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Why Parkland, Not Pulse? Understanding Racialized Policy Responses to Catastrophes

A Dissertation submitted in partial satisfaction of the requirements

for the degree of Doctor of Philosophy

in

Political Science

by

G. Agustin Markarian

Committee in charge:

Professor Marisa Abrajano, Co-chair

Professor Dan Butler, Co-chair

Professor LaGina Gause

Professor Stephan Haggard

Professor Zoltan Hajnal

Professor Thad Kousser

2022

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University of California San Diego

2022

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Abstract of the Dissertation

Why Parkland, Not Pulse? Understanding Racialized Policy Responses to Catastrophes

by

G. Agustin Markarian

Doctor of Philosophy in Political Science

University of California San Diego, 2022

Professor Marisa Abrajano, Co-chair

Professor Daniel Butler, Co-chair

Why did the 2018 mass shooting in Parkland, Florida, lead to immediate state gun policy reforms while the 2016 mass shooting in Orlando, Florida, did not affect state gun laws? This dissertation offers an answer to this puzzle by studying how victims' race and ethnicity moderate policy responses to catastrophic events, crises, and disasters. I argue that government in the United States is more likely to respond to crises and disasters compassionately and effectively when victims are white rather than racial and ethnic minorities. I contend that biased post-crisis narratives and differential responses by predominately white influential actors lead to these

disparate policy responses. I test this theory by studying state legislators' reactions to mass shootings.

Chapter 2 investigates how mass shooting victims' race and ethnicity shape state legislators' post-crisis narratives, analyzing legislators' tweets posted before and after mass shootings. I find that legislators are more likely to use gun policy-oriented language and call for legislative action to address gun violence when mass shootings victims are white but not when they are racial and ethnic minorities, lending support to the proposed causal mechanism.

Chapter 3 studies state legislators' efforts to change gun laws after mass shootings by leveraging an original state legislator panel dataset that tracks gun legislation sponsorship. Democratic legislators and legislators with larger white constituencies successfully sponsor more gun laws in response to white mass shooting fatalities but not fatalities of color. Republicans successfully sponsor more gun laws in response to mass shooting fatalities of color, but these laws may not represent the interests of racial and ethnic minorities.

Chapter 4 studies the impact of mass shootings directly on gun policy change using a unique 30-year state panel dataset. Each white mass shooting fatality leads to 0.16 new restrictive gun laws that year, but racial and ethnic minority mass shooting fatalities do not affect gun policy change. These disparate responses are most visible in Democrat-controlled states.

This research informs our understanding of political representation, crisis responsiveness, and framing effects, highlight an ill in our democratic process that speaks to biased government responses to other disasters, crises, and catastrophic events.

Chapter 1: Introduction

The 2018 mass shooting at Marjory Stoneman Douglass High School in Parkland, Florida, pushed state leaders to implement significant gun policy reforms, while the 2016 Pulse Nightclub shooting in Orlando, Florida, failed to inspire any meaningful state gun policy change. These disparate policy responses offer a fascinating puzzle. The Pulse Nightclub shooting was far more violent, resulting in the death of nearly three times as many people as the Marjory Stoneman Douglass High School shooting, and the political context remained unchanged. The Marjory Stoneman Douglass High School shooting led to the most significant gun safety legislation passed in Florida's history. Florida's leadership named the legislation in remembrance of the shooting; the 2018 Florida Senate Bill 7026 was called the Marjory Stoneman Douglas High School Public Safety Act. The bills increased the minimum age required to buy a rifle from 18 to 21, established mandatory background checks and waiting periods, created a series of "red flag laws" which ban specific individuals deemed dangerous from buying firearms, banned bump stock attachments, and increased the presences of armed public safety officers in schools. The bill provided about \$400 million in funding to back these initiatives. On the other hand, the Pulse nightclub shooting failed to impact gun safety and public safety policy.

What explains these disparate policy responses? One possible explanation is that who the victims of catastrophic events are matters. The Marjory Stoneman Douglass High School shooting victims were primarily white, affluent children, while the Pulse nightclub shooting victims were mainly LGBT people of color. I contend that the stark difference in the marginalized status of the victims of these shootings is critical to understanding the variation in policy responses.

Florida's disparate response to the Pulse shooting and the Parkland shooting is one example of many seemingly biased government policy responses to catastrophic events, major disasters, and public health crises. Critics accuse the United States federal government of responding in racially prejudiced and discriminatory ways to other types of catastrophic events, ranging from acute disasters like hurricanes to prolonged crises like drug epidemics (Willison et al., 2018; Om, 2018).¹ Case study-based research lends support to these accusations. For example, the federal government's response to Hurricane Harvey and Hurricane Irma was faster and more well-funded than the federal government's response to Hurricane Maria (Kishore et al., 2018; Willison et al., 2018). Hurricane Harvey and Hurricane Maria affect whiter and more affluent areas (Kishore et al., 2018; Willison et al., 2018). The federal government's response to the opioid crisis, which relatively affected more white and rural communities than the crack epidemic, has been more humanizing and less punitive than the federal government's response to the crack epidemic, which primarily affected urban and Black communities (Om, 2018). Similarly, the federal government responded aggressively to the HIV/AIDS epidemic when it began affecting more white, affluent, and straight individuals. On the other hand, the federal government largely ignored the crisis when it perceived HIV/AIDS as only affecting drug users, gay men, and the Black community (Shilts, 1991; Cohen, 1999).

The aforementioned catastrophic events and crises cut across issue space, policy domains, and communities. However, they jointly suggest that the United States's responses to catastrophic events are biased against historically marginalized communities, reinforcing systemic inequalities

¹ I refer to a variety of sudden, natural or human-causes, tragic events like mass shootings, hurricanes, wildfires, and public health crises that cause death and destruction as *catastrophic events*.

during times of crisis. The federal government appears to respond to catastrophic events, disasters, and crises compassionately and effectively when victims are socially advantaged. However, it ignores or punitively responds to catastrophic events, disasters, and crises when victims are socially marginalized. A review of the federal government's response to hurricanes, drug epidemics, and the HIV/AIDS epidemic suggests that federal policy responses are more active, well-funded, humanizing, and compassionate when victims are from socially advantaged communities compared to when victims are from socially marginalized communities. Discrimination based on racial and pan-ethnic identities, which play a central role in structuring power cleavages in American politics, appears to be particularly important and cut across issue types (Omi and Winant, 1986; Bonilla-Silva, 2006). Therefore, in this dissertation, I focus on how race and ethnicity shape policy responses to crises and disasters. I do so by studying gun policy responses to mass shootings, holding the policy domain and event type constant, and leveraging variation in mass shootings' location, timing, context, and random nature. Similar tests are not possible when studying policy responses to other types of public health crises or disasters with more limited geographic and contextual variations. I shift attention to state government responses to more variation in policy responses and the relatively local nature of mass shootings as gun policy has mainly remained stagnant at the federal level for decades (Spitzer 2020).

1.1 Research Question

Research studying racial biases in government responses to catastrophic events is largely case-focused. While these studies provide rich, contextual evidence supporting hypotheses of racial bias in federal government responses to particular events, they rarely test for systemic biases across space and time, failing to establish the existence of persistent patterns. This gap in the

literature leaves open the question, “Does victims’ race and ethnicity shape policy responses to catastrophic events in the United States?”

Furthermore, no research thus far offers a generalizable theory that helps explain why government responses to different types of catastrophic events and crises are racially biased in the United States. This may be because most case studies focus on federal reactions to catastrophic events over a limited period and have limited sources of variation across institutional and event-level characteristics to leverage. Therefore, scholars studying responses to specific crises may focus on particular circumstances of those events instead of searching for more generalizable patterns. The lack of a generalizable theory prompts the question, “Why do governments in the United States respond more compassionately and aggressively to catastrophic events when victims are white compared to when victims are racial and ethnic minorities?” Scholars have advanced various explanations for systemic racial biases in crises responsiveness ranging from theories that highlight differences in the political power of the groups affected to approaches that focus on legislators’ implicit biases. Understanding why policy responses to catastrophic events are more compassionate when victims are white compared to when victims are people of color is essential to understanding how systemic inequalities are reinforced and often exacerbated during times of crisis. Furthermore, understanding the causes of disparate responses can inform political strategies that aim to reduce biases in political representation.

Relatedly, research on racially biased responses to catastrophic events have primarily focused on differences in media coverage or differential public responses (*see* Sommers et al. 2006; Fong and Luttmer 2009). Of the few studies focused on ultimate policy outputs, they primarily compared government spending within-case over time or across cases during a short period (for example, *see* Shilts, 1989; Willison et al., 2018). This study advances our understanding

of policy response to disasters and crises by bridging social science research, helping us make sense of how differential media narratives, differential white responses to catastrophe, and unequal policy responses are related. It does so by studying legislators' responses to crises and disasters at various stages, ranging from the earliest framing stage immediately following a crisis to the ultimate policy outputs after a crisis. By studying legislators' responses throughout the post-shooting policymaking process, we can begin to understand at which stage representation breaks down and better understand the relationship between different research agendas.

1.2 A Generalizable Theory of Racialized Policy Responses to Crises and Disasters

Here, I propose a generalizable theory that aims to explain why victims' race and ethnicity moderate policy responses to catastrophic events and crises in the United States. I draw from research on policy making, focusing events, biases in media narratives, biases in elite behavior, and systemic political inequalities. I test the theory by systemically studying state gun policy responses to mass shootings, focusing on legislators' behavior.

I argue that policy is more responsive to crises and disasters impacting white communities than crises and disasters affecting communities of color because victims' race and ethnicity mediates media and elite narratives and influential actors' demands for government action. When crises and disasters strike white communities, media and elite narratives focus on institutional and systemic causes, highlighting policy failures and making the highlighted policy domains salient (Parham-Payne, 2014). On the other hand, when victims of catastrophic events are racial and ethnic minorities, media and elite narratives are more likely to frame these events through individual or community lenses, cueing implicit biases and deflecting responsibility away from policy failures (Parham-Payne, 2014; Sommer et al., 2006; Netherland and Hansen, 2016; Cohen, 1999).

Furthermore, when tragedy strikes white communities, influential actors are more likely to demand government-led policy responses to these events (Fong and Luttmer, 2009; Iyengar and Hahn, 2007; Walker, Collingwood, and Bunyasi, 2020). Influential actors are defined as any individual or group with significant political power, allowing them to make policy decisions themselves or significantly influence policymakers' decisions. These actors may range from legislators to special interest groups to powerful voting constituencies. Influential actors tend to be disproportionately white (Griffin and Newman, 2008; Hansen and Clark, 2020; Leading with Intent, 2021), and research suggests that people are more likely to feel empathetic toward people who share their descriptive characteristics (Dawson, 1994; Turner et al., 1987; Xu et al., 2009; Adida, Lo, and Platas, 2019). Empathy is linked to emotional responses associated with changes in political behavior (Albertson and Gadarian, 2015; Davis and Nichols, 2016; Valentino et al., 2011). Therefore, this research suggests that influential actors are more likely to feel angry, anxious, and threatened when disaster victims are white compared to when they are people of color because of higher in-group empathy.

Elite and media disasters and crises narratives often have racial undertone and biases in coverage, shaping blame attribution. Elites and the media implicitly blame crises, disasters, and tragedies impacting white communities on systemic and institutional deficits, while they implicitly blame crises and disasters affecting communities of color on individual and cultural root causes (Iyengar and Hahn, 2007; Ben-Porath and Shaker, 2010; Forgette, King, and Dettrey, 2008; Parham-Payne, 2014; Walker, Collingwood, and Bunyasi, 2020; Cohen, 1999). These acute racially biased patterns in blame attribution are part of long-term racialized media and elite narratives that stereotype blame attribution for problems racial and ethnic minorities face (Nelson and Kinder, 1996; Parham-Payne, 2014). While blame for some catastrophic events impacting

communities of color is sometimes attributed to victims themselves based on stereotypes related to criminality, laziness, and morality, this is not always the case. Even when exogenous forces, like weather, are the leading cause of a catastrophe, blame for outcomes is racialized through narratives with implicitly biased frames (Sommers et al., 2006). The media and elites implicitly blame people of color for failing to prepare or behave differently but do not engage in similar victim-blaming when victims are white (Sommers et al., 2006). Blame and responsibility for solutions and remediation is implicitly shifted to perpetrators, communities, or other actors not associated with systemic deficits or policy failures when victims are racial and ethnic minorities, often by promoting negative racial and ethnic stereotypes (Iyengar and Hahn, 2007; Ben-Porath and Shaker, 2010; Forgette, King, and Dettrey, 2008; Parham-Payne, 2014; Walker, Collingwood, and Bunyasi, 2020).²

Theories in social psychology suggest that people are more empathetic with in-group victims, shaping collective emotional responses like anger and perceptions of threats (Skitka, Bauman, and Mullen, 2004; Xu et al., 2009; Avdan and Webb, 2018). Research suggests that emotions like anger, anxiety, and threat can shape political preferences and are associated with increased mobilization (Albertson and Gadarian, 2015; Valentino et al., 2011; Newman and Hartman, 2019). I argue that white people are more likely to support government interventions to prevent or mitigate future crises and support victims when victims are white compared to when victims are racial and ethnic minorities. Whites racialized responses to catastrophic events lead to

² In the case of mass shootings, blame is unlikely to be attributed to victims' themselves like it was during the crack-cocaine epidemic or the early period of the HIV/AIDS epidemic (Shilts 1989; Netherland and Hansen 2016). However, blame may be shifted to the perpetrator and their motivations more often when victims are people of color compared to when victims are white.

disparate demands on policymakers because influential actors are disproportionately white (Griffin et al., 2019; Griffin and Newman, 2007; Hajnal and Trounstein , 2013; Hero and Preuhs , 2007; Hansen and Clark, 2020; Leading with Intent, 2021). Therefore, legislators are more likely to feel demands internally and externally for mitigating similar catastrophic events in the future and supporting victims of recent events when victims are white compared to racial and ethnic minorities.

Ultimately, I contend that racially biased media and elite narratives used in catastrophic event coverage and differential levels of empathy for victims among a disproportionately white ruling class (i.e., influential actors) lead to racially biased policy responses to catastrophic events.

1.3 Representation and Policy Responsiveness in America

To understand why catastrophic events may impact policy in the first place and why victims' race and identity may moderate this response process, we must first understand the relationship between public opinion and policy change. Notably, it is important to understand under what conditions policy is more susceptible to change.

Unless representatives adhere to a strict trustee model of democracy, we expect that public policy will be a function of public opinion (Dahl, 1971; Weale, 1999). Social scientists have broadly recognized this function, and there is empirical evidence that policy is responsive to public opinion on aggregate. Stimson, MacKuen, and Erikson (1995) find that public opinion can change public policy because current representatives align their views with shifting public opinion or because the public removes legislators from office who do not share their views through elections. Erikson, Wright, and McIver (1993) find that state ideology likely drives state policy liberalism at the state level.

Some scholars argue that findings illustrating the existence of broader ideological congruence like Erikson, Wright, and McIver (1993) may be masking a lack of congruence on individual policies (Lax & Phillips, 2009). While some studies find that policy is congruent with public opinion on specific issues, particularly under certain institutional circumstances, others find that policy is often incongruent, unresponsive, and biased towards the conservative position (Gerber, 1996; Norrander, 2000; Lupia et al., 2010; Lax & Phillips, 2012). Gun policy appears to be particularly incongruent. Lax and Phillips (2012) find that policy bans on assault rifles are only congruent with public opinion 20% of the time, ranking 34th out of 39 policies in order of most congruent to least congruent (p. 154). Furthermore, policy bans on assault rifles had the second-highest conservative bias of the 39 policies they studied.

1.3.3 Focusing Events and Policy Change

Why are policies often incongruent with public opinion? Policy change theories provide some explanation. One of the central theories in the study of policy change is that of *punctuated equilibrium*. The theory posits that legislators cannot consider all policy problems simultaneously, given the complexity of policy problems and the limitations of human cognition.³ Therefore, legislators generally defer policymaking over specific policy domains to formal or informal policy-making bodies compromised by expert bureaucrats and entrenched special interests. These actors typically favor the status-quo, only implement small incremental changes when necessary, and are largely insulated from external demands (Jones and Baumgartner, 1993). The rapid and significant policy change which we generally associate with legislative chambers only occurs during limited *policy windows* (Jones and Baumgartner, 1993). Policy windows are associated with increased

³ These theories rely heavily on conceptions of *bounded rationality*.

policy saliency, and higher policy saliency is also associated with more policy responsiveness and congruence (Lax and Philips, 2009; Lax and Philips, 2012). Therefore, low policy congruence is likely a factor of relatively low policy salience in a competitive policy environment, with policy becoming more responsive to the demands of external actors during limited policy windows.

Crises and disasters open policy windows when they act as “focusing events” (Kingdon, 1995; Birkland, 1997; Birkland, 1998). Birkland (1998) defines a *potential focusing event* as “an event that is sudden; relatively uncommon; can be reasonably defined as harmful or revealing the possibility of potentially greater future harms; has harms that are concentrated in a particular geographical area or community of interest; and that is known to policymakers and the public simultaneously” (p. 54). Focusing events like mass shootings may provide an urgent, symbol-rich example of claimed policy failure. Media and elite narratives often focus on purported policy failures when addressing and covering these events, blaming the damage caused by the events on systemic and institutional failures. Through sudden media attention and policy-focused coverage, focusing events make associated policy domains more salient. Higher policy saliency may move the previously ignored policy domains to the center of crowded legislative agendas (Baumgartner and Jones, 2010; Kingdon, 1995; Birkland, 1997; Birkland, 1998). Therefore, how much a focusing event brings attention to associated policy failures mediates whether a focusing event will lead to policy change.

However, Kingdon (1995) and Elder and Cobb (1983) argue that focusing events are unlikely to cause policy change if they only highlight policy failures. They contend that focusing events must also attract the attention of *influential actors*, like powerful voting constituencies, interest groups, or legislators. Catastrophic events and crises may draw the attention of influential actors motivated by the perceived harms caused by the events to demand government-led

solutions. Focusing events are linked with preference change among influential actors because they “bring citizens together, provide common experiences and information, and create opinions that transcend traditional political boundaries” (Atkeson and Maestas, 2012). Mobilized influential actors can use their political leverage to reduce shirking among policymakers and force compromises. This research suggests that focusing events are more likely to lead to policy change when they mobilize influential actors.

Therefore, focusing events lead to policy change through these two interrelated mechanisms associated with agenda-setting. First, focusing events make associated policy domains more salient through media and elite narratives that highlight purported policy failures that are seen as root causes of the crisis or disaster. Second, focusing events inspire influential actors to demand government-led responses, motivated by the perceived harms caused by the crises or disasters. I illustrate this theoretical mechanism in Figure 1.1.

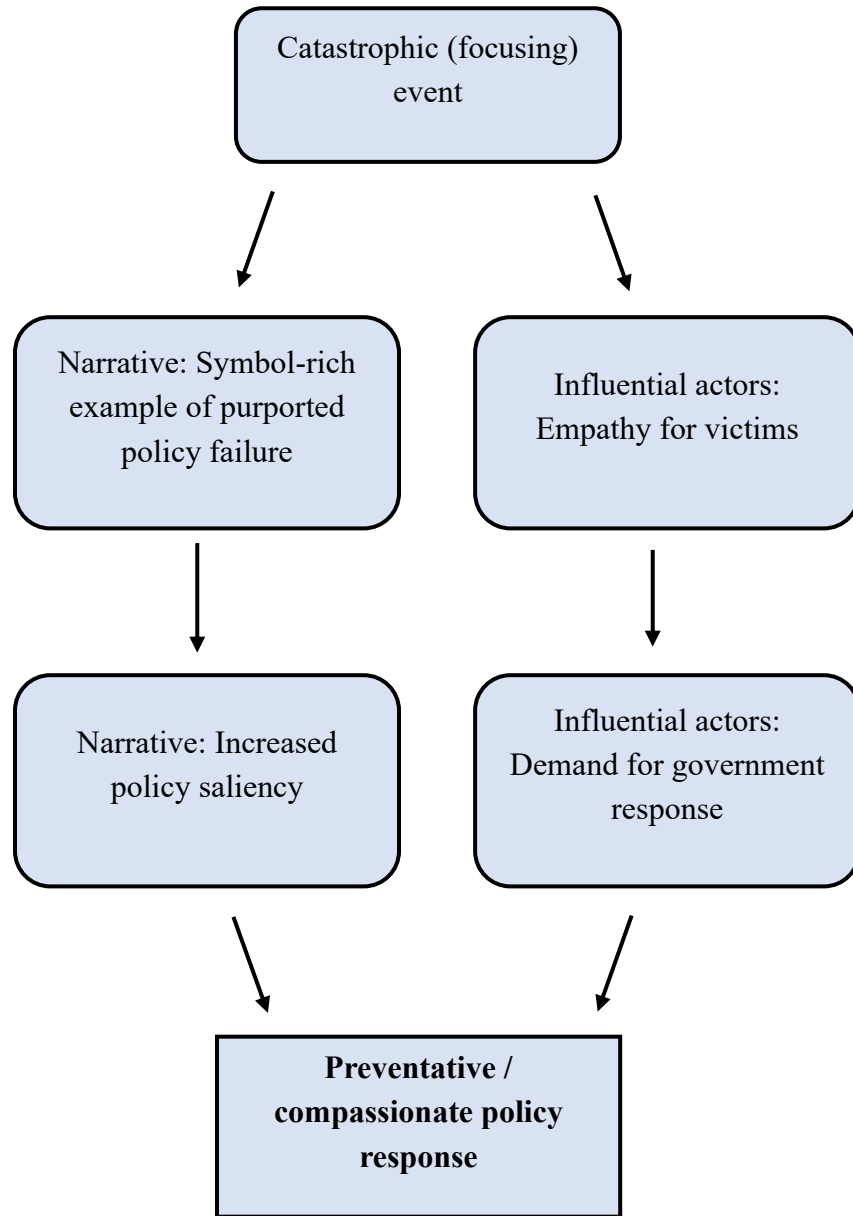


Figure 1.1: Focusing Events Mechanism

1.3.2 Mass Shootings as Focusing Events

Mass shootings are treated as focusing events in many studies that essentially embrace parts of the proposed causal mechanism in Figure 1.1. However, the exact effect of mass shootings on many of the outcomes we care about in political science remains poorly understood.

After large mass shootings, we generally find that gun policy is a more salient issue for voters. According to Gallup polling, on average, only about 1-2% of respondents rank gun policy as the most important issue facing the country in recent decades (Rakich, 2019; Gallup n.d.). However, following the Sandy Hook Elementary school shooting, 7% of Americans ranked gun policy as the country's most important problem. After the Parkland shooting, 13% of Americans ranked gun policy as the country's most important problem (Rakich, 2019; Dugan, 2018). These preference changes appear to have localized effects (Newman and Hartman, 2016). Newman and Hartman (2016) find that experiencing a mass shooting in one's proximity increases support for restrictive gun laws, irrespective of party identification or ideology. However, Barney and Schaffner (2019) find that living near a mass shooting only increases support for restrictive gun laws among Democrats when using a different measurement of proximal exposure. These empirical observations and findings suggest that mass shootings highlight gun policy failure, making gun policy a more salient issue and potentially leading to preference changes in the public.

Mass shootings are also linked to political candidates' success (and failure), particularly in some recent elections (Itkowitz, 2018). Mass shootings increase interest group mobilization locally (Laschever, 2017). Findings on their exact impact on voter preferences and behavior are more mixed. Hassel, Holbein, and Baldwin (2020) find that school shootings do not increase voter turnout rates in the local county or change voter preferences. However, García-Montoya, Arjona,

and Lacombe (2021) find that school shootings, when defined more narrowly to only include incidents with four or more deaths, increase Democratic candidates' vote share. This research suggests that mass shootings change the behavior of influential actors like interest groups and swing voters. Remarkably, García-Montoya, Arjona, and Lacombe's (2021) study suggests that swing voters demand legislators produce government-led solutions to mass shootings and failure to act on these demands leads to punishment at the voting booth.

Recent research suggests that mass shootings do not lead to stricter state gun laws on average or more congruent gun policy though they have been linked to gun policy change and more gun policy legislation (Luca et al., 2020). Luca et al. (2020) find that mass shootings in states with Republican-controlled legislators lead to weaker gun laws, while mass shootings in states with Democrat-controlled legislators do not affect state gun policy. However, under both types of government control, mass shootings increase the introduction of gun policy-related legislation (Luca et al., 2020).

These interconnected processes are diagrammed in Figure 1.2. Mass shootings are linked to increased gun policy saliency through news media and elite narratives that highlight gun policy failure when covering and discussing mass shootings. Furthermore, mass shootings are associated with demands on policymakers to produce solutions and punishment for failure to meet these demands. Scholars also have studied whether mass shootings lead to gun policy change and found curious results. However, I argue that the studies cited above are missing a crucial source of heterogeneity: victims' race and ethnicity.

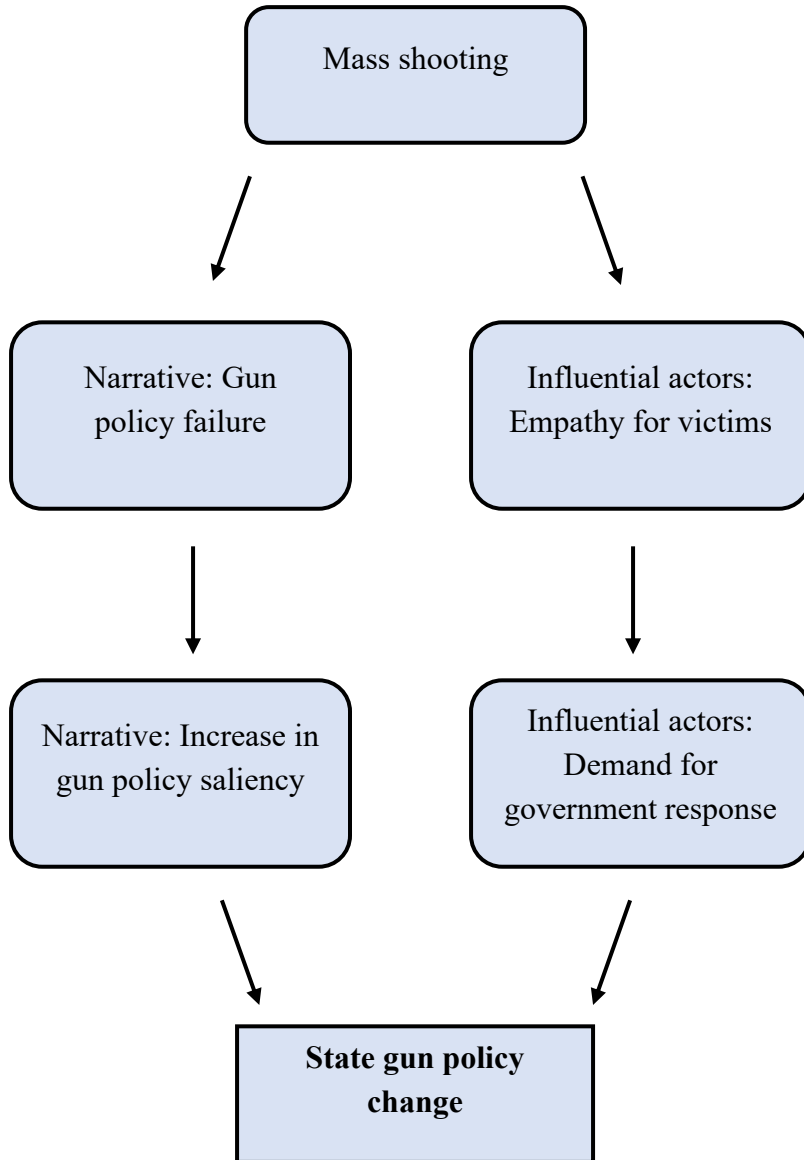


Figure 1.2: Mass Shootings as Focusing Events Diagram

1.4 Race & Unequal Political Influence

Scholarship in American politics generally finds racial and ethnic biases in policy responsiveness and political representation. Federal policy favors white policy preferences over nonwhite policy preferences (Griffin et al., 2019). Congressional representatives align their votes more closely with the priorities of white constituents than Latino constituents (Griffin and Newman 2007). Similarly, local and state officials are more responsive to the interests of white voters than voters of color (Hajnal and Trounstein, 2013; Hero and Preuhs, 2007; Butler, 2014).

Case studies suggest that federal policy responses to crises and disasters are also racially biased though few studies have advanced causal models that help us understand regularities across these responses (Shilts, 1989; Ha, 2019; Willison et al., 2018; Om, 2018). I argue that biases in media and elite narratives following catastrophic events and differential demands for government-based solutions from influential actors, who are disproportionately white, explain differential policy responses to mass shootings and other types of catastrophic events.

1.4.1 Race and Blame Attribution

Media and elite discourse about policies in the United States sometimes have racial undertones. I argue that media and elite coverage of crises and disasters have racial biases that impact policy saliency after catastrophic events and policy responses. Specifically, I argue that media and elite narratives about crises and disasters affecting white communities attribute blame for these crises to institutional and systemic issues, emphasizing institutional and policy-based solutions. On the other hand, media and elite narratives about catastrophic events impacting communities of color tend to blame individual and cultural issues and build off historically

racialized policy narratives that paint communities of color as inferior, immoral, criminal, and foreign. Ultimate these differential narratives shape what policies or issues become salient on crowded legislative agenda and limit the menu of alternative solutions.

Policy narratives substantially affect public opinion and legislators' policy choices, especially when issues are linked to communities of color (Nelson and Kinder, 1996). Media and elite frames help the public make sense of complex problems and constrain potential policy solutions (Jones & Baumgartner, 2005). Complex issues like mass shootings have many attributes the media and elites can focus on, including the context of the shooting, its potential causes, and consequences. For example, when discussing a mass shooting, the media and elites may focus on the victims, the perpetrator, the location, police response, etc. What attributes they decide to focus on frames events and highlight potential causes. This narrative process is sometimes referred to as the "problem characterization stage" of policy change (Jones & Baumgartner, 2005; Jones, 1994). According to Nelson and Kinder (1996), "the framing of issues – by partisan elites and mass media organizations – shapes public understanding of *the roots of contemporary problems and the merits of alternative solutions.*" For instance, mass shootings are blamed on easy access to guns, poor parenting, cultural decline, individual failings, terrorism, violent video games, and insufficient mental health resources, among other things. Problem characterization also helps constrain potential solutions (Jones & Baumgartner, 2005). For example, if the media and elites discuss a recent mass shooting by primarily focusing on a perpetrator's unstable upbringing, appropriate policy solutions to prevent future incidents might appear to lie within the social work policy domain, not within the gun policy domain or public safety policy domain.

