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The Influence of Evangelical and Political Identity on Climate Change Views

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ABSTRACT

The roles religion and politics play in the climate change arena have received greater attention in the past decade. Nonetheless, the relationship between religion and politics in how they shape climate change views is poorly understood, particularly among American evangelicals. This study uses data from a probability-based mail survey of residents in the political swing state of Florida, USA to examine the relationships between evangelical identity, religiosity, partisan affiliation and three measures of climate-related views: global warming knowledge, belief, and risk perception. Findings from structural equation modeling demonstrate that evangelical identity, mediated by religiosity, exerts significant negative influences on climate measures, even when partisan affiliation is considered. We discuss these results, exploring the nuanced relationships between these variables and the implications they have on the climate change views of a large and influential segment of the public.

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Introduction

As socio-ecological challenges continue to intensify globally, there is growing awareness of the diverse and important roles that religion plays in shaping how people perceive and interact with the environment, along with the implications this has for environmental problems and solutions (Arbuckle and Konisky 2015; Guth et al. 1995; Hempel and Smith 2020; Jenkins and Chapple 2011). In recent years, anthropogenic climate change and its interactions with Christianity in general and the evangelical Protestant tradition in particular, especially in the United States, has become focal (Haluza-DeLay 2014; Jenkins, Berry, and Kreider 2018; Veldman et al. 2021). Interest in American evangelicalism is due to several interconnected reasons. First, Christianity is the largest religion both globally and in the United States, and evangelicalism is the largest Christian tradition within the latter [i.e., roughly one-quarter of all Americans identify as evangelical (Pew Forum on Religion and Public Life 2014)]; though a recent national survey

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estimates *white* evangelical Protestants have declined to about 14% of the U.S. population (PRRI 2021)]. Second, evangelical Christianity is among the most politically engaged of the major religious communities in the United States (Smidt 2013; Wilkinson 2012). Third, the emergence of an aggressive countermovement of politically conservative climate skeptics—especially, though not exclusively, in the United States—has been a major obstacle to climate change action worldwide (Capstick et al. 2015; Veldman 2019; Veldman et al. 2021). Fourth, research consistently shows that evangelical Christians—and white evangelicals in particular—are among the most skeptical of climate science and solutions (Ecklund et al. 2017; Jones, Cox, and Navarro-Rivera 2014; Shao 2017; Shao and McCarthy 2020; Veldman et al. 2021). Finally, numerous prominent conservative Christian (i.e., Religious Right) figures, along with elected officials who publicly identify as evangelicals, have been outspoken opponents of climate action and leaders in the climate denial movement, further buttressing the negative perceptions of evangelicals toward climate and environmental concerns (Veldman 2019).

Given the influential role of the United States in global climate and environmental governance, and the prominent role of evangelicalism in American society and politics, it follows that a better understanding of evangelical views and opinions on climate change, e.g., knowledge, belief and risk perception, is critical for addressing skepticism and effectively engaging with a prominent constituency to support climate solutions (Smith and Leiserowitz 2013; Veldman et al. 2021; Wilkinson 2012). To that end, our study examines the influence of evangelical identity, while controlling for partisan affiliation, on three common measures of climate change views: global warming knowledge, belief, and risk perception. We also analyze how religiosity mediates the relationship between evangelical identity and global warming knowledge, belief, or risk perception. We use a probability-based random sample of Florida, USA residents as the state reflects the religious and evangelical makeup of the U.S. (Pew Forum on Religion and Public Life 2014). Florida is also characterized as a state vulnerable to a range of climate impacts (Chassignet et al. 2017) and has political significance as an electoral swing state (Foreman 2018).

Literature Review

Evangelical Identity

What does it mean to be an evangelical Christian and why is evangelical identification often negatively associated with beliefs and attitudes toward climate change? As a diverse religious movement spanning numerous Christian denominations (primarily, though not exclusively, within the Protestant branch of Christianity), evangelicalism is notably difficult to define (Burge and Lewis 2018; Hackett and Lindsay 2008; Smidt, Kellstedt, and Guth 2009). From a theological or belief-based lens, it has been described by Bebbington's Quadrilateral as having four core characteristics (Bebbington 1989, 3): "*conversionism*, the belief that lives need to be changed; *activism*, the expression of the gospel in effort; *biblicism*, a particular regard for the Bible; and what may be called *crucicentrism*, a stress on the sacrifice of Christ on the cross."

