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Cultural Authority in Comparative Context: A Multilevel Analysis of Trust in Science and Religion

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Science and religion are among the most influential forces for organizing social life around the world, yet we know little about how national context shapes perceptions of them. Using data from the 2008 International Social Survey Program, we begin to fill this gap by investigating cross-national differences in public attitudes about science, religion, and society. We find that exposure to science is associated with more trust in science relative to religion whereas religiosity is associated with less trust in science relative to religion. Moreover, these relationships are amplified in secular societies and in those where science is prioritized. We argue that secular and scientific societies provide a context in which personal characteristics are more influential in the formation of social attitudes. These results highlight the importance of macro-level factors for shaping trust in science and religion and for understanding the sources of their influence in society more broadly.

Keywords: *science and religion, public opinion, cross-national.*

INTRODUCTION

Science and religion play substantially different roles in societies around the world. For example, throughout Western Europe religion has ceded much of its historical influence to scientific and other secular sources of cultural authority (Drori et al. 2003; Schofer 2004). Yet, in places such as the Middle East and South America, traditional religious values continue to feature prominently in public life while science is less influential (Inglehart and Baker 2000). To understand cross-national differences in the social uses of science and religion, we turn to public perceptions of these two sources of knowledge and values. Given their importance for legitimizing the laws and customs that organize social life around the world, a better understanding of the bases of trust in science and religion will help to clarify why science is more central in some societies while religion is more important in others.

Existing studies provide valuable insights about public perceptions of science and religion, but they are typically based on samples from the United States and the United Kingdom. This focus on within-country differences has limited scholars' ability to test one of sociology's core tenets, namely, that societies shape individuals' beliefs and behaviors. Research in the United States emphasizes the embeddedness of science and religion within broader legal and political

Note: Data used in this article are publicly available from the ISSP, the World Christian Database, Freedom House, and the World Bank. Syntax files are available from the authors for purposes of replication.

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contexts (Edgell and Hull 2017). However, a lack of comparative research leaves questions about how national characteristics may affect these patterns. A clearer conception of how social contexts organize perceptions of science and religion may therefore also shed light on international differences in the roles science and religion play in law, politics, and civil society.

In this article, we examine how individual and national characteristics shape trust in science and religion. We argue that individuals' social identities and social contexts interactively steer perceptions of cultural authority. More specifically, we suggest that the importance of social identities in steering these attitudes depends on national scientific and religious cultures. We test these ideas using data from the 2008 International Social Survey Program. Our investigation focuses on two related questions: (1) Does exposure to science, as measured by educational attainment, or religiosity, as measured by the frequency of attendance at religious services, affect trust in science and religion internationally? (2) If so, does national context affect the strength of the relationships? Answers to these questions will help to identify individual and contextual characteristics that anchor trust in science and religion, and will also advance our knowledge of how macro- and micro-level factors interactively guide perceptions of cultural authority.

Background

Science, Religion, and Society

We conceptualize science and religion as *cultural authorities*, by which we mean widely recognized sources of credible knowledge and values, which are used to legitimate ideas, make decisions, and orient behavior (Gieryn 1999). Implicit in this conceptualization is a connection to influence in the public sphere (Frickel and Moore 2006; Gauchat 2012). Cultural authority is contextual, and the amount of influence vested in a particular form of authority and the basis of its credibility vary between places and over time (Gieryn 1999; Shapin 2008). For example, whereas the cultural authority of science was once rooted in its objectivity (Merton [1942] 1973), it is now associated with a normative orientation toward the world (Evans and Evans 2008).

Sources of cultural authority are rarely, if ever, encountered in isolation. As with all social attitudes, perceptions of cultural authority are therefore formed relationally (DiMaggio et al. 2017). This suggests that they must be investigated relative to alternative sources of knowledge and values. Often times, the cultural authority of science is contrasted against that of religion (Cacciatore et al. 2018; Gieryn 1999; Scheitle, Johnson, and Ecklund 2018). Consequently, some individuals view science and religion as incompatible. Yet, for many people the conflict is limited to a few issues, such as human origins, and it is typically based on moral rather than epistemological concerns (Evans and Evans 2008; O'Brien and Noy 2015). Studies of religious publics and scientists further suggest that although science and religion may offer differing accounts, they are not necessarily opposed to one another (Ecklund et al. 2016; Johnson, Scheitle, and Ecklund 2015; Vaidyanathan et al. 2016). Together, these studies suggest that science and religion are more than just sources of information; they are reference points that guide and legitimate worldviews. Accordingly, perceptions of science and religion are critical for framing the discourse and action related to a broad spectrum of cultural, legal, and political debates (Edgell and Hull 2017; Noy and O'Brien 2016).

Individual-Level Predictors of Trust in Science and Religion

Among the most commonly studied correlates of attitudes about science and religion are (1) exposure to science, which is often measured by formal education, and (2) religiosity, which is often measured by self-reported belief or behavior. Existing research sometimes concludes that education increases appreciation of science (Snow and Dibner 2016). Some propose that exposure

to scientific information leads to greater awareness of its instrumental value and, in turn, to more positive affect (Miller 2004). However, others suggest that attitudes toward science reflect cultural preferences gained through the education system (Bourdieu 1984; Drori et al. 2003). Still others contend that personal experiences and identities contextualize science attitudes, and that the effects of exposure to science depend on the nature of the interaction (Johnson and Simon 2012). This indicates that the relationship between education and perceptions of science may not be uniformly positive. This final possibility is consistent with research that finds that the effects of education on attitudes about science depend on religious identity (Baker 2013; Hill 2014).

Experience with science is also sometimes associated with diminished religiosity. Once again, however, the empirical evidence underscores the complexity of the relationship. On one hand, individuals with religious worldviews tend to have less education than those with scientific worldviews (O'Brien and Noy 2015). Religious individuals also tend to be less knowledgeable about science (Roos 2017; Sherkat 2011). On the other hand, this knowledge gap may result from conservative Christians' greater likelihood of rejecting certain scientific theories, which is thought to reflect cultural preferences rather than information deficits (Evans and Evans 2008). Moreover, science education and education in general have little effect on the religious beliefs of religious students (Scheitle 2011; Mayrl and Uecker 2011). Altogether, although there is some indication that education may lead to more trust in science and less in religion, these relationships are the subject of continued debate.

Experience with religion also matters for how people view science and religion. Compared to the nonreligious, religious individuals tend to prioritize some religious values and understandings over scientific ones (O'Brien and Noy 2015). Religious individuals are also more skeptical of certain aspects of science (Allum et al. 2014; Baker 2013). Consequently, religious individuals may view religion especially favorably when it is compared to secular institutions, such as science. This possibility is supported by research that shows that religious individuals in the United States tend to reject the moral rather than the epistemological claims of scientists (Evans 2011). Thus, even among individuals with comparable exposure to science, religiosity may fuel greater trust in religion compared to science.

