Religion in Contentious Times: Climate Change, Abortion Rights, and War

Nela Mrchkovska

A dissertation
submitted in partial fulfillment of the
requirements for the degree of

Doctor of Philosophy

University of Washington
2023

Reading Committee:
Aseem Prakash, Co-Chair
Anthony Gill, Co-Chair
Victor Menaldo
Nives Dolšak
Asli Cansunar

Program Authorized to Offer Degree:
Political Science

University of Washington

Abstract

Religion in Contentious Times: Climate Change, Abortion Rights, and War

Nela Mrchkovska

Co-Chairs of the Supervisory Committee:

Aseem Prakash
Anthony Gill
Department of Political Science

Religion remains a potent force in our modern society, influencing people's lives and guiding their answers to existential questions in an ever-evolving world. The enduring nature of religion lies in its ability to be shaped by, as much as it shapes, the society it inhabits. This dissertation presents three empirical studies highlighting the role of religion, both from an institutional and individual perspective, in addressing three pressing contemporary issues: climate change, abortion rights, and war. The findings illustrate the adaptability and fluidity of religion in response to local contexts and current events.

The first two papers provide a systematic study of how religious leaders, as "street-level bureaucrats" of religious institutions, craft sermons based on the demographic, sociological, and geographical factors of their communities, as well as concurrent events. What clergy choose to address in their sermons is not random. Instead, sermon topics are a product of their authors' beliefs, perceptions of their congregations' needs, and central norms and rules. Both papers use an original and unique dataset of 220,000 weekly sermons collected from 3,000 congregations across the United States. The content of the sermons provides insight into how, where, and when clergy engage politically- and socially-charged topics such as climate change and abortion rights. In a religiously pluralistic society, where individuals can choose where to seek spiritual guidance, the messages they hear during their weekly meetings

are arguably a large determinant in what shapes their choice of congregation. Thus, choosing topics to include in weekly sermons are of great strategic importance to clergy.

The first paper *"Hear Ye, Hear Ye: When and Where Religious Leaders Preach on Climate Change"* explores this process by studying how congregations address the contentious issue of climate change in their weekly meetings. As climate change and its consequences are increasingly framed as a moral issue, the religious interpretation of the human connection to the environment has varied tremendously across religious bodies as has the frequency with which clergy engage with this topic. Using text analysis tools, a dictionary-based approach and text classification with Large Language Models (LLMs), I find that both demographic characteristics of the congregations' surrounding neighborhood and environmental factors help explain this variation. Across different models and subsets, the political ideology of the local neighborhood is a persistent factor in how frequently climate-related discourse appears in weekly sermons. Evidence from these analyses also shows that the level of income and the racial composition of the neighborhood, as well as the level of air pollution in the surrounding area of a given congregation, are also strong determinants of climate change discourse in congregations. Thus, the findings suggest that the salience of an issue in a given local context drive how clergy perceive the needs and wants of their communities and address their congregations accordingly, which highlights religion's ability to cater to its flocks.

The second paper titled *"Holy Words, Contentious Topic: Analysis of Political Speech on Abortion Rights in Religious Sermons"* tracks the same process on another contentious issue – abortion rights. This paper also engages with the perceived wants and needs of the local neighborhood and exogenous factors related to abortion rights, but it includes an additional set of determinants. Specifically, it includes the hierarchy of a given congregation based on its denomination (centralized versus decentralized) and the size of the supportive network of the congregation (number of congregations from the same denomination that are relatively close in space to one another). These two additional factors account for clergy's incentives and resourcefulness and connection of congregations in engaging with contentious topics. Utilizing difference-in-difference study design and leveraging the US Supreme Court's decision in

Dobbs v. Jackson Women's Health Organization, I find that in states where the decision had considerable socio-legal implications for communities, congregations address abortion more, but they only do so in communities where the denominational position on abortion rights aligns with the perceived ideological position of the congregation's surrounding neighborhood. This effect is amplified if the congregation is embedded within a supportive network and when clergy are dependent on the local community rather than centralized religious bodies in securing their positions. The findings in this paper align with the findings from the first one in that, in both cases, the frequency of the topics of interest was driven largely by the local context.

In the third paper of this dissertation *"The (Not So) Sacred Image of Russia: Survey Experiment on Popular Support of Ukraine in the Russia-Ukraine War"*, I shift from a focus on sermons and the clergy's role in shaping and/or adapting to congregant perceptions to explore religion's role as a source of long-term identity and how that identity may manifest itself in forming opinion of contemporary events. One's religious identity is formed through a process of socialization that involves larger social (religious) groups influencing underlying values, preferences, and behavior. To what extent this identity formation affects the reaction to important political and social events is a topic of interest to scholars. I address this topic with a survey experiment in the context of the contentious Russia-Ukraine war, specifically within Bulgaria – a society historically and nationally tied to one major religion, Christian Orthodoxy, and one that has had a complex and involved relationship with Russia. I investigate the significance of affiliating with the Christian Orthodox faith in shaping in-group attitudes when the Russia-Ukraine war is framed as a cultural-religious war with Russia as the Christian Orthodox protector on one side, and Western-backed Ukraine on the other. I find that respondents' attitudes toward the war are *not* driven by their religious affiliation, *nor* the intensity of their religious identity, beliefs or behavior, but rather by the level of information they receive regarding the war as well as their fears of being drawn into the war. These findings suggest that concurrent events and information mitigate the extent to which religion can influence preferences and attitudes in a given society.

In our modern society, where religion competes with the advances of science and technology, and the forces of secular and rational thought, the socio-political relevance of religion depends on its ability to adapt. As evidence from this dissertation shows, religious institutions are flexible with respect to the needs and desires of their constituencies, but religious identity isn't always salient in all contexts. This indicates the complex nature that religious belief and religious institutions play in human behavior, a topic of inquiry that will continue to intrigue scholars in decades to come. Competing to retain and attract members, religious institutions respond to community demands, prompting individuals to continually seek comfort and guidance from the pews. By doing so, they not only maintain their relevance in individuals' personal realm but also sustain themselves as institutional pillars, even in an age where many see them as obsolete. As a social identifier and embodiment of values and beliefs, religion's power is constrained by our information-rich, globalized world. However, when religion adapts to modern challenges, it showcases its most resilient nature. This dissertation highlights these mechanisms by considering three contentious issues in a comparative context.

Acknowledgments

This research would not have been possible without the support of many. I am grateful for the learning opportunities, research experiences, and comradeship I found within the Department of Political Science at the University of Washington. I have been fortunate to have a wonderful set of mentors guiding me through my four years at UW. I wish to express my deepest gratitude to my co-chair, Aseem Prakash, for his consistent guidance and wisdom, and to my co-chair, Anthony Gill, for being a steadfast supporter. I am especially grateful to Asli Cansunar for taking me under her wing and always being there to lend a listening ear. My work has greatly benefited from the incisive advice of Nives Dolšak and the feedback from Victor Menaldo, both members of my dissertation committee. I am indebted to Jake Grumbach, who helped foster my appreciation for data science and research methods.

Many more have shaped me into the scholar I am today. My sincere gratitude goes to Mark Alan Smith, Chris Adolph, John D. Wilkerson, Susan H. Whiting, and James D. Long for their mentorship, feedback on my research, and teaching advice. The department also allowed me to connect with admirable scholars through my role as a graduate student chair of the Severyns Ravenholt Seminar in Comparative Politics, the Political Economy Forum, and as a graduate fellow at the Center for Environmental Politics.

My experience at UW was as rewarding as it was due to the friendship of many, most notably Rachel Castellano, Inhwan Ko, Jintong Han, Ian Callison, Lucas Owen, Tao Lin, Ryan Goehrung, Dennis Young, Christopher Colligan, Rachel Funk Fordham, Julia Wejchert, Zhaowen Guo, Brian Kai Ping Leung, Kenya Amano, Beatrice Magistro, Megan Borgenson, and Emily Mavaddat. Lastly, I thank my outstanding group of research assistants: Ashley Wu, Aditi Menon, Clement Joseph Bermudes Jr., Joshua Hanson, Akash Shrestha, Nick Oh, Arin Barde, Nate Iyer, and Donald Dimitriovski. My dissertation research would not have been possible without their assistance as well as the financial support from the UW Center for Women and Democracy and the Center for Environmental Politics.

Finally, I am thankful for my family and friends in Macedonia. As a first-generation college graduate, and now a graduate with a doctoral degree, the intricacies and challenges of my

academic journey were often unfamiliar terrain for my family. Nonetheless, they believed in me and cheered me on tirelessly. I am most thankful for my brother, Nenad Mrchkovski, who has been my rock, my voice of reason, and my loudest cheerleader.

Contents

List of Figures

List of Tables

Introduction

The advent of industrial society brought the idea of a "slow and steady death of religion" (Norris and Inglehart 2011). Social thinkers believed that the evolutionary forces of modernization and rationalization, fueled by industrial society, would eventually supplant the sacred. The erstwhile dominance of religious institutions and thought was to dissolve in the face of innovation, science, technology, and secular bureaucracy. Contrary to these predictions, nearly two centuries later, religion's death appears slower than many anticipated. It continues to command a stronghold in people's lives, serving as a powerful catalyst for mobilization both within and across nations. How does religion engage with contentious sociopolitical issues of our time?

For a long time, religion was understood to be a crucial part of cultural heritage, a social identifier intimately linked with ethnic identities and political affiliations (Glock and Stark 1965). Scholars adopted measures like religious belonging, belief, and behavior – considered the "social embodiment of religion" – to gauge the preferences and attitudes of religious individuals in various contexts. This perspective also dominated our understanding of political behavior (Kellstedt et al. 1996; Layman 2001; Djupe and Neiheisel 2022). Scholars associated individuals' affiliation with religious traditions, denominations, and the intensity of their beliefs and religious practices as metrics in assessing politically relevant outcomes such as voting, identity politics, and nation-building (Kellstedt et al. 1996; Layman 2001). However, religion's role in society is more complex than once believed and scholars note heterogeneity in the practice of religion, within religious traditions, denominations, and across congregations through time and space (Djupe and Hunt 2009; Djupe and Neiheisel 2022). This suggests that religion and religious identity are fluid, being shaped by society as much as religion shapes it. In other words, religion is not an "unmoved mover" (Jelen 1992; Wilcox and Robinson 2007).

In the political arena as well, religion is scarcely understood to be "pre-political" (Campbell, Layman and Green 2020; Margolis 2018). Particularly in the United States, extensive evidence shows that religion is as malleable to political shifts as it is influential in shaping political attitudes (Campbell and Pettigrew 1959; Djupe, Neiheisel and Conger 2018; Campbell, Layman and Green 2020). In contrast to conventional arguments, scholars have shown that individuals' political identity could shape their religious identity (Margolis 2014). Furthermore, evidence suggests that clergy, when interpreting and conveying religious messages to their congregants, consider their flock's need for guidance, advocacy, and leadership; that is, they do not inherently abide by directives set forth by religious doctrines, national churches, denominational positions, or central religious figures (Holman and Shockley 2017; Djupe, Burge and Calfano 2016; Owens 2008; Neiheisel and Djupe 2008; Wood and Zald 1966). Thus, as scholars in the literature of economics suggest, religious institutions are motivated by retaining their fellowship and securing their role in individuals' lives, and they respond to those that they serve rather than being bound by rules and doctrines (Iannaccone 1990). These arguments suggest that religion's position in society is more complex than previously thought; it is not vertically integrated and static but heavily dependent on sociopolitical developments and susceptible to influences from the local context. Indeed, it has been argued that the endurance and efficiency of religion lies in its ability to absorb the local community (Gill 2021).

Using a multi-method approach, my dissertation contributes to this discussion by highlighting the mechanisms outlined in these two main perspectives – one where religion is a social manifestation of affiliation, belief, and practice, and the other where religion is a mirror of contemporaneous sociopolitical influences. It does so by studying the role of religion in three contentious sociopolitical issues of our time – climate change, abortion, and war.

This dissertation consists of three papers. The first paper studies the role of religion in addressing climate change. Religious interpretation of human connection to the environment varies across religious traditions. As climate change and its consequences are increasingly framed as a moral issue, the interpretation of this relationship has varied tremendously across

religious bodies (Grasso and Markowitz 2015; Maibach 2015). While prominent religious leaders like Pope Francis have been vocal advocates for climate awareness, Pope's message, despite his centrality in religious circles, has not been favorably received everywhere (Li et al. 2016; Danielsen, DiLeo and Burke 2021; Mrchkovska, Dolšak and Prakash 2023). In part, the salience and effectiveness of the climate message depends on how local clergy, the "street-level bureaucrats" of religious organizations with direct and frequent interaction with adherents, talk about this issue (Lipsky 1980). This begs the question of when, where, and how local clergy choose to include climate change in their sermons. In the role of trusted religious leaders (Gill 2021), clergy can guide individuals in navigating climate anxiety. And in doing so, they also enhance the salience of climate change as a global and local issue. Their spoken word can provide "mental maps of the cause and effect" and potentially shift the perception and attitudes of individuals toward climate change (McClendon and Riedl 2021). To elucidate parts of this process, in the first paper, I investigate how frequently clergy sermonize on climate change. Moreover, I am interested in how the frequency changes over time and space, and in response to weather shocks.

To answer these questions, I employ novel and original data from 220,000 weekly online sermons across approximately 3,000 congregations in 12 US states. I test how exposure to severe weather and poor air quality affects the frequency of mentions of climate change in weekly sermons. I consider weather-related factors alongside demographic characteristics and political ideology of the neighborhoods where these congregants reside. I first calculate the frequency and relevance of pre-defined climate-related terms and find that approximately 30% of sermons have at least one mention of climate change. Then I randomly select 2,000 sermons that the dictionary-based approach identified as having at least one climate-related term in the sermon and employ a more sophisticated text analysis tool, large language models (LLMs), to categorize the sermons as having climate-related content or not. In this smaller subset, 54% of the sermons are climate-related. I use both samples to conduct subsequent analyses.

Using the two samples, one where I use the whole subset with 220,000 sermons evaluated

for mentions of climate change based on the dictionary-based approach and one where I use the subset of 2,000 sermons to evaluate with LLMs, I explore the factors that motivate clergy to talk about climate issues. In the large sample, the outcome variable is frequency-inverse-document-frequency (TF-IDF) score which is derived from the dictionary-based text analysis of the sermons. This outcome variable measures whether any climate-related terms from a pre-defined dictionary were found in the sermon and if they did, how frequent this term was in the sermon and how relevant it is to the rest of the corpus. In the second subsample, the outcome variable is a binary measure of whether a weekly sermon discusses climate change or not based on classification by LLMs.

Using the TF-IDF measure and the sample of 220,000 sermons, I find that income, race, and political ideology within the congregations' surrounding neighborhoods (defined as the 10-mile circle around a congregation) have a significant relationship with the frequency of climate change discourse in sermons. Surprisingly, I also find that the level of air pollution is inversely correlated with this frequency. Using the subset of 2,000 sermons and the binary measure of climate-related sermons, political ideology remains the only significant covariate, where the majority Republican-voting neighborhoods are negatively and significantly correlated with the frequency of climate-related sermons. The findings from the first paper suggest a complex relationship between environmental and demographic factors and the religious discourse on climate change. They also indicate that religious communication on the contentious issue of climate change changes with the context in which clergy serve.

In the second paper, I only use a subset of the original online weekly sermons dataset, including only those congregations for which their denomination can be identified. Focusing on 120,000 online weekly sermons, I study the frequency of the mention of abortion across approximately 1,400 US congregations. Religious entities, as the long-standing legitimate source of moral interpretation, are important participants in the discourse on abortion rights. Importantly, since abortion rights is a highly sensitive and salient issue in the United States with moral underpinnings, major religious denominations have issued official positions on this subject. The positions that religious traditions and denominations take on this issue

varies significantly, however. By examining how discourse on abortion varies across congregations based on their denominational affiliation, as well as organizational, structural, and community factors, I can explore where and when clergy, acting as "street-level bureaucrats," tailor their religious communication.

Specifically, in the second paper, I investigate how the official position of the respective denomination on abortion, the alignment of this position with the ideological leanings of the communities surrounding local congregations, the hierarchical structure of the denomination, and the network size (that is, the number of churches of the same denomination in the same area) of the congregation shape the discourse on abortion in weekly sermons. Specifically, I am interested in exploring whether clergy follow directives from above, or respond to the local context. I find that the denominational position on abortion (pro-life or pro-choice) alone does not drive the frequency of abortion talk, but when this position aligns with the community's position, the effect is positive and significant. Conversely, if the ideologies on abortion clash, the frequency declines. Moreover, adding the network size of the congregation, this effect is amplified. In other words, congregations whose ideologies on abortion align with those of the local neighborhoods sermonize more on abortion when there is a network of churches from the same denomination in their circle.

Might exogenous shocks have a bearing on whether clergy talk about abortion in their weekly sermons? Using a difference-in-difference study design, I leverage the Supreme Court's (SCOTUS) recent decision in *Dobbs v. Jackson Women's Health Organization* to investigate the treatment effect of this decision on congregations' engagement with the topic of abortion. In anticipation of the decision, 12 states enacted laws that would protect abortion rights, 19 enacted trigger laws that would criminalize abortion after the SCOTUS decision, and 12 states did not take any action. I leverage this difference in state-level response and categorize those states that have enacted laws protecting abortion rights as "unaffected" because the repeal of *Roe v. Wade* would not have substantial socio-legal implications in these states, and the states that enacted trigger laws as "affected". I do not study the 12 states that did not take action. I find that the reversal of *Roe v Wade* did not generate any discernible change in

abortion mentions in weekly sermons across affected and unaffected states. However, while the decision did not have an effect on the overall frequency of abortion talk in the two categories of states, I also explore whether congregations that have a supportive position would be more vocal on the issue if their congregants are more affected by the decision i.e. the congregation is in an affected state. I find negative effect of the treatment with this specification, meaning congregations with a supportive position on abortion speak less of abortion in the affected states. Nonetheless, this negative effect dissipates when considering the congregation's network size and decentralized hierarchy (a measure of organizational structure where the local clergy is selected by the community, and hence, relies on local support to maintain their position and congregational membership). Lastly, I also consider the aligned ideology, an indicator that measured whether the viewpoint of the congregation's denominational position on abortion aligns with the congregation's neighborhood viewpoint. I find evidence that supportive congregations that are embedded in neighborhoods that are also supportive of abortion rights talk more about abortion than their counterparts in the unaffected states. This effect is amplified when I consider the network size of the congregation and its decentralized hierarchy. This suggests that abortion is more frequently discussed in congregations that are embedded within a supportive neighborhood and networks and rely on local support for survival in affected states as opposed to unaffected states. The findings from abortion discourse in weekly sermons align with the findings from the first paper where I explored climate change discourse in weekly sermons in that, in both cases, the frequency of the topics of interest was driven by the local context.

Finally, I employ a word embedding text analysis tool to investigate the context in which congregations with supportive positions on abortion rights use abortion-related terms relative to those with unsupportive positions. I find that supportive congregations address abortion in more political terms (involving discourse on women and rights, for example) than unsupportive ones who use abortion terms in more moral terms (involving discussion on sin).

In the third paper, I move from examining how clergy communicate on morality politics

to how individuals respond to political questions with religious underpinnings based on their religious affiliation, beliefs, and behavior. I test how religious identity shapes individual attitudes in Bulgaria, a society that has historically and nationally been connected to one major religion, Christian Orthodoxy, and has strong national connection to Russia. This context is in contrast to the pluralistic religious society in the United States, where the previous two papers are nested. Specifically, I investigate the significance of identifying with the Christian Orthodox faith in shaping in-group attitudes in the context of the Russia-Ukraine war.

After the onset of the Russia-Ukraine war, many Eastern European governments expressed their support of Ukraine. However, over time, there has been a growing popular discontent over this support (Nattrass 2022). Pundits and scholars emphasize different reasons for the popular disunity; some emphasize economic factors (rise in energy prices), while others focus on anti-institutional sentiments (populism in the context of anti-European Union discourse), and yet others argue for a cultural-religious connection with Russia. I draw from these three perspectives and test them with an online survey experiment in Bulgaria in July 2023 (N=1626). I hypothesize that, given the cultural and national importance of Christian Orthodoxy and Russia as a protector of Christian Orthodoxy, individuals identifying as Christian Orthodox will oppose support for Ukraine because they perceive Western-backed Ukraine as a threat to the Christian Orthodox cohesion and values. Contrary to my hypothesis, I find that even in a society where one major religion, Christian Orthodoxy, has been historically dominant, and where most members of the major ethnic group identify with it, neither their formal religious affiliation with Christian Orthodoxy nor their practice or deep connection to it shape their preferences over the support of Ukraine. Indeed, the other two treatments (economic-rational and anti-institutional frames) are also not significant drivers of support for Ukraine. Instead, I find that respondents' support for Ukraine is driven by the level of information they have received about the war and the level of news they consume, as well as their fear of being drawn into a war.

Thus, the lack of response to perceived threats against cultural-religious unity in a society

like Bulgaria, where religion-centric national identity is prominent, lends support to the argument that religion is not merely a "social embodiment" but is contextually shaped. While once scholars believed that simply affiliating, practicing, or believing in the values of one's religion shapes political attitudes, in my study, I find religious identity or frequency of religious practice to not have a statistically significant role in shaping attitudes on a political question with religious underpinnings.

Although earlier studies have engaged in the debate of religion's role in political discourse and behavior, the evidence so far has been limited to either a select number of cases (Martin 2021; Brewer, Kersh and Petersen 2003), convenience and target samples (Boussalis, Coan and Holman 2021; McClendon and Riedl 2019), and survey data from clergy and congregants (McClendon and Riedl 2016; Haskell, Paradis and Burgoyne 2008; Djupe and Hunt 2009). Scholars recognize that there is a gap in systematic knowledge concerning how religion interacts with the broader societal context in its role as a social marker and a vehicle for change (Djupe and Neiheisel 2022). This dissertation contributes to this literature by systematically and comparatively investigating how religious communication and religious identity respond to changing sociopolitical contexts.

In sum, the three papers in this dissertation assess the role of religion across two different contexts – one with religious pluralism and one with dominant national religion – and three different issues – two that are categorized as issues of morality politics (abortion rights and climate change) and one where religion is an important shaper of group identity, the Russia-Ukraine War. The insights from these papers contribute to the burgeoning body of literature that finds that an important reason why religion endures in modern times is its ability to connect with local needs and preferences (Gill 2021).

To be noted, these findings do not suggest that religion only adapts to its communities without exercising any influence over them. Indeed, research has shown that religious narratives can sway individuals' views on topics like the death penalty (Bjarnason and Welch 2004), environmental attitudes (Djupe and Hunt 2009), immigration politics (Brown 2010; Brown et al. 2017), vote choice (Smith 2019; Boas and Smith 2015), and mobilization for

political causes. Instead, the findings in the papers reveal that religion as an institution is fluid. At the ground level, religious institutions respond to the context by catering to local demands and religious identities do not shape political attitudes, even if this identity is salient to individuals and their in-group; contextual information remains the primary factor explaining these attitudes.

Hear Ye, Hear Ye: When and Where Religious Leaders Sermonize on Climate Change

> "God gave humanity dominion over all the earth, but we seem to confuse that word dominion with domination, assuming that we have the right to control creation which is to say exploit it for our own purposes. But dominion is actually about sphere of influence. God created all there is and had such confidence in us. We are holding a masterpiece. Just take that in for a moment."
>
> *Kent UCC Worship, April 25, 2021*

2.1 Introduction

In the face of mounting concerns over the far-reaching impact of climate change on communities worldwide, a diverse group of voices has come together to raise awareness and advocate for meaningful action. Scientists, human rights advocates, politicians, and celebrities from all walks of life have emphasized the urgent need for both individual and institutional responsibility in addressing this pressing issue. Notably, climate change is no longer just a scientific or political matter, but it is increasingly framed as a moral imperative. Religious leaders, recognizing the significance of this global challenge, have emerged as vocal advocates for climate change awareness.

The National Association of Evangelicals (NAE), representing approximately 30 million people from 60 evangelical denominations, has issued annual reports urging action to combat environmental degradation and global warming (NAE 2022). Similarly, in 2015, Pope Francis issued the seminal encyclical letter *Laudato Si'*, calling for unity among people of different beliefs and worldviews in safeguarding the Earth from deterioration (Francis I 2015). Other

prominent religious figures, including Ecumenical Patriarch Bartholomew and the Archbishop of Canterbury have joined, issuing a *Joint Message for the Protection of Creation* and urging adherents to recognize the responsibility bestowed upon humanity to protect the gift of creation (Mayaki 2021).

While prominent religious leaders have demonstrated their commitment to this cause, it remains a question whether and the extent to which climate change is addressed at the local level. Research has shown that clergy often discuss political topics during their weekly interactions with congregants (Guth et al. 2002; Djupe and Olson 2010*a*; Djupe and Neiheisel 2022). Do local clergy include climate change as one of their topics in their weekly sermons? Moreover, what factors drive when and where clergy sermonize on climate change? How does geography and climate-related events affect the frequency of climate-related sermons relative to other conventional factors? As the impacts of severe weather events and environmental decline become more evident in people's lives, understanding the role of religious institutions in fostering awareness and action on climate change becomes increasingly important. This exploration can shed light on how diverse perspectives and sources of influence come together to tackle one of the most critical challenges of our time.

Individuals' attitudes toward climate change depend heavily on their perception of whether climate change is happening, what the underlying causes are, and the knowledge of the impact it has on other humans. As the opening quote depicts, making individuals aware of the relationship between God and Earth and their responsibility in it, may make individuals more aware of this issue and may very well prompt behavioral change. On the other hand, clergy may deny the existence of climate change by questioning the scientific frame of it or human's role in it. In either case, given religious leaders' frequent opportunities to communicate to a relatively large and receptive audience, their messages have the potential to clarify moral issues, relieve anxiety, create an impetus toward attitudinal or behavioral change, and potentially collective action on many issues, including climate change. Evidence shows that individuals can be motivated and change political attitudes and behavior based

on what they hear in their place of worship (McClendon and Riedl 2019; Brown et al. 2017; Djupe and Hunt 2009; Bjarnason and Welch 2004). Thus, exploring the question of whether, where, and when religious clergy engage with this topic is the first step in answering whether the religious community can make a difference on this issue. While climate change has only recently become a subject of scholarly research in the domain of religion and politics, the question of why, where, when, and how religious clergy engage with political topics has been a subject of many scholarly debates (see Djupe and Neiheisel (2022) for a comprehensive review). The polarization over the topic of climate change in the US and the growing salience of this sociopolitical issue allows us to explore this dynamic, especially in terms of local communal pressures as a factor in the political involvement of clergy.

Using novel dataset of 220,000 weekly sermons across the United States, this study investigates whether climate change is addressed among the religious, and moreover, it seeks to systematically understand the factors that may drive the frequency of climate-related sermonizing in US congregations. I find that climate change is not a frequent topic of discussion across congregations; only 30% of the sermons have some mention of climate-related terms. The analysis of the data in this study suggests that both demography and weather-related factors are important determinants in climate change talk in weekly sermons across the US. I find evidence that level of income, race, and political ideology of neighborhoods around congregations drive the frequency of climate talk in sermons. I also find evidence that the level of air pollution inversely affects the frequency of sermons on climate change. Surprisingly, worse air quality is associated with fewer mentions of climate change in sermons. I also use a random sample of 2,000 weekly sermons that have some mention of climate-related sermons, and I use this subset to perform a more sophisticated textual analysis with large language models (LLMs). I find that, in this subset, the political ideology of the congregation's neighborhood is the factor that remains significant.

Sermons are the most direct measure of clergy's spoken word in their congregations. The COVID-19 pandemic led to the rise of online services and made sermons more accessible to

researchers. Scholars have previously studied the content of sermons by listening to sermons in person (McClendon and Riedl 2019; Brewer, Kersh and Petersen 2003) or online sermons in selected congregations (Martin 2021), by reading from a centralized depository of sermons (Boussalis, Coan and Holman 2021), or by directly asking congregants and clergy about the content of the messages they hear or give (Djupe and Hunt 2009). To the best of my knowledge, this is the first paper that systematically examines sermons delivered in churches across the US to study their content. While online sermons have certain limitations (Djupe, Gilliland and Olson 2023) that I address in the conclusion, being able to "attend" large numbers of congregations and services that span time and space has been an advantage to the religious community during the pandemic, but also a rich repository for researchers.

The paper is organized as follows. The first part discusses the literature on the political engagement of congregations in the US. Further, I engage with the literature on climate change and outline theoretical expectations for where and when I expect religious clergy to mention climate change in their weekly meetings. The next section explains, in detail, the data generating process and the methodology employed in the data analysis, followed by the results. The last section concludes, lists plans for future iterations of this paper, the limitations, and implications of this study.

2.2 Background

2.2.1 Politics in the Church

The civil rights movement of the 1960s brought politics in the center of religious discourse among American clergy (Campbell and Pettigrew 1959). Initially observed in the context on the Black Church in the 1960s (Brown 2011; Calhoun-Brown 1996), this intertwining of religion and politics transcended denominational boundaries and persisted through the 1990s (Fowler, Hertzke and Olson 1999; Guth et al. 2002). In recent times, driven by the politics of elections, abortion, COVID-19, and related sociopolitical issues, there has been a

notable surge in political discourse among religious groups (Smidt 2016; Beyerlein and Chaves 2020; Martin 2021). The strong support of Donald Trump among Evangelicals and other religious groups further underscored the fusion of this two domains (Compton 2020; Martin 2021). Scholars consistently find evidence of strong political activism among American clergy, evident across diverse religious traditions and extending to every corner of the American society (Guth 1996, 1997; Djupe and Gilbert 2003*a*).

To understand the persistent trend of political activism in religious conversations, one must first understand the motivations and incentives of both the congregants and the clergy when they attend a place of worship. For individuals, religion serves as a conduit for social interaction and engenders a shared communal feeling and experience (Glock and Stark 1965; Kellstedt et al. 1996; Layman 2001; Djupe and Neiheisel 2022). Religion also provides "guidance on the metaphisical," a useful source as individuals are grappling with the world's existential questions (McClendon and Riedl 2019; Lewis et al. 2020). In both roles, as a social affiliation identifier and a guide for life's quandaries, religion incorporates politics. Political affiliations and ideologies, akin religion, also foster group cohesion and serve as a potent social marker; consistent evidence shows the interdependence between religious convictions and political dynamics (Campbell, Layman and Green 2020; Djupe, Neiheisel and Conger 2018; Margolis 2018). Moreover, decisions and developments in the political arena, whether on moral issues as abortion or economic issues such as social welfare, influence individuals' personal lives, and in this way, politics becomes interwoven with religion also in its task of offering spiritual direction. In a religiously pluralistic society, individuals have the liberty to choose the source of their religious guidance and their affiliation with a place of worship (Iannaccone 1990). The US is emblematic of such a pluralistic society, with a rich and diverse religious landscape (Finke and Stark 2005*a*). In fact, a substantial number of Americans participate in church hopping and church shopping, leading to 40% of US adults converting to a religion different from their birth religion (Wuthnow 2007; Pew Research Center 2011). Congregants cite preferences over religious institutions, practices and people as well as national

political shocks, partisan differences, and congregational scandals as reasons for switching place of worship (Hafner and Audette 2023; Margolis 2018; Patrikios 2013; Frick, Moser and Simmons 2021; Pew Research Center 2011). Finally, a notable trend is the tendency to switch religious institutions before the age of 36, a fact of relevance to the discourse on climate change as individuals between 18 and 34 are more concerned about climate change compared to those aged 55 and older – a phenomenon known as the "global warming age gap" (Reinhart 2018).

How do religious institutions and spiritual leaders cater to the evolving needs and demands of their congregations? In a society where individuals frequently "shop" for congregations, and in a culture of shifting tastes and influences, religious organizations at all levels work to retain their membership, entertain the diversity of the congregation, and recruit new members (Iannaccone 1992; Djupe and Neiheisel 2022). The considerable variation in practices within religious traditions, denominations, and congregations suggests that the sustenance of religious institutions is not exclusively governed by central sources (from either religious doctrines or a national church), but it is shaped by the context and community in which these entities exist (Djupe and Gilbert 2008; Holman and Shockley 2017; Calfano 2009). Indeed, studies have found that clergy do not draw their stand on sociopolitical issues from religious doctrines, but that their political rhetoric is fashioned by local demand and is only manifested when a need for representation or leadership exists within their congregations (Djupe and Gilbert 2003*b*; Djupe and Olson 2007; Owens 2008; Djupe, Burge and Calfano 2016; Djupe and Olson 2010*a*; Neiheisel and Djupe 2008; Wood and Zald 1966).

Pastors and priests within congregations i.e. "the street-level bureaucrats", as agenda-setters that have authorship over the content they share and engage in, are those that most immediately respond to these local contexts (Lipsky 1980). Having the institutional goal of maintaining congregational membership, but also, the personal goal of securing their jobs shapes their choice, catering to the needs and demands of their existing and potential members. This is true even for denominations whose leaders are vertically integrated as

opposed to locally elected. For example, Catholic priests are appointed by a centralized administration and as such, they are not exposed to the same local pressures as Protestant religious leaders who are commonly selected by local communities. However, evidence shows that even Catholic clergy often diverge from national directives in response to local demands (Holman and Shockley 2017; Calfano and Oldmixon 2016; Calfano 2009), suggesting that the incentive is similar across denominational differences and despite difference in clergy's career paths.

Therefore, clergy are generally receptive to their congregants' needs, yet they remain cognizant of the diversity within their communities, which necessitates a more nuanced approach when choosing to address sociopolitical issues (Olson and Cadge 2002; Calfano 2009). Their strategic considerations become more complex in the face of competition from other congregations that also strive to satisfy various community niches. In an area with a finite number of existing and potential members, competition from other congregations is also another motivation for religious organizations to understand and cater to the flocks (Smith 2016; Finke and Stark 2005*b*).

These push and pull factors, and the interplay of institutional and individual incentives, determine the circumstances that dictate when leaders engage in political activism and rhetoric. Religious organizations, in their day-to-day interactions with congregants, respond to needs by organizational offerings, but also rhetorically through weekly messages to their congregants. Recognizing this dynamic, scholars have probed the specific factors that drive some clergy to engage politically and not others. Evidence so far has been limited to either a small number of cases, convenience and target samples, and surveys. There is an existent knowledge gap in our systematic understanding of the communal pressures that may influence the timing, location, and manner in which congregations engage with political and civic matters (Djupe and Neiheisel 2022).

