

Exposure to anti-LGBTQ+ Violence and the Adoption of Prosocial Political Attitudes Towards LGBTQ+ People*

Marcel F. Roman¹ and Jack Thompson²

¹Provost's Early Career Fellow, University of Texas-Austin

²Postdoctoral Research Fellow, University of Exeter

May 7, 2022

Abstract

Does indirect exposure to anti-LGBTQ+ violence perpetrated by civilians engender prosocial political attitudes toward LGBTQ+ people among the mass public? Anti-LGBTQ+ violence may reflect heteronormative values among the mass public. Thus, these values may be resistant to introspection after high-profile anti-LGBTQ+ violence. However, social psychological insights suggest indirect exposure to violence against marginalized minority groups may motivate empathy among the mass public. We adjudicate between these perspectives by evaluating how two prominent U.S. instances of anti-LGBTQ+ violence informed attitudes toward LGBTQ+ people. Across three studies, we find indirect exposure to anti-LGBTQ+ violence increases support for LGBTQ+ political rights and reduces anti-gay attitudes. However, consistent with theoretical accounts that posit punctuated moments of group marginalization generate a temporally fickle influence on public opinion, we find the increase in prosocial political attitudes is only short-term.

Keywords: exposure to violence; prosocial behavior; intergroup emotions; LGBTQ

*We would like to thank Stuart Turnbull-Dugarte and Wayde Z. C. Marsh for their helpful comments and suggestions

1 Introduction

Exposure to sudden, shocking, and highly salient "focusing" events (Birkland 1998, 1997, Kingdon 1995) are often related to changes in public opinion (Atkeson & Maestas 2012, Bishop 2014, Laniyonu 2021, Reny & Newman 2021). There is limited research, however, as to whether and to what extent exposure to information about violence against marginalized groups may subsequently affect wider public attitudes. To what extent then do models concerning the adoption of prosocial attitudes in response to traumatic events explain mass opinion towards marginalized groups? And how exactly do mass attitudes change when the public is exposed to news and information about violence against marginalized groups?

We address these important questions by drawing on theoretical insights from the social psychology and communications literature. Social-psychological models of post-traumatic growth posit exposure to violence may motivate prosociality in the form of empathy and altruism (Tedeschi & Calhoun 2004) - a phenomenon known as "altruism born of suffering" (Staub 2003, Staub & Vollhardt 2010, Vollhardt 2009, Vollhardt & Staub 2011). Most extant works within this body of scholarship are not concerned with ingroup reactions to outgroup trauma. Still, we expect that this model will be highly relevant for understanding how ingroup members' exposure to adverse events affecting minority communities engenders prosocial political attitudes towards marginalized outgroups. In addition, much scholarship on "altruism born of suffering" indicates that individuals do not have to be directly exposed to traumatic events to adopt prosocial political attitudes. Rather, individuals may be incidentally exposed to traumatic events (Hersh 2013) – for instance, through news and information disseminated via the media. The media shape public opinion through the adoption of thematic or episodic frames (Birkland & Lawrence 2009, Iyengar 1994). In turn, exposure to these frames may trigger feelings of empathy and altruism, engendering prosocial attitudes towards outgroup members.

In this paper, we test these expectations by analyzing public reactions to violence affecting individuals with non-cisgender and nonheteronormative identities. Since the 1969

Stonewall riots, there have been numerous, documented, instances of violence against bisexual, lesbian, gay, transgender, and Queer (LGBTQ+) individuals in the United States (Herek 2008). LGBTQ+ people targeted by anti-LGBTQ+ violence are perceived to violate heteronormative rules and contravene traditional gender and sexual roles. Attacks against the LGBTQ+ community center around the idea that there is "normal" way for individuals to live their lives, encompassing the various expressions, desires, behaviors, and roles associated with cisgender and heteronormative identities. In recent years, violence against the LGBTQ+ community has increased (Chibbaro 2019). Among the deadliest instances of violence against the U.S. LGBTQ+ community is the Pulse nightclub massacre, where, on June 12, 2016, 49 clubgoers were killed at an LGBTQ+ nightclub in Orlando FL.¹.

To test the empirical validity of our theoretical framework, we report the results of three studies that evaluate if exposure to news and information about anti-LGBTQ+ violence motivates prosocial political attitudes towards LGBTQ+ individuals in the form of anti-LGBTQ+ bias reduction and support for policies that benefit segments of the LGBTQ+ community. Our findings contribute to the extant scholarship in a number of important ways. First, they add to the extant literature on information exposure about prominent events - for instance, the announcement of Supreme Court opinions affecting the LGBTQ+ community – and higher public support for LGBTQ+ rights (Flores & Barclay 2016, Kazyak & Stange 2018). Second, prior research on trauma exposure and the LGBTQ+ community has focused on how adverse events primarily affect the political attitudes of those with non-cisgender and non-heteronormative gender identities (Bowers & Whitley 2018, Page 2018), rather than testing how event exposure may also affect wider public attitudes. In sum, what is missing from the literature is a study that tests whether effects of exposure to information about violence against marginalized groups motivates the adoption of prosocial political

¹Content analyses of online and print media indicate the dominant framing of Pulse was to label the event as a mass shooting. Furthermore, the most common policy mechanisms discussed in response to pulse were measures such as gun control, reflecting coverage of the event as a mass shooting rather than as a hate crime against the LGBTQ+ community (Valcore & Buckler 2020). We therefore refer to the "Pulse massacre" rather than the "Pulse nightclub shooting" throughout the paper to emphasize the event's perceived status as a hate crime against the LGBTQ+ community.

attitudes among the wider public, and enables the estimation of the local causal effect of adverse events affecting marginalized communities on mass opinion. Our study addresses these important lacunas with the use of a novel research design and timely data.

The paper is structured as follows. First, we examine how the LGBTQ+ community have faced discrimination in a variety of contexts, noting how this discrimination has often extended to violence against individuals with a non-cisgender or non-heteronormative identity. Next, drawing on scholarship from the social psychology and communications literature, we build a theoretical framework to explain how exposure to news and information about violence against the LGBTQ+ community facilitates the adoption of prosocial attitudes among the wider public. We then outline three hypotheses concerning the impact of exposure to news about anti-LGBTQ+ violence on attitudes towards LGBTQ+ individuals and support for LGBTQ+ rights. We then present results and conclude with a reflection on the significance of our findings, including their implications for understanding how the mass public may adopt prosocial attitudes through exposure to adverse events affecting marginalized communities.

2 Trauma Exposure and Prosocial Attitudes

2.1 Altruism Born of Suffering

Intergroup relations are often negatively impacted by exposure to trauma – for instance, through cycles of violence and revenge (Dodge et al. 1990). Occasionally, individuals also appear to be motivated by exposure to adverse experiences, and adopt prosocial attitudes (Frazier et al. 2013). This model is referred to as “altruism born of suffering” (Staub 2003, Staub & Vollhardt 2010, Vollhardt 2009, Vollhardt & Staub 2011). Much scholarship documents a relationship between exposure to trauma and prosocial attitudes, both from natural causes and suffering inflicted by humans. In a study conducted in the aftermath of Hurricane Hugo, for instance, storm victims exhibited higher rates of helping behavior (such as

providing groceries) than did nonvictims (Kaniasty & Norris 1995). Similar findings have been documented among individuals who have been exposed to violence. Multiple studies conducted in the aftermath of the September 11 attacks find that individuals vicariously exposed to the event engaged in various efforts to benefit the victims, including donating blood, serving food to rescue workers, and acting as translators for victims' families (Beyerlein & Sikkink 2014, Steffan & Fothergill 2009). Crucially, prosocial behavior motivated by exposure to trauma may also translate into prosocial *political behavior*. For instance, Hersh (2013) finds higher rates of political participation among individuals who lost relatives or neighbors in the September 11 attacks.

Most studies within the “altruism born through suffering” (ABS) scholarship are not primarily concerned with ingroup members’ reactions to outgroup trauma. Instead, much work points to the intersection between trauma and *ingroup* identity. For instance, research highlights the importance of linked fate (Dawson 2020) in capturing awareness of sharing a similar status with other group members in a context of profound stigmatization. Within the political science scholarship, the concept of linked fate is crucially important for understanding how marginalized ethnoracial groups come adopt prosocial political behaviors in response to collective trauma (Chan & Jasso 2021). The highly-visible and premature deaths of young African Americans, which may further contribute to feelings of collective threat and personal vulnerability (Umberson et al. 2017), also underscore the contemporary relevance of social-psychological models of posttraumatic growth. Nevertheless, these works do not provide an explicit examination of ingroups’ prosocial attitudes towards marginalized outgroups. This is an important omission within the existing scholarship, as it is not altogether clear whether exposure to adverse events affecting marginalized groups (such as the LGBTQ+ community) might motivate the mass adoption of prosocial attitudes towards such groups. In the next subsection, we therefore explore how the wider public responds to adverse events affecting the LGBTQ+ community.

2.2 Mass Responses to Trauma Affecting the LGBTQ+ Community

Studies examining ingroup responses to trauma experienced by outgroups are not commonplace in the political science literature. Some studies that analyze increases in prosocial attitudes in response to violence against African Americans. For instance, in probing public reactions to the beating of Rodney King in Los Angeles in 1992, and the killing of Malice Green in Detroit in 1992 by law enforcement (LE) officers, Sigelman et al. (1997) find that the incidents had a small-but-significant effect on broader awareness of the extent of anti-Black discrimination. More recently, Reny & Newman (2021) find that perceptions of discrimination against African Americans increased after the murder of George Floyd by a White police officer. However, we find a paucity of studies concerning mass responses to trauma experienced by the LGBTQ+ community.².

