

# Explaining Why More Americans Have No Religious Preference: Political Backlash and Generational Succession, 1987–2012

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**Abstract:** Twenty percent of American adults claimed no religious preference in 2012, compared to 7 percent twenty-five years earlier. Previous research identified a political backlash against the religious right and generational change as major factors in explaining the trend. That research found that religious beliefs had not changed, ruling out secularization as a cause. In this paper we employ new data and more powerful analytical tools to: (1) update the time series, (2) present further evidence of correlations between political backlash, generational succession, and religious identification, (3) show how valuing personal autonomy generally and autonomy in the sphere of sex and drugs specifically explain generational differences, and (4) use GSS panel data to show that the causal direction in the rise of the “Nones” likely runs from political identity as a liberal or conservative to religious identity, reversing a long-standing convention in social science research. Our new analysis joins the threads of earlier explanations into a general account of how political conflict over cultural issues spurred an increase in non-affiliation.

**Keywords:** religious changes; nones; political polarization; generational succession

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ONE-IN-FIVE American adults expressed no religious preference in 2012, up from one-in-fourteen in 1987, according to the General Social Survey (GSS), a nationally representative survey of households (Smith et al. 2013).<sup>1</sup> Other surveys confirm the existence of a sizable trend toward declaring no affiliation; the consensus estimate for 2012 was 20 percent (Funk and Smith 2012). Among many changes in American religion in the last 25 years, this trend to less preference for religious identification is, quantitatively at least, the greatest.

<sup>1</sup>The GSS included the exact same religion question in every survey since its inception in 1972: “What is your religious preference? Is it Protestant, Catholic, Jewish, some other religion, or no religion?” Interviews are face-to-face except when respondents express a strong preference for phone (roughly 12 percent in recent years). We adjust standard errors of our calculations for the number of adults in the household, oversamples of African Americans in 1982 and 1987, complex treatment of initial non-respondents since 2004, and geographical clustering (see Smith et al. (2013, App. A)) for details and recommendations regarding using the data).

The rise of the “nones” occurred even as organized religion achieved unprecedented prominence in public discussions. Politicians invoked God and Christ as inspiration and rationale for their actions and policies while clergy backed them up with supportive statements (Domke and Coe 2008). It may seem ironic, then, that identification declined in an era of greater relevance. Evidence presented here will show, though, that the relationship between religion’s greater public presence and weaker personal identification was, in fact, causal. Organized religion gained influence by espousing a conservative social agenda that led liberals and young people who already had weak attachment to organized religion to drop that identification. In our analysis of the trend through 2000, we estimated that political backlash accounted for roughly three points of the seven-point increase in choosing no religious preference between 1987 and 2000 (Hout and Fischer (2002); see also Patrikios (2008)).

We also identified generational succession as an important source of waning religious preferences. The most religious cohorts in American history (those born in the first quarter of the twentieth century) were passing away; cohorts born after 1970 were entering adulthood with substantially weaker attachment to organized religions than the passing generations had. In our analysis of the trend through 2000, we estimated that generational succession also accounted for roughly three points of the seven-point increase in choosing no religious preference (Hout and Fischer 2002). Another change related to generational succession, the falling propensity of people raised without religion to acquire a religious preference in adulthood, had a strong effect on a small subpopulation; it contributed the seventh percentage point to the share of adults who had no religion, by our calculation.

In *American Grace* Putnam and Campbell (2010) linked both political backlash and generational succession to what they called the “earthquake and aftershocks” of the cultural changes in the 1960s. Young people’s attitudes regarding sex and drugs typified what media at the time characterized as a generation gap in thinking about lifestyle. According to Putnam and Campbell, views on the propriety of sex before marriage and the legality of abortion and marijuana capture the persisting effects of this culture shock. These attitudes and values correlate with both cohort and political views. People who were teenagers during and after the 1960s continued to have more tolerant views of sex and drugs years later. To this observation, we add that people who came of age during and after the 1960s also mistrust authority and value autonomy more than those who came of age earlier (Alwin 1990). These same attitudes and values align with cultural politics. The right takes traditional stances on sex, drugs, and the legitimacy of authority; the left supports a variety of proposals to remove legal restrictions on activities and substances that once were banned and to extend legal protection to gays, lesbians, and transgender people.

Secularization theory long anticipated a significant decline in Americans’ religious identification (Marwell and Demerath 2003). But secularization specified religion’s irrelevance, not its prominence, as the mechanism for waning identification. The classic version of secularization hypothesized that

the inexorable march of modernization, reason, and science would banish traditional explanations of the material world. People would stop consulting traditional authority for guidance and would lose faith, the churches would empty, and religious identification would die out. Fewer Americans affiliate with organized religion than twenty-five years ago, but evidence here and elsewhere (Hout and Fischer 2003) shows that secularization is hardly the cause of this trend.

This paper extends our earlier work, that of Putnam and Campbell (2010) and Patrikios (2008). First, we update the time series. Data gathered since 2000 reduces uncertainty about the pace of change and shows it to be steady, neither accelerating nor slowing. Second, we recalibrate the relative contributions of competing explanations of the “rise of the nones” — political backlash, generational succession, and changing religious beliefs — now that the trend to be explained is a 13 point increase rather than a 7 point increase. New data indicate that political backlash remains important, but ongoing generational succession is even more so. There is still almost no evidence of secularization. Third, we develop a model that incorporates competing explanations of cohort change. Estimates from that model help us understand the generational succession that is still unfolding. Large differences among cohorts in contested values and attitudes tie together the political and demographic explanations. Once again we get null results regarding religious beliefs. Fourth, we use panel data to assess the causal efficacy of political backlash and conclude that individuals’ political identities affect their religious identities. These four updates and extensions clarify and strengthen our political and demographic accounts of religious change while demonstrating the persistence of religious belief. We conclude that Americans decreasingly identify with organized religions despite still holding religious beliefs because political backlash and generational succession, both rooted in cultural changes and conflicts in the 1960s, continue.

## Updating the Time Series

Controversies over social issues have not abated in the last dozen years. The regulation of abortion remains controversial, and debates over gay mar-

riage and legalizing marijuana intensified after 2000. Many large churches prominently oppose all three. Meanwhile, mortality continued to take the exceptionally religious cohorts born before 1925 while adults coming of age in the 2000s appear to have a more diffuse sense of religion and less identification with a particular one than the elders they replaced. Thus the political-demographic framework in Hout and Fischer (2002) and Putnam and Campbell (2010) would predict that the percentage of adults with no religious preference continued to increase after 2000.

The updated GSS time series in Figure 1 shows that the percent of adults who answered “no religion” increased six percentage points from the 14 percent in 2000 to 20 percent in 2012.<sup>2</sup> We smoothed the raw data to keep sampling fluctuations from obscuring the trend.<sup>3</sup> Other surveys yield similar estimates of the religious preferences of American adults (Funk and Smith 2012).

The smoothed trend line fits the observed data points very well while accomplishing the goal of smoothing out the sampling fluctuations. Only one data point lies outside the 95 percent confidence area: 1991 — an observation 1.8 percentage points lower than the average of the observations before and after it. One reading might be that the trend away from organized religion had not yet started in 1991.<sup>4</sup> But then the puzzle is why

<sup>2</sup>Hout and Fischer (2002) primarily focused on people 25 to 74 years old to facilitate cohort analysis. In that age range, the percentages expressing no religious preference averaged three-fourths of a percentage point lower than the percentages based on all adults: 12, 13, 15, 16, 18, and 19 percent, for the even-numbered years from 2002 to 2012, respectively.

<sup>3</sup>We used a nonparametric technique — locally estimated (loess) weighted regression (Cleveland 1993) — to draw the trend line. The shape of the trend line depends on a parameter called the bandwidth. We chose a relatively narrow bandwidth of 0.4 in order to capture as much as possible of the abrupt acceleration of the trend in the late 1980s and early 1990s. The figure includes the observed percentages and the 95 percent confidence intervals of those observed percentages. The confidence intervals take account of each year’s sample size and the main features of the GSS sample design (see footnote 2 and the GSS codebook (Smith et al. 2013, App. A) for details). We center the confidence intervals on the smoothed data points even though they are calculated for the observed data to aid interpretation.

<sup>4</sup>We took that view in our 2002 paper when we summarized the 1974-2000 data with a spline function that was flat (a slope of exactly zero) from 1974-1991 and then log-linear upward thereafter (Hout and Fischer 2002).

the observed percentages in 1989 and 1990 were relatively high. The 1991 data point falls outside the 95 percent confidence area by less than one-tenth of a percentage point, so we accept the loess line as a reasonable account of the trend and view the 1991 as low due to sampling error.<sup>5</sup>

The percentage with no religious preference increased from 5.5 to 6.2 percent between 1972 and 1973, then changed very little (if at all) until the late 1980s. The current and ongoing increase started sometime between 1986 and 1991, accelerated and continued at a pace of just over 0.5 percentage points per year for over twenty years, rising from 8 percent in 1990 to 20 percent in 2012. The nearly straight trend line reflects the underlying data, not the technique used to smooth it; locally estimated regression is far more flexible than conventional regression.<sup>6</sup>

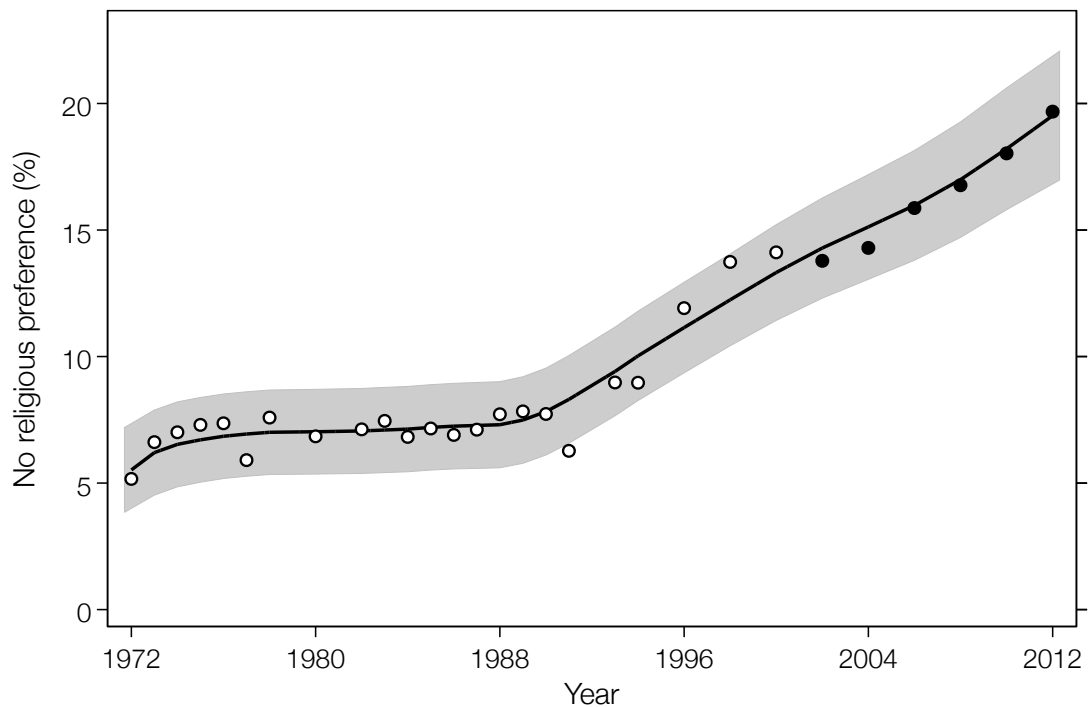
Next we use the updated series to assess three explanations: political backlash, generational succession, and religious beliefs. Then we develop multivariate models, first of generational succession and then of the possible causal role of political views in religious affiliation and disaffiliation.