2.2.2 Political Speech in Sermons

As noted, religious leaders cater to local demands through their interactions and messages directed at their congregants. When religion spreads and religious messages are disseminated to the local community, a form of new, "practical religion" takes shape, mirroring the characteristics of that community (Laitin 1978). Thus, sermons are a good depiction of this process and a reflection of the environments these religious organizations inhibit. Moreover, sermons are the "core part of lay religious practice in many faith traditions" (McClendon and Riedl 2019). The vast majority of Christian, Muslim, and Jewish places of worship use sermons as the principal medium in offering guidance, spreading religious teachings, and interpreting the religious word.

Given religious leaders' frequent opportunities to communicate to a relatively large and receptive audience, their messages arguably have the potential to impact people's attitudes and perceptions (McClendon and Riedl 2019), albeit to a varying degree. Scholars have found that the message that congregants receive in their place of worship can away their position on death penalty (Bjarnason and Welch 2004), environmental attitudes (Djupe and Hunt 2009), immigration politics (Brown 2010; Brown et al. 2017), vote choice (Boas and Smith 2015; Smith 2019), and mobilization for political causes. Thus, the political involvement of religious clergy is far from insignificant. This is especially important in regard to the topic of climate change, as it could potentially act as a catalyst for collective action on the issue. Indeed, climate change attitudes depend on individuals' beliefs of whether climate change is happening, what are the underlying causes of it, whether it is serious enough, and how severe of an impact it will have on one's well-being and that of other more vulnerable groups (Djupe and Burge 2023). Sermons can shed light on this issue and can provide "mental maps about cause and effect" that may subsequently change perspectives, attitudes, and actions on this issue (McClendon and Riedl 2021). However, as emphasized above, congregations consider their community and cultural context of their environment when deciding when to engage

with political topics. In relation to climate change, what might be the driving factors for when, where, and how clergy address this concern? Leveraging the literature on individual attitudes towards climate change and climate policies that can be quantified at an aggregate level, I propose several factors of interest in the following sections.

The first factor influencing climate change attitudes is household income. In the literature of climate change and economic growth, a widely postulated assertion is that environmental quality deteriorates at early stages of economic development, but as the economy develops, the quality also improves. On the micro level, in the early stages of industrialization, people disregard environmental consequences of growth as they give priority to material output and jobs (Dasgupta et al. 2002), but once income rises, and the standard of living increases, individuals care about the environmental quality and the related quality of life. Per the post-materialism hypothesis, as people become richer, they attach more value to environmental amenities and their willingness to pay to achieve a cleaner environment rises by a greater proportion than their income (Pezzey 1989; Selden and Song 1994; Baldwin 1995; Roca 2003).

Nevertheless, public opinion on climate change is frequently guided by identity-based positions, where individuals align their perspectives on climate change with the political and ideological viewpoints of trusted others (Schuldt and Pearson 2016; Lorenzoni and Pidgeon 2006; Pew Research Center 2019). Studies have found that party identification has a moderating effect on income in predicting climate change beliefs in the US. Higher- and middle-income Republican-leaning individuals are more likely to downplay the dangers of climate change and less likely to consider climate change as the preeminent environmental problem facing the US compared to lower-income Republican-leaning counterparts (Borh 2014). Among Democrat-leaning individuals, in contrast, increased income predicts a higher probability of ranking climate change as important (Dasgupta 2020). Educational attainment follows a similar relationship. Liberal and Democrat-leaning individuals are less likely to show climate skepticism as their educational attainment increases, while the opposite is

true for conservatives and Republicans (Hamilton 2008). Thus, the first set of hypotheses that this paper tests are the following:

> ***H1:*** Climate talk in sermons is more frequent in neighborhoods with higher income.
>
> ***H1.1:*** Political ideology has a moderating effect on frequency of climate talk in sermons, where majority Republican-leaning neighborhoods with higher income experience less climate talk in sermons relative to Democrat-leaning neighborhoods with higher income.
>
> ***H2:*** Climate talk in sermons is more frequent in neighborhoods with higher educational attainment.
>
> ***H2.1:*** Political ideology has a moderating effect on frequency of climate talk in sermons, where majority Republican-leaning neighborhoods with higher educational attainment experience less climate talk in sermons relative to Democrat-leaning neighborhoods with higher educational attainment.

Race is also an important determinant in this relationship; non-Whites are less likely to be affected by political ideologies on the topic of climate change (Schuldt and Pearson 2016), and non-Whites are more sensitive to the issue of climate change and more supportive of climate policy relative to Whites (Benegal, Azevedo and Holman 2022). Relatedly, studies have found gender to be a shaping factor in people's attitudes towards climate change. For example, Bush and Clayton (2022) argue that men perceive greater material and psychological costs when it comes to climate mitigation even after controlling for political ideology, making them less perceptive of climate change discourse. Additionally, as men tend to be employed in more carbon-intensive industries and have more carbon-intensive consumption habits, they are less likely to be pro-environment. McCright and Dunlap (2011) also find that male, but in particular conservative white male, are significantly more likely to deny climate change.

H3: Climate talk in sermons is more frequent in neighborhoods with majority non-White population.

H4: Climate talk in sermons is less frequent in neighborhoods with majority Republican-leaning neighborhoods with higher proportion of males.

Finally, the salience of climate change as an issue depends on the geography of these congregations. Some scholars argue that individuals residing in a place that has had an experience with severe weather events or if the place is vulnerable to extreme weather events or environmental degradation are more likely to have climate anxiety and support climate policy (Rogan, O'Connor and Horwitz 2005; Bush and Clayton 2022). Thus, the final set of hypotheses is as follows:

H5: Climate talk in sermons is more frequent in neighborhoods with higher number of severe weather events.

H6: Climate talk in sermons is more frequent in neighborhoods with higher intensity of environmental degradation.

The next section presents data and measures of both the environmental discourse in religious sermons and the measures of the explanatory variables.

2.3 Data

Technological advancements, coupled with the COVID-19 pandemic and religious organizations' efforts to serve the spiritual needs of their members, have incentivized many congregations to move their services online or provide hybrid formats of their services. During the pandemic, 92% of the congregations offered their worship services on an online platform (Earls 2020), and 82% of monthly religious attendees reported partaking in an online worship

during the pandemic (Gecewicz 2020). Reports suggest that congregations have maintained their online presence, and church-goers continue worshipping digitally despite the resumption of in-person services (Nortey and Rotolo 2023; Pfeiffer 2023). This shift to online worship has given researchers the opportunity to directly measure the spoken word of clergy in their congregations. This paper draws from these newly accessible data and constructs a unique dataset of digital sermons across twelve US states.

To construct the dataset, I follow several steps. First, I select 12 states based on variation in climate risk (high and low risk per the number of federal disaster declarations 2011-2022) (FEMA 2020), and political leanings (majority counties Republican, majority counties Democrat, purple/mixed counties states based on vote shares in 2020 elections) (MIT Election Lab 2020). I also utilize ARDA (2020)'s religious census to consider the number and density of congregations and adherence rate (number of religiously affiliated people divided by the total population) for similarity across states (ARDA 2020). Table 2.1 summarizes these dimensions across the 12 states.

State	**Climate Risk**	**Political Majority**	**# of Congreg.**	**Congreg. (# per mi^2)**	**Adherence Rate**
West Virginia	High	Red	4063	0.17	0.37
Louisiana	High	Red	6599	0.13	0.63
Vermont	High	Blue	821	0.09	0.37
California	High	Blue	23538	0.14	0.45
North Carolina	High	Purple	16177	0.30	0.51
Texas	High	Red	29746	0.11	0.54
Illinois	Low	Blue	12121	0.20	0.51
Ohio	Low	Red	13905	0.31	0.47
Pennsylvania	Low	Red	15134	0.33	0.47
Colorado	Low	Purple	4330	0.04	0.35
Arizona	Low	Purple	5243	0.05	0.44
Washington	Low	Blue	6114	0.09	0.30

Table 2.1: Selected States

For each of the twelve states, I randomly chose a third of their counties for analysis, resulting in 335 counties in the sample.[1] I utilize Google Places API and the corresponding R

[1]for states with small number of counties like Arizona and Vermont, I use all of the counties for analysis

packages (`googleway`, `google_places` and `google_place_details`) to geolocate congregations within each county by searching for establishments that are listed on Google as "place of worship" or "church". I scrape the congregations' names, physical addresses, and websites as posted on Google. To account only for congregations within a given county, I first identify the centroid of each county, calculate the minimum and maximum distance to the county's borderline, and choose a random point between the minimum and maximum point in each county to use in constructing a radius (distance from the centroid to the random point) for the Google search. I intersect the location of the congregations with the counties' borders to only include counties within a county border. This process also mimics randomization, as I try to sample congregations within counties as randomly as possible.

This process results in scraping the location and related information of 21,207 congregations. Figure 2.1 spatially depicts the location of these congregations cross the twelve states.

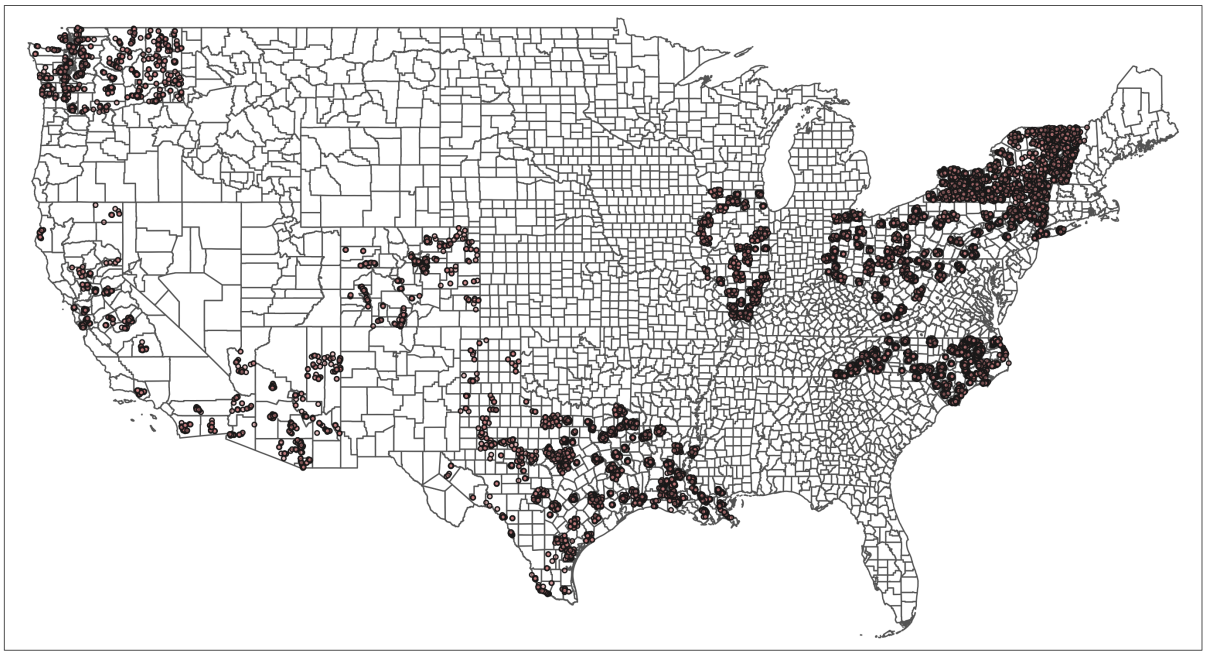


Figure 2.1: Main Map of All Congregations

Out of the 21,207 congregations, 54% of them have their websites listed on Google i.e. are "digital" congregations. Using a website scraper and manual search, I identify those

congregations that have online sermons posted on their websites (about 52% of congregations in my sample that have websites have online sermons posted). The online sermons take different formats; some congregations store sermons as audio (mp3) files, as video (mp4) files, or provide live and recorded videos on video sharing website like YouTube and Vimeo. YouTube uses highly advanced speech recognition technology to create captions of videos and a convenient YouTube API to use for scraping video content. Moreover, scholars have found that YouTube's automatic captioning is of high quality and accuracy, meaning that the automatic captioning provided by YouTube is comparable to the "gold standard" of human transcription and is outperforming other existing recognition systems (Proksch, Wratil and Wäckerle 2019). Thus, for this paper, I am narrowing the content and only consider online sermons posted on YouTube. In future iterations of this paper, I will utilize another state of the art automatic speech recognition (ASR) system `Whisper` in *Python* to scrape the content of other audio (mp3) and video (mp4) files. The congregations that have YouTube channels represent 62% of congregations with online sermons, and 17% of all of the congregations in the sample (those with and without website). Figure 2.2 shows an example state (Vermont) with geocoded congregations (left) and the sample congregations (right), while Figure 2.3 depicts the selection process – digital congregations (left), congregations with online sermons (middle), and congregations with YouTube channels (right).

Figure 2.4 depicts the number of congregations across states that were geolocated, had a website posted, and were labeled as having online sermons on YouTube specifically. The orange column represents congregations that are in the final sample of congregations used in this paper (N=2876).

Using YouTube API and related *Python* packages, I transcribe over 500,000 videos included in YouTube channels across 2,876 congregations in the sample. On their YouTube channels, congregations post their Sunday sermons, but they also post other services, special events, pastor messages, and their communities' gatherings; some channels include up to 1000+ videos. The majority of religious individuals visit their respective congregations

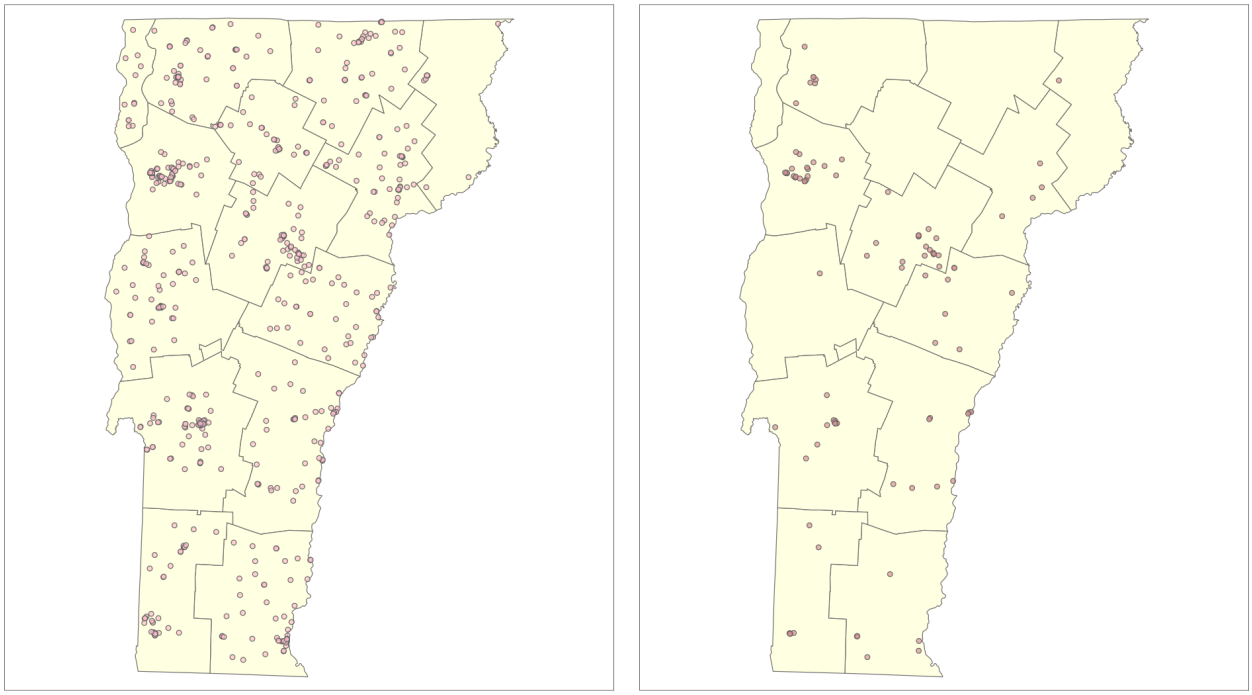


Figure 2.2: Vermont Total (left) & Sample (right) Congregations

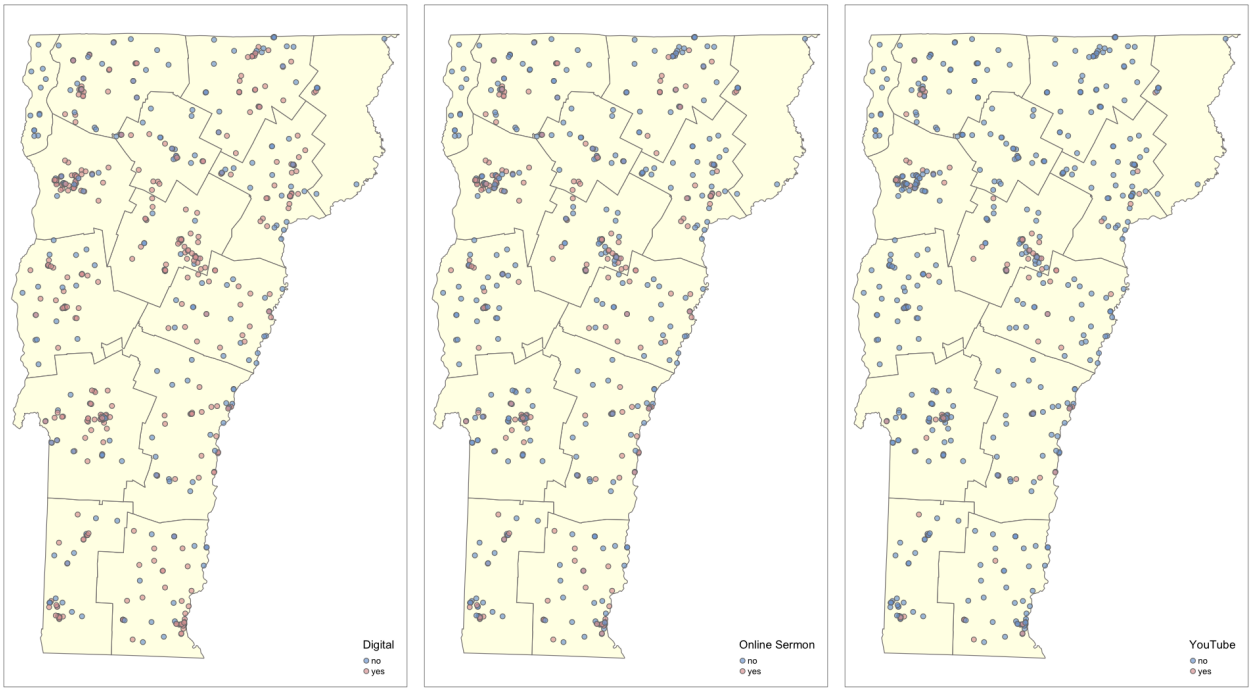


Figure 2.3: Vermont Congregation Selection Process

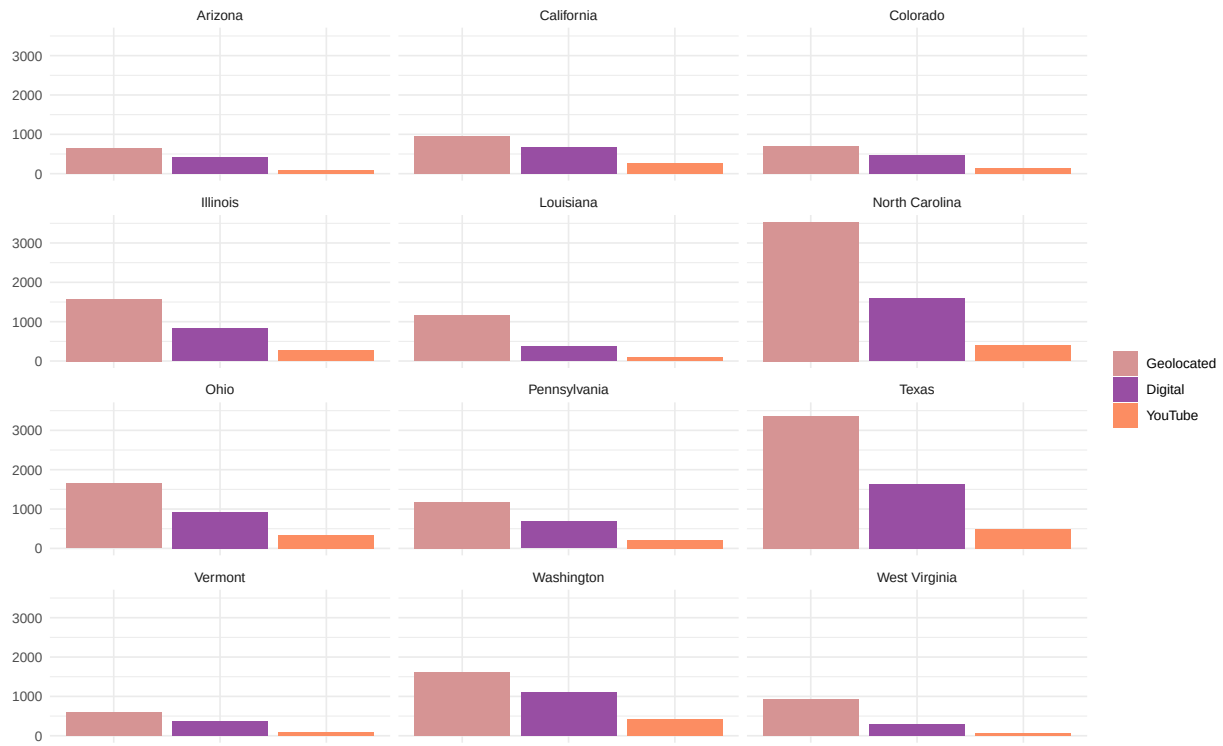


Figure 2.4: Breakdown of Sample Congregations per State

during Sunday sermons and/or listen to Sunday sermons online. That is when, arguably, the congregations' leaders' messages are heard by most. To increase the probability that I am indeed transcribing sermons, I filter and use only those videos that are posted on Sunday for transcription. I do this by determining the day the sermon was posted based on the video's date stamp or if the video has "Sunday" in their titles. I identify 224,161 sermons across the twelve states and 2,876 congregations for each week of the year when these congregations have an available video/sermon. Hence, my unit of observation is a weekly sermon per congregation. Figure 2.5 graphically presents the number of online sermons transcribed per state, and Figure 2.6 provides the time series of posted online sermons by month and year across all congregations per state. The oldest sermon in the sample is with a datestamp of November 2007, while the most recent one is July 2023. As expected, the majority of congregations started posting online sermons during the pandemic, explaining the skeweness of number of sermons later in the period.

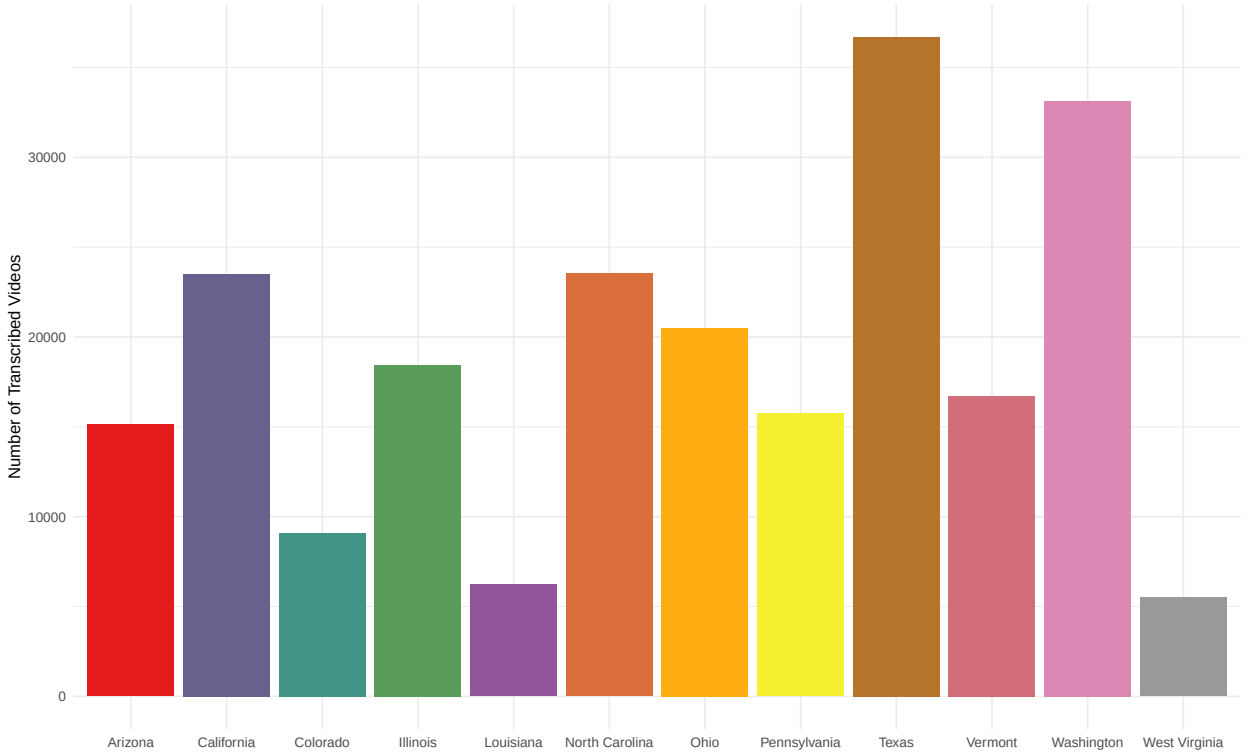


Figure 2.5: Total Transcribed Online Sermons per State

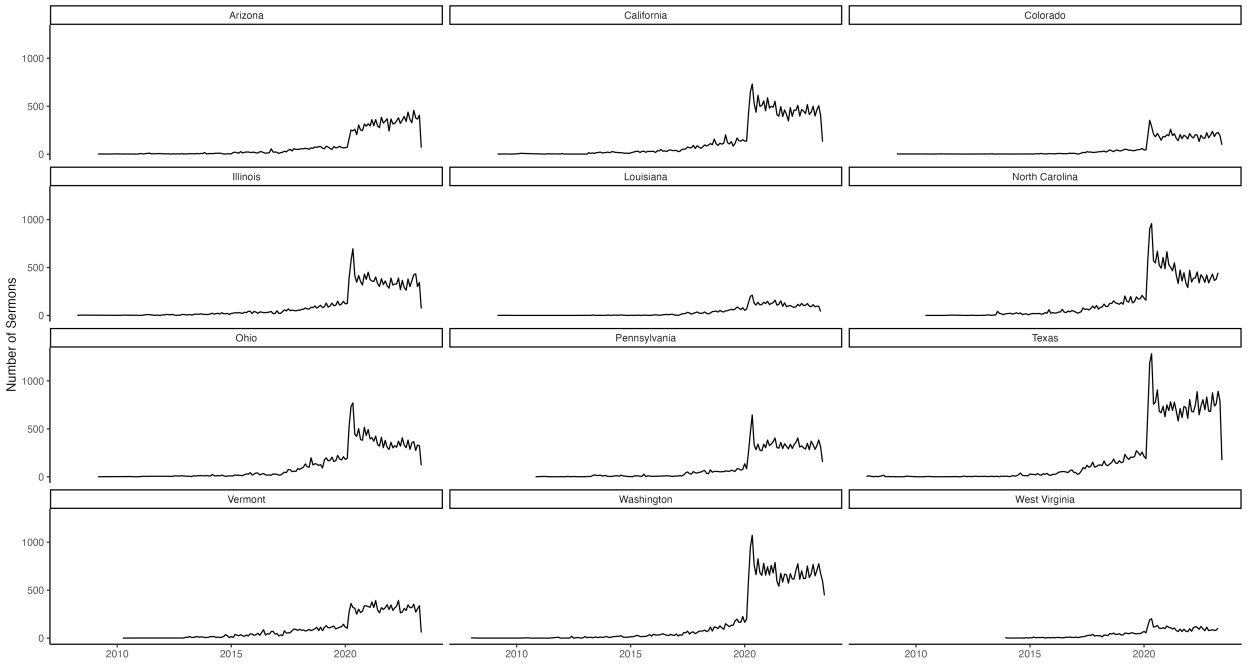


Figure 2.6: Time Trend of Online Sermons per State

2.3.1 Outcome Variable

I use the resulting corpus to operationalize the outcome variable, which is the climate-related content in weekly religious sermon. I first do this by employing a dictionary-based method. The dictionary-based method is one of the most fundamental approaches to text analysis. It requires tokenizing the corpus i.e. treating the corpus as a "bag of words" and counting how many times certain words, which are pre-defined in dictionaries, appear in the corpus. I use Boussalis, Coan and Holman (2021) categorization of political topics based on crowd-sourced labels of religious sermons and topic modeling to create dictionaries for 17 political topics. Given that Boussalis, Coan and Holman (2021) provide a careful textual analysis of sermons posted in a centralized database to aggregate phrases and keywords that describe political topics in religious text, gives me confidence that the keywords and phrases I use within my sample are suitable for the context and method. I create a unified dictionary of unigrams and bigrams for each of the 17 topics and search for the words and phrases from these dictionaries in the sermons, recording the instances where each is found and adding them to create a total word count per topic in each sermon. In other words, I record the aggregated term frequencies per topic. Table ?? shows the words and phrases contained in each of the political topics' dictionaries.

However, since political topics, and especially climate change-related topics, are relatively rare in religious texts, their relevance may be underestimated if we simply consider the term frequency of each word. For this reason, instead of simple term frequency, I use TF-IDF (Term Frequency-Inverse Document Frequency) as this method ranks words not based on their frequency, but based on their relevance in a given text compared to the rest of the corpus. In this way, when a given word scores high with the TF-IDF method, it is the most relevant word to the document, but it is also relatively rare in the rest of the corpus. I add the TF-IDF score for each of these words to calculate the overall TF-IDF score per topic and sermon. For the outcome variable then, I use this score for the topic on climate change.

Topic	Words & Phrases
Abortion	"abort", "infanticid", "babi","womb","unborn","dobb","roe","wade", "jackson", "privaci", "birth_control", "hobbi_lobbi", "human_life", "plan_parenthood", "pro_life", "pro_choic", "roe_v", "v_wade", "dobb_v", "v_jackson"
Environment	"conserv", "ecosystem", "environ","environment","storm","creation","distort","hostil", "destroy", "noah", "recycl", "protect", "domin","anthropogen", "biodivers","apocalyps", "climat_chang", "global_warm", "environment_degrad", "environment_injustic", "fossil_fuel"
Civil Rights	"civil","discrimin", "emancip", "equal", "justic", "gettysburg","ghandi", "MLK","nelson", "prejudic","racial", "BLM","floyd", "shoot","jew", "social_activ", "african_american", "indian_american", "native_american", "anti_semit", "civil_right", "equal_right", "martin_luther", "social_movement", "underground_railroad", "black_live", "blue_live"
Crime	"crimin","drug", "gun", "lawless", "polic", "policeman", "prison", "violenc", "weapon","break_law", "court_room", "court_case", "prison_sentenc"
Economy	"money", "rich", "wealth", "labor", "poor","bill", "busi", "marketplac", "capit", "commerci", "consumer", "currenc", "deficit","econom", "economi", "employ","unemploy", "financi", "invest", "wage", "monetari", "budget", "recess", "tax", "trabajo", "treasuri","workplac", "trade", "bail_out", "debt_relief", "debt_releas"
Education	"educ", "school", "learn", "colleg", "public_educ"
Elections	"vote", "elect", "leader", "govern", "campaign", "civic", "conserv", "democrat", "partisanship", "protest", "ralli", "republican", "vote_buy", "campaign_fund", "democrat_party", "republican_party", "vote_fraud", "vote_rights"
Founding	"freedom", "free", "bless", "countri", "amend", "constitut", "independ", "forefath",
Government	"polit", "bureaucraci", "clinton", "nixon" , "congress" , "govern", "government", "governor", "repres", "inagur", "trump" , "obama", "biden", "parliament", "white_house"
Homosexuality	"homosexu", "sexual","gay", "gay_lifestyl", "same_sex", "gay_right",
International Affairs	"muslim", "islam", "foreign", "world", "diplomaci" ,"diplomat", "unit_nation"
Law	"law", "litig", "prosecutor", "suprem_court", "law_suit"
Military	"army", "flag", "militari","monument", "nation", "patriot", "soldier", "troop", "veteran", "war", "air_forc", "american_flag", "arm_forc", "veteran_day", "remembr_day", "ladi_liberti", "juli_fourth", "star_spangl"
Terrorism	"911", "isil", "extrem", "jihad", "terror", "terrorist", "isi", "allah", "911_attack", "bin_laden", "islam_extrem"
Type of Government	"communist","communism","democraci","revolut", "revolutionari","social", "tyranni","tyrant", "januari_sixth", "capitol_attack"
War	"battl","power","fight","afghanistan", "assassin","blitzkrieg","civil", "war","combat","defens","invas", "missil", "russia", "ukrain", "nazi", "nuclear", "peacekeep", "syria", "warfar", "just_war", "missil_attack", "nuclear_war"
Welfare	"poverti", "healthcar","homeless", "marginalis", "welfar", "elder_care", "health_care"

Figure 2.7: Dictionary per Political Topic

Based on this measure, out of all 224,161 sermons, about 30% of them have some significant mention of climate change. Figure 2.8 shows the overall presence of 17 political topics in the whole corpus per their TF-IDF score.

