiliation. The GSS is a nationally representative survey of non-institutionalized American adults conducted annually or biennially since 1972 (Smith, Marsden, and Hout 2011). The GSS is generally administered in person, though some interviews are completed over the phone. Response rates vary between 70 and 80 percent.¹ I limit the sample to the surveys conducted from 1973 to 2010 because the religious-origin measures were not included in the 1972 survey. Respondents who are less than 25 years old are removed from the sample to avoid limiting variation in education, and to be consistent with previous research on religious non-affiliation (e.g., Hout and Fischer 2002). Respondents born before 1900 and after 1979 are deleted from the sample due to the small number of cases in those birth cohorts. The final sample size is 38,251.²

Dependent Variables

Respondents were asked, “What is your religious preference? Is it Protestant, Catholic, Jewish, some other religion, or no religion?” The primary dependent variable is a dichotomous variable, coded zero for respondents who answer Protestant, Catholic, Jewish, or some other religion, and one for respondents who report no religion. Additional analyses combine the no-affiliation measure with a measure of frequency of religious service attendance to explore lack of attachment to organized religion more broadly. Specifically, I use two additional dichotomous dependent variables: one that indicates no affiliation and no service attendance, and one that indicates no affiliation or no service attendance. Cohort-specific means for all level-one variables are reported in table 1.

Table 1. Level-1 Variable Means by Birth Cohort

	Born 1900 -04	Born 1905 -09	Born 1910 -14	Born 1915 -19	Born 1920 -24	Born 1925 -29	Born 1930 -34	Born 1935 -39	Born 1940 -44	Born 1945 -49	Born 1950 -54	Born 1955 -59	Born 1960 -64	Born 1965 -69	Born 1970 -74	Born 1975 -79
No religious affiliation	.02	.03	.03	.04	.04	.05	.05	.06	.08	.11	.12	.13	.12	.17	.20	.23
No religion & no attendance	.02	.02	.02	.03	.03	.03	.03	.04	.06	.07	.08	.08	.07	.11	.11	.13
No religion or no attendance	.15	.15	.12	.12	.13	.14	.14	.15	.17	.20	.20	.21	.21	.24	.28	.30
Bachelor's degree	.09	.08	.09	.12	.12	.17	.19	.20	.25	.29	.28	.26	.28	.29	.31	.29
Bachelor's degree only	.05	.06	.06	.08	.08	.10	.11	.11	.15	.19	.18	.19	.20	.22	.23	.21
Post-bachelor's degree	.04	.02	.03	.04	.04	.07	.08	.09	.10	.10	.10	.07	.08	.07	.08	.08
Age	77.46	73.79	70.83	67.87	64.08	60.47	56.34	51.20	47.05	42.48	40.23	37.54	35.61	33.48	31.37	28.79
Female	.58	.59	.60	.58	.57	.56	.56	.55	.55	.54	.55	.56	.55	.55	.56	.56
Family income (log)	9.58	9.66	9.85	10.07	10.20	10.32	10.45	10.48	10.58	10.58	10.54	10.49	10.48	10.45	10.39	10.32
Married	.40	.46	.51	.55	.62	.63	.66	.66	.65	.64	.60	.56	.54	.51	.48	.41
Children in home	.03	.05	.05	.09	.13	.21	.31	.41	.47	.50	.52	.53	.53	.53	.51	.45

	Born 1900 -04	Born 1905 -09	Born 1910 -14	Born 1915 -19	Born 1920 -24	Born 1925 -29	Born 1930 -34	Born 1935 -39	Born 1940 -44	Born 1945 -49	Born 1950 -54	Born 1955 -59	Born 1960 -64	Born 1965 -69	Born 1970 -74	Born 1975 -79
African American	.10	.11	.11	.11	.11	.12	.13	.13	.12	.13	.15	.15	.15	.16	.16	.16
Other race	.00	.00	.01	.01	.01	.02	.03	.02	.03	.04	.04	.04	.07	.09	.13	.14
White	.90	.88	.88	.88	.88	.86	.85	.85	.85	.84	.81	.80	.77	.75	.71	.70
Urban	.22	.23	.22	.21	.20	.21	.21	.21	.21	.23	.22	.20	.23	.24	.25	.24
Suburban	.17	.18	.20	.22	.24	.24	.25	.25	.27	.27	.27	.29	.29	.27	.27	.28
Other urban	.36	.36	.40	.39	.41	.40	.39	.40	.39	.38	.38	.40	.38	.39	.38	.39
Rural	.24	.23	.18	.18	.16	.15	.14	.14	.14	.12	.13	.11	.10	.10	.10	.10
South	.31	.35	.34	.33	.37	.34	.34	.36	.35	.34	.35	.35	.35	.37	.39	.40
Religion raised in																
Mainline Protestant	.38	.39	.35	.35	.31	.30	.27	.27	.26	.25	.23	.21	.18	.16	.14	.13
Evangelical Protestant	.27	.25	.25	.24	.27	.25	.26	.28	.26	.25	.24	.23	.24	.24	.24	.23
Black Protestant	.08	.10	.10	.10	.10	.11	.11	.11	.10	.10	.12	.11	.10	.10	.10	.10
Catholic	.20	.20	.22	.23	.25	.26	.26	.27	.29	.31	.32	.34	.35	.34	.32	.34
Jewish	.03	.02	.03	.03	.02	.03	.02	.02	.02	.02	.02	.02	.01	.02	.02	.02
Other religion	.02	.02	.03	.02	.02	.03	.03	.03	.03	.04	.04	.04	.06	.06	.07	.06
No religion	.02	.01	.02	.03	.02	.03	.04	.03	.04	.03	.04	.05	.06	.08	.11	.13
N	565	942	1,322	1,837	2,235	2,344	2,359	2,736	3,377	4,295	4,279	4,112	3,152	2,234	1,547	915

Sample limited to respondents at least 25 years of age; N = 38,251.