Contextual Predictors of Trust in Science and Religion

Although there is relatively little research on the effects of national context on trust in science and religion, individual-level studies are helpful for anticipating the impact of contextual factors. A society's engagement with science and technology may be especially important for understanding its members' orientations toward science and religion. In particular, societies with high levels of scientific activity may be marked by widely shared norms and practices that emphasize formal rationality. In these contexts, individuals are likely to interact frequently with processes and systems guided by scientific authority, such as Western medicine and regulatory science. This may normalize encounters with science and pressure individuals to internalize scientific values. In other words, as science becomes a background feature of social life, individuals' interactions with other sources of cultural authority may be limited. In highly scientific societies even those individuals with relatively little experience with science may therefore have more trust in science relative to religion than those with equivalent experiences in contexts where science is less prominent.

A society's religiosity may also affect its members' perceptions of science and religion. Specifically, support for religious compared to scientific authority is likely to be highest in the most religious (i.e., least secular) contexts. It is worth emphasizing that a country's level of religiosity (or secularity) is distinct from its engagement with science. For example, a society may have low levels of religiosity and may also invest relatively little in science and technology, such as some parts of Eastern Europe. Alternatively, a society with an extensive scientific infrastructure may also be relatively religious, such as the United States. Much in the way that a high level of scientific activity encourages the internalization of scientific values, a societal emphasis on

religious beliefs and practices limits opportunities for individuals to experience nonreligious institutions and develop preferences for secular authority, such as science. Thus, in religious societies even those individuals who are not particularly religious may trust less in science relative to religion compared to members of secular societies.

Finally, a society's level of affluence may affect its members' trust in science and religion. For example, Bauer, Durant, and Evans (1994) found that attitudes about science are more favorable in countries with high compared to low levels economic development. Evans (2014) corroborated this finding more recently. Although economic development is often associated with high levels of scientific engagement, the link is not inevitable. For example, less affluent countries may maintain scientific institutions to signal legitimacy to the international community (Drori et al. 2003). This article seeks to determine whether scientific engagement relates to trust in science and religion independently of national affluence. If so, it would point to a mechanism through which economic development cultivates trust in scientific authority.

The Interactive Effect of Individual Characteristics and National Context

It is also possible that relationships between individual characteristics and trust in science and religion depend on national scientific and religious contexts. Although there is relatively little theory to support formal hypotheses about how personal and contextual factors interactively shape perceptions of cultural authority, one of four scenarios seems plausible. First, it may be that scientific and religious contexts do not affect how social identities correspond to views of scientific and religious authority. In other words, exposure to science and religion may have uniform effects on how they are perceived internationally. This possibility seems least likely, however, given the importance of contextual factors for organizing group differences in other political and religious attitudes and behaviors (Finke and Adamczyk 2008; Koos 2012; Stavrova, Fetchenhauer, and Schlösser 2013; Summers 2016).

Second, the relationship between exposure to science and trust in science may be amplified in societies with high levels of scientific activity and attenuated in those with low levels of scientific activity. Similarly, the association between religiosity and trust in religion may be strongest in the most religious societies and weakest in the most secular ones. If so, it may signal that group differences in trust in science and religion are heightened in contexts where identities related to science and religion are reinforced by affirming institutions and structures and diminished in settings where there is less support for those identities.

Third, the link between exposure to science and trust in science may be strongest in the most religious societies. And, the effect of religiosity on trust in religion may be strongest in the most scientific societies. This possibility would be consistent with research that finds that group solidarity is strongest when social groups are assigned marginalized statuses. For example, Hameed (2015) argues that some European Muslims' rejection of evolution may be symptomatic of their identities as cultural outsiders. Similarly, the status of "embattled" outsider helped create a unifying identity for evangelical Christians in the United States (Smith 1998). A parallel process may be at work in contexts where a scientific identity is the basis of marginalization. In other words, group-specific preferences for cultural authority may be heightened when the identities related to those preferences are in the minority. Empirically, this would mean that in secular contexts, religiosity may have its strongest effect on trust in religion. Likewise, in contexts where science is marginalized, exposure to science may have its largest impact on trust in science.

Fourth, the effects of exposure to science and religiosity may each be magnified in the most scientific and least religious societies. Although scientific activity is not synonymous with secularity, both may cultivate values such as liberalism and rationality, which may promote a broadly shared sense of open-mindedness and inclusiveness. If so, societies with low levels of religiosity and those with high levels of scientific activity may marginalize religious authority at the macro level while also making room for diverse cultural preferences at the micro level.

The mechanisms connecting exposure to science and religion to trust in science and religion may therefore operate most forcefully in the most scientific and in the least religious societies.

Data

We investigate trust in science and religion using data from the International Social Survey Program (ISSP). Since the 1980s, research centers around the world have coordinated to conduct the ISSP to facilitate cross-national survey research. National samples are weighted to be representative of participating countries. We use the 2008 wave of data collection, which focused on attitudes about religion.[1] After eliminating cases with missing information on independent variables, we analyze responses from 48,059 individuals in 37 countries.[2] The number of respondents in each country ranged from 717 to 2,629, with a mean of 1,299.

Dependent Variable

Relative Trust in Science and Religion. The dependent variable comes from a survey question that asked if respondents strongly agree, agree, neither agree nor disagree, disagree, or strongly disagree with the following statement: "We trust too much in science and not enough in religious faith." This item is coded so that higher scores signify more trust in science relative to religion. We collapse the disagree and strongly disagree categories and model this item dichotomously to facilitate presentation and interpretation of results. Figure 1 summarizes the dependent variable by country. Supplemental analyses of the untransformed ordinal variable led to similar conclusions.[3]

This item offers a rare opportunity to make international comparisons of trust in science and religion, and to the best of our knowledge is the only such item available across such a wide array of countries. Although its wording may be criticized for reinforcing the notion that science and religion are incompatible, many people believe that science and religion conflict with one another (Baker 2012). Furthermore, this question allows us to analyze preferences for cultural authority relationally, and to situate our findings alongside recent research in this area. For example, Evans (2014) analyzed a similar survey question that asked whether "we believe too often in science and not enough in feelings and faith," and argued that "feelings and faith" implied religious belief. Although Evans focused primarily on individual-level predictors, this article emphasizes contextual factors and their interaction with individual-level attributes.