Media and elite frames can also construct and trigger latent racial biases in ways that implicitly shape blame attribution if policy areas and issues are historically racialized (Nelson &

Kinder, 1996; Mendelberg, 1999). When welfare is framed as primarily benefiting Black recipients or crime is framed as mostly orchestrated by Black men, it triggers and constructs implicit biases, shapes how the public views these policy issues, and shapes policy preferences accordingly (Nelson & Kinder, 1996; Mendelberg, 1999). Nelson & Kinder (1996) refer to this as “group-centric” frames. They argue that when policies are framed through a particular group, such as how affirmative action is framed in the context of African American beneficiaries, the public’s position on the policy reflects their views of that group instead of their analysis of the policy itself. Importantly, empirical evidence suggests that mass shooting frames impact both blame attribution and public opinion for a significant segment of the public (Haider-Markel and Joslyn, 2001).

The media and elites racialize the root causes of gun violence, shifting blame to different actors based on victims’ race and ethnicity. These racialized narratives construct and cue implicit biases, shape expectations for policy-based solutions, and set the legislative agenda. Parham-Payne (2014) argues that “crimes involving low-income persons and racial and ethnic minorities are framed, and consequently, attributed to a convergence of cultural, environmental, and individual shortcomings and immorality....” On the other hand, Parham-Payne (2014) argues that the victims of the Newtown shootings were disproportionately framed as ‘innocent’ victims relative to their Black and urban young counterparts, highlighting policy failures and lending support to structural solutions. Research by Zhang et al. (2019) finds that gun policy discourse on Twitter in the aftermath of mass shootings was negatively correlated with the number of African American victims in the shooting when controlling for other factors, suggesting that even public discourses about mass shootings have racialized frames.

These disparate frames build on long-term media narratives that link Black people and Latinx people to crime, amoral behavior, and foreignness, leading to the ethnic groups’

marginalization and subjugation (Gilliam and Iyengar, 2000; Farris and Mohamed, 2018; Abrajano and Lajevardi, 2021). Media treatment of Native Americans follows similar patterns (Larson, 2006; Eason, Brady, and Fryberg, 2018). Racialized crime frames likely shape the public's view of gun violence because gun violence is one salient aspect of crime debates and crime policy,

Furthermore, media and elite frames of mass shootings with victims are primarily people of color, particularly when those shootings are racially motivated, often focus on the perpetrator and their xenophobic or racist beliefs. These frames help explain limited gun policy conversations in the aftermath of primarily Asian American shootings. Asian Americans are not tied closely to urban gun violence and crime. Still, they are racialized to be seen as foreign, deprived of equal civic standing, and were frequently linked to criminality and amoral behavior in the past (Kim, 1999). David Inoue, executive director of the Japanese American Citizens League, stated in response to a 2021 shooting in Georgia with six Asian American victims, "Why is there this lack of coverage about the fact that this was a mass shooting? And whenever there's a mass shooting that's [gun policy] always one of the first things that's talked about" (Shivaram, 2021). Greg Jackson Jr., national advocacy director of the Community Justice Action Fund, offers an answer, "What we're seeing now is no different from, frankly, what we see every day. When racial and ethnic minorities are being impacted by gun violence, it's purely looked at as a *crime challenge*, a *hate challenge*, but not necessarily as the *public health crisis* that it is and the response that's required to address this as a crisis and not an *individual impact or individual incident*" (Shivaram, 2021).

1.4.2 Influential Actors and Racially Biased Responses

I argue that influential actors, who tend to be whiter on average than the American electorate, are more likely to be mobilized by crises and disasters that affect co-racials/co-ethnic victims because people are more empathetic with in-group members. Empathy can trigger strong emotional responses, including anger, anxiety, and fear (David and Nichols, 2016). These emotions affect people's political behavior and preferences, often leading to opinion change and political mobilization (Albertson and Gadarian, 2015; Valentino et al., 2011). People are more empathetic with those they are proximally and personally close to (Nussbaum, 1996). Shared racial and ethnic backgrounds can create personal proximity across strangers, strengthening empathetic bonds across co-racial or co-ethnic peers that do not exist among inter-racial or inter-ethnic peers (Dawson, 1994; Turner et al., 1987).

Greater empathy for in-group members shapes responses to crises and disaster victims. For example, people tend to favor co-racial, co-ethnic, and co-religious immigrants and asylum seekers, preferring more empathetic and compassionate responses to refugees who share their descriptive characteristics. Various studies find that whites are more likely to support more inclusive immigration policies when immigrants are framed as white instead of Latino or Muslim (Brader et al., 2008; Adida, Laitin, & Valfort, 2010; for a review, see Hainmueller and Hopkins, 2014). Nassar (2020) finds that indicators of racial prejudice are just as effective at predicting asylum policy preferences as they are at predicting immigration policy preferences for white Americans, suggesting that whites are more empathetic to co-racial refugees. Adida, Lo, and Platas (2019) find that Americans prefer accepting Syrian refugees who are female, fluent-English speakers, and Christian. While the gender preference may be based on prioritizing a population

that is more vulnerable to the harms of war, the latter two preferences suggest a tendency to prioritize people with shared ascriptive characteristics. These studies replicate findings in Europe and elsewhere (Hager and Veit, 2019; Bansak, Hainmueller, Hangartner, 2016). For example, in Syria, Sunni Muslims and Assyrian Christians were more willing to host co-religious internally displaced migrants than non-co-religious internally displaced migrants (Hartman, Morse, and Weber, 2021).

Avdan and Wedd (2019) use a series of survey experiments to test whether physical and “personal proximity” – sharing ascriptive characteristics – moderate white Americans' empathy towards victims of terrorist attacks and perceptions of the threat posed by terrorist attacks. They find that respondents are more likely to feel empathetic towards victims and threatened by terrorism when they are white victims of a terrorist attack. Personal proximity appeared to shape empathy and threat perceptions more than physical proximity in the experimental conditions. Similarly, research in Israel finds that respondents were more likely to feel threatened by violent crime when presented with a fictional news article about a co-ethnic crime victim than a news article about an inter-ethnic crime victim (Nir and Sophia, 2018).

These disparate responses translate to gun violence in America as well. Walker, Collingwood, and Bunyasi (2020) implement two research designs to test whether gun violence victims' race moderates whites' support for gun control. First, they use a regression discontinuity design (RDD), leveraging the timing of a survey conducted in Chicago. When the survey was conducted, there was a salient firearm homicide of a 9-year-old Black child, which allowed for a discontinuity test in gun policy preferences. Second, they implement a survey experiment where the race of a gun homicide victim is randomized. Based on findings from both studies, the researchers conclude that news about Black firearm homicide victims decreases support for gun

control measures among white respondents or does affect their attitudes. In contrast, news about a white firearm homicide victim increases support for gun control measures among white respondents.

These differential empathic responses at the individual level have systemic consequences because influential actors are disproportionately white. Voters are whiter on average than the American electorate, and communities of color often make up a smaller portion of a representative's constituents than whites since they constitute a minority of voters in the United States and are geographically concentrated (Bowler and Segura, 2011; Census Bureau QuickFacts, 2019).⁴ Since legislators prioritize voters' policy preferences over non-voters, racial and ethnic minority preferences are more likely to be ignored by electorally motivated legislators than white preferences (Griffin and Newman, 2005). Even when racial and ethnic minorities make up a sizeable proportion of a legislator's constituency, they may be in a position of electoral capture, making legislators less likely to prioritize their preferences and priority issues (Frymer, 1999). Furthermore, whites tend to donate at higher rates to political campaigns than people of color (Grumbach and Sahn, 2020). If legislators are more responsive to constituents that contribute versus those that do not, donation disparities may impact political representation.

Legislators and party leaders are also whiter on average than the American electorate (Hansen and Clark, 2020). Audit studies suggest that legislators hold implicit racial and ethnic biases (Butler & Broockman, 2011; White, Nathan, & Faller, 2014; Gell-Redman et al., 2018).

⁴ For example, in the 2016 presidential election, white voter turnout was 65.3% but Black voter turnout was 59.6%, Latino voter turnout was 47.6%, and Asian-American voter turnout was 49.3% (Census Bureau 2017). However, in the 2008 and 2012 presidential election, Black voter turnout surpassed White voter turnout.

Early studies find that legislators discriminate against Black Americans, even in low-cost situations and when the constituents' likelihood of voting is controlled (Butler & Broockman, 2011). Later studies find similar effects for other racial and ethnic minority groups, such as Latinos, Asians, and Arab Muslims (Butler, 2014; Gell-Redman et al., 2018; Lajevardi, 2018). Elite public appeals may pressure policymakers to act, even when these appeals come from fellow politicians (Canes-Wrone, 2001; Jacobs and Shapiro, 2000; Cohen, 1995; Grimmer, 2013; Grimmer, Westwood, and Messing, 2014; Callaghan, 2016). Survey data also suggests that nonprofit and interest group leaders are disproportionately white (Leading with Intent, 2017).

Differential empathy towards victims of gun violence may shape gun policy preferences in response to everyday, low-salience forms of gun violence also. Gun violence is far worse in the United States than in other developed countries. Yet, it rarely ranks among the most important policy issues in public opinion polls. The discrepancy between the abnormally high levels of gun violence and the low salience of gun violence may be because gun violence primarily affects communities of color. Black people, Latinos, and Native Americans in the United States are much more likely to be victims of gun-related homicides than white people (Center for Disease Control, 2021; Violence Policy Center, 2014). In 2019, black men were 14 times more likely to die of gun-related homicide than white men. Black women were more than four times as likely to die of gun-related homicide than white women (CDC, 2021). When black people, Latinos, and Native Americans die in a mass shooting, it might appear as a continuation of the status-quo gun violence paradigm and elicit a less empathetic response from whites lacking co-racial bonds that increase empathetic responses (Avdan and Wedd, 2018; Albertson and Gadarian, 2015; Valentino et al., 2011).

This research suggests that empathy for victims shapes people's emotional response to a catastrophic event, triggering anger, threat, and anxiety. These emotions are linked to changes in political preferences and behavior. When influential actors are mobilized by disaster or crises, they are more likely to demand government-led solutions. However, people are more empathetic towards victims perceived as in-group members, like co-racial/co-ethnic victims. Because influential actors are disproportionately white, divergent emotional responses among these actors lead to differential levels of demands on policymakers to respond to a crisis or disaster.

Jointly, I argue that these two interrelated mechanisms shape post-crisis policy responses in a way that reinforces systemic inequalities. Racially biased media and elite narratives used to address and cover catastrophic events shape legislative agendas by moderating what policies or issues become salient and constraining the menu of alternative solutions. Differential empathy for co-ethnic/co-racial victims compared to inter-racial/inter-ethnic victims combined with systemic racial inequalities in power structures leads to unequal levels of pressure on policymakers to act after crises and disasters. These differential responses are diagrammed in Figure 1.3.⁵

⁵ I do not argue that these are two entirely distinct causal chains. The media and elite are themselves influential actors who may use their political leverage to force policymakers to act and media and elite narratives are likely to impact the behavior of other influential actors like powerful voting constituencies. There is inherently endogeneity in this process. However, this way of conceptualizing this relatively complex process provides conceptual clarity and helps us understand how and why victims' race and ethnicity may shape post-crises policy responses.

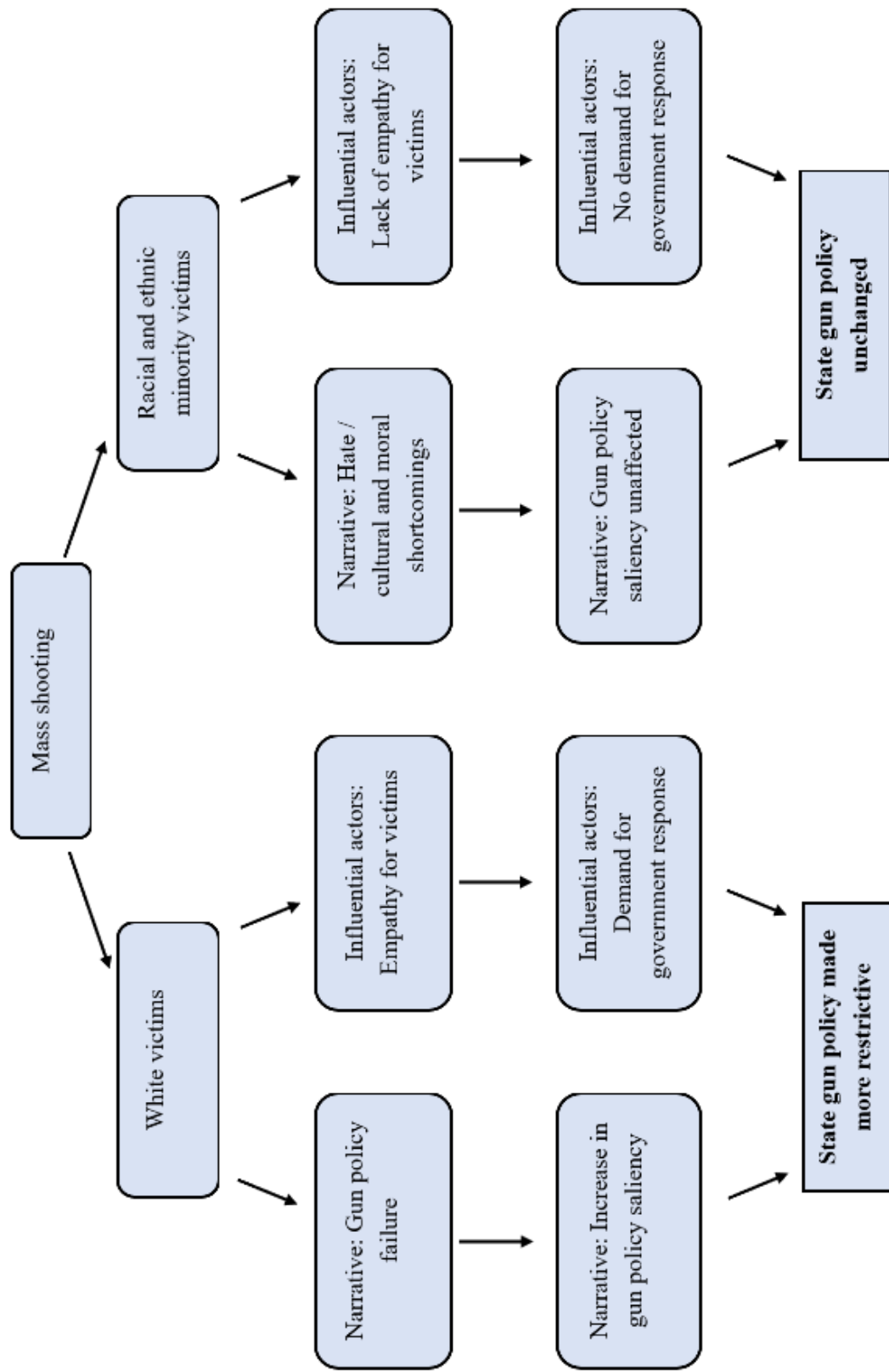


Figure 1.3: Racial Responses to Mass Shootings

1.5 Racialized Responses to Other Crises

This theory, developed to help understand racialized policy responses to mass shootings, may help us understand seemingly biased government responses to other catastrophic events like hurricanes, drug epidemics, and other public health crises. Across event types, media and elite narratives often have racial undertones that draw on implicit biases when covering and discussing catastrophic events. Influential actors' behavior in response to different types of crises and disasters also appears to be shaped by victims' race and ethnicity. In some cases, like in the early period of the AIDs/HIV epidemic, multiple marginalized identities intersected to shape media and elite narratives and the actions of influential actors (Shilts, 1989; Cohen, 1999). This theory helps bring together research on race, discrimination, and catastrophic events, creating a more holistic understanding of how the responses of different actors like the media and white voters shaped post-crisis policy responses

1.5.1 Racialized Responses to Hurricanes

Case studies suggest that federal policy responses to public health crises are not exempt from racial biases. For example, in 2017, Hurricane Harvey struck Huston, Texas, in August, Hurricane Irma struck Southern Florida in September, and Hurricane Maria hit Puerto Rico in September. While Hurricane Maria was the most destructive, measured in total fatalities and estimated property damage, the federal government responded on a larger scale and more quickly to Hurricane Harvey and Hurricane Irma than to Hurricane Maria when accounting for the storms' severity (Kishore et al., 2018; Willison et al., 2018). Critics argued that the government responded differently to Maria than to Harvey and Irma because most of Puerto Rico's population is Latino

and low-income. In contrast, Houston and Cape Verde (the center of Hurricane Irma's destruction) are whiter and wealthier (Maxwell, 2018).

The news media plays a central role in this process. Racialized media coverage of crises shapes policy responses by cueing implicit biases and shifting attention away from systemic failures. For example, media coverage of Hurricane Katrina was heavily criticized because of the implicit racial undertones in framing choices (Sommers et al., 2006). Some of the most famous examples of racist framings include the media labeling white people fleeing New Orleans "evacuees" while labeling black people fleeing New Orleans "refugees," creating a sense of foreignness for the latter (Nunberg, 2005). Similarly, white people who scavenged for supplies were disproportionately described as "looking for supplies," while black people were described as "looting" when engaging in the same behavior, framing the latter as criminals and violent (Sommers et al., 2006). Media coverage of Hurricane Katrina depicted white people and black people along positive and negative stereotypical lines, respectively (Kahle et al., 2007). These racist depictions of victims shift attention away from the federal and state governments' failure to prepare for the crises and the slow and ineffective post-disaster responses. They also legitimized government negligence by "crafting a narrative of irrationality within which Blacks violated norms of sound decision-making and accepted behavior" (Shah, 2009).

Differential empathetic responses to in-group versus out-group victims shape policy preferences broadly, particularly for those with strong in-group identities. For example, Fong and Luttmer (2007) find that white respondents with strong racial identities were less likely to give money to charities supporting Hurricane Katrina victims when shown a short audiovisual presentation that depicted victims as predominantly Black compared to when they were shown a short audiovisual presentation that depicted victims as primarily white. Furthermore, they find that

white respondents were less likely to support government assistance for hurricane victims when prompted with an audiovisual presentation with mostly Black victims. Similarly, Iyengar and Hahn (2007) find that white respondents were more likely to believe the federal government should assist Hurricane Katrina victims when prompted to think about victims as white but were more likely to think private charities and individuals should help Hurricane Katrina victims when encouraged to think about victims as Black. Both studies suggest that white voters are more likely to demand a government-led response to catastrophic events when victims are white compared to when victims are people of color.

We can use a similar theoretical frame developed to understand racially disparate responses to mass shootings to bridge the seemingly related but theoretically independent research reviewed above. Media and elite narratives used to cover hurricanes have racially biased frames that shape blame attribution and post-crisis policy saliency (Sommers et al., 2006; Shah, 2009). Influential actors, like white voters, appear to make more substantial demands on government when victims are perceived as white (Fong and Luttmer, 2007; Iyengar and Hahn, 2007). These differential narratives and calls for government action will likely impact governments' responses to hurricanes and other natural disasters. This process is diagramed in Figure 1.4.

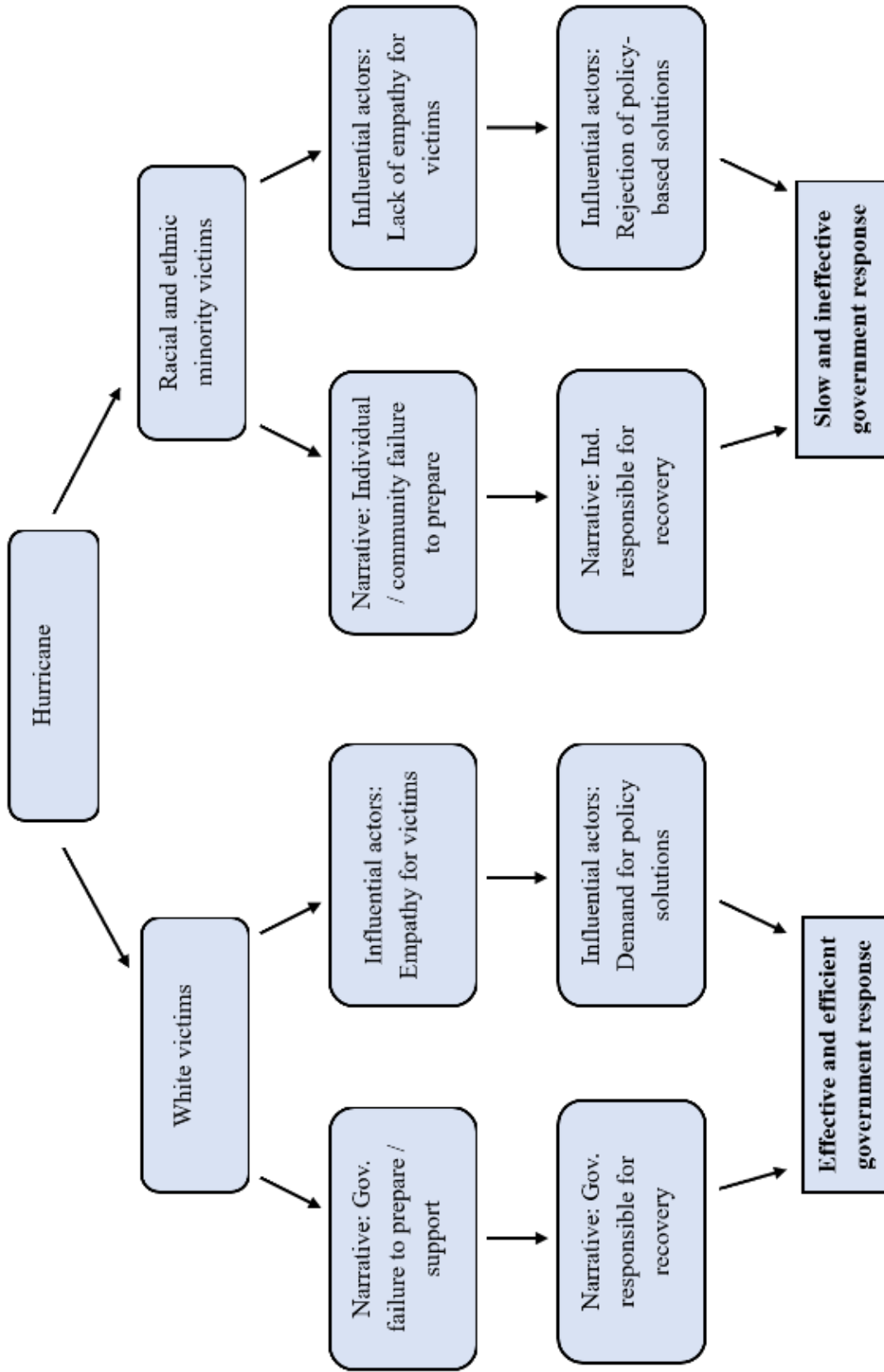


Figure 1.4: Racialized Responses to Hurricanes

1.5.1 Racialized Responses to Drug Epidemics

Similar patterns are observed when studying government responses to public health crises. For instance, Om (2018) finds that federal officials' racial biases led the federal government to respond more compassionately to the opioid epidemic when compared to the crack epidemic. Lee (2019) finds the federal government used more public health-based tools to address the opioid epidemic and more crime-based tools to manage the crack epidemic. While the crack epidemic disproportionately affected urban, Black, and low-income communities, the opioid crisis has hit white rural and suburban communities harder (Lopez, 2017; Lopez & Frostenson, 2017).

Media coverage of the opioid and crack epidemics parallels the federal government's responses to the crises. The media used criminal frames to portray urban black and Latino heroin injectors but more compassionate and sympathetic frames when describing suburban white prescription opioid users (Netherland and Hansen, 2016; Shacher et al., 2020). News stories about crack users tend to use more crime-based terminology. In comparison, news stories about opioid users tend to use more public health terminology shifting attention to different policy domains (Netherland and Hansen, 2016; Shacher et al., 2020). These different frames made crime and policing policies salient during the crack epidemic but public health policies salient during the opioid epidemic. The policy tools used by government officials to tackle each drug crisis neatly match the respective policy frames used by the media to cover the epidemics.

The actions of influential actors, like white middle-class voting constituencies, also appear to have impacted the federal government's more compassionate response to the opioid epidemic compared to the crack epidemic. Michael Botticelli, President Obama's director of the White House Office of National Drug Control Policy, stated about the opioid crisis, "because the

demographic of people affected are more white, more middle class, these are parents who are empowered. They know how to call a legislator, they know how to get angry with their insurance company, they know how to advocate. They have been so instrumental in changing the conversation” (Seelye, 2015). However, legislators’ unequal responsiveness towards whites and racial and ethnic minorities is not simply due to constituent-side resource differences, as Michael Botticelli implies. Communities of color may have tried to make their voices heard during the crack epidemic but lacked the political leverage to force those in power to act based on their preferences (Murch, 2015).

Racialized media narratives and the behavior of influential actors can also help us understand disparate responses to public health crises like drug epidemics, as diagrammed in Figure 1.5. Media narratives used to discuss drug epidemics affecting communities of color have centered around criminality and immorality, while media narratives used to discuss drug epidemics affecting white communities have focused on public health failures and humanized victims (Netherland and Hansen, 2016; Shacher et al., 2020). White middle-class voters demanded compassionate government policy to address the opioid crisis, and the government has at least partially delivered (Om, 2018; Lee, 2019; Seelye, 2015). On the other hand, when Black activists and civil society leaders demanded a more compassionate approach to the crack epidemic, those calls fell on death ears (Murch, 2015; Om, 2018).

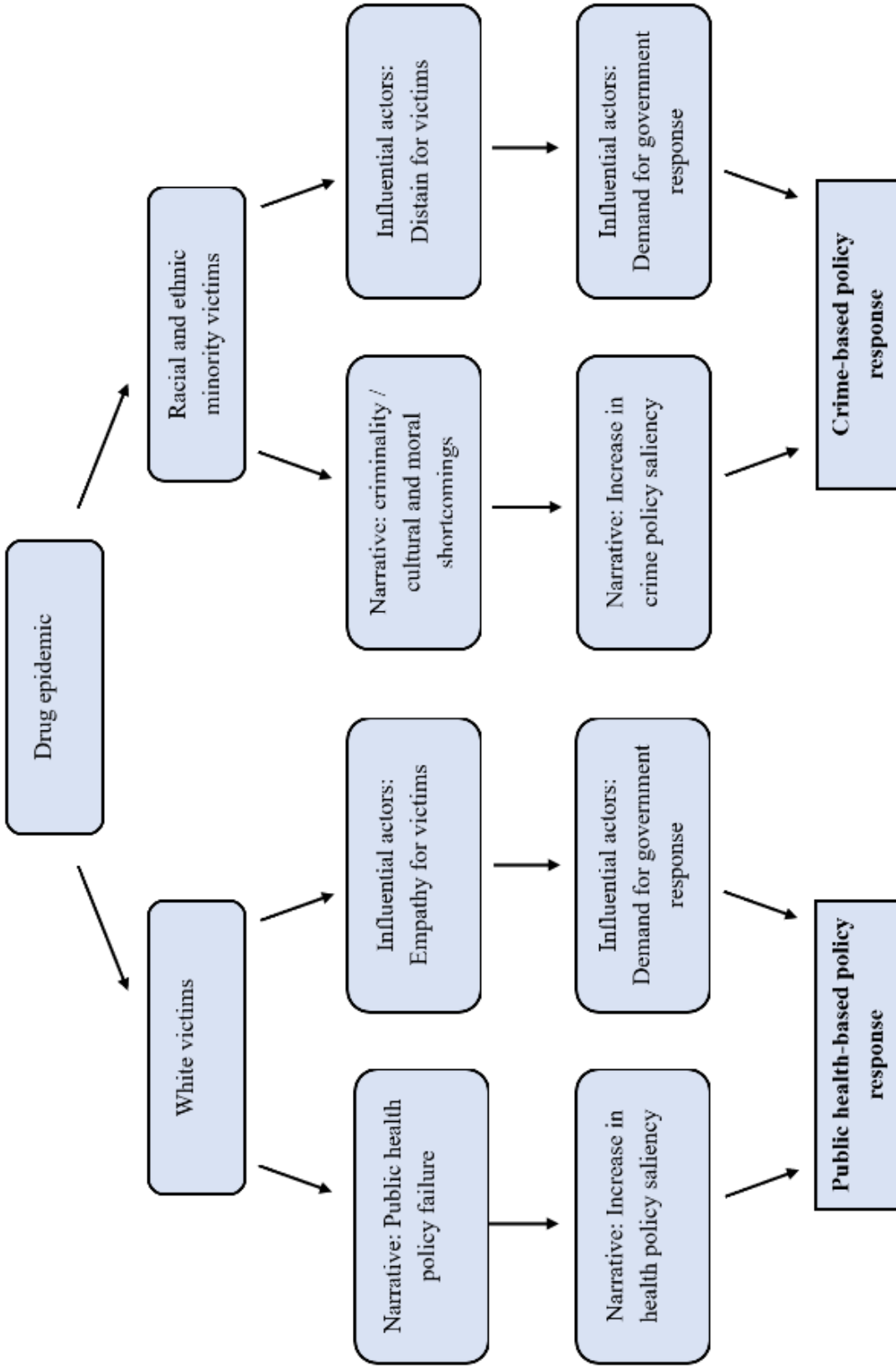


Figure 1.5: Racialized Responses to Drug Epidemics

1.5.3 Biased Responses to the HIV/AIDS Epidemic

While victims' race and ethnicity did not entirely shape biases, early public perceptions of people with HIV/AIDS and the at-risk population slowed and limited the federal government's response to the epidemic, even as it reached mortality rates of nearly 100% (Shilts, 1987; Cohen, 1999; Piot et al., 2007; Padasmsee, 2020).⁶ Elected officials perceived early HIV/AIDS victims as primarily belonging to the gay community and drug users, historically marginalized groups whose identities' also shape narratives and the actions of influential actors. Therefore, legislators were largely unresponsive to the epidemic until it affected more affluent and politically influential communities (Shilts, 1987).

Shilts (1987) argues that the media largely ignored the HIV/AIDS epidemic outbreak in the early years, only becoming concerned about the issue when it affected heterosexual people. He compares the *New York Times* reporting on the Chicago Tylenol murders, where Tylenol pill bottles were tampered with, resulting in the death of seven people in 1982, to writing about the HIV/AIDS epidemic in 1982. The Chicago Tylenol murders occurred the same year that the HIV/AIDS epidemic began. In 1982, 634 people became infected with HIV/AIDS, and 260 people died. While HIV/AIDs killed more than 37 times as many people as the Chicago Tylenol murders and spread rapidly, the *New York Times* wrote only three stories about the issue, none appearing on the front page in 1982. On the other hand, the *New York Times* wrote a front-page story about

⁶ For example, in 1982, the National Institute of Health appropriated more than ten times as much money per patient to combatting Legionnaire's Disease, an atypical form of pneumonia, compared to HIV/AIDs (Shilts 1987).

the Chicago Tylenol murders every day in October and an additional 33 more stories about the scare after that (Shilts, 1987).

