

Political Identity and Confidence in Science and Religion in the United States

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This article investigates changes in public perceptions of science and religion in the United States between 1973 and 2018. We argue that the deepening ties between science and religion and opposing moral claims reconfigured the relationship between political identities and confidence in science and religion during this period. Our analysis of 30 waves of General Social Survey data finds that while Republicans once were more likely than Democrats to be more confident in science than religion, Democrats are now more likely than Republicans. And, while Democrats used to be more likely than Republicans to be more confident in religion than science, this difference also reversed. These findings underscore the growing importance of political identities as predictors of confidence in science and religion and suggest that the politicization of science and religion fueled a perception that they provide not just alternative frameworks but opposing ones.

Key words: politics; science and technology; survey research; the United States

INTRODUCTION

Science and religion are deeply politicized in the United States (Gauchat 2012; Hout and Fischer 2014; Sherkat 2017). Since the 1970s, political elites and organizations have increasingly turned to science and religion to support moral claims about bioethics, sexuality, the environment, and more (Alumkal 2017; Evans 2018; Williams 2009). As right-leaning interests appealed to religious and traditional values, those on the left anchored their views to expert knowledge and scientific authority. Social scientists who study these processes often approach them separately and analyze changes in the political meanings of science

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and religion independently of one another. Yet, the boundaries of science and religion are often drawn in direct contrast to each other (Gieryn 1999; Sorrell and Ecklund 2019). Furthermore, the relational basis of social fields suggests that changes in the cultural meaning of one field correspond to simultaneous changes in adjacent fields (Fligstein and McAdam 2012). Given the cultural and historical relationship between science and religion, examining them in tandem may provide a more complete understanding of how they orient people's worldviews and daily lives.

In this article, we examine how the politicization of science and religion changed how they are perceived by the public. We view politicization as a wide-ranging set of processes that have embedded scientific and religious knowledge, values, and symbols within political parties and institutions. While previous studies have examined the politicization of science and religion independently of one another (Fischer and Hout 2014; Mann and Schleifer 2019), we investigate these processes simultaneously as part of a larger cultural realignment. We argue that beginning in the 1970s, changes in how science and religion were deployed in U.S. party politics prompted broad changes in their public meaning. As religious and secular conservatives tied science to liberal values and Democratic politics, religion provided a cultural counterweight. The growing number of episodes where science and religion were enlisted as moral and political alternatives gradually transformed their cultural meanings. These tensions surface in debates over bioethics (Evans 2013), sexuality (Whitehead and Baker 2012), race (Emerson and Smith 2001), the environment (Morrison et al. 2015), and more. In each of these instances, political and religious elites instigated a perception of normative conflict between science and religion. Their efforts ultimately contributed to widespread changes in the meanings attached to these cultural authorities. Consequently, perceptions of science and religion each grew increasingly rooted in moral and political dispositions.

Our analysis of 30 waves of General Social Survey (GSS) data collected between 1973 and 2018 supports these claims. We find that the association between political identity and confidence in science and religion intensified over time. The trajectory of the changes coincides with the changing uses of science and religion in U.S. politics. Given the importance of normative and moral orientations to political dispositions, we interpret the deepening ties between political identities and confidence in science and religion as evidence of their changing normative and moral significance. These findings suggest that perceptions of science and religion are more politically divided than at any time in recent history. They also indicate that the politicization of science and religion contributed to a belief that they provide not just alternative sources of cultural authority but opposing ones.

BACKGROUND

The Politicization of Science

We conceptualize science and religion as cultural authorities, by which we mean widely accepted sources of credible knowledge and values that orient belief

and behavior. Our approach is consistent with theories that view science and religion as social fields that compete for symbolic and material influence over social life (Bourdieu 1991; Fligstein and McAdam 2012). Numerous studies in this tradition examine how science interacts with other social fields, such as politics and religion. One of the most consistent findings from these studies is the widening gulf between liberals' and conservatives' perceptions of science in the United States (Gauchat 2012; Mann and Schleifer 2019; Motta 2018; Sherkat 2017). Although science has always been associated with a normative orientation (Merton ([1942] 1973)), its use during much of the twentieth century was seen through a lens of nationalism rather than partisanship (Kevles 1978). For example, Vannevar Bush's (1945) *Science: The Endless Frontier*, President Eisenhower's commissioning of the President's Science Advisory Committee, and President Kennedy's dogged pursuit of a national space program illustrate how Democrats and Republicans of the post-World War II era each viewed science as a vehicle for promoting the nation's interests.

Despite its initial popularity in the post-war years, several related developments gradually reshaped the public's view of science and provoked the mistrust of science among Republicans and conservatives that persists today. First, widespread deference to scientific and expert authority coupled with social movements focused on workers, consumers, and the environment fueled rapid growth of the regulatory state (Jasanoff 1994). However, increased regulation was met by coordinated resistance from large corporations. As these interests gained prominence in the Republican Party, deregulation and limited government became a unifying cause for conservatives (Gross et al. 2011). As the balance of power in the Republican Party tilted toward economic elites, hostility toward experts and regulators gradually permeated the party.

Second, economic elites' antipathy toward the regulatory state was joined by a widespread anti-intellectual movement (Gross et al. 2011). Barry Goldwater's presidential bid in 1964 seethed contempt for scientists, professionals, and other experts and helped to normalize the resentment of intellectualism that remains central to conservative ideology in the United States (Shermer 2013). This political shift is apparent in conservative populist discourse of the period, which centered on a critique of cultural elites (Bonikowski and Gidron 2015). The ascendance of conservative policy institutes and think tanks strengthened opposition to intellectuals and cultural elites by providing accounts of economic, environmental, and social issues that opposed those of the scientific establishment (Medvetz 2012). Ironically, right-wing policy institutes often relied on debunked or marginalized scientific claims to attack mainstream science (Oreskes and Conway 2010).

