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Peace through superior firepower: Belief in supernatural evil and attitudes toward gun policy in the United States

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ABSTRACT

Although debates over guns and gun control have roiled the contemporary political scene, the role of religion has received only limited attention from scholars. We contribute to this literature by developing a series of theoretical arguments linking one specific facet of religion –belief in supernatural evil (i.e., the Devil/Satan, Hell, and demons)—and a range of gun policy attitudes. Relevant hypotheses are then tested using data from the 2014 Baylor Religion Survey (n = 1572). Results show that belief in supernatural evil is a robust predictor of support for policies that expand gun rights. Overall, the estimated net effects of belief in supernatural evil withstand statistical controls for a host of sociodemographic covariates, and, importantly, political ideology. Very few other aspects of religion are associated with any of these gun policy attitudes. Implications and study limitations are discussed, and promising directions for future research on religion and guns are identified.

1. Introduction

Firearms have occupied a prominent place in American life since the inception of the Republic. Although its meaning is sharply contested, the Second Amendment to the U.S. Constitution guarantees that law-abiding Americans shall have the "right to keep and bear arms." Indeed, historian Richard Hofstadter (1970) famously characterized America as "a gun culture." The centrality of guns in American life sets the U.S. apart from most other countries in the world. Although precise figures remain elusive, data from the Switzerland-based Small Arms Survey (SAS) suggest that the U.S. has the most guns in private hands of any country in the world (Thomson Reuters 2016). According to the SAS, of the approximately 857 million firearms in civilian hands around the globe today, an estimated 46% of these are owned by U.S. citizens (Karp 2018). Nor do these patterns show any sign of abating. Overall gun ownership in the U.S. increased by 38% between 1994 and 2015, and handgun ownership rose by 71% during the same period (McCarthy et al. 2017).

Clearly, the widespread ownership of firearms by civilians is a distinctly American phenomenon that raises a host of sociologically relevant issues. To date, however, social scientists have shown only occasional interest in the study of guns (Yamane 2017). The limited body of existing work on this topic has focused on five main strands of research: (a) patterns and correlates of gun ownership and

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gun-related practices and lifestyles (Lizotte and Bordua 1980; Kleck 1997; Legault 2008); (b) the shifting cultural meanings associated with owning and using firearms in contemporary America (Carlson 2015; Stroud 2016; Mencken and Froese 2018); (c) public health risks associated with high rates of civilian gun ownership (Kalesan et al., 2016; Hemenway 2017); (d) the relationship between firearm ownership and well-being (Dowd-Arrow et al. 2019; Hill et al., 2020a; Hill et al. 2020b; Hill et al. 2020c); and (e) attitudes and political struggles involving gun control and gun policy issues (Wright et al. 1983; Goss 2006; Winkler 2013; Cook and Goss 2014). Our study contributes to this fifth area of social science work on the role of guns in American life.

Nevertheless, as Yamane (2017) has pointed out, despite the prominence of firearms in the lives of millions of Americans, social science perspectives on this topic remain surprisingly underdeveloped. The present study casts fresh light on the role of religion in American gun culture, a topic that has received only cursory attention in this literature (Yamane 2016). Much of what we do know about religion and guns has centered on the association between rudimentary religious indicators (e.g., denominational affiliation, attendance, salience, and conservatism) and the likelihood of owning and carrying guns among U.S. adults (Young 1989; Little and Vogel 1992; Young and Thompson 1995; Yamane 2016). More recently, a handful of studies have explored links between religion and other aspects of gun culture, such as attitudes regarding gun control and related policy preferences (Mencken and Froese 2018; Merino 2018; Whitehead et al. 2018).

Why is it important to understand how religion may impact attitudes toward gun policies? First, the few existing studies in this area report that the associations between aspects of religion and gun-related policy preferences are non-trivial in magnitude and persist despite controls for a wide array of covariates (e.g., Yamane 2016; Whitehead et al., 2018). Thus, the findings to date highlight the potentially unique influence of religion on these outcomes. Second, as Whitehead and colleagues (2018) note, for many U.S. adults, debates over gun policy are not merely concerned with public safety but threaten what they perceive as God-given rights to protect both their families and society at large. Further, gun advocates have claimed that the restoration of Christian values in schools and American culture—rather than instituting policies that limit access to firearms—have the greatest potential to reduce gun violence. These arguments highlight the unique ability of religious institutions to cast gun policy beliefs as moral issues, imbuing moral virtue into gun ownership as a means of protecting one's family and fellow citizens. Therefore, it is vital to understand the various ways that religious affiliations, practices, and beliefs may shape attitudes regarding policies that govern the ownership and use of firearms.

Our study augments the literature by linking (a) one critical facet of religious belief or cognition—i.e., belief in supernatural evil (e.g., strength of belief in the Devil/Satan, Hell, and demons)—and (b) attitudes regarding an array of gun-related policy matters. We begin by briefly reviewing the limited body of literature on religion and guns in America. Then we develop theoretical arguments connecting belief in supernatural evil and opposition to many (indeed, perhaps most) forms of gun control, and relevant hypotheses are then tested using data from the Baylor Religion Survey, a nationwide survey of 1572 adults residing in the 48 contiguous states conducted in early 2014. After presenting our results, we discuss the implications of our findings for research on the social correlates of belief in supernatural evil, a neglected dimension of religion, and the wider literature linking religious factors with U.S. gun culture.

1.1. Religion and guns in America

1.1.1. Owning and carrying guns

For some time, social scientists have documented religious variations in gun ownership in the United States (for a review, see Yamane 2016). Beginning in the 1970s, numerous researchers have reported that Protestants—often identified with a dummy variable in regression models—are more likely to own guns than persons from Catholic, non-Christian (especially Jewish), and non-religious backgrounds (e.g., Ellison 1991a; Little and Vogel 1992). More recent work has distinguished between conservative (i.e., fundamentalist, evangelical, and charismatic) Protestants and mainline Protestants. This work typically finds that elevated rates of gun ownership are confined mainly to the more conservative Protestants, as compared with their mainline counterparts (Yamane 2016). Broadly consistent with such findings, another recent study showed that youths raised in conservative Protestant households tend to have easier access to firearms than other adolescents (Stroope and Tom 2017). Another line of work has also explored links between beliefs that are common among conservative Protestants—such as biblical inerrancy and belief in a punitive God—and the tendency to own and carry guns, with surprisingly inconsistent findings (Young 1989; Young and Thompson 1995). Yet a third research direction has focused on associations between religiosity—often measured in terms of frequency of attendance at religious services—and gun ownership. These studies have occasionally found that regular churchgoers are less inclined to own or carry firearms than other persons (e.g., Yamane 2016).

What factors might account for the connection between religious conservatism and gun ownership? Prior theory and research suggest several potential explanations for this pattern, although few studies have actually explored these factors directly (for a partial exception, see Yamane 2016). For example, Protestants—and especially fundamentalists, evangelicals, and charismatics—may be more likely to own guns because they: (a) tend to hold more punitive attitudes toward criminals (Grasmick and McGill 1994); (b) are less trusting of others (Hempel et al. 2012); (c) are more politically conservative on a host of issues and tend to align with right-wing candidates and the GOP (Schwadel 2017); (d) are less trusting of supra-local government, due in part to a deeply rooted anti-institutionalist ethos (Jiobu and Curry 2001; Bivins 2008); (e) tend to hold individualistic attitudes that stress—among other things—personal responsibility for family well-being and protection (Young 1989; Celinska 2007); and (f) may be prone to embrace "rugged masculinity," a gender ideology that links masculinity with an imperative of defending one's self, their loved ones, and others from outside threats (Eldredge 2001; Gallagher and Wood 2005). Although some or all of these factors may help to explain the higher rates of gun-owning and -carrying among religious conservatives, the evidence remains inconclusive at this time.

