Religious Faith Promotes Selective Exposure to Attitude-Congruent Political Information

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Abstract

This study investigates the effect of religiosity on individual differences in selective exposure to attitude-congruent political information. Many religions teach the importance faith, the idea that beliefs must be held firmly and not doubted, even in an absence of evidence. This could lead adherents to prefer to read information that strengthens their beliefs and avoid anything that might challenge their beliefs. Being frequently exposed to faith messages could cause the development of a habitual tendency toward motivated reasoning and confirmation bias, which might then be applied as a side effect to beliefs and attitudes outside the context of religion. In this study, a simulated information-search task on a controversial political issue is used to demonstrate that subjects prefer to read a greater proportion of information that is congruent with their prior attitudes on the issue. A measure of rigid religious conviction is used to show that this effect of prior attitudes on information-search behavior is stronger among more religious individuals. A scrambled-sentence task is used experimentally to prime half of the subjects with religious concepts to identify a direct causal effect of faith messages on information-search behavior.

Motivated Selective Exposure

A large body of research has shown that, when searching for political information, people tend to seek information that will support their prior beliefs or attitudes and avoid information that might challenge them. For example, Taber and Lodge (2006) conducted an influential study in which subjects were given an opportunity to learn about a controversial issue by reading arguments from political parties and other organizations known to be supporters or opponents of the policy in question. Most subjects, especially those with strong attitudes on the issue, chose to view a disproportionate quantity of arguments from sources that would support their own prior opinions on the issue. Other research has suggested that people with strong attitudes are more likely to view an article when the headline indicates that the information contained in the article is congruent with their prior attitudes (Garrett 2009; Knobloch-Westerwick and Meng 2009; Westerwick, Kleinman, and Knobloch-Westerwick 2013). In an experimental setting, Republicans and conservative individuals are more likely to read news stories from Fox News and to avoid stories from CNN and NPR, while Democrats and liberals are more likely to read items from CNN or NPR and to avoid Fox (Iyengar and Hahn 2009). In a survey of people who read political blogs, most respondents reported that they often visit blogs that provide information with which they agree, while fewer than a quarter of respondents said they read blogs with which they disagree (Johnson, Bichard, and Zhang 2009).

(Taber and Lodge 2006) argue that this phenomenon of selective exposure to attitude-congruent information, or confirmation bias as it is sometimes called, is an aspect of motivated reasoning. Individuals are motivated to maintain and support their prior beliefs and attitudes (Kruglanski and Webster 1996), and selectively attending to attitude-congruent information can help a motivated reasoner achieve this goal. Selective exposure can also lead to increased attitude polarization (Taber and Lodge 2006) and may thus be highly consequential to aggregate public opinion and discourse. If supporters of a particular policy or candidate read primarily information and arguments in support of that policy or candidate, and opponents of that policy or candidate read only oppositional information, supporters will tend to become stronger supporters and opponents will

tend to become stronger opponents.

Although selective exposure to attitude-congruent information seems to be common, there may be differences in the degree to which individuals engage in selective exposure (Kruglanski, Webster, and Klem 1993; Chen et al. 2014). Among two individuals who have equally strong opinions on a particular issue, one may be more likely than the other to seek only attitude-congruent information on that issue. The question of what factors may influence the development of such individual differences is an important one. If we wanted to make an open-minded person who is willing to seek and consider all available information when forming judgments, how would we do it? Alternatively, if we wanted to produce the opposite behavior, how would we do it? This paper investigates one possible factor, among many, that might influence the development of this behavioral tendency: religiosity.

Religiosity and Selective Exposure

Because many religions encourage adherents to hold supernatural beliefs that cannot be supported by scientific evidence, motivated reasoning and selective exposure may be even more important to the maintenance of these beliefs than it is to the maintenance of other types of beliefs or attitudes. If motivated reasoning and selective exposure are instrumental in the maintenance of fundamental religious beliefs, then religions that are successful in encouraging adherents to engage in motivated reasoning and selective exposure should be more likely to survive and thrive. This idea is consistent with theories of cultural evolution (Dawkins 1976). Just as biological evolution is driven by natural selection in which genes that increase the probability of survival and reproduction become common in the gene pool over time, cultural evolution is driven by differential reproduction of units of cultural replication called memes. A meme, such as a religion, that includes an effective mechanism for encouraging its hosts not to doubt its veracity, should be more likely to survive and replicate in its environment, human minds.

Indeed successful religions do possess such a mechanism. Many religions include teachings that promote the importance of faith, or an effort to maintain a belief even in the absence of

evidence. Scriptural writings often include references to the importance of maintaining faith in one's religious beliefs. In his letter to the Hebrews, the Apostle Paul states that "faith is confidence in what we hope for and assurance about what we do not see" (Heb 11:1, NIV). The Quran links faith to eternal rewards or punishments: "The chastisement of Hell awaits those who disbelieve in their Lord... Forgiveness and a mighty reward await those who fear Allah without seeing Him" (Quran 67:6-12).

Because maintenance of religious beliefs is so important, clergy exhort their followers to engage in behaviors that strengthen their faith and to avoid behaviors that weaken it (see, for example, Graham 2015; Osteen 2014). An example of religious believers endorsing selective exposure can be seen in an advice forum in a Latter-Day-Saint ("Mormon") magazine. When questions about the benefits of reading anti-Mormon literature are submitted to the magazine, the vast majority of readers' responses recommend that such literature should not be read (New Era 1973, 2007). However, explicit messages from elites endorsing selecting exposure may not be necessary for habits of selective-exposure behavior to develop among followers, since messages that simply encourage faith-promoting behavior could be sufficient to result in selective reading.

A habit of selective exposure developed in the context of religion need not be forever confined to the context of religion. Habitual behaviors in one area of life, once they become instinctive, can spill into other areas of life. For example, Brady, Verba, and Schlozman (1995) note that skills learned through participating in church or synagogue organizations can help individuals become better equipped to participate effectively in politics. Similarly, habits of information seeking learned in the context of religious information seeking might be applied to political information seeking.

Suppose a person with strong religious beliefs also has strong opinions about gun legislation, believing that the government is not doing enough to control access to firearms. This is not an issue on which religion has told this person what to believe. However, the habits developed in learning to protect religious beliefs are now instinctively applied to protecting other beliefs and attitudes outside the context of religion without any conscious awareness that this is happening.

When encountering a pro-gun-control opinion article, the person reads it and feels a sense of satisfaction from having prior beliefs and opinions reinforced. When encountering an anti-gun control article, the person does not read it.

A direct effect of religiosity on habitual selective exposure may not be the only way in which a correlation between these two variables could be found. Individuals who have a predisposition toward motivated reasoning and selective exposure could be more likely to select into religious belief. The fact that the Need for Closure Scale (Webster and Kruglanski 1994) is associated both with religiosity (Saroglou 2002) and with selective exposure (Chen et al. 2014) suggests another possible mechanism by which religiosity and selective exposure could be correlated: a need for cognitive closure (or some other predispositional variable) could have an effect on religiosity and could have an independent effect on selective exposure.

The Need for Closure Scale was developed to measure individual differences in desire for predictability, preference for order and structure, discomfort with ambiguity, closed-mindedness, and decisiveness (Webster and Kruglanski 1994). Individuals who have this type of motivation might be more likely to close their minds to new information as a means of accomplishing this goal of maintaining closure (Kruglanski and Boyatzi 2012). This theory has been supported in recent empirical work. (Chen et al. 2014) find that when subjects have been exposed to information incongruent with their prior attitudes, they more often choose to read stories from news sources that are likely to agree with their own pre-existing ideological biases, but this effect is limited to subjects who score high on the Need for Closure Scale. An attitude-polarization effect is also observed only among individual high in Need for Closure.