## Explaining Trends I: Political Backlash

The increased tendency to answer no religious affiliation coincided with the polarization of American politics. By their higher birth rates, members of conservative Protestant denominations increased their share of Republican votes (Brooks and Manza 2004). Attending religious services emerged as a political factor at the same time; in most denominations, regular participants were more Republican than infrequent participants from the same denomination, beginning with the 1988 election (Putnam and Campbell 2010). Thus we expect to see the political backlash manifest

<sup>5</sup>Bootstrapped estimates of the confidence interval around the line are much narrower than the confidence interval shown in Figure 1. The bootstrapped confidence interval is useful for calculating whether change between pairs of years was significant; the area we show is more relevant for our purpose of assessing the fit of the smoothed line to the observed points.

<sup>6</sup>Our previous approach — using a spline — was far less flexible; we adopted this nonparametric approach to assure reduce the risk of imposing a straight line on nonlinear data (Hout and Fischer 2002).



**Figure 1:** No Religious Preference (percent) by Year: Adults, United States, 1972–2012.

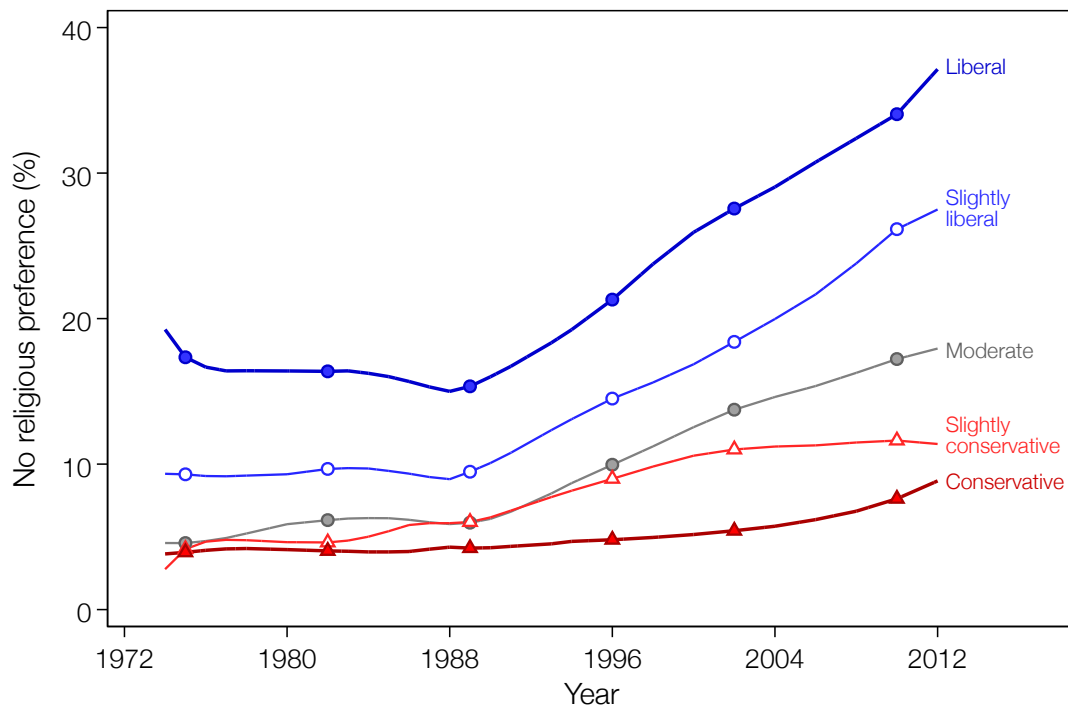
*Notes:* The line shows data smoothed by locally estimated (loess) regression with a bandwidth of 0.4; white circles show observed percentages through 2000; black circles show observed percentages 2002–2012; gray area shows the 95 percent confidence intervals for the full probability samples and an approximate confidence interval for the 1972 quota sample. The confidence intervals are centered on the smoothed data to aid interpretation. *Source:* Authors' calculations from General Social Surveys (Smith et al. 2013).

itself in a growing gap between the religious preferences of political liberals and conservatives.

Figure 2 updates the trends in religious affiliation by political views.<sup>7</sup> The developments since

<sup>7</sup>The GSS political views question is long and features a show-card: “We hear a lot of talk these days about liberals and conservatives. I’m going to show you a seven-point scale on which the political views that people might hold are arranged from extremely liberal — point 1 — to extremely conservative — point 7. Where would you place yourself on this scale?” The show-card is printed horizontally so that point 1 is on the left and point 7 is on the right. Few respondents chose the extreme answers (1 and 7), so we combined them with the adjacent ones (2 and 6, respectively) to make the figure. The trend lines in Figure 2 once again show the results of a nonparametric fit, run separately for each political category. We had to use a wider bandwidth (0.67) here than in Figure 1 because the subgroups necessarily have smaller sample sizes than the whole, requiring more bandwidth to achieve a smooth fit.

2000 underscore how disaffiliation is politically inflected. Liberals and moderates continued to move away from organized religion, as expected. Preferences changed at the same pace from 2000 to 2012 as they had from 1988 to 2000 (that is, the trend lines are nearly straight, even though the nonparametric smoothing allows them to curve). Political groups changed in proportion to how far left they were. Moderates changed less than the slightly liberal and more than the slightly conservative. Slightly conservative people were hard to distinguish from moderates in the data through 2000; in the longer time series their trend splits the difference between moderates and conservatives. In 1974 (the first year the GSS asked about political views), moderates, slight conservatives, and conservatives were indistinguishable with 4 percent of each group stating no religious preference. Over time a far larger fraction of



**Figure 2:** No Religious Preference (percent) by Year and Political Views: Adults, United States, 1974–2012.

*Notes:* Data smoothed by locally estimated (loess) regression within political category with a bandwidth of 0.67. Political views were first asked in 1974. *Source:* Authors' calculations from General Social Surveys (Smith et al. 2013).

moderates than conservatives became disaffiliated. In the twenty-five years between 1987 and 2012, the correlation between political identification and religious preference strengthened from  $-0.15$  to  $-0.25$ .<sup>8</sup> The percentage of adults with no religious preference increased after 1987 by 18 percentage points among liberals, 14 points among the slightly liberal, 11 among moderates, 8 among the slightly conservative, and only 3 percentage points among conservatives. By 2012, 36 percent of liberals preferred no religion; just 7 percent of conservatives preferred none.

<sup>8</sup>The correlations reported here are the Pearson correlations of the dichotomy “some religious preference” versus “none” the GSS’s seven-point political views scale discussed in the previous footnote, calculated from the 1987 and 2012 data, respectively.

## Explaining Trends II: Generational Replacement

People born between 1900 and 1925 were more religious than Americans born before or since: almost all professed a religion, expressed strong beliefs about God, and accepted matters of faith; most attended religious services as adults (Fischer and Hout 2006, pp. 197–200).<sup>9</sup> Our analysis of the trend through 2000 showed that the passing of this cohort contributed to the overall trend away from organized religion. Meanwhile cohorts born after 1965 were reaching adulthood; they were much less religious than the generation that was

<sup>9</sup>Belief in life after death is an interesting exception; recent cohorts are more likely to hold this view (Greeley and Hout 1999).

passing away. In combination this generational succession contributed to the steady increase in the percentage of adults who stated no religious preference. The empirical questions we address with new data are whether cohorts represented in the population before 2000 persisted in their patterns of non-affiliation while those that entered since 2000 continued the trend away from organized religion or reversed it. The answers are in the slope of lines representing the percentage preferring religion over time broken out by year of birth. If generational succession fully accounted for the trend over time in the preference for no religion, then plotting the preference over time within cohorts will appear as a series of flat lines. If temporal factors fully accounted for the trend since 2000, then all lines will slope upward at the same rate as the overall trend (about 0.5 percentage points per year). If both cohort and temporal change add to the overall trend, then the trend lines for individual cohorts will curve upward after the mid-1980s but their slopes will be less than 0.5 percentage points per year.

The young people who have become adults since 2000 express even less religious preference than any of the previous cohorts.<sup>10</sup> Between 25 and 30 percent of Americans born since 1975 stated no religious preference in recent years. The preference for no religion among people born 1966–1975 changed little (from 18 to 19 percent) since 2000. Early and late baby boomers, born 1946–1955 and 1956–1965, respectively, increased their preference for no religion two points from 13 to 15 percent since 2000.<sup>11</sup> People born before 1946 also became slightly more likely to prefer no religion since 2000, but in none of these cohorts did the percentage with no preference rise to ten percent. In short, the pattern of strong cohort differences through 2000 (Hout and Fischer 2002; Schwadel 2010) became even stronger in the years since then.

<sup>10</sup>To make the figure we calculated the percentage with no religious preference in each year for nine cohorts born at intervals labelled in the figure and then used loess regression (Cleveland 1993) to create smooth trend lines. The cohorts born before 1975 all have at least 15 years of data; for them we used a bandwidth of 0.5. The cohort born 1975 to 1984 has only nine years of data so we set the bandwidth to 0.9. The cohort born since 1984 was observed only in the last five GSSs, so we simply graph the mean across the five surveys for that cohort.