Third, the political activities of some scientists during this period contributed further to the cultural association between science and liberal politics. The close ties between science and the military and the accompanying surveillance of scientists during the early Cold War discouraged political activism in the scientific community (Thorpe 2002). However, in the more liberal climate of the 1960s

and 1970s scientific organizations such as the Union of Concerned Scientists gave scientists substantial voice in politics. These organizations advocated openly for liberal defense, environmental, and economic policies (Moore 1996). Although many “activist scientists” attempted to decouple scientific knowledge from its political implications, their activities within the broader political context of the period nonetheless heightened the perception of science as a liberal institution.

Ultimately, as science became associated with progressive moral and economic agendas, perceptions of science became tied to political identities. The Republican Party’s rejection of regulatory science and intellectualism has divided the public on numerous issues related to science including climate change, nuclear waste, gun safety, sexuality, and more (Kahan et al. 2011; Motta 2018; Whitehead and Baker 2012). At the micro-level, one explanation for conservatives’ growing suspicion of science is motivated reasoning (Kahan et al. 2011). Simply put, this suggests that people interpret evidence in ways that resonate with their cultural dispositions. In fact, disconfirming evidence may strengthen one’s beliefs. This means that when factual evidence conflicts with one’s political identity, ideological concerns may supersede intellectual ones. Thus, as Republican and conservative leaders tethered science to liberal values, this new meaning of science spread throughout the party. The self-reinforcing nature of this process suggests that there have been gradual rather than discrete changes in public opinion as parties have grown entrenched in their orientations. It also suggests that the longer the process continues, the more difficult it is to arrest.

The Politicization of Religion

As an institution, religion is often considered to be more heterogeneous than science. For example, even within faith traditions there is wide variation in doctrinal knowledge, organizational structures, and religious practices. Despite this variety, religion has recognizable institutional traits that are not reducible to denominations. This view of religion aligns with theories that conceptualize it as a cultural field rather than a set of discrete faith traditions. The growing prominence of white Conservative Christians in Republican politics during the late twentieth century is well known (Skocpol and Williamson 2013; Williams 2009). However, field theories suggest these religious changes occurred alongside changes in adjacent social fields, including science (Fligstein and McAdam 2012). We contend that when the Republican Party linked science to a liberal economic and cultural agenda, it also recast religion as an alternative source of knowledge and values. White Conservative Protestant leaders and organizations initiated this shift, but its consequences reverberated throughout U.S. politics. As science was tied to modern values and religion to traditional ones, even secular Republicans and religious Democrats changed how they thought about each, not as disciplines or denominations but as sources of cultural authority. Consequently, “religion” came to stand in for conservative politics in the eyes of many moderates and liberals who in turn rethought their own religious identities (Hout and Fischer 2014).

The contemporary relationship between religion and right-wing politics in the United States can be traced to social and demographic changes of the 1960s, the rise of the Religious Right in the 1970s, and the emergence of white Conservative Protestants as a key constituency in the Republican coalition (Steensland and Wright 2014). Previously, religious conservatives were just as likely to be Democrats as Republicans. However, population shifts coupled with economic and cultural changes during the 1960s led many Conservative Protestants to defect from the Democratic Party. And, as Conservative Protestants tacked right many liberals opted out of Conservative Protestantism (Hout and Fischer 2014).

Encouraged by successful religious movements at the local level and the defeat of the equal rights amendment at the national level, white Conservative Christians solidified their association with the Republican Party during the 1970s and began to grow their political influence by appealing to secular conservatives (Crawford 1980). At the same time, secular Republicans sought to extend their political reach by uniting secular and religious conservatives around opposition to government's perceived threat to economic freedom and religious values. The fusion of economic and religious conservatives remains a central feature of the Republican Party. Merging these constituencies required Republicans to recast their agenda as one focused on restoring "traditional" or "family" rather than "Christian" values, which is evident in the Christian nationalist ideology widespread among Republicans (Whitehead et al. 2018). Science and intellectualism were simultaneously refashioned as the cultural antithesis to religion and a threat to a traditional lifestyle, which is apparent in conservative political discourse of the era (Bonikowski and Gidron 2015). For example, during the 1988 presidential campaign Republican candidate George H.W. Bush framed Democrats as cultural elites who opposed the religious values shared by most Americans: "the intellectuals have, in my friend Bill Bennett's phrase, 'fastidious disdain' for public expressions of religious sentiment that is, to my mind, unreasonable and ungenerous. The overwhelming majority of the people feel a moment of silence or silent prayer is a legitimate right." (September 28, 1988, Columbus Ohio, Annenberg/Pew Archive of Presidential Campaign Discourse). By portraying Democrats as elitist intellectuals and Republicans as everyday people, accusations such as these reinforced the growing political fissure in people's views of science and religion as cultural authorities.

A series of public controversies that depict religion (usually white Conservative Protestantism) as besieged by technocrats and intellectuals has deepened the politicization of religion. The creation science and intelligent design movements are perhaps the best known of these conflicts (Numbers [1992] 2006). While these episodes were about contested factual knowledge, most of the current tension between science and religion concerns moral issues (Evans 2018). For example, recent conflicts between science and religion related to gender, sexuality, biomedical research, and the environment all center on normative rather than intellectual disagreements (Alumkal 2017; Evans 2011).

The politicization of science thesis suggests that as science became embedded in party politics, it acquired new cultural meaning (e.g., from disinterestedness to progressivism). We contend that as religious leaders and organizations aligned with the Republican Party, often in direct opposition to science, religion also took on new meaning (e.g., from piety to conservatism). For example, as religious accounts of sexuality grew increasingly associated with the Republican party, scientific accounts of sexuality were linked to liberal politics (Jelen 2017; Redding 2013; Sherkat et al. 2011). It is hard to overstate the importance of white Conservative Christians in this process. However, their efforts to attach a particular set of Christian values to the Republican party led to a more general shift in the cultural meaning attached to religion. Thus, the transformation of Conservative Christianity is only part of the story of religion's changing cultural meaning. Equally important was the growing belief that religion is a politically conservative institution (Evans 2016). Our argument is consistent with research on "secularized evangelical discourse" and Christian nationalism that finds that political ideals rooted in Evangelical Christianity now appeal to Americans across faith traditions (Delehanty et al. 2018; Whitehead et al. 2018).