From a political lens, American evangelicals—and *white* evangelicals in particular—have in recent decades become associated with conservative politics, the Republican

Party, and Christian nationalism (Schwadel 2017; Steensland and Wright 2014; Whitehead, Perry, and Baker 2018). Over 80% of white evangelicals voted for the Republican nominee in the 2016 election, and an estimated 76% in 2020 (Bailey 2016; Newport 2020). That political context has led to questions about whether evangelical views around climate and environmental issues merely reflect current conservative politics or Republican ideology, or if they are driven by an evangelical religious identity. In addition to religious identification, religiosity is an important and related factor to consider. Previous research has demonstrated the role of religion can vary based on one's level of commitment to or engagement with that religion, or how "religious" one is (Kilburn 2014; Pasek 2018; Shao 2017; Shao and McCarthy 2020). Although religiosity is often defined and measured in terms of the (usually self-reported) frequency of attending religious services and its importance in one's life, we draw on the notion of embeddedness in McCarthy, Olson, and Garand (2019), whereby multiple elements of religious practice and beliefs combine and reinforce each other and, in turn, enhance the impact of religious social networks on how an individual engages in various social issues. Thus, we explore religiosity as a mediator between evangelical identity and climate change views.

Political Identity

Political variables are consistently identified as among the strongest drivers of climate beliefs and attitudes. As such, examining the relationship between evangelical identity and partisan identity is prudent. However, within the sociological, psychological, and political science literature, these relationships remain unclear. While generalities exist, the complex interrelationships between politics, religion, and identity, at both the individual and social level, remain elusive and a challenge to disentangle (Smidt, Kellstedt, and Guth 2009).

On one hand, studies consistently identify politics—whether measured in terms of political ideology or partisan affiliation (which are related but not identical)—as the most influential driver of climate attitudes, overall (e.g., Dunlap, McCright, and Yarosh 2016; Dunlap and McCright 2008; Hornsey et al. 2016; Shao 2017; Unsworth and Fielding 2014). On the other hand, a growing body of research suggests that religion exerts significant influence in shaping attitudes and behavior on climate and environmental issues, even when controlling for politics (Arbuckle 2017; Kilburn 2014; Morrison, Duncan, and Parton 2015; Shao 2017). Additionally, Arbuckle (2017) found evidence suggesting that religious affiliation moderates the impact of political ideology on climate change concern for political liberals but has little effect on political conservatives. Hempel and Smith (2020) find that biblical beliefs are strongly associated with "willingness to pay" for the environment and may also moderate the effects of political orientation, with biblical literalists who are politically conservative being *more willing* to pay for the environment. A more nuanced view also recognizes religiously framed and driven engagement in favor of climate and environmental concern (often termed "creation care") in mainstream evangelicalism (Stover 2019; Wilkinson 2012). Faith-based initiatives and organizations such as the Evangelical Climate Initiative, Evangelical Environmental Network, Young Evangelicals for Climate Action, and others provide

evidence that evangelical Christianity can promote pro-climate and pro-environment views and action (Lamb, Lowe, and Meyaard-Schaap 2019; Van Dyke 2005). The contrasts apparent in the literature call for intersectional approaches to unpack the more nuanced interconnections and dynamics between evangelicalism, politics, and climate change.

Climate Change Views

Climate change (hereafter we use the synonymous term global warming to correspond with previous research) knowledge, belief, and perceived risk are distinct concepts closely associated with each other and often studied in tandem (Heath and Gifford 2006; O'Connor, Bard, and Fisher 1999). Previous research has shown global warming knowledge has positive association with both belief that global warming is happening and that it poses a risk (Shi et al. 2016; van der Linden 2015). For example, the gateway belief model states that the degree to which people perceive scientific knowledge as certain informs their belief in, concern about, and belief that global warming is human-caused (van der Linden et al. 2015). Beliefs, defined as perception of the state of things in the world, likewise are a determinant of perceived risk (Bradley and Reser 2017; Arbuckle et al. 2013). Together, knowledge and belief are known to be positively related to perceptions of risk, which, in turn, influence levels of concern or behavior. As mentioned previously, studies have also identified religious and/or political identity as significant influences on one or more of the variables related to global warming views (e.g., Kilburn 2014; Morrison, Duncan, and Parton 2015; Shao 2017; Smith and Leiserowitz 2013; van der Linden 2015). In this respect, not only do knowledge, belief, and perceived risk play important roles in the formation of public opinion on global warming, but so too does an individual's religious and political identity.