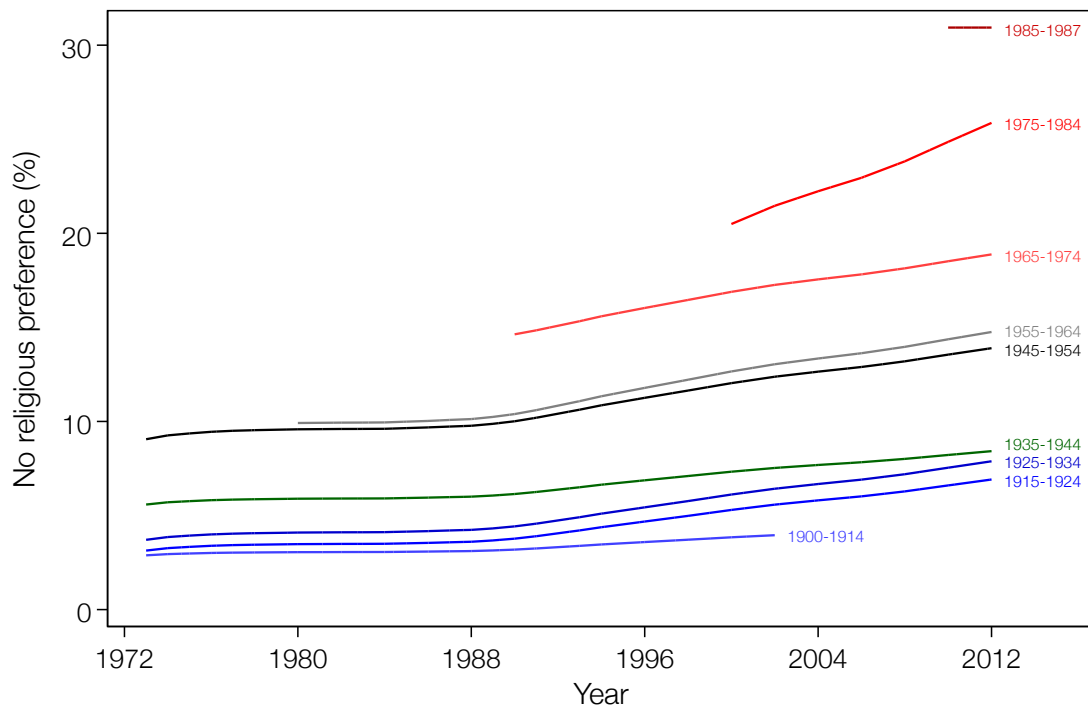
<sup>11</sup>The lines are separate because the smoothed percentages differ by a small, statistically insignificant amount.

Viewing the quarter-century of religious change all at once, we calculate that the percentage answering “none” in each cohort increased an average of 4.1 percentage points from 1987 to 2012. While significant both socially and statistically, that is less than one-third of the 12.8 percentage-point increase in the whole adult population over that time. Thus much of what at first appears to be a period trend amounts to differences among cohorts, made more profound by the passing of the most religious cohorts. A period trend of 4 points gives period-based explanations like political backlash some basis, but the differences from the earliest to the most recent cohorts are so large that they demand a different kind of explanation. By this metric, two-thirds of the increased tendency to declare no religion is rooted in generational succession.

## Explaining Trends III: Beliefs

Secularization may have once been a rather specific set of hypotheses, but over time its meaning has defused to the point where almost any downturn in a religious indicator counts as evidence of it. We take a rather textbook slant on it here, stipulating that for secularization to explain the rise of the “nones,” the sequence must accord with the original theory. First, modernization induces people to lose faith in God and religion. Then, as religion is no longer meaningful, they stop identifying with it. Yet, in our previous research, we found that many people who had no religious preference believed in God and life after death (Hout and Fischer 2002).

Here we update our analysis of belief using the most precise measure of belief in God asks people to choose from among six alternatives. Glock and Stark (1968) designed the response alternatives to capture popular expressions of atheism, agnosticism, a belief in a “higher power,” and three variants of doubt and faith in God (believing sometimes but not others, believing despite some doubts, and believing without doubt). This question has been in the GSS several times between 1988 and 2012. Figure 4 shows the trend in the atheist and agnostic responses (combined), the “higher power” response, and believing “without doubt.” It also shows the trend over time in stating a strong religious preference, believing in



**Figure 3:** No Religious Preference (percent) by Year of Survey and Year of Birth: Adults, United States, 1974–2012.

*Notes:* Political views were not asked until the 1974 GSS. Data smoothed by a locally estimated regression with a bandwidth of 0.5 for cohorts born before 1976 and a bandwidth of 0.99 for the 1975–1984 cohort. The cohort born since 1985 was observed in too few surveys for smoothing so we show its mean across all years as the smoothed value for each year. *Source:* Authors' calculations from General Social Surveys (Smith et al. 2013).

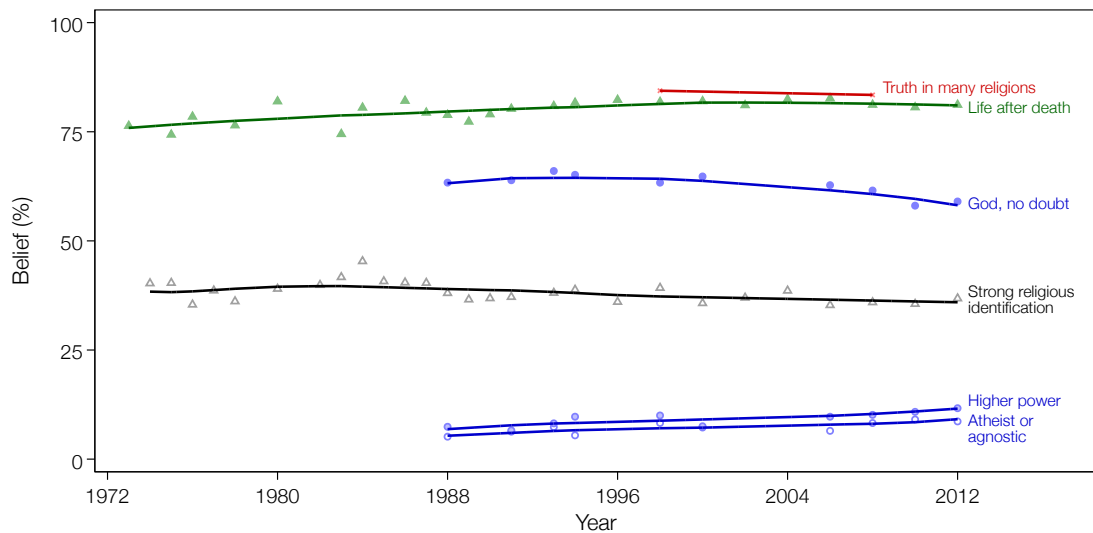
life after death, and choosing “there are truths in many religions” from alternative expressions about religion.<sup>12</sup>

If the trend to no religious preference grew out of spreading secularization, then we should see a substantial increase in the percentage atheist and agnostic and a corresponding decrease in the percentage believing in God without doubt. Instead, they changed only slightly and very recently. The changes are neither big enough nor soon enough to account for the 14-point increase in the percentage with no religious preference since this belief question was first asked in 1988. Nor do the other measures conform to the expectations of secularization. The most prevalent view in the last ten years is that there is truth

<sup>12</sup>The question about religious truths was asked in 1998 and 2008 but not in the other years.

in many religions; in 2008 (the most recent year the question was asked), 83 percent of adults gave that answer, 12 percent said there was truth in one religion, and only 5 percent said there was no truth in any religion. Belief in life after death was also very widespread, and this belief actually *increased* slightly (more among people with no religious preference than among those with a religious preference; see Greeley and Hout (1999)).

Another test of secularization considers the difference between strong and weak identification among people with a religious preference. Trends might be consistent with secularization if religious preferences became weaker among those who stated a preference. Schwadel (2013) found little change over time in strength of at-



**Figure 4:** Selected Religious Beliefs by Year: Adults, United States, 1973–2012.

*Notes:* Data smoothed by a locally estimated regression with a bandwidth of 0.8 for all but the “truths in religion” item (asked in only two years). *Source:* Authors’ calculations from General Social Surveys (Smith et al. 2013).

tachment;<sup>13</sup> we replicate that result here. The GSS asks about strength of preference right after the question about religious preference; in fact, strength is logically linked to preference.<sup>14</sup> People who answer “no religion” to the preference question are not asked the strength-of-preference item; they are automatically coded “no preference” on that item, too. Thus, as no preference increases, some of the other responses decrease. Drawing a conclusion about secularization hinges on whether it was the strong or not-strong responses that decreased. The 14-point increase in no preference between 1987 and 2012 was offset by a 3-point decrease in strong preferences and an 11-point decrease in not-strong and somewhat-strong preferences. We infer from this evidence that the segment of the population with strong religious attachments were relatively untouched by the political backlash and generational succession; the “nones” were recruited from among people who had weak religious attachments to begin with.

<sup>13</sup> Analysis by denomination shows that strength of attachment decreased among Catholics but increased among conservative Protestant, yielding little net change.