Individuals with a strong Need for Cognitive Closure may also be more religious (Saroglou 2002). Having a greater Need for Closure could cause individuals to be more drawn to religious belief, especially to fundamentalist religious belief, since the doctrines of such faiths may provide certainty of belief and provide rigid structure through strict behavioral requirements, which could help to satisfy a desire for predictability, preference for order and structure, and discomfort with ambiguity. Saroglou (2002) found that the Need for Closure Scale is indeed associated with mea-

sures of religiosity, both with the Religious Fundamentalism scale of Altemeyer and Hunsberger (1992) and with a more general measure of religiosity. Interestingly, the Need for Closure Scale's association with classic religiosity was found to be just as strong as its association with Religious Fundamentalism. Duriez, Fontaine, and Hutsebaut (2000) also found that subjects who are more religious, as determined by higher scores on the Exclusion vs. Inclusion of Transcendence component of their Post-Critical Beliefs scale (Duriez, Fontaine, and Hutsebaut 2000), scored higher on the Need for Closure Scale. The component of the Post-Critical Beliefs scale that measures Literal vs. Symbolic interpretation of religious content also predicted Need for Closure scores.

As the Need for Closure Scale is correlated with various measures of religiosity, it could be that a need for cognitive closure is a product of religiosity or it could be that religiosity is a product of need for closure. If there are predispositional traits, such as the need for closure or others, that tend to increase affinity for religious belief and that also lead to selective exposure, then a correlation between religious belief and selective exposure could be found even in the absence of any direct effect of religiosity on selective exposure or any effect of selective exposure on religiosity. Identifying the causal effect of faith on political information-search behavior could thus be problematic.

An experimental priming manipulation could be useful for identifying the effects of salience of religious faith messages. If the theory presented in this paper is correct, momentarily increased salience of religious faith could increase selective exposure because the effect of faith messages may depend not only on the habitual nature of exposure to the message, but also on the recency of such exposure. An individual who attends religious services on Sundays, for example, might feel more faithful on Sunday night than on Saturday night. If the theory presented in this paper is correct, this increased level of religious faith at certain times could also generate an increased level of faith in one's political beliefs and attitudes at those same times. We might thus expect to find that subjects who have been subliminally primed with religious concepts would be more likely to engage in selective exposure when seeking political information.

Overview of Current Study

I conducted a study to investigate whether selective exposure to attitude-congruent political information is greater among individuals with firm religious convictions. To measure the extent to which the content they choose read about an issue is driven by their prior attitudes on that issue, subjects participated in a simulated information-search task on a controversial non-religious political issue: gun policy. Subjects were required to read a certain quantity of arguments on the issue but were allowed to choose how many of the items they read were pro-gun-control arguments and how many were anti-gun-control arguments. Rigid religious conviction was measured by a self-report scale to determine whether the correlation between pre-task attitudes and information-search behavior is stronger among those with stronger religious convictions. To identify the direct causal effects of religious faith messages, I used a scrambled-sentence task prior to the information-search task as an experimental manipulation to subliminally prime subjects with religious concepts.

Hypotheses:

1. **Selective exposure:** When seeking information on the issue of gun legislation, subjects with higher pre-task levels of support for gun-control policies should choose to view a greater proportion of pro-gun-control items.

2. **Correlation between religious conviction and selective exposure:** The tendency for pro-gun-control subjects to read more pro-gun-control items and for anti-gun-control subjects to read more anti-gun-control items should be stronger among individuals with firm religious convictions. Controlling for a measure of Need for Closure in the model may reduce, but should not completely eliminate, the estimated effects of religious belief.

3. **Effect of experimental prime on selective exposure:** Experimentally increasing the salience of religious faith concepts by means of conceptual priming should increase the tendency to read attitude-congruent arguments.

Methods

Measurement of Religiosity and Sampling Method

The study was conducted using a sample of United States residents recruited through Amazon Mechanical Turk (MTurk). MTurk is an online labor market in which thousands of workers complete Human Intelligence Tasks for small amounts of money. This service is increasingly being used by behavioral researchers who pay MTurk workers to participate in survey experiments. MTurk samples have been found to reproduce the results of several important political psychology experiments that had previously been conducted on more representative samples (Mullinix et al. 2015; Berinsky, Huber, and Lenz 2012). However, because MTurk workers are a self-selected sample, they may not be representative of the general population, though they may often be more representative than the student convenience samples commonly used in much behavioral research (Berinsky, Huber, and Lenz 2012). One important difference is that MTurk samples tend to be much less religious than the general population (Clifford, Jewell, and Waggoner 2015; Lewis et al. 2015). A lack of variation in religiosity could be problematic for the present research question. For this reason, a two-stage sampling procedure was used to acquire a sample with a sufficient quantity of religious individuals. Religiosity was measured for a large sample in a very short, low-cost, first-wave survey. From that first sample, a second sample with a wide range of religiosity was selected to participate in the main part of the study.

In late 2017, 1490 participants were paid $0.10 each to answer the following six questions measuring rigid religious conviction:

1. God has given humanity a complete, unfailing guide to happiness and salvation, which must be totally followed.

2. Regardless of whether they contain some general truths, scriptures should not be considered completely, literally true from beginning to end. (Reverse scored)

3. All religions in the world have flaws and wrong teachings. There is no perfectly true, right

religion. (Reverse scored)

4. Whenever science and sacred scripture conflict, scripture is probably right.

5. It is better for religious beliefs to be held firmly and never doubted.

6. If an honest quest for the truth leads one to the conclusion that one's religious beliefs are not correct, then one should allow those beliefs to change. (Reverse scored)

The first four items are taken, with some minor adjustments, from the 12-item Revised Religious Fundamentalism Scale (Altemeyer and Hunsberger 2004), while the two remaining items are adapted from the Quest Scale (Altemeyer and Hunsberger 1992). For each item, respondents indicate their level of agreement on a seven-point response scale ranging from "strongly disagree" to "strongly agree". Responses are coded as integers from 0 to 6, with items 2, 3, and 6 being reverse scored to ensure that higher scores always represent greater religiosity.

For each respondent, the six items are summed to generate a score of Rigid Religious Conviction ranging from 0 to 36. The frequency distribution of these scores can be seen in the first panel of Figure 1. A large proportion, more than 18%, of the individuals in the first-wave sample had a score of 0, indicating that they strongly disagree with all three of the positively scored statements and strongly agree with all three of the reverse-scored statements. Because so many in the sample had such low scores on religious conviction, a two-stage sampling process was used to generate a sample with a large enough quantity of religious individuals.

Subjects were divided into 37 groups, one for each of the 37 possible levels of the variable, 0 through 36. From each group, 25 subjects were randomly selected to be invited to participate in the second wave of the study. For any group that did not have at least 25 individuals, all individuals from that group were invited to the second wave. In total, 723 subjects were invited to the second wave. The second panel of Figure 1 shows the distribution of rigid religious conviction for these invited subjects.