1.2. Attitudes toward gun control and firearms policy

Surprisingly, few studies have explored religious variations in support of gun control or other firearms policies. However, some bivariate associations recently reported by the Pew Research Center suggest that the role of religion in shaping such policy preferences may warrant closer investigation. On one hand, white evangelical Protestants are similar to other Americans in their high levels of support for certain gun policy measures (e.g., restrictions on gun purchases by persons with mental illness), a finding that has been reported by others as well. On the other hand, they are much less likely to support other restrictions. For example, according to the Pew data white evangelicals report lower levels of support than other Americans for bans on assault-style weapons (63% vs. 68%), and high-capacity magazines (53% vs. 65%) (Shellnutt 2018).

Multivariate analyses of Pew data confirm the existence of several robust religious differences in policy preferences. Specifically, white evangelicals are disproportionately opposed to stricter gun control laws, and they are also much more inclined than others to support loosening existing gun regulations. When asked about the most important approach to preventing school shootings, white evangelicals are especially likely to favor (a) better mental health screening and support, (b) stricter security measures for gatherings, (c) allowing more citizens to carry weapons, and (d) putting more emphasis on God and morality in schools and society, as opposed to (e) stricter gun laws and enforcement (Merino 2018).

In addition to this emerging body of evidence about religious group differentials, scattered studies have explored other possible religious influences on gun policy attitudes. For example, Mencken and Froese (2018) found that among gun owners, self-reported religiosity was positively associated with support for a range of gun control policies, including bans of semi-automatic weapons and high-capacity magazines. In another recent contribution, Whitehead et al. (2018) showed that Christian nationalism—i.e., the belief that America was founded as a Christian nation and enjoys a special covenantal relationship with God—is a robust predictor of opposition to gun control, even with statistical adjustments for other aspects of religion and political orientation. They concluded that Christian nationalists fully embrace the guarantees afforded by the Second Amendment as "God-given" liberties. Recent research suggests that the National Rifle Association (NRA) has capitalized on this form of religious nationalism by increasingly using religious language to shape the debate around the Second Amendment (Dawson 2019). For example, in more recent years, the NRA has increased the usage of the phrase "God-given" when referring to Constitutional rights (Dawson 2019). Moreover, they have appealed to evangelicals through rhetoric conflating the idea of a supernatural evil with being victimized by crime or mass shooting events (Dawson 2019).

Overall, however, the dearth of attention to the association between religious factors and gun policy attitudes represents an important area of neglect for several reasons. First, there is considerable state-level variation in firearm policies (Siegel et al., 2017), which may be influenced by public opinion. In addition, respondents' attitudes toward "gun control" may vary depending on the precise wording of survey items and the specific policy issue in question, and therefore it is important to inquire about attitudes concerning a range of potential gun control measures. Moreover, understanding gun laws and the social bases of support and opposition to them may have implications for reducing the apparent public health dangers associated with widespread civilian firearm ownership and use (Kalesan et al., 2016; Hemenway 2017).

1.3. The role of belief in supernatural evil

The role of religious cognitions and beliefs in general, and belief in supernatural evil in particular, in shaping social and political life remains woefully understudied (Baker 2008). Nevertheless, a fragmented literature over the years has documented links between supernatural evil belief and a range of social and political outcomes. For example, the belief that Satan is active in the material world has been linked with increased support for conservative ideology and GOP politics (e.g., Wilcox et al. 1991), as well as intolerance of sexual and racial minorities (Wilson and Huff 2001). The broader specter of supernatural evil is also linked with moral crusading against pornography, among other conservative social causes (Swatos 1988), as well as popular support for harsh punishment of criminals (Bones and Sabriseilabi 2018; Davis 2018), and the corporal punishment of children (Ellison and Bradshaw 2009). Viewed more broadly, preoccupation with themes of human sinfulness and divine punishment has been inversely associated with life satisfaction and happiness, and positively associated with depression, anxiety, and other undesirable psychosocial outcomes (Shariff and Aknin 2014; Nie and Olson 2016; Flannelly 2017). Thus, although the literature is scattered, there is clear precedent for exploring links between belief in (or about) supernatural evil with a range of social and attitudinal outcomes.

To be clear, dualist world views are not unique to the U.S. Christian context and are prevalent across religious and philosophical traditions throughout the world. The notion of supernatural evil is found within most world religions and believed by the majority of U.S. adults (Martinez 2013; Norenzayan and Shariff 2008). Belief in supernatural evil is present in the Hebrew Bible, the Qur'an, Hinduism (Brinkgreve 1997), and Buddhism (Anderson 2012). Despite the ubiquitous nature of dualist views about good versus evil, we have opted to center our discussion on Christian perceptions of supernatural evil, given that the majority of religious U.S. adults are affiliated with a Christian religious institution.

How and why might belief in supernatural evil—e.g., the Devil/Satan, Hell, and demons—be linked to attitudes regarding firearm policy? To begin, individuals who believe that a cosmic battle between good and evil is being waged here on earth, as well as in the spiritual realm, and that it is manifested in the social world, may be especially fearful and vigilant. As this conflict plays out in human affairs, true spiritual evil is unlikely to be restrained by social norms or conventions, laws and formal social controls, or by individual conscience. Indeed, the ever-present prospect of evil makes daily life unpredictable, risky, and potentially quite threatening (Baker 2008). For individuals who perceive the world in this way, gun ownership may well be seen as a necessary risk reduction strategy. Viewed from this perspective, any laws restricting the type or capacity of firearm that can be obtained for the defense of self, loved

ones, and community members may seem unnecessary at best, and dangerous at worst, because individuals who are animated by evil are not likely to obey any such laws themselves (Vegter and Kelley 2020). In fact, laws that expand gun rights are fundamentally grounded in the belief that the institutions meant to protect us are unable to do so (Carlson 2015; Steidley 2019). As the government fails to keep us safe from crime and other "evils," many individuals seek to protect themselves and their families (Steidley 2019). Moreover, state actors pass laws that expand gun access when they are not able to adequately provide for the collective security of their citizens (Steidley 2019). In the face of potentially unlimited viciousness and destructiveness, access to the most powerful defensive means possible may seem like an essential risk-reduction strategy (Kleck 1997; Kleck and Kovandzic 2009). Indeed, recent research argues that beliefs about (a) proximal danger of victimization and (b) more diffuse perceptions of uncertainty and chaos in social life combine to promote gun ownership among U.S. adults (Stroebe et al. 2017).

Further, believers in supernatural evil may be especially prone to engage in dispositional attributions of responsibility for personal conduct, i.e., to explain human events in ways that emphasize durable aspects of personal morality and character, perhaps at the expense of situational or contextual factors (Grasmick and McGill 1994). It may be easier for individuals to contemplate the use of lethal force against another person if the potential target is constructed as "evil" and fundamentally "other." Believers may perceive a moral imperative to fight back against the forces of evil, especially to protect "good" or innocent persons against demonic threats.

Lastly, many evangelical leaders have made claims that Christians are more persecuted than other groups. In 2017, Franklin Graham urged his followers to engage in politics because "Christianity is under attack" (Buie 2017). In fact, recent data from Pew Research suggests that nearly half (41%) of evangelical Protestants believe that they have more difficult lives in America than other groups (Lipka 2016). Intrinsically tied into these two ideas is the fear that Christian values are being replaced by secular values. This creates a form of status anxiety, which has been shown to increase firearm demand (Steidley and Kosla 2018). After all, if there is a war against Christianity, then it stands to reason that Christians must be ready to protect their beliefs from the "evil" of secularization.