Media framing showed signs of homophobic reporting and victim-blaming. Many stories labeled HIV/AIDS a "gay plague" or "homosexual disease" (Shilts, 1987). Mainstream media actively spread stereotypes about the causes and victims of the disease, dehumanizing victims and reinforcing implicit biases in the public (Cohen, 1999). Media frames used to cover the HIV/AIDS epidemic shaped how salient the issue was and perceptions of the root causes of the problem. Frames shifted attention away from public health-based failures by focusing on perceived individual, cultural, and moral shortcomings.

Influential actors across different institutions and positions of power responded in highly biased ways. Biases and racism among the CDC leadership led the CDC to spread misinformation about the disease (Cohen, 1999). Furthermore, electoral incentives shaped the policy response to the HIV/AIDS epidemic. For instance, the Reagan administration and many congressional representatives did not want to be associated with aiding homosexual people and drug users during the outbreak because they were supported by socially conservative constituencies (Shilts, 1987; Padasmsee, 2018). Implicit biases among legislators shaped responses as well. For example, Rep. Bill Dannemeyer [R] delivered a graphic speech describing gay sexual behavior on the House floor during a hearing on the AIDS epidemic in 1989, stating, "even the lowliest of animals do not wittingly conduct themselves in such a manner" (Beaujon, 2019). But biases are not necessarily as malicious as Rep. Bill Dannemeyer's speech suggests. They usually appear more subtlety and implicitly. Victims' intersecting identities created divisiveness within the Black community when AIDS was the leading killer of young black men and women in New York City, failing to galvanize

Black civic leaders who looked to distance themselves from the gay community and drug users (Cohen, 1999).

In the case of HIV/AIDS, various marginalized identities came together to shape media and elite narratives and the actions of influential actors. These narratives and influential actors' behavior only changed when HIV/AIDS spread more in white, straight, and middle-class communities.

1.4 Gun Violence, Mass Shootings, and Gun Policy in the United States

While there are many analogous crises and disasters, I specifically focus on state gun policy responses to mass shootings. Not only does this hold the policy domain and event type constant, but the unfortunate frequency of mass shootings provides geographic, temporal, and contextual variation, particularly regarding victims' race and ethnicity. This variation is essential for the well-identified quantitative causal inference strategies used in this research project.

Gun violence is considered a public health crisis by experts. About 100 Americans are killed by guns every day (Center for Disease Control, 2020). That is 36,000 gun-related deaths per year. An additional 100,000 are shot and injured each year (Center for Disease Control, 2020). The number of victims increased 16 percent from 2014 to 2017, with 39,773 people killed by a gun in 2017, the highest level recorded. While the majority of gun-related fatalities are suicides (61%), a large portion of gun-related fatalities are homicides (35%), and the vast majority of gun-related injuries are due to assaults (about 80%) (CDC, 2020). The United States has the highest gun-related death rate of developed OECD countries, with 12.21 deaths per 100,000 people per year (CDC, 2020). Even if one compares homicide rates, the only OECD countries with higher homicide rates are Mexico, Turkey, and Estonia, three countries far less developed than the United

States (United Nations Office of Drugs and Crime, 2018). Of all homicides in the United States, 68 percent involve firearms (National Institute of Justice, 2019).

Mass shootings constitute only a small proportion of gun-related homicides in the United States. However, mass shootings are highly salient events that uniquely capture the public’s attention, and gun policy is often seen as integral to the prevention and mitigation of mass shootings. Between 1990 and 2020, there were 137 mass shootings across 38 states resulting in 983 deaths (The Violence Project). The rate of mass shootings and the total number of yearly mass shooting casualties has increased steadily over the last decade [see Figure 1.6].

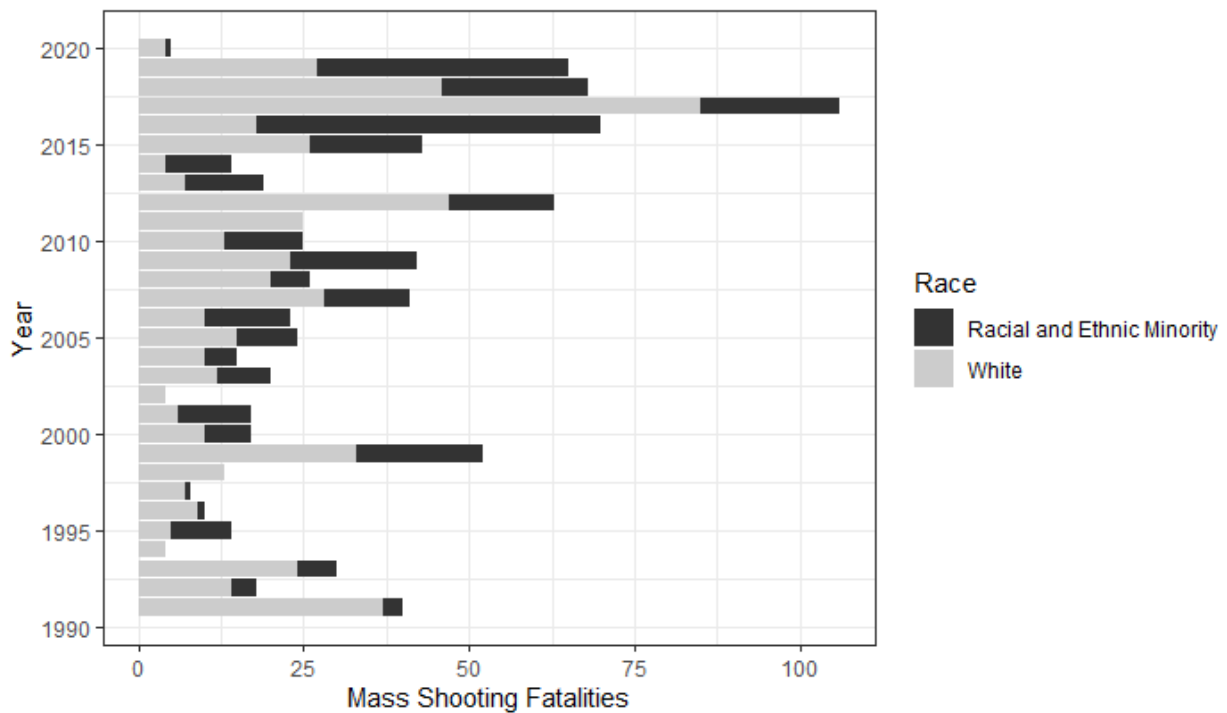


Figure 1.6: People Killed Per Year In Mass Shootings By Race and Ethnicity Since 1990 According To The Violence Project

Individual mass shootings have also become deadlier. Seven of the ten most fatal mass shootings occurred over the last ten years, including the Las Vegas Strip shooting which cost the lives of 58 people, and the Orlando Pulse shooting, which took the lives of 49 people [see Figure 1.7].

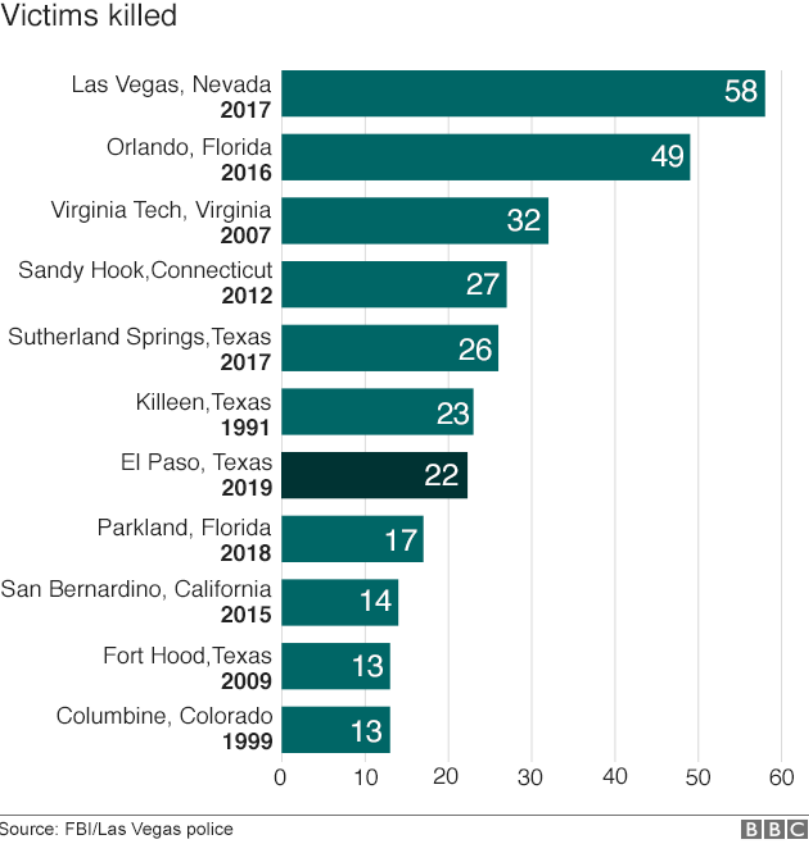


Figure 1.7: Worst Mass Shootings in the US since 1991

Chapter 2: Just Thoughts and Prayers? How Victims' Race and Ethnicity Shape the way Legislators Discuss Mass Shootings

2.1 Abstract

Does victims' race and ethnicity shape how legislators frame crises and disasters? I argue that legislators are more likely to blame institutional failures for catastrophic events and demand government action to address them when victims are white compared to racial and ethnic minorities. Using Twitter data, I test this theory by studying legislators' public responses to 40 mass shootings over seven years. The findings indicate that legislators are more likely to tie gun violence to gun policy failure and call for legislative action to address gun violence after a mass shooting as white fatalities increase but not as racial and ethnic minority fatalities increase. When victims are racial and ethnic minorities, legislators are more likely to address incidents of gun violence using apolitical frames. These differential frames set the agenda for post-crisis policy responses.

2.2 Introduction

*"The fact that the Pulse shooting happened to Latino people who were LGBT did affect the response we got from legislators. **It affected the words out of their mouth**, what happened at that moment and whether they were willing to listen" - Joe Saunders, senior political director for Equality Florida (emphasis added, Schweers, 2018).*

*"I think Republican lawmakers who control Tallahassee, they need to explain why... the fact that 49 LGBTQ people of color were murdered and **they pulled out the page from the same thoughts and prayers playbook, they diverted attention somewhere else**, they delayed and then they did nothing" - Carlos Guillermo Smith, Florida State Representative [D], District 49 (emphasis added, Hyman, 2018).*

Activist Joe Saunders and Florida State Assembly Representative Carlos Smith [D] argue that not only did Florida's state leaders fail to muster a comprehensive policy response to the Pulse nightclub shooting because victims were primarily LGBT people of color, but victims' identities also affected the way legislators discussed the shootings. The lack of a policy response to the Pulse nightclub shooting stands out because a similar cohort of state legislators aggressively responded to the Parkland shooting, which affected a more white and affluent community less than two years later. Defendants of the state government's response argue that circumstantial factors unrelated to race caused disparate reactions (Caputo, 2018). Rob Bradley, Florida Senate Budget Chairman [R], contended that he does "not accept in any way, shape or form that we marginalized the victims of Pulse or that we are prioritizing one type of victim over the other... [the Parkland shooting] happened during session, when we can do something about it" (Caputo, 2018).

However, both activist Joe Saunders and Rep. Smith do not limit their critique to actions taken within legislative chambers. They argue that state leaders talked about the Pulse nightclub shooting differently than the Parkland shooting because of the victims' demographic characteristics. Rep. Smith suggests that because the victims of the Pulse nightclub shooting were

primarily LGBTQ people of color, state leaders were more likely or willing to divert the conversation away from gun-related issues in ways that delayed and mitigated the possibility of legislative action. Suppose Saunders and Smith's claims about legislators' public discourse biases are valid. In that case, Bradley's claim that "Florida legislators did not respond to the Pulse shooting the same way they responded to the Parkland shooting because Pulse happened outside of a legislative session" fails to pass muster. Legislators' immediate public discourse after a catastrophic event is unlikely to be affected by variation in legislative session timing and other factors like interest group lobbying.

Legislators' immediate responses are more than just a form of symbolic representation. First, legislators' public reactions to catastrophic events construct narratives that shape blame attribution for crises and disasters and, therefore, what policies are salient in the aftermath of catastrophic events (Nelson and Kinder, 1996; Jones & Baumgartner, 2005; Gabel and Scheve, 2007). After crises and disasters, legislators' public comments may also shape public expectations for legislative solutions and pressure fellow policymakers to act (Canes-Wrone, 2001; Cain, Ferejohn, and Fiorina, 1987; Grimmer, 2013; Grimmer, Westwood, and Messing, 2014; Callaghan, 2016).

In this chapter, I test both causal chains of the proposed theoretical mechanism. I seek to understand how victims' race and ethnicity shape post-crises narratives and influential actors' demands for legislative action. I study legislators' public discourse post-crisis by asking, "Do legislators tie gun violence to gun policy more often after whiter mass shootings?" And, "Do legislators call for legislative action more often after whiter mass shootings?"

Research suggests that victims' race and ethnicity shapes how the media covers crises and disasters (Parham-Payne, 2014; Sommer et al., 2006; Netherland and Hansen, 2016; Cohen, 1999). Media coverage of crises and disasters dehumanizes victims and shifts attention away from systemic failures when victims are people of color (Parham-Payne, 2014; Sommer et al., 2006; Netherland and Hansen, 2016; Cohen, 1999). In doing so, media narratives often draw on implicit racial biases that portray people of color as criminal, immoral, unintelligent, lazy, and foreign (Parham-Payne, 2014; Sommer et al., 2006; Netherland and Hansen, 2016; Cohen, 1999). Parham-Payne (2014) contends that the media and elites blame gun violence affecting people of color on environmental, moral, and individual shortcomings but blame gun violence affecting white communities on systemic and institutional failures. On the other hand, when victims of catastrophic events are racial and ethnic minorities, media and elite narratives are more likely to frame these events through individual or community lenses and cue implicit biases, deflecting responsibility away from policy failures (Parham-Payne, 2014; Sommer et al., 2006; Netherland and Hansen, 2016; Cohen, 1999).

Furthermore, when tragedy strikes white communities, white individuals are more likely to demand government-led policy responses to these events (Fong and Luttmer, 2009; Iyengar and Hahn, 2007; Walker, Collingwood, and Bunyasi, 2020). Legislators are disproportionately white and tend to showcase many of the implicit biases observed in the public (Butler & Broockman, 2011; Butler, 2014; Reingold, 2019; White, Nathan, & Faller, 2014; Gell-Redman et al., 2018). Legislators discriminate against people of color, even in low-cost situations and when the constituents' likelihood of voting is controlled (Butler & Broockman, 2011, Butler, 2014; Gell-Redman et al., 2018; Lajevardi, 2019).

Building on this research, I argue that legislators' catastrophic event coverage is racially biased. Specifically, I contend that legislators are more likely to use "policy-centric frames," tying mass shootings to gun policy failure and calling for legislative action when victims are white compared to when victims are racial and ethnic minorities. On the other hand, when victims are racial and ethnic minorities, I argue that legislators are more likely to use "apolitical frames," shifting attention away from policy failures and systems change. I propose the following hypotheses:

- **Hypothesis 1:** Legislators are more likely to discuss gun violence in relation to gun policy after mass shootings as white fatalities increase but not as racial and ethnic minority fatalities increase.
- **Hypothesis 2:** Legislators are more likely to call for legislative action to address gun violence after mass shootings as white fatalities increase but not as racial and ethnic minority fatalities increase.
- **Hypothesis 3:** Legislators are more likely to use apolitical frames, like *thoughts and prayers* frames, after mass shootings as racial and ethnic minority fatalities increase.

I use a pre-post within-legislator design and Twitter data to test these hypotheses. Specifically, I study how lower-house state legislators tweeted in the seven days before and seven days after in-state mass shootings occurring between January 1st, 2012, and April 23rd, 2019.⁷ I use Twitter data from 3,399 legislators' Twitter accounts collected by Kousser and Butler (2017).

⁷ I am only interested in analyzing how legislators respond to mass shootings in the state they represent. While legislators may respond to shootings that occurred in states that are not their own, their role representing communities affected by those mass shootings is less clear. Furthermore, how foreign state legislators frame a mass shooting may have some post-crisis framing effects but are less likely to shape the legislative response.

I leverage supervised machine learning tools to classify tweets that reference incidents of gun violence. I then use hand codes to sub-classify tweets under three categories, focusing on frames. I start by coding whether a tweet uses policy-centric frames under two non-exclusive criteria. First, I code whether a tweet highlights gun policies or attributes blame for an incident of gun violence to gun policy failure. Second, I code whether a tweet calls for legislative action to prevent gun violence. Next, I code whether a tweet exclusively uses “thoughts and prayers frames,” defined as apolitical frames that offer condolences to victims’ families but avoid policy-relevant issues.

I find that legislators are more likely to reference incidents of gun violence after deadlier mass shootings, irrespective of victims’ race and ethnicity. However, legislators are more likely to post tweets using policy-centric frames, blaming gun violence on gun policy failure and calling for policy solutions, when white fatalities increase. In contrast, legislators are not more likely to use policy-centric tweets to address gun violence when racial and ethnic minority fatalities increase. On the other hand, the findings suggest that legislators are notably more likely to use apolitical frames to discuss gun violence after mass shootings with more victims of color.

These findings have implications for subsequent policy responses to mass shootings because policy-centric frames make gun policy more salient and pressure fellow legislators and party leaders to address gun violence with legislative solutions (Rochefort and Cobb, 1994; Haider-Markel and Joslyn, 2001). Because legislators use policy-centric frames more often to discuss gun violence after whiter mass shootings, legislators’ post-shooting narratives increase the likelihood that whiter mass shootings lead to gun policy change. On the other hand, legislators’ more frequent use of apolitical language after less white mass shootings limits those shootings’ impact on gun policy change. Legislators’ biased narratives after crises and disasters aggravate racial gaps in policy responsiveness and political representation in the United States. These

narratives lead to racialized blame attribution and disparate pressure on fellow policymakers to act, suggesting that influential actors shape policy responses to tragic events and public health crises through racially biased narratives in these difficult to perceive ways.

2.3 Why Legislators' Narrative and Frames Matter

Research suggests that how the media *frames* an issue contributes to legislative agenda setting and public opinion (Portz, 1996; Rochefort and Cobb, 1994; Nelson and Kinder, 1996; McCombs & Ghanem, 2001). Frames are how the media and elites define issues by focusing on specific attributes within broader topics. Gamson and Modigliani (1989, p. 143) define a frame as "a central organizing idea or story line that provides meaning to an unfolding strip of events, weaving a connection among them. The frame suggests what the controversy is about, the essence of the issue." Similarly, Entman (1993, p. 52) states that framing "is to select some aspects of a perceived reality and make them more salient in a communicating text, in such a way as to promote a particular problem definition, causal interpretation, moral evaluation, and or treatment recommendation."

Poverty may be framed as an institutional and collective problem, promoting collective solutions through government interventions. On the other hand, poverty can also be framed as an individual, cultural, and moral problem, suggesting government-based solutions are inadequate and promoting different answers. Frames appear to be particularly important in shaping blame attribution for mass shootings and policy preferences among the public (Haider-Markel and Joslyn, 2001). Consistent media frames produce narratives that structure public opinion and issue saliency (Aukes, Bontje, Slinger, 2020).

The news media are not the only influential actors with strong framing power. Elites, particularly elected officials, influence how the public views issues (Zaller, 1992; Nelson and Kinder, 1996; Jacoby, 2000; Jones and Baumgartner, 2005). Furthermore, social media's role in agenda-setting is expanding and possibly overtaking mainstream media's role (Lewis, Holton, & Coddington, 2014). Elite's social media posts significantly influence legislative agendas. Politicians' tweets affect what stories the mainstream media sees as salient (Murthy, 2015; Wallsten, 2007). Politicians use social media to frame issues, influence the policy agenda, and shape expectations among the public (Straus, Glassman, and Shogan, 2013; Cases and Morar, 2015; Barbera et al., 2019; Grimmer, 2013). Politicians can use public appeals to influence the legislative process by creating public pressure on fellow policymakers to act (Canes-Wrone, 2001; Jacobs and Shapiro, 2000; Grimmer, 2013). This research jointly suggests that the frequency with which legislators discuss events and policy issues and how they frame those events and policy issues shapes public opinion and has agenda-setting effects.

I use Twitter to study how legislators discuss gun violence and how victims' race and ethnicity shapes their framing choices. Twitter is an excellent data source to conduct this research for several reasons. First, legislators have direct control over their Tweets. Tweets are not filtered through the news media and are a source of direct communication between an elected official and the public. Casas and Morar (2015) find that the policy issues congress-members highlight in their tweets mirror their expressed policy agenda in other communication mediums, including their website and newsletters, suggesting that tweets represent other direct forms of communication.

Additionally, Twitter is a public medium with open access. Unlike closed-door meetings with donors, researchers and constituents can observe and monitor politicians' statements on Twitter. Not only does this allow for rigorous studies, but it also limits legislators' ability to micro-

target communication, preventing them from adapting their message to particular parts of their constituency. Therefore, differences in messaging are unlikely to be related to the group they are speaking to at that moment. Finally, while some legislators do not have Twitter accounts, most do, and elected officials have broadly adopted Twitter. Early Twitter adoption was associated with more ideologically extreme and younger elected officials and those representing urban districts (Gulati and Williams, 2010). However, Twitter use has become more widespread and is no longer biased toward certain demographic or ideological groups (Lassen and Bode, 2013; Straus et al., 2013).

2.5 Data

Legislators' Twitter data comes from Butler and Kousser (2019).⁸ Butler and Kousser collected all available Tweets from 3,399 (63%) legislators from the earliest date available to April 30th, 2019, using Twitters' public API, producing a dataset of 3,580,727 tweets.

Mass shooting data primarily comes from The Violence Project. The Violence Project is a nonprofit, nonpartisan research center funded by the National Institute of Justice. They use a rigorous multi-coder process to code mass shootings and relevant information and publicly provide

⁸ Undergraduate research assistants (RAs) searched for the Twitter handles of all legislators serving in the lower house chamber of 49 states in the summer of 2017. Nebraska was not included because it has a unicameral, nonpartisan legislature. RAs used online sources, including Google, public lists supplied by state governments, and Twitter to search for legislators' Twitter handles. RAs were unable to find official, publicly available accounts for 2,014 (37%) legislators even after searching for several minutes and using potential nicknames. Some legislators had fake accounts meant to parody the legislator or private accounts that were only accessible through invitations. RAs were able to find public Twitter handles for the remaining 3,399 (63%) legislators.

the most comprehensive coding of victims' race and ethnicity. The Violence Project defines a mass shooting using the Congressional Research Service's definition:

“a multiple homicide incident in which four or more victims are murdered with firearms—not including the offender(s)—within one event, and at least some of the murders occurred in a public location or locations in close geographical proximity (e.g., a workplace, school, restaurant, or other public settings), and the murders are not attributable to any other underlying criminal activity or commonplace circumstance (armed robbery, criminal competition, insurance fraud, argument, or romantic triangle).”

While this definition is relatively conservative, excluding mass shootings primarily attributed to criminal activity or domestic disputes, it best captures the type of salient public events that serve as potential focusing events.

Victims' racial and ethnic information primarily comes from The Violence Project. As a verification check, I hand-code the race and ethnicity of 475 mass shooting victims between 2010 and 2019 using online pictures found in news reports and obituaries. My coding matches The Violence Project's coding in 91% of cases. The Violence Project is missing race and ethnicity data for a small proportion of victims. I use Bayesian name prediction methods to predict the race and ethnicity of the remaining victims.⁹ I aggregate racial and ethnic minority fatalities into a broader umbrella because individual ethnic and racial minority groups constitute a small proportion of mass shooting victims.

⁹ Verification checks for the Bayesian name predictions available in SI-4A.

I study mass shootings in the United States occurring between January 1st, 2012, and April 23rd, 2019.¹⁰ There were 40 mass shootings during this period across 16 states. In these 16 states, 826 legislators tweeted at least once in the seven days before or after a mass shooting. Empty tweets or those only containing UTF-encoded objects were removed from the dataset. After subsetting tweets to the relevant dates and removing non-usable tweets, the remaining 31,452 tweets are analyzed.

I use a supervised naïve-Bayes classification model to classify tweets that referenced gun violence or an incident of gun violence. I hand-code whether tweets directly or indirectly reference an incident of gun violence using a dichotomous code. The following are examples of tweets that directly reference incidents of gun violence:

- RT @NevadaDPS: #VegasShooting Should you decide to donate blood, here's a link to make a reservation: <https://t.co/csHTbEyAOM>
- RT @SoCalOpinion: In wake of #SanBernardino mass shooting, we must be strong, resilient. By Frank Pine: <https://t.co/iG37ufbav1> #SBStrong

The following is an example of a tweet that indirectly referenced an incident of gun violence:

- RT @scottbraddock: Mass shootings in Texas have resulted in no new restrictions on the constitutional right to a firearm.

¹⁰ Legislator Twitter data is not available after April 30th, 2019 and there must be at least seven days after a shooting available for analysis. There is limited legislator twitter data available before 2012. While the Twitter data does not perfectly capture all legislators that served between 2012 and 2019, it is the only dataset tacking state legislators' Tweets available at the time of research. This sample of legislators is likely to be slightly biased toward "winners" as legislators who lost an election between 2012 and 2017 are not included.

I hand-coded 15 percent (4,717) of tweets in the corpus to create training and validation datasets. Eighty percent (3,774) of the hand-coded tweets were designated as the training dataset, and the remaining 20 percent (943) were designated as the validation dataset. The training dataset trained a naïve-Bayes text classifier with weighted class probabilities. The classifier had a 76 percent recall and 75 percent precision rate for the minority class in the validation dataset, performing better than logit and support vector machine (SVM) text classification models. The trained naïve-Bayes model was used to classify the remaining 85 percent of tweets. The classifier determined that 2,263 of the 31,452 tweets referenced an incident of gun violence.

I then corrected false positives in the predicted dataset using hand codes. About 30 percent (736) of tweets were flagged as false positives. Many of these tweets referenced other forms of violence, like sexual assault, or other tragic disasters, like the wildfires in California during the fall of 2017. Table 2.1 summarizes the most common words used in Tweets coded as referencing an incident of gun violence. The words “shooting,” “victims,” “families,” and “today” are the most commonly found words as many tweets referencing an incident of gun violence are informative, providing details about the incident. Words about particular events such as the Dallas police officer shooting frequently appear as well.

I then hand-coded the frame used in tweets classified as having referenced an incident of gun violence in three non-exhaustive categories: thoughts and prayers frames, gun policy frames, and call-to-action frames.¹¹ I used dichotomous codes to label the presence or absence of a

¹¹ Hand codes were used instead of supervised text classification because many tweets included links to other posts, articles, or statements that provided context for the tweet or a more elaborate discussion. I followed the embedded links in all cases where they were available, using them to determine tweets’ framings.

particular frame. Many tweets that reference an incident of gun violence did not use a frame of interest. In those cases, tweets were coded as having referenced the recent mass shooting, receiving a “1” in that column but lacking any frame of interest, receiving a “0” in all framing categories.

First, I code whether a tweet referencing an incident of gun violence uses a “gun policy” frame to test Hypothesis 1. Tweets classified as using a gun policy frame discuss incidents of gun violence in relation to gun policy or attribute blame for an act of gun violence, directly or indirectly, to gun policy failure. In many cases, references are indirect. Tweets that reference gun legislation, gun policy reform, reoccurring gun violence with a focus on the role of firearms, or otherwise bring specific attention to the firearm used in an incident of gun violence or how the firearm was acquired are classified as using a gun policy frame. Some examples of tweets classified as using a gun policy frame include:

- RT @GabbyGiffords: I am praying that our lawmakers find the courage to face our nations gun violence problem. This must stop. #SutherlandShooting
- RT @RepTedDeutch: The bill to allow guns in classrooms and at airports will NOT be heard Tuesday in the Florida Senate. It should NEVER be

Compared to the corpus of tweets referencing incidents of gun violence generally, tweets coded as using gun policy frames are more likely to include the words “gun” and “violence.” These words often show up sequentially as “gun violence.” Other words like “safety,” “control,” “need,” and “laws” also appear more often in these tweets compared to the general corpus of gun violence-related tweets.

To test Hypothesis 2, I code whether a tweet referencing an incident of gun violence uses a “call-to-action” frame. Tweets that receive a “1” in this category call for legislative action,

pushing policymakers to enact reforms that prevent similar acts of gun violence in the future. These tweets often overlap with gun policy frames as well but not always; sometimes, calls for legislative action are broader, simply stating that policymakers must “do something” to prevent future incidents of gun violence. Examples of tweets that use call-to-action frames include:

- Y'all been sending thoughts and prayers for two freaking decades now. Time to try something new.
- RT @kionnemcgee: Ending gun violence should be a pledge for all of us to join in on.

Tweets classified as using a call-to-action frame are more likely to include words like “must,” “action,” “need,” and “time” compared to the entire corpus of gun violence-related tweets. There is overlap between tweets using gun policy frames as these classifications are not mutually exclusive. Tweets with call-to-action frames also commonly contain words like “gun,” “safety,” “violence,” and “control,” which are also relatively common in tweets using a gun-policy frame.

Finally, I code whether a tweet exclusively uses a “thoughts and prayers” frame to test Hypothesis 3. Thoughts and prayers frames are defined as tweets that express condolences for victims and their families but avoid political debates. Tweets do not have to use the exact phrasing “thoughts and prayers” to be coded as using a thoughts and prayers frame. Examples of tweets classified as using a thoughts and prayers frame include:

- Praying for the families effected in the Orlando shooting. My heart is grieved at the thought of yet more loss.
- Our hearts and thoughts are with everyone experiencing tragedy in Santa Fe, Texas today. We pray for the safety of the community.

As summarized in Table 2.1, words derived from “prayer” stand out in tweets classified as using a thoughts and prayers frame. Other words like “thoughts,” “god,” and “heart,” as well as words related to first responders, who are often the targets of tweets with thoughts and prayers frames, are also common relative to the general corpus of tweets classified as referencing gun violence. Words like “shooting” and “families” are still found frequently.

Table 2.1: Ten Most Common Words in Each Framing Category

Frame	Top 10 Words (In order of Frequency)
All gun violence mentions	shooting, victims, families, prayers, today, dallas, gun, officers, praying, violence
Thoughts and prayers frame	prayers, families, victims, praying, thoughts, pray, dallas, shooting, today, first
Gun policy frame	gun, violence, shooting, mass, school, need, safety, today, must, families
Call-to-action frame	gun, violence, shooting, must, families, need, action, mass, thoughts, today

Figure 2.1 plots the proportion of tweets referencing an incident of gun violence and the proportion of tweets using a framing of interest over time. Legislator tweets referencing an incident of gun violence are most common the day of a mass shooting and the day after, slowly declining in frequency over time. On the day of a mass shooting, about 17 percent of tweets mention incidents of gun violence on average, compared to only one percent the day prior. The following day, about 22 percent of tweets reference incidents of gun violence. Within six days of a shooting, only about 2 percent of tweets discuss gun violence. Thoughts and prayer framings are the most common frame of interest used during the early responses to a shooting on Twitter. On the day of a mass shooting, over 30 percent of tweets referencing gun violence use a thoughts and prayers

frame. Only about fifteen percent of tweets use a gun policy frame or a call-to-action frame during this time. However, as the days go on, legislators use gun policy frames and call to action frames more frequently to discuss gun violence, matching and sometimes exceeding the use of thoughts and prayers frames.