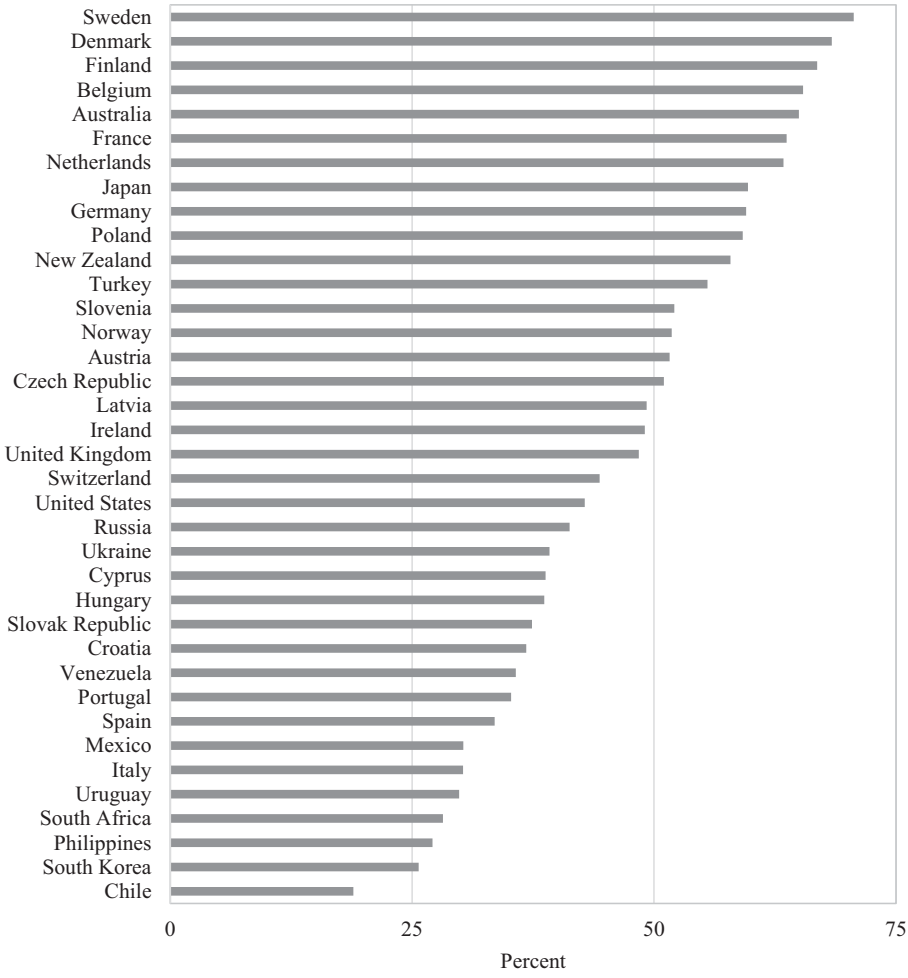
A potential limitation of the dependent variable is that respondents may interpret it to refer to their beliefs about the balance of science and religion in their own lives *or* as the overall balance of science and religion in society. For example, an individual may believe that science and religion are used appropriately in his or her own life but may also believe that laws requiring "abstinence only" sex education indicate that "we" as a society place too much trust in religion

[1]Forty countries and regions participated in the 2008 ISSP. However, one of the contextual-level variables of interest (research and development [R&D] workforce) was not available in 2008 for Israel or in any year for Taiwan or the Dominican Republican. Cases from these countries/regions are therefore excluded. In supplemental analyses, we examined a measure of Israel's R&D workforce in 2011 and found similar results.

[2]Twelve percent of the sample is excluded due to missing data on individual-level independent variables. Compared to individuals included in the analysis, those excluded attended religious services less frequently and were less educated. Excluded respondents also tended to live in households with less income and were slightly older than respondents included in the analysis. Finally, Catholics and Protestants were overrepresented among those included in the analysis while those unaffiliated with religion were overrepresented among those excluded.

[3]We also conducted analyses that excluded respondents who selected neither agree nor disagree to address the possibility that respondents who trust both science and religion and those who trust neither each selected the middle category. Results were consistent with those reported in this article.

Figure 1
Percent of respondents who disagree that there is too much trust in science and not enough in religion, by country



$n = 48{,}059$.
Source: 2008 ISSP.

and not enough in science. In this respect, the wording of the survey item may not capture an individual's trust in one sphere or another, but rather his or her perception of the balance achieved by some other social entity, such as the government. Yet, regardless of whether this item captures individuals' beliefs about science and religion in their own lives or in society, it offers a unique chance to study how national contexts orient trust in cultural authority. Furthermore, its validity is supported by its pretesting by the ISSP (Scholz et al. 2010).

Independent Variables

Individual-Level Variables

Religiosity and Education. Table 1 summarizes the independent variables in our analysis. The individual-level variables of greatest interest are respondents' religiosity and their educational attainment. To measure religiosity, we use a survey question that asked respondents how frequently they attend religious services. Responses were provided on an eight-point scale ranging from

Table 1: Descriptive statistics for independent variables

	Mean/ Proportion	Std. Dev.	Min.	Max.
*Individual-level variables (*N = *48,059)*				
Education (highest degree earned)[a]	2.77	1.49	0	5
Religiosity (attendance at religious services)[b]	3.68	2.31	1	8
Female	0.55	. . .	0	1
Age (years)	46.84	17.17	15	98
Religious tradition				
Catholic	0.41	. . .	0	1
No religion	0.20	. . .	0	1
Protestant	0.22	. . .	0	1
Orthodox	0.07	. . .	0	1
Jewish	<0.01	. . .	0	1
Muslim	0.04	. . .	0	1
Buddhist	0.02	. . .	0	1
Hindu	<0.01	. . .	0	1
Other	0.04	. . .	0	1
Household income				
<50% CMI[c]	0.20	. . .	0	1
50–80% CMI	0.18	. . .	0	1
80–120% CMI	0.19	. . .	0	1
>120% CMI	0.24	. . .	0	1
missing income	0.20	. . .	0	1
*Country-level variables (*n = *37)*				
R&D workforce (number of research and development workers per 1,000 residents)	2.90	1.84	0.08	7.69
Country mean religiosity	3.68	1.07	2.23	6.17
National religious tradition				
Catholic	0.54	. . .	0	1
Protestant	0.35	. . .	0	1
Orthodox	0.07	. . .	0	1
Other	0.05	. . .	0	1
National political rights (higher is more rights)	5.54	0.97	1	6
GDP per capita (natural log transformed)	10.11	0.90	7.56	11.48

[a]Categories are "none," "lowest credential," "above lowest credential," "secondary degree," "above secondary degree," and "university degree."
[b]Categories are "never," "less than once a year," "once a year," "several times a year," "once a month," "two to three times a month," "once a week," "more than once a week."
[c]CMI = country mean income.
Sources: 2008 ISSP (individual-level variables), World Bank, World Christian Database, and Freedom House (country-level variables).

"never" to "more than once a week." Attendance at religious services is a common measure of religiosity because it captures exposure to institutionally sanctioned beliefs and practices. We also examined several alternative measures of religiosity including strength of religious belief ranging from "extremely nonreligious" to "extremely religious," belief in God ranging from "do not

believe and never have" to "believe and always have," prayer frequency, and a standardized scale constructed from all of these variables ($\alpha = .90$). Each of these analyses led to similar conclusions.

To capture exposure to science, we use a six-category measure of educational attainment ranging from "no formal educational qualification" to "university degree." Although a measure of science education would be ideal, one is not available. Although the content and quality of science education vary within and across countries, general education is the best available metric for international comparisons of individuals' contact with science.

Control Variables. Our analysis controls for several additional individual-level characteristics. First, we control for religious traditions using binary variables indicating whether respondents were Catholic, Protestant, Orthodox Christian, Jewish, Muslim, Buddhist, Hindu, another religion, or unaffiliated with organized religion. The modal tradition (Catholic) is the referent in regression models. Second, we include a binary measure of gender because of differences in men's and women's attitudes about science and religion (Hayes and Tariq 2000; Baker and Whitehead 2016). Third, we include a measure of age, in years, because of its association with religious attitudes (Finke and Adamczyk 2008). Consistent with other cross-national studies of public opinion (Koos 2012; Summers 2016), we use a standardized measure of income based on respondents' level of income relative to their country's mean level of income (CMI). The categories are (1) less than 50 percent of CMI, (2) 50–80 percent CMI, (3) 80–120 percent CMI, and (5) greater than 120 percent CMI. Because approximately 20 percent of respondents are missing data on this item, we include these cases as a separate category. Once again, the modal category (80–120 percent CMI) is the referent in regression models.