Three weeks after the first-wave survey, the 723 selected individuals were sent an email offering to pay them $0.50 to participate in a second survey. Where necessary, a second reminder
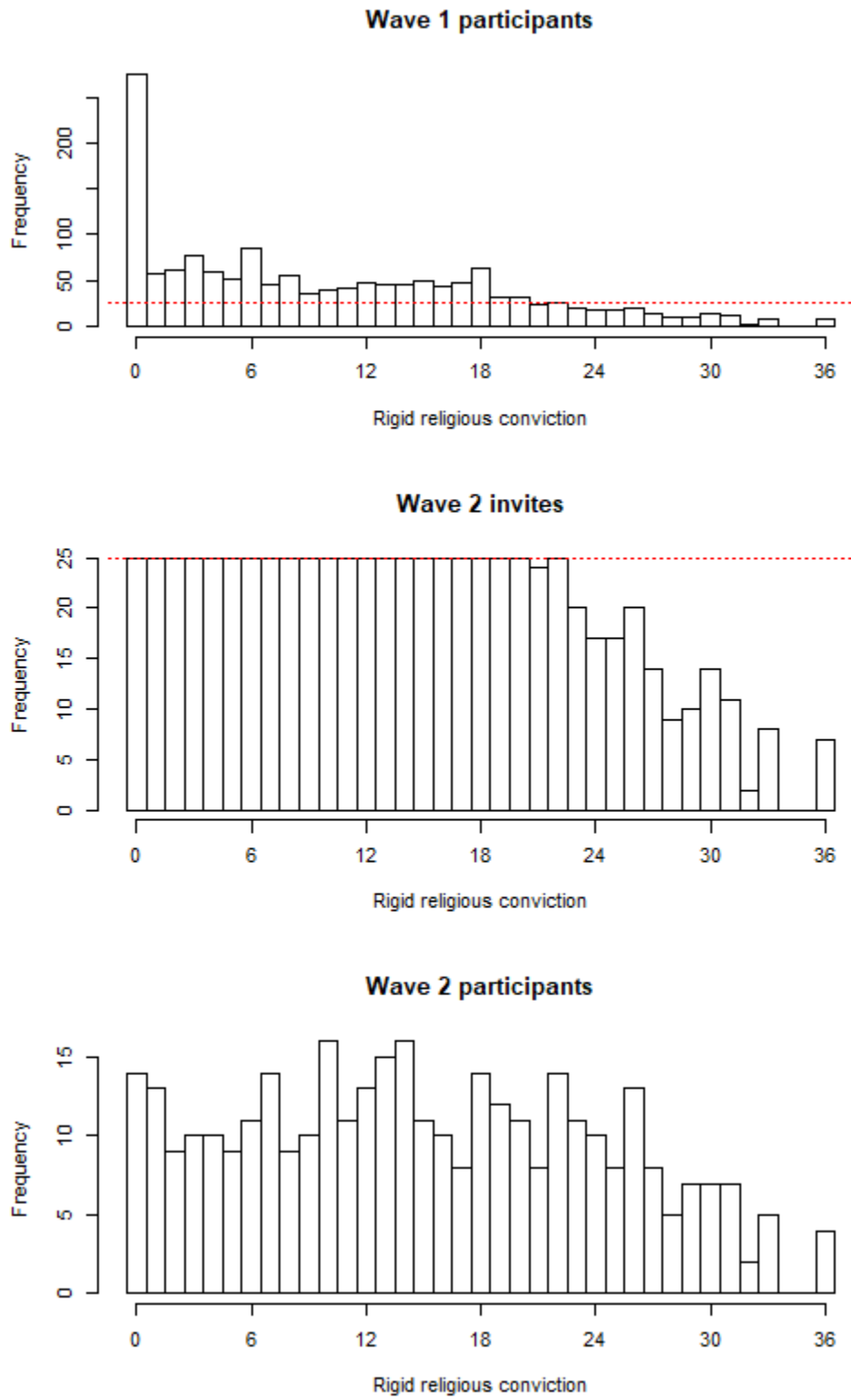
Figure 1: Distribution of Rigid Religious Conviction

email was sent a few days later. This procedure produced a final second-wave sample of 358 individuals. The third panel of Figure 1 shows the distribution of first-wave religious-conviction scores for all individuals who participated in the second-wave sample. All other data (other than the religious conviction questionnaire) were collected in the second-wave survey.

Outcome Variable: Selective Exposure in Simulated Information-Search Task

A simulated information-search task on the issue of gun control was used to measure the tendency to seek attitude-congruent information. This task is similar in design and materials, though not identical, to the task that Taber and Lodge (2006) found to be useful in eliciting selective exposure in political information seeking. A demonstration of the task can be accessed at the following URL: https://stonybrookuniversity.co1.qualtrics.com/jfe/form/SV_0TdHolbr4jJ5iLP or at this shortened URL: https://goo.gl/HqCpk2.

Select a **pro-gun-control** or **anti-gun-control** argument below.
You will have an opportunity to read 8 of these arguments.

Please select the first argument you wish to read.

○ **Pro:** "A study in a prominent medical..."	○ **Anti:** "The Bill of Rights guarantees..."
○ **Pro:** "In one poll of imprisoned felo..."	○ **Anti:** "Most privately owned guns in ..."
○ **Pro:** "A study of 743 gunshot deaths..."	○ **Anti:** "A national council reported in..."
○ **Pro:** "A gun should be fired only if..."	○ **Anti:** "Gun-control legislation can re..."
○ **Pro:** "Several recent school tragedies..."	○ **Anti:** "The liberal media distort gun..."
○ **Pro:** "Recent trials against gun manu..."	○ **Anti:** "A main reason why our murder ..."
○ **Pro:** "Self-defense arguments for the..."	○ **Anti:** "Stricter gun-control laws have..."
○ **Pro:** "The United States has the high..."	○ **Anti:** "Laws that require guns to be ..."

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Figure 2: Screen capture of subject interface for gun-control information-search task

Prior to the information-search task, participants are told that they will have an opportunity to learn about a controversial issue by reading arguments on both sides of the issue and that after
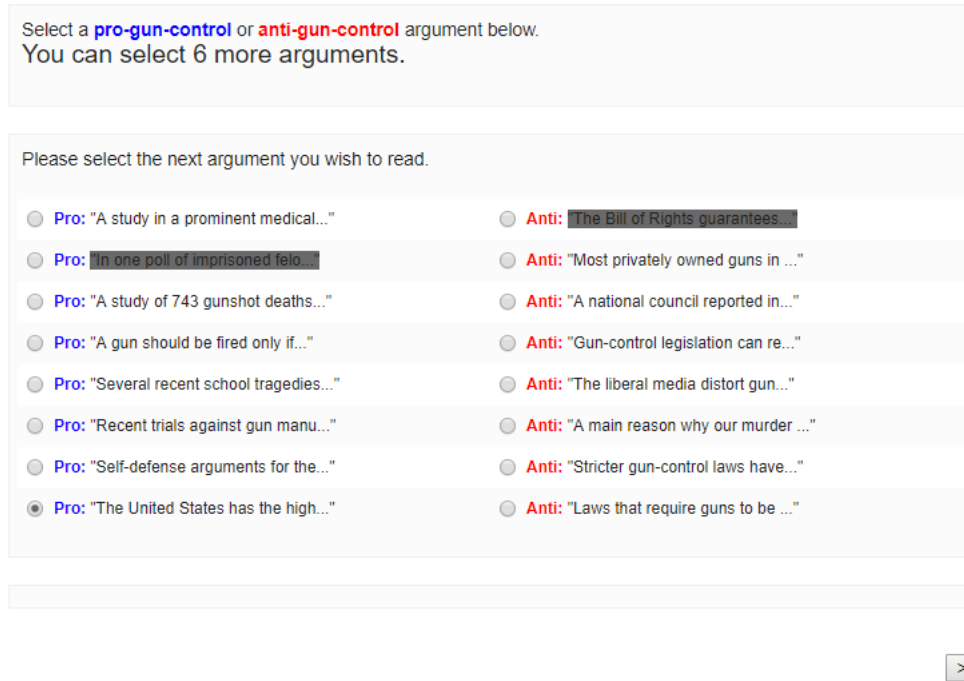
Figure 3: Screen capture of subject interface for gun-control information-search task