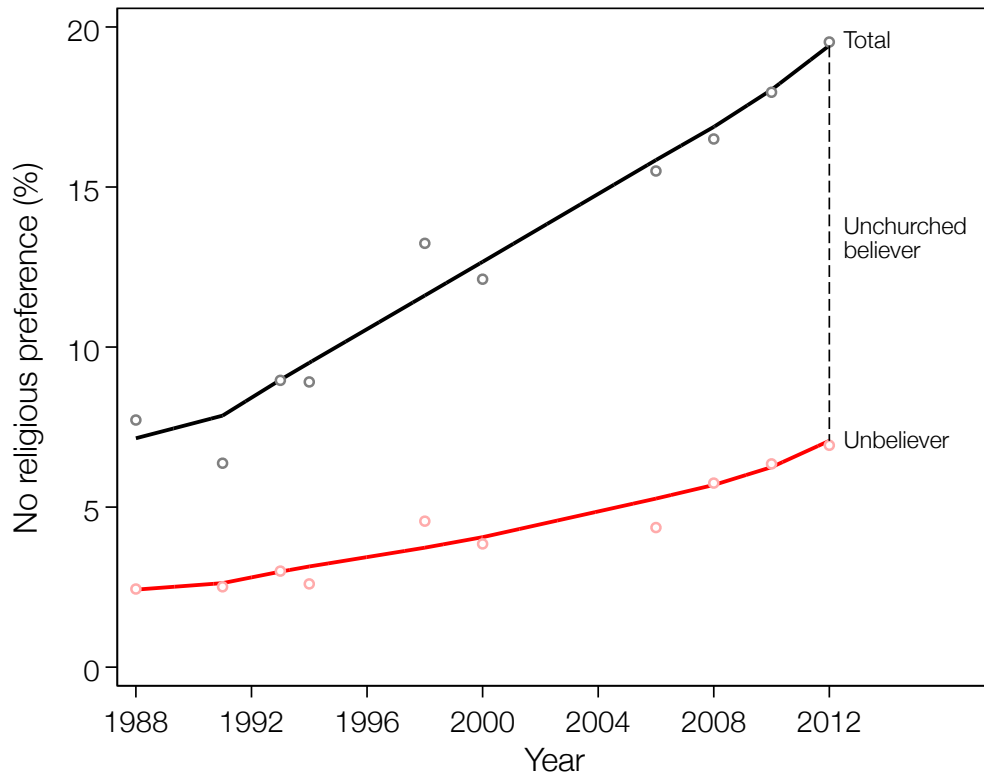
<sup>14</sup> The question is “Would you call yourself a strong or not too strong [blank]?” — filling the [blank] with the religion the respondent just mentioned as their preference.

In this way the trend to no religious preference reflected a variant of the polarization seen in many aspects of American life since the 1980s. People increasingly expressed either a strong preference for a specific religion or none at all; fewer Americans came to describe a religious preference that was “somewhat strong” or “not strong” — even though a majority used those terms in the 1970s and 1980s. Polarization, not secularization, affected religious preferences.

In short, the increase in claiming no religious preference was not preceded by an equally dramatic decline in belief or weakened religious attachment. Beliefs and the percentage with a strong religious preference hardly changed at all. Thus it is an error to equate the rising preference for no religion with an increase in unbelief.

In our previous paper we coined the term “unchurched believer” to describe people who have no religious preference but believe in God (Hout and Fischer 2002). Defining a “believer” as a person who believes in God or a higher power, GSS data show that the percentage of American adults who were unchurched believers increased from 4 to 12 percent between 1988 and 2012. Unchurched *unbelievers* — adults who prefer no religion and do not believe in God





**Figure 5:** Decomposition of Percentage Stating No Religious Preference into Unchurched Unbelievers and Unchurched Believers: Adults, United States, 1988–2012.

*Notes:*Data smoothed by a locally estimated regression with a bandwidth of 0.99. *Source:* Authors' calculations from General Social Surveys (Smith et al. 2013).

— increased from 2 percent to 6 percent. Figure 5 shows the trends for all years with data. Unchurched believers continued to be most of the new “nones;” unbelievers were a smaller proportion of the unchurched in 2012 than they were in 1988.<sup>15</sup>

Exploring these issues further, we found that fewer non-believers profess a religion now than in the 1980s, prompting a decline in the prevalence of the complementary category of “churched unbelievers” from 4 to 2 percent of adults.

The data in Figure 5 are but one prominent example of how Americans continue to believe in God but suspect churches. The 2008 GSS included another. In response to “I have my own

<sup>15</sup>Using a narrower definition of “believer” would reduce the estimated percentage of unchurched believers in each survey, by definition.

way of connecting with God without churches or religious services,” people with no religious preference agreed more strongly (31 percent strongly agreed and 33 percent agreed somewhat) than did people with a religious preference (23 percent strongly agreed and 44 percent agreed somewhat), but the difference of only 8 percentage points was quite modest.

Using “spiritual” and “religious” as terms to describe oneself is a third example. The GSS asks people how religious they are and then how spiritual they are in two separate questions. Table 1 shows the distributions for 2012, broken down by whether or not the person stated a religious preference. People with a religious preference were slightly less religious than spiritual; 23 percent were very religious and 32 percent were very spiritual. People with no religious preference

**Table 1:** Percentage Distributions of the Extent to Which People Describe Themselves as Religious and Spiritual by Some or No Religious Preference: Adults, United States, 2012.

Extent	Some religion		No religion	
	Religious	Spiritual	Religious	Spiritual
Very	23	32	3	17
Moderately	46	41	11	23
Slightly	22	21	21	30
Not	9	6	65	30
Total	100	100	100	100

*Source:* Authors' calculations from General Social Surveys (Smith et al. 2013).

were markedly less religious than spiritual; just 3 percent were very religious but 17 percent were very spiritual. While people without a religious preference were significantly less religious and spiritual than those who had a preference, 35 percent of “nones” were at least slightly religious and 70 percent were at least slightly spiritual. In this way, too, the distance from God is less than the distance from church.

Data on behaviors reinforce our interpretation. People who prefer no religion seldom if ever attend religious services, but many of them pray often. In 2012, 7 percent of people with no religious preference attended religious services monthly or more, but 37 percent prayed at least once a week and 22 percent prayed daily. Daily prayer was actually higher among the unchurched in the 2000s than previously; in the 1990s, 16 percent of “nones” prayed daily.

## Explaining Differences Among Cohorts

Generational succession turned out to be the major factor behind Americans' declining identification with organized religions (see Figure 3). Yet generational succession is a label, not an explanation. To craft an explanation we need to consider the contexts and content that yield differences among succeeding generations. We cull two explanations from the literature — secularization and culture shock — and propose a third — autonomy. Each has been linked to either religious change or cohort succession in previous theorizing or research.

- Evidence like that in the preceding section notwithstanding, *secularization* has been sociology's standard explanation of religious change since the earliest days of the discipline. Evidence of secularization in the United States is weak at best (Greeley 1972; Edgell 2012; Marwell and Demerath 2003; Hout and Fischer 2003), but secularization remains relevant because many Europeans claim it explains religious change there (Bruce 1992). Though skeptical, we include secularization among our competing explanations in case the shift in our focus from period to cohort change might result in the anticipated evidence that beliefs are declining and shaping American religious affiliation.
- Putnam and Campbell (2010) pointed to the *culture shock* of the 1960s sexual revolution — epitomized in growing acceptance of sex before marriage (Harding and Jencks 2003) — as key to religious as well as its other changes in American society. They went on to identify two aftershocks — the Christian backlash against open sexuality, epitomized by abortion politics (Greeley and Hout 2006), and the growing acceptance of homosexuality since the 1990s (Lofthus 2001) — as major influences on views of organized religion among people who came of age since the 1960s. They argued (pp. 92–96) that the culture shock and its aftershocks pushed younger people away from organized religion at the same time it pushed older people toward evangelical Protestantism. We will not engage their

ideas about older people converting, but we will test their hypothesis that tolerant attitudes toward drugs and sex pushed members of younger cohorts away from organized religion.

- Original to this paper, we invoke a value shift toward greater *autonomy* and away from traditional authority. In formulating our hypothesis we have drawn on social psychological research in the 1950s that identified the emergence of a positive bias in favor of thinking for oneself we refer to as “autonomy.” Most evidence has been compiled by asking survey respondents to rank things it might be important for a child to learn, including “to think for him or herself” and “to obey” among other potentially desirable qualities (Miller and Swanson 1958; Lenski 1961; Kohn 1976; Alwin 1990). Miller and Swanson (1958) argued that valuing autonomy over traditional authority was a cohort shift that reflected the new circumstances of postwar America, especially the growth of white-collar employment. Alwin (1990) confirmed that younger cohorts, especially among Catholics, were more favorable to independence of thought and less interested in obedience. Personal autonomy connects to religious change through traditional authority. Organized religions make strong claims for the veracity of ancient precepts and texts and for the ability of their clergy to interpret them correctly for contemporary circumstances. As successive generations come to prefer thinking for oneself over obeying, teaching authority erodes. In this way our argument echoes Chaves (1994), who argued that secularization was manifest in the narrowing societal influence of churches. Mainly, autonomy reflects the be-yourself sensibility that keeps young people detached as never before not only from organized religion but also from party politics, marriage, and other institutions.

To test the three hypotheses regarding generational succession, we developed measures of each concept. Our index of secularization is based on rejecting beliefs about God and the Bible. Our index of culture shock combines attitudes about premarital sex, homosexuality, and marijuana

cited by Putnam and Campbell (2010). Our index of autonomy is based on Alwin’s elaboration of Miller and Swanson (1958), Lenski (1961), and Kohn (1976). It measures the degree to which each cohort values children learning to think for themselves over learning to obey.

Individuals’ beliefs, attitudes, and values no doubt reflect their religious preferences at least as much as they influence them. Thus, we cannot just enter them in a regression as individual factors without biasing the estimates away from zero. More substantively, we are arguing here that these are social climate effects, that individuals responded to the value changes of their generations. So, we use cohort averages of secularization, cultural liberalism, and valuation of autonomy (calculated for single-year cohorts and smoothed) in our models; they vary from cohort-to-cohort but not within cohorts.

For our secularization index we combine the first two answers to the GSS question about belief in God (“I do not believe in God” and “I don’t know whether there is a God and do not believe there is any way to find out”), as we did in Figure 4, with the percentage of the cohort who describe the Bible as “an ancient book of fables, legends, history, and moral precepts recorded by men.” For each single year of birth, we calculated the percentage picking either the atheist or the agnostic response to the question about God and the percentage describing the Bible as fables, etc., and smoothed both time series.<sup>16</sup> Our secular-

ization index is the average of the two smoothed series. Because these items were first measured in 1988, we lacked estimates for the 1900 and 1901 cohorts; the smoothed lines were nearly flat for the first ten years we could observe, so we used the average rate of cohort-to-cohort change from 1902 to 1911 to extrapolate the trend back two more cohorts to cover 1900 and 1901.

Our counter-culture index comes from the GSS items about premarital sexual behavior, homosexual behavior, and marijuana. For each single-year cohort, we calculated the percentage saying premarital sex is never wrong, homosexual behavior is never wrong, and marijuana should be legal, smoothed each using locally estimated

<sup>16</sup>We used a relatively narrow bandwidth of 0.5 to preserve as many nonlinearities as possible given the number of observations per cohort.

(loess) regression (Cleveland 1993),<sup>17</sup> and averaged the three smoothed values.