The framing of science and religion as moral and political alternatives suggests that public perceptions of them have grown increasingly dependent on normative dispositions and increasingly oppositional. We therefore anticipate that not only have Democrats become more confident than Republicans in science, they have become less confident than Republicans in religion. We also expect that these differences grew over time. If perceptions of science and religion are based on experience with institutional science and religion, then education and religious attendance would likely be the key indicators of how they are perceived, and differences associated with political identities would be eliminated after accounting for these factors. However, if perceptions of science and religion are increasingly seen as political institutions, as we believe they are, then their association with political identities would remain net of other identities and experiences related to science and religion.

DATA

We examine perceptions of science and religion using data from the GSS. The GSS has interviewed noninstitutionalized adults from representative samples of U.S. households annually or biennially since 1972. We use 30 waves of data collected between 1973 and 2018 (dependent variables were not available for 1972 or 1985). Although the repeated cross-sections design cannot capture individual change over the life course, the GSS provides an unmatched opportunity to observe aggregate-level trends in public opinion. Its large sample size and wealth of sociodemographic information allow us to examine perceptions of science and religion after adjusting for numerous other factors.

METHODS

Our analysis proceeds in two stages. First, we estimate binary logistic regression models to examine confidence in science and religion separately. Second, we estimate a multinomial logistic regression model to examine whether people have more, less, or the same amount of confidence in science compared to religion.¹ At both stages, we use interactions to determine whether partisan differences changed over time. To interpret regression results and to illustrate political changes, we compute predicted probabilities and average marginal effects (AMEs). All analyses use the recommended sampling weights.

MEASURES

Dependent Variables

Our dependent variables are confidence in science and confidence in religion. Survey respondents were read the following statement: “I am going to name some institutions in this country. As far as the people running these institutions are concerned, would you say you have a great deal of confidence, only some confidence, or hardly any confidence at all in them?” Respondents were asked to rate the “scientific community” and “organized religion” among several other institutions. Consistent with other analyses of these data, we combine the “only some” and “hardly any” response categories (Evans 2013; Gauchat 2012; Mann and Schleifer 2019). Analyses of the three-category measures of institutional confidence led to similar conclusions. We also partition respondents into four groups to examine (1) those with a great deal of confidence in both science and religion, (2) those with a great deal of confidence in neither science nor religion, (3) those with a great deal of confidence in science but not religion, and (4) those with a great deal of confidence in religion but not science. Analyses of a nine-category version of this variable based on combinations of the three-category confidence items led to similar conclusions.

¹To examine confidence in science relative to religion, we combined measures of confidence in science and confidence in religion. The resulting variable consists of unordered categories, which we analyze using a multinomial logit regression model (MNL) (Long 1997). The MNL assumes that respondents’ choice between two response options is unaffected by the presence of additional response options, i.e., the independence of irrelevant alternatives assumption. Unfortunately, statistical tests of this assumption are unreliable in applied settings (Cheng and Long 2007). Analysts must therefore use substantive criteria to guide decisions about the appropriateness of the MNL. Cheng and Long (2007) argue that outcome categories must be distinct and must not be substitutes. McFadden (1974) argues that the MNL should be used only when the outcome categories “can plausibly be assumed to be distinct.” Amemiya (1981) agrees that the MNL works well when alternatives are dissimilar. The outcome variable in our MNL meets each of these criteria.

It is important to consider what these survey questions capture. Respondents may interpret them to refer to confidence in science and religion as sources of knowledge. Or, respondents may interpret them as measures of trust in the norms and values associated with these two sources of cultural authority. [Evans \(2013\)](#) addressed this question in his analysis of GSS data from 2006 and concluded that the confidence in science item elicits respondents' moral rather than epistemological preferences. The wording of the survey question, which focuses on the "people running these institutions," further suggests that the item captures normative attitudes about institutional leaders rather than these institutions' ability to produce factual knowledge. We argue that the confidence in religion item is interpreted by respondents similarly.

Independent Variables

To measure political identity, we use self-identified political party affiliation. Responses were provided on a 7-point scale ranging from "strong Democrat" to "strong Republican." Analyses presented below include separate categories for Democrat (strong, not strong, and near Democrat), Independent, and Republican (strong, not strong, and near Republican). Analyses of alternative categorical and linear specifications of party identification led to similar conclusions. We exclude the 1.6% of respondents affiliated with another political party. In additional analyses, we examined a measure of political ideology (extremely liberal to extremely conservative) and a scale comprised of identity and ideology and found similar results. We focus on party affiliation below because of the importance of political parties to the politicization of science and religion and because it may align more closely than ideology with voter behavior. [Table 1](#) contains descriptive information for independent variables.

There are several options for handling time with repeated cross-sections such as these. We model time using a linear measure (i.e., years since survey) for theoretical and substantive reasons. Theoretically, the political processes we describe suggest gradual rather than discrete changes in the meaning publics attribute to science and religion. Substantively, a linear measure of time allows for straightforward interpretation and presentation of findings and is consistent with several other analyses of these data ([Evans 2013](#); [Gauchat 2012](#); [Mann and Schleifer 2019](#); [Motta 2018](#)). However, one analysis of these data found non-linear changes in some predictors of confidence in science over time ([Sherkat 2017](#)). Regression models therefore include a polynomial (i.e., squared) term for time to capture non-linear changes in the independent variable of primary interest—political identity ([Mize 2019](#)). Decade-specific regressions led to the same conclusions about political changes in confidence in science and religion.