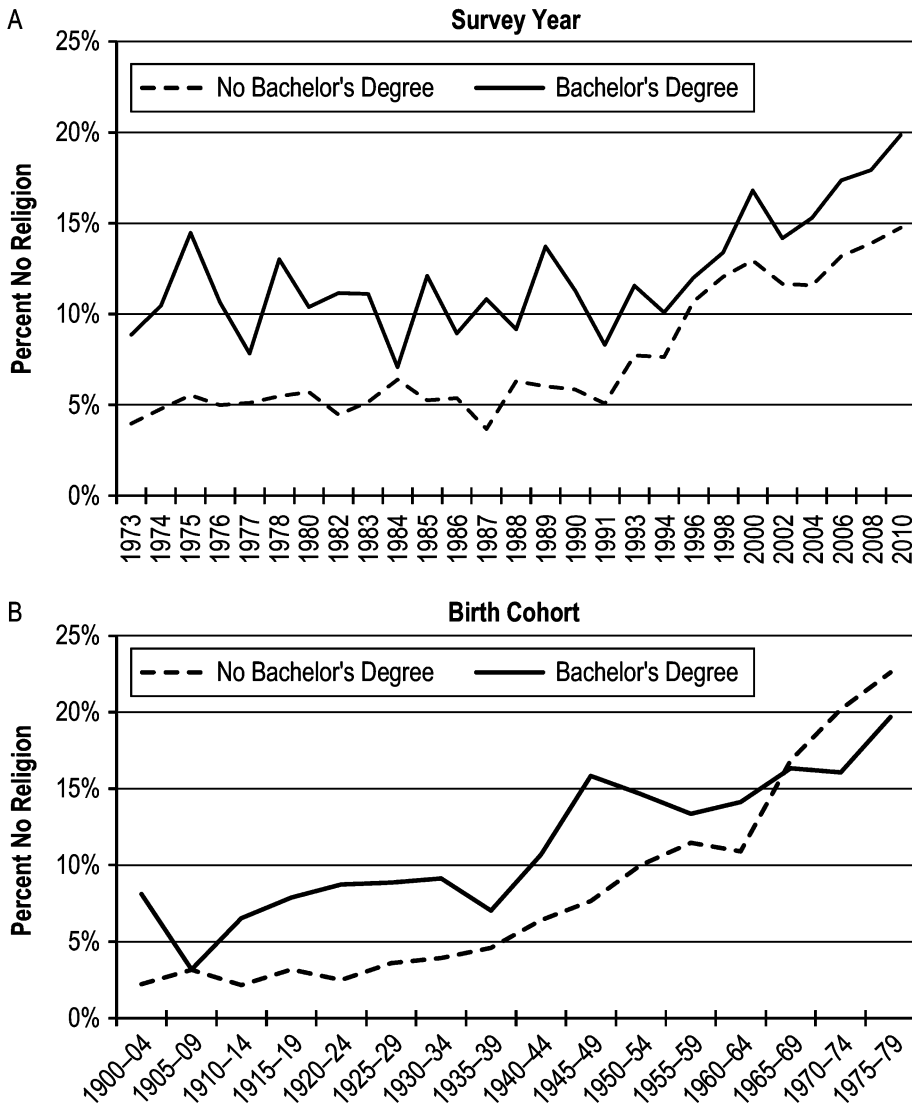


Figure 1. Gross time (survey year) and birth cohort changes in no religious affiliation. Sample limited to respondents at least 25 years of age; $N = 38,251$.

As figure 1a shows, the percent reporting no affiliation grew considerably from 1973 to 2010, for both the college- and non-college-educated. The difference between those with and without a bachelor's degree declined in the late 1990s, but then increased again in the early 2000s. Conversely, the gross cohort changes shown in figure 1b suggest that those without a bachelor's are the most likely to have no affiliation in younger cohorts. However, since age has a large effect on non-affiliation (Schwadel 2010), these gross cohort differences should not be taken as definitive evidence of an across-cohort reversal of the effect of education on non-affiliation.

Independent Variables

The key independent variables measure education, age, period, and birth cohort. Education is assessed with a dichotomous variable indicating respondents with a bachelor's degree. As table 1 shows, there is considerable across-cohort growth in the likelihood of having a bachelor's degree. Alternative models split the bachelor's degree variable into two dichotomous variables: bachelor's degree only and post-bachelor's degree. Age is measured in years of age, centered on the mean of age. Preliminary analyses show no nonlinear age effects. Each survey year is treated as a single period, and birth cohorts are coded into five-year intervals (1900–1904 to 1975–79). Period and cohort means of bachelor's degree are used to assess aggregate changes in education.

Religious tradition of origin is coded according to the religious tradition classification scheme developed by Steensland et al. (2000). The religious-origin variables are based on survey questions that ask respondents about their religious affiliation when they were 16 years old. The resulting categories are raised any affiliation, raised mainline Protestant, raised evangelical Protestant (i.e., conservative Protestant), raised Catholic, raised black Protestant, raised Jewish, raised in "other" religions, and raised with no religious affiliation. I present tradition-specific models to explore how the effect of education varies by religious origin, though there are no tradition-specific models for those raised Jewish or in "other" religions, due to small numbers of respondents in those groups. The religious-origin variables are also used as control variables in models employing all respondents and all affiliated respondents. Additionally, all models include controls for sex, marital status, children in the home, family income, urbanity, region, and race.³

Analysis Technique

Although there is currently no general solution to the linear dependency among measures of age, period, and cohort (Glenn 2005), recent methodological advances advocate hierarchical or multilevel models to adjust for this linear dependency problem when using repeated cross-sectional data (Yang and Land 2006, 2008). Hierarchical age-period-cohort (HAPC) models adjust for the dependency between age, period (year of survey), and birth cohort by treating cohorts and periods as cross-classified level-two units in a multilevel model (Yang and Land 2006).⁴ Individuals are the level-one unit of analysis. With this technique, individuals are nested in cohort-by-period cells. Random period and cohort intercepts establish variation from the mean for each period and cohort (Yang and Land 2006). Variance components for the education coefficient specify variation from the overall slope of education for each period and cohort. In conjunction with the main effect of education, period-specific and cohort-specific variations in the slope of education are used to estimate the effect of education separately for each period and cohort. Period- and cohort-level measures of education (i.e., mean with a bachelor's degree) are added to the model to address the role of aggregate increases in education. Cross-level interactions (individual education * average period- and cohort-level education) test whether the

impact of education on religious non-affiliation varies with mean levels of education in birth cohorts and time periods.

HAPC models are more statistically efficient than fixed-effects models when using unbalanced data that contain an unequal number of respondents in the cohort-by-period cells, which is the case in the GSS data (Yang and Land 2008). A logit link function adjusts for the dichotomous dependent variable. Consequently, the models report results in logged odds, similar to logistic regression. The results are converted into odds ratios in the text, in table 3, and in figures 2 through 6. Odds ratios above one indicate a positive effect, and odds ratios below one indicate a negative effect. All analyses are conducted in HLM 7. Unfortunately, the approximation methods used in computing the models do not produce a reliable deviance statistic or measure of model fit (Snijders and Bosker 1999). All analyses are weighted.

Results

Changing Effect of a Bachelor's Degree

Results from HAPC models of religious non-affiliation are shown in models 1 through 5 in table 2. The top portion of the table reports fixed effects in logged odds. The bottom portion of the table reports variance components that represent the amount of variation in both non-affiliation (intercept) and the slope of education across level-two units. Random effects results in model 1 show considerably more period-based variation (variance component = .139) than cohort-based variation (variance component = .022) in religious non-affiliation. The fixed-effects results show that age has a robust, negative effect on non-affiliation. Both changes in non-affiliation across time periods and the negative effect of age comport with previous age-period-cohort research on non-affiliation (e.g., Schwadel 2010). As expected, bachelor's degree has a strong, positive effect on reporting no religious affiliation. All else being equal, attaining a bachelor's degree is associated with a 34 percent ($e^{.29} = 1.34$; $1.34 - 1 = .34$) increase in the odds of reporting no religious affiliation. Across the cumulative GSS, education, but not family income, is positively related to religious non-affiliation.