doing so they will be asked to make a decision about which side of the issue they support. The arguments used as stimuli are the same items used by Taber and Lodge (2006). The list includes 8 pro-gun-control arguments and 8 anti-gun-control arguments. These arguments are edited for similarity in length and complexity. The first few words of each argument are displayed in a two-column list, with the 8 pro- items in one column and the 8 anti- items in the other column. Each item is clearly marked as a "pro" or "anti" item. Half the participants see the pro- items on the left side and the anti- items on the right. For the other half of participants, the orientation is reversed. Participants are told they will be able to read 8 of the 16 items. A screen capture of the subject interface can be seen in Figure 2. When subjects select an item, the full text of that argument is displayed for them to read. They then return again to the list of 16 items to select another item, but the item that was previously selected is then blacked out to indicate that the same item cannot be selected twice (see Figure 3). If the same item is selected again, the subject receives an error message instructing them to select a different item. This process continues until 8 items have been selected. The behavior of interest is the quantity of pro-gun-control items selected,
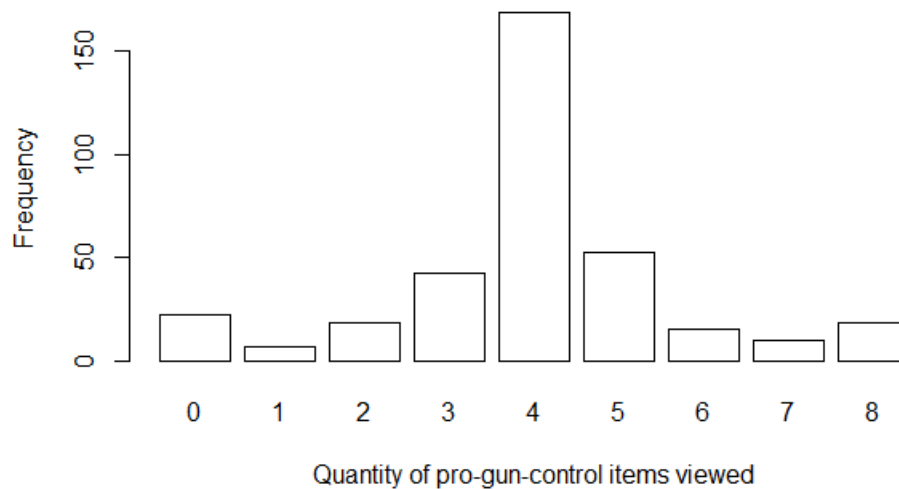
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Figure 4: Distribution of outcome variable

with a possible range from 0 to 8 (mean=3.99, sd=1.72). The midpoint of 4 would represent an equal quantity of pro-gun-control and anti-gun-control items viewed. The distribution of values for this outcome variable can be seen in Figure 4.

Prior to completing the information-search task, respondents were asked to report their attitudes on gun control using a continuous slider ranging from "strongly oppose" to "strongly support", and responses were re-coded from -1 to +1. A second item asked to what extent they prefer an increase or decrease in gun-control legislation, using a continuous slider ranging from "large decrease" to "large increase". Responses were again coded from -1 to +1. These two items were strongly correlated (r=.79). For each respondent, the mean of these two items was calculated to generate a pre-task gun-control attitude score (mean=0.19, sd=0.57). The distribution of these pre-task attitudes can be seen in Figure 5.

It was predicted that respondents with more pro-gun-control attitudes would choose to view a greater proportion of pro-gun-control items in the information-search task and respondents with more anti-gun-control attitudes would choose to view a greater proportion of anti-gun-control items. The outcome of interest is the strength of the correlation between respondents' pre-task
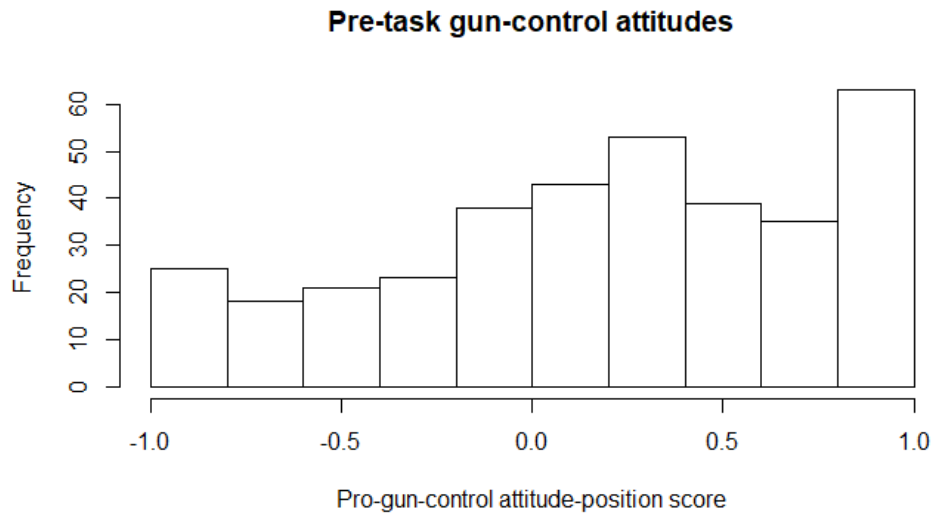
Pre-task gun-control attitudes

Figure 5: Distribution of pre-task gun-control attitudes

attitude scores and the proportion of pro- items they choose to view. The correlation for the whole sample was predicted to be positive, indicating that individuals prefer to view a greater proportion of items that are congruent with their prior attitudes. However, the strength of the correlation between pre-task attitudes and information-search behavior was predicted to differ depending on the level of rigid religious conviction and depending on the experimental priming manipulation.

A scatterplot of rigid religious conviction and pre-task gun-control attitude can be seen in Figure 6. These two variables are correlated only weakly ($r = -.14$), which means opposition to gun-control policies is not solely the domain of the highly religious and support for gun control is not solely for the less religious. It should thus be possible to test how the behavior of highly religious gun-control supporters differs from that of less religious gun-control supporters and how the behavior of highly religious gun-control opponents differs from that of less religious gun-control opponents.
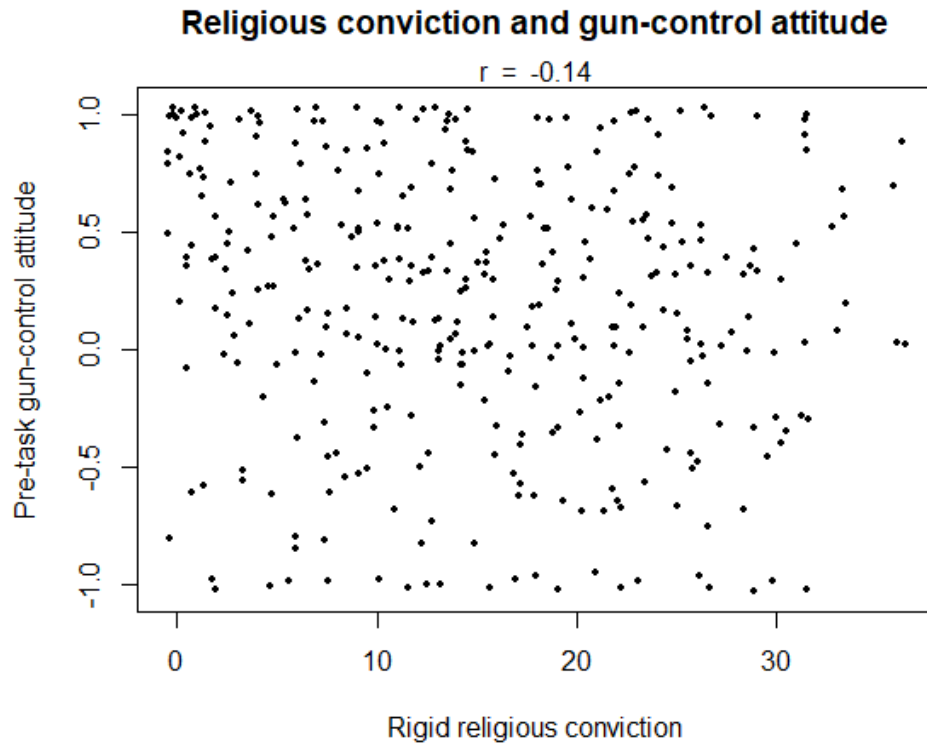
Figure 6: Scatterplot of rigid religious conviction and pre-task gun-control attitudes. To avoid overplotting, values on the X axis have been jittered by up to 0.5 and values on the Y axis have been jittered by up to 0.03

Experimental Manipulation: Faith Prime

After reporting their pre-task gun-control attitudes, but before beginning the information-search task, all participants completed a scrambled-sentence task to prime them with concepts of religious faith. The scrambled-sentence task (Srull and Wyer 1979; Bargh, Chen, and Burrows 1996) is a method of conceptual priming that has previously been used successfully to prime subjects with religious concepts (Shariff and Norenzayan 2007) (Randolph-Seng and Nielsen 2007) (Ahmed and Salas 2011). In this task, each subject is given 10 four-word sentences, the word order of each of which has been scrambled and to each of which has been added one extraneous word. Using each set of five words, the task is to drop one word and write a grammatically correct four-word sentence. Subjects were randomly assigned either to a faith-prime condition or a neutral condition. In the prime condition, five of the ten sentences included faith-related words. The other

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five sentences were identical across the two conditions. If momentary salience of religious faith messages increases susceptibility to selective exposure, then the correlation between pre-task gun-control attitude and the proportion of pro-gun-control items a participant chooses to read should be stronger among those in the faith-prime condition than among those in the neutral condition.