Control Variables

Regression models control for several sociodemographic characteristics that may be associated with confidence in science and religion. We control for religiosity using a 9-point scale of attendance at religious services ranging from

TABLE 1 Descriptive Statistics for Independent Variables

	Overall (n = 34,367)	1970s (n = 7,123)	1980s (n = 8,529)	1990s (n = 6,794)	2000s (n = 5,510)	2010s (n = 6,411)
Democrat	0.500	0.570	0.516	0.461	0.452	0.484
Independent	0.138	0.120	0.115	0.129	0.170	0.172
Republican	0.362	0.311	0.369	0.410	0.378	0.345
Income	10.097	10.157	10.067	10.094	10.143	10.032
Less than high school degree	0.192	0.305	0.228	0.142	0.131	0.123
High school degree	0.528	0.526	0.548	0.548	0.515	0.493
Some college	0.056	0.022	0.044	0.066	0.082	0.077
Bachelor's degree	0.153	0.102	0.129	0.174	0.180	0.196
Graduate degree	0.071	0.045	0.052	0.070	0.091	0.111
Attendance at religious services	3.768	3.979	3.996	3.820	3.588	3.325
Conservative Protestant	0.340	0.300	0.336	0.361	0.358	0.349
Mainline Protestant	0.215	0.310	0.249	0.203	0.157	0.126
Catholic	0.262	0.275	0.273	0.260	0.264	0.236
Other religious tradition	0.068	0.048	0.070	0.079	0.071	0.074
No religious tradition	0.115	0.067	0.072	0.096	0.149	0.216
Female	0.529	0.521	0.532	0.528	0.528	0.536
Black	0.118	0.099	0.103	0.122	0.122	0.154
White	0.829	0.894	0.872	0.829	0.778	0.743
Other race	0.052	0.006	0.025	0.049	0.101	0.103
Age	43.660	42.267	42.462	43.292	44.397	46.599
Resides in South	0.250	0.225	0.242	0.262	0.257	0.271
Institutional confidence	0.013	0.151	0.071	-0.047	-0.018	-0.128

Source: General Social Survey.

Note: Statistics in table are means. Democrat includes "strong Democrat," "not strong Democrat," and "near Democrat." Republican includes "strong Republican," "not strong Republican," and "near Republican." Income is log transformation of household income (constant dollars). Attendance at religious services ranges from (0) "never" to (8) "daily"; institutional confidence is a scale of 11 survey items ($\alpha = .77$).

“never” to “more than once per week.” We control for religious traditions using a modified RELTRAD scheme with categories for Conservative Protestant, Mainline Protestant, Catholic, other faith tradition, and not affiliated with a faith tradition (Shelton and Cobb 2017). We control for education using categories for highest degree attained. We control for household income in constant dollars (log transformed). We control for gender, race, and region of residence using binary variables. Because of the rapid defection of young people from organized religion in the United States (Voas and Chaves 2016), we control for age measured in years and birth cohort measured categorically. Finally, to account for broader declines in confidence in institutions (Gauchat 2011; Johnson and Peifer 2017), regressions contain a standardized scale of institutional confidence based on responses to the survey’s remaining 11 measures of confidence in institutions ($\alpha = .77$). These include banks and financial institutions, major companies, Congress, the Supreme Court, the executive branch of the federal government, education, organized labor, the press, medicine, television, and the military.

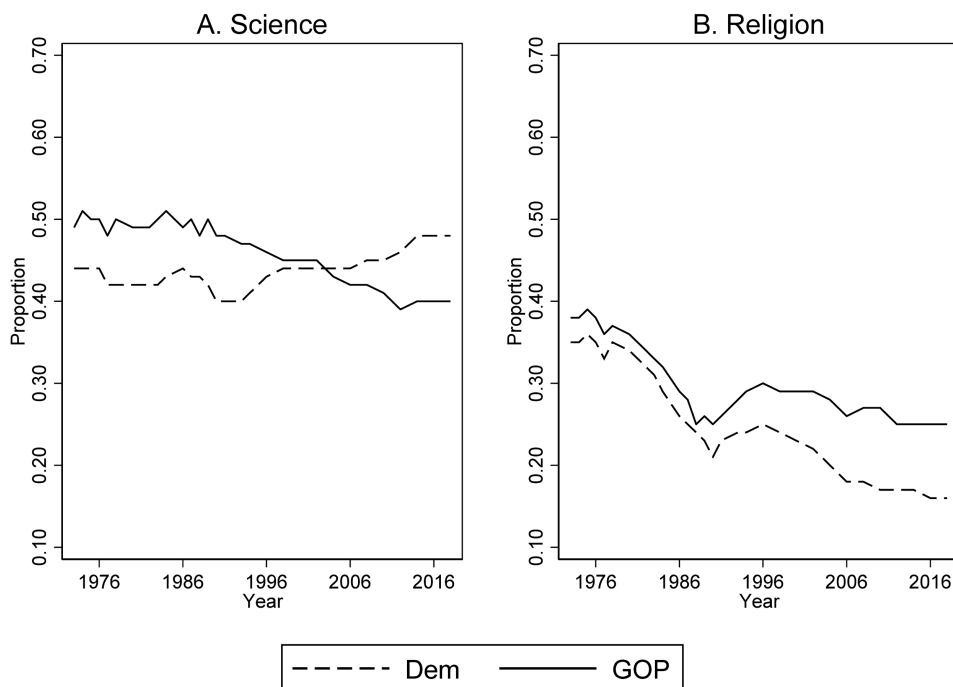
RESULTS

Confidence in Science and Religion

For a descriptive look at the politicization of science and religion, figure 1 contains 5-year moving averages of confidence in science (figure 1A) and religion (figure 1B) for Republicans and Democrats.² Overall, it suggests that science and religion acquired new political significance between the 1970s and 2010s. Democrats’ confidence in science vacillated but ultimately ended the period higher than it began. In contrast, Republicans’ confidence in science trended down. While confidence in science once was higher among Republicans than Democrats, the opposite was true by the 2000s. Figure 1B suggests also that there was a growing political fissure in confidence in religion. Democrats and Republicans each lost confidence in religion over time but the loss was more modest for Republicans. In fact, Republicans’ confidence in religion was roughly the same in the mid-2010s as it was in the mid-1980s. Instead, Democrats’ confidence in religion fell by more than half between the 1970s and 2010s. Altogether,

²Results are based on analyses that exclude cases with missing data on variables of interest. Compared to cases that were excluded, those included are slightly more confident in science and slightly less confident in religion, and they are less likely to be politically independent. Additionally, men, whites, religious people, younger people, and people with more education are over-represented among cases with complete information. To verify that our main conclusions are not contingent on other covariates or the sample of cases with full information, we estimated reduced forms of each regression model without control variables that included cases with missing data on controls. Conclusions were consistent with those from the full regression models.