Despite the paucity of studies examining how exposure to adverse events experienced by LGBTQ+ individuals shapes mass attitudes towards the LGBTQ+ community, there are reasons for expecting that exposure to such events *do* engender prosocial attitudes towards those with a non cis/heteronormative identity. As is the case with prior instances of trauma exposure (Beyerlein & Sikkink 2014, Steffan & Fothergill 2009), individuals do not have to be *directly* exposed to adverse events in order to adopt prosocial attitudes, but, rather, may be *incidentally* exposed through exposure to news and information about adverse events.

Research finds a relationship between media exposure and the adoption of prosocial attitudes towards LGBTQ+ individuals. In a cross-national, multilevel analysis of individuals' support for LGBT rights, for instance, Ayoub & Garretson (2017) demonstrate that increases in support for LGBT rights are precipitated by a change in communication climates that allow LGBTQ+ identifying individuals to freely express themselves, or to gain greater cultural representation in the media. Building on this work, much scholarship documents

²Instead, most works have paid attention to the ways in which trauma (for instance, exposure to violence and experiences of discrimination) affects the political attitudes and behaviors of LGBTQ+ identifying individuals (Bowers & Whitley 2018, Page 2018)

a relationship between parasocial contact – or virtual contact that is experienced through exposure to portrayals of LGBTQ+ individuals in the media – reduces prejudice towards LGBTQ+ persons and increases support for pro-LGBTQ+ policies (Lissitsa & Kushnirovich 2020, Miller, Flores, Haider-Markel, Lewis, Tadlock & Taylor 2020).³ In sum, the ability of the mass public to adopt prosocial attitudes towards LGBTQ+ individuals is likely to depend on exposure to news and information about the LGBTQ+ community.

The relationship between news exposure and the adoption of prosocial attitudes towards LGBTQ+ individuals makes sense in light of framing theory, which seeks to understand how media framing shapes mass opinion (Chong & Druckman 2007). How a story is framed in the news is important, since framing affects both how the public assigns responsibility for an event, as well as how those following the debate think about policy options and preferred outcomes (Kingdon 1995). Framing theory posits that outlets adopt episodic or thematic frames in their coverage of the news (Iyengar 1994). Episodic frames emphasize event-centered information, with attention directed towards the individuals portrayed in the coverage of events (as opposed to society). For instance, outlets might adopt episodic frames when the public relate to either the victims of violence or the accused, rather than seeing violence against LGBTQ+ individuals as a societal problem (Ott & Aoki 2002). By contrast, thematic frames place traumatic events in a more general context, thus leading the public to attribute responsibility to society. Thematic frames therefore make the public consider the societal factors of violence against LGBTQ+ individuals – for instance, by attributing homonegative attitudes as the consequence of violence affecting LGBTQ+ persons.

Exposure to news and information about violence inflicted on outgroup members does not *directly* engender prosocial attitudes. Rather, exposure to sympathetic frames may trigger feelings such as empathy and altruism,⁴ which, in turn, facilitate prosocial attitudes towards

³Notwithstanding these studies, it is also well documented that negative portrayals of homosexuality and transness in media may engender negative attitudes towards LGBTQ+ individuals (Brewer 2003, Haider-Markel & Joslyn 2008).

⁴The relationship between exposure to news and information about violence towards outgroup members and prosocial attitudes may be also made salient by emotions other than empathy and altruism. For instance, research demonstrates that feelings of anger or moral outrage engender prosocial behavior towards outgroup

members of the disadvantaged group (Batson 2014). Empathy and altruism have long been conceptualized as important concomitants of prosocial behavior (Krebs 1975, Thomas et al. 2009), with experimental evidence lending empirical weight to such claims Batson et al. (2002). Most research on empathy, altruism, and intergroup prosocial attitudes has focused on the ingroup members point of view, demonstrating that such emotions engender prosocial attitudes towards outgroup members. Some research has examined whether these relationships apply to cis/straight individuals' prosocial attitudes towards those who identify as LGBTQ+, finding that reactions of empathy to the struggle of LGBTQ+ individuals elicit higher support for the LGBTQ+ community (Lapointe 2015, Scheer & Poteat 2016, Stotzer 2009).

Nevertheless, there are reasons for thinking that empathetic and altruistic responses may be fragile in the particular case of intergroup relationships between cis/straight individuals and those who identify as LGBTQ+ (Herek 1984, 1988, Lewis et al. 2017, Miller et al. 2020, Norton & Herek 2013). Empathy and altruism expressed towards outgroup members only elicits prosocial attitudes when ingroup members perceive the outgroup in a positive light. Therefore, it is unlikely that those with salient homophobic or transphobic views would feel more empathetic or altruistic towards LGBTQ+ individuals after exposure to news and information about adverse events affecting the LGBTQ+ community. Furthermore, in a study probing the social-psychological concomitants of allyship with LGBTQ+ community, Fingerhut (2011) finds that empathy is largely unrelated to outgroup activism.⁵

Furthermore, despite the numerous, well-documented instances of trauma experienced by LGBTQ+ community, news outlets have often not deployed frames during their coverage of adverse events which would lead the public to adopt prosocial attitudes towards LGBTQ+ individuals. In a content analysis of 81 news articles about the rape and murder of two

members (Montada & Schneider 1989, van Doorn, Zeelenberg & Breugelmans 2014)

⁵Notwithstanding this finding, it is important to qualify that overt activism represents a particularly costly form of prosocial behavior on the part of cis/straight individuals, in that overt acts of civil courage on behalf of outgroup members carry a degree of social stigma even for ingroup members (Greitemeyer et al. 2006). As such, it remains possible that empathy is related to less costly forms of prosocial attitudes towards LGBTQ+ individuals - for instance, indicating on surveys that one is supportive of pro-LGBTQ+ policies.

lesbian women, for instance, Grozelle (2014) finds that many reports lacked sufficient details about the result, and, due to the resultant ambiguity, increased the potential for victim-blaming.⁶ Elsewhere, in a frame analysis of print media coverage of Matthew Shepard’s murder, Ott & Aoki (2002) find that an emphasis on the “scapegoat process” functioned rhetorically to alleviate the wider public of any social culpability. Such framing reinforced a set of public discourses that stigmatized the LGBTQ+ community, and hampered efforts to create and enact legislation to prevent violence against LGBTQ+ individuals.

3 Current Study and Hypotheses

Our study advances knowledge about the effects of exposure to news and information about violence against the LGBTQ+ community on prosocial attitudes towards LGBTQ+ identifying individuals by addressing two important limitations. First, most work testing empirical validity of the ABS model finds limited evidence that exposure to trauma engenders intergroup prosociality. As such, it is unclear whether ingroups more generally might adopt prosocial attitudes towards marginalized outgroups when exposed to information about adverse events affecting such individuals. Second, and despite a well-documented history of violence against LGBTQ+ individuals in the United States, we are not aware of any specific studies to date that examine whether exposure to information about violence against individuals with a non-cis or non-heteronormative identity motivates the adoption of prosocial attitudes among the American public. Given these omissions, the current study focuses on how mass attitudes towards the LGBTQ+ community change after learning about anti-LGBTQ violence.

How then should we expect exposure to news and information about anti-LGBTQ violence to translate into substantive changes in public attitudes towards the LGBTQ+ com-

⁶Research suggests that framing effects may be conditioned by the identity of individuals and groups involved in traumatic events. For instance, Feezell et al. (2019) find that individuals consistently attribute blame to outgroup members rather than society when it comes to coverage of highly salient and polarizing issues.

munity? In considering this question, it is useful to think about the prosocial effects of empathy that are generated as a consequence of exposure to information about outgroup trauma. Emotions generated as a result of exposure to such information creates a motivation for ingroup members to react in certain ways to the stimuli generating them. Group-based emotional processes – or personal emotional experiences that are felt by individuals as a result of their identification with a certain group – are highly relevant when considering the role of emotion in intergroup contexts (Mackie et al. 2000). These processes play an important part in intergroup relations because they create motivations to react to out-group stimuli in certain ways (Mackie et al. 2000, Yzerbyt et al. 2003).

Numerous studies indicate that emotions have a significant influence on mass attitudes (Brader 2005, Brader et al. 2008). Mass opinion towards the LGBTQ+ community is no exception to this body of scholarship, and a wide range of emotional processes are known to shape support for public policies in this context (Cotterll et al. 2010). This influence is attributed to the appraisals and emotional goals associate with discrete emotional processes such as empathy, which serve to translate exposure to certain stimuli into action readiness (Batson et al. 2002). While feelings of empathy may not necessarily drive individuals to concrete action to support the LGBTQ+ community (Fingerhut 2011), at minimum, the prosocial effects of empathy generated by exposure to information about anti-LGBTQ violence should translate into general support for policies that benefit the LGBTQ+ community. This is reflective of the possibility that it is likely “easy” for survey respondents to report higher support for policies that benefit the victims of anti-LGBTQ+ violence, even if event exposure has done little to change deeply ingrained attitudes (such as homonegativity and transphobia) that are more easily hidden due to factors including social desirability bias. Our first hypothesis is thus stated as:

H1: Exposure to news and information about anti-LGBTQ violence will increase support for same-sex marriage.