Research Questions and Hypotheses

To explore the relationships that evangelical identity, partisan affiliation, and religiosity have with global warming knowledge, belief, and perceived risk, we ask the following research questions based on our review of previous work: (1) to what extent does evangelical identity affect global warming views, while controlling for partisan affiliation and (2) does religiosity mediate the relationship between evangelical identification and the three global warming measures. We hypothesize a positive association between evangelical identification and religiosity and negative associations between evangelical identity, partisan affiliation, religiosity and each measure of global warming views.¹ A graphical depiction of those hypothesized relationships is presented in Figure 1.

Methods

Florida, USA exhibits a religious and evangelical composition similar to the broader U.S., is a state of political importance, and is vulnerable to the effects of climate change, thereby making it a well-suited study site. Data were from a 2016–2017 survey of Florida residents using an address-based probability sample (purchased from Survey Sampling International) based on the U.S. Postal Service's Delivery Sequence File. The

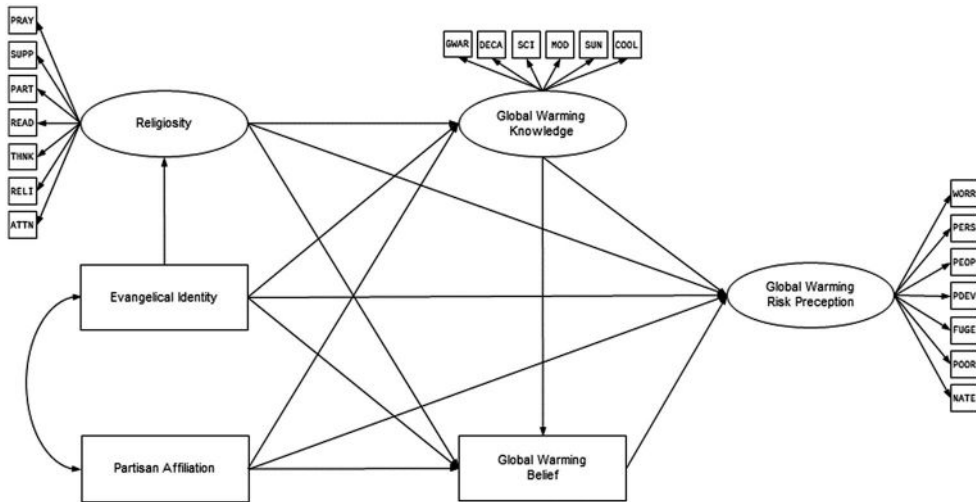


Figure 1. Hypothesized structural equation model.

sample was divided into two replicates, the first employing a mail survey protocol ($n = 1,500$) and the second a mixed-mode web-push protocol ($n = 500$) (Dillman, Smyth, and Christian 2014; Lesser et al. 2016). Both protocols used four contacts, with the mail protocol using an initial survey packet (comprising a cover letter, questionnaire, and postage-paid return envelope), reminder post card, second survey packet, and final survey packet. The mixed-mode protocol used an initial letter (with URL and PIN), followed by a second letter (with URL and PIN), a survey packet, and a final survey packet. Households receiving the survey were instructed in bold text on the cover of the mail questionnaire to have the adult with the most recent birthday complete the survey,² which has been shown to work about as well as other methods in the field (Olson and Smyth 2017; Olson, Stange, and Smyth 2014). Of the 1,871 who could be contacted, 318 provided responses suitable for the analysis, a response rate of 17.0% (AAPOR 2016). Further discussion of the response rate and a detailed analysis of potential nonresponse bias is provided in the online [Supplementary Material \(Appendix A\)](#).

Instrumentation and Variables

As part of a larger study, the 103-item survey drew questions from several previously developed surveys on climate change and global warming (e.g., Maibach, Roser-Renouf, and Leiserowitz 2009; Leiserowitz, Smith, and Marlon 2010; Leiserowitz et al. 2015). Items included knowledge, belief, and risk perception about global warming, religiosity, and socio-demographic attributes.