Taken all together, the foregoing arguments suggest two study hypotheses. First, we expect that belief in supernatural evil will be associated with more liberal gun policy attitudes (i.e., those that increase the availability of firearms to civilians). Second, given the associations between supernatural evil belief and political ideology (e.g., Wilcox et al., 1991; Wilson and Huff 2001), and the increasing politicization of firearms policy issues (e.g., Joslyn et al., 2017; Miller 2019), we expect that the associations described above will be partly mediated by political ideology.

1.4. Data and measures

To test these hypotheses, we use data from Wave Four of the Baylor Religion Survey (BRS), which was conducted in January of 2014. Briefly, the BRS is a national random sample of 1572 non-institutionalized respondents ages 18 and over who reside in the continental United States. The Gallup Organization administered and collected the survey using a mixed-mode design that included both phone interviews and mailed, self-administered questionnaires. The 2014 BRS is ideal for the purposes of the present study because it provides access to a wide range of items tapping attitudes toward gun control and gun policy issues, as well as relevant religious measures and information on political views and socio-demographic characteristics of respondents. Although there is a more recent wave of the BRS, collected in 2017, this wave did not include measures of attitudes towards gun policies.

Mencken and Froese (2018) have compared the characteristics of the 2014 BRS sample to those of the 2014 NORC General Social Survey (National Opinion Research Center 2015) and found them to be quite similar for the most part. However, there are a few notable discrepancies (e.g., racial/ethnic minority groups are underrepresented in the BRS). Consequently, our analyses are based on weighted data; BRS sample weights account for differential selection and differential response and bring our sample characteristics into alignment with those of the adult population of the continental United States. Missing data in the BRS are limited, and consistent with widespread contemporary practice, this issue is addressed via multiple imputation (Johnson and Young 2011), using Stata 16 software (StataCorp 2019).

1.5. Dependent variables: gun policy attitudes

BRS respondents were asked a series of eight items gauging their support for the following specific firearms policies, and for each item, response categories were 1 = favor and 0 = oppose. The particular measures, and the (unweighted) percentages supporting them, are as follows: (a) a ban on semi-automatic weapons (62.9%); (b) a ban on high-capacity magazines (67.1%); (c) a ban on civilian-owned handguns (29.1%); (d) support for concealed carry laws (55.8%); (e) better-armed security at schools (62.2%); (f) more teachers and school officials having guns (29.5%); (g) more gun safety programs (92.7%); and (h) expanded mental health screening for gun buyers (90.8%). Each item was analyzed as a separate outcome, using binary logistic regression estimation procedures.

1.6. Religious variables

The measure of our focal predictor variable, belief in supernatural evil, is based on a three-item index. Respondents were asked whether each of the following exist(s): (a) The Devil/Satan; (b) Hell; and (c) demons. Response categories for each item were as follows: 4 = absolutely, 3 = probably, 2 = probably not, and 1 = definitely not. Responses to the three items were summed and then averaged across the number of items answered to create an index measuring the strength of belief in supernatural evil. This index ranges from 1 to 4 with a mean of 3.09 (alpha = .94), indicating significant levels of overall belief in supernatural evil among the BRS respondents. To further confirm that our items belong in one scale, we also ran a factor analysis using the polychoric command in STATA. The polychoric command allows researchers to perform factor analysis on dichotomous and ordinal variables. As expected, the

three items loaded on one factor with factor loadings ranging from 0.93 to 0.97 and an eigenvalue of 2.68.[1] Our measure of supernatural evil is identical to the one used by Baker (2008).

In order to test our hypotheses regarding the estimated net effects of supernatural evil beliefs, it is desirable to control for other dimensions of religion that have been linked with gun ownership or policy attitudes (e.g., Yamane 2016; Merino 2018). First, we measure denominational affiliation using a variant of the well-established RELTRAD coding scheme (Steensland et al., 2000), including dummy variables for the following categories (a) conservative (i.e., fundamentalist, evangelical, and charismatic): Protestant; (b) mainline Protestant; (c) black Protestant; (d) Catholic; and (e) other religion (including Judaism, Islam, other non-Christian world religions, and various smaller minority faiths). These various categories are compared to persons with no religious affiliation, who comprise the reference group in our analyses. Unweighted descriptive statistics (see Appendix A) indicate that the religious composition of the BRS sample is as follows: 28.4% of respondents are conservative Protestant, followed by Catholic (24.9%), mainline Protestant (16.9%), unaffiliated (14.4%), other religion (8.2%), and black Protestant (7.2%).

In addition, we control for Bible beliefs, a core aspect of theological conservatism. Briefly, BRS respondents were asked to select from a list of options the view of the Bible that aligns most closely with their own interpretive posture. We use dummy variables to identify persons who embrace one of the two most conservative positions: (a) "The Bible means exactly what it says. It should be taken literally, word-for-word on all subjects" (1 = literalism) or (b) "The Bible is perfectly true, but it should not be taken literally, word-for-word. We must interpret its meaning" (1 = inerrancy). Biblical literalists (22.9% unweighted) and biblical inerrantists (33.8% unweighted) are compared with the reference group (43.3% unweighted), which consists of respondents who believe that the Bible contains some human error, or who believe the Bible is an ancient book of history and legends. Finally, religiosity is measured using responses to a single item on the frequency of religious attendance, which ranges from "never" (=0) to "several times a week" (=8). The average BRS respondent reported attending services several times per year (unweighted mean = 3.77).

1.7. Other variables

Multivariate analyses also control for background variables that are known correlates of gun ownership and policy preference (Dowd-Arrow et al., 2019; Hill et al., 2020a; Yamane 2016), including: gender (1 = female, 0 = male); race/ethnicity (1 = non-Hispanic Black, 1 = Hispanic, 1 = other minority, 0 = non-Hispanic white); age (in years); level of education (1 = less than high school, 1 = some college, but no degree, 1 = college graduate, 1 = postgraduate education, 0 = high school degree or equivalent); household income (in dollars, categorical ranging from 1 = $10K or less to 7 = $150K or more); marital status (1 = married or cohabiting, 0 = all others); children under 18 residing in the home (1 = yes, 0 = no); type of community of residence (1 = urban area, 0 = small town/rural); region of residence (1 = South, 0 = all others).

Unweighted descriptive statistics (means or percentages, standard deviations, and ranges) on all variables used in this study are presented in the Appendix. According to these unweighted statistics, the average BRS respondent is white (71.8%) and female (57.9%), not partnered (or single; 50.3%), without children under 18 living at home (70.8%), with an associates' degree or trade school education, and a household income of around $35K per year in 2013. In addition, the average BRS respondent lives in an urban area (52.8%) and a large proportion live in the South (38.7%).

As noted above, individuals who hold strong beliefs regarding the existence of supernatural evil also tend to embrace conservative positions on an array of social and political issues (Wilcox et al., 1991; Wilson and Huff 2001; Ellison and Bradshaw 2009). This is important because political conservatism is also associated with gun ownership and gun-related policy preferences. Considering these patterns, it is important to gauge the extent to which any observed associations between supernatural evil beliefs and gun-related attitudes may reflect the broader influence of political ideology. Thus, in our models, we incorporate controls for political ideology (1 = extremely conservative to 7 = extremely liberal). The average BRS respondent is a moderate who leans toward being slightly liberal (unweighted mean = 3.80).