Testing the primary argument—that the effect of higher education declines across birth cohorts—model 2 adds random slopes for bachelor's degree. The bachelor's degree period variance component (.006) is small and not significant. Conversely, the bachelor's degree cohort variance component (.199) is large and significant, indicating that the effect of bachelor's degree varies across birth cohorts. This variation is depicted in figure 2, which reports cohort-specific odds ratios for the bachelor's degree variable. As figure 2 shows, having a bachelor's degree is strongly and positively associated with reporting no religious affiliation for members of the oldest birth cohort, born between 1900 and 1904, but the positive effect of a bachelor's degree is largest for the 1920–24 cohort. Among Americans born in the first half of the 1920s, the odds of reporting no religious affiliation are 186 percent greater for those with a bachelor's degree than for those without a bachelor's degree (odds ratio = 2.86). The positive effect of a college ed-

Table 2. Hierarchical Age-Period-Cohort Models of No Religious Affiliation (and/or No Religious Service Attendance)

Fixed effects	No religious affiliation													
	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6		Model 7	
	b	se	b	se	b	se	b	se	b	se	b	se	b	se
Intercept	-1.94	.10***	-1.96	.11***	-2.70	.28***	-2.86	.29***	-1.96	.11***	-.81	.07***	-2.50	.15***
Bachelor's degree	.29	.05***	.38	.13**	.38	.13**	1.61	.32***	-.16	.07*	.35	.15*		
X mean bachelor's (period)							1.50	1.00						
X mean bachelor's (cohort)							-5.49	1.31***						
Bachelor's degree only									.32	.14*				
Post-bachelor's degree	.51	.19***												
Mean bachelor's (period)					4.24	1.10***	4.38	1.12***						
Mean bachelor's (cohort)					3.41	1.21*	4.08	1.25**						
Age	-.03	.00***	-.03	.00***	-.02	.00***	-.02	.01***	-.03	.00***	-.01	.00***	-.01	.00**
Female	-.64	.04***	-.62	.04***	-.62	.04***	-.62	.04***	-.62	.04***	-.48	.31***	-.61	.05***
Family income (log)	-.02	.03	-.03	.03	-.03	.03	-.03	.03	-.03	.03	-.15	.02***	-.05	.03
Married	-.48	.05***	-.47	.05***	-.46	.05***	-.46	.05***	-.47	.05***	-.45	.04***	-.47	.06***
Children in home	-.29	.05***	-.31	.05***	-.31	.05***	-.31	.05***	-.31	.05***	-.27	.04***	-.30	.06***

(Continued)

Fixed effects	No religious affiliation						No religion OR no attend		No religion AND no attend					
	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6		Model 7	
	b	se	b	se	b	se	b	se	b	se	b	se	b	se
Cohort-intercept	.022***		.051***		.016***		.008**		.050***		.019***		.242***	
Bachelor's degree			.199***		.162***		.064***				.037***		.252***	
Bachelor's degree only									.227***					
Post-bachelor's degree									.121*					

All continuous covariates grand-mean centered; results reported in logged odds; N = 38,251.

a. White reference

b. Other urban reference

c. Mainline Protestant reference

*** $p \leq .001$ ** $p \leq .01$ * $p \leq .05$ (two-tailed test)

education is smaller but still large for most of the 1930s and 1940s cohorts, with odds ratios over 1.5 for all cohorts except the 1935–39 cohort. The effect of a college degree is smaller still for the 1950s cohorts (odds ratios = 1.28 and 1.17). By the 1965–69 cohort, college education has no effect (odds ratio = 1.00). Among members of the 1970–74 birth cohort, having a bachelor's degree is associated with a 40 percent *decline* in the odds of reporting no religious affiliation (odds ratio = .60; $.60 - 1 = -.40$). This negative effect is reduced but still relevant for the 1975–79 cohort (odds ratio = .82). Overall, these results show that the positive effect of a college degree on religious non-affiliation declines across cohorts, from those born in the 1920s through those born in the 1960s. Notably, college education is negatively associated with religious non-affiliation for the 1970s cohorts.

Aggregate College Education

I proposed that aggregate levels of education are both associated with non-affiliation and partially drive the decline in the positive, individual-level effect of education on non-affiliation. Models 3 and 4 in table 2 test these propositions. Results from model 3 show that both mean cohort bachelor's degree ($b = 3.41$) and mean period bachelor's degree ($b = 4.24$) have significant, positive effects on reporting no religious affiliation, indicating that growth in college education across time periods and birth cohorts is correlated with reporting no religious affiliation. Additionally, there is a considerable decline in the vari-

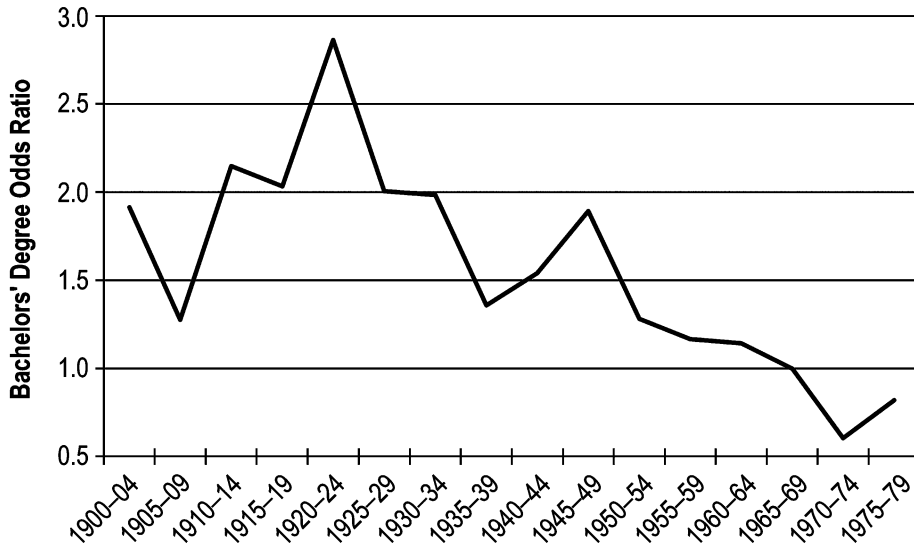


Figure 2. Cohort-specific odds ratios for bachelor's degree from hierarchical age-period-cohort model of no religious affiliation. Figure graphs results from model 2 in table 2.

ance components for both the period intercept (.110 in model 2 to .028 in model 3) and cohort intercept (.051 in model 2 to .016 in model 3) with the addition of aggregate measures of education to the model. In other words, aggregate increases in higher education appear to explain much of the period and cohort changes in reporting no religious affiliation.

Model 4 includes cross-level interaction terms between individual and aggregate measures of education. The results show that the addition of cross-level interactions leads to a large decline in the estimated across-cohort variation in the effect of a bachelor's degree on non-affiliation (variance component of .162 in model 3 reduced to .064 in model 4). The interaction between individual bachelor's degree and mean cohort bachelor's degree is large and significant ($b = -5.49$), which means the positive effect of a bachelor's degree declines as the cohort mean with a college education increases. These results support the proposition that across-cohort declines in the positive effect of education on religious non-affiliation are correlated with aggregate, across-cohort increases in education.