Most items from previous surveys were used “as is” with the exception of the knowledge items. In line with these other surveys, the questions used for this analysis referred to “global warming” as opposed to “climate change.” While there has been some debate about which term is more polarized, recent research suggests that they may not currently be significantly different (Soutter and Möttus 2020). As such, and while the survey questions themselves use “global warming,” both terms will be used interchangeably

Table 1. Operationalization of the variables.

Variable	Items/Description	Measurement
Religion	Religious identity	1, if Evangelical; 0 otherwise
Religiosity	a. Attend religious services b. Considers self a religious person c. Engage in the following activities • Think about religious issues • Read religion-based materials • Participate in religion-based activities (besides religious services) • Support a religious organization financially • Pray	1 (never)–6 (more than once a week) 1 (not religious at all)–4 (very religious) 1 (never)–5 (very often)
Partisan affiliation	Partisan identity	1, if Republican; 0 otherwise
Knowledge	a. Global warming will cause some places to get wetter, while others will get drier. b. The decade from 2000 to 2009 was warmer than any other decade since 1850. c. Scientists can't predict the weather more than a few days in advance—they can't possibly predict the climate of the future. d. Scientists' computer models are too unreliable to predict the climate of the future. e. Any recent global warming is caused by the sun. f. The earth is actually cooling, not warming.	True/False. Recoded as 1, if correct answer; 0 otherwise
Global warming belief	Do you think that global warming is happening?	1 (no, and I'm extremely sure)–9 (yes, and I am extremely sure)
Risk perception	a. Worry about global warming b. Perceived harms from global warming ^a • You personally • People in the United States • People in developing countries • Future generations of people • The world's poor • The natural environment	1 (not at all worried)–4 (very worried) 1 (not at all)–4 (a great deal), don't know

^aResponses of "Don't know" were treated as missing values and included in the multiple imputation procedure.

for the purposes of this paper. Operationalization of the subset of variables used in this analysis are presented in [Table 1](#).

Objective knowledge of global warming was measured by a set of true/false statements adapted from Leiserowitz, Smith, and Marlon (2010). These items were then recoded as 1 for correct answers and 0 for incorrect answers. Risk perception was measured by combining two indicators: "worry about global warming" and "perceived harm

from global warming.” “Worry about global warming” was a single item indicator while “perceived harm from global warming” included six-items, all of which were adopted verbatim from Maibach, Roser-Renouf, and Leiserowitz (2009). Belief about global warming was measured with a single item from Maibach, Roser-Renouf, and Leiserowitz (2009).

Religiosity was operationalized using seven items including attendance at religious services and how religious one thinks of oneself, both of which were adopted from AP-NORC (2015; see also Huber and Huber 2012). The other five items asked about the frequency of praying, thinking about religious issues, reading religious materials, participating in religious activities, and supporting a religious organization financially. The items on praying and thinking about religious issues were drawn from Huber and Huber’s (2012) centrality of religion scale, while the others were added to reflect religious practices in the US. Finally, partisan affiliation was a single measure adopted from AP-NORC (2015) and recoded as 1 for Republican and 0 for all others. We chose to focus on Republican affiliation given its well-established positive relationship with evangelical identification and negative relationship with climate and environmental concerns. Due to the limitations of our sample size, we operationalized this as a dichotomous variable, which simplifies our model but may ignore some of the variation that can occur on this issue among self-identified Republicans (e.g., between “Tea Party” Republicans and more moderate Republicans). Religious affiliation was measured using respondents’ self-identification as evangelical or born-again, which is one of the three primary strategies used in survey research (the other two being more complicated and based respectively on (1) adherence to particular beliefs and (2) denominational membership) (Smith, Hempel, and MacIlroy 2018; Veldman et al. 2021).