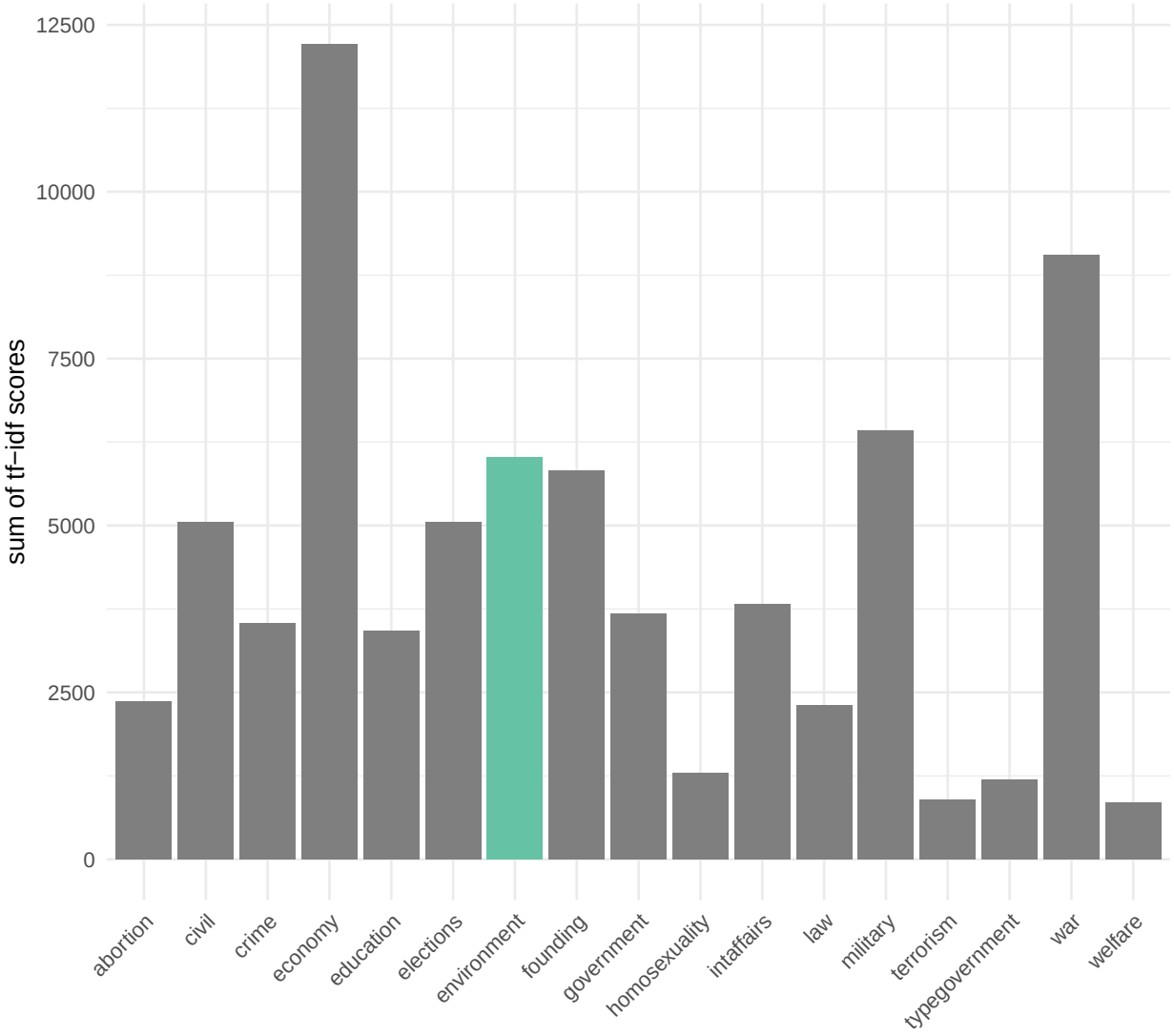


Figure 2.8: TF-IDF Scores per Political Topic

While the dictionary-approach can be an effective tool in finding text of interest within the corpus when terms are carefully defined, it is sometimes the case where the terms are unrelated to the topic we identify with it. For example, while the term "environment" in my definition captures the topic of climate change, it may not refer to climate change in the text. For this reason, I utilize a new tool in textual analysis, large language models (LLM). Schol-

ars increasingly note the potential of this tool in efficiently classifying and analyzing text. Rathje et al. (2023) test two large language models, GPT-3.5 and GPT-4 across 15 datasets in 12 languages and apply multiple prompts measuring psychological constructs (sentiment, discrete emotions, offensiveness). They find that GPT is superior to many existing methods of automated text analysis, with high accuracy across languages and prompts. Similarly, Gilardi, Alizadeh and Kubli (2023) shows that ChatGPT, the artificial intelligence chatbot that uses large language models like GPT-3.5 and GPT-4 as its underlying models, outperforms crowd workers and trained annotators like research assistants. Using Rathje et al. (2023) and Törnberg (2023) as guides in analyzing text with LLM, I use OpenAI API with GPT-3.5 turbo model to classify sermons in terms of whether or not they discuss climate change.

As a first step, since using OpenAI API on the whole corpus is costly, I subset sermons and I only consider those that have at least one climate-related term in the sermon. I randomly select 2,000 sermons for analysis. Then, using OpenAI API, I engineer a prompt, which refers to the "formulation of instructions to LLMs for specific tasks or objectives: the instruction that tell the LLM how to analyze the text" (Törnberg 2023, 3), and apply it to each of the 1,963 sermons. The prompt is as follows:

> *"This text may contain themes relating to climate change, the environment, the weather, or other climate-related topics. Your task is to evaluate whether the text does mention any of these themes and topics. If it does, say 1. If it does not, say 0. [Answer with a number only. For instance: \0\ followed by a brief motivation for your answer]"*

Based on this model's evaluation, 53% of the subset sample (1029 sermons out of 1963) contain discussion on climate change, while the other sermons do not. I use this subset of sermons for a secondary analysis in the analysis below.

2.3.2 Explanatory Variables

To test the theoretical expectations I outlined in the previous section, I use several explanatory variables. First, I use four demographic measures (income per capita, educational attainment, proportion of white individuals, and gender) from the 2021 American Community Survey data, which contains averages of 5-year data at the smallest geographical unit, census block groups (Manson et al. 2022). Second, I use vote counts from the 2020 presidential elections at the smallest geographical unit, a precinct level, for each of the twelve states (Voting and Election Science Team 2020); I derive the vote share per precinct by dividing the Republican and Democrat votes, respectively, with the total votes to construct the variable of vote share per precinct. Following Boussalis, Coan and Holman (2021), I construct a "neighborhood" and a "community" for each of the congregations in the dataset. Namely, transportation statistics from the US Department of Transportation 2009 Household Travel Survey reports that individuals travel between 7 and 10 miles to attend a place of worship (Santos et al. 2011). I draw a 10-mile radius circle around each congregation and define this circle as the congregation's neighborhood where arguably the majority of congregants come from. I use the averages from the set of block groups (for demographic variables) and precincts (for electoral data) that fall within the boundaries of the congregation's neighborhood (within the 10-mile radius circle) to calculate the demographic and electoral independent variables. On the other hand, a "communiity" is a union of intersecting neighborhoods; when congregations are clustered together, there may be influence from surrounding neighborhoods. To control for these effects and for statistical dependence in the estimation, I create a variable that indicates the "community" that the congregation belongs to, if any. Figures 2.9 and 2.10 below visually depict this categorization of a congregation's neighborhood and a community.

The salience of climate change varies across time and space depending on external weather factors that affect communities. As I outlined in the theoretical expectations above, if a

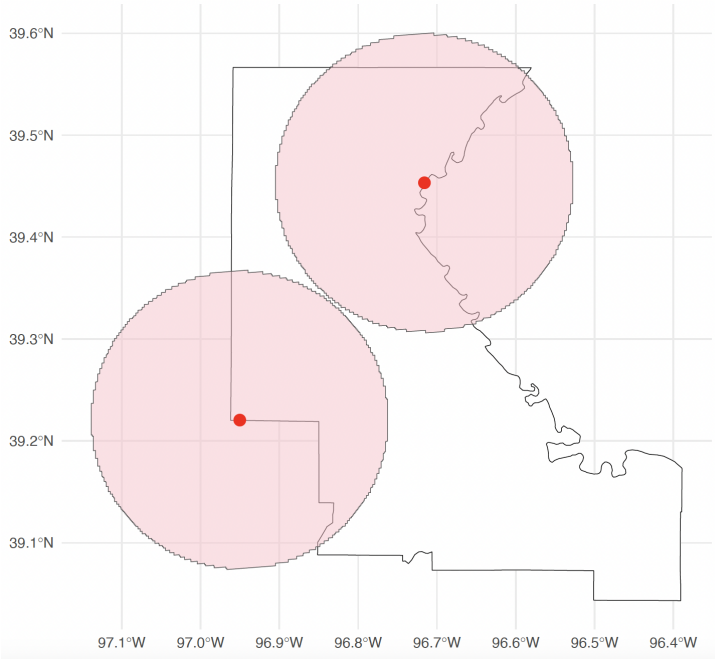


Figure 2.9: Depiction of a Congregation's Neighborhood

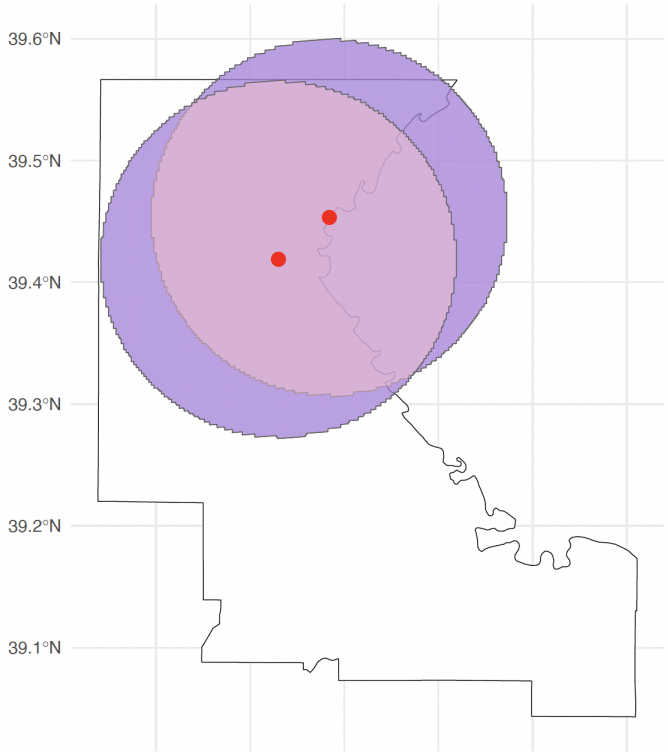


Figure 2.10: Depiction of a Congregation's Community

community is more exposed to climate-related events, then the salience of the issue may drive the clergy's discourse on climate change. Thus, I use the number of severe weather incidents per county and week from the Federal Emergency Management Agency (FEMA 2020), and match the weekly number of severe weather incidents (0 or more) with the weekly sermon. I expect that if severe weather took place prior or during the week, a congregation is more likely to address it in its weekly message. I also include one additional variable, daily air pollution index per county from EPA's database (EPA 2023), and I aggregate the daily figures to a weekly level. One issue here is that not every county in a state has an outdoor monitor, so I am only able to include data from a select number of monitors and counties depending on how many monitors the state has and where the outdoor monitor is located. I am able to gather data for 77 out of the 335 counties for my main dataset, however, future iterations of the paper will include more granular data of this measure.

2.4 Methodology

Since the variables in my model are nested within bigger units, and some group variables vary in terms of the sample sizes (air quality index, for example), I estimate a hierarchical/mixed-effects model. The unit of analysis is weekly sermon and the outcome measure is the frequency of climate-related terms in each of the weekly sermons measured by their TF-IDF score. These observations are nested within congregations, and the congregations themselves are nested within communities and counties. While the demographic and electoral variables are calculated on the neighborhood level, the weather time-variant variables are calculated on the county-level. Finally, these are all nested under states. I estimate a model where I set the fixed effects to the relationship between the dependent variable, the demographic variables, and the time-variant climate-related variables. I set the random effects for the community level since that is where there is a potential spatial (and statistical) interdependence between congregations that belong to the same community.

2.5 Results

Prior to fitting models, I check the variance inflation factor (VIF) to measure multicollinearity between the variables in the model. The factors for all variables are close to 1, with the education variable closer to 2.5. Using the general threshold of 5, I include all of the variables in the models below as the factors are below 5 and indicate no correlation between the variables.

2.5.1 Results from Mixed-Effects Model Estimation

Table 2.2 presents the results from mixed-effects models with the demographic variables based on the neighborhood around a given congregation and two weather-related variables, number of severe weather incidents and air pollution index. Column 1 shows the result from a model without any interaction terms. Neighborhoods with high-income households experience lower frequency of climate talk in their neighborhood congregations (henceforth, climate talk) as do neighborhoods with higher proportion of white-identifying individuals and those with better air quality. Those neighborhoods with majority male individuals experience higher climate talk frequency. Neighborhoods with majority Republican-voting individuals, as well as neighborhoods with higher educational attainment and higher numbers of severe weather incidents do not show a significant effect when considered independently. However, above I hypothesized that political ideology moderates the relationship between income and educational attainment as Republican-leaning individuals tend to be less engaged with the topic of climate change despite their income or educational attainment. Columns 2 and 3 show the result from a model where I interact political ideology of the neighborhood with income and educational attainment, respectively. The results confirm the interacting effect between educational attainment and Republican-voting neighborhood in the expected direction, but the interaction effect between Republican-voting neighborhood and income is insignificant. The other coefficients retain the same effect and significance as in Model 1.

Finally, I also hypothesized that neighborhoods that have majority male individuals and also reside in majority Republican-voting neighborhoods drive the frequency of climate talk downwards. Results in Column 4 confirm this hypothesis since the interaction effect between majority male individuals in a given neighborhood and majority Republican-voting neighborhoods produce a significant and negative effect on climate talk frequency in their congregations. Moreover, adding this interaction effect also reverses the direction of the coefficient for majority male neighborhoods. In terms of the weather-related variables, number of weather-related incidents are not associated with climate talk frequency as the effect is insignificant. However, across all of the models, the air pollution indicator is significant, but negative. As air pollution worsens, climate talk is less frequent in neighborhood congregations.

Overall, the results from these models confirm my hypotheses regarding the interaction effect of majority male and Republican-voting neighborhoods and their negative relationship with climate talk frequency. The results also confirm my hypothesis regarding the negative relationship between Republican-voting and high educational attainment neighborhoods and climate talk frequency. I also confirm my hypothesis that majority white neighborhoods experience less climate talk relative to majority non-white neighborhoods. However, contrary to my hypothesis, I find negative relationship between high-income neighborhoods and climate talk frequency. Additionally, experience with severe weather does not have any effect on frequency, while air pollution has an opposite effect; while I expected air pollution to increase climate talk frequency, I note less climate talk in neighborhoods where air pollution is higher.

2.5.2 Results from Mixed-Effects Model Estimation (Subset with LLM Measures)

Considering the sample with sermons that were categorized as related to climate change or not with the use of large language models, I run the models with the same variables, but

Table 2.2: Results from Linear Mixed-Effects Model: Full Sample

	Dependent variable:			
	TF-IDF Score of Climate Change Topic Terms			
	(1)	(2)	(3)	(4)
High Income	-0.090^{***}	-0.092^{***}	-0.092^{***}	-0.097^{***}
	(0.026)	(0.026)	(0.025)	(0.026)
Majority Republican	-0.033	-0.042	0.044	0.013
	(0.026)	(0.030)	(0.029)	(0.032)
High Educ. Attainment	0.041	0.041	0.086^{***}	0.041
	(0.027)	(0.027)	(0.028)	(0.027)
Majority Male	0.055^{***}	0.052^{***}	0.081^{***}	0.076^{***}
	(0.016)	(0.016)	(0.016)	(0.018)
Majority White	-0.124^{***}	-0.121^{***}	-0.150^{***}	-0.114^{***}
	(0.033)	(0.033)	(0.033)	(0.034)
Freq. of Weather Incidents	-0.014	-0.014	-0.014	-0.014
	(0.032)	(0.032)	(0.032)	(0.032)
Air Pollution (lag)	-0.008^{***}	-0.008^{***}	-0.007^{***}	-0.008^{***}
	(0.003)	(0.003)	(0.003)	(0.003)
HighIncome*Republican		0.032		
		(0.054)		
HighEduc*Republican			-0.304^{***}	
			(0.054)	
Male*Republican				-0.106^{**}
				(0.044)
Constant	0.061^{*}	0.063^{*}	0.017	0.060^{*}
	(0.033)	(0.033)	(0.034)	(0.034)
N	39,051	39,051	39,051	39,051
LL	$-54{,}556.930$	$-54{,}558.760$	$-54{,}542.890$	$-54{,}556.330$
AIC	109,133.900	109,139.500	109,107.800	109,134.700
BIC	109,219.600	109,233.800	109,202.100	109,229.000
RE (community)	Yes	Yes	Yes	Yes
Note:				*p<0.1; **p<0.05; ***p<0.01

since the dependent variable is a binary one, I fit a logit model with random effects at a community level as before.[2] As Table 2.3 shows, across all models, the only variable that shows significant results is the variable indicating majority Republican-voting neighborhoods, and it shows that these neighborhoods experience less climate talk in their congregations. Specifically, the odds ratio of 0.612 suggests that going from majority-Democrat to majority-Republican neighborhood reduces the odds that clergy will sermonize on climate change by 39%.

2.6 Discussion and Conclusion

The interplay between religion and political activism has been a point of scholarly debate since congregations frequently serve as platforms for various global sociopolitical issues. This paper offers a meaningful contribution to this dialogue by exploring the engagement of clergy with the contentious political topic of climate change at the local level in the US. Employing a novel dataset of 220,000 weekly sermons, this research finds that climate change is not a frequent topic in sermons. Using a dictionary-based approach, I find that approximately 30% of sermons have some climate-related terms based on TF-IDF measure. Using two datasets, one that includes all of the sermons and one that includes 2,000 randomly selected sermons to be evaluated with LLMs, I identified that both demographic and weather-related factors substantially to the frequency of climate-related sermonizing across U.S congregations. Using the large dataset, evidence indicates that levels of income, race, and political ideology within the congregations' surrounding neighborhoods significantly impact the frequency of climate change discourse in sermons. Surprisingly, the study also found that the level of air pollution inversely correlated with the mention of climate change in sermons, suggesting a complex relationship between environmental factors and religious discourse. Using the smaller dataset, political ideology is the only significant covariate, and it is negatively correlated with fre-

[2]Note that I am not using air pollution variable in these models as missing data restricts my sample to only 200 observations, thus I omit this variable with future iterations of this paper finding more granular data to account for the missing observations

Table 2.3: Results from Logit Mixed Effects Model: Subset Sample

	Dependent variable:			
	Mentions Climate Change			
	(1)	(2)	(3)	(4)
High Income	0.081	0.009	0.083	0.070
	(0.161)	(0.196)	(0.162)	(0.162)
Majority Republican	−0.490***	−0.566***	−0.535***	−0.564***
	(0.155)	(0.194)	(0.198)	(0.189)
High Educ. Attainment	−0.274	−0.277	−0.320	−0.269
	(0.172)	(0.172)	(0.212)	(0.172)
Majority Male	−0.037	−0.045	−0.039	−0.090
	(0.106)	(0.107)	(0.106)	(0.131)
Majority White	0.100	0.099	0.103	0.100
	(0.145)	(0.145)	(0.146)	(0.145)
Freq. of Weather Incidents	0.312	0.318	0.310	0.307
	(0.396)	(0.396)	(0.395)	(0.396)
HighIncome*Rep		0.171		
		(0.264)		
HighEduc*Rep			0.099	
			(0.270)	
Male*Rep				0.150
				(0.220)
Constant	0.211	0.261	0.241	0.240
	(0.149)	(0.168)	(0.169)	(0.155)
N	1,963	1,963	1,963	1,963
LL	−1,322.524	−1,322.314	−1,322.456	−1,322.291
AIC	2,661.048	2,662.628	2,662.912	2,662.581
BIC	2,705.706	2,712.868	2,713.152	2,712.821
RE (community)	Yes	Yes	Yes	Yes
Note:				*p<0.1; **p<0.05; ***p<0.01

quency of climate-related sermons.

Given that air quality seems to be an important indicator, the next steps in this paper is to include more granular data on air quality in the selected states. While the EPA only provides air quality statistics from select outdoor monitors, individual states have data from their respective monitoring agencies that likely encompass more territory. Future research should also differentiate between places that have a historical experience with severe weather and air pollution and those where air pollution and severe weather have only recently become phenomena. Considering the position of counties (low-lying or not) and the dependency on agriculture of the surrounding communities would be also useful data points to serve as proxies for experienced and perceived climate-related risk. Finally, in terms of data, future interations of this project should include congregational-level data such as the congregations' geographical areas (rural and urban), and congregations' denominations to assess whether denominational organizational structures offer any insights into this relationship.

In terms of data analysis, given the efficiency of large language models (LLM) to analyze and detect substantial discussion of climate change in sermons, future iterations of this paper should apply this method to the whole corpus. It is possible that some sermons have content on climate change but none of the terms in the dictionary matched the context in which that particular sermon discussed climate change. Moreover, these models can also evaluate the content of text for sentiment, underlying motivations, and emotions. It is curious how clergy address climate change when they do. Specifically, future research should explore whether clergy frame climate change as a moral or a political issue, and whether they discuss climate change as an issue or they deny the existence of climate change.

In terms of limitations and biases in the data, the data of online sermons may be representative of only certain types of congregations. Congregational resources certainly play a role in the ability of congregations to switch and maintain their online presence (Djupe, Gilliland and Olson 2023; Holleman, Roso and Chaves 2022). Larger and urban congregations are more likely to have the resources needed to stream, record, and store online worship. Djupe

and Burge (2023) find that congregations with 1000+ attendees are more likely to be online. While my current sample is restricted to YouTube videos, the larger sample contains other type of files such as mp3 and mp4 that may be more accessible to smaller congregations, and may partially address the issue of selection bias. Djupe, Gilliland and Olson (2023) also find that Protestant congregations are less likely to stream their worship services relative to non-denominational, and Catholic denominations even less so. This difference in denominational representation may be an issue as evidence shows that being online has made a difference among Black Protestants, who have engaged politically more after being online and post-pandemic (Djupe, Gilliland and Olson 2023). My goal is to address these issues by gathering congregation-level data as good representation across all denominations may ameliorate these concerns.

A noteworthy point of concern is the potential influence of the digital context on the extent of political discussions by clergy. The accessibility of online worship services enables the fellowship of a diverse audience, and one that potentially surpasses the diversity within traditional brick-and-mortar congregations. This may impact the clergy's likelihood to engage with political discourse. While this presents a certain limitation to studies of this nature, it is crucial to note that the expanded reach of online worship could arguably amplify the impact of religious messages. Therefore, despite this limitation, the implications of such religious messages warrant thorough investigation, underscoring the importance of this study.

In conclusion, this study underscores the potential of religious institutions in raising climate change awareness and fostering meaningful action at the local level. While I observed that various factors influence the frequency of climate change mentions in sermons, understanding the complexities of these factors provides a more nuanced perspective on religion's potential role in environmental stewardship. Ultimately, religious institutions, due to their moral influence and wide reach, can play a pivotal role in addressing climate change, which is arguably one of the most pressing issues of our time.

Holy Words, Contentious Topic: Analysis of Political Speech on Abortion in Religious Sermons

3.1 Introduction

The intersection of religion and morality politics is a complex and multifaceted issue subject to much debate in scholarly and political circles. With the growing influence of religious groups in US politics in recent years, the discourse around abortion has become deeply entrenched in moral and ethical considerations. Today, religious organizations play a pivotal role, not just in shaping public opinion, but also in influencing public policy through their networks and resources. In the United States, Christian denominations have taken differing stances on abortion rights and have politically engaged with the issue to a varying extent. Where and when do religious organizations engage in abortion discourse? How do local context, churches' organizational and structural characteristics, and political shifts interact to determine when and where clergy address this contentious issue? This essay explores these questions, delving into the ways in which official denominational position on abortion rights, congregations' organizational structures and networks, and denominations' alignment with the ideologies of the local communities contribute to the discourse on abortion among US congregations. It uses a novel dataset of 116,359 online weekly sermons from 1,429 congregations between 2007 and 2023 across the United States and offers a comprehensive examination of how often congregations engage with political topics like abortion.

This paper first presents theoretical expectations outlining the circumstances in which clergy may actively participate in discussions about abortion. I argue that the frequency of abortion discourse within congregations increases when there is a convergence between the position of the congregation's denomination on abortion rights (either supportive or

non-supportive) and the prevailing viewpoint on abortion within the local community. This alignment is driven by the natural response of congregations to meet congregational and local needs (Gill 2021; Finke and Stark 2005*a*; Iannaccone 1990). The intensity of this response is further amplified in organizations where the clergy's stability of their careers is contingent upon the support they garner locally (Gill 2008). Moreover, the paper argues that congregations with a vast network, i.e., those that are spatially connected to congregations from the same denomination, are more likely to engage in such discussions (Djupe and Olson 2010*b*). This is because the existence of a dense population adhering to a specific religious denominations enhances the connectivity among adherents and clergy alike, and promotes uniformity of practice. Hence, well-networked congregations are arguably more equipped and empowered to mobilize resources more effectively and cater to their flocks.

To test this argument, I use the corpus from the collected online sermons and employ text analysis tools to calculate the frequency of abortion-related discourse across congregations. I then employ two estimation strategies to measure the effect of denominational position on abortion and the alignment of the denomination's position with the surrounding neighborhood, the organizational structure of the congregation, and the size of its network on the frequency of abortion talk in congregations. The first estimation is based on a a mixed-effects model, which measures this effect across time and place. As a second estimation, I use the Supreme Court's decision in *Dobbs v Jackson Women's Health Organization* as an exogenous shock and employ a difference-in-difference design to measure the differential effect on clergy's engagement with the topic of abortion between states that were affected by the decision and those that were not. Namely, in anticipation of a potential reversal of *Roe v Wade*, some states enacted laws that would protect abortion rights regardless of any SCOTUS decisions. Others did not enact such laws, and even enacted some that would criminalize abortion upon the reversal of *Roe v Wade*. The latter group is what I call the affected states. Similarly, I explore congregational abortion talk among those denominations that are officially in support of abortion rights and not in support in both the affected and unaffected

states. Theoretically, I expect those congregations that are in the states where the ruling had considerable effects of SCOTUS decision to speak more frequently about abortion as the socio-legal implications of the reversal of *Roe v. Wade* affect individuals within affected states more than those in the unaffected one. I also expect that those congregations that find themselves in affected states, and yet their denominations are supportive of abortion rights, to be more vocal on the topic relative to their counterparts in unaffected states. Finally, in addition to assessing frequency of abortion talk, it is also of interest how different congregations speak of abortion. As a third and final estimation, I employ a la carte word embeddings approach to explore the different contexts in which abortion is being discussed across supportive and unsupportive denominations.

My findings reveal the following: generally, discourse on abortion is driven by the local context and the network size of the congregations. The denominational position on abortion itself does not drive the frequency of abortion talk, but when this position aligns with the community's position (measured by the major political ideology in the congregations' neighborhood), the effect is positive and significant. Results from the second estimation reveal that the SCOTUS decision in reversing *Roe v Wade* had no differential effect in congregations' abortion talk across states. However, when considering congregations' denominational position on abortion rights in affected and unaffected states, I find negative effect on congregations whose denominational position is supportive of abortion rights. This means that congregations whose denomination has a supportive viewpoint on abortion rights talks less about abortion if they reside in an affected state. However, once I consider the network size and decentralized hierarchy of the congregation, the negative effect disappears. Additionally, when I consider not only the denominational support, but also the viewpoint of the congregation's neighborhood on abortion rights, I find support that congregations that are embedded in neighborhoods that are also supportive of abortion rights, that have a supportive network, and have a decentralized hierarchy (which denotes accountability to the local community) talk more about abortion than their counterparts in the unaffected states.

Taken all together, the findings suggest that denominational position alone does not dictate whether the *Dobbs* effect is associated with higher frequency of abortion in the pews. However, once the congregation is in a locale where it is embedded in a supportive network and neighborhood and it is dependent on this neighborhood for survival, *Dobbs*'s enactment is correlated with the frequency of abortion talk in congregations in affected states more than those in unaffected states.

Finally, the word embedding approach reveals that supportive denominations discuss abortion in more political terms, while unsupportive denominations discuss abortion in more moral terms. For example, unsupportive denominations' usage of the word "sin" have higher cosine similarity with abortion and abortion-related word embeddings, while supportive ones use "politics" and "women's rights" more closely within the context of abortion.

3.2 Background

Abortion laws were prevalent in every US state until the 1960s and 1970s. It was only when women began mobilizing that decriminalizing abortion emerged as a focal point for the US government. The ultimate victory for the pro-choice movement came with the landmark abortion case of *Roe v. Wade* in 1973. Citing the Fourteenth Amendment and the right to privacy, the Supreme Court legalized abortion. Specifically, the ruling dictated that states could not outright criminalize abortion and emphasized that only in specific instances would the state's interest in preserving human life surpass a woman's right to privacy (FindLaw 2018). The decision was accompanied with parameters regarding state intervention and set the precedent for subsequent years.

The rise and influence of pro-life advocates within the Republican Party, instrumental in Ronald Reagan's 1980 presidential victory, cemented abortion as a defining issue in US party politics (McBride and Keys 2018; Kreitzer 2015). The Republican party became the "pro-life," and the Democratic the "pro-choice" party, embedding these positions in their

platforms and routinely leveraging them in their political debates. While abortion had been chiefly a religious issue in the 1960s, it became highly partisan in years since (Lewis 2017, 2014; Karol and Thurston 2020). It was under Reagan's leadership that discussions around overturning *Roe v. Wade* first emerged (McBride and Keys 2018). However, due to the Court's makeup and activism from both sides, the most contentious battles between pro-life and pro-choice factions took place at the state level (Kreitzer 2015; Wilson 2020). Notably, pro-life activists achieved victories in cases like *Planned Parenthood v. Casey* and *Webster v. Reproductive Health Services* which limited women's privacy and liberties in Pennsylvania and Missouri (McBride and Keys 2018; Byrnes 2019).

On June 24, 2022, with the ruling on *Dobbs v. Jackson Women's Health Organization*, the Supreme Court decided that the Constitution does not grant the right to an abortion, essentially overturning *Roe v. Wade* and giving states a wide latitude in regulating access to abortion (Ballotpedia 2023). Prior to the Supreme Court's ruling, anticipating the change, some states enacted laws that would either criminalize abortion when *Roe v. Wade* is overturned and others enacted laws that would ensure that abortion is kept legal. Yet a third group of states did not enact any laws either keeping abortion legal or restricting abortion (Wilson 2020). For example, Alabama Gov. Kay Ivey signed a bill in 2019 banning most abortions within the state, and did so because he and the sponsors of the bill "believe that it is time, once again, for the U.S. Supreme Court to revisit this important matter" (Kelly 2019). The same agenda was followed by Governors in most majority-Republican states, enacting laws that would become enforceable and would restrict abortion when Roe is overturned. Others, like Washington Gov. Jay Inslee, in rebuttal to actions by conservative states, passed laws that prohibit the state from taking any action against individuals and their pursuits of abortion (Corte 2022). In total, 19 states enacted abortion restrictions that would become enforceable if Roe is overturned, 16 states enacted laws that would keep abortion legal, and 12 states did not take action of any kind (Ballotpedia 2023). Consequently, when the *Dobbs* ruling came into effect in June 2022, its impact varied across states. Those that upheld the

legality of abortion as established by *Roe v. Wade* felt the ruling's repercussions differently than states that either implemented the new ruling immediately or did not enact protective measures against its implications. Without federal safeguards, residents in states with stringent abortion laws faced transformative changes in their personal lives.

3.2.1 Religion and Abortion Politics

The connection between governmental regulation of abortion and religion dates back to the 1800s, when medical professionals and religious leaders were the two main vocal groups advocating to outlaw abortion. While then abortion was perceived as a medical and a moral issue, the advancement in medicine and performance of safe abortions shifted the issue to predominantly a moral one. As a moral issue, churches have an enhanced role in the politics of abortion as the natural legitimate source for interpreting moral issues (Jelen 1992; Gill 2021). Indeed, views on abortion frequently arise from religious beliefs, and the values and principles derived from one's faith also influence their perspective on associated policies (Holman, Podrazik and Mohamed 2020; Mohamed 2018; Schroedel 2000).

Religion shapes the discourse on abortion through several channels. The first is by shaping public opinion. Three in four Americans identify with a religious faith, which indicates that a large population in American society has some religious influence. Most religious traditions and denominations have a formally established view on abortion. Thus, by belonging to a religious tradition, adherents generally adopt the position of their respective groups as part of the values and norms that they share as a group (Layman 2001). Moreover, the views of their trusted religious groups and leaders serve as heuristics in understanding and interpreting the morality of abortion (Gill 2021). Christian religious tradition in the US vary in the extent to which they condone abortion. For example, traditionally, Roman Catholics and Evangelicals have taken adamant pro-life position on abortion compared to mainline Protestants or Jews (O'Connor and Berkman 1995; Holman, Podrazik and Mohamed 2020). Both of these religious groups oppose abortion in almost all circumstances (Pew Research Center 2013). While

Catholicism has been historically associated with the strongest anti-abortion attitudes, over time, religious fundamentalism, among which are Evangelicals, became a stronger predictor of opposition to abortion (Hoffmann and Johnson 2005; Strickler and Danigelis 2002). Southern Baptists, Mormons, and Assemblies of God join them in opposing abortion rights, but other mainline Protestants like Methodists, Lutherans, and the Episcopal Church generally support abortion rights with some limits. The Presbyterian Church and United Church of Christ support abortion rights with few or no limits (Pew Research Center 2013).

Simply affiliating with a religious faith, however, does not mandate aligned political viewpoints between all adherents and their respective religions; the depth of individual's connection to their religion moderates the extent to which they relate to the core opinions of their faith (Djupe and Olson 2010*b*; Green and Green 2007). Religious attendance is one factor as socialization with like-minded people reinforces beliefs (Jelen 1992). Additionally, while religions may have official stands on an issue, the extent to which these messages are diffused and reinforced among individuals in their local congregations vary considerably due to local contexts and congregational demands (Djupe and Gilbert 2008; Holman and Shockley 2017; Calfano 2009; Finke and Stark 2005*a*). Nonetheless, when it comes to abortion, public opinion polls show that views on abortion by religiously affiliated individuals vary in alignment with the official position of religious traditions. Over 70% of individuals identifying as white evangelical Protestants believe abortions should be illegal in most cases, while this is the case for less than 40% of mainline Protestants. Interestingly, Catholics are divided on the issue, which indicates divergence from the official position of the Church among Catholics (Jones et al. 2023).

The second mechanism through which religion affects discourse on abortion is by religious groups serving as interest groups and lobbying the government. The organizational power of churches through their nation-wide networks and resources make them a viable and competing interest group (Meier and McFarlane 1993). Most denominations have formal lobbying representation in Washington, D.C. and their state capitals, where their groups ensure their

political agendas are well-represented alongside other civic groups (Djupe and Olson 2010*b*; Yamane 2005; Hofrenning 1995). Moreover, designated groups like the the National Right to Life Committee mobilize pro-life voters and organize individuals into petitioning and lobbying lawmakers for anti-abortion laws and identify (O'Connor and Berkman 1995). Most notably, the Christian Right was an influential and effective mobilizing power in recruiting voters and amplifying support for the Republican part, and many of these voters have come to shape the GOP policy positions, and public policy on abortion (Wilson 2020; Lewis 2017). Although this mechanism is not observed at the local level, these organizations draw their support from grassroots initiatives. It is crucial to highlight this historically employed mechanism, even if I am not factoring it into the measures of local determinants.