Country-Level Variables

National Religious and Scientific Context. Country-level variables measure national religious and scientific contexts, economic development, and political freedom. We measure religious context in two ways. First, we examine national levels of religiosity using the country mean of the religious attendance variable. We conducted additional analyses using the country means of each alternative measure of religiosity described earlier. Each of these analyses led to similar conclusions.

Second, we include binary variables for national religious tradition based on countries' most prevalent tradition. We gathered this information from the World Christian Database. Most countries in these data are predominantly Roman Catholic (54 percent) or Protestant (35 percent) and a smaller number are Orthodox Christian (7 percent) or another religious tradition (5 percent). We omit the modal category (Catholic) in regression models. The overrepresentation of majority Christian countries reflects the overrepresentation of Western nations in the ISSP. Because of the relatively small number of non-Christian societies in the data, we treat national religious tradition as a control variable and focus instead on the effects of country-level religiosity net of differences in faith traditions.

We measure national engagement with science with a variable obtained from the World Bank that indicates the number of a country's residents, per 1,000, who work in research and development (R&D). We interpret this variable as an indicator of national scientific activity. Additional analyses of square-root and natural log transformations of R&D workforce produced similar results. Analyses of alternative measures of national engagement with science including the number of Nobel laureates per capita, percentage of GDP spent on research and development, the number of scientific articles and patents produced, and Internet access among the population led to similar conclusions.[4]

[4]Correlations between country-level religiosity and each of these measures is strong ($r = -.61$ for R&D workforce). In additional analyses, we estimated regressions that examined country-level religiosity and scientific engagement separately.

Control Variables. National political freedom is measured using the 2008 Freedom House ratings of political rights, which range from 1 to 7, although no country in our data received the lowest score. The item is coded so that higher scores indicate more rights. Finally, we account for national differences in economic development using a natural log transformation of gross domestic product per capita.

Method

Respondents in these data are nested within countries. Mixed effects models allow us to parse differences associated with within-country factors from those associated with between-country factors. Importantly, these models relax assumptions about independence among cases, which allows us to model country-level variables aggregated from individual-level observations. The models estimate intercept and slope coefficients that are functions of country-level variables. They therefore allow us to examine how trust in science and religion reflect both personal characteristics and national contexts. Because the outcome variable is measured dichotomously, we use mixed effects binary logistic regressions (Rabe-Hesketh and Skrondal 2013).

To examine the effects of individual- and country-level variables, we estimate a set of random intercepts models. The regression model is:

$$\log(p_{ij}(y = 1)) = \beta_{0j} + \beta_1 X_{ij} + \beta_2 W_j + \varepsilon_{ij}$$

where $p_{ij}(y = 1)$ is the probability that respondent i in country j disagrees there is too much trust in science compared to religion. $\beta 0j$ is the country-specific intercept, X is an individual-level independent variable, W is a country-level independent variable, and ε is an error term. The value of the country-specific intercept changes depending on a normally distributed random component, with a mean of zero and nonzero variance, which is represented as:

$$\beta_{0j} = \beta_0 + \zeta_j$$

Results

Cross-National Variation in Trust in Science and Religion

Figure 1 indicates that there is considerable cross-national variation in trust in science and religion. For example, less than one in five respondents (19 percent) in Chile disagree that there is too much trust in science and not enough in religion. In contrast, more than two in three respondents (70 percent) in Sweden share this belief. An analysis of variance yields an intraclass correlation of .08, meaning that approximately 8 percent of the variance in trust in science compared to religion results from differences between countries. This suggests that although individual-level differences account for much of the variation in perceptions of science and religion, national context plays an important role. This also indicates that multi-level models are needed to parse the effects of individual and contextual factors.

Individual- and Country-Level Differences in Trust in Science and Religion

Table 2 contains results from mixed effects binary logistic regressions of trust in science and religion. A likelihood ratio test based on an empty model containing no independent variables

We also analyzed a scaled combination of the two ($\alpha = .71$). Findings from each set of analyses are similar to those presented in this article.

Table 2: Mixed effects binary logistic regressions of trust in science and religion

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Individual-level variables						
Education	0.14*	0.14*	0.04**	0.15*	0.31*	0.15*
	(0.01)	(0.01)	(0.01)	(0.01)	(0.03)	(0.01)
Religiosity	−0.16*	−0.16*	−0.17*	−0.04*	−0.17*	−0.49*
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.02)
Female	−0.03	−0.03	−0.03	−0.03	−0.03	−0.02
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Age	<−0.01*	<−0.01*	<−0.01*	<−0.01*	<−0.01*	<−0.01*
	(<0.01)	(<0.01)	(<0.01)	(<0.01)	(<0.01)	(<0.01)
No religion[a]	0.52*	0.52*	0.51*	0.47*	0.51*	0.43*
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Protestant[a]	0.06	0.05	0.05	0.06	0.05	0.04
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Orthodox[a]	−0.15	−0.14	−0.14	−0.15	−0.14	−0.13
	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)
Jewish[a]	0.19	0.19	0.18	0.21	0.18	0.18
	(0.21)	(0.21)	(0.21)	(0.21)	(0.21)	(0.21)
Muslim[a]	−0.39*	−0.40*	−0.40*	−0.39*	−0.40*	−0.42*
	(0.10)	(0.10)	(0.10)	(0.10)	(0.10)	(0.10)
Buddhist[a]	0.22*	0.20*	0.23*	0.26*	0.21*	0.18
	(0.10)	(0.10)	(0.10)	(0.10)	(0.10)	(0.10)
Hindu[a]	−0.23	−0.23	−0.23	−0.18	−0.23	−0.19
	(0.16)	(0.16)	(0.16)	(0.16)	(0.16)	(0.16)

(*Continued*)

Table 2: (*Continued*)

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Other religious tradition[a]	−0.30*	−0.30*	−0.31*	−0.28*	−0.31*	−0.29*
	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)
<50% CMI[b]	−0.23*	−0.23*	−0.23*	−0.23*	−0.23*	−0.22*
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
50–80% CMI[b]	−0.12*	−0.12*	−0.12*	−0.12*	−0.12*	−0.12*
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
>120% CMI[b]	0.15*	0.15*	0.15*	0.15*	0.15*	0.16*
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
missing income[b]	−0.12*	−0.12*	−0.11*	−0.11*	−0.11*	−0.11*
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Country-level variables						
Country religiosity		0.13	0.13	0.08	0.26*	−0.19*
		(0.09)	(0.09)	(0.09)	(0.09)	(0.08)
Protestant nation[c]		−0.03	−0.05	−0.08	−0.04	−0.03
		(0.19)	(0.20)	(0.19)	(0.19)	(0.18)
Orthodox nation[c]		−0.08	−0.04	−0.04	−0.07	0.01
		(0.32)	(0.33)	(0.31)	(0.32)	(0.30)
Other religion nation[c]		0.65	0.62	0.61	0.62	0.62
		(0.34)	(0.35)	(0.33)	(0.34)	(0.32)