Still, there are reasons for expecting that exposure to news and information about anti-LGBTQ violence will also shape deeply ingrained attitudes towards the LGBTQ+ community. First, evidence on the relationship between social desirability bias and the propensity of some survey respondents to misreport their feelings towards individuals who identify as LGBTQ+ is somewhat mixed (Morrison & Morrison 2003). Furthermore, the prosocial effects of empathy are believed to be more outgroup-inclusive and further reaching than other emotions in the case of intergroup relations (Stephan & Finlay 1999). For instance, empathy may reduce ingroup favoritism, outgroup bias, and negative group stereotypes (Batson & Ahmad 2009). Given these reasons, we should expect exposure to news and information about anti-LGBTQ violence to not only shape support for policies that benefit the LGBTQ+ community, but also favoritism towards the LGBTQ+ community in general. These developments lead us to state our second hypothesis as:

H2: Exposure to news and information about anti-LGBTQ violence will decrease homonegative attitudes

Lastly, concerns related to generalizability are also important in the context of the current study, as we need to be certain that the relationship between information exposure and the adoption of prosocial attitudes is not limited to just one instance of violence against the LGBTQ community. How then, can we be sure about the generalizability of our findings? Put simply, we should expect that exposure to news and information about anti-LGBTQ violence will also motivate the adoption of prosocial attitudes across multiple contexts. If we find that exposure to information about anti-LGBTQ violence engenders more prosocial attitudes towards the LGBTQ community among the wider public across multiple contexts, then we can be reasonably confident that our findings are generalizable. These developments lead us to state our third hypothesis as:

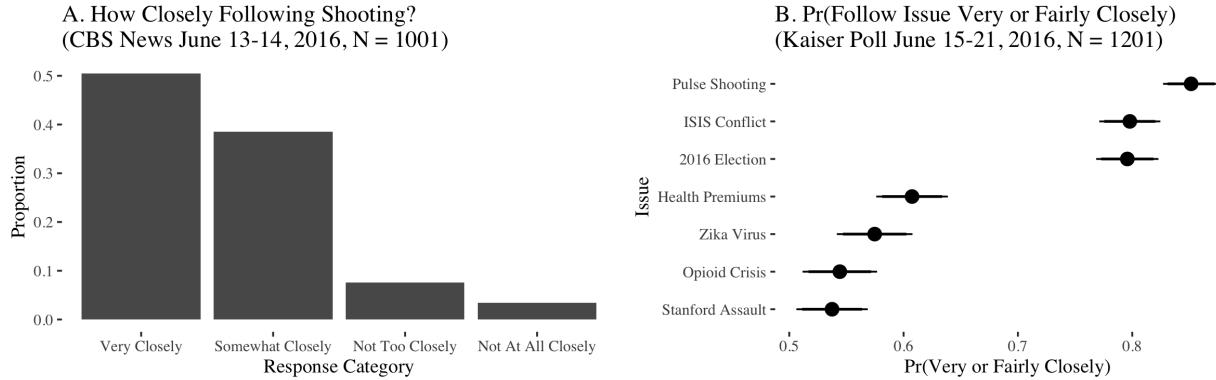


Figure 1: Survey Data Demonstrate the Pulse Massacre Was Salient. Panels A and B display how closely respondents were following the Pulse shooting in a June 2016 CBS and Kaiser poll respectively. Panel B compares attention to Pulse (x-axis) relative to other issues (y-axis). All estimates are population weighted. 95% CIs displayed from 1000 bootstrap simulations.

H3: The relationship between exposure to news and information about anti-LGBTQ violence and prosocial attitudes is temporally robust, and not limited to one instance of anti-LGBTQ violence.

4 The Pulse Nightclub Massacre

To test **H1** and **H2**, we focus on the Pulse nightclub massacre. The massacre was a terrorist attack and mass shooting that occurred between 2:00-5:00 AM EDT on June 12, 2016 in Orlando, Florida. The massacre was perpetrated by Omar Mateen, a lone wolf domestic terrorist who pledged his allegiance to the Islamic State (ISIS). Mateen, armed with a semi-automatic pistol and rifle, killed 49 clubgoers and injured 53 others.⁷ After taking hostages, Mateen was killed by the police. The massacre was the deadliest anti-LGBTQ+ incident in U.S. history, deadliest terrorist attack in the U.S. since 9/11, and deadliest mass shooting in U.S. history until the 2017 Las Vegas shooting.⁸ During the massacre, the Pulse nightclub

⁷<https://www.cnn.com/2016/06/12/us/orlando-shooter-omar-mateen/index.html>

⁸<https://www.washingtonpost.com/news/wonk/wp/2016/06/12/in-the-modern-history-of-mass-shootings-in-a/>

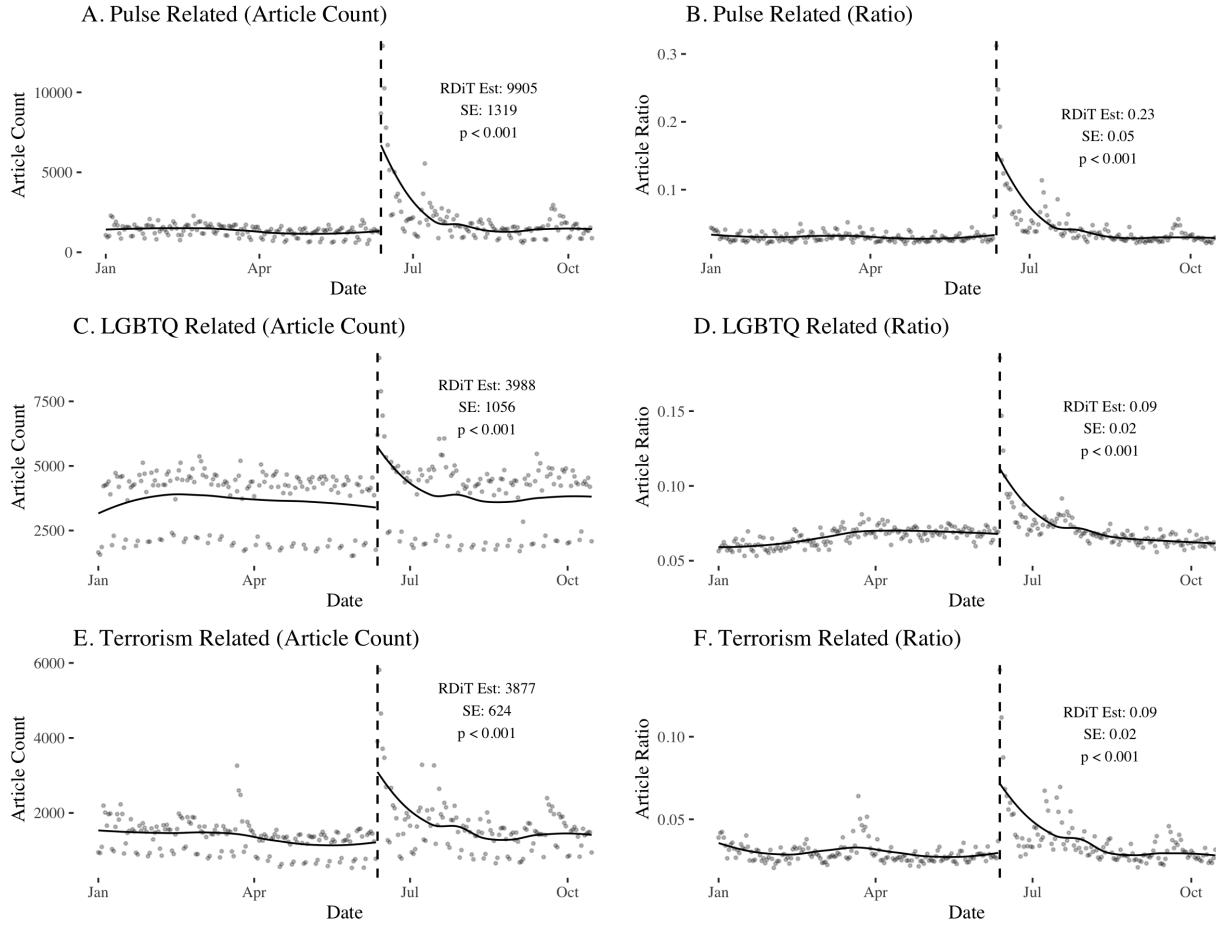


Figure 2: Media Coverage of Topics Related to the Pulse Massacre Over Time. Panels A, C, and E display the count of Pulse-, LGBTQ-, and terrorism-related stories between January–October 2016. Panels B, D, and F display the ratio of Pulse-, LGBTQ-, and terrorism-related stories relative to the total number of stories in digital news. Loess models fit on each side of the moment the massacre occurs. Annotations denote RDiT estimates for the effect of Pulse on the article count and ratio using MSE optimal bandwidth selection (Calonico et al. 2015) (running variable degree = 1).

was hosting “Latin Night.” 80% of the massacre’s victims were Latinx.⁹

The nation reacted with shock and sympathy after the massacre. Florida Governor Rick Scott expressed support for those affected while instituting a state of emergency. The Obama administration expressed condolences and ordered the federal government to provide assistance in the investigation and to the community. In a press conference, Obama described the massacre as an “act of hate” and “act of terror.” Many on social media, including

⁹<https://www.theguardian.com/us-news/2016/jun/14/latino-hispanic-orlando-shooting-victims>