The above discussion reveals that religious organizations operate through various mechanisms in shaping the discourse on abortion. However, this process is not linear across space and time nor across congregations. A number of factors dictate whether religious institutions engage in morality politics and if they do, where and when they do so. Religious denominations and congregations are tradition-maintaining institutions and their interests are predominantly parochial instead of political (Djupe and Olson 2010*b*). Even when their national governing bodies have official stands on sociopolitical issues, local congregations do not always promulgated the same among their congregants (Holman and Shockley 2017; Djupe and Olson 2007). This is mainly due to the fact that congregations and congregational leaders are malleable to the influence of local context, culture, and congregational demands (Djupe and Gilbert 2003*b*; Djupe and Olson 2007; Owens 2008; Djupe, Burge and Calfano 2016; Djupe and Olson 2010*a*; Neiheisel and Djupe 2008; Wood and Zald 1966). Thus, local demands and context matters for the extent to which congregations engage in public rhetoric on sociopolitical issues.

Besides the influence of the local context, one also need to factor in the organization and structure of denominations, intra-congregational networks and resources, the activism of individual religious clergy and their incentives (Djupe and Olson 2010*b*). Religious traditions

vary in the extent to which they are connected to a centralized national denominational organization and that, in turn, shapes clergy's career paths and incentives. The Catholic Church and the Church of Jesus Christ of Latter-day Saints, for example, are the central bodies for the Catholic and LDS churches, where organizational structures dictate that either religious leaders are vertically-integrated and appointed by central figures and/or that they follow directies from the central bodies. These stand in contrast to the National Association of Evangelicals (NAE), which is a fellowship of Evangelical Protestant groups in the US and a host of over 50 denominations, but congregations within are largely independent and their religious leaders are locally selected. The NAE is well-connected and resourceful, which ensures rich communication network for groups within the association. Other congregations yet are part of more informal networks, like the Willow Creek Association that encompasses more diverse and non-denominational churches. These structural differences between centralized and decentralized national churches, formal and informal networks, and the ways they shape clergy's incentives within congregations matter for the level of engagement with political topics and policy advocacy on political matters, and especially morality politics like abortion.

In terms of organizational structures, it is also not just the vertical connection that plays a role, but also congregations' intra-connections within their own network. Specifically, having greater concentration of adherents of a particular religious tradition is argued to help with promoting "connections among clergy and bolster unity of practice within that religious tradition" (Djupe and Olson 2010*b*). Thus, congregations that have a denser network of alike congregations i.e. from the same denomination are arguably more resourceful and empowered to mobilize and address the needs of their congregants.

Finally, political shifts at both national and state levels often determine the prominence of an issue and its impact on grassroots communities. The Dobbs decision undeniably heightened the urgency for morality discussions within congregations. Although the Supreme Court's ruling was a nationwide event, its influence on state politics and the populace varied

across regions. As a result, congregational discussions about abortion could also hinge on state political dynamics, the visibility, and the relevance of an issue in daily life.

Considering the above, the following four factors are important in determining when congregations engage with political content and specifically their engagement as it relates to abortion: 1) congregations' network size, 2) congregations' ideological alignment with the communities they are embedded in, 3) congregations' hierarchical structure and incentives in aligning with the denominations' official position on social issues such as abortion, and 4) the salience of an issue, which is often shaped by national or state politics.

Thus, in answering the question of when and where religious clergy address abortion, I hypothesize the following:

> ***H1:*** Congregations sermonize on abortion more frequently when the congregation's respective denomination's view on abortion **aligns** with that of the community in which they are embedded.
>
> ***H2:*** Congregations sermonize on abortion more frequently as they network size increases.
>
> ***H3:*** Congregations sermonize on abortion more frequently when they have a decentralized hierarchy i.e. they are responsive to local demands rather than central directives.
>
> ***H4:*** Congregations sermonize on abortion more frequently when state politics make the issue more visible and relevant to the population.

In summary, congregations with strong connections and views on abortion that resonate with their local communities are more likely to engage in political discussions, especially on morality issues like abortion. This engagement is particularly pronounced in states where a policy shift drastically alters abortion practices within their communities.

The following two sections introduce the data used to quantify these concepts and the

methodology I employ to examine their correlation with abortion discussions in US congregations.

3.3 Data

Transition to remote worship during the COVID-19 pandemic created a rich depository of online sermons, and has given researchers the opportunity to directly measure what clergy say in their congregations. This paper draws from these newly accessible data to construct a novel dataset of digital sermons across twelve US states.

To construct the dataset, I first select 12 states from different political leanings. Specifically, I select a sample of states where most counties have voted majority Republican in the 2020 election (red states), states where most counties have voted majority Democrat (blue states), and states with mixed voting patterns (purple states) (MIT Election Lab 2020). I also utilize ARDA (2020)'s religious census to consider the number and density of congregations and adherence rate (number of religiously affiliated people divided by the total population) for similarity across states (ARDA 2020). Table 3.1 summarizes these dimensions across the 12 states.

State	**Political Majority**	**# of Congreg.**	**Congreg. (# per mi^2)**	**Adherence Rate**
West Virginia	Red	4063	0.17	0.37
Louisiana	Red	6599	0.13	0.63
Vermont	Blue	821	0.09	0.37
California	Blue	23538	0.14	0.45
North Carolina	Purple	16177	0.30	0.51
Texas	Red	29746	0.11	0.54
Illinois	Blue	12121	0.20	0.51
Ohio	Red	13905	0.31	0.47
Pennsylvania	Red	15134	0.33	0.47
Colorado	Purple	4330	0.04	0.35
Arizona	Purple	5243	0.05	0.44
Washington	Blue	6114	0.09	0.30

Table 3.1: Selected States

For each of the twelve states, I randomly chose a third of their counties for analysis, resulting in 335 counties in the sample.[1] I utilize Google Places API and the corresponding *R* packages (`googleway`, `google_places` and `google_place_details`) to geolocate congregations within each county by searching for establishments that are listed on Google as place of worship or church. I scrape the congregations' names, physical addresses, and websites as posted on Google. To only account for congregations within a given county, I first identify the centroid of each county, calculate the minimum and maximum distance to the county's borderline, and choose a random point between the minimum and maximum point in each county to use in determining the length of a radius (distance from the centroid to the random point) for the Google search. I intersect the location of the congregations with the counties' borders to only include counties within a county border. This process also mimics randomization, as I try to sample congregations within counties as randomly as possible. The sample results in a total of 21,207 congregations.

Out of the 21,207 congregations, 54% of them have their websites listed on Google i.e. are "digital" congregations. Using a website scraper and manual search, I identify those congregations that have online sermons posted on their websites (about 52% of congregations that have websites have online sermons posted). The online sermons take different formats; some congregations store sermons as audio (mp3) files, as video (mp4) files, or provide live and recorded videos on video sharing website like YouTube and Vimeo. YouTube uses highly advanced speech recognition technology to create captions of videos and a convenient YouTube API to use for scraping video content. Moreover, scholars have found that YouTube's automatic captioning is of high quality and accuracy, meaning that the automatic captioning provided by YouTube is comparable to the "gold standard" of human transcription and is outperforming other existing recognition systems (Proksch, Wratil and Wäckerle 2019). Thus, for this paper, I am narrowing the content to online sermons posted on YouTube. For reference, the congregations that have YouTube channels represent 62% of congregations

[1] for states with small number of counties like Arizona and Vermont, I use all of the counties for analysis

with online sermons, and 17% of all of the congregations in the sample (those with and without website). The overall resulting sample has 2,876 congregations.

ARDA (2020)'s religious census provides comprehensive information on US congregations. Their sample counts more than 130,000 congregations across the US, and contains information on congregations' religious tradition and family/denomination, as well as reported membership and average attendance for each congregation. Merging the two datasets by the congregations' locations, I am able to obtain denominational information for 1,429 congregations in my sample, which is almost 50% of my overall sample. To ensure I am not mismatching congregations, I only use those that, in addition to their physical location matching, match in the congregations name (with a score above 0.80 using cosine method to calculate similarity). Thus, the final sample of congregations used in this paper is 1,429. They represent 17 religious traditions and 98 different denominations. Figure 3.1 shows the distribution of congregations across different traditions and per number of sermons. In the sample, there is an almost equal representation of religious groups in terms of number of congregations (with the exception of fundamentalists and other/misclassified religious families that are in lesser numbers nationally as well). However, in terms of average number of sermons per group, Baptist congregations had considerably more sermons posted online, followed by Evangelical and Presbyterian. As studies before have shown, congregations with high numbers of membership moved their worship online in higher numbers relative to those with lower fellowship (Djupe, Gilliland and Olson 2023); four out of the top six congregations in terms of average number of sermons in Figure 3.1 are congregations with the highest membership in my sample.

The representation of congregations also varies across states; the majority of denominations are represented across all 12 states in my sample. Those denominations without congregations in all states (Adventist, Brethren, LSD, and Mennonite) are smaller religious groups that are also in small numbers nationally, thus they are only represented in a few states (mainly Ohio and Pennsylvania). Figure 3.2 shows a map with the congregations in

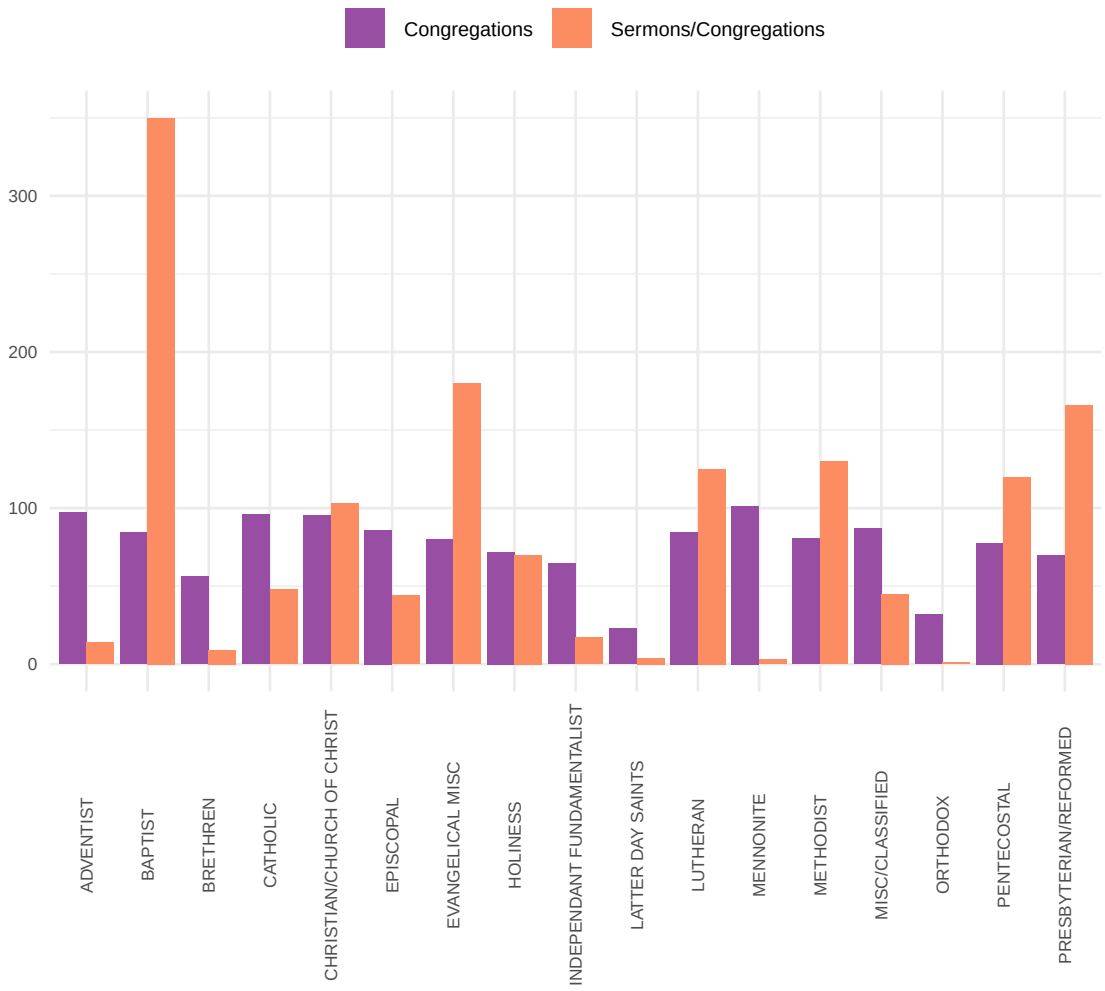


Figure 3.1: Distribution of Congregations and Sermons per Religious Group

the sample colored by religious family distributed spatially.

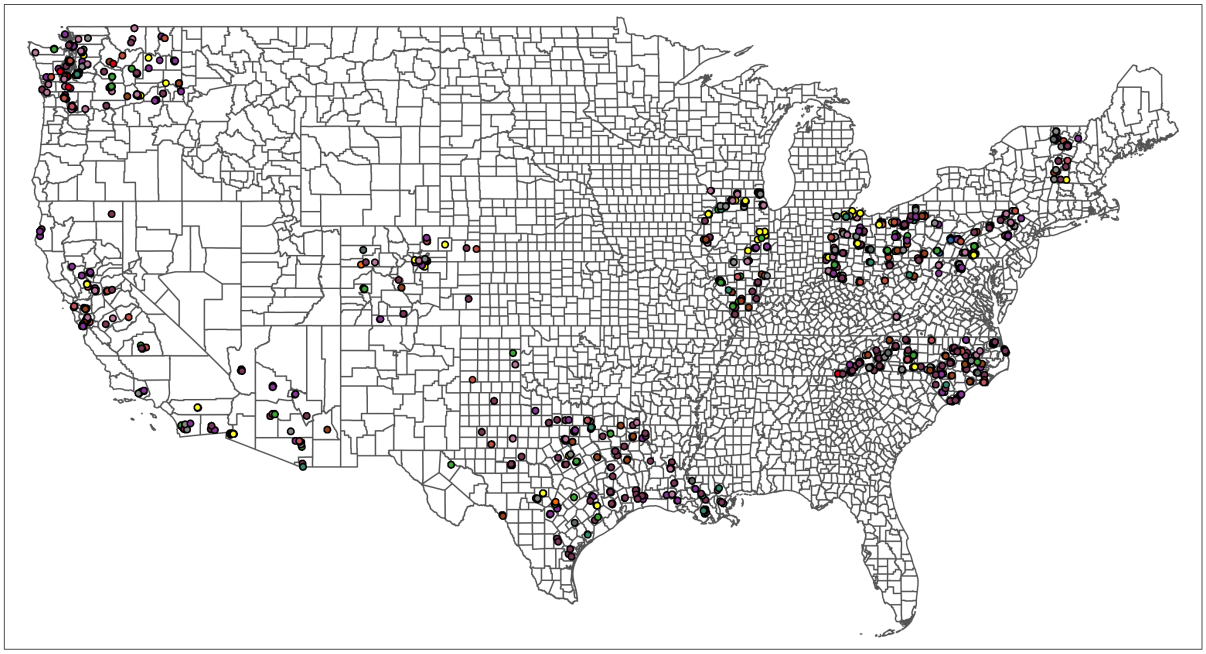


Figure 3.2: Spatial Distribution of Congregations per Religious Group

Using YouTube API and related *Python* packages, I transcribe the online sermons for each of the 1,429 congregations. To increase the probability that I am indeed transcribing sermons, I select only those videos that are posted on a Sunday by determining the day based on the video's date stamp or if the videos have "Sunday" in their titles. I identify 116,359 sermons across the twelve states and 1,429 congregations. My unit of analysis is a weekly sermon per congregation (N=116,359). Figure 3.3 provides the time series of posted online sermons by month and year across all congregations per religious group. The oldest sermon in the sample is with a datestamp of November 2007, while the most recent one is July 2023. As expected, the majority of congregations started posting online sermons during the pandemic, explaining the skeweness of number of sermons later in the period.

3.3.1 Outcome Variable

I use the resulting corpus of text from the weekly sermons to operationalize the dependent variable and I do this in two ways: 1) a simple term frequency of words or phrases related

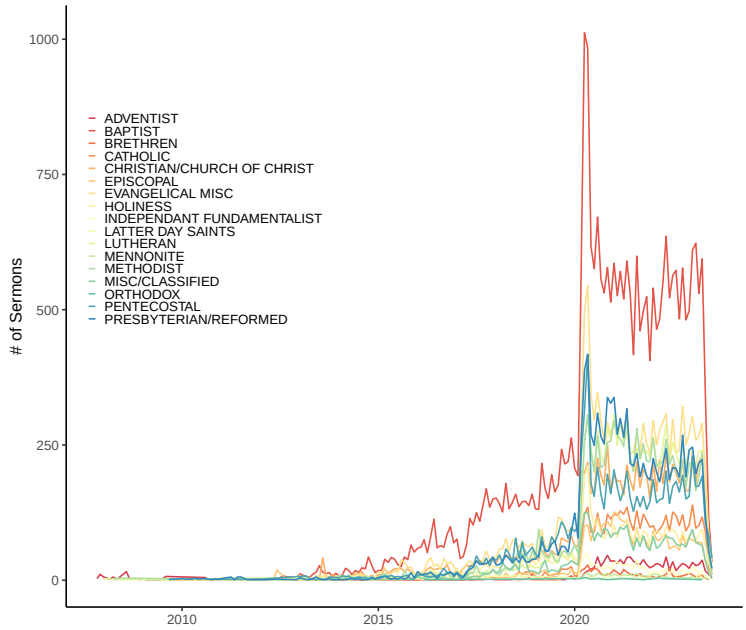


Figure 3.3: Monthly Sermon Distribution of Congregations per Religious Group

to abortion mentioned in any weekly sermon, and 2) word embeddings of abortion-related words and phrases as target words.

The term frequency of target words and phrases is calculated based on the dictionary-based approach. The dictionary-based method is one of the most fundamental approaches to text analysis. It requires tokenizing the corpus i.e. treating the corpus as a "bag of words" and counting how many times certain words, which are previously defined in dictionaries, appear in the corpus. Divided by the total number of words in the document, gives us the term frequency of abortion-related words/phrases. I use Boussalis, Coan and Holman (2021) categorization of political topics based on crowd-sourced labels of religious sermons and topic modeling to create dictionaries for 19 political topics. Given that Boussalis, Coan and Holman (2021) provide a careful textual analysis of sermons to aggregate phrases and keywords that describe political topics, gives me confidence that the keywords and phrases I use within my sample are suitable for the measure. I create a unified dictionary of unigrams and bigrams for each of the 19 topics and search for the words and phrases from these dictionaries in the sermons, recording the instances where each is found and adding them

to create a total word count per topic in each sermon. The outcome variable is the summed term frequencies per topic. Figure 3.4 shows the words and phrases contained in each of the political topics' dictionaries, and Figure 3.5 shows the overall presence of 19 political topics in the whole corpus per their term frequency score.

Topic	Words & Phrases
Abortion	"abort", "infanticid", "babi","womb","unborn","dobb","roe","wade", "jackson", "privaci", "birth_control", "hobbi_lobbi", "human_life", "plan_parenthood", "pro_life", "pro_choic", "roe_v", "v_wade", "dobb_v", "v_jackson"
Environment	"conserv", "ecosystem", "environ","environment","storm","creation","distort","hostil", "destroy", "noah", "recycl", "protect", "domin","anthropogen", "biodivers","apocalyps", "climat_chang", "global_warm", "environment_degrad", "environment_injustic", "fossil_fuel"
Civil Rights	"civil","discrimin", "emancip", "equal", "justic", "gettysburg","ghandi", "MLK","nelson", "prejudic","racial", "BLM","floyd", "shoot","jew", "social_activ", "african_american", "indian_american", "native_american", "anti_semit", "civil_right", "equal_right", "martin_luther", "social_movement", "underground_railroad", "black_live", "blue_live"
Crime	"crimin","drug", "gun", "lawless", "polic", "policeman", "prison", "violenc", "weapon","break_law", "court_room", "court_case", "prison_sentenc"
Economy	"money", "rich", "wealth", "labor", "poor","bill", "busi", "marketplac", "capit", "commerci", "consumer", "currenc", "deficit","econom", "economi", "employ","unemploy", "financi", "invest", "wage", "monetari", "budget", "recess", "tax", "trabajo", "treasuri","workplac", "trade", "bail_out", "debt_relief", "debt_releas"
Education	"educ", "school", "learn", "colleg", "public_educ"
Elections	"vote", "elect", "leader", "govern", "campaign", "civic", "conserv", "democrat", "partisanship", "protest", "ralli", "republican", "vote_buy", "campaign_fund", "democrat_party", "republican_party", "vote_fraud", "vote_rights"
Founding	"freedom", "free", "bless", "countri", "amend", "constitut", "independ", "forefath",
Government	"polit", "bureaucraci", "clinton", "nixon" , "congress" , "govern", "government", "governor", "repres", "inagur", "trump" , "obama", "biden", "parliament", "white_house"
Homosexuality	"homosexu", "sexual","gay", "gay_lifestyl", "same_sex", "gay_right",
International Affairs	"muslim", "islam", "foreign", "world", "diplomaci" ,"diplomat", "unit_nation"
Law	"law", "litig", "prosecutor", "suprem_court", "law_suit"
Military	"army", "flag", "militari","monument", "nation", "patriot", "soldier", "troop", "veteran", "war", "air_forc", "american_flag", "arm_forc", "veteran_day", "remembr_day", "ladi_liberti", "juli_fourth", "star_spangl"
Terrorism	"911", "isil", "extrem", "jihad", "terror", "terrorist", "isi", "allah", "911_attack", "bin_laden", "islam_extrem"
Type of Government	"communist","communism","democraci","revolut", "revolutionari","social", "tyranni","tyrant", "januari_sixth", "capitol_attack"
War	"battl","power","fight","afghanistan", "assassin","blitzkrieg","civil", "war","combat","defens","invas", "missil", "russia", "ukrain", "nazi", "nuclear", "peacekeep", "syria", "warfar", "just_war", "missil_attack", "nuclear_war"
Welfare	"poverti", "healthcar","homeless", "marginalis", "welfar", "elder_care", "health_care"

Figure 3.4: Dictionary per Political Topic

Studying politics, society, culture, and other large and complex phenomena often requires searching for subject-specific terms that rarely occur throughout the text. This study is an example – sermons that contain political content are the "needle in a haystack" relative to other parochial subjects that religious leaders concern themselves with. Scholars have advanced methods of studying such rare topics (Rodriguez, Spirling and Stewart 2021). One such method is the à la carte (ALC) word embedding method. This method allows me to build upon the dictionary-approach analysis that helps me answer *whether* religious leaders mention abortion in their sermons, and answer *how* abortion is included in religious sermons. Moreover, it allows me to relate the way religious leaders discuss abortion in different groups, for example, in congregations that identify with denominations that are supportive of abortion rights, and those that are not.

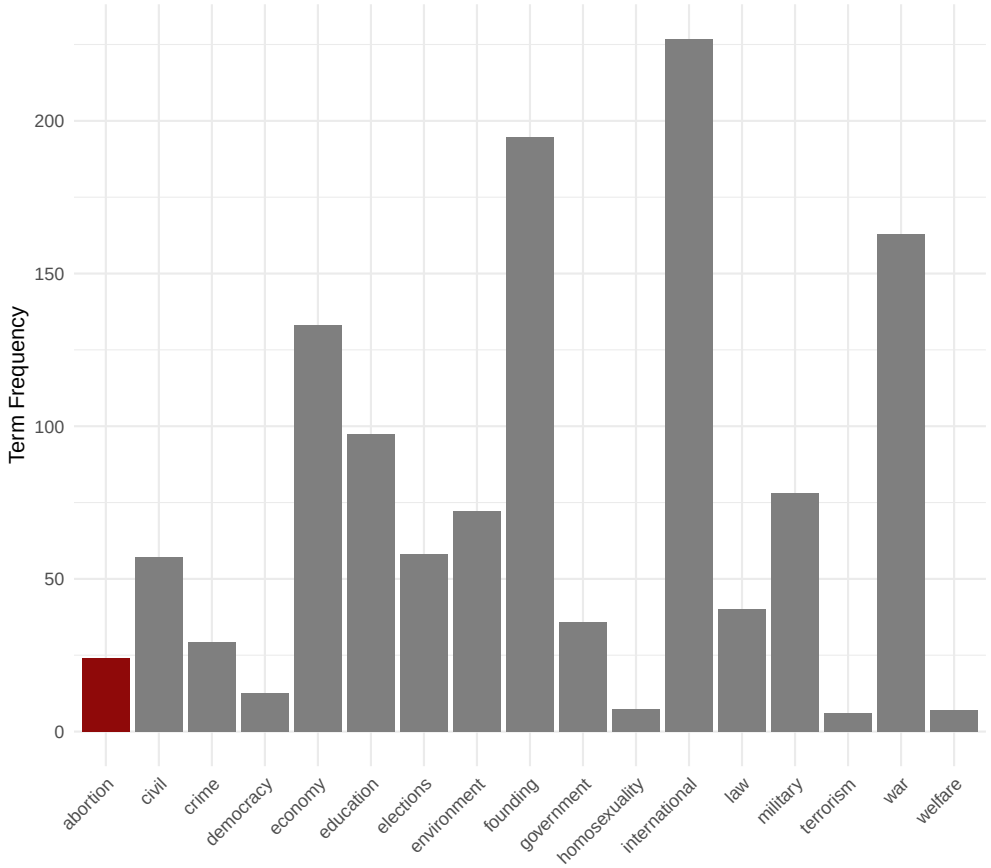


Figure 3.5: Term Frequency in Sermons per Political Topic

Word embeddings is a useful tool for the purposes of conceiving a meaning based on the distributions of words that surround a given term in the text (Mikolov et al. 2013). More specifically, word embeddings can predict a focal word based on surrounding words within a small window before/after that focal word in a given corpus. The gist of word embeddings is based on the distributional hypothesis – the idea that we can learn the meaning of words from the context in which they are used. Using pretrained models like GloVe (Pennington, Socher and Manning 2014) and Word2Vec (Mikolov et al. 2013) that have been used on large corpuses of text to obtain all the different meanings that a word can take, one can apply this method and obtain the meaning of words in an original corpus without having to label own data. This is not costly and easily applied method that makes it a useful tool for text analysis. Political scientists have used it to understand semantic meaning of political concepts of equality (Rodman 2020) or immigration (Rodriguez, Spirling and Stewart 2021), or gender and ethnic stereotypes change over time and groups (Caliskan, Bryson and Narayanan 2017; Garg et al. 2018), to name a few.

Recent innovations of this method has widen the applicability of word embeddings by introducing à la carte (ALC) embeddings. ALC embeddings can be placed in a regression setting and researchers can make statistical inferences on whether the usage of terms differs across different authors with varying covariate values (Rodriguez, Spirling and Stewart 2021). Relative to topic modeling, a familiar approach in text analysis where the machine learns the topic based on the whole document, the ALC approach learns the meaning only from the (6 to 12) surrounding words. Thus, rare words and phrases are not "lost" in a large corpus (Rodriguez, Spirling and Stewart 2021). The resulting measure from this approach is a word vector of embeddings surrounding the focal word (abortion-related phrases in this case) and the embeddings of the words within its context. Words with similar vectors demonstrate high similarity, are often found in the same context, and surrounded by similar words. Moreover, these vectors can be used in linear regression to infer statistical differences between groups of

authors.[2] Following this approach, I use the word embeddings of "abortion" in two groups, congregations that have supportive position on abortion rights and those that do not and use their word embedding score to compare with word embeddings of other set of words. For example, I can include words like "sin," "motherhood," "right," "pro-life," and observe the relative cosine similarity of "abortion" to each of these individual word between the two groups. Once again, this provides me with more insight into the context of abortion as a topic of discussion across different groups.

3.3.2 Explanatory Variables

First, I re-code the denomination labels and separate those that, even if they belong in the same religious family, they have separated at some point and differ in their worldviews and/or communication with one another. For example, in the religious census, both the American Baptist Association and the Southern Baptist Convention are coded under the same religious family, Baptist. I code these separately as the two denominations have different stands on abortion and are generally not connected to one another despite their common religious family. I do the same with a handful of other denominations that have similar complexities.

Based on Olson et al. (2018)'s Handbook of Denominations in the United States, I code each denomination as centralized or decentralized, where centralized signifies denominations that have centralized authority that appoints clergy, manages church governance, and have influence or is the sole authority on doctrinal decisions; eight of the 19 denominations in the sample are centralized. Then, I consider the official positions on abortion by major religious group (Pew Research Center 2013, 2016) and code the denominations as supportive or unsupportive of abortion rights. I code as unsupportive those that oppose abortion with few or no exception, and supportive those that support abortion rights with few or no limits. Figure 3.6 presents the 23 denominations and their respective categories for centralization and support of abortion rights.

[2] for details, refer to (Rodriguez, Spirling and Stewart 2021; Khodak et al. 2018; Arora et al. 2016)

Denomination Categories	Hierarchy	Abortion Rights Official Position
Catholic	Centralized	Unsupportive
Orthodox		
African Methodist		
Latter-day Saints		
Evangelical Lutheran		Supportive
Methodist		
Episcopal		
Lutheran		
American Baptist	Decentralized	
Presbyterian		
Adventist		Unsupportive
Mennonite		
Southern Baptist		
Baptist (other smaller denominations)		
Brethren		
Church of God		
Church of Christ		
Pentecostal		
Evangelical		
Evangelical (other smaller denominations)		
Fundamentalists		
Lutheran Church-Missouri Synod		
American Baptist		
Presbyterian		

Figure 3.6: Categorization of Denominations

I also argued that congregations' intra-connections and devoted communities can shape their engagement with the topic of abortion. Specifically, having greater concentration of adherents of a particular religious tradition is argued to help with connecting clergy and bolstering mobilization on issues (Djupe and Olson 2010*b*). To capture this, I utilize ARDA (2020)'s religious census and I use the number of congregations from the same religious tradition/denomination per area on a county-level (the smallest geographical area in the dataset) and name this network size. Finally, to measure the alignment in ideology, I use a vote share measure from the 2020 elections to account for the majority political leanings in a given congregations' neighborhood, and code it as majority Republican or majority Democrat based on whether the vote share is above 50% Republican or not. I use these two variables to later construct a variable "aligned" where, given the stark ideological divide on abortion between Democrats and Republicans, I make the assumption that being a majority Republican neighborhood also means that the majority of citizens (where the congregations draws its pool of current and potential congregants) are pro-life, and I assume the opposite

for majority Democrat neighborhood. The variable takes the value of 1 if the community is majority Republican-voting and the official position of the denomination is anti-abortion or if the community is majority Democrat-voting and the official position of the denomination is pro-abortion (or less restrictive of abortion), 0 if these two are misaligned. While I acknowledge that there are certainly people within both groups that do not share the same values with the rest of the group, this coarse measure is the closest to the variable of interest.

But what is a neighborhood? I define neighborhood as a 10-mile area around the congregation and I average the vote shares for every precinct that belongs within the circle with a 10-mile radius from the congregation to obtain the political ideology variable. Lastly, if congregations' neighborhoods overlap, I create a union of these neighborhoods and call it a common community where the congregations belong. I use this variable to account for spatial and statistical dependence in my estimation strategy.

Characteristic	**N = 1,429**[1]
Ideological Leanings	
Democrat	580 (41%)
Republican	849 (59%)
View on Abortion Rights	
Supportive	468 (33%)
Unsupportive	961 (67%)
Hierarchy	
centralized	317 (22%)
decentralized	1,112 (78%)
Religious Density per Capita	0.03 (0.05)

[1] n (%); Mean (SD)

Figure 3.7: Summary Statistics

3.4 Methodology

I use two estimation strategies to examine the relationship between the frequency of abortion-related sermons in congregations and denominational, structural, and ideological traits of the congregation and their neighborhoods.

For the first estimation, I estimate a hierarchical/mixed-effects model. The unit of analysis is a weekly sermon, but these observations are nested within congregations, and the congregations themselves are nested within communities, counties, and states. While the congregational and electoral variables are calculated at the neighborhood level, the network size variable is calculated at the county-level. Finally, there is also a time component. I estimate the model where I set the fixed effects to the relationship between the dependent variable, the time-invariant congregation-level demographic variables, and the county-level variables. I set the random effects for community level as that is where arguably the highest interdependence between what clergy say in their congregations happens. To reiterate, I am interested in estimating the effect of congregations' denominational hierarchy (centralized or decentralized), alignment on view on abortion between the denomination and the neighborhood (aligned or misaligned), and denominational network size (number of congregations in the community circle that are from the same denomination) on the frequency of abortion talk in a weekly sermon. I expect that decentralization drives talks on abortion, as does having denser network of congregations within the same denomination, and aligned ideologies on abortion rights.

For the second estimation, I leverage the Supreme Court's announcement of their decision in *Dobbs v Jackson Women's Health Organization* and use a difference-in-difference (DiD) design to measure whether being in an affected versus unaffected state changes the discourse on abortion among congregations. As mentioned in the previous section, 16 states enacted laws that would protect abortion rights in anticipation of the reversal of *Roe v Wade*. This means that the abortion practices within these states were not affected to the extent that

they were in states where the trigger laws they enacted means changing abortion practices immediately. Since the treatment takes effect after Dobbs, the treatment variable is a dummy variable set to 1 if the state did not have any laws protecting abortion rights (i.e. protecting against Dobbs) and the time variable is week after Dobbs (June 24). For the states that had laws protecting against Dobbs, the dummy variable is 0 for all of the observations as they remain untreated after Dobbs. In my sample, six states are treated i.e. affected by the decision (Pennsylvania, Louisiana, North Carolina, Arizona, Texas, West Virginia), and five were untreated i.e. not affected by the decision (Washington, California, Colorado, Illinois, and Vermont). I compare differences in the probability of discussing abortion in the post-Dobbs period relative to the pre-Dobbs period between affected and unaffected states. With this estimation, I test whether a shock that would significantly impact the lives of individuals in some states and not as much in others matter how salient the issue is in congregations measured by the frequency of abortion talk in these congregations. I expect congregations in the treated states to have more abortion talk because individuals are more concerned with the issue as it drastically changes their lives (for better or for worse). I subset the data to only include sermons two months prior and two months after the decision to reduce noise. In the model, I include fixed effects for state and time.