FIGURE 1. Unadjusted Confidence in Science and Religion.



Source: General Social Survey (n = 34,367).

Note: Graph contains 5-year moving averages of confidence in science (A) and religion (B) for Democrats (Dem) and Republicans (GOP).

figure 1 provides preliminary evidence that science and religion each took on new political meaning in recent decades.

Table 2 examines these changes in a regression context. It contains estimates from binary logistic regressions of confidence in science (Model 1) and confidence in religion (Model 2) on political identity and control variables. The negative interaction between Republican identity and time in Model 1 seems to suggest a widening gulf in Republicans' and Democrats' confidence in science. The positive interaction in Model 2 signals a countervailing trend in confidence in religion. Additionally, several control variables have effects in expected directions. For example, education and income are associated with more confidence in science and less in religion, while attendance at religious services has the opposite effects. Not surprisingly, institutional confidence is associated with more confidence in science and in religion. Although our primary interest is in political identities, it is worth reiterating that the partisan divides we discuss below adjust for numerous other factors related to perceptions of science and religion.

To interpret changes associated with political identities, figure 2 contains the AMEs of political identity on confidence in science and religion. AMEs represent the differences in the average predicted probabilities of confidence in science and religion for Republicans and Democrats. Predictions are computed from

TABLE 2 Binary Logistic Regressions of Confidence in Science and Religion

	Model 1: confidence in science	Model 2: confidence in religion
Independent	-0.388*** (0.064)	0.349** (0.119)
Republican	-0.359*** (0.069)	0.534*** (0.065)
Time	0.007 (0.007)	-0.004 (0.012)
Independent * time	-0.009*** (0.002)	0.011** (0.004)
Republican * time	-0.013*** (0.003)	0.012*** (0.002)
Time squared	<0.001 (<0.001)	<0.001 (<0.001)
Income	0.093*** (0.016)	-0.048*** (0.013)
High school degree	0.355*** (0.044)	-0.081 (0.050)
Some college	0.626*** (0.071)	-0.264** (0.088)
Bachelor's degree	0.978*** (0.054)	-0.206** (0.071)
Graduate degree	1.122*** (0.054)	-0.257*** (0.075)
Black	-0.617*** (0.046)	0.027 (0.052)
Other	-0.304*** (0.063)	-0.079 (0.075)
Female	-0.301*** (0.038)	-0.035 (0.030)
Age	-0.009 (0.007)	-0.017* (0.008)
Age squared	<0.001 (<0.001)	<0.001*** (<0.001)
Attendance at religious services	-0.052*** (0.005)	0.179*** (0.007)
Mainline Protestant	0.202*** (0.030)	0.067 (0.048)
Catholic	0.224*** (0.035)	0.057 (0.041)
Other religion	0.408*** (0.056)	-0.225*** (0.060)
No religion	0.486*** (0.050)	-0.856*** (0.085)

TABLE 2 Continued

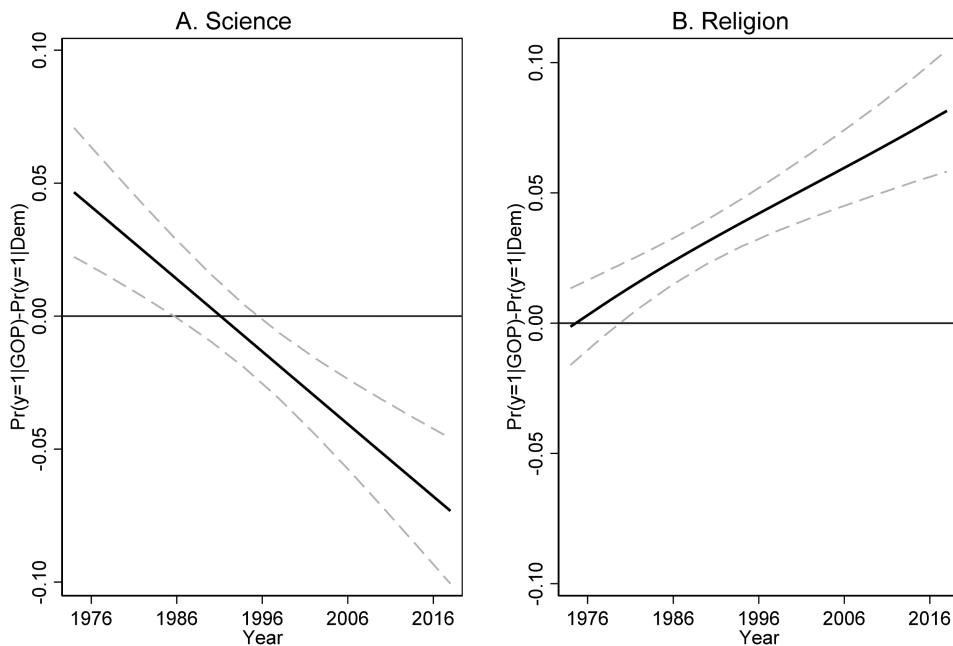
	Model 1: confidence in science	Model 2: confidence in religion
Resides in South	-0.130*** (0.039)	0.003 (0.030)
Institutional confidence	1.578*** (0.036)	1.395*** (0.031)
Constant	-1.092	-2.044
Pseudo-R ²	0.139	0.149

Source: General Social Survey (n = 34,367).

Note: Statistics in table are unstandardized regression coefficients (robust standard errors in parentheses). Standard errors clustered by year. Fixed effects for 10-year birth cohorts omitted from table. Reference groups are Democrat, less than high school degree, male, white, and Conservative Protestant.

*p < .05, **p < .01, ***p < .001.

FIGURE 2. Average Marginal Effects of Political Identity on Confidence in Science and Religion.



Source: General Social Survey (n = 34,367).