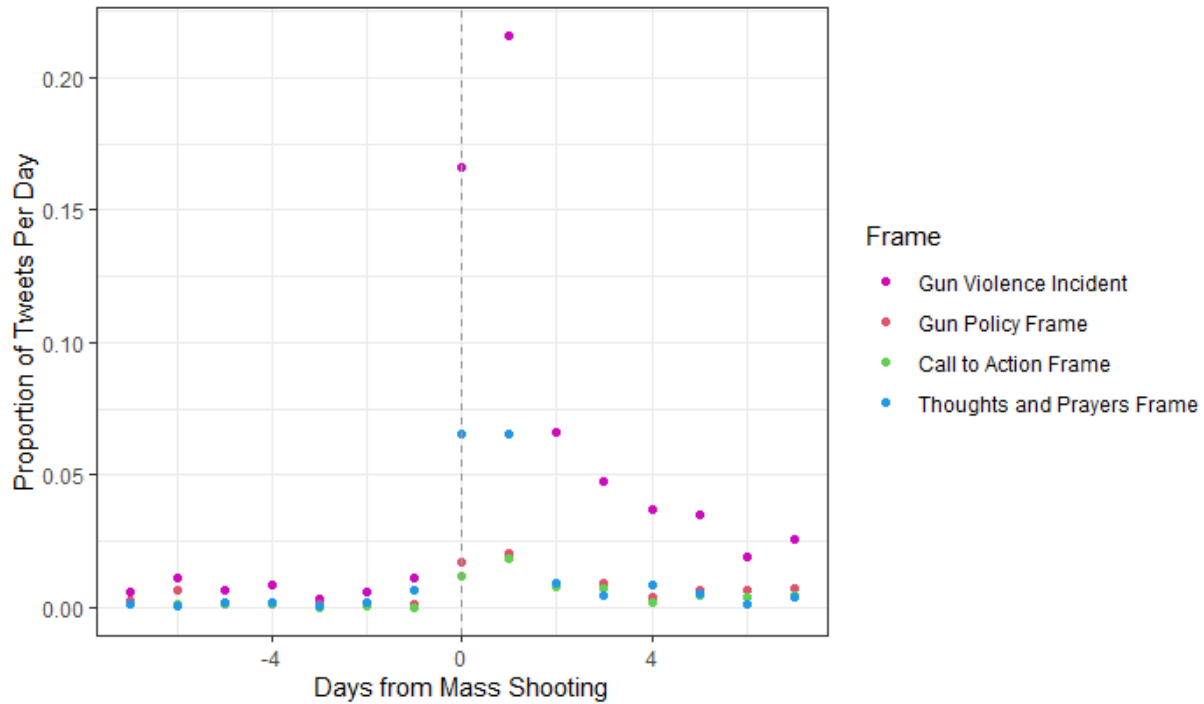


Figure 3.1: Legislators' Gun Violence Related Tweets and Frames Used Before and After Mass Shootings

2.6 Research Design

I use a pre-post within-legislator design, observing tweets posted between the seven days before and seven days after an in-state mass shooting. The inclusion of days before the mass shooting helps establish a baseline for gun violence-related tweets. I disaggregate mass shooting victims' race and ethnicity in the primary models into two aggregate categories – white victims

and racial and ethnic minority victims. I test for the independent effect of both types of victims using multivariate regression, treating fatalities as a continuous treatment affecting legislators in the post-shooting period.¹²

The primary model includes legislator-fixed effects, comparing responses to mass shootings within-legislator. Legislator-fixed effects control for differences across legislators, such as district demographic differences or differences in constituents' policy preferences that may simultaneously shape the size and racial make-up of an in-state mass shooting and legislators' gun violence discourse. However, only a subset of legislators experienced two or more mass shootings during this period, meaning models may calculate point estimates based on few observations. Robustness checks suggest findings are consistent when legislator-fixed effects are replaced with state-fixed effects and a control for legislators' party identification.¹³

Models are presented using OLS regression to facilitate the interpretation of results as OLS coefficients are more easily interpretable than log odds ratios. However, models are robust when using logit regression, and results are presented in robustness checks.¹⁴

¹² As a robustness check to ensure that the effects of white victims and racial and ethnic minority victims on legislators' twitter discourse is statistically differentiated, I model the test as an interaction. I interact the total victims in a mass shooting by the proportion of those victims that are white. This modeling strategy is not used in the main analysis because it less easily interpretable because one of the constituent terms of the interaction is non-meaningful. The results are robust to this modeling specification. See SI-2A.

¹³ See SI-2B.

¹⁴ See SI-2C. The logit regression uses state-fixed effects instead of legislator fixed-effects because the inclusion of legislator-fixed effects leads to complete separations and predicted probabilities indistinguishable from one

2.7 Findings

Model 1 in Table 2.2 tests whether white fatalities and racial and ethnic minority fatalities have differential effects on how often legislators discuss incidents of gun violence on Twitter. In other words, I test whether victims' race and ethnicity affect the *quantity* of gun violence-related tweets and not just the *quality* of tweets. The *Number of White Fatalities* coefficient is positive and statistically significant. The model implies that ten white mass shooting fatalities increase legislators' references to incidents of gun violence on Twitter by about six percentage points. Hypothetically, if the average legislator experienced a mass shooting in their state, resulting in ten white victims the week before the shooting, 0.7% of their tweets would reference incidents of gun violence. However, the week after the shooting, 6.7% of their tweets would reference incidents of gun violence. The *Number of REM Fatalities* coefficient is also positive and statistically significant. The model implies that ten racial and ethnic minority fatalities increase legislators' references to incidents of gun violence on Twitter by about five percentage points. The estimated effects of racial and ethnic minority fatalities on the frequency with which legislators reference incidents of gun violence on Twitter is similar to the impact of white fatalities. Robustness checks modeling the effects as an interaction suggest that victims' race and ethnicity do not moderate the number of gun violence-related tweets (See SI-2A). The findings suggest that legislators are equally likely to reference incidents of gun violence after mass shootings irrespective of victims' race and ethnicity.

Model 2 in Table 2.2 test of **Hypothesis 1**. The *Number of White Fatalities* coefficient is positive and statistically significant. The model implies that ten white mass shooting fatalities increase legislators' references to incidents of gun violence on Twitter using gun policy frames by about 0.85 percentage points. Again, the *Number of REM Fatalities* coefficient is positive and

statistically significant, but, in this case, it is much smaller than the *Number of White Fatalities* coefficient. The model estimates that ten racial and ethnic minority mass shooting fatalities increase legislators' references to incidents of gun violence on Twitter using gun policy frames by about 0.02 percentage points. If the average legislator experienced a mass shooting in their state, resulting in ten white victims the week before the shooting, 0.2% of the legislator's tweets would discuss gun violence using gun-policy frames. The week after the shooting, 1.2% of their tweets would discuss gun violence using a gun-policy frame. The change is a five-fold increase in the percentage of tweets discussing gun violence using a gun-policy frame. However, if the average legislator instead experienced a mass shooting in their state, resulting in ten racial and ethnic minority victims, the week after the shooting, only 0.4% of their tweets would discuss gun violence using a gun-policy frame. The change is only a two-fold increase. When total mass shooting fatalities interact with the proportion of white deaths in robustness checks, the results suggest that victims' race and ethnicity have a discernible moderating effect on legislators' use of "thought and prayers" frames. The findings support **Hypothesis 1**; white mass shooting fatalities increase legislators' use of gun policy frames more than racial and ethnic minority mass shooting fatalities.

Model 3 in Table 2.2 tests **Hypothesis 2**. The *Number of White Fatalities* coefficient is positive and statistically significant, implying that an in-state mass shooting with ten white fatalities increases legislators' calls for legislative action to address gun violence by 0.75 percentage points. On the other hand, The *Number of REM Fatalities* coefficient is positive but not statistically significant, suggesting that racial and ethnic minority mass shooting fatalities do not affect legislators' calls for legislative action to address gun violence on Twitter. Again, there is a statistically significant difference between white fatalities and racial and ethnic minority

fatalities when mass shooting fatalities are interacted with the proportion of victims that are white (See SI-2A), lending support to **Hypothesis 2**.

Model 4 in Table 2.2 tests **Hypothesis 3**. The *Number of White Fatalities* coefficient is positive and statistically significant. The model suggests that ten white mass shooting fatality increases legislators' references to incidents of gun violence exclusively using "thoughts and prayers" frames by about 1.3 percentage points. The *Number of REM Fatalities* coefficient is also positive and statistically significant. The model suggests that ten racial and ethnic minority mass shooting fatality increases legislators' references to incidents of gun violence exclusively using "thoughts and prayers" frames by about 1.8 percentage points. Again, the coefficients are a similar size. When total mass shooting fatalities are interacted with the proportion of white fatalities in a robustness check, the results suggest that victims' race and ethnicity have a small and barely discernible moderating effect on legislators' use of "thought and prayers" frames (See SI-2A). Legislators are slightly more likely to use thoughts and prayers framings when addressing incidents of gun violence after a recent mass shooting if victims are racial and ethnic minorities. These findings provide mixed support for **Hypothesis 3**.

Table 2.2: The Effect of Mass Shooting Victims’ Race and Ethnicity on Legislators’ Gun Violence Rhetoric

	<i>Dependent variable:</i>			
	Gun Violence Incident	Gun Policy	Call-to-Action	Thoughts and Prayers
	(1)	(3)	(4)	(2)
Number of White Fatalities	0.006*** (0.002)	0.001** (0.0003)	0.001** (0.0003)	0.001*** (0.0002)
Number of REM Fatalities	0.005*** (0.0004)	0.0002* (0.0001)	0.00002 (0.0001)	0.002*** (0.0002)
Constant	0.157*** (0.003)	-0.002* (0.001)	-0.0002 (0.001)	-0.016*** (0.002)
Legislator FEs	Yes	Yes	Yes	Yes
Observations	31,452	31,452	31,452	31,452
R ²	0.143	0.043	0.044	0.067
Adjusted R ²	0.120	0.017	0.019	0.042

Note: Shooting-clustered standard errors in parentheses.

+ p < 0.1; * p < 0.05; ** p < 0.01; *** p < 0.001

Robustness checks suggest that the patterns observed in Models 2 through 4 in Table 2.2 are not driven by the slight difference in overall mentions of gun violence observed in Model 1 in Table 2.2. The results are robust when we control for how often legislators reference incidents of gun violence, further suggesting that victims’ race and ethnicity shape *how* legislators discuss incidents of gun violence and not *how much* legislators reference incidents of gun violence.

Model 1 in Table 2.3 tests the independent effect of white and racial and ethnic minority fatalities on legislators’ use of gun policy frames when controlling for tweets that reference incidents of gun violence. The model suggests that the number of racial and ethnic minority

fatalities has a negative effect on legislators' use of gun policy frames when controlling for tweets that reference incidents of gun violence. On the other hand, the number of white fatalities does not have a statistically significant effect on the use of gun policy frames when controlling for tweets that reference incidents of gun violence. These findings lend strong support to Hypothesis 1.

Similarly, Model 2 in Table 2.3 tests the independent effect of white and racial and ethnic minority fatalities on legislators' use of call-to-action frames when controlling for tweets referencing gun violence incidents. Again, the number of racial and ethnic minority fatalities has a negative effect on legislators' use of call-to-action frames when controlling for tweets that reference incidents of gun violence. Still, white fatalities do not have a statistically significant effect in this case. These findings lend strong support to Hypothesis 2.

Model 3 in Table 2.3 tests the independent effect of white and racial and ethnic minority fatalities on legislators' use of thoughts and prayers frames when controlling for tweets that reference incidents of gun violence. The model suggests that the number of racial and ethnic minority fatalities has a positive and statistically significant effect on legislators' use of thoughts and prayers frames. Still, white fatalities do not have a statistically distinguishable effect on the use of thoughts and prayers frames when controlling for tweets that reference incidents of gun violence. This finding lends support to Hypothesis 3. When we control for how frequently legislators reference incidents of gun violence, racial and ethnic minority fatalities are positively correlated with the use of thoughts and prayers frames but negatively associated with the use of gun policy and call to action frames.

Table 2.3: The Effect of Mass Shooting Victims’ Race and Ethnicity on Legislators’ Gun Violence Rhetoric Controlling for Overall References to Gun Violence

	<i>Dependent variable:</i>		
	Gun Policy (2)	Call-to-action (3)	Thoughts and Prayers (1)
Number of White Fatalities	-0.00004 (0.0003)	0.0001 (0.0003)	-0.0003 (0.0003)
Number of REM Fatalities	-0.0005** (0.0002)	-0.0005** (0.0002)	0.001* (0.0002)
References Gun Violence	0.146*** (0.036)	0.103*** (0.026)	0.271*** (0.030)
Constant	-0.025*** (0.006)	-0.016*** (0.004)	-0.059*** (0.005)
Legislator FEs	Yes	Yes	Yes
Observations	31,452	31,452	31,452
R ²	0.171	0.134	0.292
Adjusted R ²	0.149	0.111	0.273

Note: Shooting-clustered standard errors in parentheses.
+ p < 0.1; * p < 0.05; ** p < 0.01; *** p < 0.001

2.8 Discussion

This research finds that mass shooting victims’ race and ethnicity shape how legislators discuss incidents of gun violence. The findings provide broad support for the proposed theory. Victims’ race and ethnicity does not moderate how much legislators discuss gun violence in the aftermath of mass shootings. However, blame attribution diverges in ways that parallel and reinforce long-term racialized gun violence narratives. Legislators are more likely to link incidents of gun violence to gun policy failure after an in-state mass shooting with more white victims but not after an in-state mass shooting with more victims of color. These patterns reflect long-term gun violence narratives that explicitly or implicitly attribute blame for gun violence impacting

communities of color to moral, environmental, and individual shortcomings but blame gun policy failure for gun violence affecting white communities (Parham-Payne, 2014). Similarly, legislators are more likely to demand legislative action to address gun violence after an in-state mass shooting with more white victims but not after an in-state mass shooting with more victims of color. When victims are racial and ethnic minorities, legislators discuss gun violence using apolitical frames like “thoughts and prayers” frames.

Ultimately, literature on framing effects suggests that these disparate frames may impact subsequent state policy responses to mass shootings. Legislators’ disparate frames shape the posterior policy response because gun policy frames make gun policy more salient, increasing the likelihood that gun policy is placed on crowded legislative agendas (Haider-Markel and Joslyn, 2001; Rochefort and Cobb, 1994). Therefore, legislators’ public discourse after mass shootings increases gun policy saliency after large predominately white mass shootings but not after predominately racial and ethnic minority mass shootings. Furthermore, legislators are more likely to demand legislative action after mass shootings with more white victims but not after mass shootings with more victims of color, and research suggests that these elite appeals can influence the legislative process (Canes-Wrone, 2001; Jacobs and Shapiro, 2000; Cohen, 1995; Edwards, 1990; Cain, Ferejohn, and Fiorina, 1987; Grimmer, 2013; Grimmer, Westwood, and Messing, 2014; Callaghan, 2016).

This research may help explain divergent and disparate policy responses to other types of public health crises and disasters. Many other policy areas are racialized similarly, using stereotypes to shape blame attribution. For example, the federal policy response to the crack-cocaine epidemic was more criminal justice-based than the national policy responses to the opioid crisis, which was more public health-based (Om, 2019). Demographic differences among the

victims affected media narratives about the crises, shifting blame attribution and calls for legislative action (Netherland and Hansen, 2016). Further understanding the causes of differential policy responses to crises and disasters may reduce racial and ethnic gaps in political representation and policy responsiveness.

Chapter 3: Mass Shootings, Victims' Race and Ethnicity, and Gun Bill Sponsorship

3.1 Abstract

Are legislators more likely to attempt policy change when mass shootings are whiter? Do Democrats and legislators with more constituents of color do more for victims of color? I study these questions by analyzing legislators' gun policy activity using a novel panel dataset tracking state legislators in 46 states over eleven years. Studying contemporaneous and lagged effects, I find that white mass shooting fatalities increase Democrats' gun policy activity and success legislating gun laws but decrease Republican-led gun policy reforms. Democrats respond much less aggressively to racial and ethnic minority (REM) mass shooting fatalities. However, REM fatalities increase Republicans' success legislating gun laws though they may not represent the interest of constituents of color. Legislators with large white constituencies pass more gun laws in response to white fatalities but not REM fatalities. In contrast, legislators with larger constituencies of color respond more aggressively to REM fatalities.

3.2 Introduction

"These mass shootings deserve more than thoughts and prayers -- they demand action... here are four common-sense actions I support in Congress to reduce the gun violence that's ripping through our schools and our communities:

- 1) I am co-sponsoring a bill that would ban 'bump stocks.'*
- 2) I am co-sponsoring a bill that would require a completed background check to buy a gun.*
- 3) I am co-sponsoring a bill that would repeal existing legislation offering liability protections for the firearm industry.*
- 4) I support federal funding of research into gun violence so it is treated like the true public health crisis it is." – Senator Ron Wyden, February 22, 2018*

The vast majority of proposed state legislation is not passed. Most bills are not voted on by whole legislative bodies, stalling in committees, and some bills do not even receive an initial hearing in their respective committees. However, the act of *sponsoring* or *co-sponsoring* legislation, where a legislator introduces legislation or adds their name to a proposed bill as an official supporter, is a way for legislators to signal support for specific policies to their constituents, interest groups, and party leaders (Schiller, 1995; Holman and Mahoney, 2018). Like roll-call voting, sponsoring legislation serves to position-take and shape the policy process, but party leaders' agenda-setting power does not limit sponsorship, unlike roll-call voting.

Political scientists often consider bill sponsorship to be a signal to constituents and interest groups about legislators' priorities and issue positions (Rocca and Sanchez 2008; Swift and VanderMolen 2016). Bill sponsorship and co-sponsorship may credibly indicate what issues a legislator sees as important and what solutions to those issues a legislator supports (Rocca and Sanchez 2008; Swift and VanderMolen 2016). These signals are also crucial to interest groups,

“Bill cosponsorship acts as a signal to interest groups that a legislator is working to promote their interests and thereby maximize his/her rents from such groups” (Tanger and Laband 2009, 260). Furthermore, bill sponsorships can shape the legislative agenda by signaling to party leaders that rank-and-file legislators support a particular bill (Bratton and Rouse 2011).

This type of action goes beyond making public statements of support by demonstrating support for policies in a more long-lasting, official, and meaningful way, shaping policy responses to catastrophes (Schiller, 1995; Holman and Mahoney, 2018). More bill sponsorship in policy areas signals greater issue saliency (Lazarus, 2013). Furthermore, more sponsorship in specific policy domains may signal greater demands by influential actors because the number of gun bills legislators sponsor is positively correlated with campaign contributions from gun control interest groups (Rocca and Gordon 2010).

Building off of the proposed theory and findings in Chapter 2, I offer the following hypothesis:

- **Hypothesis 1:** Legislators will sponsor more gun-related legislation in response to white mass shooting fatalities than racial and ethnic minority mass shooting fatalities.

However, sponsorship may simply be symbolic position-taking, failing to capture a legislator’s genuine effort to support a policy. Whether a sponsored bill eventually passes or fails is also important. Therefore, I propose an additional hypothesis:

- **Hypothesis 2:** Legislators will sponsor more *successful* gun-related legislation in response to white mass shooting fatalities than racial and ethnic minority mass shooting fatalities.

Studies used bill sponsorship to study responses to catastrophic events. Blomberg, Gandhi, and Hess (2011) find that United States senators and representatives from states geographically close to the epicenters of the September 11th attacks were more likely to sponsor antiterrorism legislation. Bromley-Trujillo, Holman, and Sandoval (2019) find that Democratic state legislators from districts with temperature anomalies were more likely to sponsor climate change legislation than Democratic legislators from districts without temperature anomalies. However, Republicans' climate bill sponsorship was unaffected by local temperature anomalies. This research suggests that party identification may moderate the effect of catastrophic events on legislators' bill sponsorship. Like climate change policy, gun policy is deeply partisan and likely to have similar partisan dynamics. Furthermore, some research suggests that Democrats produce better policy outcomes for communities of color (Hajnal and Horowitz, 2013). This research promotes the following hypothesis:

- **Hypothesis 3:** Victims' race and ethnicity will moderate Democrats' gun legislation sponsorship behavior less than Republicans'.

Bill sponsorship has also been used to measure substantive representation in studies investigating racial biases in political representation (Grose, 2011; Rocca and Sanchez, 2008; Waggoner, 2018; Trautman, 2019). Some scholars find that the relative size of a racial group in a legislative district shapes legislators' bill sponsorship activity (Lublin, 2021). However, others like Trautman (2018) find that the size of the Black voting-age population in a district did not impact

how many racial advocacy bills a legislator sponsors when controlling for legislators' race and party identification. Instead, they find that Black and Democratic legislators are more likely to sponsor more racial advocacy issues. Similarly, Wallace (2014) finds that the party identification and the race of the legislator influence bill sponsorship on Latino issues more than the size of the Latino population in a legislator's district. Still, constituents' preferences should influence election-oriented legislators. Suppose white constituents are more likely to demand gun policy change due to white mass shooting fatalities. In that case, we should expect legislators with larger white populations to respond more actively to mass shootings when victims are primarily white.¹⁵

This research promotes these hypotheses:

- **Hypothesis 4:** Legislators will sponsor more gun policy bills when victims share the race and ethnicity of their constituents.¹⁶

3.3 Data and Methods

I created a novel legislator panel dataset that tracks the number of gun-related bills legislators sponsor each year, the number of mass shootings fatalities legislators experience in their state each year (disaggregated by victims' race and ethnicity), and district demographic data.

¹⁵ Unfortunately, data on legislators' race and ethnicity is not broadly available across state legislatures. Therefore, I am unable to test whether state legislators' race and ethnic moderate their policy responses.

¹⁶ I am unable to test this hypothesis precisely because of data limitations. During the period studied, individual race and ethnic minority groups make up too small of a proportion of total fatalities to get reliable point estimates.

I create a panel dataset of all state legislators in office between 2009 and 2019 using Klarner’s (2018) State Legislative Election Returns data.¹⁷ I merged the state legislator panel dataset with district demographic data from the American Community Survey (acquired through IPUMS-NHGIS). Because of complex district naming conventions, I cannot merge district demographic data in three states – New Hampshire, Vermont, and Maryland. Therefore, these states are not analyzed. Legislators from Nebraska are also removed from the analysis because the Nebraska legislators are nonpartisan. There are 72,922 observations in the dataset, consisting of 13,612 unique legislators across 46 states serving between 2009 to 2019.

To track state gun legislation and bill sponsors, I look at the universe of state legislation considered in the United States between the 2009 and 2020 legislative sessions. Data on legislation and bill sponsorship comes from LegiScan. I download state legislation data for all available state datasets. To determine which proposed bills are potentially related to gun policy, I borrow from coding used by Luca et al. (2020). Luca et al. (2020) define potential gun legislation as those containing the key terms “firearm,” “handgun,” “pistol,” “revolver,” “rifle,” “shotgun,” “long-gun,” and “assault weapon” in the bill title or bill description. I also include the critical term “gun” in terms of interest. I then subset the bill population to only those with at least one of the key terms in the title or bill description. 10,974 gun-related bills were proposed between 2009 and 2019 in

¹⁷ Klarner’s (2018) data does not include recall elections, special elections, or special appointments during the period of interest (2009-2010). Therefore, legislators that end their term early do to recall, resignation, or death remain in the dataset until the end of their term. There are fewer than two legislators successfully recalled on average each year between 1996 and 2020 (Ballotpedia, State Legislative Recalls). There is no comprehensive figure on the number of state legislators that leave their term early due to resignation or death, though I expect this number to be relatively low and unlikely to bias results.

the 46 states analyzed, including legislation that may attempt to loosen gun laws, tighten gun laws, or do neither.

I count the number of gun bills each legislator sponsored or cosponsored each year.¹⁸¹⁹ There were 66,131 sponsors across the 10,974 bills corresponding to 8,390 unique legislators. The remaining legislators did not appear to sponsor any gun-related legislation during this time.²⁰

As in Chapter 2, data on mass shooting fatalities and victims' race primarily comes from the Violence Project.²¹ Victims' racial and ethnic information mainly comes from The Violence Project. The Violence Project is missing race and ethnicity data for a small proportion of victims.

¹⁸ I do not distinguish between primary sponsors and cosponsors in the main analysis.

¹⁹ The date that a legislator sponsors a bill is not included in the data. Therefore, I use the date of bill introduction to estimate the date of bill sponsorship.

²⁰ Using legislators' names and the estimated date of bill sponsorship, I aggregate data to the legislator-year level, summing the total number of gun-related bills a legislator sponsors or cosponsors during each year. I then merge the legislator-year aggregated bill sponsorship data with the state legislator panel dataset using legislators' names or legislative district identifiers. I use various alternative names to increase the proportion of successful matches, adjusting for duplicate matches. While over 99% of observations match, 224 legislator-year observations aggregated from the Legiscan dataset fail to match based on name-year or district-year combinations with the state legislator panel dataset derived from Klarner's (2018) State Legislative Election Returns data. This is largely due to data inaccuracies across datasets.

²¹ The Violence Project is a nonprofit, nonpartisan research center funded by the National Institute of Justice. They use a rigorous multi-coder process to code mass shootings and relevant information and provide the most comprehensive coding of victims' race and ethnicity publicly available. The Violence Project defines a mass shooting using the Congressional Research Service's definition: *a multiple homicide incident in which four or more victims are murdered with firearms—not including the offender(s)—within one event, and at least some of the murders occurred in a public location or locations in close geographical proximity (e.g., a workplace, school, restaurant, or other public settings), and the murders are not attributable to any other underlying criminal activity or commonplace circumstance (armed robbery, criminal competition, insurance fraud, argument, or romantic triangle).*

I use Bayesian name prediction methods to predict the race and ethnicity of the remaining victims. I aggregate racial and ethnic minority fatalities into a broader umbrella because individual ethnic and racial minority groups constitute a small proportion of mass shooting victims.²²

Data on mass shootings is aggregated to the state-year level, tracking the number of white fatalities and racial and ethnic minority mass shooting fatalities. Data is then merged with the state legislator panel dataset based on state-year identifiers. From 2009 to 2019, there were 63 mass shootings across 46 states. There are 559 mass shooting fatalities. Thirty-three victims are Asian, 58 are Black, 116 are Hispanic, six are Middle Eastern, seven are Native American, and 244 are white.

3.3.1 Methods

I use two-way fixed effects distributed lag models to test whether mass shooting victims' race and ethnicity moderate the number of gun laws legislators sponsor. Models include the number of mass shooting fatalities a legislator experienced in their state that year, disaggregated by victims' race and ethnicity, and the number of mass shooting fatalities a legislator experienced in their state the *previous* year by victims' race and ethnicity.

I use a distributed lag model because mass shootings may affect legislators' behavior that same year or the following year. Mass shootings may happen early in the calendar year, allowing

²² The impact of individual racial and ethnic minority group fatalities on gun policy change may differ. However, data limitations do not allow me to reliably test the individual impact of each major racial and ethnic minority group fatality on restrictive gun policy change. In SI-1, I attempt to do so but demonstrate that the point estimates are unreliable and vary depending on modeling specifications more than when aggregated.

legislators to sponsor or co-sponsor legislation immediately after the shooting, or they may occur late in the calendar year, limiting legislators' ability to sponsor or co-sponsor legislation immediately after the shooting. Most states' regular legislative sessions end during the first half of the calendar year (NCSL 2018), and some states like Texas and Nevada only have regular legislative sessions biennially (NCSL, 2018). Furthermore, more than half the legislative chambers impose a deadline for adding co-sponsors to a bill (NCSL, 2020).

Political incentives may also matter. Legislators may choose to sponsor more or fewer bills during an election year and compensate during the following year. Legislators, particularly newly elected legislators that may have campaigned on gun policy issues, may be influenced by mass shootings that happened the year prior.

Furthermore, a distributed lag model helps investigate issue *prioritization*. In other words, a distributed lag model may provide insight into the agenda-setting and issue-saliency effects of a mass shooting. If legislators sponsor more gun legislation the same year of a mass shooting and fewer gun bills the year after, it suggests the issue is prioritized. Therefore, a distributed lag model allows me to test for potential lagged effects that only considering contemporaneous responses would miss.

3.4 Findings

Table 2.1 presents the initial set of results, testing **Hypothesis 1** and **Hypothesis 2**. Model 1 analyzes the effect of white fatalities and racial and ethnic minority fatalities on the number of gun bills legislators sponsor. When analyzing the results from both periods, the models suggest that white mass shooting fatalities positively affect the aggregate number of gun bills legislators sponsor and incentivize legislators to prioritize gun policy. On the other hand, racial and ethnic

minority mass shooting fatalities only have a small positive aggregate effect on the number of gun-related bills legislators sponsor and incentivize them to delay gun bill sponsorship, lending partial support to **Hypothesis 1**. It is important to note that the directionality of the effects is inconsistent for racial and ethnic minority fatalities across periods, partially canceling out aggregate-level effects. However, white fatalities appear to lead to gun policy *prioritization* in a way that racial and ethnic minority fatalities do not, suggesting that white fatalities make gun policy more immediately salient.

Model 1 suggests that the average legislator sponsors 0.15 additional gun-related bills during years with ten white fatalities compared to years where no white mass shooting fatalities. White mass shooting fatalities do not have a statistically significant effect on the number of gun bills legislators sponsor the following year. On the other hand, the average legislator sponsors 0.06 fewer gun bills on average in years with ten racial and ethnic minority mass shooting fatalities compared to years with no racial and ethnic minority mass shooting fatalities but will sponsor 0.1 additional gun bills the following year.

When we study the effects of white fatalities and racial and ethnic minority fatalities on the number of *successful* bills legislators sponsor, we find weak support for **Hypothesis 2**. Both white mass shooting fatalities and racial and ethnic minority mass shooting fatalities are positively correlated with the number of successful gun-related bills legislators sponsor that same year but not the following year.

Model 2 plots the effects of white and racial and ethnic minority mass shooting fatalities on the number of successful gun bills legislators sponsor. The model implies that legislators sponsor about 0.04 additional *successful* gun bills during years with ten white mass shooting

fatalities compared to years with zero white mass shooting fatalities. Similarly, the average legislator sponsors 0.03 additional *successful* gun bills during years with ten racial and ethnic minority mass shooting fatalities compared to years with zero racial and ethnic minority mass shooting fatalities. These findings lend weak support to **Hypothesis 2**.

However, aggregate effects may be masking differential partisan and political responses. In the following sections, I study how legislators' party identification and constituency demographics may be moderating these responses.