In addition, I am curious about the treatment effect of Dobbs and frequency of abortion talk between congregations that are supportive and unsupportive of abortion in the affected and unaffected states. One would expect that, if in states where abortion rights were affected, those that are supportive would be more vocal relative to the same group in unaffected states. However, given the argument that the local context matters, I also consider this difference accounting for the alignment of position with their respective communities. In other words, I explore the difference between those that are generally supportive of abortion rights and reside in neighborhoods where their congregants likely align with the denomination's position (majority Democrat) versus those that are unsupportive and reside in neighborhoods where their congregants likely align with the denomination's position (majority Republi-

can), in both treated and untreated states pre- and post-Dobbs. The treatment variable in this case takes the value of 1 if the congregations is supportive, within a Democrat-voting neighborhood, is in affected state and the time variable is post-Dobbs. The treatment is 0, otherwise. Following the same principle of using difference-in-difference, I estimate the effect of the Dobbs decision on the frequency of abortion talk in these two types of congregation in affected and unaffected states. I also estimate the same model without accounting for alignment in position on abortion, and investigate how denominational position alone changes this effect. My expectation is that those congregations that are with supportive ideologies and aligned with the neighborhood will have a higher frequency of abortion talk in the treated versus the untreated states. This is because state politics heighten the salience of the issue of abortion, as individuals are more affected by the changes – especially those who are supportive of abortion rights. Here also, I include fixed effects for state and time.

Figure 3.8 below presents a time series of average mentions of abortions per congregation grouped by those that are in the treated and untreated states, with both the leak of the Dobbs decision and the Dobbs announcement marked. Figure 3.9 depicts the average mentions denominations that are generally supportive and unsupportive across all states.

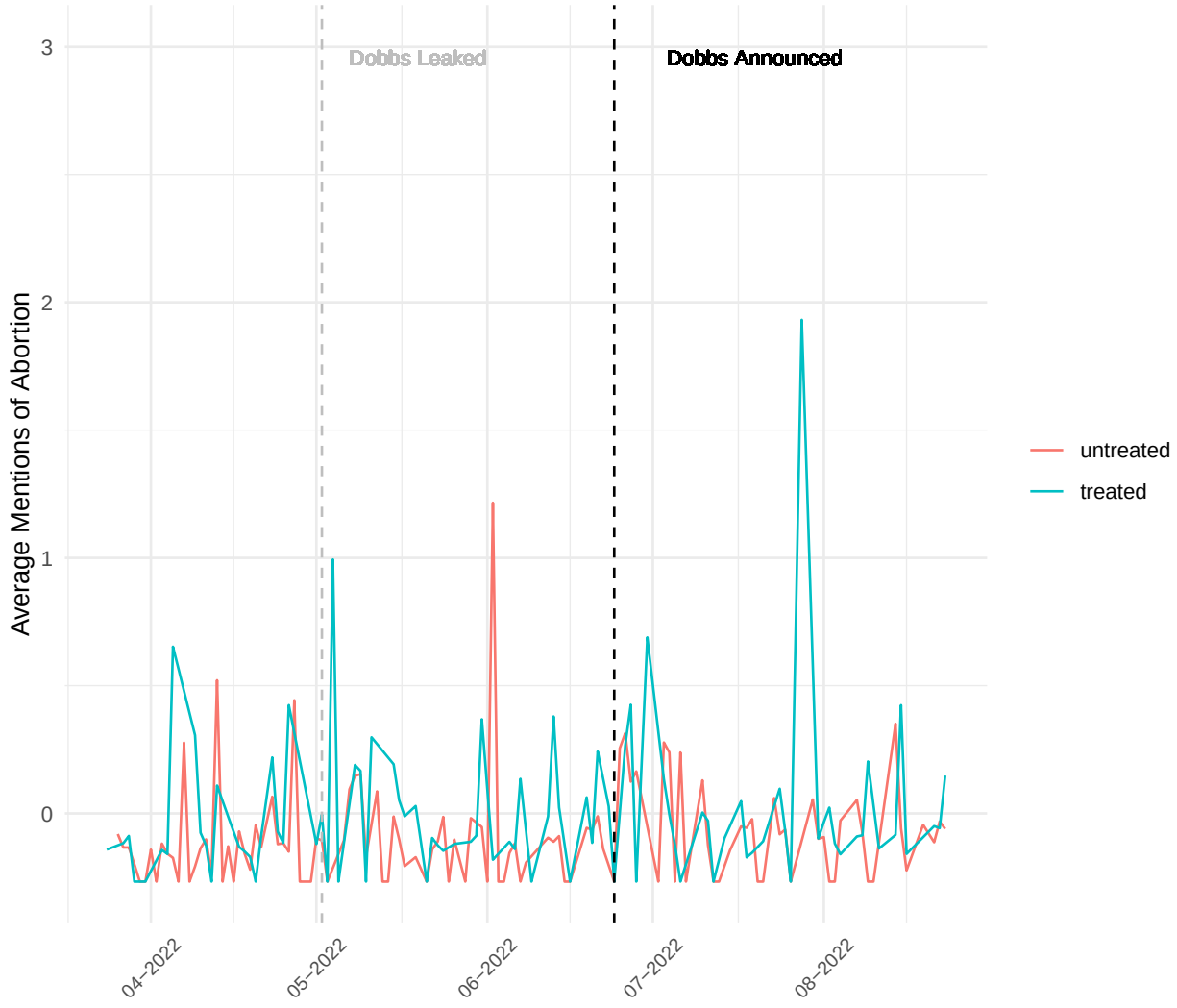


Figure 3.8: Trend of Abortion Discourse Across Affected/Unaffected States

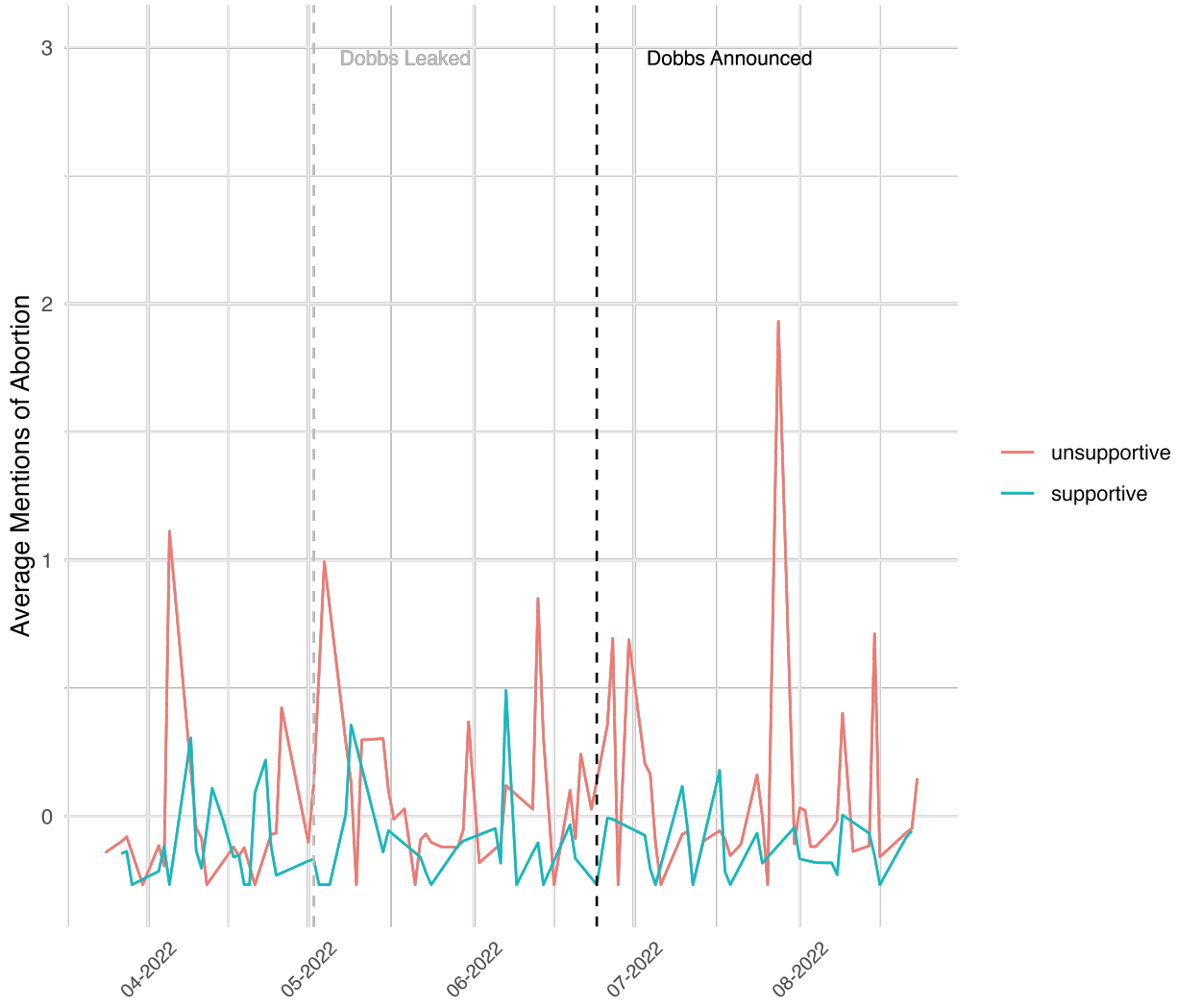


Figure 3.9: Trend of Abortion Discourse by Supportive/Unsupportive Status

Finally, as an alternative estimation, I use word embeddings around a set of abortion-related phrases and compare the context in which they are mentioned across groups (covariate values) of interest. Rodriguez, Spirling and Stewart (2021) provide the following formula for what the $\mathbf{Y}$ outcome (the word embedding of a focal word) depicts:

$$\underbrace{\mathbf{Y}}_{n\times \mathrm{D}} = \underbrace{\mathbf{X}}_{n\times \mathrm{p+1}} \underbrace{\beta}_{p+1\times \mathrm{D}} + \underbrace{\mathbf{E}}_{n\times \mathrm{D}}$$

Recall that word embeddings of a given word is a vector of the embeddings of the word

itself as well as of the words within its context, thus the vector represents the embedding of a particular instance of a given word in some particular context like "abortion" in this case. Each observation has a dimension D. Stacking them produces the outcome variable $\mathbf{Y}$, which is the number of instances of a given word times the dimension D. Additionally, $\mathbf{X}$ is a matrix of p covariates and a constant, while β is a set of p coefficients plus an intercept. $\mathbf{E}$ is the error term. The coefficients are used to calculate the estimated embedding of the focal word, and obtain words that are closest to the focal word in the vector space. This can be depicted by the score of cosine similarity between focal words and other words of interest. I use "sin," "women," "politics," "pro-life," "pro-choice," and "motherhood" as words of interests whose word embeddings I compare with the word "abortion" across two groups. In my specification, I use the covariate indicating supportive/unsupportive view of abortion and explore how their use of "abortion" compares to the use of the selected words of interest, and I extract a sample of sermons to depict contexts in which these two groups discuss abortion.

3.5 Results

3.5.1 Results from Mixed-Methods Estimation

Table 3.2 presents the results from the first estimation, the mixed effects models where the outcome is the term frequency of abortion-related words and phrases across the corpus. I estimate the effects of congregations' hierarchy, denominational view on abortion, and size of network on the frequency of abortion terms in religious sermons (henceforth, abortion talk). I also add the variable that measures the aligned ideology on abortion between the neighborhood and the congregation (henceforth, aligned ideology). I estimate two models, one where I account for the aligned ideology, and one where I consider the denominational ideology alone (without the ideology of their neighborhoods). In both models, I estimate the interaction effect between the position on abortion (denominational and aligned) and the

network size as, per the theory above, these two traits jointly influence the engagement of clergy in political talk.

The first model considers the aligned ideology, the congregation's hierarchy, and the joint effect of the aligned ideology and the network size. I find that aligned ideology is strongly and positively associated with the frequency of abortion talk in congregations. While the network size on its own has a negative relationship with the frequency of abortion talk, when considered jointly with the aligned ideology variable, it gains significance and the association is positive. The hierarchical structure of the congregation is not significant. In the second model, I consider only the denominational position on abortion (supportive or unsupportive). On its own or interacted with the network size, the denominational position does not have a significant effect on the frequency of abortion talk.

I interpret the findings as follows: As an illustration, consider a congregation that affiliates with Southern Baptist religious denomination, a denomination that is unsupportive of abortion rights per my measure. As an affiliate of Southern Baptism, we would expect that clergy in this congregation would align with the denominational position on abortion. My findings suggest that simply having a pro-life position on abortion does not drive whether or not clergy would engage with the topic of abortion. However, if this congregation is located in a neighborhood where the majority of its population is Republican, and arguably this is the population where the congregation draws its existent and potential members, clergy are more likely to address abortion, presumably from a pro-life stance, because they know their audience is receptive to their message. Moreover, if there are more congregations in the surrounding area (specifically, within the county where this congregation belongs in) that also affiliate with Southern Baptism, shared resources and unison of practice amplifies this effect.

Table 3.2: Results from Mixed-Effects Model: Full Sample

	Dependent variable:	
	TF of Abortion Topic Terms	
	(1)	(2)
Aligned	0.025^{***}	
	(0.009)	
Abortion Ideology		-0.005
		(0.011)
Network Size	-0.019^{**}	-0.007
	(0.008)	(0.006)
Decentralized Hierarchy	-0.015	-0.017
	(0.010)	(0.012)
Aligned*Network Size	0.018^{**}	
	(0.009)	
Supportive*Network Size		-0.001
		(0.012)
Constant	0.004	0.021
	(0.011)	(0.013)
N	77,909	77,909
LL	$-124{,}030.100$	$-124{,}035.100$
AIC	248,074.200	248,084.100
BIC	248,139.000	248,149.000
RE (community level)	Yes	Yes
Note:	*p<0.1; **p<0.05; ***p<0.01	

3.5.2 Results from Two-Way Fixed Effect Estimation from DiD

Table 3.3 displays the bivariate effect of the *Dobbs* decision on frequency of abortion talk in the congregations across states affected by the decision and those not affected by the decision. The ATT (average treatment effect on the treated) is positive, but not significant. Thus, the *Dobbs* decision does not have an effect on the frequency of abortion talk in congregations located in affected states relative to those that are in unaffected states. This is opposite of my expectation as I hypothesized that, the changes that the reversal of *Roe v. Wade* would bring to abortion practices among people of an affected state make the issue of abortion more salient relative to those that are less affected, and consequently, clergy would engage with the topic more frequently.

Table 3.3: Dobbs Effect on Congregational Abortion Talk Across States: Bivariate Model

	Dependent variable:
	Abortion Talk
ATT	0.024
	(0.040)
State/Week Fixed Effects	Yes
Num. obs.	10,638
R^2	0.014
Adjusted R^2	0.011
RMSE	0.868
Note:	*p<0.1; **p<0.05; ***p<0.01

Next, table 3.4 presents four models. With the first model, I explore the difference between frequency of abortion talk in congregations that are generally supportive of abortion rights and reside in communities where they are likely aligned with the denomination's position versus those that do not reside in such communities in treated and untreated states. For illustration, if a congregation belongs to a denomination that is generally supportive of abortion rights, say an Presbyterian Church, whose neighborhood is composed of Democrat-leaning

individuals and are likely the congregants of the said congregation, if this congregation is located in Louisiana, where the reversal of *Roe v. Wade* resulted in near criminalization of abortion, is the clergy of this Church speaking more about abortion, relative to its counterpart in Washington? The results from this model estimation suggest that there is no difference in how often these two congregations address abortion. However, what if this church resides in a Democrat-leaning neighborhood and has a large network of other Presbyterian Churches in the county? In this case, the effect is positive and significant of both the individual treatment effect and when I consider the network size of this congregation. Similarly, the fact that the leadership of this church is chosen by the local congregants (has decentralized hierarchy) amplifies the positive relationship with frequency of abortion talk. This suggest the effect of *Dobbs* drives frequency of abortion upward in congregations that fit the above conditions in states like Louisiana, relative to the counterpart of this Presbyterian Church in Washington.

With the second model, I consider the denominational position on abortion independently, without the neighborhood's ideology as a factor. Interestingly, the results suggest that, in our example, the Presbyterian Church in Louisiana, having a supportive position on abortion rights, addresses abortion less relative to its counterpart in Washington. However, once we consider the network size and hierarchy of the congregation, the effect disappears. This can be interpreted as having supportive outlook on abortion as a denomination may deter clergy from speaking on abortion if in an affected state like Louisiana, unless they are in a neighborhood where their message is perceived well, they have large network support, and they are accountable to the local population. Otherwise, the denominational position does not have an effect on the frequency of abortion talk.

3.5.3 Results from ALC Word Embeddings

The results from the ALC word embeddings are presented as a cosine similarity between abortion-related terms and a set of chosen words ("sin," "women," "politics," "pro-life," "pro-choice," and "motherhood"). Figure 3.10 depicts that supportive denominations use

Table 3.4: Dobbs Effect on Congregational Abortion Talk Across Congregations

	Dependent variable:			
	TF of Abortion Topic Terms			
	(1)	(2)	(3)	(4)
Aligned & Treated	−0.075		0.048**	
	(0.051)		(0.020)	
Ideology & Treated		−0.102***		0.040
		(0.031)		(0.028)
Size of Network			−0.007*	−0.007*
			(0.003)	(0.003)
Decentralized Hierarchy			0.080**	0.067**
			(0.027)	(0.028)
Aligned*Network Size			0.460**	
			(0.189)	
Ideology*Network Size				0.467**
				(0.164)
N	10,638	10,638	7,227	7,227
R^2	0.014	0.015	0.019	0.020
Adjusted R^2	0.011	0.012	0.014	0.015
RMSE	0.868	0.868	0.883	0.882
State/Week Ficed Effects	Yes	Yes	Yes	Yes
Note:				*p<0.1; **p<0.05; ***p<0.01

abortion in the context of discussing motherhood, pro-life and pro-choice, women, and politics more than unsupportive ones. The unsupportive ones, on the other hand, discuss abortion more in the context of sin. While one cannot conclusively determine this from pre-selected words, this implies that perhaps supportive denominations are more political compared to unsupportive denominations.

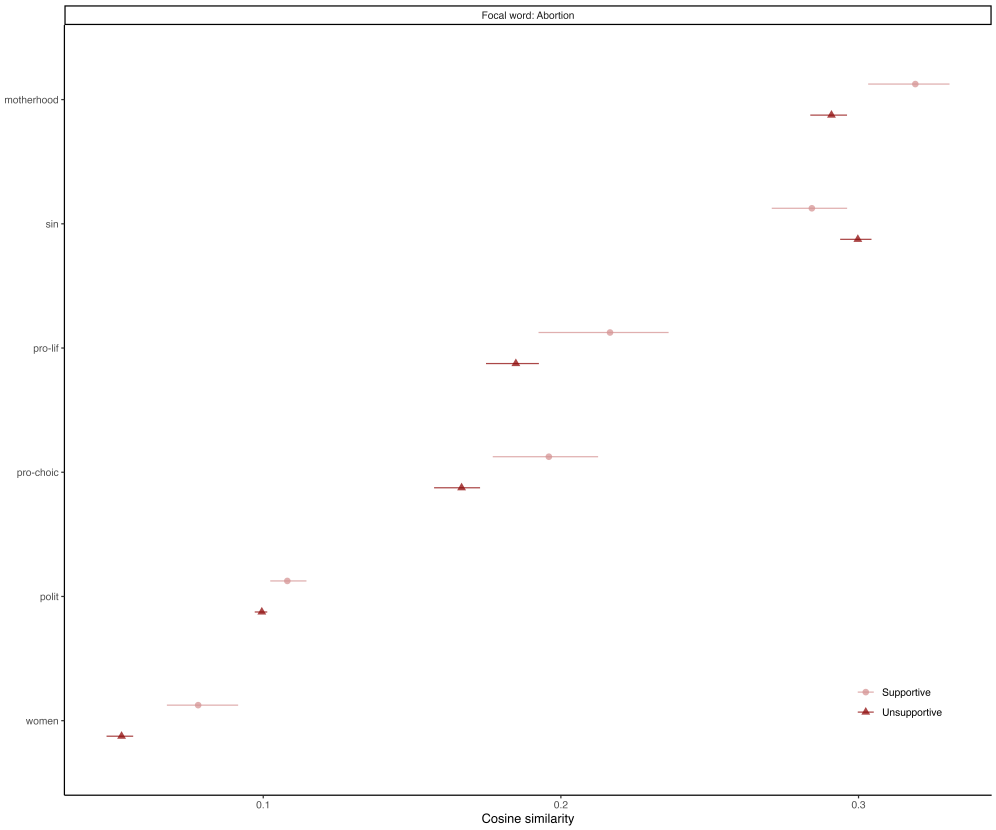


Figure 3.10: Cosine Similarity

Since a single word without context is hard to interpret, we can also explore the nearest contexts in which we can find the word. The nearest context function finds the target word, in this case abortion, or any other word that is semantically close to the target word, and explores the contexts in which they are found within each group (supportive and unsupportive in our case). Table 3.5 presents the several fractions of sermons that depict the context in which abortion is found per group. Reading through the sample of sermons in the table shows clear division in how supportive versus unsupportive congregations address abortion,

where the first do not encourage abortion necessarily, but acknowledge the gray area in which individuals can find themselves. On the other side, unsupportive denominations talk about abortion rights being "sexual freedom with no consequence".

3.6 Discussion and Conclusion

This paper explored the frequency of abortion discourse in US congregations in light of heightened salience of the issue in the American society. Religious organizations have historically played a role in influencing political ideologies and shaping the discourse on morality politics. Religion can influence individuals' beliefs and attitudes on abortion through congregations and religious clergy interpretation, deliberation, and delivery of the holy text. Religion can also shape public policy through their congregational networks and resources. This paper analyzed what drives abortion talk in congregations in the US, and considered possible congregational, denominational, and structural factors as predictors of the frequency of abortion discourse in weekly sermons. Moreover, it provided an exploratory analysis of how abortion discourse differs across denominations with different outlooks on abortion.

As previous literature has found, this paper systematically showed that clergy are largely responsive and sensitive to the local context. The denominational position alone does not explain the frequency of abortion talk, but once I consider whether the denominational position of the congregation is aligned with that of the neigborhood where the congregation resides, the effect is positive and significant across different estimations. Moreover, the recent SCOTUS decision in reversing *Roe v. Wade* had differential sociolegal consequences in states; while some states had previously enacted laws that protected their citizens from the SCOTUS decision, others enacted trigger laws that would criminalize abortion after the decision. The results from difference-in-difference study design and two-way fixed effects model reveal that the decision did not make a difference between how often congregations talk about abortion in affected states relative to unaffected states. However, once I consider congrega-

Group	Context
Supportive	"i want people to live i want them to have life i want them to fill that god's expectations for them and i don't believe as paul says you can't make a law about how to do that i just know that what we have done isn't about but about telling a whole group of people we don't trust you and we want to control you and that i am not good with because life is complicated and there are places where we have to dance the gray folks" "it's been all over the news uh it is kind of neat to think about the fact that regardless of access to or not abortion rates were the lowest they've been in years that means that some of the things we're doing as a nation are working but you know the banning of abortion brings to the forefront many biomedical ethical issues that are important for us to consider as christians" "we've got we've got a lot of things shifting in our nation toward possibly uh overcoming this this whole abortion ruling from years and years and years ago and roe v wade but it's not done yet and regardless whether it is actually if is outlawed we're going to need the pregnancy health center more than ever because they're going to bepeople out there that don't want to do and they do they come in very lost and scared and the last thing we want to do is abandon people"
Unsupportive	"i just think we need to talk honestly about the issue i need i think we i think people need to quit hiding behind these high-sounding arguments if if the reason people want on demand is so that they can have sexual freedom with no consequences then just please say that because i think jesus has something to say to those people" "we understand the stresses of cost and fears of being poor and all these things yeah we can put ourselves in the shoes but we have to stand against abortion we have to make the decision to fight against abortion we have to make the decision to say no to it says in verse here if we say to god behold i don't know about this i don't understand this i don't get it i god will say well really i think i looked at your heart i think you knew the issues" "you've got christians out there and they're like yeah but you know this is okay and this lifestyle's fine and it's okay you know we can have abortion we can have a form of or we can do this and it's not really we don't i'm not fanatical and my thought on that is like why would anyone want to be your friend because you're by your actions you're saying that you don't care about the one you say you love"

tions that have supportive ideologies of abortion, are embedded in neighborhoods where the population is largely supportive of abortion rights, where these congregations have spatially close network of alike congregations, and are held accountable by the local congregants, the results suggest that congregations that meet these conditions in affected states speak more frequently of abortion than those in unaffected states. Thus, even in the aftermath of the SCOTUS decision, clergy choose to address the issue of abortion only in places where they serve like-minded individuals.

There are few limitations to this studies that future work should consider. In terms of data analysis, including more states in the difference-in-difference design and estimation model would lend more statistical power and would estimate the effect more precisely. Thus, future collection of data will improve the estimation with this study design. Relatedly, since the decision on Dobbs was leaked on May 2, 2022, six weeks before the official decision was announced by SCOTUS, future estimations should account for May 2, 2022 as the treatment date to check for effects of the leak, rather than the decision.

When considering the constraints and potential biases within the data, the collected online sermons might only reflect specific kinds of congregations. The resources of a congregation influence its capability to establish and sustain an online presence; larger and urban congregations typically possess the necessary means to stream, record, and archive online worship services (Djupe, Gilliland and Olson 2023; Holleman, Roso and Chaves 2022). My present sample is confined to YouTube videos, but including other file formats like mp3 and mp4 might help to mitigate this problem, as they might be more accessible for smaller congregations. Additionally, studies have shown that Protestant congregations are less inclined to stream services compared to non-denominational congregations, and Catholic denominations are even less so (Djupe, Gilliland and Olson 2023). My sample is balanced in regard to the sampled denominations, although certain Protestant denominations like Baptist have considerably more online presence. In similar vein, another concern is how the online environment might influence the clergy's willingness to discuss political matters. The ability

for anyone to stream the worship service, coupled with a potentially more diverse online audience compared to traditional in-person congregations, might deter clergy from engaging in political dialogue. This presents a limitation to the study, yet it's worth noting that the broader reach of online worship arguably amplifies the impact of a religious message, thereby reinforcing the significance of this research.

The (Not So) Sacred Image of Russia: Survey Experiment on Popular Support of Ukraine in the Russia-Ukraine War

4.1 Introduction

Since the beginning of the Russian invasion of Ukraine, the majority of Eastern European governments have unanimously supported Kyiv through military, financial, or humanitarian means (Taylor 2022). The Ukrainian government particularly values military aid for its effectiveness in hindering Russian progress. Yet, as the conflict continues, these governments struggle to maintain domestic consensus on supporting Ukraine. This waning public support is concerning for regional leaders. Moreover, the divisiveness over the support of Ukraine intensifies debates over national identity, fueling a cultural rift and bolstering European populist agendas. This paper assists in identifying the factors driving popular disunity over the Russia-Ukraine War. I use extant theories on political opinion formation and political disunity, and test competing explanations through a survey experiment in a polarized setting.

When forming opinions on public policy, citizens decision-making is multi-faceted and complex. Extant theories have argued that the prevailing factors in this decision-making process are either the policy's effects on individuals' economic well-being or individuals' long-standing symbolic attitudes, ideology, identity, and deeply rooted beliefs (Citrin and Green 1990; Gabel 1998; Mutz 2018; Sides and Citrin 2007). In addition to the economic-rational and identity-based arguments, scholars have identified institutional factors as playing a decisive role; in particular, the decline in the responsiveness and effectiveness of governance structures (Berman 2021). In the context of Eastern Europe, all three of these explanations

provide insights into the political disunity over Ukraine. For one, most of the Eastern European countries were highly reliant on Russian oil and gas at the inception of the war. As part of the economic sanctions against Russia, gas deliveries to these nations were either restricted or entirely halted, leaving their citizens to absorb the costs of increased energy and household prices. Secondly, Euro-skepticism has been growing in this region in the past decade, with many expressing frustrations with EU institutions, the judicalization of politics, and the undermining of national institutions by EU elites (Poland as the leading example). The fact that the EU and NATO (and the US) are one of the main players in the Russia-Ukraine War may create further disenchantment with Eastern European support for Ukraine as well as deteriorating relations with those Western allies.

I argue that social identity, particularly Russophilia, may be an especially strong favtor in shaping public opinion over the Ukraine-Russia conflict. Russophilia has been a consistent trend in this part of the world; many, especially those residing in countries where Christian Orthodoxy is the dominant religion, exhibit strong pro-Russia views (Pew Research Center 2017*c*). The image of Russia as a protector of Christian Orthodoxy, related traditional and religious values, and in general, reverence for historical Russian might in defense of Slavic nations have long shaped the social identity of individuals in this region. While scholars largely understood this pro-Russian tendency to be found among older generations as a result of communist nostalgia, evidence suggests that the support is cross-generational and growing (Muzikárová 2023). Thus, individuals' opposition to Ukrainian support may be shaped by in-group identity with Christian Orthodoxy, where Russia is perceived as the rightful protector and Western-backed Ukraine as the out-group.

The Russian invasion of Ukraine is arguably one of the core issues concerning states worldwide. Examining the factors behind public divisions on such a prominent issue is crucial. Arguably, peace in Europe can only be realized when governments maintain consistency in their policies and in their supply of military support to Ukraine. Domestic discontent in Eastern Europe can threaten this. Secondly, the division over Ukraine gives a viable pretext

for populist parties in Eastern Europe, a region that is already a host of rising populist parties. Understanding the cleavages that the war helps deepen is an important scholarly question to tackle.

I address this dynamic situation by conducting a survey experiment in Bulgaria in July 2023 (N=1626), a country that has found itself in the cross-fire between the West as an EU and NATO member, and Russia as its historical and cultural ally. Bulgaria's domestic political parties and public are highly divided on this issue, which makes it an ideal case to explore this question. In my survey, 47% of respondents support the Bulgarian government military aid to Ukraine, while 53% do not. What shapes their opinion? I am particularly interested in how cultural-religious identity and the appeal of Russia's sacred image among Christian Orthodox adherents shape respondents' support of Ukraine over Russia. I compare a cultural-religious frame against economic-rational and populist-institutional frame in testing the difference of effects. I find that, the cultural-religious priming does not have an effect across the general population. Moreover, I do not note difference in effect even among Christian Orthodox individuals when primed with this frame, which is contrary to the expectation I set forward. The results do not change when I consider the salience of this identity nor the intensity of their religious practices. Measuring Russophilia not with Christian Orthodox identity as a proxy, but rather by respondents' opinion on Russia's cultural proximity to their own group and their opinion on Russia's leadership, also does not reveal a differential effect among respondents treated with the cultural-religious frame relative to those in the control group. Interestingly, only those that score very low on the Russophilia scale i.e. are not Russophiles, support Ukraine more compared to their counterparts in the control group, suggesting a *backlash* effect against the cultural-religious framing of the war.

In regard to the alternative frames, contrary to my expectations, priming individuals with the populist-institutional frame does not appeal to those that exhibit strong anti-EU sentiment nor those that rank high on the scale measuring populist attitudes. Those that score low on the EU-skepticism scale push back against the populist-institutional frame and

support Ukraine more compared to those in the control group, suggesting, once again, a *backlash* effect against the populist-institutional frame. Finally, across different indicators, economically vulnerable individuals do not support Ukraine any less when primed with the economic frame compared to their counterparts in the control group, suggesting that priming these individuals with information on the economic consequences of the war are not a decisive factor among individuals either. What drives strong opposition or support to Ukrainian support then? To investigate additional determinants of Ukrainian support, results from the pooled sample show that fear of being drawn into the war as a NATO member and news consumption are strong determinants of support, with the first having negative effect and the latter a positive effect. While much of the discussion on populism has revolved around economic, anti-institutional, or cultural issues, these findings suggest that, people's attitudes in the divisive issue of the Ukraine-Russia war are shaped by exposure to news rather than any particular framing, even among groups that are arguably vulnerable to such discourses.

This insight is also important in understanding the role of religion in shaping attitudes; while religious identity in the form of belonging, believing, and practicing, has been argued to motivate political behavior, in this study, I do not find that religion in this form is a motivating factor. Even among Christian Orthodox adherents for whom their religious identity is highly salient and who practice religion frequently, the threat of an out-group to the cohesion of their religious in-group is not sufficient to shift political attitudes.

To shed light on support during the Russian invasion of Ukraine, my article proceeds in four steps. First, I provide a background of the governmental support of Ukraine in the past two years, the popular backlash, and the extant Russian historical and cultural influence in Bulgaria and the broader region. Second, I leverage the literature on political opinion formation and populism in theorizing the expectations for opposition of the support for Ukraine. I identify subgroups in the population that may be particularly susceptible to different framings of the reasons and consequences of the war. Third, I present the survey experiment

and the results from the same. The last section concludes by drawing the implications of the findings in this paper for our understanding of the role of identity versus economic and institutional factors in popular backlash.

4.2 Background

The Ukrainian endurance against the Russian invasion and the ongoing war since February 2022 has been largely attributed to the military aid that Ukraine has received from governments across the world. The message by Ukraine's president, Volodymyr Zelensky, has been clear – the only way to "bring peace back to Europe" and stop Russian aggression is to employ powerful and long-range weapons (Bolton 2023). Thus, military support is of utmost importance to Ukraine and the Ukrainian people in their defense against Russia's might. As a non-NATO member, however, Ukraine is not protected by Article 5 (collective defense), thus, bilateral commitments of aid are at the discretion of individual countries and their willingness to pledge aid. The United States is the largest donor of military aid to Ukraine, followed by Germany and Poland (Trebesch et al. 2023). However, when considering the size of countries' economies, Eastern European countries stand out as most generous with Estonia, Latvia, and Lithuania in the lead; in percent of their respective GDPs, Bulgaria, the Czech Republic, and Slovakia are among the top ten countries that distribute aid (military and otherwise) to Ukraine (Trebesch et al. 2023).

While the governments of these countries have been uncompromising in the support of Ukraine, they have had a difficult time consolidating political unity over their actions of support (Nattrass 2022). This is important because public policies at the government level depend on sustained support from the population. The public can arguably revolt and influence decisions on key policy domains. The Czech Republic has experienced several protests since the onset of the war. A number of political groups have organized to demand an end to the government's military support for Ukraine (AssociatedPress 2023). Others, in opposition,

have rallied in favor of continued assistance to Ukraine (Kahn 2022). Similar events have emerged in both Slovakia and Bulgaria. In Slovakia, about two-thirds of Slovaks, according to the latest public poll, support Russian victory in the Russia-Ukraine war (Lewkowicz 2022). In Bulgaria, the war has created deep internal divisions between pro-Russia and pro-EU elements among both the political elites and the society (Antonov 2023). In these countries, the war has become yet another defining issue over the national identity and priorities.