Self-Report Measurement of Need for Cognitive Closure

All participants completed this subset of 6 items from the Need for Closure scale:

1. When I am confronted with a problem, I'm dying to reach a solution very quickly.

2. I enjoy having a clear and structured mode of life.

3. I feel irritated when one person disagrees with what everyone else in a group believes.

4. When I have made a decision, I feel relieved.

5. I don't like situations that are uncertain.

6. I do not usually consult many different opinions before forming my own view.

Participants indicated their agreement with each statement on a 7-point scale ranging from "strongly disagree" to "strongly agree". Responses were coded as integers from 0 to 6. For each participant, the 6 items were summed to generate a need for closure score with a theoretical range from 0 to 36 and an observed range from 6 to 35. The distribution of these scores can be seen in Figure 7.

Results

Each participant is required to select a total of 8 gun-control items to read. As predicted, the quantity of pro-gun-control items a participant chooses to read is positively correlated with pre-task level of support for gun-control policies ($r=.24$, $p<.001$). A linear regression model (Model 1
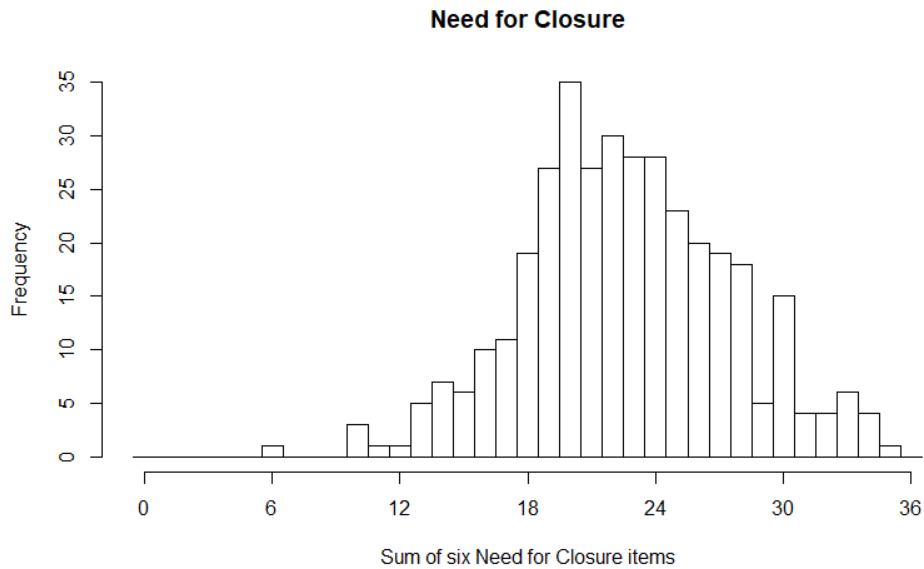
Figure 7: Distribution of need for closure

in Table 1) predicts that individuals with a neutral attitude toward gun control read an average of 3.85 pro-gun-control items (with a 95% confidence interval ranging from 3.67 to 4.04) and that a one-unit increase in gun-control support (i.e. an increase from neutral to strong supporter or an increase from strong opponent to neutral) is associated with an average increase of 0.71 pro-gun-control items viewed. Predicted values of the outcome variable based on this model are plotted in the first panel of Figure 8. The model predicts that individuals with a gun-control attitude score of 1, the strongest possible pro-gun-control attitude, read an average of 4.56 pro-gun-control items and 3.44 anti-gun-control items. Individuals with a gun-control attitude score of -1, the strongest possible anti-gun-control attitude, read an average of 3.14 pro-gun-control items and 4.86 anti-gun-control items.

Effects of measured religiosity

To test whether this selective-exposure effect differs depending on the level of religious conviction, I estimate a second linear regression model of the number of pro-gun-control items viewed, using the following predictor variables: pre-task gun-control attitude, rigid religious conviction,

Table 1: OLS regression models

	Dependent variable:		
	Quantity of pro-gun-control items viewed		
	(1)	(2)	(3)
Gun-control attitude	0.709***	0.003	−1.994***
	(0.155)	(0.288)	(0.697)
Rigid religious conviction		−0.003	0.006
		(0.010)	(0.011)
Need for cognitive closure			−0.049**
			(0.019)
Attitude * Religious		0.050***	0.034**
		(0.017)	(0.017)
Attitude * Closure			0.099***
			(0.031)
Constant	3.853***	3.933***	4.884***
	(0.094)	(0.191)	(0.437)
Observations	358	355	355
R^2	0.056	0.084	0.115
Adjusted R^2	0.053	0.076	0.103
Residual Std. Error	1.678 (df = 356)	1.655 (df = 351)	1.631 (df = 349)
F Statistic	20.956*** (df = 1; 356)	10.707*** (df = 3; 351)	9.098*** (df = 5; 349)

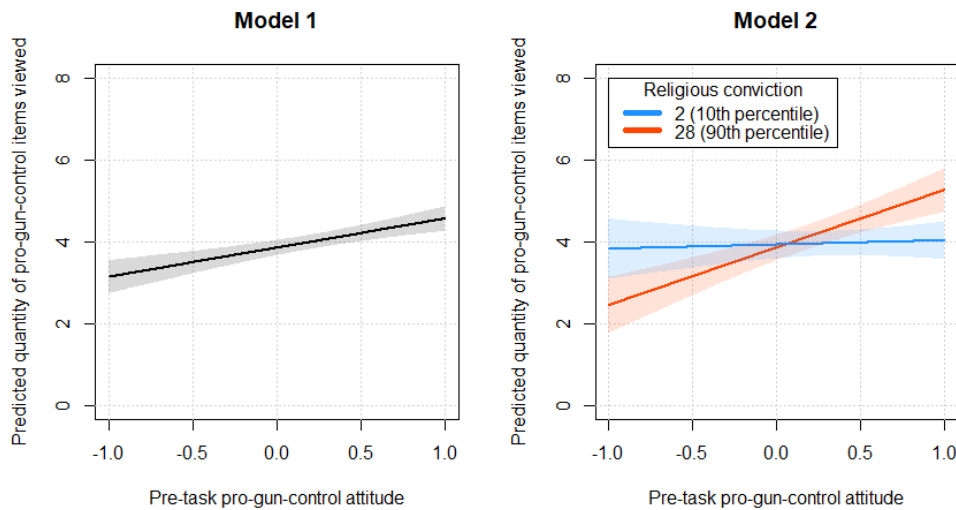*Note:* $^{*}p<0.1$; $^{**}p<0.05$; $^{***}p<0.01$

Figure 8: Predictions with 95% confidence intervals based on OLS regression models in Table 1

and a multiplicative interaction between the two. Model 2 in Table 1 shows the estimated co-efficients for this model. The positive interaction coefficient (p=.003) indicates that the effect of prior attitudes on information-search behavior depends on the level of religious conviction. Higher levels of religiosity are associated with a higher likelihood that pro-gun-control individuals will view a greater proportion of pro-gun-control items and anti-gun-control individuals will view a greater proportion of anti-gun-control items. The coefficient for the main effect of gun-control attitude shows no significant effect, suggesting that when religious conviction is zero, the arguments people choose to read may not depend on their prior attitudes toward the issue. The theory under investigation does not predict any main effect of religiosity on the quantity of pro-gun-control items viewed, and no such effect is found in the estimated model. Predicted values of the outcome variable based on this model are plotted in the second panel of Figure 8 and marginal effects are plotted in Figure 9. It can be seen that among the highly religious subjects, the items they choose to view depend on their prior attitudes toward the issue. Among the less religious, information-search behavior does not appear to be driven so much by prior attitudes. Among pro-gun-control individuals, the more religious individuals tend to view a greater proportion of pro-gun-control items. Among anti-gun-control individuals, the more religious tend to view a lower proportion of pro-gun-control items.