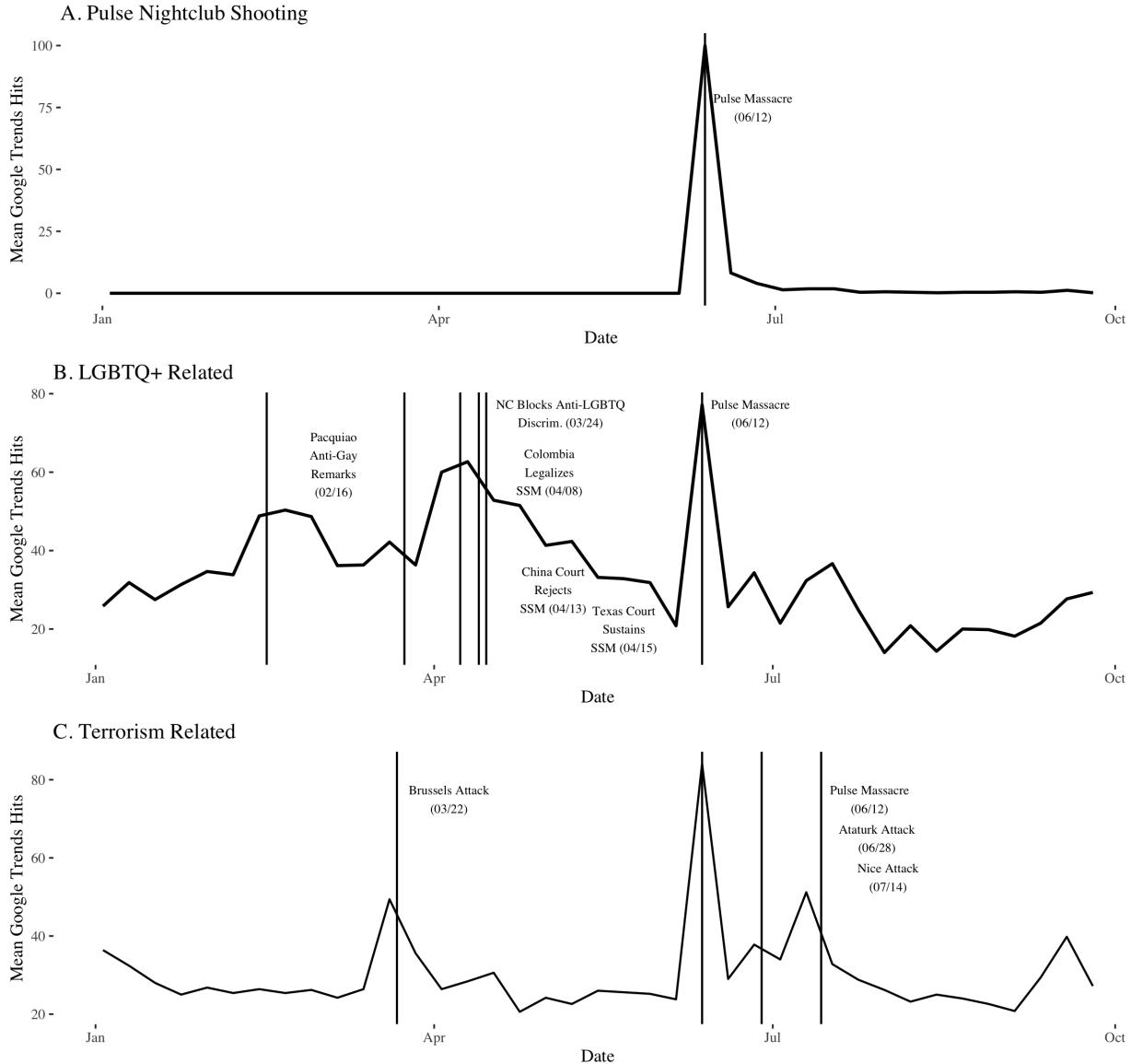


Figure 3: Search Behavior From Google Trends Demonstrates the Pulse Massacre Was Salient and Unexpected. Panels A, B, and C display the average search intensity for Pulse massacre-, LGBTQ-, and terrorism-related terms between January–October 2016. Vertical lines and annotations denote key events related to respective topics.

2016 presidential election candidates, congresspeople, political figures, foreign leaders, and celebrities expressed shock and condolences to those affected.

Multiple pieces of evidence suggest the event was highly salient amongst the mass public. 90% of national adults surveyed immediately after the massacre indicated they were closely

following the incident (Figure 1).¹⁰ The shooting was followed more than other salient issues such as the ISIS conflict, the 2016 election, health care premiums, the Zika virus, the Opioid crisis, and the Stanford sexual assault case (Figure 1, Panel B). Media coverage of topics related to Pulse, LGBTQ issues, and terrorism discontinuously increased after the massacre (Figure 2).¹¹ At the same time, Google searches related to the same topics peak the moment the massacre occurs (Figure 3).¹² Importantly, media coverage and Google searches related to these topics were either declining or limited pre-massacre, suggesting anticipatory effects are unlikely to drive attitudinal shifts toward LGBTQ+ issues or people post-massacre. Moreover, evidence from a nationally representative survey fielded by the Chicago Council on Global Affairs during the massacre (June 10-26) suggests the public was aware of the mass shooting (Figure 4).¹³ Respondents interviewed after the massacre were more likely to report they felt less safe since 9/11 (Panel A), terror attacks were likely in the future (Panel B), international terrorism poses a critical threat to the U.S. (Panel C), and they felt worried about both terrorism and gun violence (Panels D-E).

Important to the ABS framework, we demonstrate the massacre was not simply interpreted as a terrorist attack, but a targeted anti-LGBTQ+ attack.¹⁴ Consistent with Obama's characterization of the massacre as an "act of hate," the vast majority of the public understood the massacre as a anti-LGBTQ+ hate crime. In two polls, 85% and 70% of adults believed the shooting was an LGBTQ+ hate crime (Figure 5).¹⁵

¹⁰See Appendix A.1 for more details on Figure 1 polls.

¹¹See Appendix A.2 for more details on Figure 2 data.

¹²See Appendix A.4 for more details on Figure 3 data

¹³See Appendix A.3 for more details on Chicago Council data. See also Table A1.

¹⁴Omar Mateen was not motivated by anti-LGBTQ attitudes. Mateen randomly targeted nightclubs for the purposes of inflicting mass casualties without regard to the clubgoer composition (see <https://www.nbcnews.com/feature/nbc-out/what-really-happened-night-pulse-n882571>). However, surveys suggest the mass public *perceived* the massacre as anti-LGBTQ+ violence regardless of the facts on the ground (Figure 5).

¹⁵See Appendix A.1 and A.5 for details on Figure 5 data.

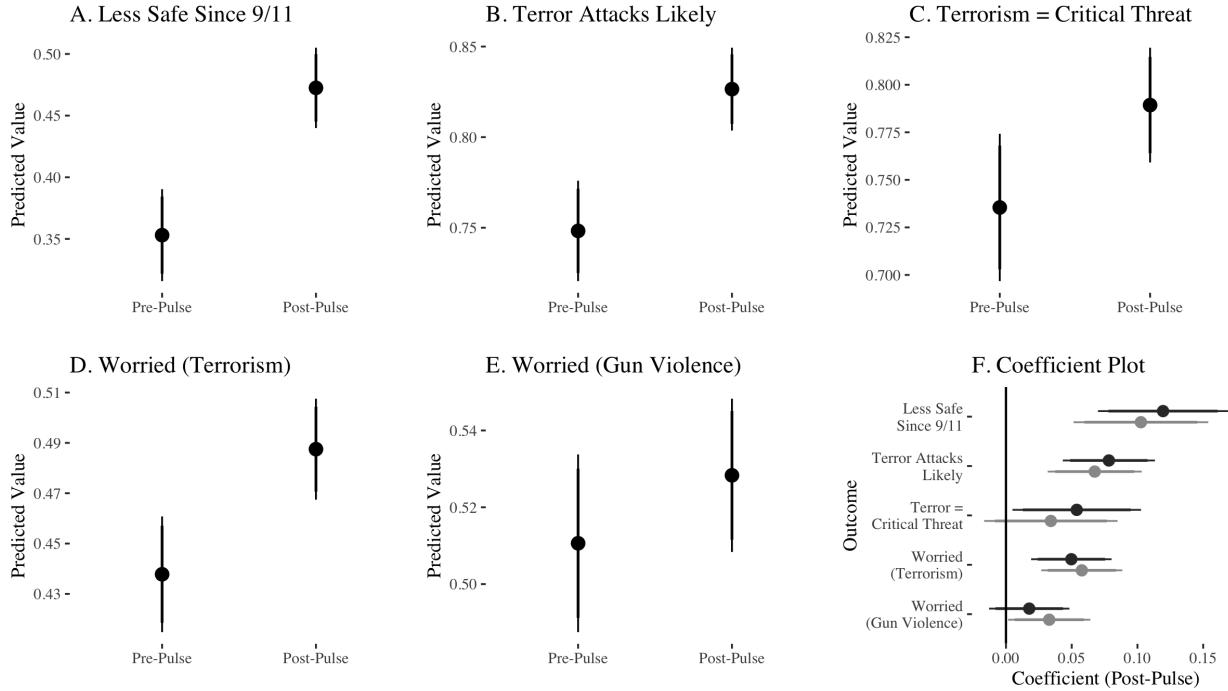


Figure 4: The Pulse Massacre Was Perceived by the Mass Public. Panels A-E characterize predicted values of belief country is less safe since 9/11, terror attacks are likely in the future, international terrorism is a critical threat, worry about terrorism, and worry about gun violence respectively. Panel F characterizes the the influence of Pulse (x-axis) on the aforementioned outcomes (y-axis) adjusting and not for imbalanced covariates (black = with controls, grey otherwise, see Figure A1 for balance plot). All covariates rescaled between 0-1. 95% CIs displayed derived from HC2 robust standard errors.