Table 3.1: The Effect of Mass Shooting Fatalities on The Number of Gun-Related Bills Legislators Sponsor

	(1) Gun Bills Sponsored	(2) Gun Bills Sponsored Passed
Number of White Fatalities	0.0151*** (0.00269)	0.00392*** (0.000860)
Number of REM Fatalities	-0.00639*** (0.00219)	0.00323*** (0.00120)
Number of White Fatalities t-1	-0.00532 (0.00358)	0.000358 (0.00106)
Number of REM Fatalities t-1	0.0108*** (0.00272)	-0.000544 (0.000677)
DV Mean	0.830 (0.007)	0.114 (0.002)
Legislator Fixed Effects	Yes	Yes
Year Fixed Effects	Yes	Yes
Observations	72,922	72,922
R-squared	0.015	0.010
Number of Legislators	13,613	13,613

Note: Cluster-robust standard errors in parentheses.

*** p<0.001, ** p<0.01, * p<0.05

3.4.2 Heterogeneous Effects: Partisan Divergence

When studying partisan effects across both periods, the findings suggest that white mass shooting fatalities increase the number of gun bills Democrats sponsor and decrease the number of gun bills Republicans sponsor. These effects are consistent across periods. Racial and ethnic minority mass shooting fatalities have a lagged positive effect on the number of gun policy bills Democrats sponsor and lagged negative effect on the number of gun policy bills Republicans sponsor. These findings provide weak support for **Hypothesis 3**. Instead, Democrats are more promptly and consistently active on gun policy issues after whiter mass shootings. Republicans, on the other hand, are less active on gun policy issues after mass shootings, particularly when victims are white.

Figure 3.1A plots the marginal effects of white mass shooting fatalities at time t on legislators' firearm bill sponsorship disaggregated by legislators' party identification. Figure 3.1A suggests that Democratic legislators sponsor more gun bills in years with more white fatalities. Ten white mass shooting fatalities in a year led Democratic legislators to sponsor about 0.3 additional gun bills that same year compared to years with no white mass shooting fatalities. On the other hand, white mass shooting fatalities decrease the number of firearm-related bills Republican legislators sponsor that year. We observe similar lagged effects. Figure 3.1B plots the marginal effects of white mass shooting fatalities the previous year on legislators' firearm bill sponsorship disaggregated by legislators' party identification. The figure indicates that white mass shooting fatalities are positively correlated with the number of gun bills Democrats sponsor the following year but negatively correlated with the number of gun-related bills Republicans sponsor the next year.

Figure 3.2A plots the marginal effects of racial and ethnic minority mass shooting fatalities on legislators' firearm bill sponsorship that year disaggregated by legislators' party identification. The figure implies that racial and ethnic minority mass shooting fatalities do not affect the number of firearm legislation Democrats or Republicans sponsor that year. Figure 3.2B plots the marginal effect of racial and ethnic minority mass shooting fatalities the previous year on firearm bill sponsorship by party identification. Racial and ethnic minority mass shooting fatalities are positively correlated with the number of gun bills Democrats sponsor the following year but are negatively correlated with the number of firearm-related legislation Republicans sponsor the next year. Ten racial and ethnic minority mass shooting fatalities predict that Republicans will sponsor about 0.3 fewer gun bills on average the following year compared to years with zero racial and ethnic minority mass shooting fatalities.

The findings suggest that Democrats consistently sponsor more gun-related bills in response to white mass shooting fatalities but lag in responding to racial and ethnic minority mass shooting fatalities. Republicans, on the other hand, appear to sponsor fewer gun-related bills in response to all mass shooting fatalities but are notably less active in gun policy legislating when mass shootings impact white communities. These findings do not support **Hypothesis 3**.

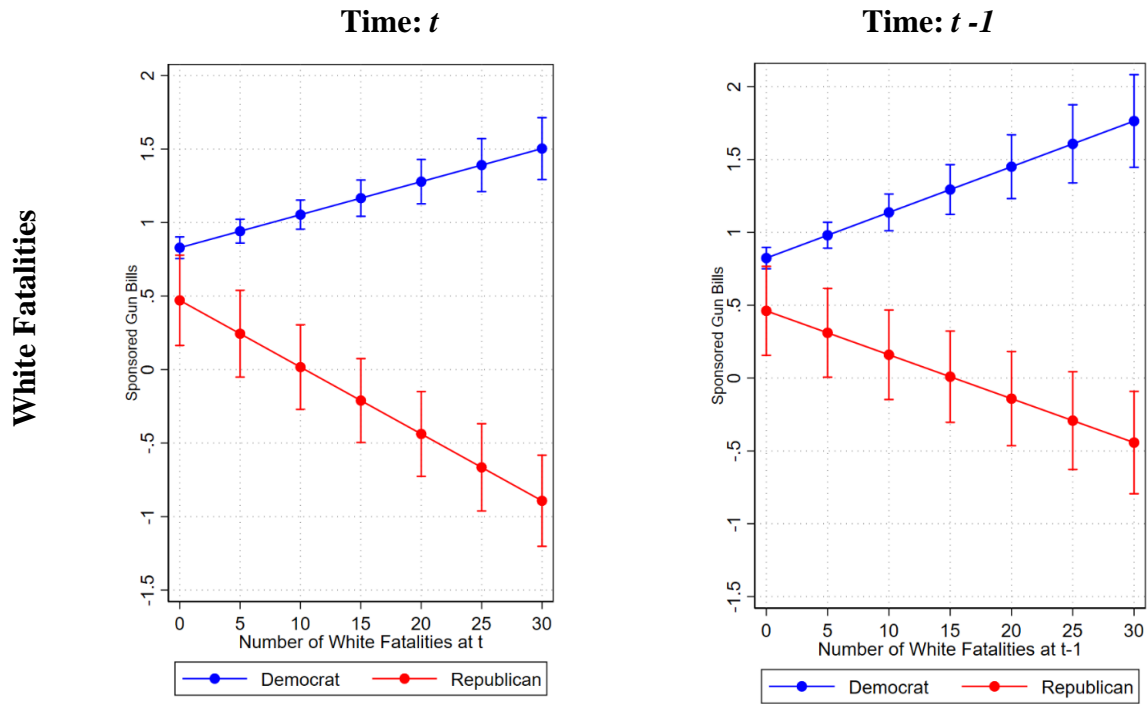


Figure 3.1: The Effect of White Mass Shooting Fatalities at T and $T-1$ on Gun Bill Sponsorship by Party

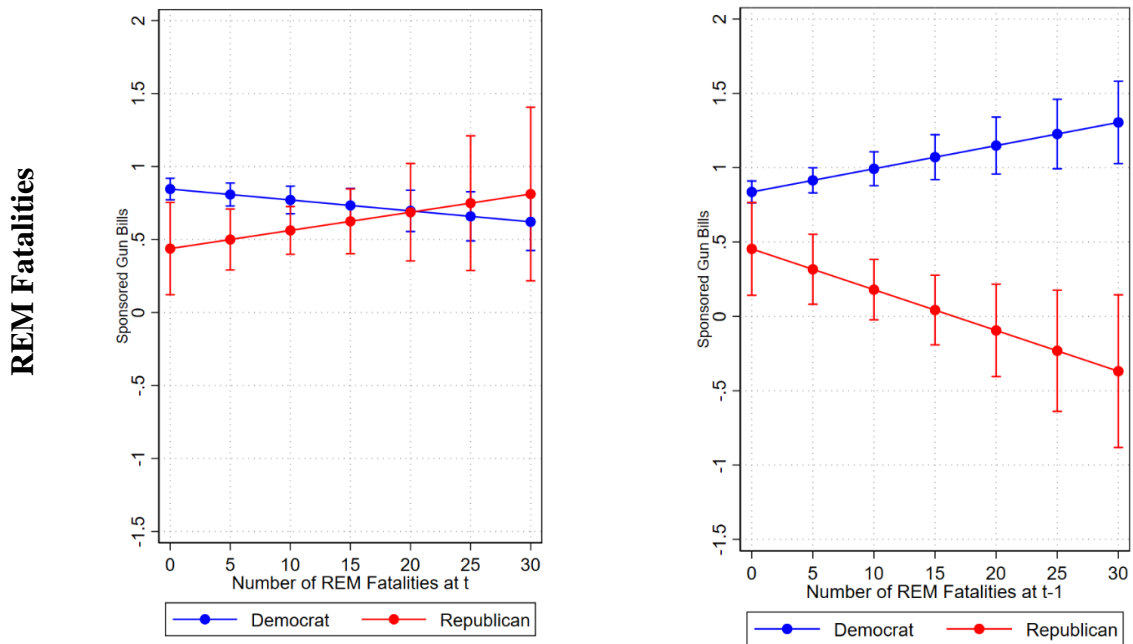


Figure 3.2: The Effect of REM Mass Shooting Fatalities at T and $T-1$ on Gun Bill Sponsorship by Party

We observe different patterns when we study *successfully* sponsored legislation. The findings suggest that white mass shooting fatalities are positively correlated with the number of successful gun bills Democrats and Republicans sponsor that year. However, white fatalities are negatively correlated with the number of gun bills Republicans sponsor the following year. On the other hand, racial and ethnic minority mass shooting fatalities only increase successful gun bill sponsorship for Republicans.

Figure 3.3A plots the marginal effect of white mass shooting fatalities on the number of successful gun legislation sponsored that year by party identification. Both Democratic and Republican legislators sponsor more successful gun legislation in years with more white mass shooting fatalities. The model predicts that the average Democratic legislator will sponsor about 0.2 successful gun bills in years with ten white mass shooting fatalities but only 0.12 successful gun bills in years with zero white mass shooting fatalities. Republicans' successful bill sponsorship is similarly affected by white mass shooting fatalities that year. Figure 3.3B suggests that white mass shooting fatalities may have a small positive effect on the number of successful gun bills Democrats sponsor the following year but reduce the number of successful gun bills Republicans sponsor the next year.

Figure 3.4A and Figure 3.4B plot the marginal effect of racial and ethnic minority mass shooting fatalities on the number of successful gun bills legislators sponsor that year and the following by legislators' party identification. The model indicates that racial and ethnic minority mass shooting fatalities do not affect the number of successful gun bills Democratic legislators sponsor. However, the racial and ethnic minority mass shooting fatalities increase the number of successful gun bills Republican legislators sponsor that year. The positive correlation between

racial and ethnic minority mass shootings fatalities and successful gun legislation sponsorship observed in Model 2 of Table 3.1 appears to be driven by Republicans' behavior.

The findings suggest that white mass shooting fatalities significantly increase the number of Democrat-supported gun bills passed on aggregate but have more mixed on Republican successful gun bill sponsorship. Racial and ethnic minority mass shooting fatalities only increase successful gun bill sponsorship for Republicans.

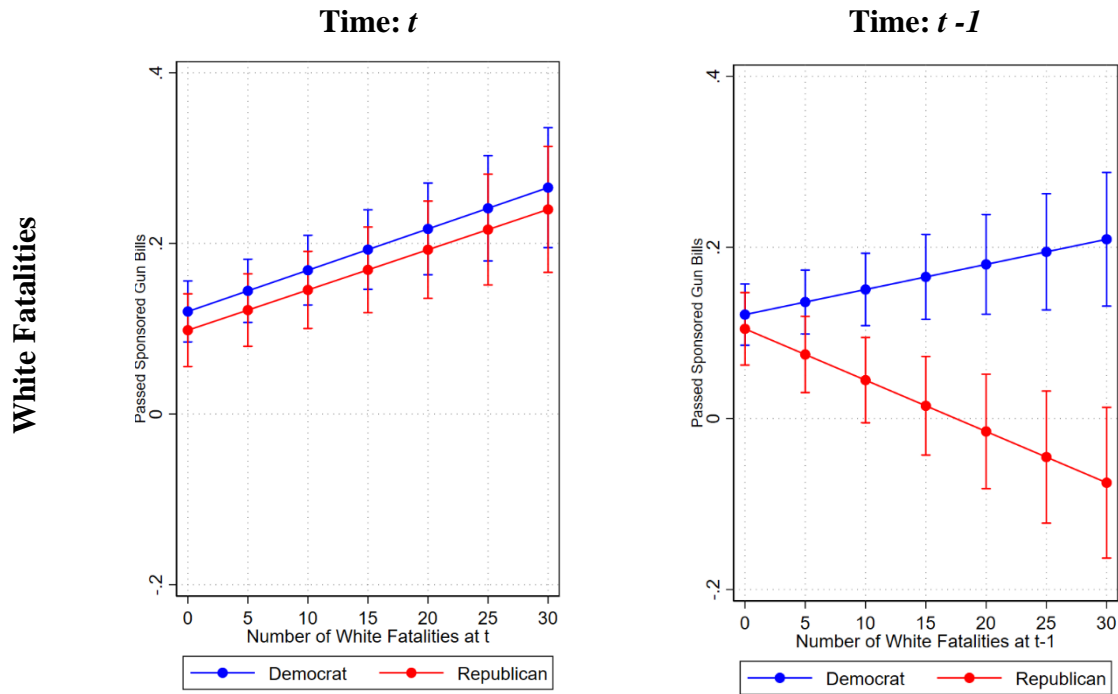


Figure 3.3: The Effect of White Mass Shooting Fatalities at T and $T-1$ on Successful Gun Bill Sponsorship by Party

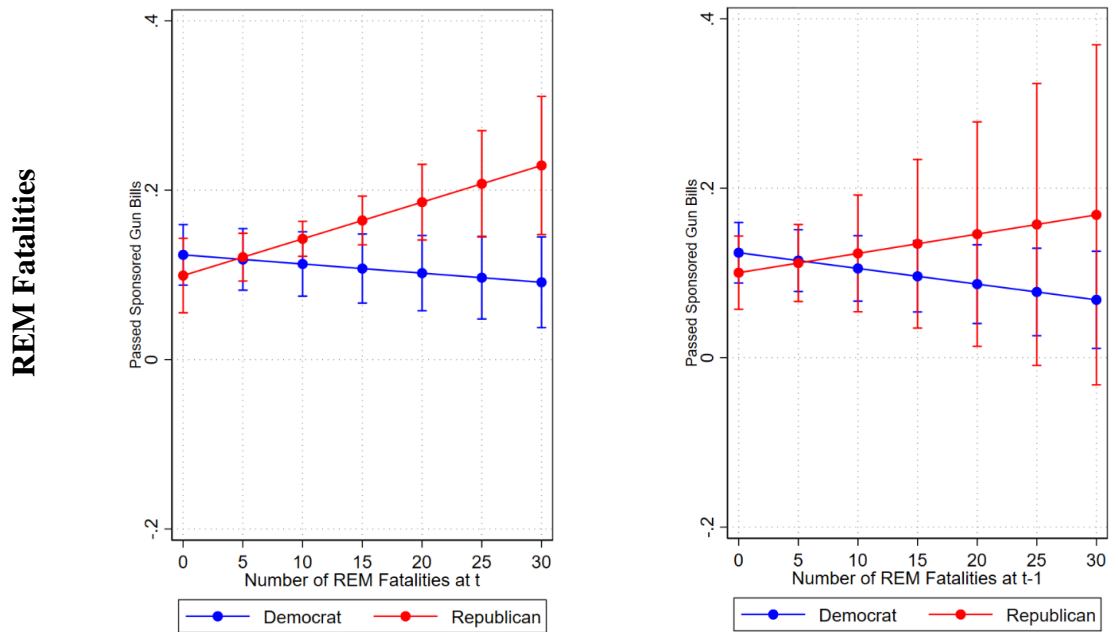


Figure 3.4: The Effect of REM Mass Shooting Fatalities at T and $T-1$ on Successful Gun Bill Sponsorship by Party

3.4.3 Heterogeneous Effects: Constituency Effects

Legislators' white constituency size does not clearly and consistently moderate whether racial biases in legislators' responses to mass shootings.²³ White mass shooting fatalities are positively correlated with the number of gun bills legislators sponsor that year in districts with white constituencies smaller than the median but not in districts with white constituencies larger than the median. However, white mass shooting fatalities are negatively correlated with the number of gun bills legislators sponsor that *following* year in districts with smaller white constituencies but positively correlated in districts with larger white constituencies. Hence, the effects are inconsistent across time. Racial and ethnic minority mass shooting fatalities are negatively correlated with the number of gun bills legislators sponsor that year in districts with larger white constituencies. While the effects are relatively small, the number of racial and ethnic minority fatalities is positively correlated with the number of gun bills legislators sponsor the following year in districts with smaller white constituencies. The inconsistent effects across time and district time provide weak evidence for **Hypothesis 4**

Figure 3.5A plots the marginal effect of white mass shooting fatalities on the number of gun bills legislators sponsor that year by legislators' white constituency size. White mass shooting fatalities increase the number of gun bills a legislator sponsors in districts with smaller white constituencies. In districts where the percentage of white voters is *below* the median, ten white mass shooting fatalities increase the number of gun bills legislators sponsor by about 0.15 bills. Figure 3.5B plots the marginal effect of white mass shooting fatalities on the number of gun bills legislators sponsor the *following* year by white constituency size. The model suggests that white

²³ All model control for legislators' party identification.

mass shooting fatalities are positively correlated with the number of gun-related bills legislators sponsor the next year in districts with white constituencies *above* the median but have a negative effect on gun bill sponsorship in districts with white constituency sizes *below* the median. These findings are inconsistent across periods and sometimes counterintuitive.

Figure 3.6A plots the marginal effect of racial and ethnic minority mass shooting fatalities on the number of gun bills legislators sponsor by white constituency size. Racial and ethnic minority mass shootings fatalities are negatively correlated with the number of gun-related bills legislators sponsor that year in districts with white constituencies *above* the median. Legislators in districts with white constituencies above the median sponsor 0.5 fewer gun bills on average in years with ten racial and ethnic minority mass shooting fatalities compared to years with zero racial and ethnic minority mass shooting fatalities. Racial and ethnic minority mass shootings fatalities do not affect the number of gun bills legislators sponsor that year in districts with smaller white constituencies. Figure 3.6B plots the marginal effect of racial and ethnic minority mass shooting fatalities on the number of gun bills legislators sponsored the following year by white constituency size. Racial and ethnic minority mass shooting fatalities are positively correlated with the number of gun bills legislators sponsored the next year in districts with smaller white constituencies though the effects are relatively small; ten racial and ethnic minority mass shooting fatalities increase gun bill sponsorship by about 0.1 bills in districts with white constituency sizes below the median.

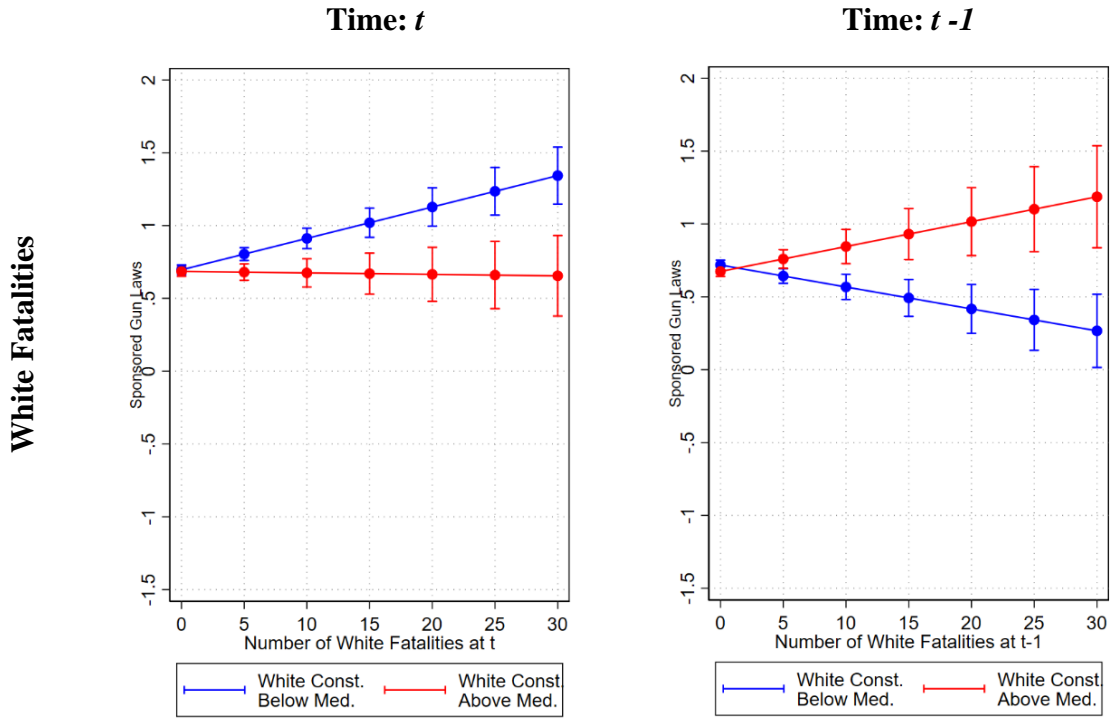


Figure 3.5: The Effect of White Mass Shooting Fatalities at T and $T-1$ on Gun Bill Sponsorship by White Constituency

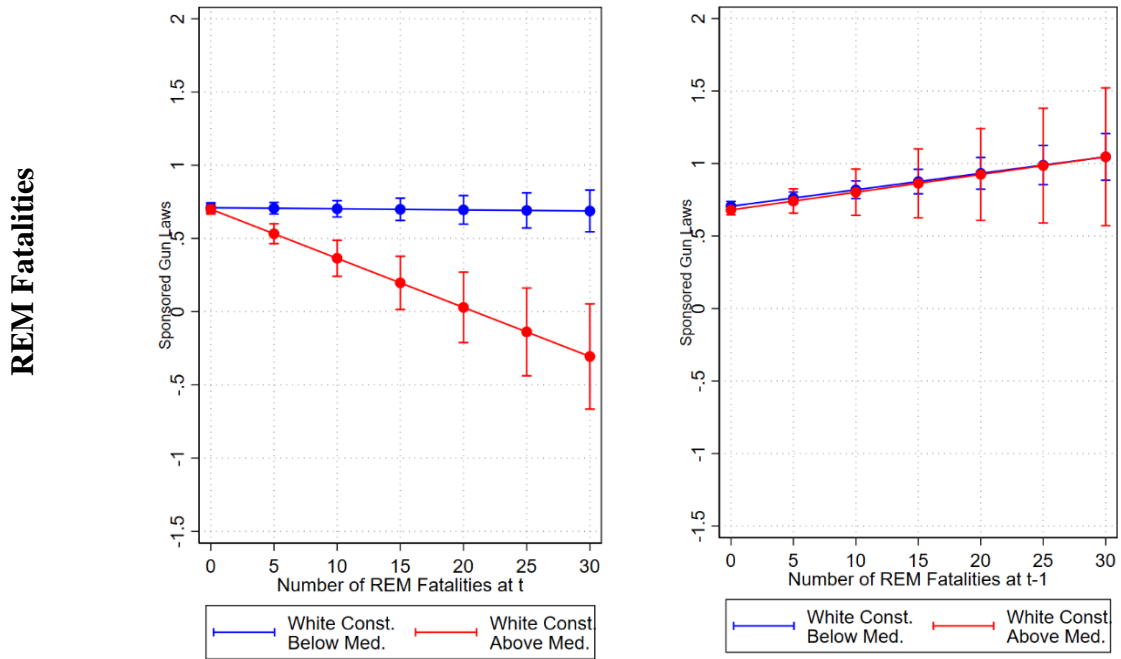


Figure 3.6: The Effect of REM Mass Shooting Fatalities at T and $T-1$ on Gun Bill Sponsorship by White Constituency

Legislators' constituencies consistently moderate the number of *successful* gun laws legislators sponsor in response to mass shooting victims' race and ethnicity. Legislators with white constituencies *larger* than the median are more likely to successfully sponsor gun laws in response to white mass shooting fatalities compared to legislators with white constituencies *smaller* than the median on aggregate. On the other hand, racial and ethnic minority mass shooting fatalities are negatively correlated with the number of *successful* gun laws legislators sponsor in districts with larger white constituencies. However, they are positively correlated with the number of successful gun bills legislators sponsor in districts with smaller white constituencies. These effects are relatively consistent across time. These findings provide stronger and robust support for **Hypothesis 4**.

Figure 3.7A plots the marginal effect of white mass shooting fatalities on the number of *successful* gun-related bills legislators sponsor that year by white constituency size. White mass shooting fatalities increase the number of successful gun bills legislator sponsors that year irrespective of white constituency size. Still, the effects are more significant in districts with larger white constituencies. In state legislative districts where the percentage of white voters is *above* the median, ten white mass shooting fatalities increase the number of successful firearm-related legislation a legislator sponsors that year by about 0.1 bills. In state legislative districts where the percentage of white voters is *below* the median, ten white mass shooting fatalities increase the number of successful firearm-related legislation a legislator sponsors that year by about 0.05 bills. Looking at lagged effects in Figure 3.7B, white mass shooting fatalities increase *successful* bill sponsorship in districts with larger white constituencies.

Figure 3.8A plots the marginal effect of racial and ethnic minority mass shooting fatalities on the number of successful gun bills legislators sponsor that year by white constituency size.

Racial and ethnic minority mass shootings fatalities are negatively correlated with the number of successful gun bills legislators sponsor the same year in districts with white constituency sizes *above* the median. Legislators in districts with white constituencies above the median sponsor 0.15 successful gun bills on average in years with zero racial and ethnic minority mass shooting fatalities but only sponsor 0.03 successful gun bills on average in years with ten racial and ethnic minority mass shooting fatalities. The model indicates that racial and ethnic minority mass shootings fatalities positively affect the number of successful gun bills legislators sponsor that same year in districts with white constituency sizes *below* the median. These effects are relatively weaker but consistent when observing lagged effects in Figure 3.8B. The findings suggest that racial and ethnic minority mass shooting fatalities have no impact on the number of successful gun bills legislators sponsor in districts with white constituencies *below* the median but have a negative effect on the number of successful gun-related bills legislators sponsor in districts with white constituencies *above* the median.

Legislators with larger white constituencies sponsor more successful gun bills in response to white mass shooting fatalities but sponsor fewer successful gun bills in response to racial and ethnic mass shooting fatalities. On the other hand, legislators with larger constituencies of color sponsor more successful gun bills in response to racial and ethnic minority mass shooting fatalities. Still, they are not sponsoring more successful gun bills on aggregate in response to white mass shooting fatalities. These findings provide more robust support for **Hypothesis 4** than previous findings on overall gun bill sponsorship.

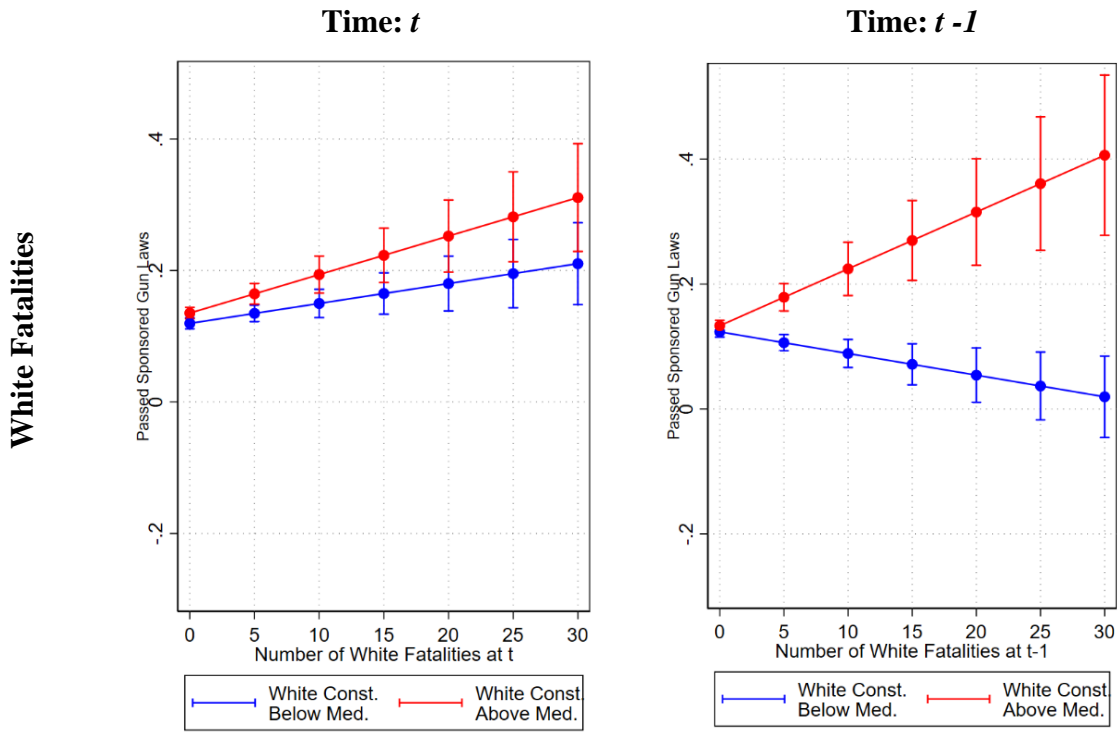


Figure 3.7: The Effect of White Mass Shooting Fatalities at T and $T-1$ on Successful Gun Bill Sponsorship by White Constituency

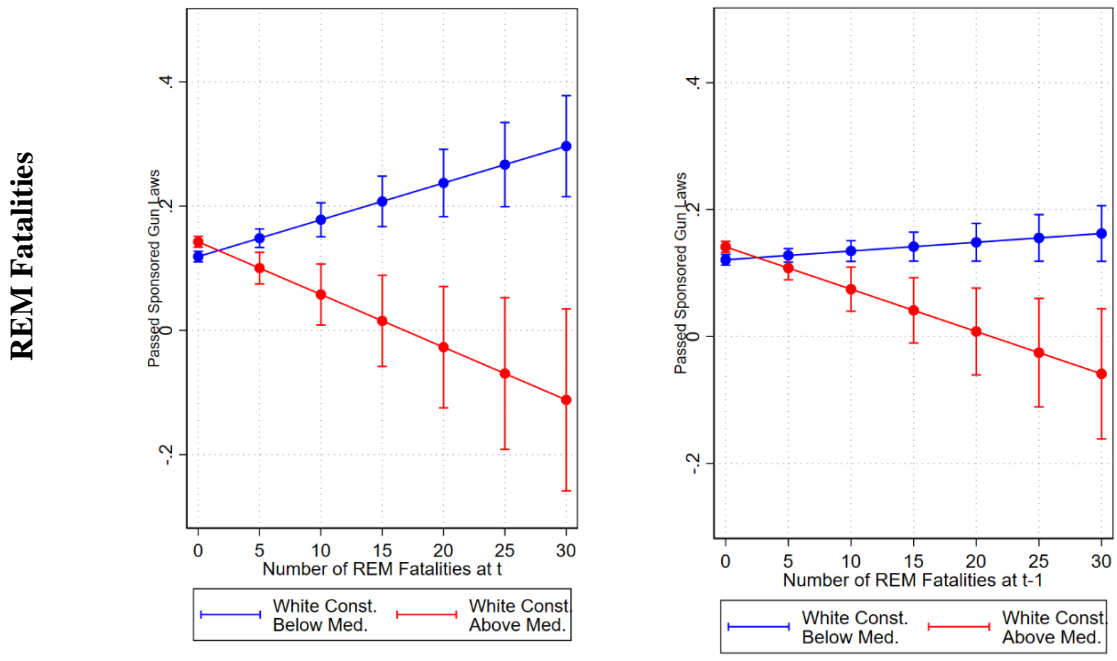


Figure 3.8: The Effect of REM Mass Shooting Fatalities at T and $T-1$ on Successful Gun Bill Sponsorship by White Constituency

3.6 Discussion

When we simultaneously consider both contemporaneous and lagged effects, the findings suggest that mass shootings increase legislators' gun bill sponsorship irrespective of victims' race and ethnicity. While white fatalities have a more substantial immediate effect, racial and ethnic minority mass shooting fatalities increase the number of gun bills legislators sponsor the following year. Furthermore, irrespective of victims' racial makeup, mass shootings increase the likelihood that legislators will *successfully* sponsor gun legislation, meaning that the legislation they sponsor eventually becomes law.