Note: Graph contains differences in the predicted probabilities and 95% confidence intervals of confidence in science and religion for the average Republican and Democrat. Predictions based on Model 1 (A) and Model 2 (B) in Table 2.

regression results in [table 2](#). [Figure 2A](#) indicates that after adjusting for other factors, Republicans were significantly more confident than Democrats in science during the 1970s. However, by the 2000s, Democrats were significantly more confident than Republicans in science.³ [Figure 2B](#) indicates that political differences in confidence in religion moved in the opposite direction.⁴ Democrats' and Republicans' views of religion were nearly indistinguishable in the 1970s. Yet, Republicans emerged as significantly more confident than Democrats in religion in the 1980s and the divide widened in subsequent decades. The magnitudes of these changes are consistent with other shifts in public opinion during this period, including other analyses of these data ([Evans 2013](#); [Gauchat 2012](#); [Mann and Schleifer 2019](#)). Thus, while [figure 1](#) shows that there were different levels of confidence in science and religion, [figure 2](#) shows that the trajectories of the political divides in each were strikingly similar.⁵

Confidence in Science Compared to Religion

So far, our analysis found that while Republicans were more confident than Democrats in science in the 1970s, this was no longer true in the 2010s. And, although Democrats and Republicans once held similar views of religion, this also changed. [Figure 2](#) shows that these changes were concurrent but does not indicate whether the people who lost confidence in religion also gained confidence in science or vice versa. In other words, did confidence in science *displace* confidence in religion among Democrats? Did confidence in religion *displace* confidence in science among Republicans? To address these questions, we examine four groups of people: those who are confident in science and religion, those who are confident in neither science nor religion, those who are more confident in science than religion, and those who are more confident in religion than science.

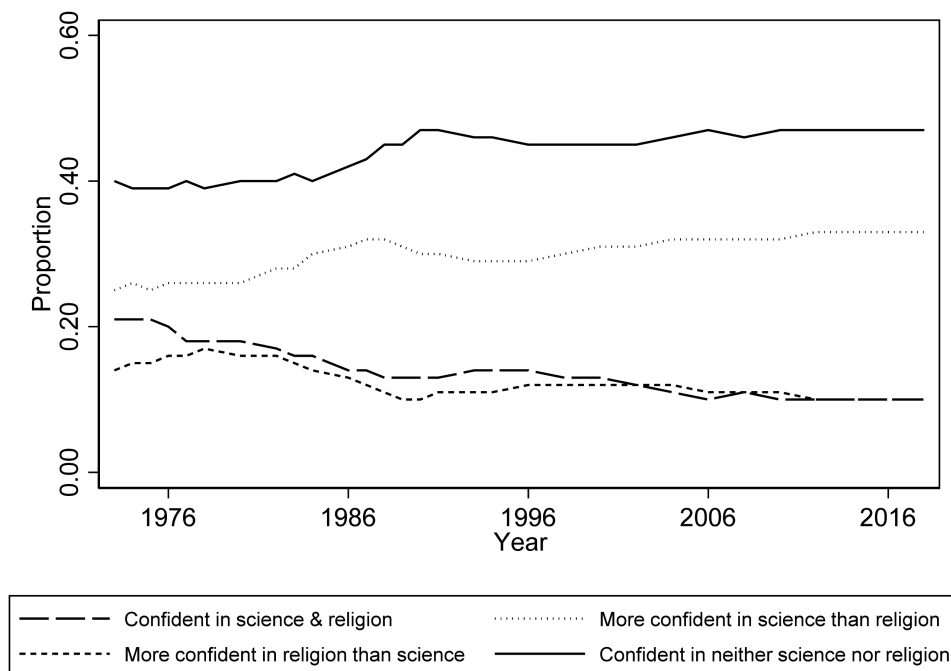
[Figure 3](#) contains descriptive information for these groups over time. The figure signals increasing confidence in science relative to religion, although those who were confident in neither science nor religion were a plurality throughout the study. For example, in 1973 there were nearly as many people who were confident in both science and religion (one in five) as there were who were more confident

³Analyses of the original three-category confidence variable suggest that the same partisan dynamics were evident at each level of the outcome. Republicans became increasingly likely to have “only some” or “hardly any” confidence in science while Democrats became less likely to do so.

⁴Analyses of the original three-category confidence variable suggest that there was little difference in Republicans' and Democrats' chances having “only some” confidence in religion, but that Democrats grew increasingly likely to have “hardly any” confidence in religion.

⁵Conclusions from decade-specific analyses mirror those from analyses of the pooled dataset. Specifically, decade-specific regressions indicate that in the 1970s and 1980s, Republicans were slightly more confident than Democrats in science, although the differences were small and only marginally significant ($p = .07$ in both decades). In the 1990s, there was virtually no partisan gap but in the 2000s and 2010s, Democrats were increasingly more confident than Republicans in science ($p < .01$ in both decades). The political divide in confidence in religion was not significant in the 1970s. However, by the 1980s, a statistically significant partisan gap emerged and widened in subsequent decades.

FIGURE 3. Unadjusted Confidence in Science Compared to Religion.



Source: General Social Survey (n = 34,367).

Note: Graph contains 5-year moving averages of the proportion of people who are (a) confident in science and religion, (b) more confident in science than religion, (c) more confident in religion than science, and (d) confident in neither science nor religion.

in science than religion (one in four). While the share of people who were more confident in science grew steadily, the share who were confident in both fell by more than half. In 2018, one in three people were more confident in science than religion while only one in ten were confident in both. The dwindling number of respondents who were confident in both science and religion and the growing share who were more confident in science than religion are consistent with our claim that these two institutions were seen in increasingly oppositional terms.

To what extent do these patterns depend on political identity? To address this question, [table 3](#) contains results from a multinomial logistic regression of the four categories of confidence in science compared to religion on political identities and the same set of control variables from the binary logistic regressions. Once again, the interactions between time and political identity are of primary interest. To interpret results, [figure 4](#) contains the AMEs of political identity on confidence in science compared to religion. In other words, the figure shows the differences in Democrats' and Republicans' probabilities of falling into each relative confidence category.