(*Continued*)

Table 2: (*Continued*)

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Political rights		−0.12	−0.11	−0.09	−0.10	−0.08
		(0.09)	(0.10)	(0.09)	(0.09)	(0.09)
R&D workforce		0.07	−0.02	0.21*	0.07	0.07
		(0.07)	(0.07)	(0.07)	(0.07)	(0.07)
GDP per capita		0.31*	0.31*	0.32*	0.30*	0.33*
		(0.15)	(0.15)	(0.14)	(0.15)	(0.14)
Cross-level interactions						
Education (L1) * R&D workforce (L2)			0.03*			
			(<0.01)			
Religiosity (L1) * R&D workforce (L2)				−0.05*		
				(<0.01)		
Education (L1) * Country religiosity (L2)					−0.05*	
					(0.01)	
Religiosity (L1) *Country religiosity (L2)						0.08*
						(<0.01)
Constant	0.17	−3.02	−2.76	−3.57	−3.50	−2.34
Country variance	0.28*	0.18*	0.19*	0.17*	0.18*	0.16*
	(0.07)	(0.04)	(0.05)	(0.04)	(0.04)	(0.04)
Log-likelihood	−29695.61	−29687.72	−29650.53	−29572.24	−29662.18	−29538.41
Bayesian information criterion	59585.25	59644.94	59581.35	59424.77	59604.65	59357.10

Notes: Standard errors in parentheses; *$p < .05$ (two-tailed tests).

[a]Catholic is referent.

[b]80 percent–120 percent CMI is referent.

[c]Catholic nation is referent.

Sources: 2008 ISSP (individual-level variables), World Bank, World Christian Database, and Freedom House (country-level variables). $n = 48{,}059$.

(not shown) confirms that a mixed effects model provides a better fit for the data than a standard logistic model ($\chi^2 = 3834.60, p < .001$). Model 1 contains individual-level independent variables. As predicted, religiosity has an inverse relationship with trust in science vis-à-vis religion and education has the opposite effect, net of other factors. Moreover, compared to respondents who are Catholic, those who are Muslim or belong to another faith tradition are more likely to believe there is too much trust in science and not enough in religion. Respondents who are Buddhist or unaffiliated with organized religion are less likely than Catholics to believe this. We also find that older respondents and those with less income are each more likely to believe that there is too much trust in science and not enough in religion, other differences aside.

To begin to assess how national context affects these attitudes, Model 2 adds country-level independent variables. The direction and significance of the associations between individual-level variables and trust in science and religion are virtually unchanged by the addition of country-level variables. This suggests that these relationships are not country specific.[5] Model 2 also indicates that residents of countries with higher levels of GDP per capita trust more in science compared to religion, other differences aside. Overall, these findings indicate that relative trust in these two forms of cultural authority depend on both individual and contextual factors.

Cross-Level Interactions

Models 3 through 6 contain cross-level interactions that test whether the effects of education and religiosity depend on national scientific or religious contexts. Interactions are presented in separate models because of potentially biased confidence intervals in models with multiple cross-level interactions. This problem reflects the difficulty of estimating variance parameters in maximum likelihood models, and is exacerbated as more cross-level interactions are added (Stegmueller 2013). Nevertheless, a model containing all interactions, estimated as an additional robustness check, produced similar results.

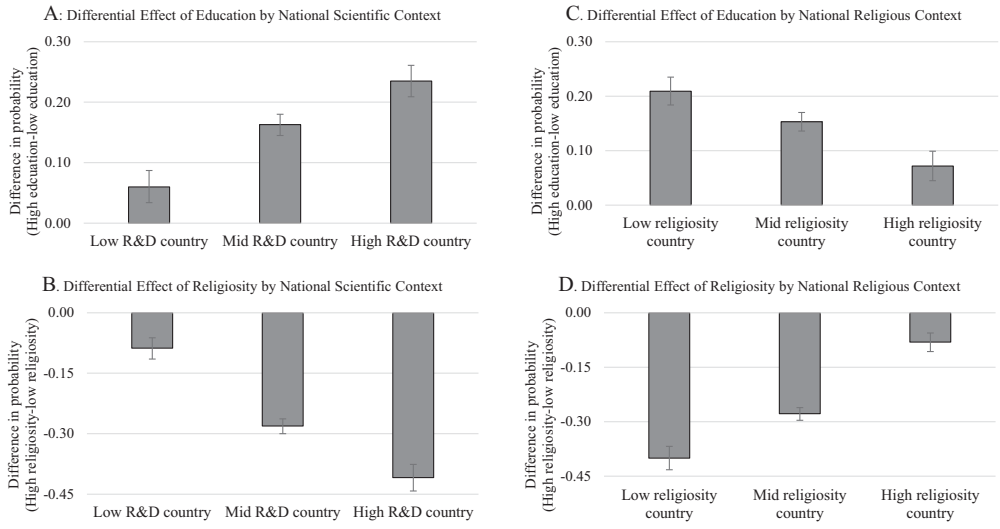
Model 3 examines whether the effect of education on trust in science and religion varies by countries' level of engagement with science. The positive, statistically significant interaction indicates that the association between exposure to science and trust in science is stronger in societies with higher levels of scientific activity.[6] To interpret this result, Panel A in Figure 2 graphs the marginal difference of disagreeing that there is too much trust in science and not enough in religion between individuals with high versus low levels of education in countries with high, middle, and low levels of scientific engagement.[7] In essence, this illustrates the effect of education on trust in science and religion in three distinct country contexts. Ninety-five percent confidence intervals were obtained using delta-method standard errors. The predicted probabilities used to

[5] As an additional sensitivity analysis, we estimated country-specific regressions. Religiosity had a negative, statistically significant relationship with trust in science vis-à-vis religion in 28 of the 37 countries ($p<.05$). In five of the remaining nine countries the coefficient for religiosity was negative but not significant at the .05 level. There were no countries in which religiosity had a significant, positive effect. Education had a positive, statistically significant association with trust in science compared to religion in 25 of the 37 countries ($p<.05$). We observed the same relationship in two additional countries at a .10 significance level. There were no countries where education had a negative, statistically significant effect.

[6] There is a strong correlation between R&D workforce and GDP ($r = 0.77$). In additional analyses we estimated regressions that substituted GDP for R&D workforce as a moderating variable. Results were substantively similar to those presented here. However, we argue that while economic development is related to trust in science and religion, scientific engagement provides a more proximate measure of the mechanism driving this relationship, namely, the cultural centrality of scientific values.

[7] Here, high and low levels of education refer to individuals with a college degree and those with no formal educational credential. High, middle, and low national engagement with science are defined as countries at the 90th, 50th, and 10th percentiles of the R&D workforce variable. We also examined countries with an R&D workforce equal to the mean compared to one standard deviation above and below the mean and found similar patterns.