Data Processing and Analysis

To address item nonresponse, multiple imputations (Schafer and Graham 2002) was used to fill in missing values across 10 data sets using SPSS (see [supplemental material, Appendix B](#)). Next, each imputed data set was separately weighted to match the distributions of Florida’s population for age, sex, race, Hispanic ethnicity, and education using SPSS’ raking procedure. Values for the control totals in the raking procedure were obtained from the American Communities Survey 5-year estimates for 2015. This balances the data to adjust for coverage and nonresponse error, although bias can remain for variables excluded from the raking procedure (Biemer and Christ 2008). After implementing the raking procedure, bias was reduced for six of seven demographic variables and estimates for climate change items show a pattern similar to estimates obtained from the Yale Program on Climate Change Communication (Howe et al. 2015; [Appendix A of the supplementary material](#)).

We used SPSS Version 26 (IBM Corp. 2019) to calculate pooled estimates of means for individual items. We then used Mplus (Muthén and Muthén 2017) to conduct our analysis and obtain pooled parameter estimates for the 10 imputed data sets. This included estimating correlation coefficients (see [supplemental material, Appendix C](#)) and a two-step, covariance-based structural equation model (SEM) protocol to (1)

Table 2. Means, standard deviations (SD), alpha (α), composite reliability (CR) and average variance explained (AVE), standardized factor loading scores (λ), standard error (SE), and response scale for items.

Scale items	Mean (SD)	λ	SE	Scale
Religiosity ($\alpha = 0.92$, CR = 0.95, AVE = 0.73)				
Attend religious services	3.19	0.87	0.031	1–6
Consider self a religious person	2.56	0.89	0.026	1–4
Think about religious issues	3.38	0.83	0.036	1–5
Read religion-based materials	2.97	0.88	0.026	
Participate in religion-based activities (besides services)	2.35	0.85	0.036	
Support a religious organization financially	2.51	0.87	0.030	
Pray	3.70	0.79	0.045	
Knowledge ($\alpha = 0.76$, CR = 0.89, AVE = 0.57)				
Global warming will cause some places to get wetter, while others will get drier.	.83	0.81	0.086	0–1
The decade from 2000 to 2009 was warmer than any other decade since 1850.	.69	0.75	0.085	
Scientists can't predict the weather more than a few days in advance—they can't possibly predict the climate of the future.	.59	0.88	0.046	
Scientists' computer models are too unreliable to predict the climate of the future.	.62	0.88	0.059	
Any recent global warming is caused by the sun.	.70	0.44	0.147	
The earth is actually cooling, not warming.	.84	0.68	0.110	
Risk Perception ($\alpha = 0.96$, CR = 0.98, AVE = 0.86)				
Worry about global warming	2.73	0.92	0.023	1–4
Harm you personally	2.45	0.82	0.044	
Harm people in the United States	2.79	0.88	0.030	
Harm people in developing countries	2.94	0.97	0.015	
Harm future generations of people	3.14	0.97	0.018	
Harm the world's poor	3.00	0.97	0.015	
Harm the natural environment	3.18	0.94	0.023	

Measurement model fit: $\chi^2 = 235.28$, df = 167; RMSEA = 0.04; CFI = 0.99; TLI = 0.99; WRMR = 0.89.

evaluate the reliability and validity of measurement items and (2) test hypothesized structural relationships among latent factors (Anderson and Gerbing 1988).

First, confirmatory factor analysis (CFA) was used to test a measurement model and determine the extent to which questionnaire items reflect the latent factors: religiosity, knowledge, and risk perception (Table 2). We did not rescale the items that had unequal levels of measurement as a latent variable approach was used to understand the relationships among variables (rather than mean comparisons) and model estimation was standardized (Grace 2006). We used weighted least square mean and variance adjusted (WLSMV) to estimate the model; WLSMV is a robust estimator at lower sample sizes and when modeling ordered categorical items (Brown 2006). A chi-square test alongside other appropriate fit statistics were used determine the fit of the model (Kline 2016). Cronbach's alpha (α) values greater than 0.80 (Nunnally 1978), composite reliability (ρ_C) values greater than 0.60 (Bagozzi and Yi 1988), average variance extracted (AVE) values greater than 0.50 (Fornell and Larcker 1981), and standardized factor loading greater than 0.50 (Hair, Ringle, and Sarstedt 2013) were considered to indicate adequate reliability and validity. Decisions at each step to assess psychometric adequacy followed recommendations from Kyle et al. (2020).

Next, three observed variables, partisan affiliation, religious identity, and global warming belief, were added to assess the extent to which the empirical data from

Table 3. Structural regression coefficients.