Post-Bachelor's Degree

Turning to differences among the college-educated, model 5 in table 2 includes two dummy variables for higher education: bachelor's degree only and post-bachelor's degree. The coefficients demonstrate that, in the aggregate, those with a bachelor's and those with a post-bachelor's degree are both more likely than those without a bachelor's degree to report no religious affiliation, though the odds ratio for post-bachelor's (1.67) is larger than the odds ratio for bachelor's only (1.38). The variance components indicate that the effects of both bachelor's

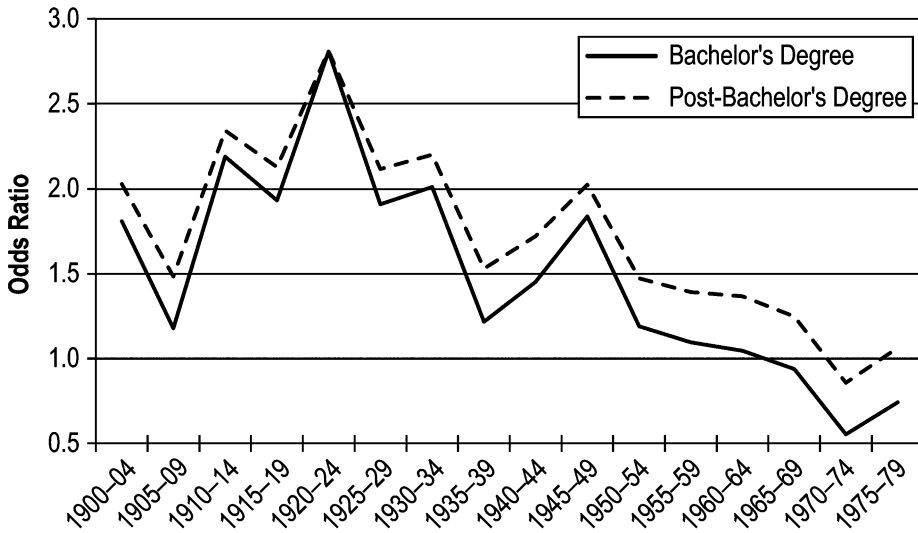


Figure 3. Cohort-specific odds ratios for bachelor's degree (only) and post-bachelor's degree from hierarchical age-period-cohort model of no religious affiliation. Figure graphs results from model 5 in table 2.

degree and post-bachelor's degree vary significantly across birth cohorts. As figure 3 shows, the positive effects of bachelor's degree and post-bachelor's degree decline across cohorts. Notably, though, there is no negative effect of post-bachelor's degree in the youngest cohorts. Among the 1970s cohorts, respondents without a bachelor's degree and those with a post-bachelor's degree are about equally likely to report no affiliation, while those with only a bachelor's degree are relatively unlikely to report no affiliation. Overall, these results demonstrate that the decline in the effect of higher education on religious non-affiliation extends to those with a post-bachelor's degree, but the negative effect of college education in the youngest cohorts does not hold for those with a post-bachelor's degree.

Non-Affiliation and/or No Attendance

The final two models in table 2 incorporate religious service attendance into the measure of no religious affiliation. The dependent variable in model 6 is reporting no religious affiliation *or* never attending religious services. Bachelor's degree has a moderate, negative effect on the measure of no affiliation or no attendance (odds ratio = .85), and this effect varies significantly across birth cohorts (variance component = .037). As the dashed line in figure 4 shows, bachelor's degree has little impact on no affiliation or no attendance in older cohorts (i.e., odds ratios near 1), while in younger cohorts, bachelor's degree has a strong, negative effect on no affiliation or no attendance (e.g., odds ratio of .70 for 1975-79 cohort).

The dependent variable in model 7 in table 2 is no affiliation *and* no attendance. Bachelor's degree has a positive effect (odds ratio = 1.42), but this effect varies considerably across cohorts (variance component = .252). As the solid line in figure 4 shows, bachelor's degree has a strong, positive effect on no affiliation and

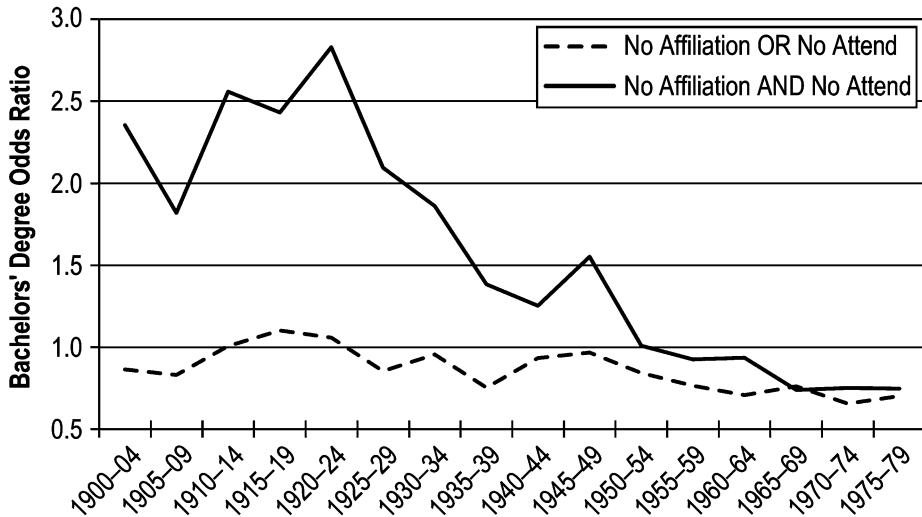


Figure 4. Cohort-specific odds ratios for bachelor's degree from hierarchical age-period-cohort models of no religious affiliation and/or no religious service attendance. Figure graphs results from models 6 and 7 in table 2.

no attendance in older cohorts, with odds ratios near or above 2 for all pre-1930 cohorts. This effect reverses direction across birth cohorts. In younger cohorts, bachelor's degree has a negative effect (e.g., odds ratios between .74 and .75 for those born between 1965 and 1979). Overall, these results suggest that in older cohorts the college-educated are relatively likely to exhibit intense forms of lack of interaction with organized religion (i.e., no affiliation and no attendance), but in younger cohorts, it is those without a college degree who are the most likely to lack interaction with organized religion, regardless of how that interaction is measured (i.e., no affiliation and/or no attendance).

Religious Origin

Table 3 reports results from HAPC models of no religious affiliation by religious origin. These models replicate model 2 in table 2 but limit the sample by the religious tradition in which respondents were raised. Among those raised with any religious affiliation, bachelor's degree has a positive effect on religious disaffiliation (odds ratio = 1.43), and there is substantial across-cohort variation in the effect of bachelor's degree (variance component = .148). This variation is represented by the solid line in figure 5, which depicts a large, across-cohort decline in the effect of bachelor's degree on religious disaffiliation. The odds ratio for bachelor's degree decreases from 2.45 for the 1920-24 cohort to .72 for the 1970-74 cohort. There is little difference between across-cohort changes in the effect of education among all respondents and among those raised with a religious affiliation, suggesting that the increase in the number of Americans raised with no religion is not unduly influencing the results. Additionally, the raised unaffiliated model in table 3 shows that the effect of bachelor's degree follows a similar

Table 3. Variance Components and Odds Ratio for Bachelor's Degree from Hierarchical Age-Period-Cohort Models of No Religious Affiliation by Religion Raised In

	Raised any affiliation	Raised unaffiliated	Raised evangelical	Raised mainline	Raised black Protestant	Raised Catholic
Bachelor's degree odds ratio	1.43**	1.50	1.09	1.64***	.82	1.81***
Variance components						
Period						
Intercept	.117***	.115***	.097***	.157***	.042	.053***
Bachelor's degree	.005	.077	.008	.001	.317	.012
Cohort						
Intercept	.040***	.283***	.058***	.133***	.024	.255***
Bachelor's degree	.148***	.441**	.231**	.152**	.054	.106*
N	36,544	1,681	9,514	9,500	3,830	11,270

All continuous covariates grand-mean centered; all models include controls for age, gender, race, family income, marital status, children in the home, region, and urbanity; the raised any affiliation model also includes controls for religion raised in.