For each gun-related policy outcome we estimate two models: (a) one model that includes all religious predictors; and (b) a second model, adding all the covariates and political Ideology to the initial model. To formally test the indirect effect of supernatural evil on specific gun policy positions through political ideology, we employ parametric mediation methods in the counterfactual framework and the paramed command in Stata 16 (Emsley and Liu 2013). Specifically, we use estimates from two parametric regression models to construct the controlled direct effect (CDE), the natural direct effect (NDE), and the natural indirect effect (NIE). The natural indirect effect, which is the focus of our mediation analysis, is calculated with respect to the mediator, controlling for all other predictors in the model (Valeri and VanderWeele 2013). The natural indirect effect assumes that exposure is set to some level "a" and then compares what would have happened if the mediator (political ideology) were set to an alternative value "a*". In the end, we calculated 95% confidence intervals using the default delta method after verification of substantively identical results using bootstrapped intervals.

2. Results

Beginning with Table 1, several findings are especially noteworthy. First, each one-unit increment in the strength of one's belief in supernatural evil is associated with a 27% decline in support for banning semi-automatic weapons (OR = 0.73, $p < 0.001$). The magnitude of this pattern is diminished only slightly with controls for political ideology (OR = 0.81, $p < 0.05$), which partially

[1] Because our measures focus primarily on Christian concepts, we also ran additional analyses removing those identifying with a non-Christian religious group. The results of these analyses were substantively identical to those we present in our current manuscript.

Table 1
Logistic regression estimates predicting support for various gun policies by supernatural evil presented in odds ratios.

	Semi-Auto Weapons Ban		High-Capacity Magazine Ban		Civilian Hand Gun Possession Ban		Support for Concealed Carry	
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
Focal Variable								
Supernatural Evil	0.73***	0.81*	0.74***	0.83*	0.67***	0.73***	1.51***	1.38***
Religious Variables								
Attendance	1.04	1.07*	1.04	1.05	1.06	1.08*	0.98	0.97
Biblical Inerrancy	1.03	1.09	1.05	1.08	0.95	0.97	0.76	0.67*
Biblical Literalism	0.98	1.19	0.95	1.02	1.31	1.36	0.96	0.78
Religious Affiliation								
Mainline Protestant	1.18	1.20	1.31	1.15	0.73	0.83	1.03	0.98
Black Protestant	1.76	0.66	2.00*	1.10	2.65**	1.71	0.42**	0.45
Conservative Protestant	0.99	1.34	1.06	1.34	0.75	0.93	1.04	0.84
Catholic	1.32	1.39	1.37	1.36	1.37	1.25	0.65*	0.66
Other Religion	1.89*	1.61	1.85*	1.48	1.66*	1.50	0.56*	0.65
Mediators								
Political Ideology		1.68***		1.60***		1.36***		0.68***
Controls								
Non-Hispanic Black		2.39*		1.36		1.72		1.05
Hispanic		1.57*		1.36		2.73***		0.64*
Other Race		0.93		0.92		2.37**		0.73
Female		3.23***		2.78***		1.44**		0.46***
Less Than HS		0.74		1.20		1.38		0.77
Some College		0.90		1.01		0.71		1.28
College Graduate		0.71		0.90		0.87		1.29
Postgraduate		1.28		1.56		1.18		0.77
Age		1.03***		1.03***		1.01**		0.99
Income		1.11*		1.00		0.94		0.95
Married		0.78		0.97		1.07		1.15
Children		1.07		1.08		1.13		1.03
Urban		1.40*		1.41**		1.37*		0.77*
South		0.67**		0.89		0.75*		1.46**

Source: Wave 4 of the Baylor Religion Survey (2014), n = 1572. *p < 0.05, **p < 0.01, ***p < 0.001. Reference categories include white, men, high school, unmarried, no children in the household, non-religious identity, having no religious identity, non-Southern residence, and urban residence.

mediates this relationship (b = 0.83, p < 0.001). This suggests that gun policy position scores would change by the value of the slope (b) if beliefs in supernatural evil were stably low, but political ideology scores were changed from the level they would take for those who identify as extremely conservative to the level they would take for those who are extremely liberal. When we divided the natural indirect effect of banning semi-automatic weapons (0.83) by the total effect (2.16), we observed a proportion mediated of 38.4%. This means that over one-third of the association between supernatural evil and supporting policies to ban semi-automatic weapons, after controlling for all covariates, is mediated by political ideology. Appendix B contains the results of these mediation analyses for all gun policies.

A similar pattern emerges with respect to support for a ban on high-capacity ammunition magazines, i.e., those that hold more than 10 bullets. Belief in supernatural evil bears a strong inverse association with support for such a ban in the initial model (OR = 0.74, p < 0.01). And this effect is only slightly reduced by controls for political ideology (OR = 0.83, p < 0.05). As with the semiautomatic weapon ban, the effect of belief in supernatural evil is partially mediated by political ideology (b = 0.83, p < 0.001). Individuals who believe strongly in supernatural evil are also much less enthusiastic about a broader ban on civilian ownership of handguns (OR = 0.67, p < 0.001), a pattern that persists with adjustments for their overall political ideology (OR = 0.73, p < 0.001). As with the previous policy outcomes, political ideology explains a significant portion of this association (b = 0.92, p < 0.001). Supernatural evil beliefs are positively associated with approval of laws allowing the concealed carry of handguns (OR = 1.51, p < 0.001), which remains the case even when variations in political ideology are controlled (OR = 1.38, p < 0.001). However, as with previous models, political beliefs are a partial mediator of the association between beliefs in supernatural evil and approval of concealed carry of handguns (b = 1.11, p < 0.001).

Turning to the remaining multivariate results in Table 2, we find less in the way of a clear pattern of results. On one hand, persons who believe strongly in supernatural evil tend to favor placing more police and security personnel in schools (OR = 1.56, p < 0.001). More importantly, this association maintains significance once controls for political ideology are added to the model (OR = 1.34, p < 0.001). Once again, this pattern is partially mediated by political views (b = 1.10, p < 0.001). Similarly, the association between supernatural evil belief and support for arming teachers is highly significant (OR = 1.47, p < 0.001) in the first model, and this association remains after accounting for political ideology (OR = 1.32, p < 0.001). As with our previous models, political ideology is a partial mediator of the association between beliefs in supernatural evil and this specific gun policy (b = 1.18, p < 0.001). More specifically, we found that nearly two-thirds (64.8%) of the association between supernatural evil and supporting policies to arm teachers is mediated by political ideology. However, unlike our previous models, the associations between belief in supernatural evil and support for (a) more gun safety programs (OR = 1.03, n.s., model 2) and (b) better mental health screening of gun buyers (OR =

Table 2
Logistic regression estimates predicting support for various gun policies by supernatural evil presented in odds ratios.

	More Armed Security at Schools		More Teachers/Faculty with Guns		Required Gun Safety Programs		Expanded Mental Health Screening	
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
Focal Variable								
Supernatural Evil	1.56***	1.34***	1.47***	1.32**	0.90	1.03	0.83	0.91
Religious Variables								
Attendance	0.92**	0.92**	0.96	0.93*	0.97	0.96	1.01	1.02
Biblical Inerrancy	1.22	1.11	0.86	0.82	1.20	1.17	1.18	1.15
Biblical Literalism	2.15***	1.62*	0.91	0.78	0.91	1.09	1.00	1.00
Religious Affiliation								
Mainline Protestant	1.36	1.56	0.96	0.93	0.96	1.04	1.09	1.13
Black Protestant	1.63	1.27	0.54	1.05	0.96	0.59	1.54	0.59
Conservative Protestant	1.34	1.22	1.30	1.09	0.94	1.22	0.66	0.80
Catholic	1.29	1.44	0.80	0.75	1.13	1.18	1.39	1.34
Other Religion	1.28	1.70*	0.80	0.94	1.14	0.90	1.46	1.23
Mediator								
Political Ideology		0.80***		0.67***		1.42***		1.47***
Controls								
Non-Hispanic Black		1.57		0.67		1.40		2.10
Hispanic		0.97		0.71		1.32		2.77*
Other Race		1.00		0.74		0.61		0.72
Female		0.92		0.48***		1.52		2.01**
Less Than HS		0.66		0.76		0.35*		0.78
Some College		0.77		0.82		0.93		0.86
College Graduate		0.79		0.83		0.87		0.84
Postgraduate		0.50**		0.59*		1.27		1.16
Age		0.99**		0.98**		1.01		1.02**
Income		0.86**		0.97		0.98		0.97
Married		1.23		1.20		1.02		1.11
Children		0.68**		0.84		0.74		1.26
Urban		0.84		0.66**		1.74*		1.41
South		1.50**		0.88		0.78		1.13

Source: Wave 4 of the Baylor Religion Survey (2014), n = 1572. *p < 0.05, **p < 0.01, ***p < 0.001. Reference categories include white, men, high school, unmarried, no children in the household, non-religious identity, having no religious identity, non-Southern residence, and urban residence.