[Figure 4](#) shows that there were several notable changes to Republicans' and Democrats' views of science relative to religion since the 1970s. First, with one exception party differences were larger in the 2010s than in the 1970s. In the one

TABLE 3 Multinomial Logistic Regression of Confidence in Science Compared to Religion

	Confident in science and religion (vs. more confident in science)	More confident in religion than science (vs. more confident in science)	Confident in neither science nor religion (vs. more confident in science)
Independent	0.549*** (0.144)	0.658*** (0.124)	0.477*** (0.068)
Republican	0.633*** (0.073)	0.875*** (0.078)	0.405*** (0.081)
Time	-0.005 (0.014)	-0.011 (0.013)	-0.006 (0.008)
Independent * time	0.017*** (0.005)	0.017*** (0.004)	0.012*** (0.002)
Republican * time	0.016*** (0.002)	0.025*** (0.003)	0.015*** (0.003)
Time squared	<0.001 (<0.001)	<0.001 (<0.001)	<0.001 (<0.001)
Income	-0.022 (0.018)	-0.158*** (0.023)	-0.081*** (0.019)
High school degree	-0.102 (0.062)	-0.457*** (0.062)	-0.359*** (0.051)
Some college	-0.255* (0.111)	-0.959*** (0.101)	-0.618*** (0.082)
Bachelor's degree	-0.258** (0.082)	-1.252*** (0.100)	-0.988*** (0.061)
Graduate degree	-0.285** (0.098)	-1.522*** (0.090)	-1.113*** (0.063)
Black	0.110 (0.087)	0.662*** (0.071)	0.643*** (0.058)
Other race	-0.127 (0.091)	0.257* (0.122)	0.273*** (0.078)
Female	0.020 (0.041)	0.268*** (0.057)	0.321*** (0.038)
Age	0.008 (0.012)	-0.014 (0.009)	0.024** (0.009)
Age squared	<0.001 (<0.001)	<0.001*** (<0.001)	<-0.001** (<0.001)
Attendance at religious services	0.189*** (0.011)	0.240*** (0.007)	0.064*** (0.007)
Mainline Protestant	0.051 (0.061)	-0.151* (0.060)	-0.201*** (0.040)
Catholic	0.048 (0.058)	-0.180*** (0.051)	-0.220*** (0.046)

TABLE 3 Continued

	Confident in science and religion (vs. more confident in science)	More confident in religion than science (vs. more confident in science)	Confident in neither science nor religion (vs. more confident in science)
Other religion	-0.334*** (0.084)	-0.600*** (0.104)	-0.458*** (0.060)
No religion	-0.897*** (0.109)	-1.313*** (0.140)	-0.483*** (0.055)
Resides in South	0.056 (0.052)	0.128** (0.044)	0.156*** (0.046)
Institutional confidence	1.350*** (0.040)	-0.217*** (0.049)	-1.503*** (0.040)
Constant	-2.969	-0.615	0.568
Pseudo-R ²	0.141		

Source: General Social Survey ($n = 34,367$).

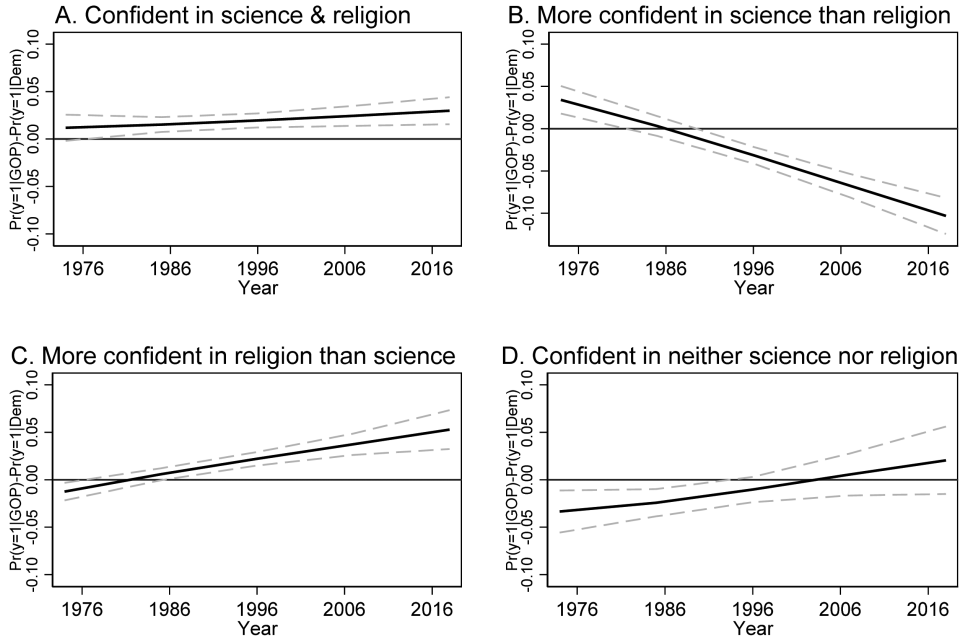
Note: Statistics in table are unstandardized regression coefficients (robust standard errors in parentheses). Standard errors clustered by year. Fixed effects for 10-year birth cohorts omitted from table. Reference groups are Democrat, less than high school degree, male, white, and Conservative Protestant.

* $p < .05$, ** $p < .01$, *** $p < .001$.

exception (“confident in neither”), the difference changed direction, although it was slightly narrower in 2018 than 1973. This is consistent with our argument about the changing political significance of science vis-à-vis religion. Second, the party differences reversed for three of the four categories. The one exception (“confident in both”) fell by more than half over the study period and included only one in ten respondents in 2018. The scarcity of this view supports the notion that many people associate science and religion with competing worldviews. Third, [figure 4](#) suggests that confidence in religion essentially displaced confidence in science for a share of the Republican Party while the opposite happened for Democrats. Notably, Republicans were more likely than Democrats to be more confident in science than religion in the 1970s, but by the end of the study Democrats were more likely to than Republicans. There was a corresponding reversal among those who were more confident in religion than science. In 1973, Democrats were slightly, although statistically significantly, more likely than Republicans to be more confident in religion than science. However, Republicans were clearly more likely to than Democrats in 2018.⁶

⁶Decade-specific analyses of confidence in science relative to religion led to the same conclusions. Like the pooled analyses, decade-specific results show widening political divides over time. Most notably, Republicans grew increasingly less likely than Democrats to be more confident in science than religion and Republicans grew increasingly more likely than Democrats to be more confident in religion than science.