*** $p \leq .001$ ** $p \leq .01$ * $p \leq .05$ (two-tailed test)

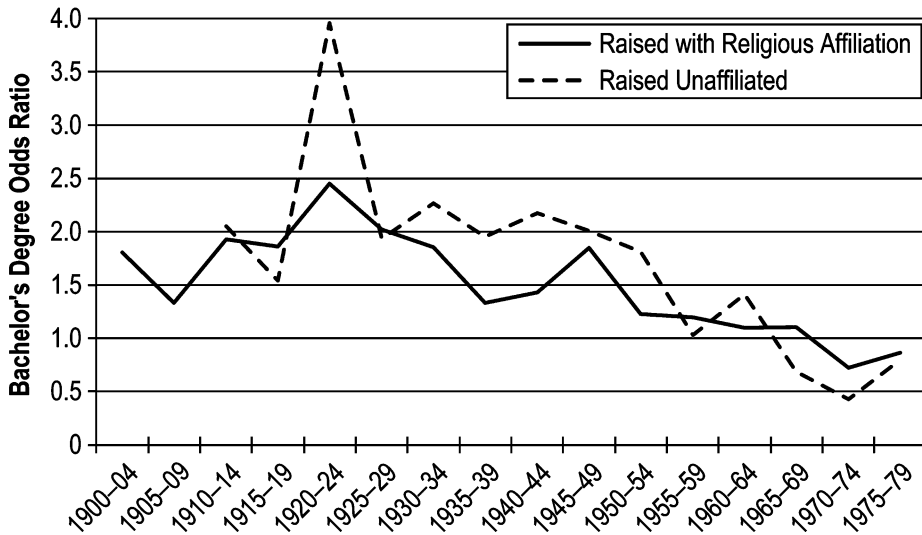


Figure 5. Cohort-specific odds ratios for bachelor's degree for respondents raised with a religious affiliation and respondents raised without a religious affiliation from hierarchical age-period-cohort models of no religious affiliation. Figure graphs results from models in table 3.

pattern for those raised with no affiliation (see figure 5).⁵ One notable difference is that the negative effect of bachelor's degree among the 1970s cohorts is more robust for those raised unaffiliated.

For those raised evangelical Protestant, the overall effect of education is small and not significant (odds ratio = 1.09). Nonetheless, the effect of bachelor's degree varies considerably across birth cohorts (variance component = .231). As figure 6 shows, bachelor's degree has little or no effect for the oldest cohorts raised evangelical, but a strong, positive effect for the 1920-24 cohort and the 1930s and 1940s cohorts. The effect of bachelor's degree is negative for both the 1950s and 1970s cohorts of respondents raised evangelical Protestant.

The results in table 3 also show considerable change in the effect of bachelor's degree (odds ratio = 1.64) across cohorts of Americans raised mainline Protestant (variance component = .152). As figure 6 shows, there is a relatively linear, across-cohort decline in the effect of bachelor's degree for those raised mainline Protestant, from the 1915-19 cohort (odds ratio = 3.23) to the 1950-54 cohort (odds ratio = 1.00). In contrast to the raised evangelical Protestant model, there is no negative association between bachelor's degree and disaffiliation among any of the cohorts raised mainline Protestant.

The raised Catholic findings (table 3 and figure 6) are similar to the raised mainline Protestant findings. Specifically, bachelor's degree has a strong, positive effect on disaffiliation among older cohorts (e.g., odds ratios near or above 2 for all pre-1940 cohorts), and this effect declines across cohorts (e.g., odds ratio of 1.05 for 1970-74 cohort). Finally, bachelor's degree is not meaningfully associated with disaffiliation for respondents raised black Protestant, and this association does not change significantly across periods or cohorts. In sum, the results in

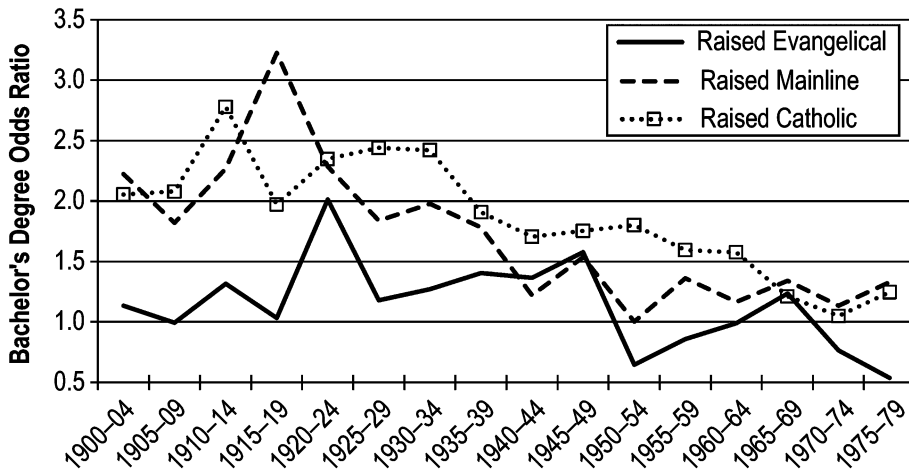


Figure 6. Cohort-specific odds ratios for bachelor's degree for respondents raised Protestant and Catholic from hierarchical age-period-cohort models of no religious affiliation. Figure graphs results from models in table 3.

table 3, depicted in figures 5 and 6, suggest that across-cohort declines in the positive effect of bachelor's degree on non-affiliation occur among those raised mainline Protestant, evangelical Protestant, Catholic, and with no affiliation, but the negative effect of bachelor's degree in younger cohorts is limited to those raised evangelical Protestant and unaffiliated.

Discussion and Conclusions

To summarize, I use repeated cross-sectional survey data from 1973 to 2010 to examine changes in the relationship between college education and reporting no religious affiliation. Age-period-cohort models show that the strong, positive effect of a college education on religious non-affiliation declines across birth cohorts, so there is no association between higher education and non-affiliation by the 1965-69 cohort. This finding supports the first hypothesis. It also fits with expectations from a cultural diffusion model (Palloni 2001; Pampel and Hunter 2012; Rogers 2003), which suggests that religious innovations that begin disproportionately among the highly educated eventually diffuse to the remainder of the population. While cultural diffusion is not easy to directly address through survey-based research, extending the above analyses to incorporate international samples could provide additional evidence.

Among Americans born in the 1970s, college education has a *negative* effect on non-affiliation. This finding supports the second hypothesis, as well as propositions regarding religious deinstitutionalization among the less educated (Wilcox et al. 2012). The religious deinstitutionalization of the non-college-educated is further supported by models that incorporate religious attendance into the measure of non-affiliation. In younger cohorts, a large minority of Amer-

icans report either not attending services or no religious affiliation (see table 1), and in those same cohorts, the non-college-educated are particularly likely to report either no attendance or no affiliation. At the more extreme end of religious deinstitutionalization, both having no affiliation and not attending services is relatively rare. Still, for those born between 1965 and 1979, the non-college-educated are disproportionately likely to report both no affiliation and no service attendance. These results extend Wilcox et al.'s (2012) analysis of service attendance by demonstrating that the religious deinstitutionalization of non-college-educated Americans involves both affiliation and service attendance, and it occurs across birth cohorts.