The common argument is that this popular disunity has developed along traditional political divides – social conservatives, Euroskeptics, and rural residents on one side, and progressives, pro-EU, and urban residents on the other. Indeed, when observing the demographic differences in public opinion polls, residents of the capital cities (Bratislava, Prague, Sofia as examples), richer regions, as well as liberal individuals, show stronger support for Ukraine relative to rural residents and conservatives. However, there are also some puzzling correlations. For example, in Slovakia, younger individuals (30-39 years of age) show higher support of Russia (Nattrass 2022). It is unclear why younger individuals are demonstrating higher support of Russia when, commonly, nostalgia of Russia is predominantly a phenomenon of the older generations. Similarly, the geographical differences of support in Slovakia is also puzzling with some Western regions expressing the highest support for Russia (Lewkowicz 2022).

Russophilia is a viable, yet often overlooked, factor to consider. Emotional attachment of Eastern European individuals to Russia remains strong for a number of reasons. Some people's fondness for Russia stems from a nostalgia for the communist era. Even when individuals recognize the benefits of the Western democracies and economies, and generally report inclinations to live and work in the West, individuals still exhibit strong preference for Russia's cultural influence (Gruhonjik 2022). However, it is noteworthy that, aside from Ukraine and Georgia, in countries where Christian Orthodoxy is the dominant religion, citizens tend to have strong pro-Russia sentiments (Pew Research Center 2017*c*,*a*). Thus, Christian Orthodox identity in tandem with Russia's image as a guardian of Christian Orthodoxy, might be

a motivating factor in the popular backlash against the support of Ukraine.

What exactly drives Russophilia in the region? The next section investigates.

4.2.1 The Sacred Image of Russia in Eastern Europe

Eastern Europe is a perfect nexus of clashing cultural convictions. The countries in these regions are caught in between the politics, economic dependencies, and ideologies of the West and Russia. This is especially true for the countries in the Balkan region, for whom the Russian Empire is celebrated as the Slav Orthodox brethren that waged wars "on behalf of kindred Eastern Orthodox nations in the south" (**?**, 3). The fraternity, pan-Slavism, Orthodox solidarity, and the historical bonds date back to the days of Russia's Catherine the Great and the 1774 peace treaty of Küçük Kaynarca with the Ottoman Empire that relinquished certain freedoms to Christian Orthodox in the region. Eventually the Russian Empire's 1878 victory against the Ottomans gave rise to the independent states of Bulgaria, Serbia, and Greece. The history repeated once again when Russia came to rescue of the Southern Slavs and Orthodox Christians at the inception of World War I, when they sent troops in defense of Serbia, and once again after the World War II in 1944 where Russia provided "second liberation" in the region (Bechev 2022). And while history is often susceptible to political distortion, and many events and experiences between Russia and the countries in the region throughout the history show dissonance and conflict as well, the reverence of "Mother Russia" as the protector of the enslaved Eastern Orthodox people and the image of Russia as a beacon of Orthodoxy and "big brother" continues to boast the Russophile tradition in this region (**?**). So much so that, when Vladimir Putin visited the monasteries of Mount Athos in May 2016, he was honored by being given the throne that belonged only to the Eastern Roman emperor before, further demonstrating the sacred image of Russia, especially among Christian Orthodox Slavs.

In the present, Serbia and Bulgaria both exhibit cultural elements that are a nod to their historical connection to Russia. Number of their streets are named after Russian generals,

diplomats, and intellectuals. In Serbia's capital, Belgrade, there is a monument of Nicolas II, the last of Romanov autocrats, while Bulgaria boasts a statue of Emperor Alexander II, known as "The Liberator Tsar" in its capital city, Sofia (**?**). Bulgaria, as an EU and NATO member, is a particularly interesting case and serves as the main stage for the clashing worlds of the West and Russia. Russia played a key role in re-establishing Bulgaria's independence in the 19th century and is credited for Bulgaria's first state institutions – the army, courts, and civil service – that were pivotal for the country's democratic constitution in 1879 (Bechev 2018). To this day, March 3rd is celebrated as Bulgaria's liberation day and the end of the Ottoman rule, commemorating, at the same time, the close ties between Russia and Bulgaria (Nehring 2022). Bulgaria also had the support of Russia after the World War II when the Red Army liberated Bulgaria and consequently, became a loyal satellite to Russia, growing economically due to Soviet-imported technology and aligning their respective regimes (Bechev 2018). The strong ties between the Soviets and Bulgaria's communist regime during the reign of the USSR even gave Bulgaria the informal title of the Union's "16th republic" (Bechev 2022). After the fall of USSR, Bulgaria was a host to a plethora of Soviet-raised politicians, intellectuals, and oligarchs that became influential in the political scene of newly democratizing Bulgaria. Even as Bulgaria started looking westward and joining Western institutions in the late 1990s, Bulgaria was perceived as "the Trojan horse" of Moscow into Brussels (Bechev 2018).

While the dominant tie between Russia and Bulgaria has been a historical and culturally religious one, the second pillar onto which this relationship is based on was Bulgaria's dependence of Russia's oil, gas, and nuclear power (Samorukov 2022). Bulgaria's heavy dependence on Russia's energy companies like Gazprom, Lukoil, and Rosatom, as well as their partnership in building the South Stream and TurkStream pipelines were supposed to solidify the relationship between the two countries. However, when Russia launched a full invasion of Ukraine and Bulgaria found itself between its obligations to the West and the cultural and economic dependencies with Moscow, Bulgaria sidestepped Russia (Bechev 2022). The ini-

tial conundrum caused deep domestic divisions between the President and prime minister of Bulgaria, who have different stands on whether Ukraine should be supported militarily. Despite fervent opposition by the Socialist party, the Bulgarian parliament passed a legislation approving the supply of military aid to Ukraine, alienating Russia in the process, severing the economic ties between the two countries, and resulting in Bulgaria having to pivot to Azerbaijan and Greece for energy imports (Samorukov 2022; Preussen 2022). While this government-level support has been welcomed by the EU and other Western governments, the political disunity over the support of Ukraine remains, with pro-Russian protesters frequently waging anti-war demonstrations in the capital city of Sofia (Camut 2023).

Presently, Bulgaria is a host to a number of Pro-Russian political parties that continue to promulgate pro-Russian propaganda and fuel Soviet nostalgia. One of these parties is Europe's most anti-Western political party Ataka, whose former member congratulated "all Orthodox Slavs" on winning "the Third Crimean War," referring to Russia's annexation of Crimea in 2014 (Bechev 2018). These Kremlinophile populist parties are motivated by the memory of the 1878 liberation and the nostalgia for the communist period, but often use Christian Orthodoxy as a heuristic in evoking collective memory. They are also not an insignificant power as they have continuously (albeit less so in recent months) secured seats in the Bulgarian parliament (Bechev 2018; Bedrov and Dimitrova 2022). The socialist, nationalist, and security apparatus in Bulgaria have traditionally supported and spread this rhetoric in their affairs. Polls show that the general population echoes such sentiment with a relatively large proportion (about 40% in 2022 and 32% in 2023) having positive opinion of Russia and Putin (Nehring 2022). Their supporters can be found across a number of Facebook groups (some of which include "In favour of Bulgarian in the Eurasian Union," "Russophiles.bg", "I love Russia", "About Russia -in Bulgarian", "Friends of the Donetsk and Lugansk People's Republics") that host over 50,000 members (Bechev 2018). Across all platforms, the rhetoric of Russia as Bulgaria's liberator, as well as the common cultural heritage, Christian Orthodox religion, and Slavic language and alphabet is common. Among

the public, the latest reports show that the public is almost equally divided in terms of supporting Ukraine or Russia in the ongoing war (Zankina 2023). Regardless of the reasons for elites' discourse (crude opportunism from both Russia and Bulgarian elites as reasons for perpetuating the cultural-religious rhetoric is certainly a viable argument, albeit not the goal of this paper), the effects on the ground in the form of pro-Russian sentiment in the Bulgarian society is undeniable.

Given the deep historical and cultural connections to Russia, the evidence of Rusophilia in Bulgaria, the salience of the support of Ukraine in domestic politics, and the poll results of almost equal division over the government's policy regarding Ukraine, Bulgaria presents a fitting case study to test the drivers of opposition to the support of Ukraine. Bulgaria is only second to Serbia in terms of the proportion of the public that is pro-Russia and anti-West in the Balkan region, making it the best-case scenario for detecting the effect of Russophilia. Second, even though Bulgaria is an EU (and NATO) member since 2007 (and 2004), Bulgaria still has significant political fractions that are closely aligned with Russian politics. Finally, the public is almost equally divided in terms of supporting Ukraine or Russia in the ongoing war (Zankina 2023), meaning that, even though there is a strong Russophilia present, there may be other factors driving the attitudes toward either party in the war, giving me variation in testing alternative explanations.

The next section outlines the theoretical expectations for the drivers of citizens' support for public policy and relatedly, the disunity between citizens and their government's policy preference over the support of Ukraine.

4.2.2 Individual Preferences & Attitudes toward Public Policy

When discussing the driving factors of citizens' formation of opinions toward their government's policies, several competing theories emerge. Scholars argue that individuals' long-standing symbolic attitudes like ideology, identity, and deeply rooted beliefs to be one set of drivers (Nelson and Steinberg 2018; Mutz 2018; Hainmueller and Hiscox 2007; Sides and

Citrin 2007). When it comes to attitudes toward public policy that affect oneself and that one's own group, individuals may activate their collective, or social identities (Sharafutdinova 2022). A social identity is "what marks us out as different from other groups" (Reicher 2004, 929). Social identity is a historical and cultural construct, meaning that, while navigating their social networks, engaging in economic activities, participating in cultural activities, and interacting with political dynamics, individuals construct their in-group identity which describes the group that provides individuals with a sense of belonging, pride, and self-esteem (Brubaker 2006; Tajfel 1970). Such identification with an in-group naturally places others that do not identify with the same group as an out-group. Moreover, given the psychological value one derives from being in a group, individuals will seek to increase the value of their own group, often at the expense of the out-groups (Sharafutdinova 2022; Tajfel et al. 1979). Lastly, while individuals can have multiple identities, special circumstances can make some forms of social identity more salient than others (Simon and Klandermans 2001). One factor that can lead to such activation of collective identity is the perceived threat to one's group dominance and status.

In the context of Bulgaria, but also in the broader Eastern European region, the expansion of the West and its liberal values may be perceived as a cultural threat to the traditional, religious values and cultural cohesion in the region. The Russia-Ukraine war may be perceived as a proxy war between the West and the East, where one side presents the cosmopolitan and liberal values and the other the traditionally religious values. Even though Ukraine also has a major population of Christian Orthodox adherents, Ukraine is largely perceived as a Western-backed nation that is under the influence of the West and its progressive ideals. Given the national importance of Russia in Bulgaria and the strong identification with Christian Orthodoxy (more than 80% of Bulgarians identify as Christian Orthodox), one possible mechanism to explain the backlash against Ukrainian support is the defense of their cultural-religious identity that is under threat of the encroaching progressive West. In this view, the Western-backed Ukraine and their related values are perceived as the out-

group and the war in Ukraine is a cultural-religious war against any form of identity that is not Christian Orthodox. Similarly, another related mechanism is driven by the historical and national importance of Russia in Bulgaria, as the previous section elaborated. The perception of Russia as a liberator of their Christian Orthodox nation and protector of their common faith, Slavic culture, language, and identity may be the motivating factors. Despite the political turmoil between the two countries in recent months, and perhaps the rational understanding individuals may have of the war, embedded identities can still foster political, cultural, and historical attachments and consequently shape political behavior (Calhoun 2007). In both mechanisms, given the historical presence, importance in national identity construction, and popular affiliation, Christian Orthodoxy is an approximate indicator of this affinity toward Russia and attachment to traditional and religious value.

I expect priming individuals with the cultural-religious frame to have a negative effect on their support for the government's military aid to Ukraine. However, I expect the cultural-religious priming to only affect specific subsets of the Bulgarian population – groups that have some latent Russophile attitudes like being devout Christian Orthodox. Moreover, I expect the effect to be intensified among individuals that are Christian Orthodox and are also highly religious (measured as self-reported importance of religion and frequency of religious practice). This is because, adherents that practice their religion through attendance and prayer and find religion important are arguably more invested in their religion as these are costly activities and thus, more likely to be protective of their religion. In this region, "belonging without believing" is a common religious trend as individuals relate to their national religion without invested belief or practice any more than attending traditional religious festivals (Pew Research Center 2017*b*). Thus, in this context, it is important to disentangle the belonging versus behaving nexus. I construct the first set of hypotheses:

> ***H1a:*** Individuals that strongly identify with a Christian Orthodox religion are less likely to find their government's military support of Ukraine justifiable when primed with the cultural-religious frame relative to the control frame.

H1b: Individuals that strongly identify with a Christian Orthodox religion and are highly religious are less likely to find their government's military support of Ukraine justifiable when primed with the cultural-religious frame relative to the control frame.

In juxtaposition to theories arguing for identity-based opinion formation, one approach argues that citizens are driven by personal material interests (Curtis, Jupille and Leblang 2014; Scheve and Slaughter 2001; Gabel 1998; Tucker, Pacek and Berinsky 2002). If a proposed policy is directly affecting individuals' pockets, self-interested individuals will evaluate public policies based on the economic consequences of said policy. Moreover, individuals who are directly and immediately financially affected by a given policy are more likely to consider material concerns in their evaluation of a given policy (Bearce and Tuxhorn 2017; Citrin and Green 1990; Rho and Tomz 2017).

In the case of Bulgaria, where 90% of its energy came from Russian imports, the sudden suspension of energy flow from Russia led to a surge in energy prices and economic anxieties in Bulgarian households. Despite the government's efforts to secure alternative supplies at affordable prices from Azerbaijan and Greece and to shoulder the burden of energy price spikes to businesses and households (Reuters 2022), Bulgarian households noted price increases of over 20%. The Bulgarian National Statistical Institute shows that the purchasing power of Bulgarian household has declined since 2021 due to rising electricity prises and food costs (Kandilarov 2022), and has mainly affected low- and middle-income households and those reliant on transport fuels and electricity prices (Steckel et al. 2022). These macro events that frustrate people's economic standing have shown to increase fear of future economic status of oneself and that of one's group, prompting individuals to revolt against the political system (Ahlquist, Copelovitch and Walter 2020; Rodrik 2018). In terms of Bulgarian's support of Ukraine, supporting Ukraine militarily may be perceived as an expensive endeavor (opportunity cost of spending resources on meeting the economic challenges in the country), as a way for prolonging the war and reducing the likelihood of reestablishing energy supply with Rus-

sia, and further endangering the economic conditions in a country that is already the poorest among EU member countries. Given this, I expect priming individuals with the economic frame to have a negative effect on their support for the government's military aid to Ukraine. While I do not expect this effect to be noted among the general population, I expect it to be lower among those for whom the distributional consequences of the war are the starkest (Alesina and La Ferrara 2005; Malhotra, Margalit and Mo 2013), namely the economically vulnerable groups. These include low- and middle-income households, unemployed individuals and those with low educational attainment, as well as individuals that have experienced worsening incomes in the last year. Thus, the second hypothesis is as follows:

> ***H2:*** Individuals that are economically vulnerable are less likely to find their government's military support of Ukraine justifiable when primed with the economic frame relative to the control frame.

Alternative growing body of literature argues that political institutions, or more specifically, the decline of responsiveness and effectiveness of political institutions have caused backlash against governments and the status quo (Maier, Adam and Maier 2012; Berman 2017; Foa et al. 2020; Berman 2021). In the European context, the growing power of the European Union, the decline of mainstream political parties, and the transfer of power to unelected technocrats have fertilized the ground for popular discontent (Scicluna and Auer 2019; Nanou and Dorussen 2013; Gabel and Scheve 2007; Svallfors 2017). Important for the Eastern European context broadly is the role of the European Union. Namely, scholars argue that the causal link lies in the European Union's expansion and increasing judicialization of politics to a point where national governments are inferior to the EU institutions and leave limited room for mobilization by domestic electoral processes. The region has noted growing skepticism of the European Union, and in Bulgaria the Eurosceptic sentiment is, in general, mixed with some expressing strong disapproval of the European Union and supporting parties that are Eurosceptic, while others expressing higher trust in the EU relative to national institutions (Ivanova, Koleva and Chafkarov 2022). Thus, another viable factor is

the involvement and role of Brussels and the European Union in the Russia-Ukraine War. I expect individuals indicating skepticism of the European Union and institutions, and those that are generally distrustful of political elites, domestic and EU elites to be the group that is affected by the populist-institutional frame. The final set of hypotheses are as follows:

> ***H3a:*** Individuals that are skeptical of the European Union are less likely to find their government's military support of Ukraine justifiable when primed with the populist-institutional frame relative to the control frame.
>
> ***H3b:*** Individuals that are skeptical of the political elites are less likely to find their government's military support of Ukraine justifiable when primed with the populist-institutional frame relative to the control frame.

To be noted, scholars have found that elite cues, propaganda, and misinformation all play a role in citizens' public opinion formation and attitudes (De Vries and Edwards, 2009; Gabel and Scheve, 2007; Hooghe, 2007; Steenbergen et al., 2007). I perform exploratory analysis to determine whether the results are driven by level of consumption of news about the war (which arguably equalizes pre-treatment across respondents), as suggested in experimental studies (Druckman and Leeper 2012). Finally, Russia has been active in sharing propaganda and misinformation, utilizing the notion of pan-Slavic unity, language proximity, and shared history and cultural ties in the region (Luceri, Giordano, andFerrara 2020; Ferrara et al. 2020; Ezzeddine et al. 2023), and while the effect may be conditional on propaganda, the direction of attitudes will likely remain the same as it is dependent on existent pre-dispositions as prior studies on propaganda effects have found (Adena et al. 2015).

4.3 Data and Methods

4.3.1 Sample

To test the hypotheses, in July 2023, I fielded an original online survey-embedded experiment to a sample of 1626 respondents in Bulgaria. The sample was randomly drawn from a larger representative panel provided by a survey research firm Cint. The sample was stratified with respect to age and gender to match the adult population margins in Bulgaria. Everyone between the age of 18 to 65, with access to the internet and a device was the eligible population. Prior to administering the survey, I received approval from the human subject ethics committee at the University of Washington (STUDY00018256) and pre-registered the survey here. I also piloted the survey to a sample of 80 respondents (20 respondents per group) prior to the full launch to assess the survey design. The completion rate of the final survey was 84%.

Figure 4.1 includes the summary statistics of the whole sample and summary statistics per group. Due to randomization, the four groups of respondents are similar to one another in all the observed and unobserved characteristics (in expectation). A cursory look at Figure 4.1 shows that the respective sizes and averages of the covariates are comparable, and any small differences are likely due to chance, a natural part of the sampling process. However, to ensure successful randomization and eliminate the possibility of imbalance and selection bias, the last column in Figure 4.1 provides the p-values (from Fisher's Exact Test and Kruskal-Wallis rank sum test for categorical and continuous co-variates, respectively). None of the differences are significant on the conventional level, with the exception of level of war-related info consumption and age. Additionally, I regress the assignment outcomes on the covariates, and I only find the level of war-related info consumption to have a significant correlation at the .90 confidence level. One possibility of a self-selection bias is that those respondents who are well-informed on the events surrounding the war were more likely to

drop out in the control group because they might have thought the information provided of the control frame is narrow. To account for this possibility, in addition to the main models, I control for this covariate in alternative models.

4.3.2 Experimental Design

The survey was conducted in Bulgarian language and programmed in Qualtrics. It was translated from English to Bulgarian and checked for cultural sensitivity by a Bulgarian native and the author. Participants were randomly assigned into four groups, one control and three treatment groups. Each group received one paragraph of text, where only keywords in the text changed, while the rest stayed the same. The summary of the text presented the war in terms of reasons for happening per "one of many shared opinions" and the consequences related to said reason. The first treatment group (T1) received the framing of Russia-Ukraine war as cultural-religious emphasizing threat to Christian Orthodox religion and values; the second treatment group (T2) received the framing of Russia-Ukraine war as economic emphasizing the threat to energy security and economic well-being, and the third treatment group (T3) as institutional war emphasizing the sovereignty threat posed by the European Union in Eastern Europe. Each frame emphasizes keywords that are most commonly related to the cultural-religious, economic, and institutional framing found in popular media. Figure 4.2 provides the text of each individual frame. All frames are between 102-105 words in length.

Experimental noncompliance is a common issue in experiments, but especially so in an online setting (Berinsky, Margolis and Sances 2014). To address the concern of inattentive and low-effort respondents, I follow recommendations from the literature and implement several tactics in the survey design (Harden, Sokhey and Runge 2019). First, after confirming with the pilot that reading the text carefully takes, on average, between 10-15 seconds, I programmed the survey to ensure that respondents devote at least 11 seconds to reading the text before being able to move to the next question. This forces respondents to spend

Figure 4.1: Summary Statistics (Overall and Per Group)

Characteristic[1]	Overall, N = 1,626[2]	control, N = 406[2]	t1, N = 406[2]	t2, N = 404[2]	t3, N = 410[2]	p-value[3]
Gender						0.6
Female	818 (50%)	202 (50%)	196 (48%)	214 (53%)	206 (51%)	
Male	802 (50%)	203 (50%)	209 (52%)	189 (47%)	201 (49%)	
Location						0.4
Urban/city	1,058 (65%)	271 (67%)	268 (66%)	271 (67%)	248 (60%)	
Town	481 (30%)	117 (29%)	117 (29%)	111 (27%)	136 (33%)	
Rural/village	87 (5.4%)	18 (4.4%)	21 (5.2%)	22 (5.4%)	26 (6.3%)	
Educational attainment						>0.9
College and Up	958 (59%)	233 (57%)	240 (59%)	240 (59%)	245 (60%)	
No College	668 (41%)	173 (43%)	166 (41%)	164 (41%)	165 (40%)	
Employment level						0.3
Full-Time	1,153 (71%)	298 (73%)	279 (69%)	293 (73%)	283 (69%)	
Other than Full-Time	473 (29%)	108 (27%)	127 (31%)	111 (27%)	127 (31%)	
Religious status						0.6
Religiously Affiliated	983 (60%)	254 (63%)	242 (60%)	253 (63%)	234 (57%)	
Believer	406 (25%)	96 (24%)	96 (24%)	96 (24%)	118 (29%)	
Agnostic	39 (2.4%)	10 (2.5%)	12 (3.0%)	10 (2.5%)	7 (1.7%)	
Atheist	198 (12%)	46 (11%)	56 (14%)	45 (11%)	51 (12%)	
Religious affiliation						0.5
Christian Orthodox	849 (86%)	215 (85%)	208 (86%)	227 (90%)	199 (85%)	
Christian Catholic	27 (2.7%)	11 (4.3%)	8 (3.3%)	4 (1.6%)	4 (1.7%)	
Christian Protestant	22 (2.2%)	7 (2.8%)	5 (2.1%)	5 (2.0%)	5 (2.1%)	
Muslim	64 (6.5%)	18 (7.1%)	15 (6.2%)	14 (5.5%)	17 (7.3%)	
Other	21 (2.1%)	3 (1.2%)	6 (2.5%)	3 (1.2%)	9 (3.8%)	
Info consumption on war						0.021
High War Info Consump.	725 (45%)	156 (38%)	188 (46%)	180 (45%)	201 (49%)	
Low War Info Consump.	901 (55%)	250 (62%)	218 (54%)	224 (55%)	209 (51%)	
Social media consumption						0.2
High Social Media Consump.	967 (59%)	254 (63%)	235 (58%)	227 (56%)	251 (61%)	
Low Social Media Consump.	659 (41%)	152 (37%)	171 (42%)	177 (44%)	159 (39%)	
Political ideology						0.14
center	549 (34%)	121 (30%)	156 (38%)	132 (33%)	140 (34%)	
conservative	244 (15%)	52 (13%)	61 (15%)	65 (16%)	66 (16%)	
liberal	588 (36%)	158 (39%)	135 (33%)	153 (38%)	142 (35%)	
not political	245 (15%)	75 (18%)	54 (13%)	54 (13%)	62 (15%)	
Age	40.19 (12.83)	38.91 (12.48)	40.82 (13.30)	39.83 (13.05)	41.22 (12.39)	0.072
News Consumption	1.34 (1.29)	1.30 (1.30)	1.37 (1.31)	1.31 (1.29)	1.37 (1.26)	0.6
Income level	1.92 (1.42)	2.01 (1.48)	1.93 (1.38)	1.79 (1.36)	1.96 (1.46)	0.2

[1] Categorical variables are treated as ordinal ones with their means and standard deviations being reported. Weekly news consumption is originally coded as 0-1hrs (0), 2-4hrs (1), 4-6hrs (2), 6-8hrs (3), 8+hrs(4); Monthly income is originally coded as Up to 1000levs (0), Between 1000-2000levs (1), Between 2000-3000levs (2), Between 3000-4000levs (3), Between 4000-5000levs (4), Between 5000 and 6000levs (5), More than 6000levs (6); he high/low consumption of war-related info and social media categories are constructed based on whether respondents have consumed more than half/less than half of their news consumption on war-related content and social media, respectively; Measure of Russia Connection is an additive index measure based on three questions inquiring whether the respondents or their close family/friends have been born, been educated, or have lived in Russia (0/1); High/low war-related and social media news consumption is based on whether respondents have spent more than half/less than half from overall news consumption

[2] n (%); Mean (SD)

[3] Fisher's Exact Test for Count Data with simulated p-value (based on 2000 replicates); Kruskal-Wallis rank sum test

Figure 4.2: Priming Frames per Group

Control (Historical Character)
There are many opinions on the reasons for the war between Russia and Ukraine. One shared opinion is that the ongoing tensions between the two countries that have lasted for many decades finally escalated in the winter of 2022, prompting the deployment of both Russian and Ukrainian troops and making Ukraine a battlefield where these two forces meet. In this view, the war has a historical character as it has been long expected given the contentious history of the two countries. Thus, the war is perceived to have historical roots with many casualties and infrastructure losses on both sides as a consequence.
Treatment 1 (Cultural-Religious Character)
There are many opinions on the reasons for the war between Russia and Ukraine. One shared opinion is that the encroachment upon Christian Orthodox values by Western values has threatened the cultural unity and the religiosity of Eastern Europe, making Ukraine a battlefield between two cultures and prompting a response from Russia as the protector of Christian Orthodoxy. In this view, the war has a cultural-religious character as it will have a consequence on the cultural and religious character of the Eastern European region. Thus, the war is perceived as a cultural-religious war with an increased division between liberal and traditional Orthodox religious values as a consequence.
Treatment 2 (Economic Character)
There are many opinions on the reasons for the war between Russia and Ukraine. One shared opinion is that Russian dominance in the fossil fuel sector has threatened the energy balance in Europe, allowing Russia to exert economic influence in the region and making Ukraine a battlefield over economic dominance. In this view, the war has an economic character as it will have a consequence on how Russia can influence the economies of the Eastern European region. Thus, the war is perceived as an economic war with the disruption of energy supplies increasing energy prices and cost of living as a consequence.
Treatment 3 (Institutional Character)
There are many opinions on the reasons for the war between Russia and Ukraine. One shared opinion is that the increased influence of the European Union and Brussels has threatened the sovereignty of nations in Eastern Europe, prompting a response from Russia as the antagonist to these Western institutions and making Ukraine a battlefield between institutional interests. In this view, the war has an anti-institutional character as it will have a consequence on the influence the EU can exert in the Eastern European region. Thus, the war is perceived as an institutional war with an increased division between pro-EU and anti-EU actors as a consequence.

some time reading and processing the information in the treatment/control. Second, as an attention check, I employ additional "latency measure" – impatience/low-effort – by checking after how many seconds, before the 11 seconds were up, the respondent tried to click to move on to the next page as an attention check. Finally, I ask two manipulation questions that are frame-specific to ensure that respondents have received the intended treatment.

After respondents read the respective assigned frames, they read a sentence that their government has pledged military aid to Ukraine in the form of equipment and ammunition. Once again, the respondents are required to spend 5 seconds reading the question and indicating the answer before being able to move to the next question. My outcome variable refers to the degree to which respondents believe this support is justifiable on sliding scale from 0-7, ranging from completely unjustifiable to completely justifiable.

To separate compliers from non-compliers, I assess whether respondents tried to click (once or more) to move onto the next page within the first five seconds of seeing the text before the button for the next question becomes available and whether they answered the manipulation check questions correctly. Following this criteria, I identified 86 respondents as

inattentive/failed the manipulation check (5% of the total sample). Since dropping inattentive respondents may cause posttreatment bias and bias the estimation of the causal effect (Varaine 2023; Aronow, Baron and Pinson 2019), I run the main models on both samples and I find no meaningful differences between the two sets of results. To minimize posttreatment bias, I continue the use the full sample for the main results of the paper.

4.3.3 Operationalization

To test the hypotheses, I use multiple questions in the survey and construct my moderator variables. After indicating how justifiable the support of Ukraine in military aid by the Bulgarian government is, I listed several potential factors and asked them to indicate on a 5-point Likert scale how much they influenced their decision. I also presented respondents with a set of questions that measure populist attitudes on a 6-point Likert scale, as well as trust in different institutions and closeness to different social identities, both measured on a 8-point Likert scale.[1] I also asked them to report their news consumption on social media and elsewhere and respondents' level of news consumption specifically on the Russia-Ukraine War. The last battery of questions inquired about respondents' opinion on Russia, Vladimir Putin, and questions on any familial or educational connections to Russia. Finally, I inquired demographic questions on year of birth, rural/urban location, educational level, employment status, political ideology, income, religious affiliation, and frequency of religious practice.

Based on these questions, I construct four indices: 1) populism, 2) EU-skepticism, 3) attitudes toward Russia, and 4) religious intensity. I construct the populism index based on six items that capture anti-elitism, people-centrism, and homogeneity of the people (Schulz et al. 2018). After conducting a factor analysis, based on eigenvalue method ("Kaiser Rule") and a scree test, all six items load onto one factor, meaning that they capture the same latent measure. I add the scaled values of each six items (Cronbach's Alhpa is 0.76) and I construct the populist index to use in my subsequent analysis. I follow the same process to

[1]The variation in the range of Liker scale are due to the framing of the question, but in the analysis, I scale these measures for comparability

construct an index on EU skepticism. While the populism index measured attitudes against political leaders (both domestic and EU-based), this index captures attitudes toward EU institutions. For this index, I use six items that load onto the same latent measure (Cronbach's Alpha is 0.88). To measure sentiment and connections to Russia, I first include six items. Factor analysis loads the items into two different factors, one that I name *Russophilia* (Cronbach's Alhpa is 0.71) as it contains two questions that inquire about respondents' opinion on President Putin and beliefs about cultural connection to Russia. The other factor contains three questions and I name *Russo-connections* (Cronbach's Alhpa is 0.70) as they inquire whether a respondents is born, educated, or currently have family/friends in Russia. Finally, I construct a religious intensity index based on respondents' self-reported frequency of prayer and attendance in a place of worship, as well as self-reported importance of religion in their lives, which load onto one factor (Cronbach's Alpha is 0.73). I also attempt to construct an index on economic vulnerability, but the survey items all uniquely load onto separate factors, meaning that creating an index of these items will not capture the same latent measure, so I consider items on respondents' economic standing (income level, income variation, education, and employment) separately. Figure 4.3 presents the summary statistics of these indices per group. The statistically significant difference between groups that the table shows for the measure of Russophilia (on the .95 confidence level) and the measure of populist attitudes (on the .90 confidence level) indicates the possibility of posttreatment bias. While scholars are increasingly exploring ways in which to reduce posttreatment bias and trade-offs between this bias and priming bias if we were to include covariate questions prior to the treatment, scholars are yet to find the best practices that also align with limited resources of conducting these experiments (Blackwell et al. 2023). Thus, the models containing these variables should be interpret for causality carefully.

Figure 4.3: Summary Statistics of Indices

Characteristic	control, N = 406[1]	t1, N = 406[1]	t2, N = 404[1]	t3, N = 410[1]	p-value[2]
Measure of Populist Attitudes	0.02 (3.79)	0.01 (4.15)	-0.19 (3.73)	0.35 (3.93)	0.094
Measure of EU-Skepticism	-0.05 (4.53)	0.26 (4.71)	-0.32 (4.42)	0.12 (4.76)	0.2
Measure of Russophilia	-0.12 (1.74)	0.15 (1.75)	-0.15 (1.70)	0.10 (1.74)	0.017
Measure of Connections to Russia	0.04 (0.99)	0.02 (1.02)	-0.08 (0.88)	-0.02 (1.04)	0.3
Measure of Religious Intensity	0.17 (2.47)	0.03 (2.43)	-0.03 (2.45)	-0.10 (2.40)	0.4

[1] Mean (SD)
[2] Kruskal-Wallis rank sum test

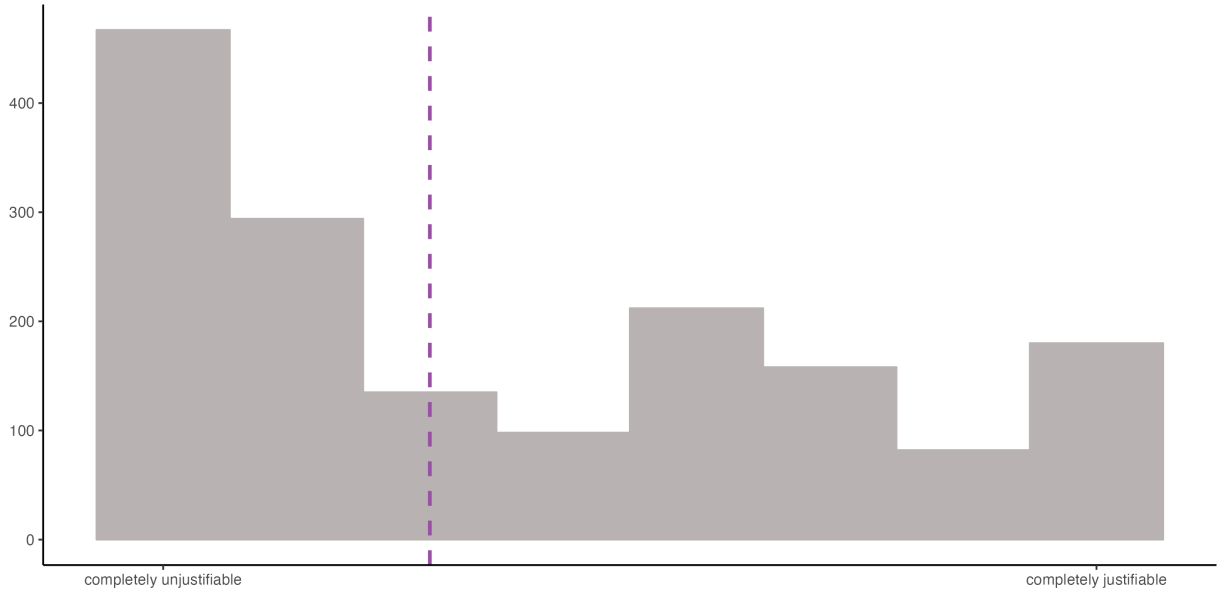
4.3.4 Empirical Strategy

To test the hypotheses, I employ ordinary linear least squares regression (OLS) and regress the outcome indicator on treatment group assignment, where I treat the control group as a reference group. In testing the additional hypotheses, I use samples of respective subgroup of interest in a regression setting. In continuation, I present the sample average treatment effect (SATE) estimand for each model. As the sampling for the survey experiment was random sampling of the population, the estimated treatment effects from the regressions are unbiased estimator of the population average treatment effect (PATE), eliminating the need for any post-hoc weighting or standard error adjustments (Abadie et al. 2023; Franco et al. 2017; Imai, King and Stuart 2008).