However, when we look more closely at heterogeneous effects, racial disparities arise. Democratic legislators sponsor more gun laws in response to white mass shooting fatalities and racial and ethnic minority mass shooting fatalities. However, they are quicker to respond to white fatalities and are only more successful in passing sponsored gun laws when victims are white. On the other hand, Republicans sponsor fewer gun bills in response to white mass shooting fatalities, though their success is mainly unaffected by white fatalities. However, they pass more sponsored gun bills during years with more racial and ethnic minority mass shooting fatalities. While it may seem that Republicans are better representing communities of color after mass shootings, this may not be the case. Republicans generally favor looser gun laws, while communities of color typically prefer more restrictive gun laws (Spitzer, 2020). According to the 2016 American National Elections Survey, Blacks, Latinos, and Asian Americans are more likely to favor stricter gun laws than whites.²⁴ If Republicans' successfully sponsored gun laws loosen gun policy, they may not

²⁴ When asked "Do you think the federal government should make it more difficult for people to buy a gun than it is now, make it easier for people to buy a gun, or keep these rules about the same as they are now?" 73% of Blacks, 68% of Asian Americans, and 60% of Latinos prefer that government make it more difficult to purchase a firearm. On the other hand, only 49% of whites

be representing the interests of the communities most affected by a mass shooting. I tackle this empirical question in the next chapter of the dissertation.

Legislators' district demographics do not consistently moderate how many gun bills legislators sponsor in response to white fatalities or fatalities of color. Still, legislators' district demographics moderate how successful legislators' gun bill sponsorship is. Legislators with larger white constituencies are more likely to successfully sponsor gun legislation in response to white mass shooting fatalities but are less likely to successfully sponsor gun legislation in response to racial and ethnic minority mass shooting fatalities. On the other hand, legislators with larger constituencies of color are relatively more likely to successfully sponsor gun legislation in response to racial and ethnic minority mass shooting fatalities

This study points to potential disparities in mass shooting responses. Democrats, who generally favor more restrictive gun laws, sponsor more gun legislation and are more successful in passing these laws after whiter mass shootings. However, they are relatively less active and far less successful in passing sponsored gun laws after mass shootings with more victims of color. Instead, Republicans, who favor looser gun laws, successfully pass more sponsored gun laws during years with more mass shooting victims of color. These findings suggest that mass shootings may lead to more restrictive gun laws when victims are white and looser gun laws when victims are people of color. I empirically test this question in the next chapter.

prefer that government make it more difficult to purchase a firearm. Gun control is also more important to communities of color than whites. When asked "How important is this issue [gun control] to you personally?" 72% of Blacks, 64% of Asian Americans, and 69% of Latinos state that it is "extremely important" or "very important" while only 62% of whites state that it is "extremely important" or "very important."

Chapter 4: Mass Shootings, Victims' Race and Ethnicity, and Gun Policy Change

4.1 Abstract

Why did the 2018 mass shooting in Parkland, Florida, immediately lead to state gun policy reforms while the 2016 mass shooting in Orlando, Florida, did not affect state gun laws? I argue that victims' race and ethnicity shape post-crisis narrative and influential actors' demands for legislative solutions, moderating policy responses to mass shootings. I hypothesize that states are more likely to implement restrictive firearm laws in response to mass shootings when victims are white because gun policy failure is blamed, and influential actors demand policy solutions, but this does not occur when victims are racial and ethnic minorities. Leveraging a novel 30-year state panel dataset, I find that ten white mass shooting fatalities lead to about 1.6 additional restrictive firearm laws when all victims are white, while ten racial and ethnic minority mass shooting fatalities have no statistically significant effect on new restrictive gun laws.

4.2 Introduction

“They say that tougher gun laws do not prevent gun violence: we call B.S.

They say a good guy with a gun stops a bad guy with a gun: we call B.S.

They say guns are just tools, like knives, and are as dangerous as cars: we call B.S.

They say that no laws would have been able to prevent the hundreds of senseless tragedies that occur: we call B.S.”

– Emma Gonzalez, a survivor of the Stoneman Douglas High School shooting, addressing a crowd in Fort Lauderdale, FL, on February 17th, 2018 (Witt 2018)

Scholarship points to broad racial disparities in political representation and policy outcomes (Griffin and Newman 2008; Butler & Broockman 2011; Hajnal and Trounstein 2013; Griffin et al. 2014). Case studies in public health suggest that the US federal government is less responsive to public health crises that affect socially marginalized communities than similar crises that affect socially advantaged communities (for examples of case studies, *see* Shilts, 1987; Cohen, 1999; Om 2018). While case studies provide excellent theoretical development and process tracing, they lack generalizability and may suffer from selection bias. Yet, to the best of my knowledge, no research systemically tests whether policy is more responsive to tragic events and public health crises that affect white communities compared to communities of color. This study helps fill this gap in the literature and advances research in previous chapters by testing whether victims’ race and ethnicity shape state gun policy change.

Findings in Chapter 2 suggest that legislators are more likely to tie gun violence to gun policy, making gun policy more salient, and are more likely to call for legislative action when victims are white compared to when victims are racial and ethnic minorities. Chapter 3

demonstrates that Democratic legislators sponsor more gun policy legislation after whiter mass shootings, but their sponsorship behavior is unaffected by mass shootings when victims are people of color. Democrats' increase in gun bill sponsorships does not appear to be a symbolic act: many of these additional bills become law. Furthermore, Chapter 3 suggests that Republicans sponsor fewer gun bills after mass shootings, irrespective of victims' race and ethnicity. But does policy become significantly more restrictive after whiter mass shootings, or are Democrats' successfully sponsored bills largely symbolic?

Building off the theory, case studies on racialized policy responsiveness, and the previous chapters, I hypothesize that:

- **Hypothesis 1:** White mass shooting fatalities will positively affect the implementation of new restrictive state gun laws.
- **Hypothesis 2:** Racial and ethnic minority mass shooting fatalities will have no effect on the implementation of new restrictive state gun laws

I test these hypotheses, I create an original state panel dataset tracking mass shootings and state gun policy over 30 years (1990-2020) by merging data from The Violence Project, the State Firearms Laws Project, the National Conferences for State Legislators, and data collected by Luca et al. (2020). I use OLS regression with two-way (state and year) fixed effects and state-clustered standard errors, extending the difference-in-difference design beyond two time periods.

Consistent with the theory, I find that victims' race and ethnicity moderate state policy responses to mass shootings: state firearm policy becomes more restrictive in response to mass shootings fatalities when victims are white but is unresponsive to mass shooting fatalities when victims are racial and ethnic minorities. The main models predict that ten white mass shooting

fatalities predict about 1.5 additional restrictive gun laws, but ten racial and ethnic minority mass shooting fatalities predict about 0.4 fewer restrictive gun laws. However, the effect of racial and ethnic minority mass shooting fatalities on state gun laws is not statistically significant across all models, and findings are robust across model specifications. Results hold when I control for the number of child fatalities and school fatalities.

This paper points to a significant gap in political representation in the United States: policy is more responsive to catastrophic events, crises, and disasters when victims are white compared to when victims are people of color. This study contributes to research on political representation in American politics by systemically testing for differential policy responsiveness to tragic events and public health crises.

4.3 Data and Methods

Mass shooting data primarily comes from The Violence Project. The Violence Project is a nonprofit, nonpartisan research center funded by the National Institute of Justice. They use a rigorous multi-coder process to code mass shootings and relevant information and publicly provide the most comprehensive coding of victims' race and ethnicity. The Violence Project defines a mass shooting using the Congressional Research Service's definition:

“a multiple homicide incident in which four or more victims are murdered with firearms—not including the offender(s)—within one event, and at least some of the murders occurred in a public location or locations in close geographical proximity (e.g., a workplace, school, restaurant, or other public settings), and the murders are not attributable to any other underlying criminal activity or commonplace circumstance (armed robbery, criminal competition, insurance fraud, argument, or romantic triangle).”

While this definition is relatively conservative, excluding mass shootings primarily attributed to criminal activity or domestic disputes,²⁵ it best captures the type of salient public events that serve as potential focusing events.

From 1990 to 2020, there were 137 mass shootings across 38 states. There are 983 victims across these mass shootings. Victims' racial and ethnic information primarily comes from The Violence Project. As a verification check, I hand-code the race and ethnicity of 475 mass shooting victims between 2010 and 2019 using online pictures found in news reports and obituaries. My coding matches The Violence Project's coding in 91% of cases. The Violence Project is missing race and ethnicity data for 116 victims, mainly from older years when less media information was available. I use Bayesian name prediction methods to predict the race and ethnicity of the remaining victims.²⁶ I aggregate racial and ethnic minority fatalities into a broader umbrella because individual ethnic and racial minority groups constitute a small proportion of mass shooting victims.²⁷ 638 victims are white, and 345 are racial and ethnic minorities. Figure 4.1 plots mass shooting fatalities by victims' aggregated race and ethnicity over time, showing that mass shooting fatalities have increased over time though racial and ethnic distributions are relatively constant.

²⁵ Mass shootings in which over 50% of the victims are directly related to the shooter are excluded.

²⁶ See SI-4A for validation results.

²⁷ The impact of individual racial and ethnic minority group fatalities on gun policy change may differ. However, data limitations do not allow me to reliably test the individual impact of each major racial and ethnic minority group fatality on restrictive gun policy change. In SI-4B, I attempt to do so but the point estimates may be unreliable.

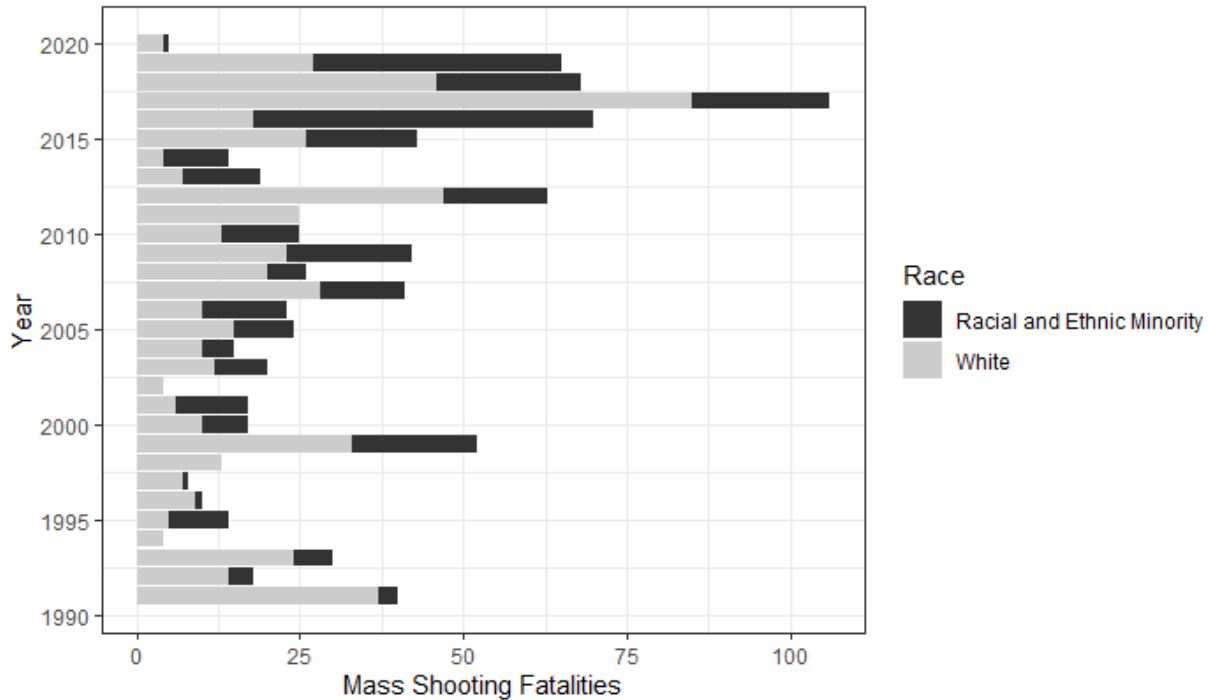


Figure 4.1: Mass Shooting Fatalities Disaggregated By Victims' Race and Ethnicity by Year

The main independent variables are mass shootings fatalities disaggregated by victims' race and ethnicity at the state-year level.²⁸

To measure the dependent variable, I use state panel data from the State Firearm Laws Project (Siegel et al., 2017). Using an already established measurement of gun policy reduces the risk of researcher-induced measurement bias. Scholars at the State Firearm Laws Project use Thomson Reuters Westlaw data to track historical state statutes and code the presence or absence of 133 firearm laws in all states over 30 years (1990-2020). Gun policy experts at the State Firearm

²⁸ Results are robust when modeling total fatalities and the proportion of white victims as an interaction. The results indicate the difference in the impact of white fatalities and racial ethnic minority fatalities on the number of restrictive firearm laws is statistically significant. See SI-4C.

Laws project code for 133 policies using a dichotomous coding with 1 indicating the more restrictive position on a particular policy and 0 indicating the less restrictive position on that policy. The primary dependent variable uses the sum of these dichotomous codes. Therefore, higher totals indicate the presence of more restrictive gun laws. Table 1 summarizes the broad gun policy domains tracked by the State Firearm Laws Project and the specific number of policies pertaining to these broad domains.

Policy Area	Number of Policies
Ammunition Regulations	7
Assault Weapons and Large-Capacity Magazines	8
Background Checks	11
Buyer Regulations	17
Child Access Prevention	11
Concealed Carry Permitting	7
Dealer Regulations	17
Domestic Violence	21
Gun Trafficking	7
Immunity	1
Possession Regulations	12
Preemption	3
Prohibitions for High-Risk Gun Possession	10
Stand Your Ground	1

The primary dependent variable is measured using change in state gun laws between $t-1$ and $t+1$. In other words, if a shooting happened in State A in 2018, how many restrictive firearm

laws does State A have in 2019 compared to 2017?²⁹ ³⁰ State firearm laws are produced at the end of the calendar year, so measurements corresponding to 2019 would capture gun policy in State A at the end of 2019, accounting for all policy changes that occurred that year. This measurement recognizes fluidity in the policy change process, capturing policy changes during the year of the mass shooting and the year after.

State partisan control, whether a state is under unified Democratic control, unified Republican control, or divided partisan control,³¹ is used as a control and a moderating variable in robustness checks.³² State partisan control is included as a control in all models because gun policy is a particularly partisan issue, partisan control of government is closely linked with the direction of policy change, and state partisan control is a time-variant state-specific covariate (Oliphant 2020; Caughey, Xu, and Warshaw 2017). State partisan control may also be a vital moderator because the party in power may moderate state governments' responses to white mass shooting fatalities and racial and ethnic minority mass shooting fatalities. Research at the national level suggests that unified Democratic control of government leads to better economic outcomes for communities of color than unified Republican control of government, and Democrats are more likely to represent constituents of color (Hajnal and Horowitz, 2014). Therefore, because

²⁹ Dealing with lagged effects always poses complex questions for researchers, of which the most obvious and most important is: *what is the appropriate time lag for the dependent variable?* Of course, the lag used does not perfectly capture the dynamics of the policy process. Negotiations over policy change may take longer or are only achievable after elections signal public support for change, taking two or more years. There is no perfect way to design lagged effects in this case. This inconsistency in the policy process should bias against finding statistically significant results.

³⁰ Results are robust when using a more traditional measure of the dependent variable: gun policy at time $t+1$. See SI-4D for more details.

³¹ Divided partisan control means the state's government branches [or interbranch legislative bodies] are controlled by different political parties.

³² Nebraska is excluded from all analysis because they have a non-partisan unicameral legislature.

Democrats are more likely than Republicans to represent communities of color and support more restrictive gun laws, state governments under unified Democratic control may be more likely to implement restrictive gun laws in response to mass shootings irrespective of victims' race and ethnicity (Pew Research, 2021B; Hajnal and Horowitz, 2017; Oliphant, 2017). As a robustness check, I test whether state partisan control moderates state gun policy responses to mass shootings fatalities disaggregated by victims' race.

Figure 4.2 graphs the distribution of state firearm laws by party control in 2020. Most states have few restrictive gun policies, but a few states have many restrictive gun laws, making the distribution right-skewed. The distribution of firearm laws follows logical partisan divisions. States under unified Democratic control have the most restrictive gun laws, and states under unified Republican control have the fewest restrictive gun laws.

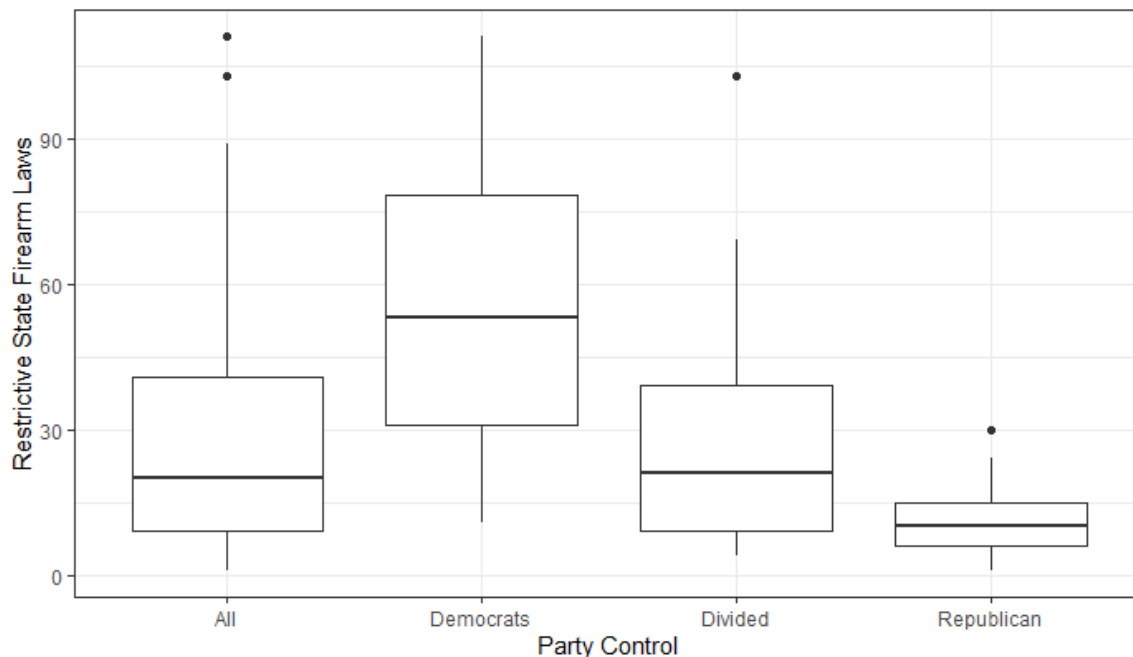


Figure 4.2: Number of Restrictive State Firearm Laws by Party Control

Figure 3 plots the number of restrictive gun laws over time by state with smoothed trends by partisan control. One important observation is that the gap between Democratic and Republican states has grown over time, suggesting that there may be differential rates of change in restrictive gun laws across states. Therefore, I add state-specific time trends to the main models as a robustness check.

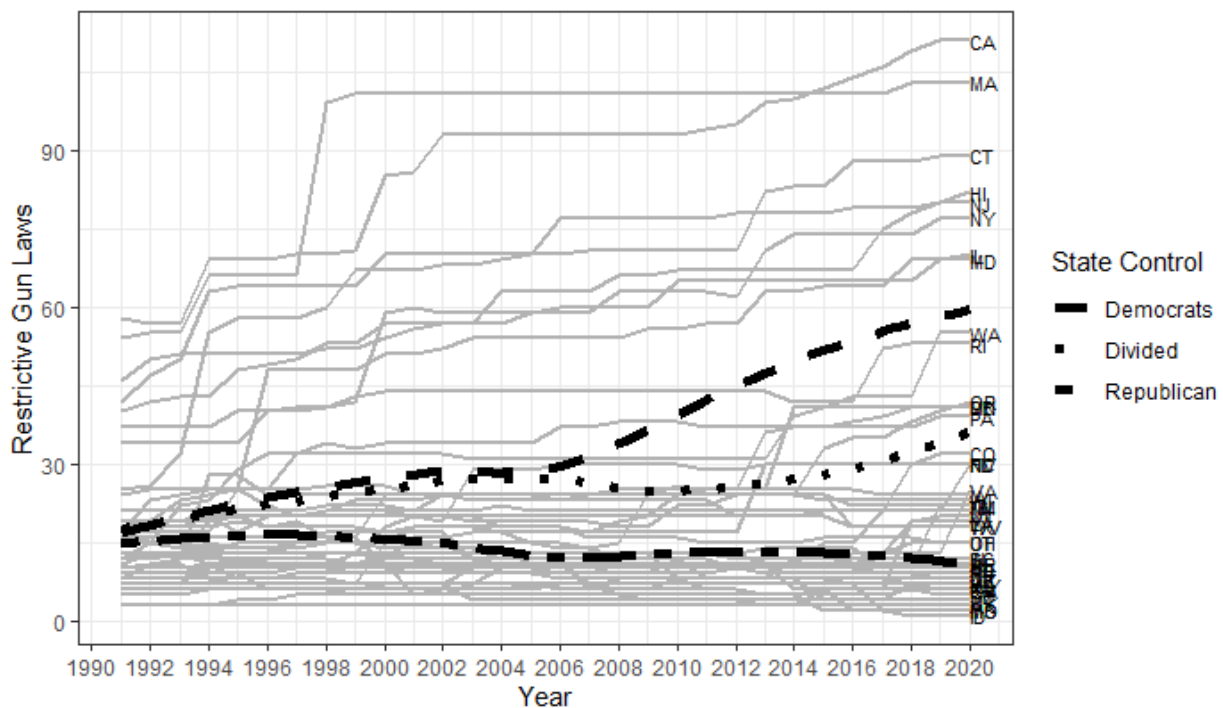


Figure 4.3: Time Trends of the Number of Restrictive State Firearm Laws by Party Control

I present three models. The first model uses only state and year fixed effects, extending the two-time period difference-in-difference design to multiple periods. This model shows that the results are not an artifact of specific hand-picked control variables, which may bias results (Achen, 2005). In the second model, I include a series of time-variant state-specific controls. I control for mass shooting fatalities in neighboring states, disaggregated by victims' race, to control for

potential geographic spillover effects. Furthermore, I include controls for the presence of a regular legislative session and the first year of a legislative biennium. Some states, like Nevada, only hold a regular legislative session every other year and may exceptionally have special sessions, which are more limited in scope, in the intermediate years. States that have regular legislative sessions every year are more likely to propose new legislation during the first year of a legislative biennium, the two years between lower house state elections. Additionally, I include a control for the current number of restrictive firearms laws because I expect that the number of current restrictive firearms laws will be negatively correlated with additional new firearm laws. Constitutional and practical limits may create a ceiling effect making it difficult for states with more restrictive firearm policies to pass additional restrictive firearm legislation. Model 3 further includes state-specific linear time trends because states appear to have different overtime trends in adopting stricter gun laws. Therefore, including state-specific linear time trends allows me to relax the fundamental parallel trends assumption for well-identified difference-in-difference analyses.

4.4 Findings

The results presented in Figure 4.4 paints a consistent picture supporting both **Hypothesis 1** and **Hypothesis 2**.³³ White mass shooting fatalities have a positive and statistically significant effect on implementing new restrictive gun laws across all three models, supporting **Hypothesis 1**. Model 1, which relies only on two-way fixed effects, suggests that each white mass shooting fatality predicts 0.154 new additional gun laws ($p < 0.01$). Therefore, ten white mass shooting fatalities are associated with 1.54 new additional gun laws. When a series of time-variant state-specific controls are added in Model 2, the regression results imply that ten white mass shooting

³³ Full regression results are presented in SI-4E.

fatalities predict 1.5 new restrictive gun laws ($p < 0.01$). The results are consistent and robust when state-specific linear time trends are included along with the two-way fixed effects and time-variant controls in Model 3. The estimates in this model are slightly more conservative but still relatively large and robust, suggesting that ten white mass shooting fatalities are associated with about 1.39 new restrictive gun laws ($p = 0.01$).

On the other hand, Figure 5 suggests that racial and ethnic minority mass shooting fatalities are not associated with new restrictive gun laws and may even have a negative effect on the number of restrictive state gun laws lending support to **Hypothesis 2**. The coefficient for the effect of racial and ethnic minority mass shooting fatalities in Model 1 is negative but not statistically significant ($p = 0.25$). The model suggests that ten racial and ethnic minority mass shooting fatalities predict about 0.27 fewer restrictive gun laws though the effects are not statistically significant. Model 2 implies that ten racial and ethnic minority mass shooting fatalities predict about 0.52 fewer restrictive gun laws and the predicted effects are statistically significant in this case ($p = 0.03$). Model 3 similarly implies that ten racial and ethnic mass shooting fatalities predict 0.46 fewer restrictive gun laws, but the results are not statistically significant in this case ($p = 0.12$).

Notably, the results are robust when the explanatory variables are modeled as an interaction between the total number of fatalities and the proportion of white fatalities (See SI-4C). The robustness check provides further evidence that the effects of white mass shooting fatalities on restrictive gun laws and the impact of racial and ethnic minority fatalities on restrictive gun laws are robustly different from each other.

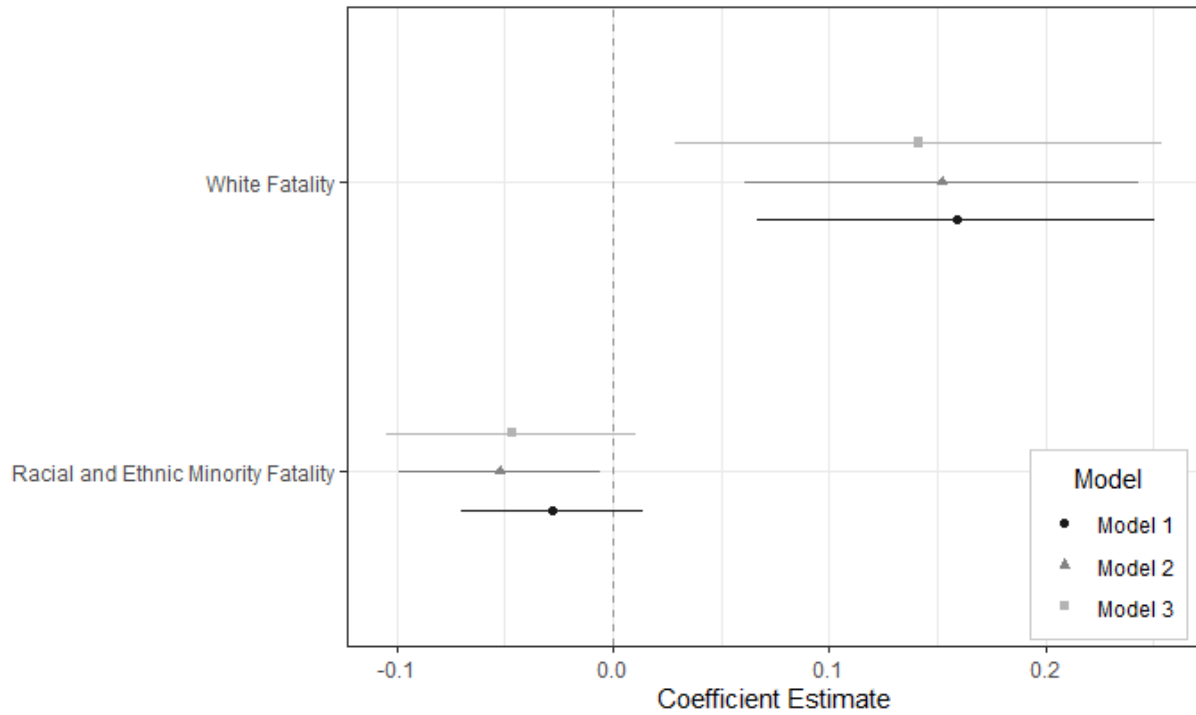


Figure 4.4: Predicting the Number of New Restrictive State Firearm Laws

4.4.1 Party Control and Policy Change

It is possible that differential responses to mass shootings, moderated by the victims' race and ethnicity, are driven primarily by specific partisan compositions of government. Some research suggests that Democrats may be more responsive to mass shootings affecting racial and ethnic minority communities than Republicans (Hajnal and Horowitz, 2017). Therefore, pooling different government compositions together may mask heterogeneous responses on behalf of state governments.

To test for heterogeneous effects based on the partisan compositions of state governments, I regress policy change on racially disaggregated fatality counts. States are classified as having

unified Democratic control, unified Republican control, or divided government. Again, I regress mass shooting fatalities on state firearm policy change between time $t-1$ and $t+1$ with state and year fixed effects and a series of controls. Results are presented in Table 3.

Model 1 in Table 4.2 does not include time-variant state-specific controls. Unified Democratic control is the excluded category. The *White Fatalities* coefficient is positive and statistically significant ($p < 0.01$). In this case, the coefficient estimates the effect of white mass shooting fatalities in Democrat-controlled states and is more extensive than previously estimated. The coefficient suggests that ten white mass shooting fatality leads to an additional 2.3 restrictive gun laws in Democrat-controlled states. The interactions with different partisan government compositions are not statistically significant in either case. The coefficient for *White Fatalities*Republican Gov* is negative but not statistically significant, suggesting that Republican-controlled state governments may respond slightly less forcefully to white mass shooting fatalities. Still, their responses are not all that different from Democrat-controlled states' responses. The coefficient for *White Fatalities*Divided Gov* is negative, though very small and not statistically significant. Again, this suggests that states with divided government respond to white mass shooting fatalities by restricting gun laws in similar ways to Democrat-controlled states.

On the other hand, the coefficient for *Racial and Ethnic Minority Fatalities* is negative but not statistically significant. Democrat-controlled state governments do not change gun laws in response to racial and ethnic minority mass shooting fatalities. Again, none of the interaction terms are statistically significant. The *Racial and Ethnic Minority Fatalities*Republican Gov* coefficient is negative but not statistically significant, and the *Racial and Ethnic Minority Fatalities*Divided Gov* is positive but very small and not statistically significant.