For autonomy we began with the item Alwin (1990) used: “If you had to choose, which thing on this list would you pick as the most important for a child to learn to prepare him or her for life?” The list included “to obey,” “to work hard,” and “to think for himself or herself” (“think-self” for short) as well as “to be well liked or popular” and “to help others.” For each single-year cohort, we calculated the percentage who ranked “think-self” a more important than “obey” (TO), the percentage who ranked “think-self” as more important than “work hard” (TW), and the percentage who ranked “work hard” as more important than “obey” (WO). We smoothed these three series using locally estimated (loess) regression (Cleveland 1993)<sup>18</sup> and then combined them using the formula:  $\text{Autonomy} = .4 \cdot \text{TO} + .4 \cdot \text{WO} + .2 \cdot \text{TW}$ . We gave more weight to the two percentages that refer to obedience because the trend away from obedience is the substantive link between autonomy and organized religion.

Figure 6 shows the three indices by cohort. Although all three indices increased over time, the timing and extent of change differed among them. Cohorts valued autonomy over obedience more than they accepted sex and drugs and far more than they rejected God and the Bible. Autonomy did not increase after the 1950 cohort, though; by that time about 70 percent of each cohort valued teaching children to think for themselves over obedience. The percentages thinking sex and drugs were not wrong increased from about 8 percent in the earliest cohorts to over 60 percent in the most recent ones with only slight variation in the rate of change. A small share (7 percent) of the earliest cohorts rejected God and the Bible, slightly more (10 percent) of the baby boom cohorts did, and almost 20 percent of the cohorts born in the 1980s do.

These differences among indices in the timing of change drive the statistical results in our multivariate models. The levels do not determine the ability of one index or another to account for change across cohorts (or over time); it is the

<sup>17</sup>We set the bandwidth at 0.33 to capture nonlinearities because we had more observations on these items than on God or the Bible.

<sup>18</sup>We set the bandwidth at 0.33 as with the countercultural attitudes series.

shape of the trend line compared to the cohort trajectory in stating no religious preference that matters. Thus, to aid interpretation, we standardized all three indices to means of zero and variances of one. In that way, the relative magnitudes of the three coefficients are meaningful.

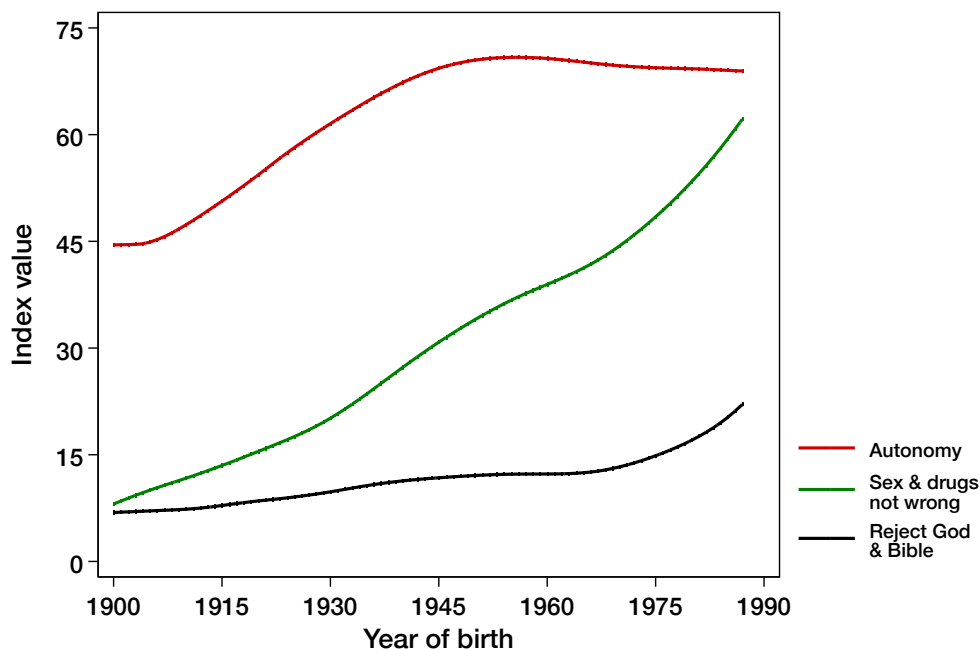
To gauge variation across cohorts in the preference for no religion in each model, we calculated the variance of the cohort coefficients in each model. We obtained those cohort coefficients two ways; we first added dummy variables to standard logistic regression models, then, when we encountered a multicollinearity problem described below, we switched to a multilevel modeling framework (Gelman and Hill 2007). In each model, we calculated the variance of dummy variable coefficients for five-year cohorts.<sup>19</sup> We also tracked the degree to which explanatory factors account for the year-to-year trend with a “sheaf” variable (Heise 1972) for the smoothed trend in Figure 1.<sup>20</sup> Using a sheaf to capture the trend follows the same logic as the spline in Hout and Fischer (2002), but has the advantage of tracing a smoother trend than the spline did. The spline specified no change through 1991 followed by log-linear change thereafter. That was a useful simplification, but the sheaf is more realistic in the way it avoids abrupt changes.

Although we are primarily interested in our “generation” model that includes personal attributes as controls and cohort attributes as explanations for the cohort variation, we build up to the generation model in steps. The “null” model has no cohort effects; it consists of the sheaf variable for time as the only predictor of preferring no religion; the coefficient for the sheaf variable is 1.0 by construction. The “baseline” model adds cohort dummy variables to the model.<sup>21</sup> The “personal” model adds social and demographic characteristics of each person — religious origin (some or none), gender, racial ancestry (four groups), education (five categories), marital status (five categories), parental status (yes or no),

<sup>19</sup>We included the zeros for the baseline category (the 1950–1954 cohort) in calculating the variances for the dummy variable coefficients (Hout et al. 1995).

<sup>20</sup>We turn year into a sheaf variable by recoding the years to the logit of smoothed percent “none” in Figure 1.

<sup>21</sup>We split years of birth from 1900 to 1984 into five-year intervals; the last interval covers 1985 to 1987. We chose the 1950–1954 cohort as the baseline for comparison because it is the largest one represented in all 28 GSSs.



**Figure 6:** Indices of Religious Disbelief, Counter-cultural Attitudes, and Autonomy by Year of Birth: Persons, 25 years old and over.

*Source:* Authors' calculations from General Social Surveys (Smith et al. 2013).

the interaction between married and parent, and region (five categories).<sup>22</sup> The difference between the cohort variance in the baseline and personal models indicates the degree to which the distribution of personal characteristics accounts for the cohort differences in preferring no religion. The generation model adds our three cohort indices — disbelief, countercultural attitudes, and autonomy — to the equation. The difference between the cohort variance in the personal and generation models indicates the degree to which these cohort indices account for the cohort differences in preferring no religion that the personal model could not account for. The size and statistical significance of the coefficients for the disbelief, countercultural attitudes, and autonomy indices indicate the relative importance of the secularization, culture-shock, and autonomy hypotheses in contributing to that accounting.

The key numbers from each model are shown in Table 2. The full models are in Appendix

<sup>22</sup>Measurement details about the personal characteristics are in Appendix Table A1.

Table A2. The cohort variance is substantial in the baseline model (.539), and adding the cohort dummies reduced the sheaf coefficient for year from 1.0 to .369, implying that over 60 percent of the trend reflects cohort succession and less than 40 percent is over time within cohorts. Adding personal characteristics to the baseline model reduced net cohort variance from .539 to .317 (a 42 percent reduction). The statistically significant sheaf coefficient of .367 means is nearly identical to the sheaf coefficient in the baseline model, implying that the personal characteristics explained none of the over-time trend within cohorts.

The crucial step of adding the three cohort indicators to the personal model yielded uninterpretable results. The counterculture and autonomy hypotheses led us to expect that the cohort indicators would account for a substantial portion of the remaining cohort variance; instead the cohort variance increased from .317 to .387. Worse, the pattern of cohort coefficients reversed and the standard errors for the cohort dummy variable coefficients were substantially larger than

the corresponding numbers in the personal model. Figure 7 shows the problem; the cohort coefficients from the baseline and personal models are on the left and those from the generation model estimated by conventional logit regression are on the right. The standard errors for the cohort indicators from this first attempt to fit the model (not shown in Table 2) were also large relative to the standard deviations of the indicators themselves (recall we standardized each indicator to a standard deviation of 1.0). These are classic symptoms of multicollinearity. To confirm our diagnosis, we created another sheaf variable (Heise 1972), this time from the cohort dummy variable coefficients in the personal model, and regressed it on the three cohort indicators; the  $R^2$  was 0.919 — high enough to indicate multicollinearity. The cohort indicators so completely captured the variation among cohorts we hoped to explain that we could not use conventional methods to separate the effects of the indicators from those of cohort.

Multilevel models (Gelman and Hill 2007), also known as mixed models (Rabe-Hesketh and Skrondal 2012), offer a solution. A two-equation multilevel model of the following form, rewrites the cohort variation as draws from a normal distribution; imposing a distribution on the coefficients helps to estimate both the cohort variance and the coefficients for the cohort-level predictors:<sup>23</sup>

$$\text{logit}(y_{ijt}) = \beta_{0j} + \beta_1 sTime_t + \sum_{k=2}^K \beta_k X_{ik} + \epsilon_{ijt} \quad (1)$$

<sup>23</sup>As Gelman and Hill (2007) explain, the multilevel approach weights alternative estimates, giving more weight to alternatives that have small standard errors and less weight to the ones with large standard errors. In a multilevel regression involving a continuous outcome variable, the estimates would be the weighted average of a rather unrestricted model that allows a different model of each cohort and a “pooled” regression that ignores cohort. The weights take account of the sampling variability of the unrestricted and pooled regressions. The weights would be  $a_j/(a_j + b)$ , where  $a_j = n_j/\sigma_y^2$  and  $b = 1/\sigma_{\beta_0}^2$ , if  $y$  were continuous. In this analysis, we have a dichotomous outcome — stating a religious preference or not — so model averaging is more complicated because  $\sigma_y^2$  cannot be separated from the mean of  $y$ . Nonetheless, the main point about results being a weighted average of alternative estimates applies even when the outcome variable is dichotomous.

$$\beta_{0j} = \gamma_0 + \gamma_1 Autonomy_j + \gamma_2 Counter_j + \gamma_3 Disbelief_j + \nu_j \quad (2)$$

where  $i$  indexes persons,  $j$  indexes cohorts,  $t$  indexes years of observation,  $\beta_{0j}$  is the cohort-specific intercept,  $sTime_t$  is a sheaf variable formed from the smoothed time series in Figure 1 (transformed to logits), the  $K$   $X$ -variables are the personal characteristics,  $\epsilon_{ijt}$  is the individual-level error term, the  $\gamma$ s are cohort-level coefficients to be estimated,  $Autonomy_j$ ,  $Counter_j$ , and  $Disbelief_j$  are the three cohort-level indices, and  $\nu_j$  is the cohort-level unobserved normal variable with a mean of zero and a variance to be estimated from the data. To confirm that switching from the dummy variable model to the multilevel model does not induce other changes in the results, we reestimated the personal model using the multilevel approach. The variance of the cohort dummy variables (0.317) was five percent larger than the variance estimated by the multilevel model (0.302). That could be a problem if some of the person-level coefficients were substantially different in the two models. As the details in Appendix table A2 reveal, the biggest difference between the two versions of the personal model are the estimated effect of year which was four percent bigger in the multilevel model.