5 Study 1: TAPS

5.1 Data and Design

Study 1 uses data from The American Panel Survey (TAPS), Wave 55, to assess if exposure to anti-LGBTQ+ violence motivates support for policies that benefit segments of the LGBTQ+ community. TAPS is a monthly online survey administered by the Weidenbaum Center at WashU-St. Louis, with national probability sampling conducted by GfK/Knowledge Networks. TAPS includes population representative post-stratification weights for English-speaking adults.

Our outcome is support for same-sex marriage (*SSM support*). SSM is an important LGBTQ+ rights dimension. There is near-unanimous SSM approval among LGBTQ+ peo-

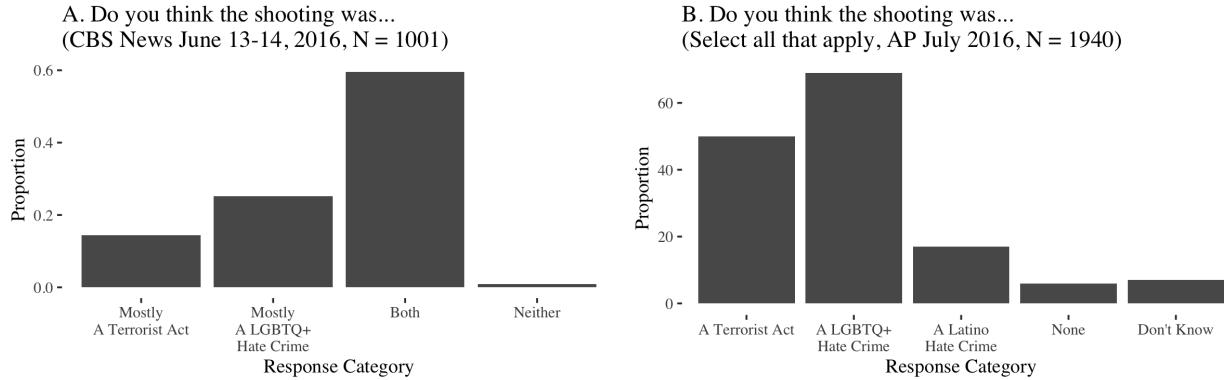


Figure 5: The Pulse Massacre Was Perceived as Targeted Anti-LGBTQ+ Violence. Panels A and B display beliefs the public felt the shooting was an anti-LGBTQ+ hate crime in a June 2016 CBS poll (Panel A) and July 2016 AP poll (Panel B). All estimates are population weighted.

ple. Moreover, 60% of LGBTQ+ people say SSM should be a top priority even if it takes attention away from other issues (Taylor 2013). TAPS includes an item asking respondents if they “generally support or oppose same-sex marriage,” with an option to indicate “no opinion.”¹⁶ We measure *SSM support* as a binary indicator equal to 1 if the respondent indicates they support SSM and 0 otherwise.

Our independent variable is exposure to the Pulse massacre (*post-Pulse*). TAPS was fielded between 06/08/2016-07/08/2016. Pulse occurs on 06/12/2016, allowing us to implement an Unexpected Event During Survey Design (UESD) with the TAPS data comparing *SSM support* before and after Pulse (Muñoz et al. 2020). We measure *post-Pulse* as a binary indicator equal to 1 if a respondent is interviewed after 06/12/2016, 6AM EST. Since we cannot be certain respondents perceived the massacre, coefficients characterizing the influence of being interviewed *post-Pulse* should be interpreted as an “intent-to-treat” effect (ITT). However, Figures 1, 2, 3, and 4 suggest the the public was informed of and attentive to the massacre. Moreover, TAPS respondents are more likely to believe ISIS is an important issue *post-Pulse* (Figure B2), suggesting they “received the treatment” since the massacre’s perpetrator pledged fealty to ISIS.

¹⁶See Section B.1 for outcome measurement details.

Online survey respondent inattentiveness produces low quality responses that attenuate associations of interest (Read et al. 2021). Attention is critical for question comprehension and retrieval of relevant information from memory to form a judgement (Krosnick & Alwin 1987). Our design depends upon respondents cognitively making connections between violence against marginalized groups they observe in mass media and their policy preferences implicating said groups. Prior research suggests very quick and very slow survey response times are associated with lower attention and quality responses (Malhotra 2008, Paas & Morren 2018, Read et al. 2021). In TAPS (Wave 55), the minimum response time was 3 minutes, insufficient to process a 250 item survey. Furthermore, the maximum response time is 34,586 minutes, raising the possibility some respondents were multi-tasking, distracted, or intermittently engaging the survey with low effort. Thus, in the absence of internal attention checks, we truncate the sample to respondents who completed the survey in a “reasonable duration” of time, defined as those who took between 15-60 minutes to complete the survey. Our truncation is consistent with the rule of thumb forwarded by Roßmann (2010), who suggest removing respondents below 60% the median completion time.

The final TAPS data contain $N = 1142$ respondents, with 682 (60%) interviewed before Pulse and 460 after (40%). Truncation is unlikely to undercut generalizability. There are limited differences between inattentive and attentive TAPS respondents (Figure B3, Panel A). Additionally, the truncated sample is compositionally similar to the full TAPS sample and the “gold standard” in election studies, the 2016 ANES (Figure B3, Panel B, Table B2). Moreover, although our truncation is based on arbitrary thresholds, we follow best practices (Greszki et al. 2015), and demonstrate the results are insensitive to using the initial raw data or alternative response time cut-offs for “reasonable duration (Figure B3, Panel C).”¹⁷

¹⁷Another beneficial property of the truncated data is the reduction in imbalance between respondents interviewed before and after the Pulse massacre. The truncated sample is imbalanced on 1/20 baseline covariates, whereas the full sample is imbalanced on 3/20 covariates.

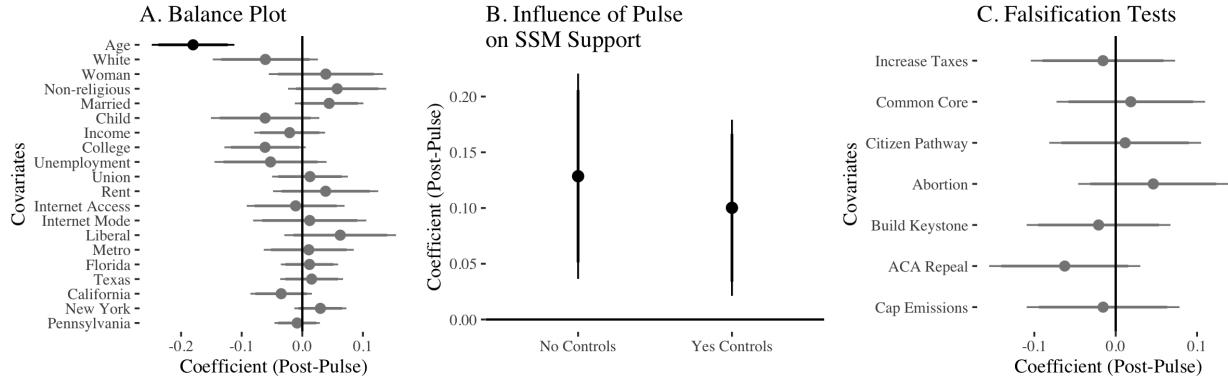


Figure 6: Support for Same Sex Marriage Increases After Pulse. Panel A displays covariate balance for survey respondent characteristics before and after the Pulse massacre. Panel B characterizes the ITT effect of the massacre on *SSM support* not adjusting and adjusting for covariates. Panel C displays falsification tests characterizing the unadjusted ITT effect of the massacre on policy outcomes unrelated to LGBTQ+ rights. Black coefficients are statistically significant, grey otherwise. All estimates use post-stratification survey weights to ensure representativeness. All covariates scaled between 0-1. 95% CIs displayed derived from HC2 robust standard errors.

5.2 Results

Before we describe the Study 1 results, we demonstrate the influence of Pulse on *SSM support* is insulated from bias by validating UESD identification assumptions. The first assumption is ignorability. Treatment status should be independent of potential outcomes conditional on random sampling (Muñoz et al. 2020). Consequently, respondents interviewed before and after Pulse should be compositionally similar in TAPS. Figure 6, Panel A supports the assumption. Respondents interviewed *post-Pulse* are compositionally similar to respondents interviewed pre-Pulse across 20 baseline demographic, economic, political, and geographic covariates with the exception of age (see Section B.4 for more information on baseline covariate measurement), a finding consistent with multiple testing (Benjamini & Hochberg 1995).

Excludability is another key UESD identification assumption: any difference between respondents interviewed before and after Pulse should be the sole consequence of the event (Muñoz et al. 2020). It is important to note the “treatment” is not just the massacre itself but also collateral media attention, much of which was sympathetic to the massacre’s

victims. However, outside the massacre, there are no punctuated moments of media attention over LGBTQ+ issues or anti-LGBTQ+ violence during the month TAPS was fielded (June, Figures 2 and 3), suggesting the absence of simultaneous events that could motivate pro-LGBTQ+ attitudes. In addition, it is unlikely preexisting time trends in support of SSM are driving the result (Muñoz et al. 2020). We subset TAPS to the pre-Pulse period and assess the placebo “effect” of being interviewed after the median pre-treatment date and find statistically null results (Table B4).