Dependent	Predictor	β	SE	R^2
Religiosity	Evangelical	0.42***	0.08	0.17*
	Knowledge	0.22	0.15	0.24*
Belief	Republican	-0.19	0.13	
	Religiosity	-0.49***	0.12	
	Evangelical	0.06	0.11	0.78***
	Republican	-0.14 ⁺	0.08	
	Religiosity	0.08	0.10	
Risk perceptions	Knowledge	0.88***	0.07	
	Evangelical	0.10	0.09	0.91***
	Republican	-0.14 ⁺	0.07	
	Religiosity	0.01	0.07	
	Knowledge	0.72***	0.20	
	Belief	0.22	0.20	

Structural model fit: $\chi^2 = 295.29$, $df = 219$; RMSEA = 0.03; CFI = 0.99; TLI = 0.99; WRMR = 0.86. Note. Evangelical correlation with Republican $r = 0.40$, $p < 0.001$.

⁺ $p < 0.10$, * $p < 0.05$, *** $p < 0.001$.

participants fit the hypothesized model via examination of structural paths from exogenous (independent) to endogenous (dependent) variables. To assess model-to-data fit, we follow recommendations by Hu and Bentler (1999), who suggest the combination of a standardized root mean square residual (SRMR) less than 0.08, root mean square error of approximation (RMSEA) less than 0.06, and comparative fit index (CFI) or Tucker-Lewis index (TLI) greater than 0.95 to indicate relatively good fit.

Results

Among the single item measures, belief in global warming had a mean of 6.81 (range 1–9) and 35% and 29% of respondents were evangelical and Republican, respectively (other demographic attributes of the sample are reported in [Table A1 of the supplementary material](#)). The measurement model fit indices suggest adequate overall fit ($\chi^2 = 235.28$, $df = 167$; RMSEA = 0.04; CFI = 0.99; TLI = 0.99; SRMR = 0.08). Standardized factor loadings of all other indicators were > 0.4 and reliability coefficients of all latent variables were > 0.8 , suggesting acceptable measurement reliability and internal consistency. The AVE values of > 0.5 indicate convergent validity of all latent variables.

Structural model fit indices suggest adequate fit ($\chi^2 = 295.29$, $df = 219$; RMSEA = 0.03; CFI = 0.99; TLI = 0.99; SRMR = 0.08). Positive associations were observed between knowledge and global warming belief and risk perception ([Table 3](#)). At the same time, there is no significant relationship between belief that global warming is happening and risk perception. Similarly, evangelical identity does not show a significant direct relationship with any of the three global warming measures (knowledge, belief, and risk perception). However, there is a significant and positive direct relationship between evangelical identity and religiosity, indicating that evangelicals tend to be more religious than non-evangelicals. There is also a significant but negative relationship between religiosity and knowledge, indicating that the more religious respondents are, the less knowledgeable they are about global warming. We did not find any significant direct relationship between religiosity and either global warming belief or risk perception. Furthermore, partisan (Republican) affiliation was

Table 4. Significant indirect (mediation) effects on risk perception.

Relationship	β	SE
Religiosity → Knowledge → Risk perception	−0.36**	0.14
Evangelical → Religiosity → Knowledge → Risk perception	−0.15*	0.06
Religiosity → Knowledge → Belief	−0.43***	0.12
Evangelical → Religiosity → Knowledge → Belief	−0.18**	0.06
Evangelical → Religiosity → Knowledge	−0.20***	0.06

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

negatively associated with global warming belief and risk perception, although both fall just outside the $p \leq 0.05$ significance threshold ($p = 0.08$ and 0.07 , respectively). Republican affiliation had no significant association with knowledge about global warming.

Our model also identified multiple mediation effects (Table 4). First, the negative relationships between religiosity and both belief and risk perception are mediated by knowledge. Second, although evangelical identity is not directly associated with any of the climate measures, it had a significant indirect negative association with all three when mediated by religiosity and, for global warming belief and risk perception, further mediated by knowledge.

Although our model posits that religious identity and partisan affiliation are related, we did not assume a unidirectional relationship between the two. Our results show a significant correlation (0.42 , $p < 0.01$) between these variables. Comparing the associations between religious and partisan affiliation on risk perception, we found Republican affiliation had a close to significant direct relationship with belief and risk perception while evangelical identification had a significant indirect and negative relationship with belief and risk perception (which was mediated by both religiosity and knowledge together).