FIGURE 4. Average Marginal Effects of Political Identity on Confidence in Science Compared to Religion.



Source: General Social Survey ($n = 34,367$).

Note: Graph contains differences in Republicans' (GOP) and Democrats' (Dem) probabilities and 95% confidence intervals of being (A) confident in science and religion, (B) more confident in science than religion, (C) more confident in religion than science, and (D) confident in neither science nor religion. Predictions based on regression results in Table 3.

To summarize, confidence in religion relative to science has eroded in the United States for several decades. Yet, this aggregate pattern masks a substantial partisan divide. Specifically, Democrats' confidence in science strengthened relative to their confidence in religion while Republicans' weakened. Consequently, whereas Republicans were once more likely than Democrats to be more confident in science than religion, this is no longer true. And, while Democrats used to be more likely than Republicans to be more confident in religion than science, this also changed.⁷ Importantly, these political divisions grew net of changes in other sociodemographic and attitudinal factors *including confidence in other institutions*. The magnitude of these changes is commensurate with other recent trends in social attitudes, such as beliefs about marijuana, same-sex marriage, and abortion

⁷One possibility is that these patterns simply reflect religious conservatives migrating into the Republican the party and out of the Democratic party rather a broad political realignment that included secular conservatives. To address this possibility, we estimated the regression models with a control variable for beliefs about the Bible, which was not included in the GSS before 1984. Conclusions are consistent with those from analyses of the full dataset that do not control for beliefs about the Bible. These additional analyses further strengthen our conclusion that the changing cultural meanings of science and religion were not restricted to Conservative Christians.

rights (Jelen 2017; Schnabel and Sevell 2017). Overall, these findings illustrate growing political rifts in confidence in science and religion and suggest that the changes are part of a broader cultural realignment of the nexus of science, religion, and politics.

CONCLUSIONS

This article builds on other analyses of science, religion, and politics and makes several unique contributions. We replicated Gauchat's (2012) finding of a growing political divide in confidence in science using data that includes several additional survey waves. Yet, Gauchat's analysis left open the possibility that differences in faith traditions account for political differences in confidence in science. By controlling for faith traditions, our investigation shows that declining confidence in science on the political right cannot be attributed simply to Conservative Christians' increasing ties to the Republican party. Additionally, Mann and Schleifer's (2019) recent analysis shows that conservative opposition to science reflects hostility toward scientific elites rather than the scientific method, which is consistent with our conclusions about the political meaning of institutional science. However, unlike previous studies we situate confidence in religion alongside confidence in science. Doing so illustrates previously undocumented countervailing changes in these two sources of cultural authority. Moreover, by categorizing individuals based on their perceptions of both science and religion, we found new evidence that confidence in science displaced confidence in religion within the Democratic Party while the opposite happened within the Republican Party. In short, politics grew increasingly entangled with how Americans think about science and religion.

An alternative to the explanation we propose is that beginning in the 1970s, white Conservative Protestants and some Catholics increasingly aligned with the Republican Party and opposed the scientific community's position on a few high-profile issues, such as evolution and stem cell research. However, we found the same partisan dynamics in analyses that excluded white Conservative Protestants and that controlled for beliefs about the Bible. Research on the politicization of science and religion in the United States often prioritizes Conservative Christianity's role in the process. Yet, economic elites also played a part in sowing anti-intellectualism among conservatives. The combination of these forces ultimately helped align organized science with liberal values and organized religion with conservative ones. Importantly, this article suggests that these new normative meanings were recognized by religious and non-religious Americans alike.

We have emphasized growing political dissensus associated with science and religion but it is worth noting that most people in these data had the same level of confidence in science that they did in religion, which is consistent with the more harmonious view of science and religion described by Ecklund and Scheitle

(2018). Yet, these authors also found large religious differences in beliefs about conflict and compatibility between science and religion. Although the measures we analyzed tap different underlying concepts than the measures of conflict and compatibility used by [Ecklund and Scheitle \(2018\)](#), our results also suggest that while many people reject the notion of conflict between science and religion, many prefer one of these sources of authority to the other and these preferences differ substantially depending on social identities.

Any story of how Republicans' attitudes changed in recent decades is a story primarily about how whites' attitudes changed. In these data, less than 1 in 10 African Americans identified as Republican. Indeed, the union of Conservative Christianity and Republican politics is partly rooted in the white backlash to the civil rights movement ([Balmer 2006](#)). However, whites were also the primary drivers of changing perceptions of science and religion within the Democratic Party. Among Democrats in these data, African Americans were less confident than whites in science and more confident than whites in religion. Although this article focused on political differences, we do not wish to minimize the importance of other social identities such as race and ethnicity in steering perceptions of science and religion (see [Noy and O'Brien 2018](#)). Further research on how the political changes documented here relate to other identities and experiences could provide valuable clues about the social and cultural reach of science and religion in the United States.

This study contributes to research on science, religion, and politics in several ways, but there are important limitations to the data. Notably, we examined confidence in institutional science and religion rather than perceptions of specific controversies where science and religion intersect. Additionally, the repeated cross-sections data we analyzed cannot answer whether the trends we found reflect attitudinal change at the level of individuals or compositional change at the level of political parties. Finally, the utility of long-term trend data on institutional confidence must be weighed against the challenges of measuring perceptions of institutions as heterogeneous as science and religion. This article sheds new light on changes in confidence in science and religion, but it also highlights the need for additional sources of data containing more fine-grained tools for analyzing public opinion about these issues.

This article provides a new framework to understand how the politicization of science and religion relate to one another. It also underscores the relational nature of public support for different sources of cultural authority. Regardless of whether science and religion actually conflict, their portrayal as incompatible in popular and political culture and their growing associations with divergent normative orientations fueled a political divide in how they are perceived in the United States. The long-term trajectory of these trends and the potentially self-reinforcing nature of the underlying process suggest that these divisions will persist as long as science and religion remain prominent features of social and political life.

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