Table 2: OLS regression model

	Dependent variable:	
	totalpro	
	(1)	(2)
Gun-control attitude	−0.246 (1.007)	−1.657 (1.146)
Age	−0.016** (0.008)	−0.015* (0.008)
Gender	−0.057 (0.218)	0.094 (0.222)
Education	0.083 (0.060)	0.075 (0.059)
Political knowledge	−0.001 (0.049)	−0.003 (0.048)
Political interest	−0.595 (0.389)	−0.590 (0.385)
Self-reported conservatism	−0.258 (0.290)	−0.180 (0.290)
Lean toward Republican	−0.216 (0.275)	−0.193 (0.273)
Rigid religious conviction	0.005 (0.012)	0.009 (0.012)
Need for cognitive closure		−0.046** (0.021)
Attitude * Age	0.014 (0.012)	0.009 (0.012)
Attitude * Gender	−0.077 (0.349)	−0.335 (0.356)
Attitude * Education	−0.123 (0.100)	−0.109 (0.099)
Attitude * Knowledge	−0.086 (0.084)	−0.071 (0.083)
Attitude * Interest	0.630 (0.647)	0.544 (0.642)
Attitude * Conservatism	−0.185 (0.473)	−0.293 (0.469)
Attitude * Republican	0.518 (0.521)	0.415 (0.517)
Attitude * Religious	0.054*** (0.020)	0.045** (0.020)
Attitude * Closure		0.092*** (0.033)
Constant	4.704*** (0.612)	5.397*** (0.725)
Observations	354	354
R^2	0.136	0.159
Adjusted R^2	0.092	0.111
Residual Std. Error	1.640 (df = 336)	1.623 (df = 334)
F Statistic	3.103*** (df = 17; 336)	3.321*** (df = 19; 334)

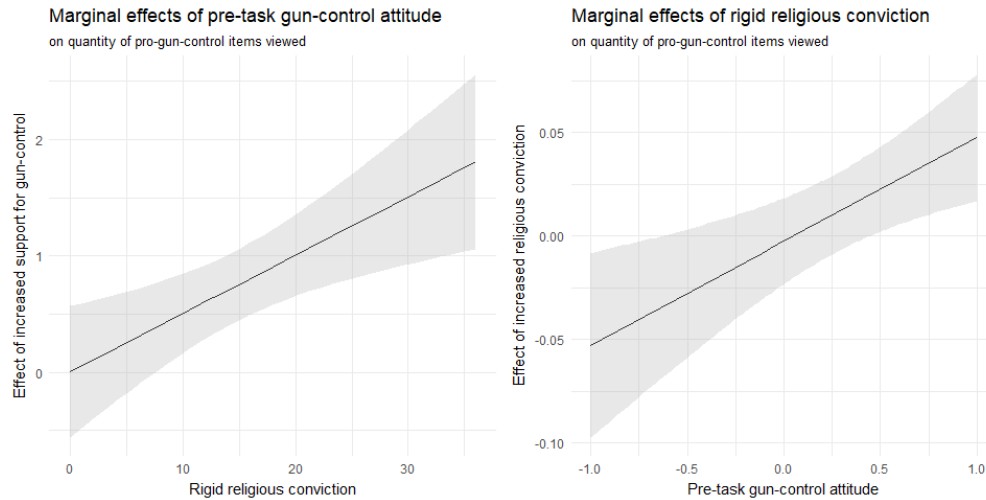Note: *p<0.1; **p<0.05; ***p<0.01

Figure 9: Marginal effects with 95% confidence intervals based on regression model 2 in Table 1

In the third column of Table 1, the self-report measure of Need for Closure and an interaction between Need for Closure and pre-task gun-control attitude are added to the model. The coefficient for the interaction between Need for Closure and gun-control attitude is positive (p=.002), indicating that greater Need for Closure is associated with a greater tendency for pro-gun-control individuals to read pro-gun-control arguments and anti-gun-control individuals to read anti-gun-control arguments. The coefficient for the interaction between rigid religious conviction and gun-control attitude is still positive when controlling for the self-report measure of Need for Closure (p=.046). This suggests that, although religious conviction and self-reported Need for Closure are correlated (r=.21, p<.001), the Need for Closure measure does not account for all of the association between religiosity and selective exposure.

To test the robustness of the association between rigid religious conviction and selective exposure, I estimate another model, seen in Table 2, which includes the following control variables: age, gender, level of education, performance on a test of political knowledge, self-reported level of interest in politics, partisan leaning (Democrat or Republican), and self-assessed position on a liberal-conservative spectrum. Even when controlling for all of these variables, the predicted interactive effect of religious conviction and pre-task attitude is still present (p=.006).

Effects of Experimental Priming Manipulation

The experimental priming manipulation makes it possible to test whether increased salience of religious faith concepts has a direct causal effect on information-search behavior. To test the effects of the manipulation, I estimate another model of the number of pro-gun-control items viewed, this time using the following predictor variables: the experimental condition, pre-task gun-control attitude, and an interaction between the two. The estimated coefficients for this model can be seen as Model 1 in Table 3. The coefficient of greatest interest for testing the effects of the priming manipulation is the interaction coefficient. The estimated interaction coefficient is positive (p=.039), indicating that the effect of pre-task gun-control attitudes on the number of pro-gun-control items viewed is stronger among those who were primed with religious words. The coefficient estimate for the main effect of pre-task attitude is positive but is not statistically distinguishable from zero at a conventional significance threshold (p=0.10). A significant positive value for this main effect, if there were one, would indicate that, among those who were not primed with religious words, pre-task level of support for gun control would have a positive effect on the number of pro-gun-control items viewed. In other words, we do not have strong evidence of selective exposure to attitude-congruent information among subjects who are not primed with religious words (p=0.10), but we do have evidence that selective exposure is greater among those who are primed with religious words than among those who are not (p=.039).