4.4 Results

Figure 4.4 reports the distribution of the outcome measure, respondents' opinion on the justifiability of military aid to Ukraine (henceforth, support for Ukraine for brevity), across the pooled sample. As the graph shows, the largest group of respondents find military aid to Ukraine completely unjustifiable (29%), while 11% think it is completely justifiable. About 47% of all the respondents rank the support below 2 (the median of the outcome variable), and 53% above, with the sample being left-skewed.

Figure 4.4: Distribution of Outcome Responses



Bar plots indicate the number of respondents in each category of support (0-7). Dashed line represents median value.

Individuals that ranked the justifiability of aid below 2.5 on the sliding scale (not justifiable in figure), ranked that the West is to blame for the war and that Bulgaria should help with humanitarian and not with military aid as very or extremely important factors in their decision over 50% of the time, and the reason that supporting Ukraine diverts national resources and that the Ukrainian government is not working in favor of the Ukrainian people following behind with a few percentages less. Those that find the aid justifiable, conversely, rank the support for Ukrainian sovereignty and territorial integrity as reasons more than 50% of the time.

Figure 4.6 plots the results of an OLS regression model, depicting the average treatment effects of the three priming experiments in relation to the control group. The estimates present the absolute difference between the mean value of the treatment group in relation to the control group, and it shows that across the three groups, the priming with any of the frames did not have an effect on the public's support for Ukraine as these differences are not statistically significant. This is in line with my expectations that the frames will not have an effect on the general population.

Figure 4.5: Breakdown of Ranked Reasons for Support

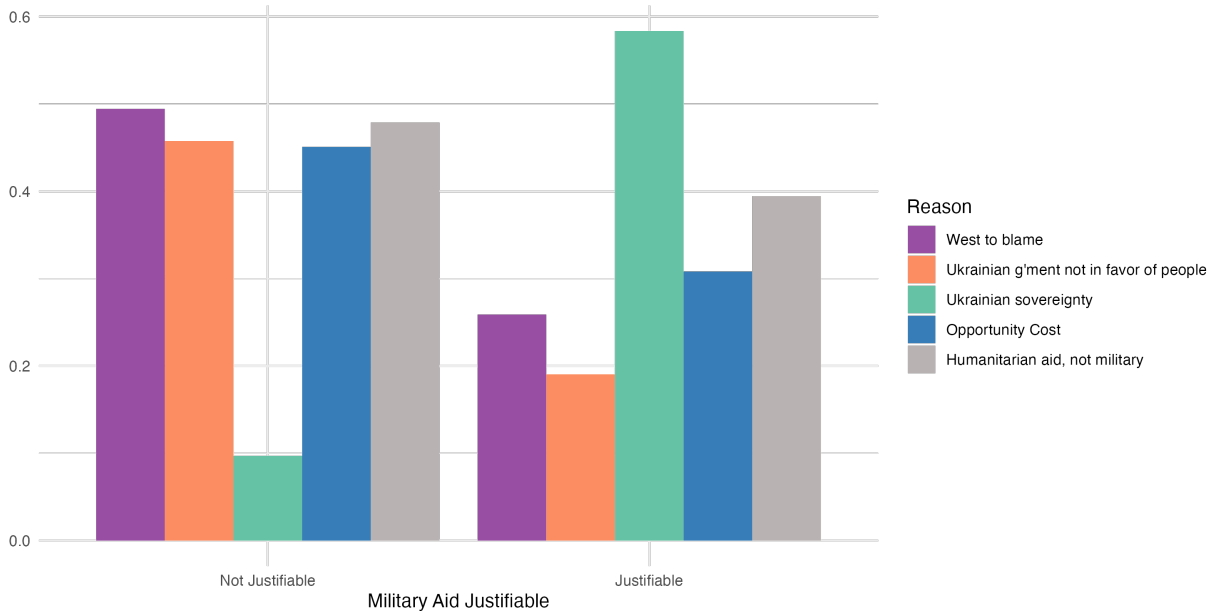
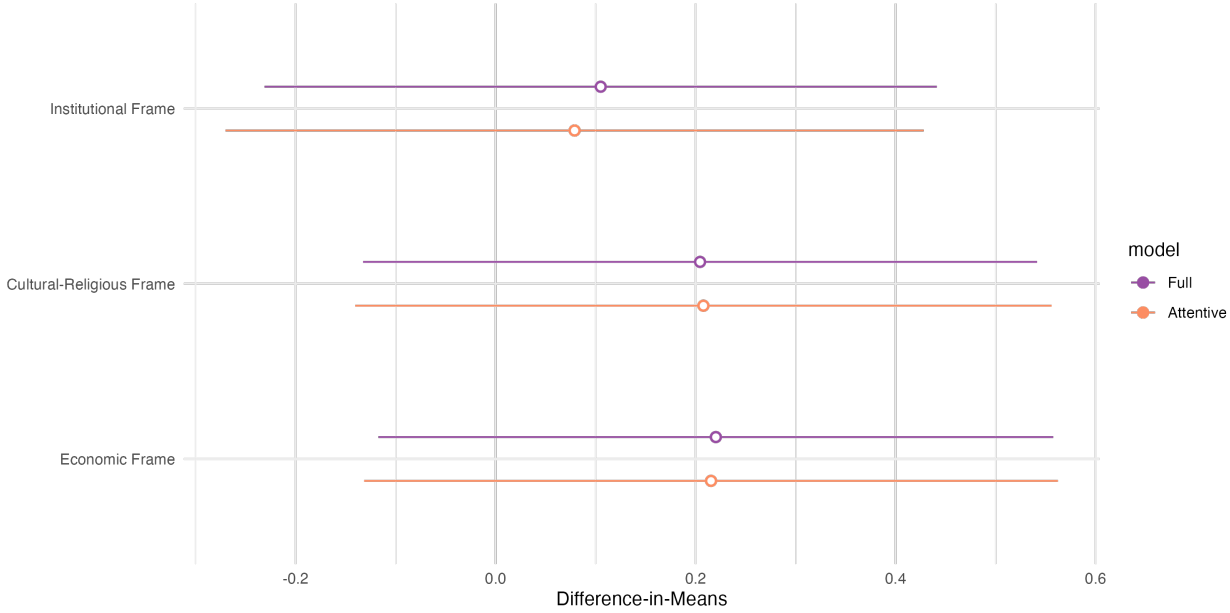
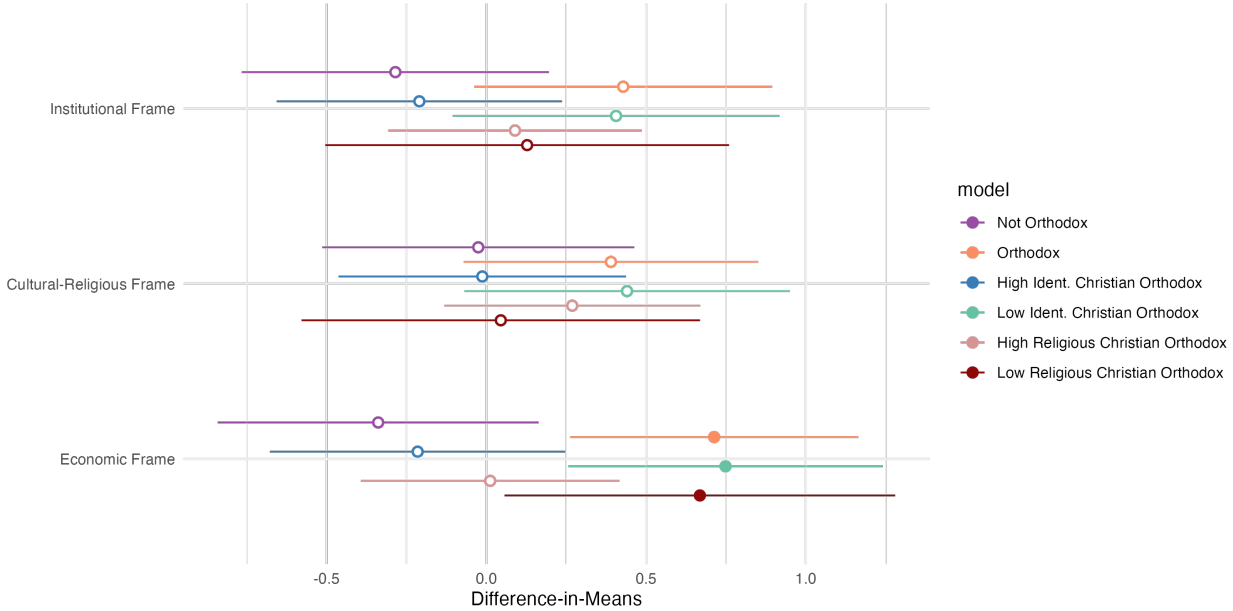


Figure 4.6: Difference-in-means from OLS estimation



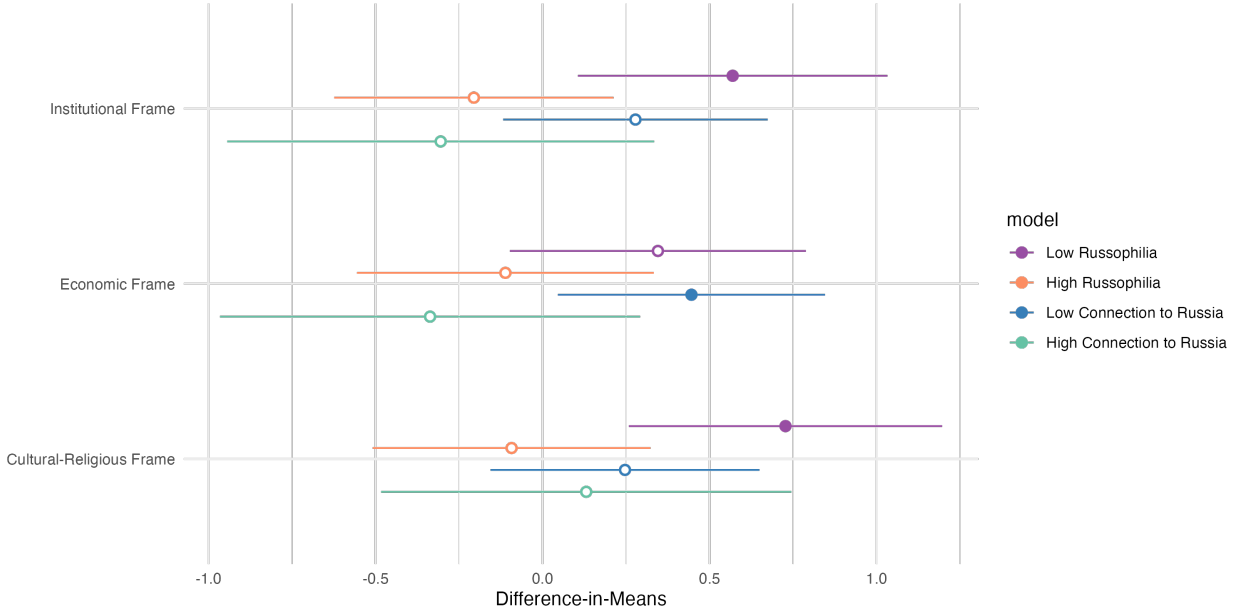
Although general effect of framing is weak across the general population, framing may have heterogeneous effects across different subpopulations. In other words, the opposition over the support for Ukraine may be multifaceted and different groups will be more susceptible to different reasoning and will respond differently. As hypothesized above, the Russia-Ukraine war may be perceived as a cultural-religious war where the clash exists between Russia as the protector of the Christian Orthodox faith and values and the Western-backed Ukraine who encroaches upon the traditional values of Christian Orthodoxy. Thus, those that identify as Christian Orthodox may react against the support of Ukraine in the name of protecting their in-group collective identity. Consequently, I hypothesized that when primed with cultural-religious frame, Christian Orthodox adherents will reduce the support for Ukraine. Additionally, the effect will be also negative among those that are Christian Orthodox and highly religious. Figure 4.7 depicts the result from this subgroup analysis. When individuals are primed with the cultural-religious frame, neither being an adherent of the Christian Orthodox faith nor the identity's salience or intensity of religious practice make any difference in how these groups respond to the cultural-religious frame compared to their counterparts in the control group. This is opposite of what I hypothesized above.

Figure 4.7: Treatment Effect Across Religious Affiliation & Religious Intensity



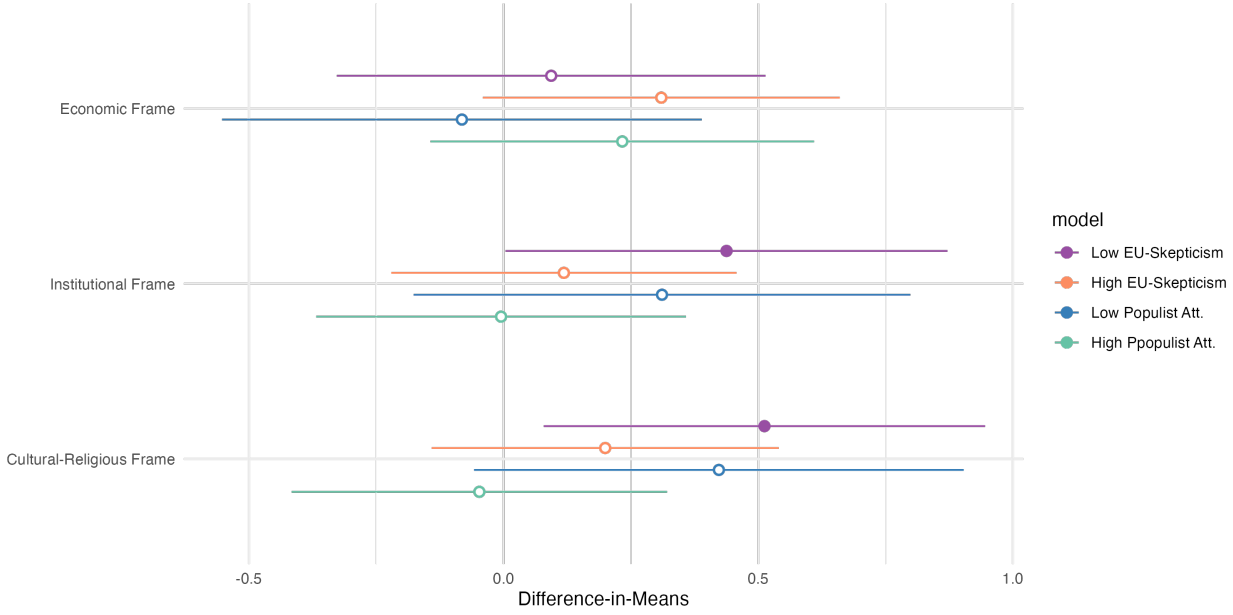
Above, I also argued that Russophilia may be a strong indicator of level of support of Ukraine. One mechanism is the cultural closeness that one feels for Russia as well as the favorability of Russia's leadership, and the other one is the connections to Russia through having been born there, residing or having family there, and being educated there. I hypothesized that those that score higher on the Russophilia scale and are closer to Russia in connection will support Ukraine less when the priming reminds them of the cultural connection. Figure 4.8 reveals no significant nor substantial differences in this group relative to the control group. However, those that score low on the Russophilia scale (whom one might call Russophobes), support Ukraine more than those that have the opposite opinion, and they do so significantly more than those individuals in the control group. This suggests a *backlash* effect against the cultural-religious frame among Russophobes. One plausible explanation is that, while the positive appeal of Russia is not sufficient for individuals to align with Russia against Ukraine, those that view Russia negatively (in terms of not being culturally aligned with Russian culture and being critical of Russian leadership) react more strongly against the cultural-religious explanation by showing stronger support for Ukraine relative to those that do not get the cultural-religious message.

Figure 4.8: Treatment Effect Across Russophilia & Connection to Russia



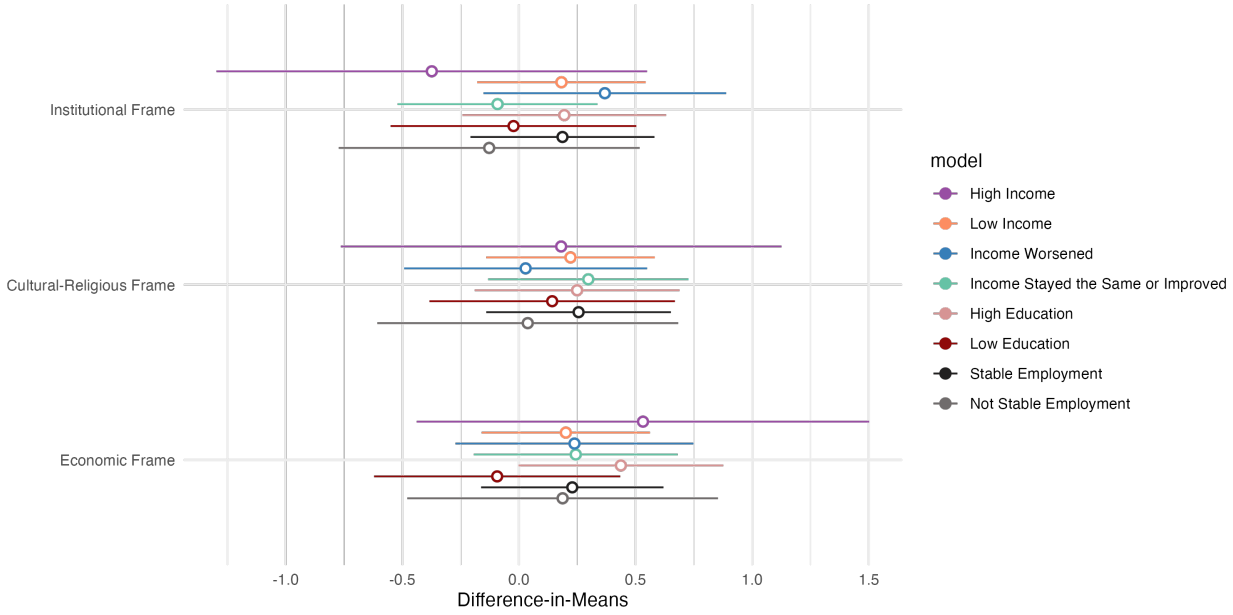
In terms of the anti-institutional reasons for potential backlash against Ukraine's support is the existence of EU skepticism as well as the existence of anti-elitist and anti-government sentiments in the region. Results in Figure 4.9 reveal the results from both measures; those that score low on the EU-skepticism scale are the ones that support Ukraine more relative to their counterparts in the control group, suggesting a *backlash* effect against the framing of anti-Western reasons and consequences of the war. The measure of populist attitudes is not statistically significant, and not much different than the support in the control group. Similarly as with the cultural-religious frame and Russophobes, individuals that are in strong support of the EU react strongly against the anti-EU frame by showing greater support for Ukraine.

Figure 4.9: Treatment Effect Across EU-Skepticism & Populist Attitudes



Finally, what of economic reasons for the opposition to Ukraine's support? Across all of the indicators of economic vulnerability (low income, worsened income, low education attainment, and unstable employment status), the economic framing does not produce any statistically significant effects. Moreover, only those with lower education support Ukraine less than those in the control group with the same status, however, the effect is small and not significant on statistically conventional levels.

Figure 4.10: Treatment Effect Across Economic Vulnerability Indicators



To further investigate the determinants of support of Ukraine, I employ OLS regression and model the relationships between the probabilities of supporting Ukraine (the outcome measure), on the one hand, and the treatments and respondent characteristics, on the other. In addition to respondents' demographic characteristic (age, gender, income, education, ideology, and location), I also include the hours respondents receive news, receive news related to the war, and receive news from social media as well as a measure of how much they fear being drawn into a war as NATO members, given that is one of the commonly cited reasons (Volkmann-Schluck 2023). The pooled regression results show that, indeed, the fear of being drawn into a war is a significant determinant of support for Ukraine; those that are more fearful of being drawn into a war support military aid less. Ideology is also a significant factor, the more liberal an individual is, the more likely they are to support Ukraine. Finally, news consumption is also a significant determinant; those that generally consume news more and those that consume news related to the war frequently support Ukraine more. The only unexpected result is that those with higher income support Ukraine less, which is opposite of the economic reasoning expectation, but it may help explain the null findings of the economic priming in the survey experiment.

Table 4.1: Pooled OLS Regression with Covariates

	Support of Ukraine
religious framing	0.065
	(0.156)
institutional framing	0.012
	(0.158)
economic framing	0.011
	(0.158)
Age	0.002
	(0.005)
News on War Consump.	0.405***
	(0.117)
Social Media Consump.	0.039
	(0.120)
General News Consump.	0.133***
	(0.046)
Ideology	0.201***
	(0.028)
Female	−0.067
	(0.114)
Small town	0.167
	(0.126)
Rural	0.228
	(0.265)
Income	−0.071*
	(0.042)
High Educ. Attainment	0.066
	(0.120)
Fear of War Drawn	−0.584***
	(0.032)
Constant	3.351***
	(0.299)
N	1463
R-squared	0.246
Adj. R-squared	0.239
Residual Std. Error	2.124 (df = 1448)
F Statistic	33.760*** (df = 14; 1448)

***p < .01; **p < .05; *p < .1

4.5 Discussion and Conclusion

This paper tackled an important question over an issue that is currently of highest political concerns in many countries. The response to the Russian invasion of Ukraine has been relatively united so far on the government level, however, the issue has been increasingly politicized on both domestic and European levels, which raises a concern over the unity and polity building of Europe. Policy-making on the elite level does not happen in a vacuum; it depends on popular support for sustainability. The popular backlash against the support of Ukraine in several countries in Eastern Europe has raised the question of what motivates the popular backlash against their government policy on Ukraine. This paper leveraged theories from the literature on political opinion formation and populism to test possible explanations that could appeal to different subgroups and drive popular disunity. Specifically, I compared the cultural-religious, economic-rational, and anti-institutional as the three framings of the war and the consequences of the war that could shape individual opinion. In this paper, I made the argument that strong Russophilia, characterized by close identification to Christian Orthodoxy, is the identity-based motivation that may shape individuals' support of Ukraine in relation to Russia. I expected this to be of salience to individuals that are close to their Christian Orthodox identity as Russia has long been perceived as the protector of the Christian Orthodox faith and related values, while the West and Western-backed Ukraine as the threatening out-group. I expected this group to express lower support of Ukraine when they are primed with such information relative to the control group.

Evidence from a survey experiment in Bulgaria does not provide strong evidence that this is the case. Generally taken, the cultural-religious framing does not make a difference relative to the control framing among Christian Orthodox adherents, with and without consideration of how salient this identity is to them or the level of religious practice. When considering their level of cultural closeness to Russia and opinion of Russian leadership, those that do not see themselves aligned with Russian culture and that strongly oppose Russian leadership show

more support for Ukraine relative to their peers in the control group. This suggests a *backlash* effect against the cultural-religious framing of the war, which is often a common rhetoric among socially conservatives, Russian sympathizers, and channels that spread Russian propaganda. In terms of the populist-institutional frame, while this framing did not decrease the support among EU-skeptics and those with high populist attitudes, it showed a *backlash* effect among those that are trusty of the EU institutions. This suggests that while negative opinion of the EU does not influence individuals to decrease their support of Ukraine, those that are strong supporters of EU institutions push back against the anti-EU rhetoric more relative to those that do not receive this priming. Finally, the economic-rational priming does not make any difference among the economically vulnerable individuals as they show relatively the same support for Ukraine as their counterparts in the control group. Thus, despite the fact that the economic consequences of the war has been felt across the Bulgarian society, priming individuals with this information does not have a large or significant effect on their level of support.

What could be the reasons for the null findings from the priming experiment? Several confounding factors may be a factor. For one, online experiments are biased toward individuals located in urban locations, that are arguably also individuals that hold more liberal views and are economically less vulnerable. Only 5% of the overall sample are individuals from rural regions of Bulgaria, and 25% are from smaller towns, while that majority are individuals living in the urban cities of Bulgaria. Secondly, the results may be driven by individuals' prior knowledge of the Russia-Ukraine war. As a salient issue, individuals are likely exposed to factual information about the war, along with propaganda from different groups. Future iterations of this study should consider matching across groups by different levels of news consumption related to the war.

What, then, motivates individuals to support or oppose military aid to Ukraine? Evidence from the pooled sample shows that social conservatives are those that oppose aid as well as those that fear being drawn into the war as Bulgaria is a NATO member. However,

individuals that consume news in general, and news in relation to the war, support aid to Ukraine more. Thus, the lesson is that the opposition to Ukrainian support is mainly driven by fear and ideological factors that are outside of economic conservatism or religious identity. Religious believing, belonging, and behaving (the 3 Bs) have long shaped our understanding of the relationship between individual attitudes and political outcomes (Layman 2001; Kellstedt et al. 1996). However, recent scholarship has diverged from this understanding of the social embodiment of religion through these three indicators and have argued that religious beliefs and attitudes are not static, but they are continuously shaped by the environment around us; religion is not "pre-political" but rather, it is responsive to developments in the political arena (Campbell, Layman and Green 2020; Margolis 2018). In a divergence from years prior, the decline of support of Russia among Bulgarians is an indicator that the Russian invasion of Ukraine was an influence on Bulgarians' sympathies toward Russia. This study suggests that this may also be true for Christian Orthodox adherents, who despite their deep connections to Russia as a protector of their faith, their political attitudes are not embedded in their religious affiliation, but rather are shaped by concurrent events and developments. Finally, the pooled regression also shows that knowledge about the war is the factor that seems to be the most telling in understanding this phenomenon. The more individuals know about the war, the more they support military aid to Ukraine. Future iterations of this paper should explore how the different frames vary across levels of knowledge about the war, and their sources of information as some sources are more susceptible to Russian propaganda than others.

In terms of the limitations of this study, future studies should implement strategies to minimize the post-treatment bias in estimating the effect. Since this survey experiment asked sentiments on Russia, the EU, and populist attitudes after the treatment, it is possible that the treatment also affected these responses. Scholars are increasingly finding ways to address the challenges of pre- and post-treatment biasing of survey results, and should be considered in similar surveys in the future. Second, the choice of Bulgaria raises the question if the

findings in this study can be generalized to other countries. Indeed, Bulgaria presents a unique case due to its deep alliances with both Russia and the West, however, most Eastern European countries (besides those that are geopolitically threatened by Russia) have similar historical connections to Russia and high degree of Russophilia despite inspirations for joining Western institutions (Serbia, Montenegro, Macedonia, and Armenia as examples), thus there may be some lessons to be drawn for other countries as well. Future studies should replicate this experiment in other country for improvement in external validity.

Conclusion

Contrary to traditional views of religion as a static and prescriptive force, religion is a fluid institution, evolving in tandem with the societies it inhabits. By examining two distinct religious contexts (the United States and Bulgaria) and three contentious issues (climate change, abortion rights, and the Ukraine war), the findings of this dissertation provide evidence of religion's adaptability to contemporary demands and concurrent events. I show that clergy, as "street-level bureaucrats," craft their message based on the needs of their communities rather than centrally dictated rules and norms. Moreover, while conventional theories have argued that religious affiliation, as one's core identity and marker of ethnic or national identity, shapes political outcomes, I show that individuals can retain their religious affiliation and can strongly identify with it, and yet, allow other factors like information from the broader environment to shape their political attitudes. Thus, religious identity is not always salient in all contexts.

In my empirical work involving US congregations, I draw on an original, unique dataset of 200,000 weekly religious sermons that I have compiled by utilizing Google API, YouTube API, and OpenAI API. In the climate change and abortion papers, I use this dataset to test hypotheses about how frequently clergy incorporate these issues in their weekly sermons. In the first paper, in addition to using a conventional text analysis tool (the dictionary-based approach), I utilize a state-of-the-art text analysis tool, Large Language Models (LLMs) to categorize large corpus of text. I also employ mixed-effects models to analyze the findings from the text analysis (the frequency of climate-related sermons in the corpus) and relate their frequency with geographic and demographic variables.

For the second paper, I identify an exogenous shock, *the Dobbs v Jackson Women's Health Organization* and I leverage this shock to construct a difference-in-difference study

design and understand the difference in abortion-related sermons across states pre- and post-Dobbs. I employ a two-way fixed effects model to estimate the effect of this national policy and subsequent state changes on religious messages on the issue of abortion rights. This is in addition to the mixed-effects model that I use to understand the denominational, structural, and organizational traits of congregations as driving factors in clergy's engagement with political issues such as abortion rights. Finally, I also use another text analysis tool, the a la carte word embedding approach, and assess the different context in which congregations that differ on the position on abortion (pro-life versus pro-choice), use abortion in their sermons.

For the third paper, I conduct a survey experiment in Bulgaria with a nationally representative sample of 1,626 respondents. I find that the religious framing of the Ukraine conflict does not have a statistically significant effect on public support for Ukraine, even among Christian Orthodox. Instead, public support depends on respondents' consumption of news. Thus, religion, which defines national identity in many Eastern European countries, plays no statistically significant role in shaping public perceptions towards perhaps the most salient political debate of contemporary times.

In terms of future work, given the rich corpus of online religious sermons I have gathered, I will examine the context, tone, and sentiment of political discourse in religious sermons. While some may emphasize human's connection to God and human's responsibility in taking care of God's creation, other clergy may offer scientific evidence and provide practical steps in addressing climate change. Others yet, may address climate change but deny the role of humans in it. Similarly, concerning abortion rights, while I find some evidence that congregations with a supportive position discuss abortion rights in more political terms than congregations with an unsupportive position, employing more sophisticated text analysis will elaborate further on the context of this subject across congregations. Finally, the same corpus of religious sermons can be used (and expanded) to explore other political topics such as immigration, elections, public health, homosexuality, and other contentious issues of our modern times. Future work will also involve gathering data on congregations and clergy-

specific factors to assess if they play a role in how clergy talk about contentious political issues. Lastly, I want to assess whether competition for congregants might shape what clergy talk about in their weekly sermons. Data shows that about a quarter of Americans have switched congregations (Contreras 2023). If so, then we expect clergy in more "competitive" religious markets to be more attuned to congregational preferences than in non-competitive markets. I believe this dissertation has provided me with an excellent opportunity to begin this intellectual journey and contribute to the broader understanding of the economics of religion.

In addition to the role that religion plays in addressing contentious issues, this dissertation also opens the avenue in exploring how these mechanisms of adaptation sustain religion as an institution. The mechanisms that came to light in this dissertation are arguably those that sustain the durability and socio-political relevance of religion. Thus, studying religion as an industrial organization that considers the many layers of accountability in conducting its operations may also provide insights into how they drive its institutional durability as an outcome. For indeed, the longevity and resilience of religion relative to any other secular regime in our human history is a fascinating subject and of intriguing social inquiry for social scientists.

Bibliography

Abadie, Alberto, Susan Athey, Guido W Imbens and Jeffrey M Wooldridge. 2023. "When should you adjust standard errors for clustering?" *The Quarterly Journal of Economics* 138(1):1–35.

Adena, Maja, Ruben Enikolopov, Maria Petrova, Veronica Santarosa and Ekaterina Zhuravskaya. 2015. " Radio and the Rise of The Nazis in Prewar Germany *." *The Quarterly Journal of Economics* 130(4):1885–1939.
URL: *https://doi.org/10.1093/qje/qjv030*

Ahlquist, John, Mark Copelovitch and Stefanie Walter. 2020. "The political consequences of external economic shocks: evidence from Poland." *American Journal of Political Science* 64(4):904–920.

Alesina, Alberto and Eliana La Ferrara. 2005. "Preferences for redistribution in the land of opportunities." *Journal of public Economics* 89(5-6):897–931.

Antonov, Stefan. 2023. "Reuters Institute Digital News Report 2023: Bulgaria." *Reuters Institute for the Study of Journalism* .
URL: *https://reutersinstitute.politics.ox.ac.uk/digital-news-report/2023/bulgaria*

ARDA. 2020. "US Religion.". data retrieved from ARDA, `https://thearda.com/us-religion/census/congregational-membership?y=2020&y2=0&t=1&c=17`.

Aronow, Peter M, Jonathon Baron and Lauren Pinson. 2019. "A note on dropping experimental subjects who fail a manipulation check." *Political Analysis* 27(4):572–589.

Arora, Sanjeev, Yuanzhi Li, Yingyu Liang, Tengyu Ma and Andrej Risteski. 2016. "A latent variable model approach to pmi-based word embeddings." *Transactions of the Association for Computational Linguistics* 4:385–399.

AssociatedPress. 2023. "An anti-government protest in Czech capital draws thousands." *Associated Press* .
URL: *https://apnews.com/article/czech-ukraine-russia-government-protest-8a92e5e0163c17cbc75a55f5c65b52fe*

Ballotpedia. 2023. "Abortion Regulations by State.".
URL: *https://ballotpedia.org*

Bearce, David H and Kim-Lee Tuxhorn. 2017. "When are monetary policy preferences egocentric? Evidence from American surveys and an experiment." *American Journal of Political Science* 61(1):178–193.

Bechev, Dimitar. 2018. Russia's Influene in Bulgaria: Defence, Foreign Policy and Security. Technical report.
URL: *https://newdirection.online/2018-publications-pdf/ND-report-RussiasInfluenceInBulgaria-preview-lo-res.pdf*

Bechev, Dimitar. 2022. "Russia and Bulgaria: End of a tumultuous affair?" *Aljazeera* .
URL: *https://www.aljazeera.com/opinions/2022/7/8/russia-and-bulgaria-end-of-a-tumultuous-affair*

Bedrov, Ivan and Desislava Dimitrova. 2022. "For Putin, Against 'Global Liberalism': Why So Many Bulgarian Parties Support Russia." *RadioFreeEuropeRadioLiberty* .
URL: *https://www.rferl.org/a/bulgaria-elections-pro-russian-parties/32061638.html*

Benegal, Salil, Flávio Azevedo and Mirya Holman. 2022. "Race, ethnicity, and support for climate policy." *Environmental Research Letters* .