0.91, n.s., model 2) are negligible in all models.

We also ran a series of models estimating the standardized coefficients for each of our outcomes.[2] These models allow us to assess the strength of supernatural evil compared to other predictors of attitudes towards gun policy (not shown, but available upon request). Although, as observed in Tables 1 and 2, the effects of supernatural evil vary depending on the specific gun policy, they tend to be similar in magnitude to level of education and political views, but less robust than gender. For example, in examining support for concealed carry, the effect of supernatural evil (0.07) is roughly the same as political ideology (0.08) and having a college degree (0.06), but smaller than the effect of gender (0.15).

As we expected, in models of each gun-related attitude, political ideology is a potent and robust predictor. However, it also bears mentioning that although previous studies have linked other aspects of religion—affiliation, Bible beliefs (often regarded as a core indicator of theological conservatism), and attendance—with patterns of gun ownership and (less often) gun policy attitudes, we find relatively few associations between other religious variables and our measures of gun policy attitudes. The only other consistent patterns involve the frequency of religious attendance, which is modestly predictive of (a) greater support for banning civilian ownership of handguns and high-capacity weapons, and (b) lower support for arming teachers or having more armed security at schools. In ancillary analyses (not shown, but available upon request), we re-estimated model 1 for each attitudinal outcome, dropping the measure of supernatural evil beliefs. Even with that model re-specification, very few statistically significant patterns involving other religious variables emerged in the BRS data on gun policy attitudes.

2.1. Ancillary analyses

Some readers might be curious as to whether the effects of supernatural evil on gun policy beliefs withstand controlling for gun ownership. Briefly, gun owners may be more resistant to restrictive policies due to self-interest (e.g., Wolpert and Gimpel 1998) or because gun ownership is emerging as a salient political identity that may shape policy preferences and voting behavior (e.g., Joslyn et al., 2017). To address this issue, we ran a series of models including a control for gun ownership (not shown, but available upon request). As might be expected, we found that the inclusion of this control did reduce the magnitude of our findings, however, only in

[2] Models were run in STATA 16 using linear regression using the robust command. This method is appropriate when for estimating standardized coefficients due to its ease of interpretation (von Hippel 2015). Standardized coefficients were obtained using the command listcoef.

one model, the banning of semi-automatic weapons, did the inclusion of gun ownership eliminate the statistical significance of our variable of interest. Readers may also be interested as to whether controlling for trust in the police may alter our results. To address this issue, we ran a series of models including a variable measuring individual level of trust in the police (not shown, but available upon request). While level of trust in the police was indeed associated with gun policy attitudes, it did not alter any of our associations between supernatural evil and attitudes towards gun policies. Therefore, we did not include this variable in our final models.

Additionally, some readers may be curious as to whether trust in the government may alter the relationship between beliefs in supernatural evil and firearm policy attitudes. To address this issue, we ran a series of models including a variable measuring individual level of trust in the federal government (not shown, but available upon request). While level of trust in the federal government was associated with gun policy attitudes in some of our models, this item did not mediate or moderate the associations between supernatural evil and attitudes towards gun policies. Therefore, this variable was not included in our final models.

Finally, criminological research suggests that being the victim of a crime may impact gun ownership and attitudes (e.g., Kleck et al., 2011). To address this issue, we ran a series of models including a variable measuring whether the respondent or someone they are close with had ever been threatened with a gun or shot at (not shown, but available upon request). Somewhat surprisingly, this variable measuring gun victimization was a significant predictor of only one of our policy outcomes (increasing support for handgun bans). Further, our measure of gun victimization did not alter the relationship between beliefs in supernatural evil and firearm policy attitudes. As a result, we did not include this variable in our final models.

Overall, these findings align well with the hypotheses that have guided this study. Belief in supernatural evil is consistently linked with approval of measures that would ensure that civilians will retain access to firearms—especially powerful and high-capacity defensive weapons—and that they can carry weapons concealed in a variety of public settings. These individuals also tend to support policies that would place armed security personnel in schools as well as proposals to arm teachers or school administrators. Very few of these patterns can be explained away by the tendency of persons who believe strongly in supernatural evil to embrace generally conservative political views. By contrast, belief in supernatural evil is largely unrelated to support for other gun policy measures, which do not have any direct implications for the ability of civilians to access firearms to defend themselves against evil whenever it may surface in daily life.

3. Discussion

This study has explored an important, but understudied topic, the relationship between religion and gun-related policy attitudes. This work adds to the existing literature in several ways. First, although the role of religion in American gun culture has received intermittent scrutiny, this work has focused mainly on patterns of firearm ownership and the cultural meanings associated with gun ownership and use (Young 1989; Little and Vogel 1992; Young and Thompson 1995; Yamane 2016; Mencken and Froese 2018). By contrast, the possible role of religious factors in shaping attitudes about gun control and other policy matters has started to receive attention only recently (Merino 2018; Whitehead et al., 2018). Second, the limited body of work on religion and gun culture has tended to focus on standard or generic religious measures, including indicators of religious affiliation, theological conservatism (typically gauged in terms of beliefs about the nature and authority of the Bible), and religious practice (for a review, see Yamane 2016). Although there is much to be learned from such studies, the links between specific religious beliefs and gun ownership or attitudes have been neglected. Third, here and in the sociology of religion more generally, the implications of belief in supernatural evil (i.e., the Devil/Satan, Hell, and demons) have received short shrift from investigators (Baker 2008). Our work helps to remedy this pattern of neglect.

The findings reported here suggest several conclusions. First, as expected, the belief in supernatural evil is a consistent and robust predictor of most of the gun policy attitudes considered here. This is especially the case when the measures in question would affect the ability of individuals—citizens and trained security personnel—to access and deploy weapons (especially powerful weapons capable of significant stopping power) in defense of self, loved ones, and others. Not surprisingly, political ideology is also a strong predictor of gun-related policy preferences, but in nearly all instances, our core findings regarding belief in supernatural evil withstand statistical controls for political ideology, as well as various sociodemographic covariates. On the other hand, consistent with our arguments, the associations between supernatural evil belief and attitudes toward other gun-related measures (e.g., support for expanded mental health screening for gun purchasers) are negligible.

In contrast to the clear and consistent patterns involving supernatural evil belief, we find limited evidence that other dimensions of religion are linked with gun policy attitudes. The main exceptions involve the frequency of religious attendance, which is associated with (a) support for restrictive gun measures (e.g., banning semi-autos, banning handguns, etc.) and (b) opposition to introducing guns into school contexts. This pattern of results is broadly consistent with some previous research, which has reported that regular churchgoers may be somewhat less involved with gun culture than other Americans (e.g., Yamane 2016; Mencken and Froese 2018). Despite some prior evidence linking aspects of religious conservatism with gun ownership and opposition to gun control (Yamane 2016; Merino 2018; Whitehead et al., 2018), we find few significant links between denominational affiliation or Bible beliefs and gun policy attitudes in these data. Perhaps most importantly, the estimated net effects of supernatural evil beliefs remain robust, with or without controls for these other religious variables.