Figure 6, Panel B characterizes the influence of being interviewed *post-Pulse* on *SSM support*. Consistent with **H1**, respondents interviewed *post-Pulse* are 13 and 10 percentage points (pp.) more likely to support SSM not adjusting and adjusting for baseline covariates ($p < 0.01$, $p < 0.05$). These coefficients are equivalent to 26-20% of the outcome standard deviation. Our findings are likely not driven by secular dynamics outside the massacre. Falsification tests on treatment irrelevant outcomes such as support for increasing taxes, common core, a citizenship pathway, abortion, the Keystone pipeline, ACA repeal and emission caps are statistically null (Figure 6, Panel C). The results are not driven by outcome item non-response since non-response is balanced pre- and post-Pulse respondents (Table B3). We demonstrate the results are not driven by seasonal trends by showing the influence of Pulse is unique to 2016. Leveraging 3 surveys fielded in June 2012, 2013, and 2017, we show the influence of being interviewed after the calendar day of the massacre on *SSM support* is statistically null (Figure B6), suggesting there are no secular dynamics intrinsic to the month of June that could explain our findings (e.g. Pride Month). Our findings are also robust to small temporal bandwidths before and after the massacre that are less susceptible to secular temporal trends that could influence *SSM support* (Figure B7). Moreover, the pattern of results are the same using an ordinal *SSM support* measure (Table B7).

6 Study 2: PI S-IAT Data

6.1 Data and Design

Study 2 examines if the public adopts more positive attitudes toward segments of the LGBTQ+ community *post-Pulse*. We use Project Implicit (PI) data on U.S. respondents who self-selected into and completed an internet survey in 2016 asking questions on their explicit attitudes toward gay people in addition to measuring their implicit anti-gay bias via PI's Sexuality Implicit Association Test (S-IAT, $N = 43,950$).¹⁸ On average, 175 U.S. respondents completed the PI S-IAT and concomitant explicit attitude survey each day during 2016. We exclude respondents interviewed after 09/08/2016 due to order effects since the S-IAT measurement changes from 188 to 200 trials by cutting a particular task block (Klauer & Mierke 2005).

The PI data are not population representative. The PI sample contains more youth (68% aged 18-29 vs. 18%), women (65% vs. 51%), liberals (57% vs. 41%), college educated (44% vs. 29%), and non-whites (36% vs. 22%) than TAPS. However, although the PI sample is disproportionately composed of respondent attributes associated with positive affect toward LGBTQ+, the empirical conclusions we draw from the PI sample may translate to a nationally representative population. Prior research demonstrates non-representative internet survey samples respond similarly to external stimuli as representative samples (Coppock 2019). Other research shows trends in the PI S-IAT data respond similarly to external events as trends in nationally representative surveys (Ofosu et al. 2019). If Study 2 corroborates the results from a nationally representative sample in Study 1, then we may have some confidence Study 2's findings are generalizable.

The three Study 2 outcomes are the S-IAT *D-score*, *straight bias*, and *heterocentrism*. The S-IAT acquires respondents mean *compatible response latency* (CRL) and *incompat-*

¹⁸Data available here: <https://osf.io/yjqmw/>. See <https://implicit.harvard.edu/implicit/education.html> for more Project Implicit information. See <https://implicit.harvard.edu/implicit/selectatest.html> to take the S-IAT.

ible response latency (IRL) (in milliseconds). The CRL is an average of how quickly a respondent associate “good” (e.g. celebrate, happy, terrific) and “bad” (e.g. evil, rotten) words in addition to “gay” (e.g. homosexual, woman/woman image) or “straight” (e.g. heterosexual, man/woman image) words/images to a left or right-sided bin that characterize associations designed to be easy for people who prefer straight to gay people (e.g. gay/bad, straight/good). The IRL measures the same thing but where the left or right-sided bins characterize associations designed to be difficult for people who prefer straight to gay people (e.g. gay/good, straight/bad). The S-IAT assumes implicitly biased respondents will be faster making congruent than incongruent associations. Consequently, the *D-score* is the $IRL - CRL$ difference divided by the within-individual standard deviation of response latencies calculated across the compatible and incompatible trials. The *D-score* ranges from -2-2, with higher values suggesting implicit bias against gay people (Greenwald et al. 2003).

Given the indirect measurement mechanism (Greenwald & Lai 2020), the S-IAT *D-score* may be less perturbed by impression management to be perceived as pro-gay in the aftermath of the Pulse massacre (Greenwald et al. 1998). Although the IAT is not completely insulated from introspection, the modest-to-moderate correlation between the implicit *D-score* and explicit measures of bias suggests the IAT measures attitudes that are difficult to manipulate (Ratliff & Smith 2021). The *D-score* is a well-established measure, and is associated with a number of objective covariates that characterize subordination, marginalization, or discrimination vis-a-vis the relevant group (Ratliff & Smith 2021).

Heterocentrism and *straight bias* are explicit measures of anti-gay bias. *Heterocentrism* is the difference in 10 point feeling thermometers for straight and gay men. Straight bias is a 7 point measure from “I strongly prefer gay to straight people” to “I strongly prefer straight to gay people.” These explicit measures are well established as anti-gay commitment measures (Keleher & Smith 2012). The *D-score*, *straight bias*, and *heterocentrism* are rescaled between -1-1, 0-1, and -1-1. The PI data outcomes are aggregated to a daily time series.

We use a regression discontinuity-in-time (RDiT) design to evaluate how anti-gay atti-

tudes shifted *post-Pulse*. We use the non-parametric RD estimation approach developed by Calonico et al. (2015).¹⁹ We estimate the discontinuous effect of *post-Pulse* on anti-gay attitudes, in other words, the immediate shift in anti-gay attitudes the day after the massacre. We present *post-Pulse* RDiT effect permutations where the running variable (days to massacre) degree is set to 0 (difference-in-means), 1 (linear), and 2 (quadratic) and the kernel weights are triangular, uniform, and Epanechnikov. The Calonico et al. (2015) approach selects a mean-squared error optimal bandwidth.

6.2 Results

Before we describe the RDiT effect of *post-Pulse* on anti-gay attitudes, we assess the plausibility of the *continuity assumption* (Lee & Lemieux 2010), that is, S-IAT takers before and after Pulse are similar on baseline characteristics.²⁰ Figure 7 displays balance across 12 demographic, socioeconomic, political, and geographic covariates with different kernel and polynomial specifications. Across the board, there is no statistically significant covariate imbalance with the exception of *post-Pulse* respondents being less white in some specifications. Given LGBTQ+ attitudes are similar across racial groups (Jenkins et al. 2009), racial imbalance is likely inconsequential for our coefficient estimates. These findings suggest our coefficient estimates are relatively insulated from omitted variable bias.

Figure 7 displays RDiT coefficients for *post-Pulse* where the outcome is the daily *D-score*, *straight bias*, and *heterocentrism*. Consistent with **H2**, the massacre discontinuously decreased implicit bias measured via the *D-score* in addition to *heterocentrism*. There is no statistical evidence the massacre discontinuously decreased *straight bias*. However, given *straight bias* is a highly explicit measure, the absence of a shift in attitudes *post-Pulse* may be a function of impression management on part of respondents whose attitudes would otherwise shift in favor of LGBTQ+ through indirect bias measurement (Greenwald et al. 1998). Honing in on linear polynomial coefficients derived from a triangular kernel, the

¹⁹Implemented via the `rdrobust` package in R.

²⁰See Appendix Section C.1 for details on baseline covariate measurement.