The generation model, estimated as a multilevel model, accounts for all but a trivial residual cohort difference of .005. A second version of the generation model, this time based on single-year cohorts, confirms that the cohort indicators account for all but a small residual difference among cohorts. The sheaf coefficients of .336 and .332 in these models indicate that about one-third of the over-time trend within cohorts remains unexplained by the variables in the two versions of the generation model.

The test of whether valuing autonomy, culture shock, or secularization explains the efficacy of generational succession, we look to the coefficients for the cohort-level indices in the generation model. The more detailed model based on single-year cohorts produced slightly better results (the standard errors are smaller), but the results are reassuringly consistent. Countercultural attitudes toward sex and drugs differentiate the cohorts the most, followed by valuing auton-

**Table 2:** Coefficients and Standard Errors for Year (sheaf) and Cohort-level Explanatory Variables Plus the Variances of Year-of-birth Coefficients from Selected Models of Religious Preference by Method of Estimating Year-of-birth Effects: Persons 25 Years Old and Over, United States, 1973-2012.

	Null	Dummy variables		Multilevel model		
		Baseline	Personal	Personal	Generation	Generation'
Year (sheaf)	1.000 (0.049)	0.369 (0.059)	0.367 (0.058)	0.384 (0.049)	0.336 (0.049)	0.332 (0.049)
Year-of-birth (variance)		0.539 —	0.317 —	0.302 (0.112)	0.005 (0.003)	0.010 (0.005)
Cohort-level explan. variables						
Autonomy over obedience					0.094 (0.050)	0.104 (0.044)
Sex and drugs not wrong					0.320 (0.092)	0.299 (0.078)
Reject God and the Bible					0.034 (0.070)	0.048 (0.061)

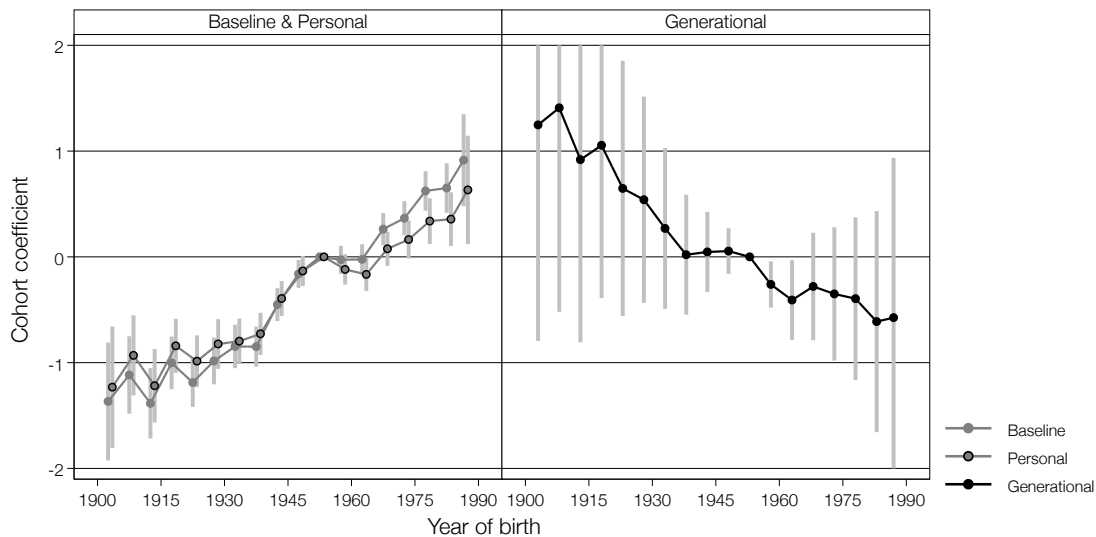
*Notes:*  $N = 47,092$  for all models. Cases weighted for design effects and the number of adults in the household. Standard errors are below the coefficients. Year (sheaf) was created by recoding year to the trend line in Figure 1, transformed to logits; its coefficient equals 1.0 in the null model by construction. Adding covariates to the model maintains the curve with respect to year, while the coefficient is free to take any value; a value less than one indicates that the covariate(s) explained some of the differences among years. Cohort variances measure net differences among five-year cohorts except in the Generation' model where the variance measures differences among single-year cohorts. See Appendix table A1 for measurement details and Appendix table A2 for all coefficients and standard errors for these models. *Source:* Authors' calculations from General Social Surveys (Smith et al. 2013).

omy. Secularization in the form of rejecting God and the Bible does not contribute to the explanation. Dropping secularization from the generation model (results not shown) had no effect on the estimated cohort variance while reducing the standard error for the countercultural indicator.

In sum, we have accounted for almost all of the cohort shift in religious preference with reference to two specific ways that cohorts born and raised since World War II increasingly differ from cohorts born before then. First, attitudes about personal liberties relating to sexuality and recreational drugs were bellwethers of the "generation gap" that was a major talking point during the 1960s. Those attitudes are now predictive of cohort differences in religious preferences. We caution against a narrow view of these results; it would surprise us if changing an individual's attitudes regarding premarital sex or legalizing marijuana would directly change their religious preference. Rather we view these particular attitudes as proportional to the various social norms and lifestyle features that shifted at more or less the same time generational differences in these

attitudes arose. We interpret this pattern as evidence that it was the broader normative stance that is behind the cohort differences in religious preferences. Second, cohorts from the 1930s to the baby boom increasingly valued personal autonomy over deference to authority or tradition. Rating "to think for him- or herself" ahead of "to obey" as important lessons for children to learn differentiates post-baby boom cohorts from those that came before. That component of cohort change predated and probably encouraged the attitude changes captured by our countercultural index.

All three of our cohort indices have substantial relevance for political backlash as well as for religious affiliation. Thus, though our 2002 paper contrasted politics and generations as alternative explanations, this analysis brings them together. Moreover, the analysis suggests that the specific religiously-inflected politics that alienated moderates and liberals of recent cohorts was the politics of personal morality (and not, by implication, the politics of class or foreign policy). The root causes of much of the political polarization over the last



**Figure 7:** Patterns of Cohort Variation in the Baseline, Personal, and Generation Model: Persons, 25 years Old and Over.

*Source:* Authors' calculations from General Social Surveys (Smith et al. 2013).

25 years — the conflict over the limits of choice and the relevance of traditional authority — also stand at the root of declining religious affiliation.

## Politics and Personal Change

We return now to the question whether liberal political views cause religious disaffiliation or merely correlate with it. The descriptive pattern in Figure 2 showed that from the late 1980s to now, political liberals became substantially more likely to express no religious preference, moderates became somewhat more likely to do so, and political conservatives (more religiously affiliated, even in the 1970s) changed very little. These changes were reflected in a stronger cross-sectional correlation between political views (scored on a number line from left to right — liberals low and conservatives high) and stating no religious preference; it was  $-0.15$  in the late 1980s and  $-0.25$  in the most recent data.<sup>24</sup> Social scientists have long viewed religion as a causal factor shaping political views (Lipset and Rokkan 1967; Manza and Brooks 1997). Could the correlation be ris-

<sup>24</sup>See footnote 8. A more sophisticated approach might detect even more change.

ing because a reciprocal relationship of political views causing religious disaffiliation is now adding to the long-standing effect of religion on politics?

Establishing causal relationships in observational data is notoriously difficult (Morgan and Winship 2007; Gelman and Hill 2007). To disentangle what might well be a reciprocal relationship is all the more daunting. But we have two new tools at our disposal: panel data from the GSS and counterfactual models with which to analyze the panel data.

The repeated observations on the same individuals in panel data allow researchers to track changes in one variable, the other, or both, sometimes noting which changed first when both did. Researchers have touted this power of repeated observations for causal inference at least since the 1940s (Lazarsfeld et al. 1948; Goodman 1973). Not all of the early claims have been borne out by subsequent analysis, but panels remain a very useful tool (Morgan and Winship 2007, Ch. 9).

The GSS added a panel component in 2006, and social scientists have begun to use it (Lim et al. 2010; Brooks and Manza 2013; Owens and Pedulla 2014). We pool the two completed panels, one started in 2006 and reinterviewed in 2008 and 2010 and the second started in 2008 and



reinterviewed in 2010 and 2012. Appendix Table A3 shows the details of panel retention. The relevant summary statistic is that 64 percent of the original respondents completed all three interviews.

Methodological developments known as the “counterfactual” approach, described and extended by Morgan and Winship (2007), provide the statistical tools to complement the panel data and the familiar “fixed effects” model for panel data (Allison 2009). We discuss these developments at length in our methodological appendix. The upshot of that work is a model that contrasts people’s responses to the religion question when they say their political views are liberal to their responses when they say they are not liberal, provided that they answer “liberal” at least once in their three interviews. Similarly, the model contrasts people’s responses to the religion question when they say their political views are conservative to their responses when they say they are not conservative, provided that they answer “conservative” at least once in their three interviews. In making both liberal and conservative views “treatments,” the model classifies moderate to be the neutral or untreated political response, a reasonable classification. More importantly, in estimating the effect from the difference between a person’s religious affiliation when taking a political view with the same person’s response when giving the moderate or neutral answer, the model controls for selection into either liberal or conservative political views (or both).