Discussion

The relationship between religion, politics, and climate change is nuanced and multifaceted. Our results offer evidence that, although correlated, evangelical identification and partisan affiliation are independently related to common measures of climate change views, though in different ways. Evangelical identity has a significant but indirect (mediated) negative association with all three climate change measures. Meanwhile, Republican affiliation has a direct but only close-to-significant negative relationship with belief about climate change and risk perception (though not with global warming knowledge). Turning to our second research question, the results further indicate that religiosity is a strong negative mediator between evangelical identification and measures of climate change views, with the relationship between religiosity and belief and risk perception further mediated by knowledge. In other words, evangelicals tend to show higher levels of religiosity, and the higher ones' religiosity—i.e., the more engaged one is with their religious practices and community—the less knowledgeable one is about climate change and the less likely one is to think it is really happening or poses a risk.

Our results also suggest objective knowledge about global warming is positively associated with both the belief that it is happening and that it poses a risk, which is consistent with existing studies (Shi et al. 2016; van der Linden 2015). Although knowledge

showed a strong association with risk perception, believing that global warming is happening was not significantly associated with risk perception after the common cause of objective knowledge was incorporated. Additionally, there are various theoretical explanations for why belief was not found to influence risk perception. For example, one could simply be facing more salient concerns, or think that worries about climate impacts are overblown, or that one is sufficiently protected from the impacts by space or time, etc. From a religious perspective, one could agree that the climate is changing but also believe that God is in control and, thus, there is no reason to be too concerned, as some climate skeptics have asserted (Veldman 2019).

Additionally, we unexpectedly found that, when evangelical identification is taken into account, partisan affiliation is not significantly related (at the $p < 0.05$ level) to risk perception and climate change belief. This could be due to the specific political and environmental context of Florida where—given the state’s vulnerability to hurricanes and sea-level rise—climate change can be a higher profile issue that receives attention across the political spectrum. This widely perceived and experienced vulnerability may increase risk perceptions and weaken the typical partisan/political polarization around climate change that is often found elsewhere (Carlton and Jacobson 2013). Notably, Republican governors and conservative legislators in Florida have been advocates of state and local-level climate and environmental protection because it is an issue of concern for so many residents across party lines. Thus, in Florida, partisan affiliation may not be as strong or consistent a predictor of views on climate change as in other contexts.

These findings suggest how results may vary depending on both the specific geopolitical context as well as the endogenous variables tested in a given study. Similarly, Smith, Hempel, and MacIlroy (2018, 292) examined the relationship between evangelical religion and dependent variables focused on environmental issues and found that, “negative religious effects are more pronounced when questions concern future environmental outcomes, but not current environmental concerns, and when outcomes are related to collective actions rather than individual ones.”

So, why is religiosity and, indirectly, evangelical identity, negatively related with climate change measures in this study, and more broadly associated with climate skepticism in general? Particular strains of evangelical beliefs such as around the biblical “end time” (e.g., Barker and Bearce 2013) or a more “literal” reading of select scripture passages that advocates dominionistic attitudes (e.g., Smith, Hempel, and MacIlroy 2018) have been offered as explanations. Smith and Veldman (2020) question this rationale given their findings that evangelicals in Brazil held more pro-environment and pro-climate attitudes (with religiosity having a positive relationship with environmental measures) even though they shared similar core religious beliefs and doctrine with American evangelicals. As Smith and Veldman (2020) posit, cross-cultural variation suggests evangelical views on climate change may have less to do with specific theological beliefs *per se*, and more to do with the particular culture or subculture context, norms, and other social constructs. That explanation aligns with our results related to religiosity, as we would then expect any association between religious identity and climate views to be stronger among those with higher levels of religiosity, i.e., those who are more embedded in their faith tradition and community (McCarthy et al. 2019). This

explanation is further supported by other research—i.e., Veldman (2019), Wilkinson (2012), and Djupe and Hunt (2009)—which argues that Christian identity is not inherently incompatible with pro-climate or pro-environmental views. Rather, as Djupe and Hunt (2009, 670) conclude, “social sources of information in the church shape the dimensions of religious belief and exert much stronger effects on attitudes on the environment than do doctrinal or religiosity measures.”