Model 2 in Table 4.2 includes time-invariant state-specific controls. The findings are robust to this modeling specification, and the point estimates are consistent. Model 3 has time-invariant state-specific controls and state-specific linear time trends. The results are robust to their inclusion, with a few minor discrepancies. Model 3 suggests that Democrat-controlled states respond more forcefully than previously estimated to white mass shootings fatalities, with ten white fatalities predicting three additional restrictive gun laws in Democrat-controlled states. Second, Model 3 suggests more strongly that Republican-controlled states respond less aggressively to white fatalities than Democrat-controlled states when compared to Model 1.

Table 4.2: Mass Shootings' Effect on State Firearm Laws

	<i>Dependent variable:</i>		
	Change in Firearm Laws		
	(1)	(2)	(3)
White Fatalities	0.233*	0.238**	0.302**
	(0.0882)	(0.0870)	(0.0859)
Racial and Ethnic Minority Fatalities	-0.0767	-0.0713	-0.0536
	(0.188)	(0.188)	(0.213)
White Fatalities*Republican Gov	-0.110	-0.117	-0.236 ⁺
	(0.131)	(0.125)	(0.128)
Racial and Ethnic Minority Fatalities*Republican Gov	-0.0760	-0.112	-0.149
	(0.188)	(0.190)	(0.182)
White Fatalities*Divided Gov	0.0855	0.0581	0.0666
	(0.238)	(0.221)	(0.264)
Racial and Ethnic Minority Fatalities*Divided Gov	0.0478	0.0199	0.00702
	(0.189)	(0.191)	(0.212)
Divided Government	-0.886*	-1.138*	-1.025*
	(0.417)	(0.432)	(0.506)
Republican Government	-0.937*	-1.689***	-1.429*
	(0.415)	(0.478)	(0.557)
DV Mean	0.846	0.846	0.846
	(3.333)	(3.333)	(3.333)
State Fixed Effects	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes
Time Variant Controls	No	Yes	Yes
State Linear Time Trends	No	No	Yes
Observations	1,372	1,372	1,372
R ²	0.078	0.115	0.196

Note: State-clustered standard errors using a cluster-adjustment matrix (CR1) in parentheses.
⁺ p < 0.1; * p < 0.05; ** p < 0.01; *** p < 0.001

In Figure 4.5, I plot the marginal effects of white mass shooting fatalities under each variation of party control in Model 1 of Table 4.2. The marginal effects suggest that white fatalities have a clear positive effect on new restrictive gun laws in Democrat-controlled states. The effects of white fatalities on new restrictive gun laws are slightly weaker in Republican-controlled states

though they largely appear to be positive. However, the confidence intervals are large in states with divided government, and white fatalities' effects on restrictive gun laws are unclear.

Overall, the main effects and interaction terms jointly suggest that state governments, particularly those under Democrat control, restrict gun policy in response to white mass shooting fatalities but do not engage in any significant gun policy change in response to racial and ethnic minority mass shooting fatalities.

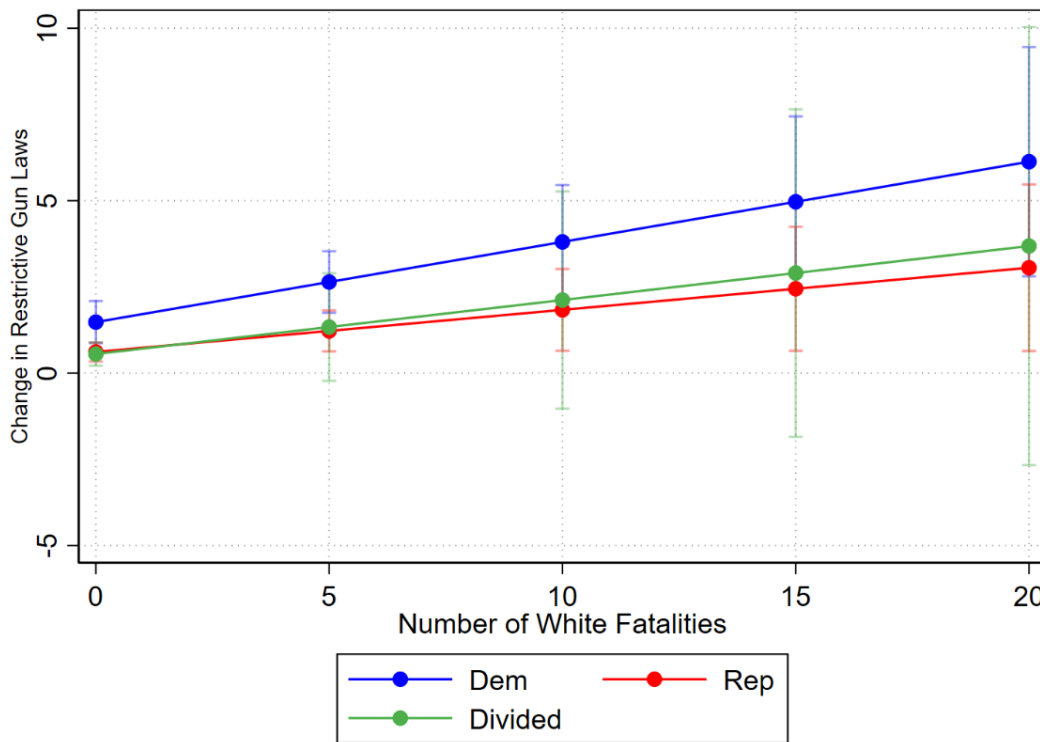


Figure 4.5: Marginal Effects of White Mass Shooting Fatalities on Restrictive Gun Laws by Party Control

4.4.2 Controlling for Victims' Age and School Shootings

When considering the motivating example that compares Florida's policy response to the Stoneman Douglas High School shooting in Parkland, Florida, to Florida's reaction to the Pulse

nightclub shooting in Orland, Florida, victims' age and the location of the shootings also stand out as potential explanations for the disparate responses. The Stoneman Douglas High School shooting happened at a school, and the victims were children, while the Pulse nightclub shooting occurred at a nightclub, and the victims were young adults. Suppose white mass shooting victims are systematically more likely to be children than students of color, or white mass shooting victims are more likely to be located in schools. In that case, those differences may bias the findings.

In Table 4.3, I control for the number of mass shootings fatalities located on school campuses and for the number of victims under the age of 18. The findings are robust to these controls. In Model 1 in Table 4.3, I control for the number of mass shooting fatalities on school campuses fatalities in a state-year. This model suggests that ten white mass shooting fatalities lead to about 1.2 additional restrictive gun laws. In comparison, ten racial and ethnic minority mass shooting fatalities lead to 0.6 fewer restrictive gun laws. Model 2 in Table 4.3 controls for the number of mass shooting fatalities under 18 in a state-year. According to this model, ten white mass shooting fatalities lead to about 1.1 additional restrictive gun laws, while ten racial and ethnic minority mass shooting fatalities lead to 0.5 fewer restrictive gun laws on average. While the point estimates for white fatalities are slightly smaller than the effects observed in previous models, the findings are mostly robust to this set of controls. These models suggest that systematic differences in victims' age do not drive racial disparities in state policy responses to mass shootings.

Table 4.3: Control for School Shootings and Young Victims

	<i>Dependent variable:</i>	
	Change in Firearm Laws	
	(1)	(2)
White Fatalities	0.123 ^{**} (0.044)	0.109 ^{**} (0.040)
Racial and Ethnic Minority Fatalities	-0.062 [*] (0.025)	-0.054 [*] (0.023)
School Shooting Fatalities	0.109 (0.075)	
Fatalities Age 18 and Under		0.219 (0.134)
DV Mean	0.85 (3.33)	0.85 (3.33)
State Fixed Effects	Yes	Yes
Year Fixed Effects	Yes	Yes
Time Variant Controls	Yes	Yes
State Linear Time Trends	No	No
Observations	1,372	1,372
R ²	0.258	0.259
Adjusted R ²	0.207	0.207

Note: State-clustered standard errors using a cluster-adjustment matrix (CR1) in parentheses.

+ p < 0.1; * p < 0.05; ** p < 0.01; *** p < 0.001

4.5 Discussion

This paper presents evidence that victims' race and ethnicity moderate state government responses to mass shootings. As white mass shooting fatalities increase, states become more likely to implement restrictive gun laws, but comparable losses of racial and ethnic minority lives do not produce the same effect. Ten white mass shooting fatalities predict about 1.5 new restrictive gun laws, while ten racial and ethnic minority fatalities predict about 0.4 fewer restrictive gun laws.

The findings from this study highlight an ill in our democratic process that likely speaks to policy responses extending beyond mass shootings. The Black Lives Matter movement, primarily associated with policing practices, grew out of a belief that American institutions, policies, and leaders do not value Black lives as much as white lives. This research lends empirical credibility to that argument by looking beyond policing to other forms of tragic violence with racialized responses. The loss of racial and ethnic minority lives appears to drive preventative policy changes less than comparable losses of white lives. These disparate responses may not be limited to mass shootings. Racialized issue narratives exist in other policy realms as well, potentially affecting policy responses to natural disasters, police shootings, and public health crises.

Chapter 5: Conclusion

Case studies focusing on the federal government's response to the HIV/AIDS epidemic, hurricanes, and drug epidemics suggest that the federal government is more responsive to catastrophic events, disasters, and crises when victims are white compared to racial victims ethnic minorities (Cohen, 1999; Willison et al., 2018; Om, 2018). However, no unifying theory helps explain disparities in government responsiveness across these events. Moreover, these case studies largely focus on one or two disasters and victims are often marginalized across many intersecting identities, making it difficult to disentangle the specific causal effects of race and ethnicity.

This dissertation aims to fill this gap in the literature. I argue that victims' race and ethnicity shapes media and elite narratives about catastrophic events. Specifically, I contend that media and elite narratives are more likely to blame systemic and institutional failures when victims are white, ultimately shaping what policy issues (if any) become salient after crises and disasters. Furthermore, I contend that influential actors (people or groups with significant political leverage) are more likely to demand legislative action in response to crises and disasters affecting white communities compared to those affecting communities of color because 1) influential actors tend to be white themselves and 2) people are more empathic with co-racial/co-ethnic victims.

Throughout the previous chapters, I test this theory by explicitly focusing on how victims' race and ethnicity shapes state legislators' responses to mass shootings. I investigate legislators' responses throughout the policy-making process to understand if and when representation becomes racially-biased, starting by studying legislators' immediate public communication after mass shootings on social media and culminating by investigating state gun policy. The studies suggest that legislators respond to mass shootings in racialized ways throughout the policy-making

process. Legislators focus more on gun policy failure and gun policy reform in response to white mass shooting fatalities but not racial and ethnic minority mass shooting fatalities.

In Chapter 2, I find that legislators' immediate public communication after mass shootings is racially biased. Legislators are more likely to blame gun violence on gun policy failure, pushing gun policy to the center of crowded legislative agendas. Legislators are also more likely to demand government-led solutions in response to mass shootings when victims are white but not when victims are people of color. These findings lend support to the proposed causal mechanism. Post-shooting elite narratives tend to focus more on systemic and institutional failures when mass shooting victims are white compared to when they are people of color. Moreover, legislators demand legislative action to address gun violence more often when victims are white, potentially pressuring each other to act (Canes-Wrone, 2001; Jacobs and Shapiro, 2000; Cohen, 1995; Edwards, 1990; Cain, Ferejohn, and Fiorina, 1987; Grimmer, 2013; Grimmer, Westwood, and Messing, 2014; Callaghan, 2016).

Chapter 3 investigates multiple heterogeneous effects that may mediate legislators' racially-biased responses by studying gun bill sponsorship. I find that white fatalities lead state legislators to sponsor more gun laws and prioritize reforming gun policy more than racial and ethnic minority mass shooting fatalities. These findings suggest that white fatalities make gun policy more salient, forcing gun policy onto packed legislative agendas sooner and more often. However, I do not find significant racially-driven differences in successful gun bill sponsorship when looking at aggregate data. A closer look suggests heterogeneous partisan effects in successful gun bill sponsorship. Democrats sponsor more successful gun legislation in response to white mass shooting fatalities but not in response to racial and ethnic minority mass shooting fatalities. Republicans, on the other hand, sponsor more successful gun legislation in response to racial and

ethnic minority mass shooting fatalities. This finding is surprising given that communities of color prefer more restrictive gun laws and Republicans tend to favor looser gun laws (Splitzer 2020). Future research should code the directionality of sponsored gun bills (whether they attempt to make gun policy looser, more restrictive, or neither) to understand better whether the proposed type of policy after mass shootings is racially biased.³⁴

In Chapter 4, we see that the findings in Chapter 3 translate as we would expect along partisan lines into gun policy change. White mass shooting fatalities lead to more restrictive state gun laws, likely driven by Democrats' more successful gun legislation sponsorship in years with more white fatalities. On the other hand, racial and ethnic minority mass shooting fatalities generally do not affect gun policy. Some models suggest that they may lead to fewer restrictive gun laws, which may be driven by Republicans' higher success in sponsoring gun laws during years with more fatalities of color. Importantly, these results are robust across modeling specifications and when we control for victims' age.

In summary, this set of studies shows that state governments are more likely to implement restrictive gun laws in response to white mass shooting fatalities but not racial and ethnic minority mass shooting fatalities. These effects are particularly true in states where Democrats control all legislative veto points. Democrats appear to be notably more active on gun policy issues and more successful in passing sponsored gun laws after mass shootings when victims are white but not when victims are racial and ethnic minorities. Republican-controlled state governments, and Republican legislators, appear to be less responsive to mass shootings in general. State legislators'

³⁴ Three research assistants are currently working on coding the directionality (more restrictive, looser, or neither) of a subset of the nearly 11,000 bills. Coded bills will be used to train a text classification model to code the complete dataset and allow me to study bill directionality in the future.

racially biased responses to mass shootings are visible in legislators' public discourse immediately after mass shootings. They focus more on gun policy failure and demand legislative action more when mass shooting victims are whiter.

5.1 Future Research

This research suggests that policy responses to mass shootings are racially biased, with state gun policy becoming more restrictive in response to white mass shooting fatalities but not to mass shooting fatalities of color. It provides empirical support for the proposed causal mechanism by investigating how state legislators respond to mass shootings in their public comments, finding that legislators advance racialized gun violence narratives and are more likely to demand legislative action when victims are white than when victims are racial and ethnic minorities. However, the proposed causal mechanism focuses not just on legislators' responses but also discusses media narratives and the behavior of other actors that influence policymakers. Future research can advance our understanding of racialized policy response to mass shootings, and other catastrophic events, by focusing on media narratives and the behavior of other influential actors like interest groups, donors, and powerful voting constituencies.

5.1.1 Narratives and Media Frames

To further test the narrative portion of the proposed causal mechanisms, one should study whether mass shooting victims' race and ethnicity shape media narratives, particularly whether the news media attributes blame for gun violence to gun policy more when victims are white. I have begun studying how the news media frames mass shootings using data from *The New York Times* and *USA Today* using a similar methodology to that employed in Chapter 2. Early qualitative

analysis of the framings suggests that victims' race and ethnicity lead to disparate types of frames and quantity of coverage. For example, I find that in the first week after the Pulse nightclub shooting, there were 44 stories between both newspapers reporting on the incident but only 13.6% mentioned gun policy issues. On the other hand, after the Parkland shooting there were 60 stories covering the shooting between both newspapers and over 40% mentioned gun policy issues.

5.1.2 Influential Actors: Elites, Interest Groups, and Donors

To test the portion of the causal mechanism that focuses on the actions of influential actors, one should look beyond legislators. Various survey experiments study white voters' racialized responses to catastrophic events and tragedies like hurricanes or gun violence (Fong and Luttmner, 2007; Walker, Collingwood, and Bunyasi, 2020). However, studies have focused less on other actors' racialized responses to catastrophic events. Like the NRA or the Brady Center, interest groups are a set of influential actors whose behavior likely shapes policymakers' gun policy decisions (Gilens and Page, 2021; Spitzer, 2020). Nonprofit leaders tend to be disproportionately white (Leading with Intent, 2021).

I plan to study whether interest groups' post-shooting behavior is racialized by triangulating various data sources. First, I aim to conduct a comparative case study of Florida's responses to the Parkland shootings and the Pulse nightclub shooting using semi-structured interviews of Florida state legislators, activists, and community stakeholders to develop the theoretical mechanism further. Second, I collected tweets from six pro-gun-control interest groups and six pro-gun-rights interest groups. This data allows me to study whether interest groups are more likely to demand gun policy reforms after whiter mass shootings and whether victims' race and ethnicity shapes how often interest groups reference each shooting as part of their advocacy

strategies. Finally, I collected state lobbying data for four gun policy interest groups in a subset of states from Opensecrets, allowing me to study how many lobbyists and how much money interest groups invest in reforming state gun policy after mass shootings.

5.2 Concluding Remarks

This research suggests when people of color lose their lives in preventable tragedies, government is rarely held accountable by the media and elites. However, when white lives are taken in similar circumstances, the media and elites demand that government do something to help victims and prevent similar incidents from reoccurring. Because of these different post-crisis narratives and elite responses, the loss of racial and ethnic minority lives drives preventative policy changes less than comparable losses of white lives, highlighting an ill in American democracy.

We observe similar racially biased responses to many other types of catastrophic events ranging from the HIV/AIDS epidemic to more recent crises and disasters. For example, racial justice activists accuse US federal, state, and local governments of caring more for whites than people of color during the COVID-19 epidemic, pointing to significant health disparities along racial lines (Lopez, 2021; Morris, 2022).

Even over borders and oceans, we see similar patterns emerge. Attentive and racially conscious observers criticize European countries' seemingly biased responses to recent refugee crises (Wamsley, 2022; Olorunselu, 2022). As European leaders enthusiastically coordinate to shelter and support over three million Ukrainian refugees, less than five years ago, they bitterly squabbled over how to handle slightly over a million Syrian refugees (Wamsley, 2022; Olorunselu, 2022). Bulgarian Prime Minister Kiril Petkov directly addresses the disparities in coded racial language stating, "These people are Europeans. These people are intelligent, they are educated

people. ... This is not the refugee wave we have been used to, people we were not sure about their identity, people with unclear pasts, who could have been even terrorists" (Wamsley, 2022).

Understanding the causes of these disparities is fundamental. Tragic events and public health crises devastate entire communities, and in those extremely difficult times, communities look to government entities for support. In the immediate aftermath of the events, the calls are often for urgent aid in the form of supplies and human resources. However, once the smoke settles and the public's immediate needs are met, the constituencies most affected turn to government with a different call: "never again." Of course, governments cannot eradicate major tragic events or public health crises. The weather only answers to mother nature and humans can be unpredictable and prone to random acts of violence. However, as citizens, we expect governments to have our backs, particularly in the aftermath of a major disaster or crisis where lives are lost. During these times, we ask government to take steps that reduce the likelihood that similar events reoccur or reduce the expected fallout if similar events were to reoccur - whether they be policies, regulations, or funding allocations. Democratic – small "d" – governments should not respond enthusiastically and compassionately to these events only when they affect certain groups, yet this research suggests that is the case.

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SI-2A: Proportion of White Fatalities and Twitter Frames

As a robustness check, I test whether white mass shooting fatalities have a statically distinguishable effect from racial and ethnic minority fatalities on legislators' twitter rhetoric. I use an interaction instead of disaggregated fatality counts. Mass shooting fatalities are treated as a continuous treatment where *Number of Fatalities_i* equals the number of in-state mass shooting fatalities a legislator is exposed to over the last seven days, assuming that larger mass shootings will elicit more social media discourse like the main models. In all models, the *Number of Fatalities* coefficient is interacted with the proportion of victims that are white (*Proportion White*). Therefore, the *Number of Fatalities* coefficient represents the marginal effect of an in-state mass shooting fatality over the last seven days on the dependent variable of interest when the proportion of white victims is 0. The *Proportion White* coefficient is a constituent term of the interaction representing the effect of a mass shooting when the proportion of white victims is equal to 1 and there are 0 mass shooting fatalities. In essence, this partially controls for differences across mass shooting locations in the pre-treatment period, when *Number of Fatalities* is zero. Finally, the interaction *Number of Fatalities*Proportion White* represents the difference in the marginal effect of a mass shooting fatality when the proportion of white victims is one compared to when the proportion of white victims is zero. I provide predicted probabilities after the regression tables to ensure the interaction terms are interpretable. Models use the same pre-post design but with state-fixed effects and control for legislators' party identification because cluster-robust standard errors cannot be estimated in the fourth model when using legislator fixed effects.

Model 1 in Table SI-2A tests whether victims' race and ethnicity shape how frequently legislators tweet about gun violence. If there is a significant difference, then the proportion of tweets using specific frames to discuss gun violence may simply be a difference in legislators'

overall coverage of gun violence issues after mass shootings and not a difference in framing choices. The *Number of Fatalities* coefficient implies that each racial and ethnic minority mass shooting fatality increases the number of tweets referencing an incident of gun violence by about 0.6-percentage points. The *Proportion White* coefficient is positive but not statistically significant at conventional levels ($p = 0.09$). The coefficient is a constituent term of the interaction representing the base differences in the pre-shooting period between legislators who experience a shooting with only white victims and legislators who experience a shooting with only racial and ethnic minority victims. The *Number of Fatalities*Proportion White* coefficient is negative and not statistically significant. This indicates that legislators are no more or less likely to reference incidents of gun violence after mass shootings with all white victims compared to after mass shootings with all racial and ethnic minority victims.

Model 2 in Table SI-2A tests **Hypothesis 1**. The *Number of Fatalities* coefficient is small but positive and statistically significant, suggesting that each racial and ethnic minority mass shooting fatality increases the number of tweets legislators post referencing gun violence exclusively using thoughts and prayers frames by 0.2 percentage points. The *Proportion White* coefficient is positive and statistically significant, representing the base level difference in the pre-shooting period between legislators who experience a shooting with only white victims and legislators who experience a shooting with only racial and ethnic minority victims. However, the *Number of Fatalities*Proportion White* coefficient is negative and statistically significant. This indicates that legislators are less likely to use thoughts and prayers frames when discussing incidents of gun violence when victims are white compared to when victims are racial and ethnic minorities. These findings provide support for **Hypothesis 1**.

Model 3 in Table SI-2A is the first test of **Hypothesis 2**. The *Number of Fatalities* coefficient is positive but not statistically significant. This suggests that racial and ethnic minority mass shooting fatalities do not increase the number of tweets legislators post referencing gun violence using gun policy frames. The *Proportion White* coefficient is not statistically significant and small. On the other hand, the *Number of Fatalities*Proportion White* coefficient is positive and just short of conventional levels of statistical significance ($p = 0.06$). It suggests that each white mass shooting fatality increases the proportion of tweets using referencing gun violence using gun policy frames by 0.2-percentage points. The findings support **Hypothesis 2**; an increase in racial and ethnic minority fatalities appears not to affect the use of gun policy frames in gun violence discourse, but an increase in white fatalities increases gun policy frames in gun violence discourse.

Finally, Model 4 in Table SI-2A is the second test of **Hypothesis 2**. The *Number of Fatalities* coefficient is positive but not statistically significant, implying that racial and ethnic minority mass shooting fatalities do not increase calls for policy action. The *Proportion White* coefficient is not statistically significant. On the other hand, the *Number of Fatalities* Proportion White* coefficient is positive and statistically significant. The coefficient suggests that each white mass shooting fatality increases the use of call-to-action frames by 0.1-percentage points. While this effect may appear relatively small, the impact of racial and ethnic minority fatalities on calls-to-action frames is non-existent, supporting **Hypothesis 2**.

Table SI-2A: The Effect of Mass Shooting Victims’ Race and Ethnicity on Legislators’ Gun Violence Rhetoric - Interaction of Proportion of White Victims

	<i>Dependent variable:</i>			
	Gun Violence Incident	Thoughts and Prayers	Gun Policy	Call-to-Action
	(1)	(2)	(3)	(4)
Fatalities	0.006*** (0.0004)	0.002*** (0.0001)	0.0001 (0.0001)	0.00003 (0.0001)
Proportion White	0.031+ (0.017)	0.013* (0.006)	-0.001 (0.002)	-0.001 (0.001)
Fatalities*Proportion White	-0.0003 (0.002)	-0.001*** (0.0003)	0.001+ (0.0003)	0.001* (0.0003)
Democrat	0.0005 (0.007)	-0.010*** (0.002)	0.009*** (0.002)	0.008*** (0.002)
Constant	-0.021+ (0.013)	-0.003 (0.005)	-0.005** (0.002)	-0.004* (0.002)
State FEs	Yes	Yes	Yes	Yes
Observations	31,407	31,407	31,407	31,407
R ²	0.074	0.024	0.009	0.009
Adjusted R ²	0.074	0.023	0.008	0.008

Note: Shooting-clustered standard errors in parentheses.

+ p < 0.1; * p < 0.05; ** p < 0.01; *** p < 0.001

Figure SI-2.1A plots the marginal effects of mass shooting fatalities in Model 2 of Table SI-2A. The predicted outcomes suggest that both types of mass shooting fatalities increase the number of tweets legislators post exclusively using thoughts and prayers frames to discuss gun violence, but racial and ethnic minority fatalities produce a stronger and more consistent increase than white fatalities. These findings provide robust support for **Hypothesis 1**.

Figure SI-2.2A plots the marginal effects of mass shooting fatalities in Model 3 in Table SI-2A. The findings point to disparate impacts based on victims’ race and ethnicity. When all victims are racial and ethnic minorities, an increase in fatalities does not lead to additional tweets

discussing gun violence using gun policy frames. However, when all victims are white, an increase in deaths drives legislators to use more gun policy frames. Legislators appear to use gun policy frames for mass shootings more often when mass shootings are large and victims are white. Figure SI-2.2A suggests that 20 white mass shooting fatalities are associated with a 1.5-percentage point increase in tweets discussing gun violence using a gun policy frame. On the other hand, 20 racial and ethnic minority mass shooting fatalities have no statistically significant effect on the number of tweets discussing gun violence using a gun policy frame. However, when fatalities are low, the effects are less clear. This lends support to **Hypothesis 2**, white fatalities disproportionately impact legislators' use of gun policy frames to discuss in-state mass shootings

Figure SI-2.3A plots the marginal effects of mass shooting fatalities in Model 4 in Table SI-2A. Again, the findings point to disparate racialized outcomes, and legislators are more likely to call for policy action after mass shootings with more white fatalities. On the other hand, an increase in racial and ethnic minority mass shooting victims does not affect the use of call-to-action frames, and the effects are similar to those observed in Figure SI-2.2. Again, this supports **Hypothesis 2** as legislators are more likely to use call-to-action frames to discuss gun violence after mass shootings with a greater number of white victims but not after a mass shooting with a great number of racial and ethnic minority victims.