We estimate four versions of the model; this one is the most general:

$$\begin{aligned}
 \text{logit}(y_{it}) = & \mu + \delta_{1lib}Lib_{it} + \delta_{1con}Con_{it} \\
 & + \delta_2A_{it} + \delta_3M_{it} + \gamma_{1lib}Lib_i^* \\
 & + \gamma_{1con}Con_i^* + \gamma_2A_i^* + \gamma_3M_i^* + \sum_t \tau_{1t}T_t \\
 & + \sum_t \tau_{2lib,t}T_t Lib_i^* + \sum_t \tau_{2con,t}T_t Con_i^* \\
 & + \sum_t \tau_{3t}A_i^* T_t + \sum_t \tau_{4t}M_i^* T_t \\
 & + \beta_1 Y_{0i} + \sum_{k=2}^K \beta_k Z_{kit} + \nu_i + \epsilon_{it}
 \end{aligned} \tag{3}$$

where  $y_{it}$  is one if person  $i$  prefers no religion in year  $t$  and zero otherwise;  $\mu$  is the regression constant;  $Lib_{it}$  is person  $i$ ’s liberal views in year  $t$ ;  $Con_{it}$  is person  $i$ ’s conservative views in year  $t$ ;  $A_{it}$  is a dummy variable scored one if person  $i$  attended religious services “almost every month”

or more often in year  $t$ ;  $M_{it}$  is a dummy variable for being married;  $Y_{0i}$  is religious origins; the  $Z_{kit}$  are the other covariates in the model (gender, race, nativity, education, region, and year of birth);  $Lib_i^*$  is a dummy variable equal to one if person  $i$  identified as liberal in any wave of the panel;  $Con_i^*$  is a dummy variable equal to one if person  $i$  identified as conservative in any wave of the panel;  $A_i^*$  is a dummy variable equal to one if person  $i$  ever reported attending religious services monthly or more often;  $M_i^*$  is a dummy variable equal to one if the person ever reported being married; the  $T_t$  are dummy variables equal to one in year  $t$  and zero otherwise; and the  $\nu_i$  and  $\epsilon_{it}$  are random effects uncorrelated with the other variables. Appendix Table A1 gives details of how we coded each item. The  $\beta$ s,  $\gamma$ s,  $\delta$ s, and  $\tau$ s are coefficients to be estimated; the constant  $\mu$  and the variance of  $\nu$  are also estimated. The  $\delta$ s are the coefficients of greatest interest; they show the degree to which the competing treatments affected the treated.<sup>25</sup> We label this model the asymmetrical counterfactual model because it allows different magnitudes for the liberal and conservative effects.

The second version of our model takes a more conventional approach to political views, removing the political asymmetry from equation (3).<sup>26</sup> We call this the symmetrical counterfactual model. The third and fourth versions of the model repeat the first two, this time restricting the sample to those who were raised in a religion.<sup>27</sup>

The  $\delta$ s for liberals, conservatives, and political views are the quantities of greatest interest. Formally our political hypothesis that liberals, in particular, moved away from religious identification in the 1990s and 2000s while conservatives may have moved toward it implies that  $\delta_{1lib} > 0$  and  $\delta_{1con} < 0$  in the asymmetrical model and that  $\delta_{1PV} < 0$  in the symmetrical model. In our

<sup>25</sup>In the terms used in counterfactual inference they estimate the ATT.

<sup>26</sup>Formally, it is equivalent to putting constraints on each pair of political coefficients, making them equal in magnitude but opposite in sign, that is,  $\delta_{1lib} = -\delta_{1con}$ ,  $\gamma_{1lib} = -\gamma_{1con}$ , and  $\tau_{2lib,t} = -\tau_{2con,t}$  for all  $t$ . In practice, of course, we simply replace  $Lib_{it}$  and  $Con_{it}$  in equation (3) with the GSS variable `polviews` minus 3, so that liberals have negative scores, moderates have a score of zero, and conservatives have positive scores ( $PV_{it}$ ). We also replace  $Lib_i^*$  and  $Con_i^*$  with  $PV_i^* = Con_i^* - Lib_i^*$ .

<sup>27</sup>We drop religious origin ( $Y_0$ ) from each model due to this restriction.

discussion above, we suggested a mechanism for the growing correlation. Liberals with a religious background might feel a need to distance themselves from the conservative social agenda of the church they were raised in; without that kind of background, liberals raised with no religion would have nothing to distance themselves from, implying that we might get a better estimate of  $\delta_{lib}$  if we leave out people raised with no religion. Thus we repeat the statistical analysis for the subpopulation of people raised in a religion.

For comparison, we also fit a more conventional cross-lagged panel model (using only the symmetrical version):

$$\begin{aligned} \text{logit}(y_{it}) = & \mu' + \delta'_1 PV_{i,t-2} + \delta'_2 A_{i,t-2} \\ & + \sum_t \tau'_{1t} T_t + \beta'_1 Y_{0i} \\ & + \sum_{k=2}^K \beta'_k Z_{kit} + \nu'_i + \epsilon'_{it} \end{aligned} \quad (4)$$

where all terms are defined as they are for equation (3) and the primes (') serve to indicate that the parameters are estimated from different conditional means in the two models. In particular, the model in equation (4) may fail to adequately control for selection into having a political view. If so, then the estimates will reflect the bias, and  $\hat{\delta}'_1 > \hat{\delta}_{1PV}$ .

Table 3 presents four estimates of the counterfactual effect of political views: for two versions of the model — asymmetrical and symmetrical — and two samples — all cases and the subsample raised with a religion. Alongside those we show the results for the symmetrical version of the cross-lagged panel model (equation (4)) for the whole sample. There is no evidence that the effect of politics is greater for liberals than for conservatives. In the whole sample, the estimate for conservatives is actually slightly larger, though conventional statistical inference would fail to reject the null hypothesis that they are the same magnitude (just opposite sign). In the subsample raised with religion, the liberal coefficient is slightly stronger but, here too, the difference in magnitude between liberal and conservative is not statistically significant.<sup>28</sup> The cross-lagged panel model yields a larger estimate, as expected. Thus, among the estimates in Table 3, we prefer

<sup>28</sup>The estimate of  $\delta_{1con}$  is not significantly greater than zero, but as it is closer in absolute value to  $\delta_{lib}$  we infer that they are not different in magnitude, just sign.

the one based on the symmetrical version of the model and all available cases. We focus on it for the substantive discussion and use it to calculate expected probabilities.

Among people who ever take a political stance other than moderate, moving to the left substantially increases the odds of stating no religious preference; moving to the right decreases the odds proportionately. From the symmetrical estimate for the whole sample (−.369), we calculate that a person who changes from identifying as a moderate to identifying as liberal doubles his or her odds of preferring no religion compared to what they were as a moderate.<sup>29</sup> A corresponding step to the right from moderate to conservative would halve the odds.<sup>30</sup> As thinking in odds can be challenging, we calculated expected percentages and graphed some of them in Figures 8a and 8b.

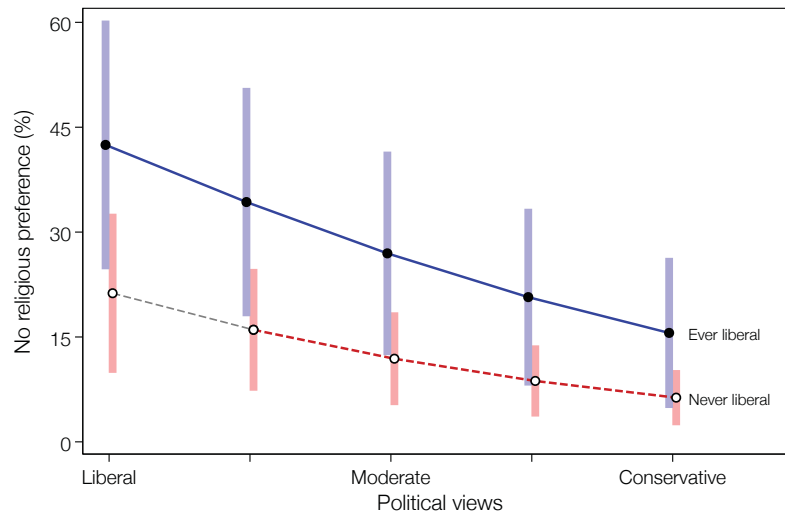
Figure 8a shows the key calculations for our political hypothesis: the expected percentages with no religious preference for each political view, as implied by our preferred estimate (−.369). These calculations require us to set the values of the other variables in the model; we chose raised in a religion ( $Y_0 = 1$ ), seldom attend services ( $A = 0$ ) and born 1966–1975, and set all other variables equal to their means. We show two curves: one for people who described their political views as liberal in at least one of the three interviews ( $PV^* = -1$ ), and the other for people who were never liberal  $PV^* = 0$ . The vertical lines show the 95 percent confidence intervals for each expected probability.<sup>31</sup>

The expected probabilities for those who were ever liberal span 27 percentage-points, dropping sharply from 44 percent among the current liberals to 29 percent among the current moderates to 17 percent among the current conservatives. Even that 17 percent is a high number compared to the prevalence of no religion in the whole population (20 percent), but this estimate is mainly a projection of the line running from liberals to

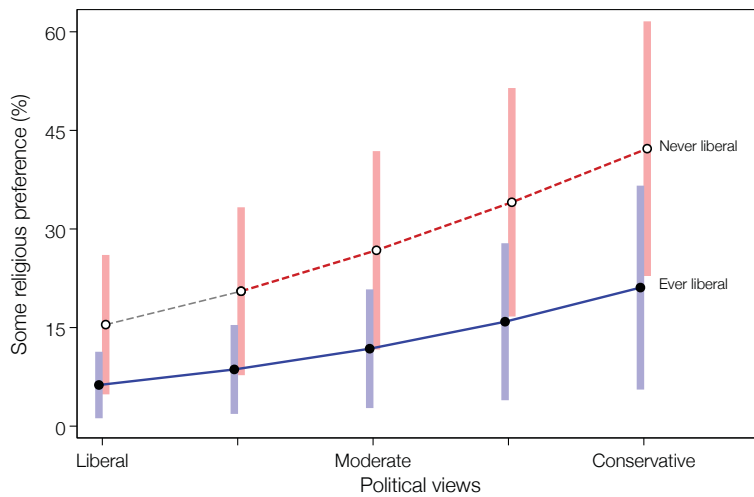
<sup>29</sup>Liberal is two steps to the left of moderate, so the calculation is  $\exp(-2\hat{\delta}_{1PV}) = 2.09$ , which we round off to 2 in stating that the odds double.

<sup>30</sup>Conservative is two steps to the right of moderate, so the calculation is  $\exp(2\hat{\delta}_{1PV}) = .48$ , which we round off to .5 in stating that the odds are halved.