Why might persons who believe strongly in supernatural evil tend to favor having more weapons in the hands of larger numbers of Americans, especially civilians? Briefly, the conviction that there is a cosmic battle between ultimate good and ultimate evil being waged on earth as well as in the spiritual realm may make the world seem uncertain, risky, and even threatening. Individuals may display their propensity for evil at any moment in daily life, and pure evil is unlikely to be restrained by conscience, customs, or formal or informal social controls. Believers may perceive a moral imperative to fight evil, especially if its expression takes the form of threats

to the well-being of innocent persons (self, loved ones, or others). Under such circumstances, individuals may perceive a need for the most potent weapons available, to combat evil when it emerges, with or without warning. Moreover, it may be easier to consider deploying lethal weapons against others if they are viewed in highly morally charged terms; depicting them as "evil" may be the ultimate form of "othering." Given the potency of such beliefs, it is perhaps unsurprising that the NRA often employs similar rhetoric, depicting the "present evil" as a threat to individual safety and the Second Amendment in particular (Dawson 2019). Further, the conflation of dangerous individuals, such as mass shooters, with the idea of "evil" rouses born-again Christians to take up arms to defend the nation against the Devil, whom they view as real and acting through human agents (Dawson 2019). Taken together, these arguments may help to explain the robust associations between belief in supernatural evil and Americans' views on gun policy measures.

Viewed broadly, this study adds to a modest but growing literature on supernatural evil beliefs and their social and political correlates. Previous work has documented consistent links between these beliefs about evil and a host of outcomes, including: (a) conservative political ideology and support for the GOP and right-wing candidates (Wilcox et al., 1991); (b) support for socially conservative moral crusades, such as those opposing pornography (Swatos 1988); (c) reluctance to extend civil liberties to unpopular groups, especially sexual and religious minorities (Wilson and Huff 2001); (d) support for law and order and punitive attitudes regarding criminals (Bones and Sabriseilabi 2018; Davis 2018); and (e) approval of stern discipline, including corporal punishment, of children (Ellison and Bradshaw 2009). The potential role of belief in supernatural evil in shaping attitudes and orienting actions clearly warrants sustained attention from social scientists.

Future research might build on our findings in several ways. First, it would be worthwhile to investigate potential mediators, or explanatory pathways, that account for the association between supernatural evil belief and firearm policy attitudes. A partial list of such mediating factors might including the following: (a) generalized trust, because strong believers in evil may be more skeptical of the motives of others (Hempel et al., 2012); (b) confidence in governmental and other institutions, given that persons who endorse supernatural evil beliefs may be wary of centralized power and the tendencies of elites (Jiobu and Curry 2001; Perry et al., 2020); and (c) punitive orientations, because strong believers in these theological tenets may tend to engage more broadly in dispositional (rather than situational) attributions of responsibility for behavior (Grasmick and McGill 1994), and may view God in harsher, more judgmental terms (Ellison and Bradshaw 2009; Bones and Sabriseilabi 2018). Although our ancillary analyses suggest that level of trust in the government did not mediate or moderate the relationship between belief in supernatural evil and gun policy attitudes, the roles of these and other possible explanatory factors merit investigation in the future.

Second, it will be useful to investigate subgroup variations in the association between belief in supernatural evil and gun policy attitudes. Among the most promising candidates are race/ethnicity and gender. In perhaps the lone exploration of the social distribution of supernatural evil beliefs, Baker (2008) reported that racial and ethnic minorities—and especially African Americans—and women tend to endorse belief in the Devil/Satan, Hell, and demons at higher levels than most other Americans. At the same time, racial and ethnic minorities and women are also less likely to own firearms, and more likely to support gun control policies, than whites or men, respectively (Azrael et al., 2017; Goss 2017; Parker et al., 2017). Taken together, these patterns raise the interesting possibility that supernatural evil belief may "work" differently, depending on aspects of location in the social structure. In addition, there may be reasons to anticipate regional differences as well. Briefly, one notable strand of previous research has shown that conservative Protestant affiliation and belief (e.g., hierarchical images of God) are differently related to violent attitudes and behavior among southerners as compared with persons from other regions of the United States (Ellison 1991b; Ellison et al. 2003). It is worth investigating whether this general pattern extends to the link between supernatural evil belief and gun-related policy matters.

Like most studies, our work is characterized by several limitations. First, because the BRS data are cross-sectional, we cannot establish temporal order among our focal variables, which is one necessary element in determining causality. Therefore, we are restricted to reporting statistically significant associations only. Nevertheless, we believe that our theoretical arguments concerning our focal associations are far more compelling than the arguments in favor of reverse causation. Second, although we considered links between an array of religious factors and gun policy orientations, there are other potentially relevant religious constructs (e.g., Christian nationalism) that were unavailable. Unfortunately, it is not currently feasible to compare directly the estimated net effects of (a) supernatural evil belief and (b) Christian nationalism within a single study of gun policy attitudes. One recent study was able to juxtapose these two constructs directly and found that each of these religious factors had additive, complementary effects on support for law-and-order policies and harsher punishments of criminals (Davis 2018). Thus, it may be fruitful to estimate the joint effects of these beliefs on gun-related attitudes in the future.

These limitations notwithstanding, our study has broken new ground. Most of the limited literature associating religious factors with aspects of gun culture have focused on (a) rather standard religious measures and (b) gun ownership rather than policy orientations. By contrast, we have linked specific religious beliefs –i.e., regarding supernatural evil—with an array of policy preferences related to firearms and gun control, particularly measures that affect the ready access and possible deployment of defensive weapons. Clearly, this is not the last word regarding the role of religion in America's gun culture –nor should it be. Further research, including work along the lines sketched above, is needed to illuminate this vitally important, but poorly understood, topic.

Appendix A. Descriptive Statistics ($n = 1{,}572$, unweighted)

	Range	*Mean (%)*	*SD*	α

(*continued on next page*)

(*continued*)

	Range	*Mean (%)*	*SD*	α
Dependent Variable				
Ban on Semi-Auto Guns	0–1	(62.9)		
Ban on High-Capacity Ammo Clips	0–1	(67.1)		
Banning Civilian Handguns	0–1	(29.1)		
Support for Concealed Carry Laws	0–1	(55.8)		
More Armed Security at Schools	0–1	(62.2)		
More Teachers/Faculty having Guns	0–1	(29.5)		
More Gun Safety Programs	0–1	(92.7)		
Expanded Mental Health Screening	0–1	(90.8)		
Focal Variables				
Supernatural Evil	1–4	3.09	1.05	.95
Religious Variables				
Attendance	0–8	3.77	2.93	
Bible (Human Error, History and Fables)	0–1	(43.3)		
Biblical Inerrancy	0–1	(33.8)		
Biblical Literalism	0–1	(22.9)		
Religious Affiliation				
Conservative Protestant	0–1	(28.4)		
Mainline Protestant	0–1	(16.9)		
Black Protestant	0–1	(7.2)		
Catholic	0–1	(24.9)		
Other	0–1	(8.2)		
No Affiliation	0–1	(14.4)		
Mediator				
Political Ideology	1–7	(3.80)	1.55	
Controls				
Age	19–99	52.6	17.02	
Female	0–1	(57.9)		
Male	0–1	(42.1)		
White	0–1	(71.8)		
Hispanic	0–1	(11.3)		
African American/Black	0–1	(11.3)		
Other	0–1	(5.6)		
Less Than High School	0–1	(5.93)		
High School or Equivalent	0–1	(13.5)		
Some College	0–1	(32.2)		
College Degree	0–1	(26.1)		
Post-graduate Degree	0–1	(22.3)		
Household Income	1–7	4.15	1.71	
Not Partnered/Single	0–1	(50.3)		
Married/Cohabitating	0–1	(49.7)		
No kids under 18 in home	0–1	(70.8)		
Kids under 18 in home	0–1	(29.2)		
Small Town/Rural	0–1	(47.2)		
Urban Area	0–1	(52.8)		
South	0–1	(38.7)		
Other Region	0–1	(61.3)		