The absence of an association between higher education and non-affiliation for the 1965–69 cohort and the negative association for the 1970s cohorts have implications beyond affiliation with organized religion. Americans who matured in the 1960s and later are the motivation for what Wuthnow (1976) calls a “consciousness reformation” and what Bellah et al. (1985) call “Sheilaism” — world-views that emphasize religious individualism and an aversion to traditional forms of organized religion. Wuthnow, Bellah et al., and others who explore the cultural changes brought about since the 1960s suggest that education is positively related to this new frame of mind. Yet education does not positively affect religious disaffiliation for Americans born after the 1950s. This across-cohort change in the association between education and religious disaffiliation may apply to other forms of religious individualism and aversion to religious authority, or even to other cohort-appropriate cultural changes such as views of gender, race, and sexual orientation.

With regard to aggregate levels of education, the average level of education in both periods and birth cohorts is positively associated with religious non-affiliation. As higher education becomes more common, so does religious non-affiliation, regardless of an individual's level of education. This finding supports the third hypothesis, and it comports with Taylor's (2007) emphasis on the spread of “secular age” culture. The growth of higher education does not just affect those with a college education. Instead, increases in higher education bring about social and cultural changes that influence Americans in general. For instance, growth in political tolerance of the nonreligious — which is associated with aggregate increases in education — should lead to greater social acceptance of religious non-affiliation across the educational continuum (Schwadel and Garneau 2014). The above results are an important reminder that both individual and aggregate phenomena are relevant to social change.

The results also show that the positive effect of college education on religious non-affiliation declines as the proportion of cohort members with a college education increases. This finding supports the fourth hypothesis, and it aligns with changes in the college-educated population. In younger generations, college education is not limited to those with relatively high levels of cultural capital who are disproportionately predisposed to religious disaffiliation (Wilson and Sherkat 1994; Wuthnow and Mellinger 1978). Additionally, the growth of higher education has created a more diverse pool of college graduates who are not as socially isolated from religious-based social networks that are key to maintaining

religious affiliation (Baker and Smith 2009; Cheadle and Schwadel 2012; Maryl and Uecker 2011). Simply put, what it means to be a college-educated American has changed, and this likely influences established correlates of higher education, such as non-affiliation. Still, additional research is needed to more directly examine these proposed forms of social change, particularly how social networks and cultural capital vary across cohorts of college-educated Americans, and how these changes influence religious behaviors and other correlates of higher education. Further research is also needed to examine the impact of different types of educational institutions. It is possible that changes in the association between education and religious non-affiliation differ for those who attend religious and secular schools, and for those who attend elite, private universities and those who attend public universities (Hill 2011).

American religion has changed substantially in recent decades, as the proportion of the population raised with no religion has increased considerably (Schwadel 2010). Americans who were born in the 1960s and 1970s and raised unaffiliated are relatively unlikely to attain a bachelor's degree (Massengill and MacGregor 2012), which suggests that the decline in the positive association between college education and non-affiliation may be affected by those raised with no affiliation. Nonetheless, the above results show that across-cohort changes in the association between higher education and religious non-affiliation are relevant for both Americans with secular origins and those raised with a religious affiliation. In other words, there is a decline in the positive effect of college education on religious *disaffiliation*. In contrast to popular discourse, higher education is not associated with apostasy or the renunciation of organized religion for Americans born since the 1960s.

As expected, across-cohort changes in the effect of higher education on religious non-affiliation vary by religious origin. Among both Catholics and mainline Protestants, college education has a strong, positive effect on disaffiliation in older cohorts, and this effect declines across cohorts. Among evangelical Protestants, college education has a strong, positive effect on disaffiliation for most cohorts born between 1920 and 1949, but a negative effect for the 1950s and 1970s cohorts. Averaging the effects for the two 1970s cohorts, a bachelor's degree is associated with a 35 percent reduction in the odds of disaffiliation for those raised evangelical Protestant, a 23 percent increase in the odds of disaffiliation for those raised mainline Protestant, and a 15 percent increase in the odds of disaffiliation for those raised Catholic. Catholics and mainline Protestants in younger cohorts continue to fit the traditional model of being relatively likely to disaffiliate if they attain a bachelor's degree, though the magnitude of the association is considerably smaller than in older cohorts. Among evangelical Protestants in younger cohorts, however, it is the less educated that are particularly likely to become apostates.

These results suggest that the religious deinstitutionalization of non-college-educated Americans emphasized by Wilcox et al. (2012) is disproportionately evident among evangelical Protestants. Although the evangelical Protestant community has generally been relatively successful at transmitting religious affiliation across generations by limiting disaffiliation (Wilson and Sherkat 1994), this ca-

capacity has waned for the non-college-educated. One potential explanation for this change is the value placed on college-educated adherents in contemporary evangelical churches (McFarland, Wright, and Weakliem 2011). As evangelical churches become more welcoming to the highly educated, those with low levels of education may become increasingly uncomfortable in their churches (Schwadel 2012), leading to greater rates of disaffiliation among less-educated evangelical Protestants. A qualitative approach to why non-college-educated evangelical Protestants from younger cohorts are relatively likely to disaffiliate would be a fruitful extension to the above results (e.g., Sullivan 2011). Regardless of the reason for this finding, it is clear that as evangelical Protestant churches have gained in their relative social class (Schwadel 2014), they are having trouble retaining less-educated adherents.

In conclusion, secularization theories predict that higher education leads to declines in participation in organized religion (e.g., Beckwith 1985; Johnson 1997; Swatos and Christiano 1999), and this view was supported by the positive association between education and religious disaffiliation. The doubling of the proportion of Americans with no religious affiliation in the 1990s further fed the debate over secularization and the decline of religion (e.g., Hout and Fischer 2003; Marwell and Demerath 2003). The above findings, however, run counter to the assumption that education continues to have a secularizing influence, at least in terms of religious disaffiliation. Of course, secularization is a multifaceted concept. The findings in this article do not address other prominent secularization predictions, such as the waning influence of religious authority or the differentiation of religious and nonreligious institutions in modern societies (Gorski 2000). The growth of disaffiliation itself is probably evidence of secularization (Marwell and Demerath 2003), but individuals' education is not—or is no longer—responsible for this manifestation of secularization.

Notes

1. Response rates based on response rate 5 (American Association for Public Opinion Research 2008). See GSS, appendix A, for more information on sampling.
2. About half of the missing cases are due to non-response on the family income question. The results are unaffected when using a larger sample by excluding the income measure from the models. Unfortunately, HLM 7 does not allow for multiple imputation of missing data with cross-classified models, and the estimation of random slopes becomes unstable in other statistical software packages, such as Stata.
3. Sex is assessed with a dummy variable for female respondents. Marital status is a dummy variable for married respondents. Children in the home is a dummy variable for respondents with children below 18 years old living in their homes. Income is real family income in 1986 dollars, logged to limit heteroscedasticity. Three dummy variables account for city size: 100 largest SMSAs, suburbs of the 100 largest SMSAs, and rural areas; other urban (counties with towns of 10,000 people or more) is the reference category. A dummy variable for respondents in the South Census Region controls for geographic variability. Dummy variables for African American and other non-white respondents control for race, with white as the reference category.