Berinsky, Adam, Michele F Margolis and Michael W Sances. 2014. "Separating the shirkers from the workers? Making sure respondents pay attention on self-administered surveys." *American journal of political science* 58(3):739–753.

Berman, Sheri. 2017. "Populism is a problem. Elitist technocrats aren't the solution." *Foreign Policy* 20.

Berman, Sheri. 2021. "The causes of populism in the west." *Annual Review of Political Science* 24:71–88.

Beyerlein, Kraig and Mark Chaves. 2020. "The political mobilization of America's congregations." *Journal for the Scientific Study of Religion* 59(4):663–674.

Bjarnason, Thoroddur and Michael R Welch. 2004. "Father knows best: Parishes, priests, and American Catholic parishioners' attitudes toward capital punishment." *Journal for the scientific study of religion* 43(1):103–118.

Blackwell, Matthew, Jacob R Brown, Sophie Hill, Kosuke Imai and Teppei Yamamoto. 2023. "Priming bias versus post-treatment bias in experimental designs." *arXiv preprint arXiv:2306.01211* .

Boas, Taylor C. and Amy Erica Smith. 2015. Religion and the Latin American Voter. In *The Latin American Voter*, ed. Ryan E. Carlin, Matthew Singer and Elizabeth Zechmeister. University of Michigan Press pp. 99–121.

Bolton, Thomas. 2023. "Which countries are sending heavy weapons to Ukraine, and is it enough?" *EuroNews* .
URL: *https://www.euronews.com/2023/03/05/which-countries-are-sending-heavy-weapons-to-ukraine-and-is-it-enough*

Borh, Jeremiah. 2014. "Public views on the dangers and importance of climate change: predicting climate change beliefs in the United States through income moderated by party identification." *Climatic Change* (126):217–227.

Boussalis, Constantine, Travis G Coan and Mirya R Holman. 2021. "Political speech in religious sermons." *Politics and Religion* 14(2):241–268.

Brewer, Mark D, Rogan Kersh and R Eric Petersen. 2003. "Assessing conventional wisdom about religion and politics: A preliminary view from the pews." *Journal for the Scientific Study of Religion* 42(1):125–136.

Brown, R Khari. 2010. "Religion, economic concerns, and African American immigration attitudes." *Review of Religious Research* pp. 146–158.

Brown, R Khari. 2011. "Religion, political discourse, and activism among varying racial/ethnic groups in America." *Review of religious research* 53:301–322.

Brown, R Khari, Angela Kaiser, Lara Rusch and Ronald E Brown. 2017. "Immigrant-conscious congregations: Race, ethnicity, and the rejection of anti-immigrant frames." *Politics and Religion* 10(4):887–905.

Brubaker, Rogers. 2006. *Nationalist Politics and Everyday Ethnicity in a Transylvanian Town*. Princeton University Press.

Bush, Sarah Sunn and Amanda Clayton. 2022. "Facing Change: Gender and Climate Change Attitudes Worldwide." *American Political Science Review* p. 1–18.

Byrnes, Timothy A. 2019. The Politics of Abortion: The Catholic Bishops. In *The Catholic Church And The Politics Of Abortion*. Routledge pp. 14–26.

Calfano, Brian Robert. 2009. "Choosing constituent cues: Reference group influence on clergy political speech." *Social Science Quarterly* 90(1):88–102.

Calfano, Brian Robert and Elizabeth A Oldmixon. 2016. "Remembering to ask the boss: Priming and the dynamics of priest reliance on bishop cues." *Religions* 7(3):21.

Calhoun-Brown, Allison. 1996. "African American churches and political mobilization: The psychological impact of organizational resources." *The Journal of Politics* 58(4):935–953.

Calhoun, Craig. 2007. *Nations matter: Culture, history and the cosmopolitan dream*. Routledge.

Caliskan, Aylin, Joanna J Bryson and Arvind Narayanan. 2017. "Semantics derived automatically from language corpora contain human-like biases." *Science* 356(6334):183–186.

Campbell, David E, Geoffrey C Layman and John C Green. 2020. *Secular surge: A new fault line in American politics*. Cambridge University Press.

Campbell, Ernest Q and Thomas F Pettigrew. 1959. "Christians in racial crisis: a study of Little Rock's ministry: including statements on desegregation and race relations by the leading religious denominations of the United States." *(Public Affairs Press)* .

Camut, Nicolas. 2023. "Pro-Russian protesters vandalize EU offices in Bulgaria." *Politico* . **URL:** *https://www.politico.eu/article/pro-russia-revival-party-bulgaria-protesters-vandalize-eu-offices-in-sofia/*

Citrin, Jack and Donald Philip Green. 1990. "The Self-Interest Motive in American Public Opinion." *Research in Micropolitics* 3:1–27.

Compton, John W. 2020. *The end of empathy: Why white Protestants stopped loving their neighbors*. Oxford University Press.

Contreras, Russell. 2023. "Rising number of Americans are switching religions." *Axios* . **URL:** *https://www.axios.com/2023/05/16/rising-number-americans-switch-religions*

Corte, Rachel La. 2022. "Washington state governor signs bill that prohibits Texas-style abortion lawsuits." *PBS News hour* . **URL:** *https://www.pbs.org/newshour/politics/washington-state-governor-signs-bill-that-prohibits-texas-style-abortion-lawsuits*

Curtis, K Amber, Joseph Jupille and David A Leblang. 2014. "Iceland on the rocks: Self interest and sovereign debt resettlement." *International Organization* 68(3).

Danielsen, Sabrina, Daniel R DiLeo and Emily E Burke. 2021. "US Catholic bishops' silence and denialism on climate change." *Environmental Research Letters* 16(11):114006.

Dasgupta, Aditya. 2020. "Explaining rural conservatism: Technological and political change in the great plains.".

Dasgupta, Susmita, Benoit Laplante, Hua Wang and David Wheeler. 2002. "Confronting the Environmental Kuznets Curve." *Journal of Economic Perspectives* (16):147–168.

Djupe, Paul A. and Christopher P. Gilbert. 2003*a*. *The prophetic pulpit: Clergy, churches, and communities in American politics*. Rowman & Littlefield.

Djupe, Paul A. and Christopher P. Gilbert. 2003*b*. *The prophetic pulpit: Clergy, churches, and communities in American politics*. Rowman & Littlefield.

Djupe, Paul A. and Christopher P. Gilbert. 2008. *The political influence of churches*. Cambridge University Press.

Djupe, Paul A., Claire C. Gilliland and Shayla F. Olson. 2023. "Are Online Congregations Representative? Exploring Resource and Political Differences." *Review of Religious Research* p. 0034673X231172138.

Djupe, Paul A. and Jacob R Neiheisel. 2022. "The religious communication approach and political behavior." *Political Psychology* 43:165–194.

Djupe, Paul A., Jacob R. Neiheisel and Kimberly H. Conger. 2018. "Are the politics of the Christian right linked to state rates of the nonreligious? The importance of salient controversy." *Political Research Quarterly* 71(4):910–922.

Djupe, Paul A. and Laura R. Olson. 2007. *Religious interests in community conflict: Beyond the culture wars*. Baylor University Press.

Djupe, Paul A. and Laura R. Olson. 2010*a*. "Diffusion of environmental concerns in congregations across US states." *State Politics & Policy Quarterly* 10(3):270–301.

Djupe, Paul A. and Laura R. Olson. 2010*b*. "Diffusion of Environmental Concerns in Congregations across U.S. States." *State politics policy quarterly* 10(3):270–301.

Djupe, Paul A. and Patrick Kieran Hunt. 2009. "Beyond the Lynn White thesis: Congregational effects on environmental concern." *Journal for the Scientific Study of Religion* 48(4):670–686.

Djupe, Paul A. and Ryan P. Burge. 2023. "Divine attribution? The interaction of religious and secular beliefs on climate change attitudes." *Politics and Religion* 16(1):110–128.

Djupe, Paul A., Ryan P. Burge and Brian R. Calfano. 2016. "The delegational pulpit? Clergy identifying as congregational political representatives." *Representation* 52(1):43–69.

Druckman, James N and Thomas J Leeper. 2012. "Learning more from political communication experiments: Pretreatment and its effects." *American Journal of Political Science* 56(4):875–896.

Earls, Aaron. 2020. "Most Churches Have Stopped Gathering, Few Plan to Meet on Easter.".
URL: *https://research.lifeway.com/2020/04/02/most-churches-have-stopped-gathering-few-plan-to-meet-on-easter/*

EPA. 2023. "Outdoor Air Quality Data.".
URL: *https://www.epa.gov/outdoor-air-quality-data/download-daily-data*

FEMA. 2020. "Declared Disasters.". data retrieved from FEMA, `https://www.fema.gov/disaster/declarations`.

FindLaw. 2018. "Abortion and the Law: Background.".
URL: *https://www.findlaw.com/family/reproductive-rights/abortion-and-the-law-background.html*

Finke, Roger and Rodney Stark. 2005*a*. *The Churching of America, 1776-2005*. Rutgers University Press.

Finke, Roger and Rodney Stark. 2005*b*. *The churching of America, 1776-2005: Winners and losers in our religious economy*. Rutgers University Press.

Foa, Roberto Stefan, Andrew Klassen, Micheal Slade, Alex Rand and Rosie Collins. 2020. "The global satisfaction with democracy report 2020.".

Fowler, Robert Booth, Allen D Hertzke and Laura R Olson. 1999. *Religion and Politics in America: Faith, Culture, and Strategic Choices, 2nd*. Boulder, CO: Westview Press.

Francis I. 2015. "Laudato Si'." *The Holy See* .
URL: *https://www.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco$_2$0150524$_e$nciclica − laudato − si.html*

Franco, Annie, Neil Malhotra, Gabor Simonovits and LJ Zigerell. 2017. "Developing standards for post-hoc weighting in population-based survey experiments." *Journal of Experimental Political Science* 4(2):161–172.

Frick, Bernd, Katharina Moser and Rob Simmons. 2021. "Spillover effects of scandals on exits from the Catholic and Protestant churches in Germany." *Journal for the Scientific Study of Religion* 60(3):482–497.

Gabel, Matthew. 1998. "Economic integration and mass politics: Market liberalization and public attitudes in the European Union." *American Journal of Political Science* pp. 936–953.

Gabel, Matthew and Kenneth Scheve. 2007. "Mixed Messages: Party Dissent and Mass Opinion on European Integration." *European Union Politics* 8(1):37–59.
URL: *https://doi.org/10.1177/1465116507073285*

Garg, Nikhil, Londa Schiebinger, Dan Jurafsky and James Zou. 2018. "Word embeddings quantify 100 years of gender and ethnic stereotypes." *Proceedings of the National Academy of Sciences* 115(16):E3635–E3644.

Gecewicz, Claire. 2020. Few Americans say their house of worship is open, but a quarter say their faith has grown amid pandemic. Technical report.
URL: *https://www.pewresearch.org/short-reads/2020/04/30/few-americans-say-their-house-of-worship-is-open-but-a-quarter-say-their-religious-faith-has-grown-amid-pandemic/*

Gilardi, Fabrizio, Meysam Alizadeh and Maël Kubli. 2023. "Chatgpt outperforms crowd-workers for text-annotation tasks." *arXiv preprint arXiv:2303.15056* .

Gill, Anthony. 2008. *Rendering unto Caesar*. University of Chicago Press.

Gill, Anthony. 2021. "The Comparative Endurance and Efficiency of Religion: A Public Choice Approach ." *Public Choice* 189(3-4):313–334.

Glock, Charles Y. and Rodney Stark. 1965. "Religion and society in tension.".

Grasso, M. and E.M. Markowitz. 2015. "The moral complexity of climate change and the need for a multidisciplinary perspective on climate ethics." *Climatic Change* 130:327–334.

Green, John C and John Clifford Green. 2007. *The faith factor: How religion influences American elections*. Praeger.

Gruhonjik, Dinko. 2022. "Serbian Media between Putin-philia and the new world reality." *Radio MF* .
URL: *https://www.radiomof.mk/stav-mediumite-vo-srbija-megju-putinofilijata-i-novata-svetska-realnost/*

Guth, James L. 1996. "The bully pulpit: Southern Baptist clergy and political activism 1980–1992." *Religion and the culture wars: Dispatches from the front. Lanham, MD: Rowan & Littlefield* .

Guth, James L. 1997. *The bully pulpit: The politics of Protestant clergy*. Studies in Government & Public.

Guth, James L., Lyman A. Kellstedt, John C. Green and Corwin E. Smidt. 2002. A Distant Thunder? Religious Mobilization in the 2000 Elections. In *Interest Group Politics*, ed. Andrew J. Ciglar and Burdett A. Loomis. 6th ed. Washington, DC: CQ Press pp. 161–184.

Hafner, Shay R and Andre P Audette. 2023. "The politics of church shopping." *Politics and Religion* 16(1):73–89.

Hainmueller, Jens and Michael J Hiscox. 2007. "Educated preferences: Explaining attitudes toward immigration in Europe." *International organization* 61(2):399–442.

Hamilton, Lawrence C. 2008. "Who cares about polar regions? Results from a survey of U.S. Public Opinion." *Arct Antarct Alp Res* (40):671–678.

Harden, Jeffrey J, Anand E Sokhey and Katherine L Runge. 2019. "Accounting for Noncompliance in Survey Experiments." *Journal of Experimental Political Science* 6(3):199–202.

Haskell, David M, Kenneth Paradis and Stephanie Burgoyne. 2008. "Defending the faith: Easter sermon reaction to pop culture discourses." *Review of religious research* pp. 139–156.

Hoffmann, John P and Sherrie Mills Johnson. 2005. "Attitudes toward abortion among religious traditions in the United States: Change or continuity?" *Sociology of Religion* 66(2):161–182.

Hofrenning, Daniel JB. 1995. *In Washington but not of it: The prophetic politics of religious lobbyists*. Temple University Press.

Holleman, Anna, Joseph Roso and Mark Chaves. 2022. "Religious congregations' technological and financial capacities on the eve of the COVID-19 pandemic." *Review of Religious Research* pp. 1–26.

Holman, Mirya, Erica Podrazik and Heather Silber Mohamed. 2020. "Choosing choice: How gender and religiosity shape abortion attitudes among Latinos." *Journal of Race, Ethnicity, and Politics* 5(2):384–411.

Holman, Mirya and Kristin Shockley. 2017. "Messages from above: Conflict and convergence of messages to the Catholic voter from the Catholic Church hierarchy." *Politics and Religion* 10(4):840–861.

Iannaccone, Laurence R. 1990. "Religious practice: A human capital approach." *Journal for the scientific study of religion* pp. 297–314.

Iannaccone, Laurence R. 1992. "Sacrifice and Stigma: Reducing Free-riding in Cults, Communes, and Other Collectives." *Journal of Political Economy* 100(2):271–291.

Imai, Kosuke, Gary King and Elizabeth A Stuart. 2008. "Misunderstandings between experimentalists and observationalists about causal inference." *Journal of the Royal Statistical Society Series A: Statistics in Society* 171(2):481–502.

Ivanova, Bistra, Chaya Koleva and Panayot Chafkarov. 2022. Hate speech and Euroscepticism in Bulgaria. Technical report European Commission.

Jelen, Ted G. 1992. "The clergy and abortion." *Review of Religious Research* pp. 132–151.

Jones, Robert P, Natalie Jackson, Maxine Najle, Oyindamola Bola and Daniel Greenberg. 2023. "The state of abortion and contraception attitudes in all 50 states." *T&T Clark Reader in Abortion and Religion: Jewish, Christian, and Muslim Perspectives* p. 92.

Kahn, Michael. 2022. "Czechs rally against rising extremism and voice support for Ukraine." *Reuters* .
URL: *https://www.reuters.com/world/europe/czechs-rally-against-rising-extremism-voice-support-ukraine-2022-10-30/*

Kandilarov, Evgeniy. 2022. Bulgaria social briefing: How does the Energy Crisis and Inflation Affect the Purchasing Power of Bulgarians? China-cee institute European Center for Populism Studies (ECPS) Budapest: .

Karol, David and Chloe N Thurston. 2020. "From personal to partisan: Abortion, party, and religion among California state legislators." *Studies in American Political Development* 34(1):91–109.

Kellstedt, Lyman A., John C. Green, James L. Guth and Corwin E. Smidt. 1996. Grasping the Essentials: The Social Embodiment of Religion and Political Behavior. In *Religion and the Culture Wars: Dispatches from the Front*, ed. John C. Green, James L. Guth, Corwin E. Smidt and Lyman A. Kellstedt. Rowman & Littlefield pp. 174–192.

Kelly, Caroline. 2019. "Alabama governor signs nation's most restrictive anti-abortion bill into law." *CNN* .
URL: *https://www.cnn.com/2019/05/15/politics/alabama-governor-signs-bill/index.html*

Khodak, Mikhail, Nikunj Saunshi, Yingyu Liang, Tengyu Ma, Brandon Stewart and Sanjeev Arora. 2018. "A la carte embedding: Cheap but effective induction of semantic feature vectors." *arXiv preprint arXiv:1805.05388* .

Kreitzer, Rebecca J. 2015. "Politics and morality in state abortion policy." *State Politics and Policy Quarterly* 15(1):41–66.

Laitin, David D. 1978. "Religion, political culture, and the Weberian tradition." *World politics* 30(4):563–592.

Layman, Geoffrey. 2001. *The great divide: Religious and cultural conflict in American party politics*. Columbia University Press.

Lewis, Andrew R. 2014. "Abortion Politics and the Decline of the Separation of Church and State: The Southern Baptist Case." *Politics and Religion* 7(3):521–549.

Lewis, Andrew R. 2017. *The rights turn in conservative Christian politics: How abortion transformed the culture wars*. Cambridge University Press.

Lewis, Andrew R, William D Blake, Stephen T Mockabee and Amanda Friesen. 2020. "American constitutional faith and the politics of hermeneutics." *Politics and Religion* 13(1):57–88.

Lewkowicz, Łukasz. 2022. "Slovakia: an unstable public support for Ukraine and the West." *Institute of Central Europe* .
URL: *https://ies.lublin.pl/en/comments/slovakia-an-unstable-public-support-for-ukraine-and-the-west/*

Li, Nan, Joseph Hilgard, Dietram A Scheufele, Kenneth M Winneg and Kathleen Hall Jamieson. 2016. "Cross-pressuring conservative Catholics? Effects of Pope Francis' encyclical on the US public opinion on climate change." *Climatic Change* 139(3):367–380.

Lipsky, Michael. 1980. *Street-Level Bureaucracy: Dilemmas of the Individual in Public Services*. New York, NY: Russell Sage Foundation. ISBN: 978-0871545442.

Lorenzoni, Irene and Nick F. Pidgeon. 2006. "Public Views on Climate Change: European and USA Perspectives." *Climatic Change* 77:73–95.

Maibach, Edward W. 2015. "The Francis effect: How Pope Francis changed the conversation about global warming." *Available at SSRN 2695199* .

Maier, Michaela, Silke Adam and Jürgen Maier. 2012. "The impact of identity and economic cues on citizens' EU support: An experimental study on the effects of party communication in the run-up to the 2009 European Parliament elections." *European Union Politics* 13(4):580–603.

Malhotra, Neil, Yotam Margalit and Cecilia Hyunjung Mo. 2013. "Economic explanations for opposition to immigration: Distinguishing between prevalence and conditional impact." *American Journal of Political Science* 57(2):391–410.

Manson, Steven, Jonathan Schroeder, David Van Riper, Tracy Kugler and Steven Ruggles. 2022. "IPUMS National Historical Geographic Information System: Version 17.0 [dataset].".
URL: *http://doi.org/10.18128/D050.V17.0*

Margolis, Michele. 2014. "Rethinking the relationship between religion and politics: A test of the life cycle theory.".

Margolis, Michele F. 2018. "How politics affects religion: Partisanship, socialization, and religiosity in America." *The Journal of Politics* 80(1):30–43.

Martin, Stephanie A. 2021. *Decoding the digital church: Evangelical storytelling and the election of Donald J. Trump*. University of Alabama Press.

Mayaki, Benedict. 2021. "Pope and ecumenical leaders: Caring for God's creation requires commitment." *(Vatican News)* .
URL: *https://www.vaticannews.va/en/pope/news/2021-09/pope-bartholomew-justin-welby-creation-sustainability-message.html*

McBride, Dorothy E and Jennifer L Keys. 2018. *Abortion in the United States: A reference handbook*. ABC-CLIO.

McClendon, Gwyneth H and Rachel Beatty Riedl. 2016. "Individualism and empowerment in Pentecostal sermons: New evidence from Nairobi, Kenya." *African Affairs* 115(458):119–144.

McClendon, Gwyneth H and Rachel Beatty Riedl. 2019. *From pews to politics: Religious sermons and political participation in Africa*. Cambridge University Press.

McClendon, Gwyneth and Rachel Beatty Riedl. 2021. "Using sermons to study religions' influence on political behavior." *Comparative Political Studies* 54(5):779–822.

McCright, Aaron M and Riley E Dunlap. 2011. "Cool dudes: The denial of climate change among conservative white males in the United States." *Global environmental change* 21(4):1163–1172.

Meier, Kenneth J and Deborah R McFarlane. 1993. "The politics of funding abortion: State responses to the political environment." *American Politics Quarterly* 21(1):81–101.

Mikolov, Tomas, Kai Chen, Greg Corrado and Jeffrey Dean. 2013. "Efficient estimation of word representations in vector space." *arXiv preprint arXiv:1301.3781* .

MIT Election Lab. 2020. "County Presidential Election Returns 2000-2020.". data retrieved from MIT, `https://electionlab.mit.edu/data`.

Mohamed, Heather Silber. 2018. "Embryonic politics: Attitudes about abortion, stem cell research, and IVF." *Politics and Religion* 11(3):459–497.

Mrchkovska, Nela, Nives Dolšak and Aseem Prakash. 2023. "Pope Francis, climate message, and meat tax: evidence from survey experiment in Italy." *npj Climate Action* 2(1):10.

Mutz, Diana C. 2018. "Status threat, not economic hardship, explains the 2016 presidential vote." *Proceedings of the National Academy of Sciences* 115(19):E4330–E4339.

Muzikárová, Soňa. 2023. "Why some EU countries in the east are still pro-Russia." *Aljazeera* .
URL: *https://www.aljazeera.com/opinions/2023/2/6/why-some-eu-countries-still-harbour-pro-russian-sentiments*

NAE. 2022. NAE Releases Report on Impacts of Climate Change on Poverty. Technical report.
URL: *https://www.nae.org/nae-releases-report-impacts-climate-change-poverty/*

Nanou, Kyriaki and Han Dorussen. 2013. "European integration and electoral democracy: How the European Union constrains party competition in the Member States." *European Journal of Political Research* 52(1):71–93.

Nattrass, William. 2022. "Eastern Europe's Culture War Over Ukraine." *The Wall Street Journal* .
URL: *https://www.wsj.com/articles/eastern-europes-culture-war-over-ukraine-czech-republic-slovakia-urban-rural-protests-eastern-european-union-america-11667506602?mod=hp$_o$pin$_p$os$_6$cxrecs$_s$*

Nehring, Christopher. 2022. "Bulgaria torn between Russia and West." *Deutsche Welle* .
URL: *https://www.dw.com/en/nato-or-moscow-bulgaria-torn-between-russia-and-the-west/a-61036527*

Neiheisel, Jacob R and Paul A Djupe. 2008. "Intra-Organizational Constraints on Churches' Public Witness." *Journal for the Scientific Study of Religion* 47(3):427–441.

Nelson, Stephen C and David A Steinberg. 2018. "Default positions: What shapes public attitudes about international debt disputes?" *International Studies Quarterly* 62(3):520–533.

Norris, Pippa and Ronald Inglehart. 2011. *Sacred and secular: Religion and politics worldwide*. Cambridge University Press.

Nortey, Justin and Michael Rotolo. 2023. How the Pandemic Has Affected Attendance at U.S. Religious Services. Technical report.
URL: *https://www.pewresearch.org/religion/2023/03/28/how-the-pandemic-has-affected-attendance-at-u-s-religious-services/*

O'Connor, Robert E and Michael B Berkman. 1995. "Religious determinants of state abortion policy." *Social Science Quarterly* pp. 447–459.

Olson, Laura R and Wendy Cadge. 2002. "Talking about homosexuality: The views of mainline Protestant clergy." *Journal for the Scientific Study of Religion* 41(1):153–167.

Olson, Roger E, Frank S Mead, Samuel S Hill and Craig D Atwood. 2018. *Handbook of denominations in the United States*. Abingdon Press.

Owens, Michael Leo. 2008. *God and government in the ghetto: The politics of church-state collaboration in black America*. University of Chicago Press.

Patrikios, Stratos. 2013. "Self-stereotyping as "Evangelical Republican": An empirical test." *Politics and Religion* 6(4):800–822.

Pennington, Jeffrey, Richard Socher and Christopher D Manning. 2014. Glove: Global vectors for word representation. In *Proceedings of the 2014 conference on empirical methods in natural language processing (EMNLP)*. pp. 1532–1543.

Pew Research Center. 2011. Faith in Flux. Technical report.
URL: *https://www.pewresearch.org/religion/2009/04/27/faith-in-flux/*

Pew Research Center. 2013. Religious Groups' Official Positions on Abortion. Technical report.
URL: *https://www.pewresearch.org/religion/2013/01/16/religious-groups-official-positions-on-abortion/evangelical-lutheran-church-in-america*

Pew Research Center. 2016. Where major religious groups stand on abortion. Technical report.
URL: *https://www.pewresearch.org/short-reads/2016/06/21/where-major-religious-groups-stand-on-abortion/*

Pew Research Center. 2017*a*. Orthodox Christians in Central and Eastern Europe favor strong role for Russia in geopolitics, religion. Technical report.
URL: *https://www.pewresearch.org/short-reads/2017/05/11/orthodox-christians-in-central-and-eastern-europe-favor-strong-role-for-russia-in-geopolitics-religion/*

Pew Research Center. 2017*b*. Religious Belief and National Belonging in Central and Eastern Europe. Technical report.
URL: *https://www.pewresearch.org/religion/2017/05/10/religious-belief-and-national-belonging-in-central-and-eastern-europe/*

Pew Research Center. 2017*c*. Views on role of Russia in the region, and the Soviet Union. Technical report.
URL: *https://www.pewresearch.org/religion/2017/05/10/views-on-role-of-russia-in-the-region-and-the-soviet-union/*

Pew Research Center. 2019. U.S. Public Views on Climate and Energy. Technical report.
URL: *https://www.pewresearch.org/science/wp-content/uploads/sites/16/2019/11/PS.11.25.19*$_{climate\text{-}energy-FINAL.pdf}$

Pfeiffer, Rachel. 2023. "Online Church Attendance Retains Some of Its Pandemic Boost." *(Christianity Today)* .
URL: *https://www.christianitytoday.com/news/2023/april/online-worship-pandemic-digital-church-attendance-pew-minis.html*

Preussen, Wilhelmine. 2022. "In U-turn, Bulgarian parliament tells Sofia to send weapons to Ukraine." *Politico* .
URL: *https://www.politico.eu/article/bulgarian-u-turn-on-weapons-delivery-to-ukraine/*

Proksch, Sven-Oliver, Christopher Wratil and Jens Wäckerle. 2019. "Testing the validity of automatic speech recognition for political text analysis." *Political Analysis* 27(3):339–359.

Rathje, Steve, Dan-Mircea Mirea, Ilia Sucholutsky, Raja Marjieh, Claire Robertson and Jay J Van Bavel. 2023. "GPT is an effective tool for multilingual psychological text analysis.".

Reicher, Stephen. 2004. "The context of social identity: Domination, resistance, and change." *Political psychology* 25(6):921–945.

Reinhart, RJ. 2018. Global Warming Age Gap: Younger Americans Most Worried. Technical report.
URL: *https://news.gallup.com/poll/234314/global-warming-age-gap-younger-americans-worried.aspx*

Reuters. 2022. "Bulgarian government approves plan to offset high energy prices." *Reuters* .
URL: *https://www.reuters.com/business/energy/bulgarian-government-approves-plan-offset-high-energy-prices-2022-05-16/*

Rho, Sungmin and Michael Tomz. 2017. "Why don't trade preferences reflect economic self-interest?" *International Organization* 71(S1):S85–S108.

Rodman, Emma. 2020. The Idea of Equality in America PhD thesis.

Rodriguez, Pedro L, Arthur Spirling and Brandon M Stewart. 2021. "Embedding Regression: Models for Context-Specific Description and Inference." *American Political Science Review* pp. 1–20.

Rodrik, Dani. 2018. "Populism and the economics of globalization." *Journal of international business policy* 1(1):12–33.

Rogan, Ruth, Moira O'Connor and Pierre Horwitz. 2005. "Nowhere to hide: Awareness and perceptions of environmental change, and their influence on relationships with place." *Journal of environmental psychology* 25(2):147–158.

Samorukov, Maxim. 2022. "Is Bulgaria Drifting Back Into Russia's Orbit?" *Carnegie Endowment for International Peace* .
URL: *https://carnegieendowment.org/politika/87405*

Santos, Adella, Nancy McGuckin, Hikari Yukiko Nakamoto, Danielle Gray, Susan Liss et al. 2011. Summary of travel trends: 2009 national household travel survey. Technical report United States. Federal Highway Administration.

Scheve, Kenneth F and Matthew J Slaughter. 2001. "Labor market competition and individual preferences over immigration policy." *Review of Economics and Statistics* 83(1):133–145.

Schroedel, Jean Reith. 2000. *Is the fetus a person?: A comparison of policies across the fifty states*. Cornell University Press.

Schuldt, Jonathon P. and Adam R. Pearson. 2016. "The role of race and ethnicity in climate change polarization: evidence from a U.S. national survey experiment." *Climatic Change* 136:495–505.

Schulz, Anne, Philipp Müller, Christian Schemer, Dominique Stefanie Wirz, Martin Wettstein and Werner Wirth. 2018. "Measuring populist attitudes on three dimensions." *International Journal of Public Opinion Research* 30(2):316–326.

Scicluna, Nicole and Stefan Auer. 2019. "From the Rule of Law to the Rule of Rules: Technocracy and the Crisis of EU Governance." *West European Politics* 42(7):1420–1442.

Sharafutdinova, Gulnaz. 2022. "Public opinion formation and group identity: the politics of national identity salience in post-Crimea Russia." *Problems of Post-Communism* 69(3):219–231.

Sides, John and Jack Citrin. 2007. "European opinion about immigration: The role of identities, interests and information." *British journal of political science* 37(3):477–504.

Simon, Bernd and Bert Klandermans. 2001. "Politicized collective identity: A social psychological analysis." *American psychologist* 56(4):319.

Smidt, Corwin E. 2016. *Pastors and public life: The changing face of American Protestant clergy*. Oxford University Press.

Smith, Amy Erica. 2016. "When clergy are threatened: Catholic and Protestant leaders and political activism in Brazil." *Politics and Religion* 9(3):431–455.

Smith, Amy Erica. 2019. *Religion and Brazilian democracy: mobilizing the people of God*. Cambridge University Press.

Steckel, Jan Christoph, Leonard Missbach, Nils Ohlendorf, Simon Feindt and Matthias Kalkuhl. 2022. Effects of the energy price crisis on European households: Socio-political challenges and policy options. Mercator research institute on global commons and climate change European Center for Populism Studies (ECPS) Berlin: .

Strickler, Jennifer and Nicholas L Danigelis. 2002. Changing frameworks in attitudes toward abortion. In *Sociological Forum*. Vol. 17 Springer pp. 187–201.

Svallfors, Stefan. 2017. "Knowing the game: motivations and skills among partisan policy professionals." *Journal of Professions and Organization* 4(1):55–69.

Tajfel, Henri. 1970. "Experiments in intergroup discrimination." *Scientific american* 223(5):96–103.

Tajfel, Henri, John C Turner, William G Austin and Stephen Worchel. 1979. "An integrative theory of intergroup conflict." *Organizational identity: A reader* 56(65):9780203505984–16.

Taylor, Adam. 2022. "The big role that small countries are playing in supplying Ukraine." *The Washington Post* .
URL: *https://www.washingtonpost.com/world/2022/04/14/slovakia-estonia-small-country-supply-weapons-russia-ukraine-germany/*

Törnberg, Petter. 2023. "How to use LLMs for Text Analysis." *arXiv preprint arXiv:2307.13106* .

Trebesch, Christoph, Arianna Antezza, Katelyn Bushnell, André Frank, Pascal Frank, Lukas Franz, Ivan Kharitonov, Bharath Kumar, Ekaterina Rebinskaya and Stefan Schramm. 2023. The Ukraine support tracker: which countries help Ukraine and how? Technical report KIEL working paper.

Tucker, Joshua A, Alexander C Pacek and Adam J Berinsky. 2002. "Transitional winners and losers: Attitudes toward EU membership in post-communist countries." *American Journal of Political Science* pp. 557–571.

Varaine, Simon. 2023. "How Dropping Subjects Who Failed Manipulation Checks Can Bias Your Results: An Illustrative Case." *Journal of Experimental Political Science* 10(2):299–305.

Volkmann-Schluck, Philip. 2023. "Bulgaria to the rescue: How the EU's poorest country secretly saved Ukraine." *Politico* .
URL: *https://www.politico.eu/article/bulgaria-volodymyr-zelenskyy-kiril-petkov-poorest-country-eu-ukraine/*

Voting and Election Science Team. 2020. "2020 Precinct-Level Election Results.".
URL: *https://doi.org/10.7910/DVN/K7760H*

Wilcox, Clyde and Carin Robinson. 2007. "Prayers, parties, and preachers: the evolving nature of political and religious mobilization." *From pews to polling places* pp. 1–28.

Wilson, Joshua C. 2020. "Striving to rollback or protect Roe: State legislation and the Trump-era politics of abortion." *Publius: The Journal of Federalism* 50(3):370–397.

Wood, James R and Mayer N Zald. 1966. "Aspects of racial integration in the Methodist Church: sources of resistance to organizational policy." *Social Forces* 45(2):255–265.

Wuthnow, Robert. 2007. *After the baby boomers: How twenty-and thirty-somethings are shaping the future of American religion*. Princeton University Press.

Yamane, David A. 2005. *The Catholic Church in state politics: Negotiating prophetic demands and political realities*. Sheed & Ward.

Zankina, Emilia. 2023. Pro-Russia or anti-Russia: Political dilemmas and dynamics in Bulgaria in the context of the war in Ukraine. Report European Center for Populism Studies (ECPS) Brussels: .