Figure 2
Marginal differences in trust in science and religion adjusted for individual- and country-level characteristics



Note: Graph contains marginal differences in predicted probabilities with 95 percent confidence intervals of disagreeing that there is too much trust in science and not enough in religion, adjusted for respondents' personal characteristics and national contexts. Predictions are based on Models 3 (Panel A), 4 (Panel B), 5 (Panel C), and 6 (Panel D) in Table 2 and computed with controls held at their grand means. Data are from 2008 ISSP (individual-level variables), World Bank, World Christian Database, and Freedom House (country-level variables) ($n = 48{,}059$).

compute these differences are contained in an appendix. Predictions are calculated holding other independent variables at their grand means.

Panel A in Figure 2 indicates that in each national context the probability of disagreeing that there is too much trust in science and not enough in religion is greater for respondents with high compared to low levels of education. In other words, education is associated with greater trust in science compared to religion cross-nationally. However, the education gap is nearly three times larger in countries with the median level of scientific activity compared to countries with low levels of scientific activity (.16 compared to .06). The gap is roughly four times larger in countries with high compared to low levels of scientific activity (.24 compared to .06). This suggests that exposure to science has its most powerful effect on trust in science vis-à-vis religion in the most scientifically engaged societies.

Model 4 in Table 2 examines whether national scientific context also moderates the effect of religiosity on views of science and religion. The negative, statistically significant coefficient for the cross-level interaction indicates that religiosity's negative effect on trust in science compared to religion is strongest in the most scientifically engaged countries. Panel B in Figure 2 illustrates this by graphing marginal differences in the predicted probability of disagreeing that there is too much trust in science relative to religion for highly religious individuals compared to those who are not religious in countries with high, middle, and low levels of scientific engagement.[8] In each country context, the probability of disagreeing that there is too much trust in science compared to religion is lower for religious compared to nonreligious people. Yet, the gap is more than four times larger in countries with high compared to low levels of scientific activity (.41 compared to

[8]For the purposes of this graph, we define individuals who attend religious services more than once per week as highly religious, and those who never attend religious services as not religious.

.09). So, like education, religiosity has its most pronounced effect on trust in science and religion in the most scientific societies.

Model 5 contains a cross-level interaction to determine whether the effect of education on trust in science and religion depends on national religious context.[9] The negative, statistically significant interaction indicates that the effect of education is strongest in the least religious countries. Panel C in Figure 2 illustrates this by graphing marginal differences in the probability of observing the outcome between individuals with high and low levels of education in countries with high, middle, and low levels of religiosity.[10] In each context, the probability of disagreeing that there is too much trust in science and not enough in religion is greater for individuals with high levels of education. Yet, the education gap is three times greater in countries with low compared to high levels of religiosity (.21 compared to .07). In other words, the positive effect of exposure to science on trust in science is largest in the least religious societies.

Finally, Model 6 tests whether the relationship between religiosity and trust in science and religion depends on national levels of religiosity.[11] The significant, positive coefficient for the cross-level interaction indicates that the negative effect of personal religiosity on trust in science and religion is stronger in less religious societies. Panel D in Figure 2 illustrates this by graphing the marginal differences in the probability of observing the outcome for individuals who are highly religious compared to those who are not religious in three different religious contexts. As the figure shows, personal religiosity is associated with less trust in science compared to religion in each context. However, the difference between those who are highly religious and those who are not religious is five times larger in countries with low compared to high levels of religiosity (.40 compared to .08).[12]

To summarize, this analysis reveals that educational attainment and religiosity are associated with trust in science and religion around the world. More importantly, we find that the strength of these relationships is moderated by national factors. Specifically, trust in science relative to religion depends on the scientific and religious contexts in which personal experiences with science and religion occur. This suggests that the association between education and support for science in the United States, with its unusually high levels of scientific activity, may overemphasize the importance of exposure to science compared to countries with less scientific activity. Likewise, studies about religious beliefs and practices in the United States and United Kingdom may overestimate the role of religiosity in shaping trust in cultural authority in more religious societies.

Conclusions

Although perceptions of science and religion are the focus of a large body of research, less attention has been paid to how those beliefs are affected by macro-level forces. Our findings corroborate earlier studies that show that attitudes about science and religion are shaped by

[9]We have also examined cross-level interactions between personal religiosity and national religious traditions. These models indicate that personal religiosity has similar effects on trust in science and religion in Protestant and Catholic nations. Although personal religiosity is also associated with less trust in science relative to religion in Orthodox countries and countries with other faith traditions, the effect of religiosity is weaker in these contexts compared to Protestant and Catholic nations.

[10]Here, we define high, middle, and low religiosity as countries at the 90th, 50th, and 10th percentiles on the national religiosity measure. We also compared countries with the mean level of religiosity to countries one standard deviation above and below the mean and found similar patterns.

[11]We also conducted analyses where individual-level religiosity was modeled as respondents' deviation from within-country mean religiosity. Findings were consistent with those reported here.

[12]For further verification of these patterns, we estimated regression models that included fixed effects for countries. Conclusions were consistent with those discussed in this article.

individuals' experiences with them (Evans 2014). We build on this research by showing that the strength of these relationships depends on national context.

We find that educational attainment is accompanied by more trust in science relative to religion across countries. It is important to reiterate that we analyzed the effect of education on trust in science and religion net of differences in faith traditions. Research in the United States suggests that education's effect on attitudes about science depends on religious identities, and further study is needed to know whether this is also the case elsewhere (Baker 2013; Hill 2014; Scheitle 2011). Nonetheless, our results advance knowledge in this area by providing evidence that education's positive effect on trust in science relative to religion is not culturally specific.

We find also that religiosity is associated with less trust in science compared to religion cross-nationally. Critics have characterized research on science and religion in the United States as "Protestant-centric," and suggested that religious Americans' skepticism of science reflects a uniquely contentious relationship between certain Protestant traditions and scientific theories of human origins (Bender et al. 2013). However, we find that religiosity is associated with less trust in science compared to religion independently of national religious traditions. For example, country-specific analyses (see footnote 5) revealed the same patterns in non-Protestant countries throughout Eastern Europe and the Global South. Although measuring religiosity cross-nationally is challenging, the validity of our conclusions is further supported by our analyses of several alternative measures of religiosity. Thus, although cross-national surveys of religious beliefs and behaviors may carry inherent limitations, this investigation offers robust evidence that the relationship between religiosity and trust in science and religion is not confined to Protestant countries.

The primary contribution of this article is establishing that the effects of exposure to science and religion on trust in science and religion depend on national context. Although education is associated with more favorable views of science relative to religion around the globe, the relationship is strongest in the most scientific and least religious countries. Similarly, religiosity is associated with more trust in religion compared to science worldwide, but the relationship is most pronounced in the most secular and scientifically engaged nations. Taken together, this suggests that the impacts of social identities related to science and religion on trust in science and religion are strongest in places where science is prioritized and where religion is marginalized.