4. Since there is no general solution to the linear dependency problem, there is a vibrant debate over the utility of age-period-cohort models. Most of the recent debate has focused on Intrinsic Estimator models (see *Demography* 50(6), 2013), rather than HAPC models (cf. Bell and Jones 2014; Frenk, Yang, and Land 2013). While this debate has not yet addressed random slopes, which are the focus of the analysis in the article, it is possible that the coding of period and cohort may influence the results. To address this possibility, the analysis in this article was repeated with several alternative codings of age, period, and cohort (not shown). For instance, in addition to the five-year cohorts, one-year periods, and continuous measure of age used in this article, I ran models with two-year periods, eight-year periods, four-year cohorts, ten-year cohorts, and dummy variables for five-year age groups. The results are robust to all these alternative codings of age, period, and cohort. The results are also similar when the primary independent variable is years of education rather than bachelor's degree.
5. The spike for the 1920–24 cohort is likely related to the relatively low number of respondents raised with no affiliation in that cohort (see table 1). Relatedly, the low number of respondents raised unaffiliated in the oldest cohorts led to the removal of the 1900–1909 cohorts from the model limited to raised unaffiliated respondents.

References

- American Association for Public Opinion Research. 2008. *Standard Definitions: Final Dispositions of Case Codes and Outcome Rates for Surveys*, 5th ed. Lenexa, KS: AAPOR.
- Baker, Joseph O., and Buster G. Smith. 2009. "The Nones: Social Characteristics of the Religiously Unaffiliated." *Social Forces* 87:1251–63.
- Balswick, Jack, Dawn M. Ward, and David E. Carlson. 1975. "Theological and Socio-Political Belief Change among Religiously Conservative Students." *Review of Religious Research* 17:61–67.
- Beckwith, Burnham P. 1985. *The Decline of US Religious Faith, 1912–1984*. Palo Alto, CA: B. P. Beckwith.
- Bell, Andrew, and Kelvyn Jones. 2014. "Another 'Futile Quest'? A Simulation Study of Yang and Land's Hierarchical Age-Period-Cohort Model." *Demographic Research* 30:333–60.
- Bellah, Robert N., Richard Madsen, William M. Sullivan, Ann Swidler, and Steven M. Tipton. 1985. *Habits of the Heart: Individualism and Commitment in American Life*. New York: Harper & Row.
- Braskamp, Larry A. 2007. "Fostering Religious and Spiritual Development of Students during College." *SSRC Web Forum*. <http://religion.ssrc.org/reforum/Braskamp.pdf>.
- Caplovitz, David, and Fred Sherrow. 1977. *The Religious Drop-Outs: Apostasy among College Graduates*. Beverly Hills, CA: Sage Publications.
- Cheadle, Jacob E., and Philip Schwadel. 2012. "The 'Friendship Dynamics of Religion,' or the 'Religious Dynamics of Friendship'? A Social Network Analysis of Adolescents Who Attend Small Schools." *Social Science Research* 41:1198–212.
- Cherlin, Andrew J. 2009. *The Marriage-Go-Round: The State of Marriage and the Family in America Today*. New York: Alfred A. Knopf.
- Cherry, Conrad, Betty A. DeBerg, and Amanda Porterfield. 2001. *Religion on Campus*. Chapel Hill: University of North Carolina Press.
- Clydesdale, Tim. 2007. *The First Year Out: Understanding American Teens after High School*. Chicago: University of Chicago Press.
- Cornwall, Marie. 1989. "The Determinants of Religious Behavior: A Theoretical Model and Empirical Test." *Social Forces* 68:572–92.
- Edgell, Penny. 2006. *Religion and Family in a Changing Society*. Princeton, NJ: Princeton University Press.

- Edmunds, June, and Bryan S. Turner. 2002. *Generations, Culture, and Society*. Buckingham, UK: Open University Press.
- Elias, Norbert. 2000. *The Civilizing Process: Sociogenetic and Psychogenetic Investigations*, rev. ed. Oxford: Blackwell Publishers.
- Evans, John H. 2013. "The Growing Social and Moral Conflict Between Conservative Protestantism and Science." *Journal for the Scientific Study of Religion* 52:368–85.
- Feldman, Kenneth A. 1969. "Change and Stability of Religious Orientations during College: Part I." *Review of Religious Research* 11:40–60.
- Fischer, Claude S., and Michael Hout. 2006. *Century of Difference: How America Changed in the Last One Hundred Years*. New York: Russell Sage Foundation.
- Frenk, Steven M., Yang Claire Yang, and Kenneth Land. 2013. "Assessing the Significance of Cohort and Period Effects in Hierarchical Age-Period-Cohort Models: Applications to Verbal Test Scores and Voter Turnout in US Presidential Elections." *Social Forces* 92:221–48.
- Glenn, Norval D. 2005. *Cohort Analysis*, 2nd ed. Thousand Oaks, CA: Sage Publications.
- Gorski, Philip S. 2000. "Historicizing the Secularization Debate: Church, State, and Society in Late Medieval and Early Modern Europe, ca. 1300 to 1700." *American Sociological Review* 65:138–67.
- Halman, Loek, and Veerle Draulans. 2006. "How Secular Is Europe?" *British Journal of Sociology* 57:263–88.
- Hill, Jonathan P. 2011. "Faith and Understanding: Specifying the Impact of Higher Education on Religious Belief." *Journal for the Scientific Study of Religion* 50:533–51.
- Hout, Michael, and Claude S. Fischer. 2002. "Why More Americans Have No Religious Preference: Politics and Generations." *American Sociological Review* 67:165–90.
- _____. 2003. "O Be Some Other Name." *American Sociological Review* 68:316–18.
- Iannaccone, Laurence R. 1994. "Why Strict Churches Are Strong." *American Journal of Sociology* 99:1180–211.
- Johnson, Daniel Carson. 1997. "Formal Education vs. Religious Belief: Soliciting New Evidence with Multinomial Logit Modeling." *Journal for the Scientific Study of Religion* 36:231–46.
- Kosmin, Barry A., and Ariela Keysar, with Ryan Cragun and Juhem Navarro-Rivera. 2009. "American Nones: The Profile of the No Religion Population, a Report Based on the American Religious Identification Survey 2008." Hartford, CT: Institute for the Study of Secularism in Society & Culture.
- Lauderdale, Diane S. 2001. "Education and Survival: Birth Cohort, Period, and Age Effects." *Demography* 38:551–61.
- Lee, Jenny J. 2002. "Religion and College Attendance: Change among Students." *Review of Higher Education* 25:369–84.
- Lim, Chaeyoon, Carol Ann MacGregor, and Robert D. Putnam. 2010. "Secular and Liminal: Discovering Heterogeneity among Religious Nones." *Journal for the Scientific Study of Religion* 49:596–618.
- Marsden, Peter. 1987. "Core Discussion Networks of Americans." *American Sociological Review* 52:122–31.
- Marwell, Gerald, and N. J. Demerath III. 2003. "'Secularization' by Any Other Name." *American Sociological Review* 68:314–16.
- Maryl, Damon, and Jeremy E. Uecker. 2011. "Higher Education and Religious Liberalization among Young Adults." *Social Forces* 90:181–208.
- Massengill, Rebekah P., and Carol Ann MacGregor. 2012. "Religious Nonaffiliation and Schooling: The Educational Trajectories of Three Types of Religious 'Nones.'" *Research in the Sociology of Work* 23:183–203.
- McFarland, Michael J., Bradley R. E. Wright, and David L. Weakliem. 2011. "Educational Attainment and Religiosity: Exploring Variations by Religious Tradition." *Sociology of Religion* 72:166–88.