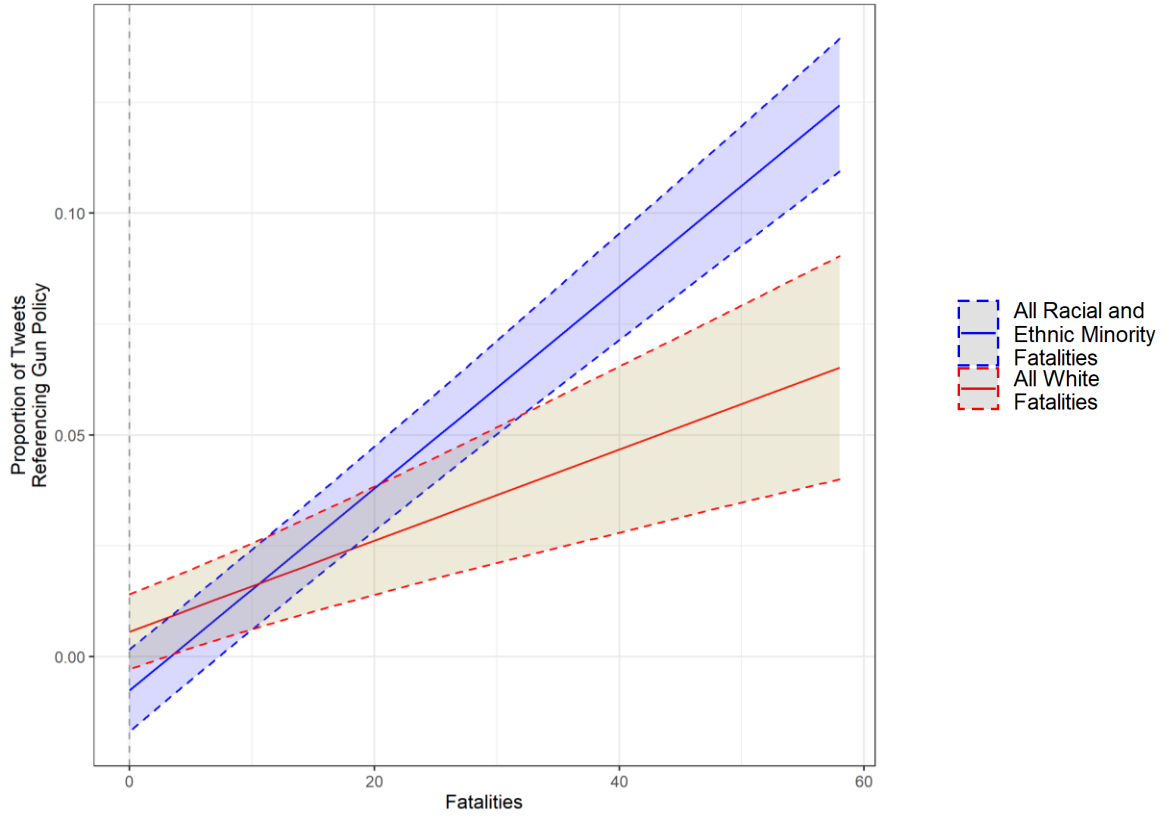


Figure SI-2.1A: Predicted Effect of Mass Shooting Fatalities on Proportion of Tweets Using a Thoughts and Prayers Frame

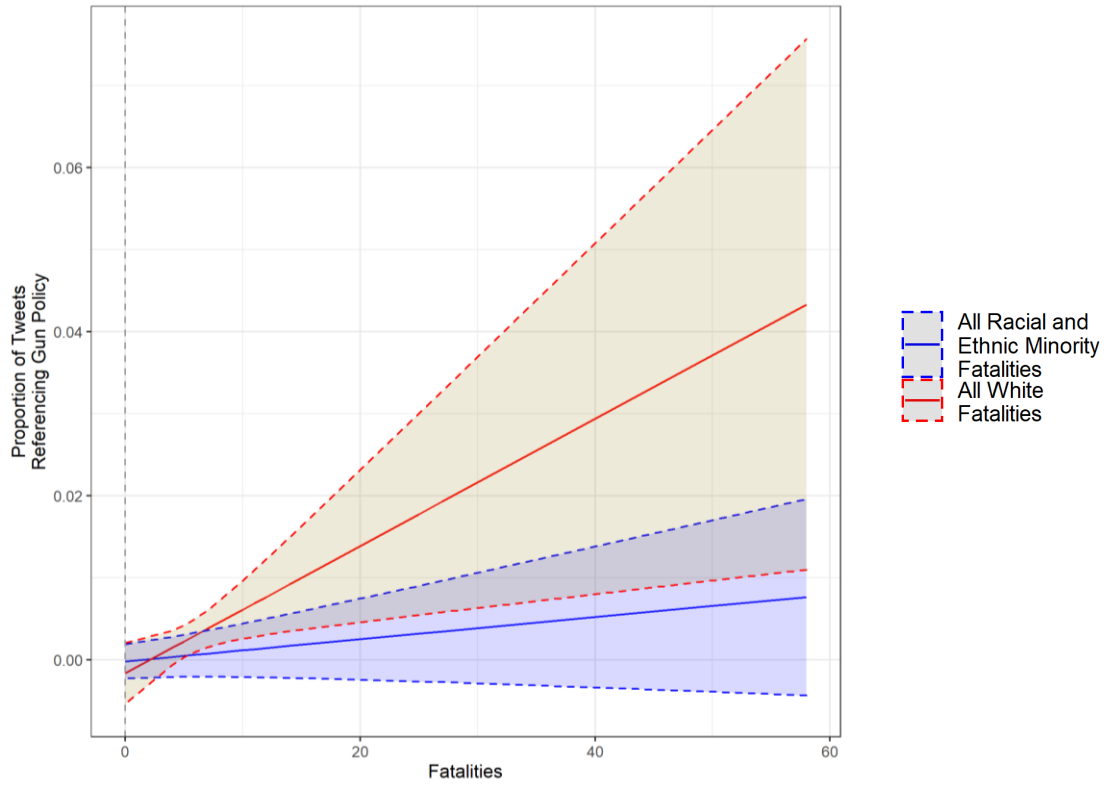


Figure SI-2.2A: Predicted Effect of Mass Shooting Fatalities on Proportion of Tweets Using a Gun Policy Frame

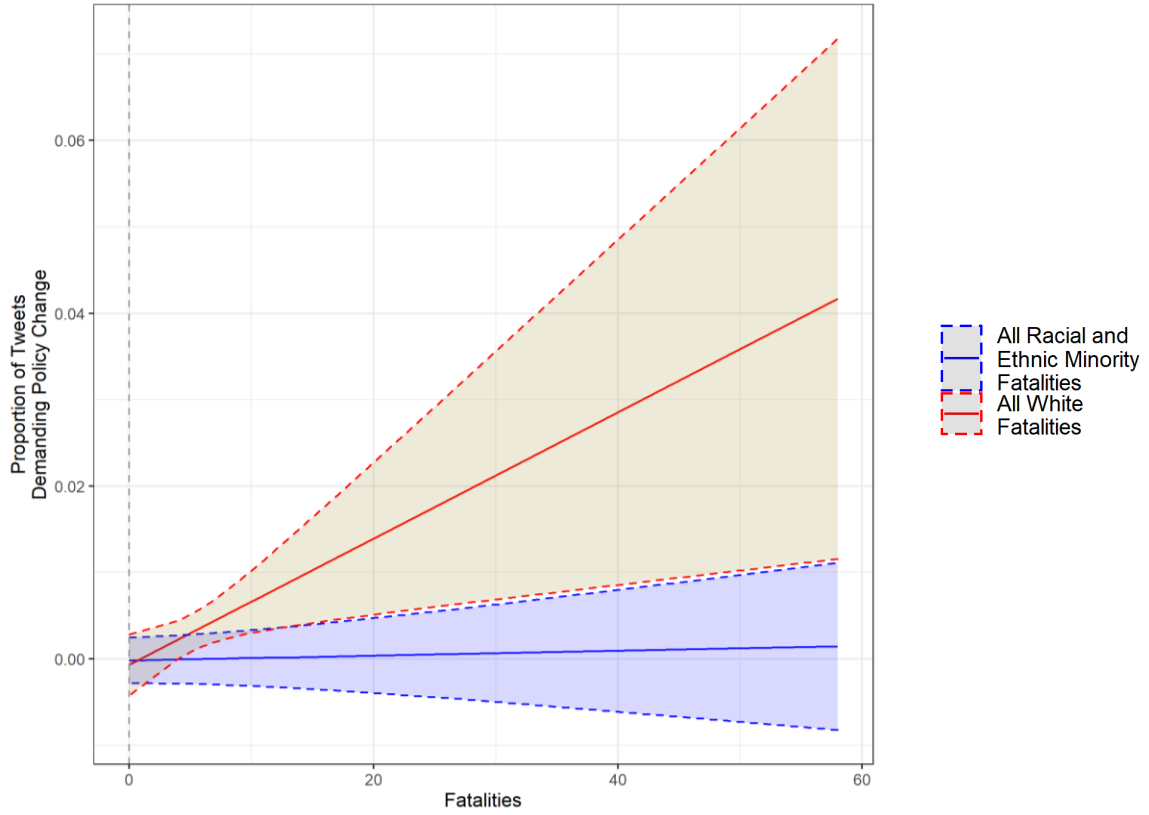


Figure SI-2.3A: Predicted Effect of Mass Shooting Fatalities on Proportion of Tweets Using a Call-to-Action Frame

SI-2B: State Fixed Effects and Twitter Frames

Table SI-2B provides a robustness check of Table 2.1, using state fixed effects and a control for legislators' party identification instead of legislator fixed effects. Model 1 in Table SI-2B tests whether victims' racial and ethnic characteristics shape the frequency with which legislators tweet about an incident of gun violence. The results are robust to this modeling specification. The *Number of White Fatalities* coefficient implies that ten white mass shooting fatalities increase legislators' references to incidents of gun violence on Twitter by about six percentage points. The *Number of REM* indicates that ten racial and ethnic minority fatalities increase legislators' references to incidents of gun violence on Twitter by about five percentage points. The estimated effects of both fatality types closely resemble the findings in Model 1 in Table 2.1, suggesting that legislators are equally likely to reference an incident of gun violence after a mass shooting irrespective of victims' race and ethnicity.

Model 2 in Table SI-2B is a robustness check for Model 2 in Table 2.1 and tests **Hypothesis 1**. The *Number of White Fatalities* coefficient is positive and statistically significant, suggesting that ten white mass shooting fatality increases legislators' references to incidents of gun violence exclusively using "thoughts and prayers" frames by about 1.2 percentage points. The *Number of REM Fatalities* coefficient is also positive and statistically significant, suggesting that ten racial and ethnic minority mass shooting fatalities increase legislators' references to incidents of gun violence exclusively using "thoughts and prayers" frames by about 1.9 percentage points. The findings closely resemble Model 2 in Table 2.2, proving some support for **Hypothesis 1**.

Model 3 in Table SI-2B is a robustness check of Model 3 in Table 2.2 and tests **Hypothesis 2**. The *Number of White Fatalities* coefficient implies that ten white mass shooting fatalities

increase legislators' references to incidents of gun violence on Twitter using gun policy frames by about 0.75 percentage points. In this model, the *Number of REM Fatalities* coefficient is positive but not statistically significant, supporting **Hypothesis 2**. The findings close match Model 3 in Table 2.2.

Finally, Model 4 in Table SI-2B is a robustness check of Model 4 in Table 2.2 and a test of **Hypothesis 2**. The *Number of White Fatalities* coefficient is positive and statistically significant, implying that an in-state mass shooting with ten white fatalities increases legislators' references to incidents of gun violence using call-to-action frames by about 0.7 percentage points. On the other hand, the *Number of REM Fatalities* coefficient is positive but not statistically significant, lending support to **Hypothesis 2** and closely matching the findings in Table 2.2.

Table SI-2B: The Effect of Mass Shooting Victims' Race and Ethnicity on Legislators' Gun Violence Rhetoric – State Fixed Effects

	<i>Dependent variable:</i>			
	Gun Violence Incident	Thoughts and Prayers	Gun Policy	Call-to-Action
	(1)	(2)	(3)	(4)
White Fatalities	0.006*** (0.002)	0.001*** (0.0002)	0.001* (0.0003)	0.001** (0.0003)
Racial and Ethnic Minority Fatalities	0.005*** (0.001)	0.002*** (0.0002)	0.0002 (0.0001)	0.00004 (0.0001)
Democrat	-0.001 (0.007)	-0.010*** (0.002)	0.009*** (0.002)	0.008*** (0.002)
Constant	-0.002 (0.011)	0.006+ (0.003)	-0.006** (0.002)	-0.005* (0.002)
State FEs	Yes	Yes	Yes	Yes
Observations	31,407	31,407	31,407	31,407
R ²	0.073	0.023	0.009	0.009
Adjusted R ²	0.072	0.022	0.008	0.008

Note: Shooting-clustered standard errors in parentheses.
+ p < 0.1; * p < 0.05; ** p < 0.01; *** p < 0.001

SI-2C: Logit Regression and Twitter Frames

The findings in Table 2.2 are robust when modeled using logit regressions. Because the dependent variable in all models is a dichotomous coding of Tweets' topics or frames, logit regressions may be more appropriate than standard OLS regression. Models use state-fixed effects and a control for legislators' party identification because models using legislator-fixed effects in a logit regression fail to optimize. Results are presented in Table SI-2C.

Model 1 in Table SI-2C indicates that an increase in recent in-state mass shooting fatalities, irrespective of victims' race or ethnicity, increases legislators' likelihood of discussing the incidents more on Twitter. Legislators are no more or less likely to reference a recent in-state mass shooting when victims are white compared to when victims are racial and ethnic minorities. The results are closely in line with the findings in Model 1 in Table 2.2.

The findings in Model 2 in Table SI-2C vary slightly from Model 2 in Table 2.2. The results imply that mass shooting fatalities increase the likelihood that a legislator will post tweets discussing an incident of gun violence exclusively using thoughts and prayers frames, irrespective of victims' racial and ethnic makeup. However, this model suggests that white fatalities have a stronger effect on the use of thoughts and prayers frames than racial and ethnic minority mass shooting fatalities, weakening support for **Hypothesis 1**.

Model 3 in Table SI-2C closely approximates the results in Model 3 in Table 2.1. The findings suggest that both white and racial and ethnic minority fatalities increase the likelihood that legislators will post tweets referencing an incident of gun violence using a gun policy frame. However, the *Number of White Fatalities* coefficient is larger than the *Number of REM Fatalities* coefficients, indicating that white mass shooting fatalities have a stronger positive effect on

legislators' likelihood of using gun policy frames than racial and ethnic minority mass shooting fatalities. These findings provide strong support for **Hypothesis 2**.

Similarly, Model 4 in Table SI-2C is a robustness check for Model 4 in Table 2.1. The findings are consistent and robust. Model 4 in Table SI-2C suggests that legislators are more likely to use a call-to-action frame when discussing gun violence when white fatalities increase but not when racial and ethnic minority mass shooting fatalities increase, supporting **Hypothesis 3**.

Table SI-2C: The Effect of Mass Shooting Victims' Race and Ethnicity on Legislators' Gun Violence Rhetoric – Logit Regression

	<i>Dependent variable:</i>			
	References Mass Shooting	Thoughts and Prayers Frame	Gun Policy Frame	Call for Policy Action Frame
	(1)	(2)	(3)	(4)
White Fatalities	0.091** (0.035)	0.080** (0.030)	0.090*** (0.023)	0.118*** (0.027)
Racial and Ethnic Minority Fatalities	0.050*** (0.006)	0.048*** (0.007)	0.020* (0.009)	0.015 (0.011)
Democrat	-0.021 (0.172)	-0.829*** (0.128)	1.488*** (0.205)	2.009*** (0.310)
Constant	-4.153*** (0.449)	-5.130*** (0.502)	-7.219*** (0.224)	-7.849*** (0.337)
State FEs	Yes	Yes	Yes	Yes
Observations	31,407	31,407	31,407	31,407
Log Likelihood	-5,398.479	-1,972.727	-1,123.075	-808.932
Akaike Inf. Crit.	10,836.960	3,985.454	2,286.150	1,657.864

Note: Shooting-clustered standard errors in parentheses.

+ p < 0.1; * p < 0.05; ** p < 0.01; *** p < 0.001

SI-4A: Race Prediction Precision and Recall

Table SI-4A presents the precision and recall rates for the race prediction of victims. I predict the race and ethnicity of 102 victims of the 913 victims in the dataset using the WRU package in R. I use the race and ethnicity data from the Violence Project as a validation set for the predictions. Race and ethnicity data is primarily missing from earlier years. From 1990 to 1999, the Violence Project does not have race and ethnicity data for 71 victims (31.3% of victims). From 2000 to 2009, the Violence Project does not have race and ethnicity data for 31 victims (13.9%). From 2010 to 2020, the Violence Project does not have race and ethnicity data for 12 victims (1.6%).

I rely on county estimates for the census locations based on the mass shooting location. Within the Violence Project Data, 37% of victims with race codes in the Violence Project are racial and ethnic minorities, while 30% of victims relying on race predictions are racial and ethnic minorities. The recall rate for whites is 88.6% and the recall rate for racial and ethnic minorities is 69%. The precision rate for whites is 83% and the precision rate for racial and ethnic minorities is 78%.

Table SI-4A: Race Prediction Precision and Recall

	Asian	Black	Hispanic	Other	White	Recall	Aggregate Recall
Asian	46	1	2	0	20	67%	69%
Black	1	36	4	0	51	39%	
Hispanic	1	3	147	0	19	86%	
Native American	0	0	0	9	8	53%	
Middle Eastern	1	0	0	0	11	8%	
White	4	49	16	1	543	88.6%	88.6%
Precision	87%	40%	87%	90%	83%		
Aggregate Precision	78%				83%		

SI-4B: Disaggregated Racial and Ethnic Minority Fatalities

In Table SI-4B, I test for heterogenous effects within racial and ethnic minority groups. Race and ethnicity are disaggregated into the four major racial and ethnic groups in the United States (white, black, Latinx, and Asian). Victims not belonging to those racial and ethnic categorizations (primarily people of Native American and Middle Eastern descent) are classified under “other” because they represent a very small proportion of fatalities. However, there are relatively few fatalities in individual racial and ethnic minority groups generally, limiting the reliability of the models in Table SI-4B. Model 1 and Model 2 in Table SI-4B model the impact of mass shooting fatalities on change in restrictive gun laws between time $t-1$ and $t+1$ with victims’ race and ethnicity disaggregated into individual racial and ethnic groups. Model 1 in Table SI-4B includes state and year fixed effects and time-variant controls. Model 2 in Table SI-4B adds state-specific time trends to the set of controls.

The point estimates in the models are consistent with previous findings. The models suggest ten white mass shooting fatalities lead to approximately 1.4 to 1.5 additional restrictive gun laws. On the other hand, except for Asian mass shooting fatalities, all other racial and ethnic minority group fatalities have a negative but not statistically significant effect on the implementation of new restrictive gun laws.

Table SI-4B: Mass Shootings' Effect on Change in State Firearm Laws with Dissagregated Minority Groups

	<i>Dependent variable:</i>	
	Change in State Firearm Laws	
	(1)	(2)
White Fatalities	0.152 ^{**} (0.057)	0.144 [*] (0.069)
Black Fatalities	-0.123 (0.126)	-0.064 (0.119)
Latino Fatalities	-0.033 (0.038)	-0.045 (0.043)
Asian Fatalities	0.018 (0.185)	0.031 (0.187)
Other Racial and Ethnic Fatalities	-0.056 (0.367)	-0.108 (0.352)
DV Mean	0.85 (3.33)	0.85 (3.33)
State Fixed Effects	Yes	Yes
Year Fixed Effects	Yes	Yes
Time-Variant Controls	Yes	Yes
State Linear Time Trends	No	Yes
Observations	1,372	1,372
R ²	0.257	0.323
Adjusted R ²	0.204	0.247

Note: State-clustered standard errors using a cluster-adjustment matrix (CR1) in parentheses.
 + p < 0.1; * p < 0.05; ** p < 0.01; *** p < 0.001

SI-4C: Proportion of White Victims and Policy Change

As a robustness check, I model the total number of mass shooting fatalities in state-year (*Fatalities*) interacted with the proportion of white fatalities (*Fatalities*Proportion White*). This model tests whether the effects of each fatality type are statistically distinguishable from each other. Therefore, the *Fatalities* coefficient estimates the impact of a racial and ethnic minority fatality on change in restrictive gun laws. It represents the effect of a mass shooting fatality on restrictive gun laws when *Proportion White* is zero, meaning all victims are racial and ethnic minorities. On the other hand, the *Fatalities*Proportion White* coefficient estimates the effect of a white mass shooting fatality on restrictive gun laws. It represents the effect of a mass shooting fatality when *Proportion White* is one, meaning all victims are white.

I regress change in restrictive state firearm laws between time $t-1$ and $t+1$ on mass shooting fatalities with state and year fixed effects and the time-variant controls mentioned previously, interacting the total number of deaths in a state-year with the proportion of white victims. The results are presented in Model 1 of Table SI-4C. The *Fatalities* coefficient in Model 1 is negative but not statistically significant. This result suggests that when all mass shooting fatalities are racial and ethnic minorities (when *Proportion White* = 0), mass shooting fatalities have no statistically significant effect on gun policy change. As a constituent term of the interaction, the *Proportion White* coefficient does not have an intuitive meaning. It represents the effect of a mass shooting with zero fatalities where all victims are white, a situation impossible to observe practically. In essence, it controls for states where white mass shooting fatalities are more likely to occur and is negative but not statistically significant suggesting that there are no pre-existing differences between states that experience whiter mass shootings. However, the interaction term (*Fatalities*Proportion White*) is positive and statistically significant ($p < 0.01$). The coefficient is

more than five times larger than the *Fatalities* coefficient. It suggests that mass shooting fatalities positively affect new restrictive gun laws when all victims are white (when *Proportion White* = 1). The coefficients indicate that each mass shooting fatality leads to an additional 0.16 restrictive gun laws on average when all victims are white. In contrast, a mass shooting fatality leads to about 0.04 fewer restrictive gun laws on average when all victims are racial and ethnic minorities, though the latter is not statistically significant.

In Model 2, I include state-specific linear time trends because states appear to have different overtime trends in adopting stricter gun laws. Therefore, including state-specific linear time trends allows me to relax the fundamental parallel trends assumption for well-identified difference-in-difference analyses. The findings are robust to this modeling specification. The *Fatalities* coefficient in Model 1 is negative and not statistically significant, suggesting that mass shootings where all victims are racial and ethnic minorities do not affect new restrictive firearm laws. On the other hand, the interaction coefficient (*Fatalities*Proportion White*) remains largely unchanged and is just short of conventional levels of statistical significance ($p = 0.052$). These findings support the hypothesis that white mass shooting fatalities lead to more restrictive state gun laws while racial and ethnic minority mass shooting fatalities do not affect gun policy.

Table SI-4C: Mass Shootings' Effect on Change in State Firearm Laws – Proportion of White Victims

	<i>Dependent variable:</i>	
	Change in State Firearm Laws	
	(1)	(2)
Fatalities	-0.040 (0.025)	-0.055 (0.027)
Proportion White	-0.155 (0.459)	-0.057 (0.537)
Fatalities*Proportion White	0.201* (0.062)	0.202+ (0.086)
Divided Government	-1.189** (0.429)	-1.149* (0.491)
Republican Government	-1.564** (0.452)	-1.602** (0.520)
Total Firearm Laws	-0.089** (0.031)	-0.021 (0.033)
Neighbor White Fatalities	0.003 (0.018)	0.003 (0.018)
Neighbor Racial and Ethnic Minority Fatalities	0.028 (0.025)	0.007 (0.023)
Biennium	0.363 (0.221)	0.151 (0.134)
Regular Session	0.060 (0.126)	0.040 (0.121)
DV Mean	0.846 (3.333)	0.846 (3.333)
State Fixed Effects	Yes	Yes
Year Fixed Effects	Yes	Yes
State Linear Time Trends	No	Yes
Observations	1,372	1,372
R ²	0.247	0.314
Adjusted R ²	0.197	0.240

Note: State-clustered standard errors using a cluster-adjustment matrix (CR1) in parentheses.

+ p < 0.1; * p < 0.05; ** p < 0.01; *** p < 0.001

Figure SI-4C plots the predicted effect of mass shooting fatalities, disaggregated by victims' race and ethnicity, on change in restrictive firearm laws between $t-1$ and $t+1$ for the excluded unit-year (Alaska 1992). Figure 5 suggests that when mass shooting fatalities are held at zero and all victims are white, there would be approximately 0.5 fewer restrictive gun laws between $t-1$ and $t+1$.³⁵ However, Figure 5 suggests that ten mass shooting fatalities lead to about 1.1 additional restrictive firearm laws when all victims are white, a difference of 1.6 additional restrictive gun laws. On the other hand, Model 1 predicts that there would be 0.4 fewer restrictive gun laws between $t-1$ and $t+1$ when fatalities are held at zero, and all victims are racial and ethnic minorities. Figure 5 suggests that ten mass shooting fatalities are followed by 0.7 fewer restrictive gun laws on average when all victims are racial and ethnic minorities – a difference of about -0.3 restrictive gun laws. However, it is important to note that zero is always within the confidence intervals of the predicted effect of fatalities when all victims are racial and ethnic minorities.

³⁵ Again, it is impossible to practically observe a mass shooting with zero fatalities where all victims are white or where all victims are racial and ethnic minorities. The predicted values are interpolated for mass shootings with less than four fatalities because those predictions lie outside of the range of the data.

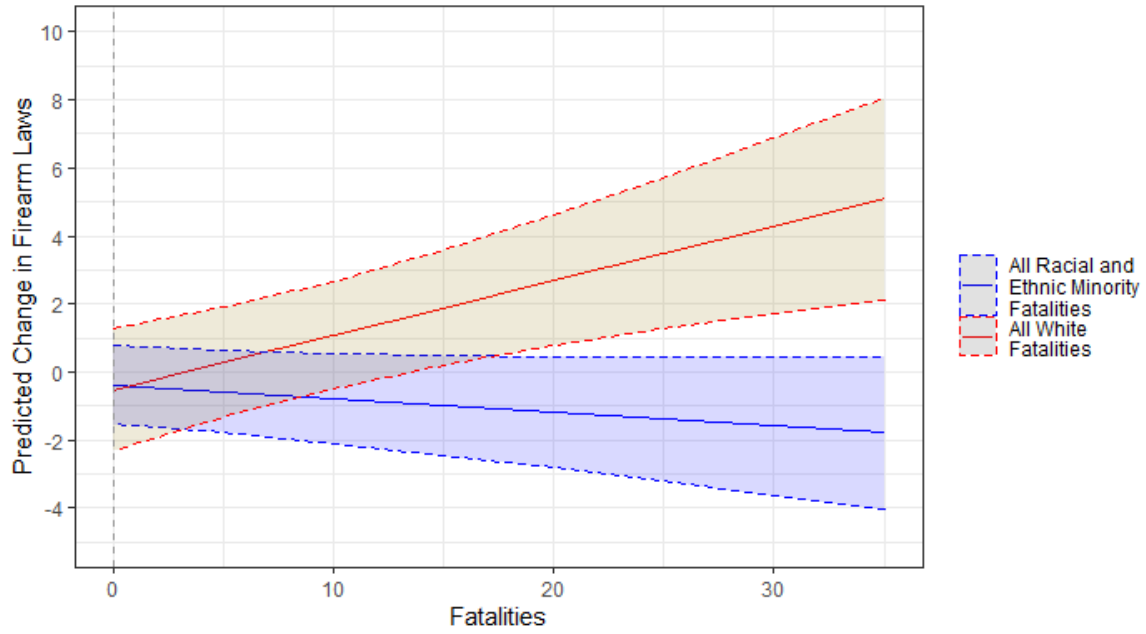


Figure SI-4C: Marginal Effects of Mass Shooting Fatalities on Change in Restrictive Gun Laws by Victims' Race and Ethnicity

SI-4D: Dependent Variable Set to Gun Laws at $t+1$

In Table SI-4.1D, I test for robustness using more traditional modeling specifications, specifically regarding the measurement of the dependent variable. Instead of measuring the change in firearm laws between $t-1$ and $t+1$, the dependent variable is specified as the number of restrictive gun laws during time $t+1$. The models include the same series of controls presented in Model 1 in Table 2 and a lagged dependent variable for time $t-1$.³⁶

Model 1 in Table SI-4.1D is specified as a two-way fixed effects model. The *Fatalities* coefficient is negative but not statistically significant, suggesting that mass shootings do not affect restrictive gun laws when all victims are racial and ethnic minorities. On the other hand, the interaction term (*Fatalities*Proportion White*) is positive, large, and statistically significant ($p < 0.01$). This result indicates that each mass shooting fatality is associated with 0.19 additional restrictive gun laws when all victims are white. In other words, ten white mass shooting fatalities are expected to lead to 1.9 new restrictive gun laws on average. The marginal effect of victims' race and ethnicity in Model 1 in Table SI-4.1D is slightly larger than the marginal effect of victims' race and ethnicity in Model 1 in Table 4.2 but remains largely in line with those predictions. Model 2 in Table SI-4.1D is specified as a first difference model. The *Fatalities* coefficient is negative but not statistically significant. The interaction term (*Fatalities*Proportion White*) is positive statistically significant ($p < 0.05$). Model 2 suggests that ten mass shooting fatalities lead to about

³⁶ The lagged dependent variable for time $t-1$ is included to control for potential ceiling effects. I use a lagged dependent variable for time $t-1$ because it should not be affected by mass shootings during time t . However, a lagged dependent variable for time t may be affected by a mass shootings during time t . Lagged dependent variables tend to bias estimates for other coefficients downwards (Achen 2001).

0.9 additional restrictive firearm laws when all victims are white. Model 3 in Table SI-4.1D is specified as a random-effects model, and the findings are robust in this case as well. Model 3 suggests that mass shooting fatalities have no effect on restrictive firearm laws at time $t+1$ when all victims are white but have a strong and statistically significant effect on restrictive firearm laws at time $t+1$ when all victims are white. The model predicts ten mass shooting fatalities will lead to about 1.7 new restrictive firearm laws when all victims are white.

Table SI-4.1D: Mass Shootings' Effect on State Firearm Laws at $t+1$

	<i>Dependent variable:</i>		
	Lead Firearm Laws ($t+1$)		
	Within Effects	First Difference	Random Effects
	(1)	(2)	(3)
Fatalities	-0.033 (0.031)	-0.057 ⁺ (0.032)	-0.023 (0.031)
Proportion White	-0.362 (0.486)	-0.247 (0.311)	0.196 (0.484)
Fatalities*Proportion White	0.219 ^{**} (0.073)	0.141 [*] (0.071)	0.195 [*] (0.083)
Divided Government	-1.442 ^{***} (0.400)	-0.471 [*] (0.227)	-1.145 [*] (0.468)
Republican Government	-1.663 ^{***} (0.406)	-0.807 ^{**} (0.275)	-1.694 ^{**} (0.521)
Lagged Firearm Laws	0.806 ^{***} (0.026)	0.051 [*] (0.024)	1.014 ^{***} (0.013)
Neighbor White Fatalities	0.020 (0.017)	-0.004 (0.010)	0.0003 (0.017)
Neighbor Racial and ethnic minority Fatalities	0.033 (0.031)	-0.013 (0.009)	0.025 (0.033)
Biennium	0.365 (0.262)	-0.125 (0.100)	0.371 (0.248)
Regular Session	-0.003 (0.064)	0.158 [*] (0.071)	-0.015 (0.061)
Constant		0.403 ^{***} (0.090)	1.126 ⁺ (0.601)
Observations	1,372	1,323	1,372
R ²	0.782	0.018	0.973
Adjusted R ²	0.772	0.010	0.973

Note: State-clustered standard errors using a cluster-adjustment matrix (CR1) in parentheses.
⁺ $p < 0.1$; ^{*} $p < 0.05$; ^{**} $p < 0.01$; ^{***} $p < 0.001$

Table SI-4.2D reproduces the same models as Table SI-4.1D but the dependent variable is logged restrictive firearm laws in time $t+1$. Logged firearm laws are used as a robustness check because

restrictive firearm laws are left-skewed. Model 1 in Table SI-4.2D is specified as a two-way fixed effects model. Again, the *Fatalities* coefficient is negative and not statistically significant. Therefore, the model suggests that mass shootings with only racial and ethnic minority fatalities do not affect logged gun policies in time $t+1$. The interaction term (*Fatalities*Proportion White*) is positive and statistically significant ($p < 0.01$). The model suggests that each white mass shooting fatality leads to a 1.4% increase in state firearm laws. Therefore, ten white mass shooting fatalities are expected to lead to a 14% increase in restrictive firearm laws. Model 2 is specified as a first difference model and the dependent variable is logged firearm laws in time $t+1$. As in all the other models, the *Fatalities* coefficient is not statistically significant at conventional levels. The interaction term (*Fatalities*Proportion White*) is positive and statistically significant ($p < 0.05$). The model suggests that a ten-unit increase in mass shooting fatalities leads to a 5% increase in restrictive firearm laws when all victims are white. Model 3 in Table SI-2.2 is specified as a random-effects model. The estimated coefficients are nearly identical to the estimated coefficients in the fixed-effects model.

Table SI-4.2D: Mass Shootings' Effect on Logged State Firearm Laws at $t+1$

	<i>Dependent variable:</i>		
	Lead Logged Firearm Laws ($t+1$)		
	Within Effects	First Difference	Random Effects
	(1)	(2)	(3)
Fatalities	-0.002 (0.002)	-0.002 ⁺ (0.001)	-0.002 (0.003)
Proportion White	-0.037 (0.026)	-0.003 (0.011)	-0.030 (0.074)
Fatalities*Proportion White	0.014 ^{***} (0.003)	0.005 [*] (0.002)	0.014 [*] (0.005)
Divided Government	-0.053 [*] (0.023)	-0.009 (0.009)	-0.051 (0.052)
Republican Government	-0.145 ^{**} (0.056)	-0.027 [*] (0.012)	-0.145 (0.097)
Lagged Firearm Laws	0.023 ^{***} (0.003)	0.002 [*] (0.001)	0.024 ⁺ (0.015)
Neighbor White Fatalities	-0.003 (0.002)	-0.001 (0.001)	-0.003 (0.005)
Neighbor Racial and ethnic minority Fatalities	0.0003 (0.003)	-0.001 (0.001)	0.0003 (0.005)
Biennium	0.024 (0.018)	-0.003 (0.007)	0.027 (0.101)
Regular Session	0.003 (0.005)	0.004 (0.003)	0.002 (0.011)
Constant		0.007 (0.004)	2.287 ^{***} (0.377)
Observations	1,372	1,323	1,372
R ²	0.318	0.009	0.374
Adjusted R ²	0.288	0.001	0.369

Note: State-clustered standard errors using a cluster-adjustment matrix (CR1) in parentheses.
⁺ p < 0.1; ^{*} p < 0.05; ^{**} p < 0.01; ^{***} p < 0.001