Although one might expect social identities to be most important to attitude formation when those identities are either most or least salient, our findings suggest otherwise. Specifically, individual-level predictors of trust in science and religion—even those that move trust in opposite directions—have their strongest effects in the most scientific and least religious societies. This may reflect an emphasis on values such as liberalism and pluralism in these contexts. Not only do secular and scientific societies each make available a wider range of acceptable belief systems, they provide settings where there is greater acceptance of diverse attitudes. Altogether, these results lend support to theories that trust in institutions depends increasingly on self-identity in late modernity (Giddens 1991; Madsen 2009; Meyer 1990).

Even as societies dissociate with religious authority, they often encourage tolerance for religious values at the individual level. If favorable views of science and religion were strengthened in reaffirming contexts, then the effect of religiosity on trust in science and religion would be greatest in the most religious societies. Yet, we find that the link is strongest in the most secular ones. Overall, this pattern resonates with scholarship on religious marketplaces, which argues that religious identities fuel religious commitment most strongly when diverse ideas and values compete for acceptance (Finke and Stark 1992).

For those who wish to increase support for scientific or religious authority in the public sphere, this article suggests that efforts should be tailored to fit local scientific and religious cultures. At a general level, promoting exposure to science and liberal values through education may generate support for scientific leaders as policy advisors, and attempts to increase religious engagement may bolster support for religious leaders' influence in society. These possibilities

are supported by our analyses of additional ISSP data (not shown) that found that higher levels of trust in science relative to religion were associated with greater opposition to religious leaders' influence over voters and elected officials. Importantly, however, programs aimed at increasing trust in science or religion may be more fruitful in some contexts than others. For example, investments in education may provide the largest returns in places where scientific values are already widespread and where religion is relatively peripheral.

An important caveat of this analysis is that it uses a survey question that contrasts science and religion. However, given the relational basis of social attitudes (DiMaggio et al. 2017), measuring trust in science and religion in comparative terms provides a more realistic depiction of how individuals encounter them in daily life. Furthermore, the wording of the dependent variable makes it challenging to distinguish respondents' beliefs about the uses of science and religion in their own lives compared to society more generally. Our analysis, although not without its limitations, provides an important addition to our understandings of international attitudes about science and religion and highlights the need for new data streams to study these issues further. Another criticism of the survey question is that non-Western religions may not differentiate science and religion as sources of knowledge and values in the same way as some Christians. This concern is mitigated by the fact that a majority of respondents in this study live in predominately Christian societies. Nonetheless, examining perspectives on science and religion in non-Christian countries may be a promising avenue for future research.

Our findings suggest several additional avenues for further investigation. For example, survey questions that focus on the relationship between science and religion with reference to specific public controversies related to education, biomedical research, sexuality, and other issues might shed new light on how science and religion organize public life around the world. Moreover, survey items that distinguish between how individuals view science and religion in their own lives compared to society as a whole may offer additional insight about the cross-national bases of trust in science and religion. Finally, extending the scope of data collection in the Global South and non-Christian countries would allow for more comprehensive tests of how contextual factors affect perceptions of these sources of cultural authority. Although further study of science and religion from a comparative perspective is warranted, this investigation provides an exciting step forward in understanding how individual and societal factors interactively shape trust in science and religion. Thus, although this article adds to mounting evidence of group differences in beliefs about cultural authority, it is also a reminder of the strength of societies in guiding public opinion.

References

Allum, Nick, Elissa Sibley, Patrick Sturgis, and Paul Stoneman. 2014. Religious beliefs, knowledge about science and attitudes towards medical genetics. *Publisc Understanding of Science* 23(7):833–49.

Baker, Joseph O. 2012. Public perceptions of incompatibility between "science and religion." *Public Understanding of Science* 21(3):340–53.

———. 2013. Acceptance of evolution and support for teaching creationism in public schools: The conditional impact of educational attainment. *Journal for the Scientific Study of Religion* 52(1):216–28.

Baker, Joseph O. and Andrew L. Whitehead. 2016. Gendering (non)religion: Politics, education, and gender gaps in secularity in the United States. *Social Forces* 94(4):1623–45.

Bauer Martin, John Durant, and Geoffrey Evans. 1994. European public perceptions of science. *International Journal of Public Opinion Research* 6(2):163–86.

Bender, Courtney, Wendy Cadge, Peggy Levitt, and David Smilde, eds. 2013. *Religion on the edge: De-centering and re-centering the sociology of religion*. New York, NY: Oxford University Press.

Bourdieu, Pierre. 1984. *Distinction: A social critique of the judgement of taste*. Cambridge, MA: Harvard University Press.

Cacciatore, Michael A., Nick Browning, Dietram A. Scheufele, Dominique Brossard, Michael A. Xenos, and Elizabeth A. Corley. 2018. Opposing ends of the spectrum: Exploring trust in scientific and religious authorities. *Public Understanding of Science* 27(1):11–28.

DiMaggio, Paul, Ramina Sotoudeh, Amir Goldberg, and Hana Shepherd. 2017. Culture out of attitudes: Relationality, population heterogeneity and attitudes toward science and religion in the US. *Poetics* Available online ahead of print at: https://doi.org/10.1016/j.poetic.2017.11.001 (accessed May 2018).

Drori, Gili S., John W. Meyer, Francisco O. Ramirez, and Evan Schofer. 2003. *Science in the modern world polity: Institutionalization and globalization*. Stanford, CA: Stanford University Press.

Ecklund, Elaine Howard, David R. Johnson, Christopher P. Scheitle, Kirstin R.W. Matthews, and Steven W. Lewis. 2016. Religion among scientists in international context: A new study of scientists in eight regions. *Socius: Sociological Research for a Dynamic World* 2:1–9. https://doi.org/10.1177/2378023116664353

Edgell, Penny and Kathleen E. Hull. 2017. Cultural schemas of religion, science, and law in talk about social controversies. *Sociological Forum* 32(2):298–320.

Evans, John H. 2011. Epistemological and moral conflict between religion and science. *Journal for the Scientific Study of Religion*. 50:707–27.

———. 2014. Faith in science in global perspective: Implications for transhumanism. *Public Understanding of Science* 23(7):814–32.

Evans, John H. and Michael S. Evans. 2008. Religion and science: Beyond the epistemological conflict narrative. *Annual Review of Sociology* 34:87–105.

Finke, Roger and Amy Adamczyk. 2008. Cross-national moral beliefs: The influence of national religious context. *Sociological Quarterly* 49(4):617–52.

Finke Roger and Rodney Stark. 1992. *The churching of America, 1776–1990: Winners and losers in our religious economy*. New Brunswick, NJ: Rutgers University Press.

Frickel, Scott and Kelly Moore. 2006. *The new political sociology of science: Institutions, networks, and power*. Madison, WI: University of Wisconsin Press.

Gauchat, Gordon. 2012. Politicization of science in the public sphere: A study of public trust in the United States, 1974 to 2010. *American Sociological Review* 77(2):167–87.

Giddens, Anthony. 1991. *Modernity and self-identity: Self and society in the late modern age*. Stanford, CA: Stanford University Press.

Gieryn, Thomas F. 1999. *Cultural boundaries of science: Credibility on the line*. Chicago, IL: University of Chicago Press.

Hameed, Salman. 2015. Making sense of Islamic creationism in Europe. *Public Understanding of Science* 24(4):388–99.