Practically, this suggests that one pathway toward overcoming climate skepticism among American evangelicals may be through effectively framed and delivered communication or education efforts focused on evangelical communities that increase scientifically based understanding about the causes and effects of global warming. If our model is accurate, then increasing knowledge about climate change in religious communities could lead to increasing levels of belief and risk perception. Indeed, Hayhoe, Bloom, and Webb (2019) conducted experiments with students at evangelical universities to show that presenting information about climate change within the right context and content frame can result in lasting gains on awareness and attitudes.

Another implication of our findings is that if the relationship between evangelical identity, religiosity, and climate change views has elements that are distinct from the relationship between politics and climate change views, then engaging through religious pathways may transcend entrenched partisan polarization. This approach is at work through groups like Young Evangelicals for Climate Action and Climate Stewards, as well as through prominent individuals such as Dr. Katharine Hayhoe, a respected climatologist and award-winning climate change communicator who is open about her evangelical faith and speaks regularly to religious audiences. These groups and individuals demonstrate that there is a meaningful and potentially even growing segment of American evangelicals who care about climate change and broader environmental concerns.

Limitations and Future Research

As an initial and preliminary examination of the relationships among key religious, political, and climate change variables, this study has several limitations. A low response rate, though weighted on key demographics, has the potential for nonresponse bias. Additionally, some parameter estimates of variables having weaker effects might achieve greater statistical significance with a larger sample size and thus more statistical power. While a probability-based data set weighted to the population of Florida was used, caution should still be taken with applying our findings more broadly, especially as climate change can be a particularly salient issue given Florida’s vulnerability. Further research is recommended into whether and how experiencing climate change impacts (e.g., sunny-day flooding in city streets, beach erosion, stronger hurricanes) may influence the connections between religion, religiosity, and climate views.

The results of any analysis are connected to how exogenous or endogenous variables are conceptualized and operationalized (Hempel and Smith 2020; Smith, Hempel, and MacIlroy 2018). There are multiple ways to measure religion and politics, as well as numerous climate and environmental outcomes of interest, and comparing different sets of independent and dependent variables can lead to a range of conclusions. For our

exogenous religious variable, we used a self-identification approach to measure evangelical identity, a common measure in climate and environmental studies, and a more parsimonious approach than the denomination-based RELTRAD (e.g., Smith 1990). Both approaches, along with others, have their respective strengths and shortcomings (Smith, Hempel, and MacIlroy 2018), although there is some evidence that they may be largely comparable at the end (Burge and Lewis 2018). At the same time, further research is needed to understand, not just how religion and politics may shape climate change variables separately, but also how they may interact together to alter their combined effects on attitudes, perceptions, and behaviors. For example, to the extent that knowledge shapes climate change beliefs and risk perceptions (Shi et al. 2016), future research should also explore where American evangelicals get their information about climate change from (i.e., news media, radio or podcasts, social media, conversations with family and friends, formal education, etc.) and how it may differ from non-evangelicals. Other studies might explore the relationship of Christian Nationalism with climate change, as recent research has shown this to be a predictor of attitudes toward a range of other social and political issues (Baker, Perry, and Whitehead 2020; Whitehead, Perry, and Baker 2018).

Conclusion

This study reinforces and contributes further nuance to the argument that religion in general, and American evangelicalism in particular, matters for how people view and engage the pressing challenge of anthropogenic climate change. Among other findings, our data highlight that evangelical identification, when mediated by religiosity and knowledge, is associated with lower levels of climate change belief and risk perceptions. This relationship holds even with partisan affiliation being considered. Thus, while American evangelicalism tends to be closely associated with the Republican Party, this adds to the growing evidence that it may also shape views on climate change independently and not just through politics. Better understanding these various sources of information could be integral to understanding and shaping the attitudes of this large, complex, and influential faith community.

Notes

1. We did not hypothesize a relationship between partisan affiliation and religiosity because we reasoned that religiosity is a function of religious identity and reflects engagement with a faith community that is distinct from, but may be correlated with, partisan identity and associated engagement in political organizations.
2. The web version of the mixed-mode survey failed to include the instruction on the landing page, which may have affected respondent selection for the small number of web respondents ($n = 25$).

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