Predicted values of the outcome variable based on this model are plotted in the first panel of Figure 10. The significant interaction coefficient in the model indicates that there is a significant difference in slope between the two lines in this plot. Pre-task attitudes have a greater effect on information-search behavior among the treatment group than among the control group. However, at either end of the gun-control attitude spectrum it is not possible to say with much confidence that there is a significant difference between the predicted outcome for the treatment group and the predicted outcome for the control group. This can also be seen by examining the marginal effects of the faith priming treatment, which are plotted in the second panel of Figure 11. At either end of the spectrum of gun-control attitudes, the 95% confidence interval for the

Table 3: OLS regression models testing the effects of the priming manipulation

	Dependent variable:	
	Quantity of pro-gun-control items viewed	
	(1)	(2)
Gun-control attitude	0.371	−0.220
	(0.226)	(0.415)
Rigid religious conviction		−0.015
		(0.016)
Faith prime	−0.113	−0.451
	(0.189)	(0.386)
Attitude * Religious		0.042*
		(0.025)
Attitude * Prime	0.640**	0.392
	(0.310)	(0.579)
Religious * Prime		0.025
		(0.021)
Attitude * Religious * Prime		0.018
		(0.033)
Constant	3.925***	4.173***
	(0.142)	(0.294)
Observations	358	355
R^2	0.067	0.101
Adjusted R^2	0.059	0.083
Residual Std. Error	1.672 (df = 354)	1.649 (df = 347)
F Statistic	8.451*** (df = 3; 354)	5.561*** (df = 7; 347)

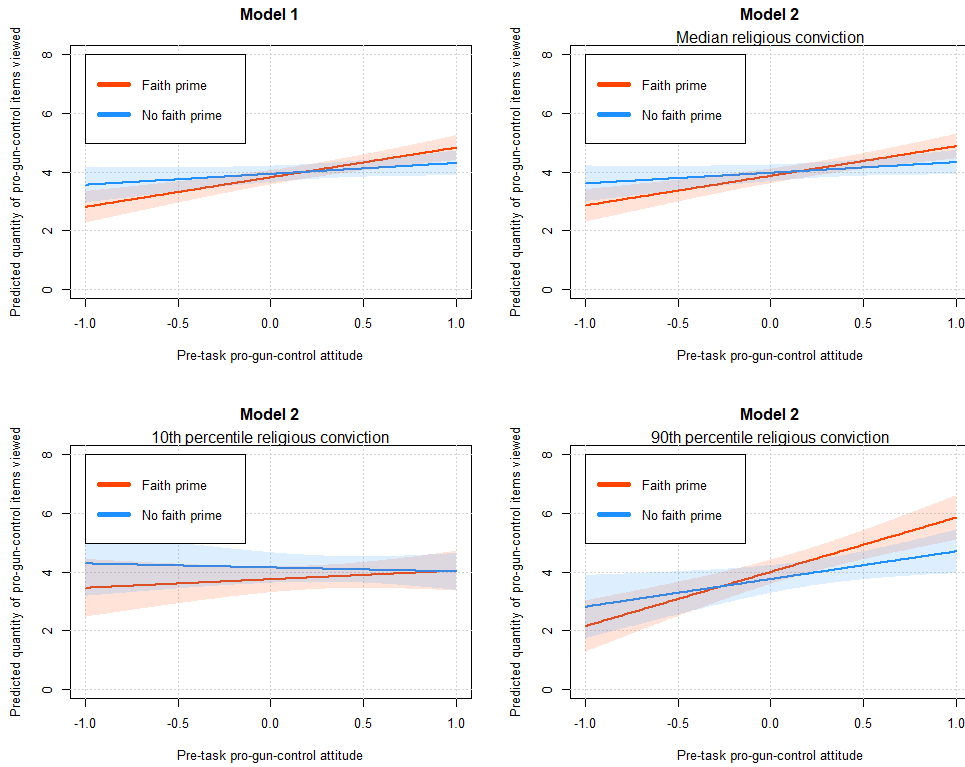*Note:* *p<0.1; **p<0.05; ***p<0.01

Figure 10: Predictions with 95% confidence intervals based on OLS regression models in Table 3

marginal effect of the treatment overlaps with zero. However, this marginal effects plot does have a significant positive slope. Although the conventional significance theshold of a=.05 does not allow the marginal effect of the prime among strong pro-gun-control individuals to be statistically distinguished from zero nor the marginal effect of the prime among strong anti-gun-control individuals to be statistically distinguished from zero, the marginal effect of the prime among strong pro-gun-control individuals can be statistically distinguished from the marginal effect of the prime among strong anti-gun-control individuals (p=.039). The marginal effects of pre-task support for gun control on the proportion of pro-gun-control items viewed are plotted in the first panel of Figure 11. This plot shows that among un-primed subjects the 95% confidence interval for the effect of pre-task attitude on search behavior overlaps with zero. This corresponds to the previously discussed non-significant coefficient for the main effect of pre-task attitude (p=.10). This same plot shows that the marginal effect of higher support for gun-control on the proportion of pro-gun-control items viewed is greater among primed subjects than among un-primed
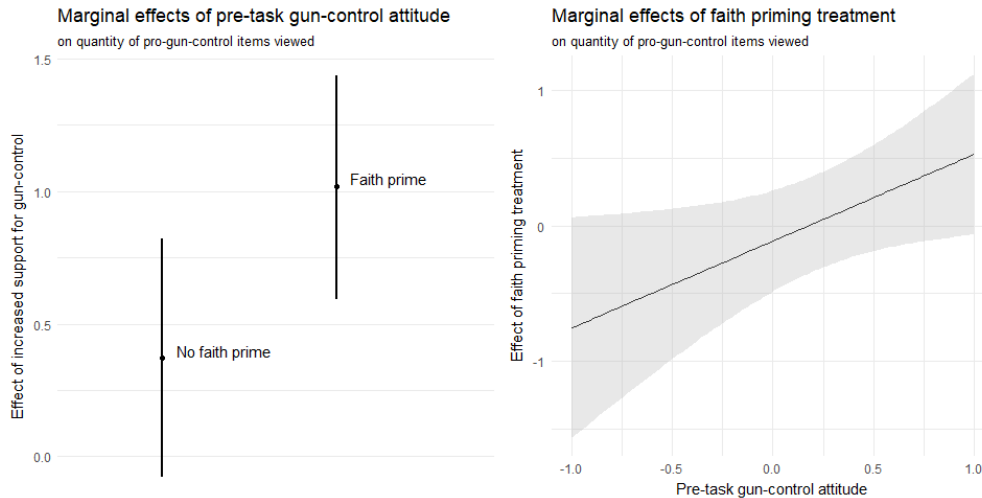
Figure 11: Marginal effects with 95% confidence intervals based on regression model 1 in Table 3

subjects (p=.039).

It is reasonable to imagine that the priming manipulation might be more effective among religious individuals than it is among non-religious individuals. Reminding subjects of their religious faith might have less effect among those do not have much religious faith. A second model with a three-way interaction is estimated to test this. The estimates for this model can be seen in Table 3, Model 2. No significant three-way interaction is found, so we cannot be confident that the effectiveness of the prime differs with levels of religious conviction. Unlike in Model 1, the two-way interaction coefficient is not significant, but this should not be interpreted to mean that the prime has no effect on the correlation between pre-task attitude and information-search behavior. It is important to remember that when a three-way interaction is added to the model, the two-way interactive term takes on a different meaning. This coefficient represents the effect of the priming treatment when religious conviction is zero. Because interpreting the coefficients in a three-way interactive model can be confusing, it can be especially helpful to examine plots of the predicted values when attempting to interpret results. The second panel of Figure 10 makes it clear that the results from Model 2 should not be interpreted as a challenge to the results from Model 1, since the plot in the second panel looks almost identical to the plot in the first panel. The non-significant three-way interaction coefficient (p=.582) indicates that the difference in slope be-

tween the two lines in the high-religiosity plot is not significantly greater than the difference in slope between the two lines in the low-religiosity plot, meaning that there is not evidence that the effectiveness of the prime differs depending on the level of measured religiosity. In other words, we do not have strong evidence that the prime has an effect on selective exposure among non-believers, and we do not have strong evidence that the prime has a greater effect on selective exposure among believers than it does among non-believers. However, we do have evidence that the prime has an effect on selective exposure among those at the mid range (18) of religious belief (p=.029).

Discussion

In this paper, I show evidence that, when seeking information on a non-religious political issue, individuals with firm religious convictions engage in more selective exposure to attitude-congruent information than do less religious individuals. In a simulated information-search task on the issue of gun control, the proportion of pro-gun-control arguments an individual chooses to read is positively correlated with the individual's pre-task level of support for gun-control policies, and this correlation is stronger among subjects who score higher on a measure of rigid religious conviction. There are multiple possible explanations for this correlation. I will discuss three possibilities here.