- Miller, Samuel H. 1967. "Oppositions Between Religion and Education." In *Religion and Public Education*, edited by Theodore R.Sizer, 112–24. Boston: Houghton Mifflin Company.
- Palloni, Alberto. 2001. "Diffusion in Sociological Analysis." In *Diffusion Processes and Fertility Transition*, edited by John B. Casterline, 66–114. Washington, DC: National Academies Press.
- Pampel, Fred C., and Lori M. Hunter. 2012. "Cohort Change, Diffusion, and Support for Environmental Spending in the United States." *American Journal of Sociology* 118:420–48.
- Perry, Evelyn M., and Elizabeth A. Armstrong. 2007. "Evangelicals on Campus." *SSRC Web Forum*. http://religion.ssrc.org/reforum/Perry_Armstrong.pdf.
- Rogers, Everett M. 2003. *Diffusion of Innovations*, 5th ed. New York: Free Press.
- Ruiter, Stijn, and Frank van Tubergen. 2009. "Religious Attendance in Cross-National Perspective: A Multilevel Analysis of 60 Countries." *American Journal of Sociology* 115:863–95.
- Schmalzbauer, John. 2007. "Campus Ministry: A Statistical Portrait." *SSRC Web Forum*. <http://religion.ssrc.org/reforum/Schmalzbauer.pdf>.
- _____. 2013. "Campus Religious Life in America: Revitalization and Renewal." *Society* 50:115–31.
- Schwadel, Philip. 2009. "Neighbors in the Pews: Social Status Diversity in Religious Congregations." *Interdisciplinary Journal of Research on Religion* 5(2):1–24. <http://www.religion-journal.com>.
- _____. 2010. "Period and Cohort Effects on Religious Non-Affiliation and Religious Disaffiliation: A Research Note." *Journal for the Scientific Study of Religion* 49:311–19.
- _____. 2011. "The Effects of Education on Americans' Religious Practices, Beliefs, and Affiliations." *Review of Religious Research* 53:161–82.
- _____. 2012. "Race, Class, Congregational Embeddedness, and Civic and Political Participation." *Research in the Sociology of Work* 23:253–79.
- _____. 2014. "Are White Evangelical Protestants Lower Class? A Partial Test of Church Sect Theory." *Social Science Research* 46:100–116.
- Schwadel, Philip, and Christopher R. H. Garneau. 2014. "An Age-Period-Cohort Analysis of Political Tolerance in the United States." *Sociological Quarterly* 55:421–52.
- Sherkat, Darren E. 2007. "Religion and Higher Education: The Good, the Bad, and the Ugly." *SSRC Web Forum*. <http://religion.ssrc.org/reforum/Sherkat.pdf>.
- Smith, Christian, and Patricia Snell. 2009. *Souls in Transition: The Religious and Spiritual Lives of Emerging Adults*. New York: Oxford University Press.
- Smith, Tom W., Peter V. Marsden, and Michael Hout. 2011. *General Social Surveys, 1972–2010 Cumulative Codebook*. Chicago: National Opinion Research Center, University of Chicago.
- Snijders, Tom A. B., and Roel J. Bosker. 1999. *Multilevel Analysis: An Introduction to Basic and Advanced Multilevel Modeling*. London: Sage Publications.
- Stark, Rodney. 1963. "On the Incompatibility of Religion and Science: A Survey of American Graduate Students." *Journal for the Scientific Study of Religion* 3:3–20.
- Stark, Rodney, and Roger Finke. 2000. *Acts of Faith: Explaining the Human Side of Religion*. Berkeley: University of California Press.
- Steensland, Brian, Jerry Z. Park, Mark D. Regnerus, Lynn D. Robinson, W. Bradford Wilcox, and Robert D. Woodberry. 2000. "The Measure of American Religion: Toward Improving the State of the Art." *Social Forces* 79:291–318.
- Sullivan, Susan Crawford. 2011. *Living Faith: Everyday Religion and Mothers in Poverty*. Chicago: University of Chicago Press.
- Swatos, William H., and Kevin J. Christiano. 1999. "Secularization Theory: The Course of a Concept." *Sociology of Religion* 60:209–28.
- Tamney, Joseph B., Shawn Powell, and Stephen Johnson. 1989. "Innovation Theory and Religious Nones." *Journal for the Scientific Study of Religion* 28:216–29.

- Taylor, Charles. 2007. *A Secular Age*. Cambridge, MA: Harvard University Press.
- Uecker, Jeremy E., Mark D. Regnerus, and Margaret L. Vaaler. 2007. "Losing My Religion: The Social Sources of Religious Decline in Early Adulthood." *Social Forces* 85:1667–92.
- US Census Bureau. 2007. "Table A-1. Years of School Completed by People 25 Years and Over, by Age and Sex: Selected Years 1940 to 2006." <http://www.census.gov/population/www/socdemo/educ-attn.html>.
- Vaisey, Stephen. 2008. "Socrates, Skinner, and Aristotle: Three Ways of Thinking About Culture in Action." *Sociological Forum* 23:603–13.
- Warner, Stephen R. 1993. "Work in Progress Toward a New Paradigm for the Sociological Study of Religion in the United States." *American Journal of Sociology* 98:5:1044–93.
- Wilcox, W. Bradford, Andrew J. Cherlin, Jeremy E. Uecker, and Mathew Messel. 2012. "No Money, No Honey, No Church: The Deinstitutionalization of Religious Life among the White Working Class." *Research in the Sociology of Work* 23:227–50.
- Williams, J. Allen Jr., Clyde Z. Nunn, and Louis St. Peter. 1976. "Origins of Tolerance: Findings from a Replication of Stouffer's Communism, Conformity, and Civil Liberties." *Social Forces* 55:394–408.
- Wilson, Bryan. 1982. *Religion in Sociological Perspective*. Oxford: Oxford University Press.
- Wilson, John, and Darren E. Sherkat. 1994. "Returning to the Fold." *Journal for the Scientific Study of Religion* 33:148–61.
- Wuthnow, Robert. 1976. *The Consciousness Reformation*. Berkeley: University of California Press.
- _____. 1988. *The Restructuring of American Religion: Society and Faith Since World War II*. Princeton, NJ: Princeton University Press.
- _____. 2007. *After the Baby Boomers: How Twenty- and Thirty-Somethings Are Shaping the Future of American Religion*. Princeton, NJ: Princeton University Press.
- Wuthnow, Robert, and Glen Mellinger. 1978. "Religious Loyalty, Defection, and Experimentation: A Longitudinal Analysis of University Men." *Review of Religious Research* 19:234–45.
- Yang, Yang, and Kenneth C. Land. 2006. "A Mixed-Models Approach to the Age-Period-Cohort Analysis of Repeated Cross-Section Surveys, with an Application to Data on Trends in Verbal Test Scores." *Sociological Methodology* 36:75–97.
- _____. 2008. "Age-Period-Cohort Analysis of Repeated Cross-Section Surveys: Fixed or Random Effects." *Sociological Methods & Research* 36:297–326.
- Young, Michael, and Peter Willmott. 1973. *The Symmetrical Family*. New York: Pantheon Books.



Acknowledgments

The author thanks Amy Anderson, Helen Moore, Julia McQuillan, Jacob Cheadle, Hugh Whitt, the anonymous reviewers for *Social Forces*, and the editor of *Social Forces* for their advice and assistance.

About the author

Philip Schwadel is an Associate Professor of Sociology at the University of Nebraska-Lincoln. His research examines religious and political perspectives and activities, with an emphasis on the influence of social class and both social and temporal contexts. His recent publications focus on generational changes in Americans' religious and political behaviors, as well as generational changes in the correlates of religious and political behaviors.