Appendix B. Mediation Estimates for Various Gun Policies by Supernatural Evil Through Political Ideology Expressed in Percentages

Semi-Auto Weapons Ban	High-Capacity Magazine Ban	Civilian Hand Gun Possession Ban	Support for Concealed Carry
38.4%	43.2%	52.9%	46.1%
More Armed Security at Schools	More Teachers/Staff with Guns	Required Gun Safety Programs	Required Mental Health Screenings
60.1%	64.8%	26.0%	49.5%

Source: Wave 4 of the Baylor Religion Survey (2014). All models control for all covariates. All mediation significant at $p<.001$.

References

Anderson, Benedict, 2012. The Fate of Rural Hell: Asceticism and Desire in Buddhist Thailand. Seagull Books, New York.
Azrael, Deborah, Hepburn, Lisa, Hemenway, David, Miller, Matthew, 2017. The stock and flow of U.S. Firearms: results from the 2015 national firearms survey. RSF: Russell Sage Foundation Journal of the Social Sciences 3 (5), 38–57.
Baker, Joseph O., 2008. Who believes in religious evil? An investigation of sociological patterns of belief in satan, Hell, and demons. Rev. Relig. Res. 50, 206–220.

Bivins, Jason C., 2008. Religion of Fear: the Politics of Horror in Conservative Evangelicalism, first ed. Oxford University Press, New York.
Bones, Paul D.C., Sabriseilabi, Soheil, 2018. Sinners in the hands of an angry God: an exploration of religious forces on support for the death penalty. J. Sci. Stud. Relig. 57, 707–722.
Brinkgreve, Francine, 1997. Offerings to durga and pretiwi in bali. Asian Folklore Stud. 56, 227–251.
Buie, Jordan, 2017. "Franklin Graham: Christianity under Attack, Believers Should Engage in politics." *the Tennessean*. May 16. Retrieved on December 1, 2020 from. https://www.tennessean.com/story/news/religion/2017/05/16/franklin-graham-christianity-under-attack-believers-should-engage-politics/325667001/.
Carlson, Jennifer A., 2015. Citizen Protectors: the Everyday Politics of Guns in an Age of Decline. Oxford University Press, New York.
Celinska, Katarzyna, 2007. Individualism and collectivism in America: the case of gun ownership and attitudes toward gun control. Socio. Perspect. 50, 229–247.
Cook, Philip J., Goss, Kristin A., 2014. The Gun Debate: what Everyone Should Know, first ed. Oxford University Press, New York.
Davis, Joshua, 2018. Enforcing christian nationalism: examining the link between group identity and punitive attitudes in the United States. J. Sci. Stud. Relig. 57, 300–317.
Dawson, Jessica, 2019. Shall not be infringed: how the NRA used religious language to transform the meaning of the second amendment. Palgrave Communications 5, 1–13.
Dowd-Arrow, Benjamin, Hill, Terrence D., Burdette, Amy M., 2019. Gun ownership and fear. SSM – Population Health 8, 100463. https://doi.org/10.1016/j.ssmph.2019.100463.
Eldredge, John, 2001. Wild at Heart: Discovering the Passionate Soul of a Man. Thomas Nelson, Nashville.
Ellison, Christopher G., 1991a. Southern culture and firearms ownership. Soc. Sci. Q. 72, 267–283.
Ellison, Christopher G., 1991b. An eye for an eye? A note on the southern subculture of violence thesis. Soc. Forces 69, 1223–1239.
Ellison, Christopher G., Matt, Bradshaw, 2009. Religious beliefs, sociopolitical ideology, and attitudes toward corporal punishment. J. Fam. Issues 30, 320–340.
Ellison, Christopher G., Burr, Jeffrey A., McCall, Patricia L., 2003. The enduring puzzle of southern homicide: is regional religious culture the missing piece? Homicide Stud. 7, 326–352.
Emsley, Richard, Liu, Hanhua, 2013. PARAMED: Stata module to perform causal mediation analysis using parametric regression models. https://EconPapers.repec.org/RePEc:boc:bocode:s457581.
Flannelly, Kevin J., 2017. Religious Beliefs, Evolutionary Psychiatry, and Mental Health in America. Springer, New York.
Gallagher, Sally K., Wood, Sabrina L., 2005. Godly manhood going wild? Transformations in conservative protestant masculinity. Sociol. Relig. 66, 135–159.
Goss, Kristin A., 2006. Disarmed: the Missing Movement for Gun Control in America. Princeton University Press, Princeton, NJ.
Goss, Kristin A., 2017. The socialization of conflict and its limits: gender and gun politics in America. Soc. Sci. Q. 98, 455–470.
Grasmick, Harold A., McGill, Anne L., 1994. Religion, attribution style, and punitiveness toward juvenile offenders. Criminology 32, 23–46.
Hemenway, David, 2017. Private Guns, Public Health, second ed. University of Michigan Press, Ann Arbor.
Hempel, Lynn M., Matthews, Todd, Bartkowski, John P., 2012. Trust in a "fallen world": the case of protestant theological conservatism. J. Sci. Stud. Relig. 51, 522–541.
Hill, Terrence D., Dowd-Arrow, Benjamin, Burdette, Amy M., Lauren, Hale, 2020a. Gun ownership and sleep disturbance. Prev. Med. 132 (2020), 105996. https://doi.org/10.1016/j.ypmed.2020.105996.
Hill, Terrence D., Dowd-Arrow, Benjamin, Burdette, Amy M., Warner, Tara D., 2020b. Gun ownership and life satisfaction in the United States. Soc. Sci. Q. 101 (5), 2121–2136. https://doi.org/10.1111/ssqu.12860.
Hill, Terrence, Dowd-Arrow, Benjamin, Davis, Andrew, Burdette, Amy, 2020c. "Happiness is a warm gun? Gun ownership and happiness in the United States (1973–2018). SSM-Population Health 10, 100536.
Hofstadter, Richard, 1970. America as a gun culture. Am. Herit. 21 (6). October.
Jiobu, Robert M., Timothy, J. Curry, 2001. Lack of confidence in the federal government and the ownership of firearms. Soc. Sci. Q. 82, 77–88.
Johnson, David R., Rebekah, Young, 2011. Toward best practices analyzing datasets with missing data: comparisons and recommendations. J. Marriage Fam. 73, 926–945.
Joslyn, Mark R., Haider-Markel, Donald P., Baggs, Michael, Bilbo, Andrew, 2017. Emerging political identities? Gun ownership and voting in presidential elections. Soc. Sci. Q. 98, 382–396.
Kalesan, Bindu, Villarreal, Marcos D., Keyes, Katherine M., Galeo, Sandro, 2016. Gun ownership and social gun culture. Inj. Prev. 22, 216–220.
Karp, Aaron, 2018. Estimating Global Civilian-Held Firearms Numbers. " Government, Graduate Institute of International and Development Studies, Geneva, Switzerland.
Kleck, Gary, 1997. Targeting Guns: Firearms and Their Control. Aldine de Gruyter, New York.
Kleck, Gary, Kovandzic, Tomislav, 2009. City-level characteristics and individual handgun ownership effects of collective security and homicide. J. Contemp. Crim. Justice 25, 45–66.
Kleck, Gary, Kovandzic, Tomislav, Saber, Mark, Hauser, Will, 2011. The effect of perceived risk and victimization on plans to purchase a gun for self-protection. J. Crim. Justice 39, 312–319.
Legault, Richard L., 2008. Trends in American Gun Ownership. LFB Scholarly Publishing, New York.
Little, Robert E., Vogel, Ronald E., 1992. Handgun ownership and the religion factor. J. Appl. Soc. Psychol. 22 (23), 1871–1877.
Lipka, Michael, 2016. "Evangelicals Increasingly Say It's Becoming Harder for Them in America. July 14. Retrieved on December 1, 2020. Pew Research Center. https://www.pewresearch.org/fact-tank/2016/07/14/evangelicals-increasingly-say-its-becoming-harder-for-them-in-america/.
Lizotte, Alan J., Bordua, David J., 1980. Firearms ownership for sport and protection: two divergent models. Am. Socio. Rev. 45, 229–244.
Martinez, Brandon C., 2013. Is evil good for religion? The link between supernatural evil and religious commitment. Rev. Relig. Res. 55 (2), 319–338.
McCarthy, Tom, Beckett, Lois, Glenza, Jessica, 2017. "America's Passion for Guns: Ownership and Violence by the Numbers. " The Guardian, U.S. Edition. https://www.theguardian.com/us-news/2017/oct/02/us-gun-control-violence-statistics.
Mencken, F. Carson, Froese, Paul, 2018. Gun culture in action." social problems. https://doi.org/10.1093/socpro/spx40.
Merino, Stephen M., 2018. God and guns: examining religious influences on gun control attitudes in the United States. Religions 9 (6). https://doi.org/10.3390/rel9060189.
Miller, Steven V., 2019. What Americans think about gun control: evidence from the general social survey, 1972-2016. Soc. Sci. Q. 100, 272–288.
National Opinion Research Center, 2015. General Social Surveys, 1972-2014: Cumulative Codebook. National Opinion Research Center, Chicago.
Nie, Fanhao, Olson, Daniel V.A., 2016. Demonic influence: exploring the relationship between a belief in demons and mental health. J. Sci. Stud. Relig. 55, 498–515.
Norenzayan, Ara, Shariff, Azim F., 2008. The origin and evolution of religious prosociality. Science 322, 58–62.
Parker, Kim, Horowitz, Juliana, Ruth, Igielnik, Oliphant, Baxter, Brown, Anna, 2017. "America's Complex Relationship with Guns. Pew Research Center, " Washington.
Perry, Samuel L., Whitehead, Andrew L., Grubbs, Joshua B., 2020. Save the economy, liberty, and yourself: christian nationalism and Americans' views on government COVID-19 restrictions. Sociology of Religion. PMCID: PMC7798614.
Schwadel, Philip, 2017. The republicanization of evangelical Protestants in the United States: an examination of the sources of political realignment. Soc. Sci. Res. 62, 238–254.
Shariff, Azim, Aknin, Lara B., 2014. The emotional toll of Hell: cross-national and experimental evidence for the negative well-being effects of Hell beliefs. PloS One 9 (1), e85251. https://doi.org/10.1371/journal.pone.0085251.
Shellnutt, Kate, 2018. Pew: white Evangelicals want stricter gun laws too. Christianity Today International (Retrieved 7/6/18). https://www.Christianitytoday.com/news/2018/February/white-evangelicals-guns-arming-teachers-assault-rifles-nra.html.
Siegel, Michael, Pahn, Molly, Xuan, Ziming, Ross, Craig S., Galea, Sandro, Kalesan, Bindu, Fleegler, Eric, Kristin, A., Goss, 2017. Firearm-related laws in all 50 U.S. States, 1991-2016. Am. J. Publ. Health 107 (7), 1122–1129.
StataCorp, 2019. Stata Statistical Software: Release, vol. 16. StatCorp LP, College Station, TX.