First, having a greater predisposition to selective exposure could cause individuals to be more likely to maintain their religious beliefs firmly. Individuals who have a general tendency to read things that are congruent with their beliefs and avoid reading incongruent information should tend to read things that will strengthen their religious beliefs and avoid reading things that will challenge their faith. Just as selective exposure to attitude-congruent political information can lead to increased attitude strength and polarization (Taber and Lodge 2006), selective exposure to information congruent with one's religious beliefs might lead to stronger religious belief. If this is true, it would result in a correlation between the level of religious conviction

and the tendency toward selective exposure, as was observed in the current study.

Second, having a greater need for cognitive closure could cause individuals to be more religious and could have a separate effect on political information-search behavior. Individuals with a strong need for closure could be more drawn to religious belief, especially to fundamentalist religious belief, because the doctrines of such faiths may provide rigid structure and certainty and eschew ambiguity. Consistent with this idea, prior research has found that the Need for Closure Scale (Webster and Kruglanski 1994) is correlated with various measures of religiosity (Saroglou 2002; Duriez 2003). The current study replicates this finding. Individuals who scored high on a measure of rigid religious conviction also tend to score higher on a subset of items from the Need for Closure Scale.

Independent of its effect on religiosity, a strong need for cognitive closure could also cause individuals to engage in selective exposure to attitude-congruent political information. Individuals with a motivation to maintain closure in their attitudes and beliefs would prefer to avoid encountering any information that might reduce their certainty on any given topic. Consistent with this idea, prior research has found selective exposure to occur primarily among individual who score high on the Need for Closure Scale (Chen et al. 2014). The current study replicates this finding. The correlation between pre-task gun-control attitudes and gun-control information-search behavior is stronger among individuals who score higher on a set of Need for Closure items.

This second possible explanation for a correlation between religiosity and selective exposure, in which the need for closure has separate effects on religiosity and on selective exposure, does not require any direct causal connection between religiosity and selective exposure. The empirical results of the current study seem to suggest that, if this mechanism is present, it is probably not the only mechanism driving the correlation between religiosity and selective exposure. Although the estimated effect of religious conviction on selective exposure is slightly reduced when controlling for a measure of Need for Closure in the model, as would be expected if some of the correlation between religiosity and selective exposure is driven by the effects of Need for Closure on both of

these variables, some of the correlation remains when controlling for Need for Closure. However, if the subset of six Need for Closure items used in this study does not capture all aspects of the conceptual motivational variable of interest (or if even the full Need for Closure Scale would not fully capture the concept), it could still be possible that the correlation between religious conviction and selective exposure is driven entirely by a motivation for cognitive closure and its independent effects on these two variables. It is also possible that some other unknown variable affects both of these variables and is responsible for the correlation between them.

Third, religion could cause individuals to become more likely to engage in selective exposure. Religious faith messages could convince religious individuals of the importance of maintaining their beliefs and could thus encourage them to engage in motivated reasoning and selective exposure in order to increase the likelihood that they will maintain their religious beliefs. This could lead to the development of a habit for selective exposure which could then be applied more broadly to other non-religious contexts such as the context of political information seeking. This theory is supported by the results of the experimental part of the current study. Subliminally priming half of the subjects with words related to religious faith demonstrates that increased salience of faith concepts causes an increase in selective exposure when seeking information on a non-religious political issue. The correlation between pre-task gun-control attitudes and gun-control information-search behavior is stronger among subjects primed with religious words than among those primed with neutral words.

All three of these theories are plausible, and the results of the current study do not provide evidence against any of them, but the third theory, in which religious faith messages have a direct causal effect on selective exposure, is the only one of the three theories that gains clear support from this study. However, it seems unlikely that this third mechanism would be active without the first mechanism also being active. Religions would not have much reason to promote selective exposure if a tendency toward selective exposure did not have some beneficial effect on the strength of religious belief. It is possible that all three of these mechanisms are at work simultaneously. The interplay between religious faith and selective exposure may be complex.

While it appears that religious faith may be a factor in individual differences in selective exposure to attitude-congruent political information, it surely is not the only factor, and may not even be the most important factor. Further research should seek to discover what other variables can lead people to be more or less likely to seek information that challenges their beliefs and opinions and what variables can lead people to process the information they encounter in a biased or unbiased manner. If such variables can be discovered, then we may some day have an answer to this important question: how do we make an open-minded person?

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Appendix

Scrambled sentences for faith priming condition

1. appreciated presence was see her

2. felt she eradicate spirit the

3. more paper it once do

4. dessert divine was fork the

5. send I over it mailed

6. evil faith have God in

7. yesterday it finished track he

8. sacred was book refer the

9. prepared somewhat I was retired

10. sermons believed the simple she

Scrambled sentences for neutral condition

1. appreciated presence was see her

2. fall was worried she always

3. more paper it once do

4. shoes give replace old the

5. send I over it mailed

6. saw hammer he the train

7. yesterday it finished track he

8. sky the seamless blue is

9. prepared somewhat I was retired

10. predictable he shoes his tied

Pro-gun-control arguments in information-search task

1. A study in a prominent medical journal found that you or a member of your family are 43 times more likely to be killed by your own gun than by an intruder's. Guns aren't the protection many people think they are. We need stricter gun control.

2. In one poll of imprisoned felons, only 27% report buying guns on the black market; the rest got their weapons through legal channels. Obviously, tougher gun controls are needed to keep these 'legal' guns out of criminal hands.

3. A study of 743 gunshot deaths reports that 398 occurred in a home where a gun was kept. Only 9 of the 743 were deemed to be justified by the police. It follows that gun owners are not as responsible as they claim to be.

4. A gun should be fired only if one's life is in danger and all other options have been exhausted. Most 'self-defense' shootings do not meet these criteria. Thus use of guns in self-defense only contributes to the crime rate.

5. Several recent school tragedies highlight the fact that guns have become a menace to our children. It's very simple: our schoolyards should not be battlefields. We need to reduce access to guns; we need stricter gun control.

6. Recent trials against gun manufacturers have consistently found them guilty, and have forced the gun industry to pay out huge sums of money. If the courts can find good reason to rein in the gun industry, then it is high time for Congress to follow suit.

7. Self-defense arguments for the need of guns are silly: guns only become necessary for self-defense because there are so many guns out there. Thus, guns should be outlawed outright – then we won't need to worry about self-defense.

8. The United States has the highest murder rate of all industrialized nations. It is also the only industrialized country that has lenient gun laws. We therefore say: bring down the number of guns, bring down the murder rate.

Anti-gun-control arguments in information-search task

1. The Bill of Rights guarantees the right of all citizens to bear arms. Quite simply, gun control measures are unconstitutional infringements on a basic right of citizenship.

2. Most privately-owned guns in America are owned by sportsmen and are used for completely peaceful purposes. These guns pose no risk to society, but they are unfairly targeted by gun control legislation.

3. A national council reported in a recent year that handgun accidents killed less than 15 children under the age of 6. This number is minuscule when compared to the total number of accidental deaths of young children. It simply is not worth outlawing guns to save just a handful of lives.

4. Gun control legislation can only regulate guns sold through legal outlets. But these days, many criminals buy their guns illegally. Gun control legislation therefore cannot regulate the most dangerous guns in society.

5. The liberal media distort gun issues: they only talk about tragedies involving guns. Yet guns were used defensively 2.5 million times last year. The real tragedy would be to outlaw guns – crime would spiral out of control.

6. A main reason why our murder rate is so high is that most crime victims do not resist. These victims are twice as likely to be injured compared to those who defend themselves. Carrying a gun is thus one's ultimate protection against violent crime.

7. Stricter gun control laws have not passed Congress, reflecting serious misgivings the American people have about gun control. However, the courts have repeatedly ignored the will of the people, finding gun manufacturers in the wrong. We need to limit the power of the courts in gun control cases.

8. Laws that require guns to be locked up defeat the purpose of gun ownership: how can I protect my family if I must first retrieve my gun from its locker? We thus need to repeal laws regulating guns in private homes.