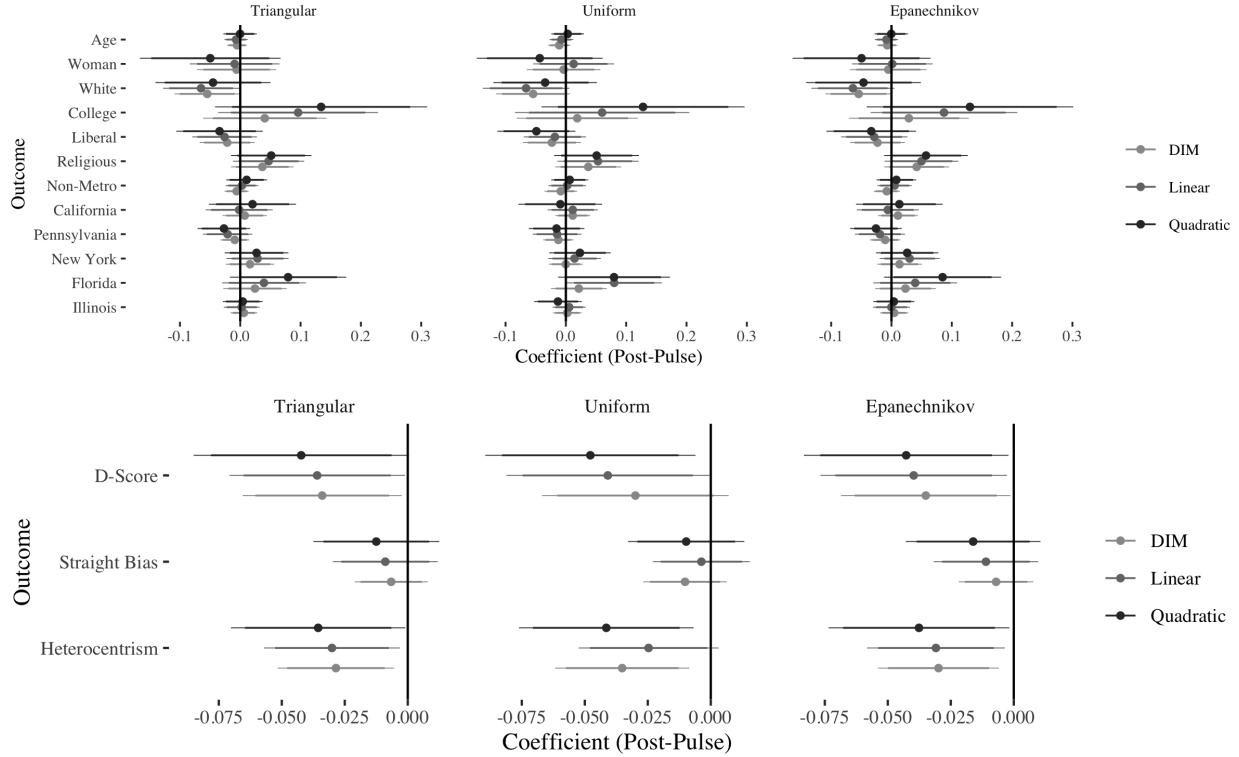


Figure 7: Balance on IAT Taker Composition (Top 3 Panels) and RDiT Effect of *Post-Pulse* (x-axis) on Anti-Gay Attitudes (y-axis) (Bottom 3 Panels). Each panel characterizes estimates using triangular, uniform, and Epanechnikov kernels. Color denotes the running variable (days to Pulse) polynomial degree. The x-axis is the *post-Pulse* RDiT coefficient. The y-axis is the baseline covariate outcome for the top 3 panels and the anti-gay attitude outcome for the bottom 3 panels. All covariates rescaled between 0-1. 95% CIs displayed from robust standard errors.

massacre discontinuously decreased the *D-score* by 0.036 ($p < 0.05$), equivalent to 100% of the daily *D-score* standard deviation (0.036). Likewise, the massacre discontinuously decreased *heterocentrism* by 0.03 ($p < 0.05$), equivalent to 91% of the daily *heterocentrism* standard deviation (0.033).

We conduct several robustness checks to buttress our conclusions. Despite balance, baseline covariates may be correlated with the running variable or discontinuity in ways that alter statistical conclusions (Gelman & Zelizer 2015). Therefore, we demonstrate the findings do not change after adjusting for the full set of baseline covariates (Figure C9). Our conclusions are also not sensitive to choosing bandwidths near the discontinuity (Lee & Lemieux

2010) (Section C.5). We assess the “effect” of placebo discontinuities prior to Pulse during 2016 to demonstrate our findings are not due to statistical chance. In general, the negative RDiT effect of Pulse on the daily *D-score* and *heterocentrism* is less than 90-99% of placebo RDiT estimates (Section C.6), suggesting our findings are not a statistical artifact. We rule out seasonal trends by assessing the effect of placebo discontinuities on the calendar day of the Pulse massacre for the years 2006-2015 and 2017-2018. Only 5% of estimates are statistically significant at $p < 0.05$, suggesting our findings are not due to secular seasonal factors (Section C.7). We demonstrate our findings are not due to a secular attitudinal trend in favor of marginalized groups through a series of falsification tests assessing if attitudes toward Black people, Asians, the differently-abled, Arabs, darker-skin people, and women discontinuously shifts after Pulse. Across 117 statistical tests with respect to attitudes toward non-LGBTQ+ marginalized groups, 4% are statistically significant, consistent with a statistical artifact (Section C.10). We rule out if our empirical conclusions are driven by sorting near the discontinuity. Sorting is a problem in the context of the PI S-IAT dataset since more people may take the S-IAT after publicized anti-LGBTQ+ violence. Although a density test developed by Cattaneo et al. (2020) suggests there is a discontinuous increase in IAT takers *post-Pulse* ($p = 0.042$) (Section C.8), we believe there is limited cause for concern. The balance tests show IAT taker composition does not shift even if there are more *post-Pulse* respondents (Figure 7). Estimates adjusting for baseline covariates include an adjustment for the respondent count at the daily-level, and the empirical conclusions do not change (Figure C9). Finally, we use a donut hole RDiT removing observations near the discontinuity that are likely affected by sorting and find the exercise statistically reduces sorting while producing the same results (Section C.9).

7 Study 3: Matthew Shepard's Murder

Although we provide evidence Studies 1-2 are internally valid, they may not be externally valid. The Pulse massacre is a highly unique instance of anti-LGBTQ+ violence. The massacre is the deadliest instance of anti-LGBTQ+ violence, is the second deadliest mass shooting, has predominantly Latinx victims, was an instance of ISIS-inspired terrorism, and occurred after seminal gay rights victories (e.g. gay marriage). Therefore, it may be prudent to assess if a distinct instance of anti-LGBTQ+ violence also motivates pro-LGBTQ+ beliefs. Consequently, we examine how the prominent 1998 murder of Matthew Shepard, a white gay Wyoming college student, by two white men, influenced the public's beliefs toward gay people during a relatively more homophobic temporal context.

7.1 Context

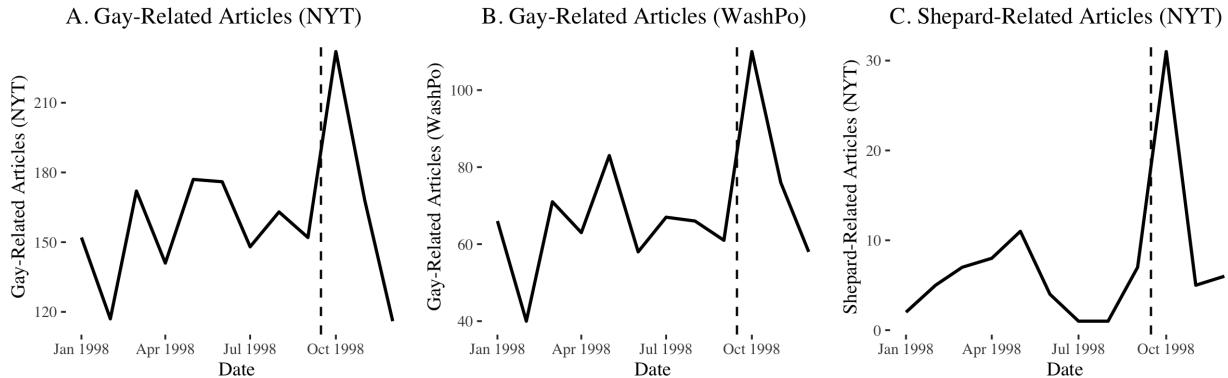


Figure 8: Media Coverage of Gay-Related Content in 1998. Panels A/B display the number of NYT/Washington Post gay-related articles (y-axis) by month (x-axis). Panel C displays the number of gay-related articles that relate to Matthew Shepard or anti-gay violence by month. Dashed vertical line denotes the period Shepard is murdered.

On October 6, 1998, Shepard was offered a ride home from the Fireside Lounge in Laramie, WY, by Aaron McKinney and Russell Henderson. They subsequently drove to a secluded rural area and proceeded to rob, pistol whip, and torture Shepard. The incident was picked up and heavily covered by national media. On the month of Shepard's murder, the number of gay-related news articles was 150% (NYT) and 172% (WashPo) of the average

number of gay-related news articles for Jan-Sep 1998 (Figure 8).²¹ Multiple media outlets highlighted the violent nature of the attack, noting how Shepard was so brutally beaten that his face was completely covered in blood, except where it had been partially cleansed by Shepard's tears (Loffreda 2001). After being found in a coma by a passerby the following day, Shepard was transported to hospital. However, he died six days after the attack at 12:53 am October 12, 1998.

The nation reacted with outrage and sympathy towards Shepard's murder (Brooke 1998). Former Wyoming Senator Alan K. Simpson, a Republican, decried Shepard's murder as an "ugly, ugly butchering," and urged that "the people of my state and the University of Wyoming [where the perpetrators had been students] want you to know that this is not who we are" (Lengel 1998). Members of Congress also offered their condolences to Shepard's parents and urged Congress to pass hate crime legislation. Responding to Shepard's murder, Senator Edward M. Kennedy (D-Mass) said that "hate crimes are crimes against our country," and that Congress needed to "send the strongest possible signal that these crimes will not be tolerated in the United States" (Lengel 1998). At a vigil outside the steps of the US Capitol, on October 15, 1998, thousands of individuals, including current and former Congresspeople, celebrities, and members of the public, gathered to pay their respects to Shepard. Advocates also note how Shepard's murder engendered a "seismic shift in attitudes towards the LGBTQ community" (Compton 2018). Indeed, more than a decade after Shepard's murder, Congress passed the Matthew Shepard and James Byrd, Jr. Hate Crimes Prevention Act, a federal statute that expanded the power of the Department of Justice (DoJ) to investigate and prosecute hate crimes based on sexuality and gender.

²¹See Appendix D.1 for details on media data.

7.2 Data and Design

To evaluate if exposure to Shepard’s murder decreased anti-gay attitudes, we identify surveys with similar items shortly before and after Shepard’s murder.²² We identify two nationally representative CNN telephone surveys that ask respondents if they believe homosexuality is “morally wrong” (CNN Jun. 1998, $N = 1016$; CNN Oct. 1998, $N = 1036$) in addition to a Newsweek and Gallup poll asking respondents if they believe homosexuals should be hired for the military (Newsweek Jul. 1998, $N = 602$; Gallup Feb. 1999, $N = 1054$).²³ For each item, we stack the respective datasets and identify consistent corresponding baseline control covariates from each survey. We then compare respondents interviewed after Shepard’s murder to those before to assess if exposure to anti-gay violence decreased the belief homosexuality is morally wrong and increased the belief homosexuals should be hired for the military, consistent with **H1-H3**.