Hayes, Bernadette and Vicki Tariq. 2000. Gender difference in scientific knowledge, and attitudes toward science: A comparative study of four Anglo-American nations. *Public Understanding of Science* 9(4):433–47.

Hill, Jonathan P. 2014. Rejecting evolution: The role of religion, education, and social networks. *Journal for the Scientific Study of Religion* 53(3):575–94.

Inglehart, Ronald and Wayne Baker. 2000. Modernization, cultural change, and the persistence of traditional values. *American Sociological Review*. 65(1):19–51.

Johnson, David R., Christopher P. Scheitle, and Elaine Howard Ecklund. 2015. Individual religiosity and orientation towards science: Reformulating relationships. *Sociological Science* 2:106–24.

Johnson, Katherine and Richard Simon. 2012. Women's attitudes toward biomedical technology for infertility: The case for technological salience. *Gender & Society* 26(2):261–89.

Koos, Sebastian. 2012. What drives political consumption in Europe? A multi-level analysis on individual characteristics, opportunity structures and globalization. *Acta Sociologica* 55(1):37–57.

Madsen, Richard. 2009. The archipelago of faith: Religious individualism and faith community in America today. *American Journal of Sociology* 114(5):1263–1301.

Mayrl, Damon and Jeremy E. Uecker. 2011. Higher education and religious liberalization among young adults. *Social Forces* 90(1):181–208.

Merton, Robert K. ([1942]1973) The normative structure of science. In *The sociology of science*, edited by Norman Storer, pp. 267–80. Chicago, IL: University of Chicago Press.

Meyer, John. 1990. Individualism: Social experience and cultural formulation. In *Self-directedness: Cause and effects throughout the life course*, edited by Judith Rodin, Klaus Warner Schaie, and Carmi Schooler, pp. 51–58. Hillside, NJ: Lawrence Erlbaum Associates Publishers.

Miller, Jon. 2004. Public understanding of and attitudes toward scientific research: What we know and what we need to know. *Public Understanding of Science* 13(3): 273–94.

Noy, Shiri and Timothy L. O'Brien. 2016. A nation divided: Science, religion, and public opinion in the United States. *Socius: Sociological Research for a Dynamic World* 2:1–15. https://doi.org/10.1177/2378023116651876

O'Brien, Timothy L. and Shiri Noy. 2015. Traditional, modern, and post-secular perspectives on science and religion in the United States. *American Sociological Review* 80(1):92–115.

Rabe-Hesketh, Sophia and Anders Skrondal. 2013. *Multilevel and longitudinal modeling using stata*, 3rd edition. College Station, TX: STATA Press.

Roos, J. Micah. 2017. Contested knowledge and spillover. *Social Currents* 4(4):360–79.

Scheitle, Christopher P. 2011. Religious and spiritual change in college: Assessing the effect of a science education. *Sociology of Education* 84(2):122–36.

Scheitle, Christopher P., David R. Johnson, and Elaine Howard Ecklund. 2018. Scientists and religious leaders compete for cultural authority of science. *Public Understanding of Science* 27(1):59–75

Schofer, Evan, 2004. Cross-national differences in the expansion of science, 1970–1990. *Social Forces* 83(1):215–48.

Scholz, Evi, Marleen Heller, and Timo Lenzner. 2010. *ISSP 2008 Germany: Religion III GESIS report on the German study*. Mannheim, Germany: GESIS – Leibniz-Institut für Sozialwissenschaften.

Shapin, Steven. 2008. Science and the modern world. In *The handbook of science and technology studies*, 3rd edition, edited by Edward J. Hackett, Olga Amsterdamska, Michael E. Lynch, and Judy Wajcman, pp. 433–48. Cambridge, MA: MIT Press.

Sherkat, Darren E. 2011. Religion and scientific literacy in the United States. *Social Science Quarterly* 92(5):1134–50.

Smith, Christian. 1998. *American evangelicalism: Embattled and thriving*. Chicago, IL: University of Chicago Press.

Snow, Catherine E. and Kenne Dibner. 2016. *Science literacy: Concepts, contexts, and consequences*. Washington, DC: National Academies Press.

Stegmueller, Daniel. 2013. How many countries for multilevel modeling? A comparison of frequentist and Bayesian approaches. *American Journal of Political Science* 57(3):748–61.

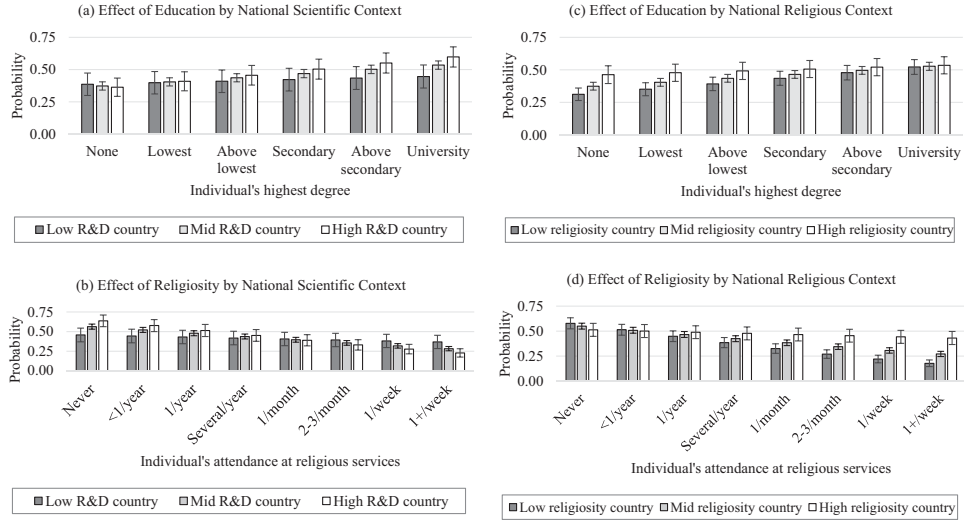
Stavrova, Olga, Detlef Fetchenhauer, and Thomas Schlösser. 2013. Why are religious people happy? The effect of the social norm of religiosity across countries. *Social Science Research* 42(1):90–105.

Summers, Nik. 2016. Ethical consumerism in global perspective: A multi-level analysis of the interactions between individual-level predictors and country-level affluence. *Social Problems* 63(3):303–28.

Vaidyanathan, Brandon, David R. Johnson, Pamela J. Prickett, and Elaine Howard Ecklund. 2016. Rejecting the conflict narrative: American Jewish and Muslim views on science and religion. *Social Compass* 63(4):478–96.

APPENDIX

Figure A1
Predicted probabilities of trust in science and religion adjusted for individual- and country-level characteristics.



Note: Graph contains predicted probabilities with 95 percent confidence intervals of disagreeing that there is too much trust in science and not enough in religion, adjusted for respondents' personal characteristics and national contexts. Predictions are based on Models 3 (Panel A), 4 (Panel B), 5 (Panel C), and 6 (Panel D) in Table 2 and computed with controls held at their grand means. Data are from 2008 ISSP (individual-level variables), World Bank, World Christian Database, and Freedom House (country-level variables) ($n = 48{,}059$).