Steidley, Trent, 2019. Sharing the monopoly on violence? Shall-issue concealed handgun license laws and responsibilization. Socio. Perspect. 62, 929–947.
Steidley, Trent, Kosla, Martin T., 2018. Toward a status anxiety theory of macro-level firearm demand. Social Currents 5 (1), 86–103.
Steensland, Brian, Jerry Z. Park, Mark D. Regnerus, Lynn D. Robinson, W. Bradford Wilcox, and Robert D. Woodberry. "The measure of American religion: toward improving the state of the art." Soc. Forces 79: 291-318.
Stroebe, Wolfgang, Leander, N. Pontus, Kruglanski, Arie W., 2017. Is it a dangerous world out there? The motivational bases of American gun ownership. Pers. Soc. Psychol. Bull. 43, 1071–1085.
Stroope, Samuel, Tom, Joshua C., 2017. In-home firearm access among U.S. Adolescents and the role of religious subculture: results from a nationally representative sample. Soc. Sci. Res. 67, 147–159.
Stroud, Angela, 2016. Good Guys with Guns: the Appeal and Consequences of Concealed Carry. Chapel Hill: University of North Carolina Press.
Swatos, William H., 1988. Picketing satan enfleshed at the 7-eleven: a research note. Rev. Relig. Res. 30, 73–82.
Thomson Reuters, 2016. Countries with the most guns list has some surprises. https://cbc.ca/news/world/small-arms-survey-countries-with-the-most-guns-1.3392204.
Valeri, Linda, VanderWeele, Tyler J., 2013. "Mediation analysis allowing for exposure–mediator interactions and causal interpretation: theoretical assumptions and implementation with SAS and SPSS macros. Psychol. Methods 18, 137–150.
Vegter, Abigail, Kelley, Margaret, 2020. The protestant ethic and the spirit of gun ownership. J. Sci. Stud. Relig. 59, 526–540.
Von Hippel, Paul, 2015. "Linear vs. Logistic models: which is better, and when?" *Statistical horizons*. July 5. Retrieved on December 1, 2020. https://statisticalhorizons.com/linear-vs-logistic.
Whitehead, Andrew L., Schnabel, Landon, Perry, Samuel L., 2018. Gun control in the crosshairs: christian nationalism and opposition to stricter gun laws. Socius 4, 1–13. https://doi.org/10.1177/2378023118790189.
Wilcox, Clyde, Linzey, Sharon, Jelen, Ted G., 1991. Reluctant warriors: premillenialism and politics in the new moral majority. J. Sci. Stud. Relig. 30, 245–258.
Wilson, Keith M., Huff, Jennifer L., 2001. Scaling satan. J. Psychol. 135 (3), 292–300.
Winkler, Adam, 2013. Gun Fight: the Battle over the Right to Bear Arms in America. W.W. Norton & Co, New York.
Wolpert, Robin M., Gimpel, James G., 1998. Self-interest, symbolic politics, and public attitudes toward gun control. Polit. Behav. 20 (3), 241–262.
Wright, James D., Rossi, Peter H., Daly, Kathleen, 1983. Under the Gun: Weapons, Crime, and Violence in America. Aldine, New Brunswick, NJ.
Yamane, David, 2016. Awash in a sea of faith and firearms: rediscovering the connection between religion and gun ownership in America. J. Sci. Stud. Relig. 55, 622–636.
Yamane, David, 2017. "The sociology of gun culture in the United States." *sociology compass*. https://doi: 10.11111/soc4.12497.
Young, Robert L., 1989. The protestant heritage and the spirit of gun ownership. J. Sci. Stud. Relig. 28, 300–309.
Young, Robert L., Thompson, Carol Y., 1995. Religious fundamentalism, punitiveness, and firearm ownership. J. Crime Justice 18, 81–98.