<sup>31</sup>Because the confidence intervals overlap for some political views, we displace the expected percentages for the “never liberal” group .02 to the right and the percentages for the “ever liberal” group .02 to the left.



**Figure 8a:** Percentage with No Religious Preference by Political Views: Persons Born 1966–1975, Raised with Religion, Attended Religious Services Less Than Once a Month, 2012.



**Figure 8b:** Percentage with Some Religious Preference by Political Views: Persons Born 1966–1975, Raised with Religion, Attended Religious Services Less Than Once a Month, 2012.

*Notes:* The observations are limited to people interviewed in all three waves. The model includes random effects for persons and additional controls for racial ancestry, gender, nativity, education, marital status, and region. To calculate the expected percentages, cohort was fixed at 1966–1975, religious origin was fixed at some, attendance and ever-attendance were fixed at less than monthly, year was fixed at 2012, random effects were fixed at zero, and all other variables were fixed at their means. *Source:* Authors’ calculations from the first two General Social Survey panels, pooled (Smith et al. 2013).

**Table 3:** Estimates of the Effect of Political Views on Preferring No Religion by Model and Subsample: Adults, United States, 2006–2012.

Variable	Counterfactual				Cross-lagged Symmetrical All
	Asymmetrical		Symmetrical		
	All	Raised in a religion	All	Raised in a religion	
Political views			–0.369*	–0.335*	–0.471*
			(0.090)	(0.099)	(0.068)
Liberal	0.321*	0.312*			
	(0.129)	(0.142)			
Conservative	–0.362*	–0.292			
	(0.140)	(0.154)			

*Notes:* Standard errors in parentheses. The asymmetrical model allows liberals and conservatives to have different coefficients; the symmetrical model constrains them to have the same magnitude but opposite signs. All models control for gender, race, nativity, education, year of birth, and region. Models for all persons also control for religious origin. Coefficients for all variables in the counterfactual models are in Appendix Table A3. *Source:* Authors' calculations from the General Social Survey Panels 2006–2012.

\*  $p < 0.05$

moderates.<sup>32</sup> Selection is important here, too, as reflected in the gap between lines. Only 21 percent of the people who were otherwise similar to the ever-liberals were projected, counterfactually, to have no religious preference had they been liberal. Current conservatives nearly all have a religious preference; even in the relatively secular 1966–1975 cohort, only 6 percent are expected to have no religious preference.

The model also makes predictions about people raised without religion. In Figure 8b we show the expected percentage with *some* religious preference among people born 1966–1975 who were raised with no religion who attend less than monthly and were otherwise average. Again we made separate calculations according to whether or not they ever said they were liberal. Among those whose political views moved to the right, the probability of stating some religious preference rose sharply. For those who were ever liberal, 6 percent had a religious preference in 2012, compared to 21 percent among conservatives — a 15 percentage-point spread. The counterfactual calculation for those never liberal was that

<sup>32</sup>Because we have very few actual cases that match all the criteria of the calculation, this percentage applies to the very few people born after the baby boom who switched from liberal to conservative on political views.

15 percent of them would have had a religious preference had they been liberal, compared to 42 percent of the conservatives who were never liberal — a 27 percentage-point spread.

These results are strong evidence in favor of our political hypothesis. Among all adults in 2012, 38 percent of liberals and just 7 percent of conservatives had no religious preference. Our counterfactual calculations indicate that much of that reflects a direct causal effect of political views on the propensity to identify with no organized religion. The selection of people into liberal or conservative political views, some of which is driven by the reverse-direction causal effect of religious preference on political views, matters as well.<sup>33</sup>

## Conclusions and Discussion

In the twenty-five years from 1987 to 2012, the percentage of American adults expressing no religious preference increased from 7 to 20 percent.

<sup>33</sup>Because the counterfactual model relies on an interaction effect between ever-liberal and time and another between ever-conservative and time, we do not have a single coefficient that expresses the effect of selection, but the gap between lines in Figures 8a and 8b make its role obvious.

That represents an average rate of increase of one-half of one percentage point per year, sustained over 25 years. Data from the last six surveys, covering ten years, hardly depart from the long-term trend line, indicating that the pace of change shows no sign of either accelerating or slowing in recent years. Political backlash and generational succession contributed to the rising non-affiliation. In the most recent data, 36 percent of political liberals answered “no religion” when asked their religious preference, compared with 18 percent of moderates, and 8 percent of conservatives — a gap of 28 percentage points from left to right on the political spectrum.<sup>34</sup> This represents a political backlash because liberals (and many moderates) distanced themselves from organized religion when organized religion became more conservative. Political liberals expressed less attachment to organized religion even before the trend started; in 1987, 16 percent of liberals, 6 percent of moderates, and 4 percent of conservatives said “no religion” — a gap of 12 percentage points across the political spectrum. Social scientists usually interpret patterns like this as evidence of how religion affects politics.

In previous research, we concluded that, for this particular trend, the causal influence flows the other way — from politics to religion (Hout and Fischer 2002). Once the American public began connecting organized religion to the conservative political agenda — a connection that Republican politicians, abortion activists, and religious leaders all encouraged (Domke and Coe 2008) — many political liberals and moderates who seldom or never attended services quit expressing a religious preference when survey interviewers asked about it. New calculations here using panel data not only confirm the correlational pattern, but go further to support the inference that political backlash is actually causing some of the religious disaffiliation.

Generational changes have been even more important than the political backlash. Generational succession has two parts. People raised without religion since the 1960s have been increasingly likely to prefer no religion in adulthood than were people raised with no religion prior to the 1960s. Few readers will be surprised to know that among people born in the 1980s and raised

<sup>34</sup>We use the percentages from our statistical smoothing here to reduce the influence of sampling error.

without religion, over 80 percent preferred none when interviewed as adults. The surprising fact is that this intergenerational persistence is new. Among people born in the 1960s and raised without religion, 60 percent preferred no religion in adulthood; among people who were born in the 1930s and raised without religion, only 24 percent had no religious preference when they were interviewed as adults. For the U.S. population as whole, the emerging intergenerational persistence in being unchurched is still a small factor in religious change because, even now, a sizable majority of Americans are raised in some religion. But unless there is some kind of “awakening,” persistence among the unchurched will probably become quantitatively important in the future.

The second part of generational change applies to far more people, making it very salient for the population trends. People from recent cohorts with an upbringing in a religious tradition were also increasingly less likely to state a religious preference in adulthood than early cohorts had been. Among people born in the 1980s and raised with religion, 22 percent preferred no religion in 2012. That is 50 percent more (14 percent) than among people born twenty years earlier and raised with religion and five times what it was fifty years earlier; among people born in the 1930s and raised with religion, only 4 had no religious preference when they were interviewed in recent years.

Political backlash and generational succession apply mainly to religious affiliation, in particular; they are much less relevant for religion more generally. Neither the percentage believing in God nor the percentage stating a strong religious preference have changed substantially since the late 1980s. In 2012 61 percent of American 25 years old and older had no doubt God exists compared with 64 percent in 1988.<sup>35</sup> At the other end of the belief spectrum, 3 percent did not believe in God in 2012 compared with 2 percent in 1988. In 2012 as in 1988, 81 percent of Americans believed in life after death. “Unchurched believers” were 11 percent of American adults in 2012 compared to 4 percent in 1988.

We tested the possibility that the generational aspect of religious disaffiliation might be a sign of

<sup>35</sup>The GSS first asked about belief in God in 1988; we had to switch the baseline from 1987 to 1988 for that reason.

long-expected secularization in America; a multivariate model of cohort differences in religious preference showed no evidence that secularization, measured by belief in God, was driving change. Attitudes related to the sexual revolution of the 1960s and values that rank independent thought over obedience as important things for children to learn explain the cohort patterns in religious preferences. In our analysis these are *zeitgeist* changes tied to specific cohorts, not personal attitudes. For sixty years now, young people have been raised to think for themselves; parents emphasize obedience less (Alwin 1990). The young people who emerge from that kind of socialization may evince a fair amount of conformity, but they put the individual in the center and leave little margin for any authority — scientific, religious, judicial, political<sup>36</sup> — to dictate a worldview.

These *zeitgeist* changes have contributed to the political backlash, too (Putnam and Campbell 2010). In that way the multivariate analysis ties our political and demographic arguments together. For decades Americans' religious identifications were solid expressions of self that social scientists used to predict many other important facts of social life (Lenski 1961; Greeley 1991; Keister 2011). Cultural and political conflicts since the 1960s have shaken those solid expressions. Religious preferences are now as much an outcome of political identification as political identification once was an expression of religious tradition and political mobilization.

The alienation of liberals from churches is far from being institutionalized, however, largely because it is alienation and not action. In stating no religious preference, people are not siding with an anti-clerical movement. Most alienated liberals and individualist young people with no religious preference believe that they can access God without church, and do not want to be seen indirectly endorsing views church leaders express. Few were active in religion before they stopped saying they had a religious preference. Among those who were already adults in the Reagan era, their behavior now resembles their behavior then; they are just significantly less likely to say they have a religious preference.

<sup>36</sup>We know of no research on the subject, but suspect that even medical authority is coming under scrutiny as well-educated younger parents resist vaccinating their children.

The valuing of autonomy that gives rise to disaffiliation also blunts its potential for broader impact. In the 1970s it was easy to overstate religious adherence in the United States because the numbers were inflated by many people who were religious “in name only.” They believed in God or a higher power, but they seldom attended services and described their religious affiliation as “not very strong.” Now they state a preference on some occasions but not others (Lim et al. 2010). They still do not attend services, and when they state a preference they still label it not very strong. A census of church-goers would not have found them in the 1970s, just as it would not find them now.

We do not wish to soft-sell this change. It seems likely that the more pervasive disaffiliation becomes, the harder it will be for the churches to reach the unchurched. If unchurched believers stay unchurched for long, they or their children could easily become not only unchurched but also nonbelievers. As things stand now, though, organized religion might still have some chance of reaching a population that uses the names of churches to describe themselves. If some churches were to diversify their message, appealing to issues beyond sexual politics, perhaps the alienated liberals might think about church again. America's churches have long been important institutions for social connections and cultural production (Chaves 2004; Putnam and Campbell 2010). Over the last twenty-five years, religiously inactive people have identified less and less with them, partly because so many churches have made conservative political statements and some have backed conservative political initiatives. Time will tell if personalized religion is sustainable or if belief fades without public profession and community practice.

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