The approach has several shortcomings we attempt to assuage. First, given the absence of auxiliary data on attention to the murder, we cannot be certain respondents “received the treatment.” Therefore, we interpret the influence of exposure to Shepard’s murder as an ITT effect. However, we are certain the murder received significant nationalized media attention such that it could shift the mass public’s attitudes (Figure 8). Second, unlike Study 1 and 2’s UESD or RDiT design, we cannot assess a relatively immediate effect of exposure to anti-gay violence even though the surveys we use were fielded near Shepard’s murder. There are 4 (Jun.-Oct. 1998) and 7 (Jul. 1998-Feb. 1999) months in between the surveys with the immorality and military items. Therefore, our estimates on the influence of being interviewed after Shepard’s murder may be a function of either intervening factors or secular liberalizing time trends. However, there are no other nationalized instances of anti-gay violence in this time period with the level of media coverage Shepard’s murder garnered in between the respective field periods (Figure 8). Moreover, we rule out if our analysis is

²²We use the search terms “homosexuality” OR “homosexual” OR “gay” in Roper iPoll between 1996-2000 to identify gay-related items around Shepard’s murder.

²³See Appendix D.2, D.3, for more details on study methodology and item wording.

a function of secular time trends in a liberal direction by conducting a temporal placebo test and demonstrating beliefs that homosexuality is morally wrong and that homosexuals should be in the military do not change between Apr. 1997-Jun. 1998 and Nov. 1996-Jul. 1998 respectively (Figure 9, Panel F).²⁴ These results are important since they suggest prominent pre-study events, such as Ellen DeGeneres' publicly televised coming out in April 1997, are not driving our results. Third, given possible differences in sampling and the samples between the two studies for each outcome item, our statistical conclusions may be a function of sample composition. We do not believe our estimates on the influence of Shepard's murder are substantially affected by sample composition since balance tests on baseline demographic, socio-economic, and political covariates between the two studies for each outcome demonstrate limited to no covariate imbalance (Figure 9, Panels A and C). In summary, despite several shortcomings to Study 3's design, we believe the design provides sufficient complementary evidence to Studies 1 and 2 along with suggestive evidence our theory is generalizable to other instances of anti-gay violence besides the Pulse massacre.

7.3 Results

Consistent with **H1-H3**, Figure 9, Panel B shows respondents interviewed after Shepard's murder were 10 percentage points less likely to report homosexuality is morally wrong without and adjusting for covariates, equivalent to 20% of the outcome standard deviation ($p < 0.001$). Likewise, post-Shepard respondents were roughly 4 percentage points more likely to report homosexuals should be hired for the military without and adjusting for control covariates ($p < 0.10$), equivalent to 9% of the outcome standard deviation.

In addition to the compositional balance and temporal placebo tests we previously discussed, we also conduct a series of falsification tests on outcomes unrelated to gay people or rights such as support for banning abortion, raising the retirement age, increasing domestic spending on health/education/environment, allowing anti-HMO lawsuits, affirmative action,

²⁴See Appendix D.2, D.3.2 for more details on the temporal placebo test.

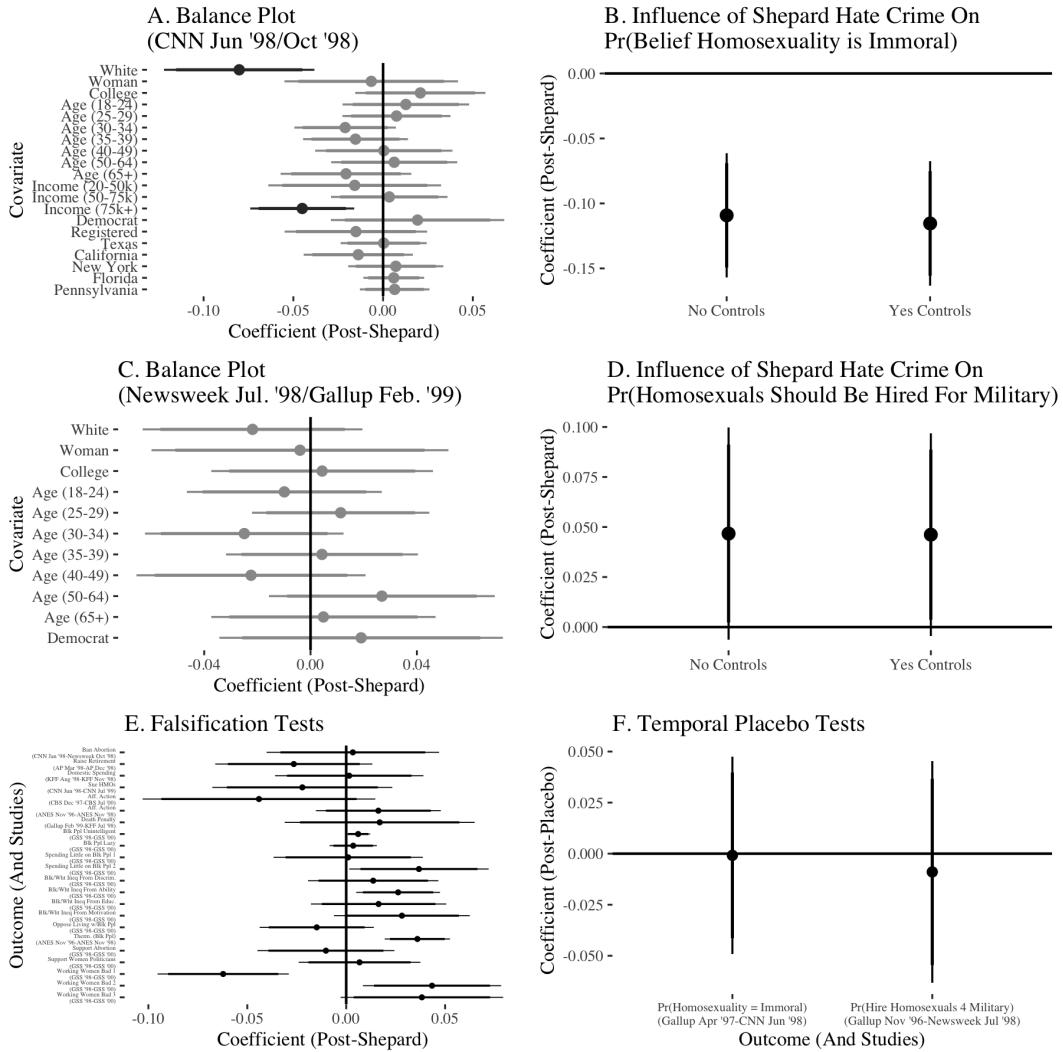


Figure 9: Respondents Surveyed After Matthew Shepard’s Murder Are Less Likely to Hold Anti-Gay Attitudes. All estimates include population weights. All covariates are scaled between 0-1. 95% CIs displayed derived from HC2 robust standard errors.

the death penalty, the belief Black people are unintelligent, the belief Black people are lazy, spending more to help Black people, the belief Black-white inequality is a function of discrimination/ability/education/motivation, not living with Black people, allowing abortion in any circumstance, women politicians, and the notion working women are bad for children in addition to a Black feeling thermometer. We evaluate if attitudes related to these policies/groups shift after Shepard's murder to rule out if our findings are a function of secular

trends liberalizing the mass public's beliefs.²⁵ Only 5 of the 22 outcomes are statistically significant. Only the Black thermometer and one of the two measures of spending more to help Black people shift in a liberal direction after the murder. Conversely, the belief Black people are unintelligent, Black-white inequality is a function of in-born ability, and that working women are bad for children increases. These tests suggest there is no consistent secular liberalizing trend toward marginalized groups among the mass public driving our results.

8 Effect Persistence

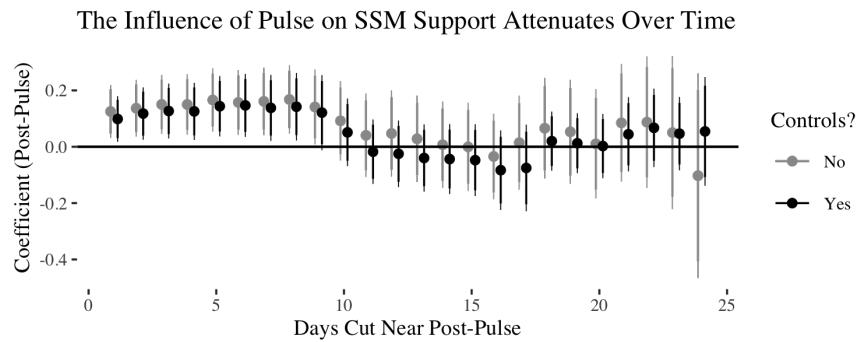


Figure 10: The Influence of Pulse on SSM Support Attenuates Over Time. X-axis is days cut from moment of pulse (with days after kept intact). Y-axis is the *post-Pulse* coefficient. 95% CIs from HC2 robust standard errors

A lingering question is whether exposure to anti-LGBTQ+ violence generates temporally durable effects on long-term pro-LGBTQ+ attitudes. Public opinion may be temporally fickle (Zaller et al. 1992), subject to unreliable and unstable shifts conditional on ephemeral informational contexts. Indeed, “focusing” events that highlight group marginalization may only generate temporary support for marginalized groups (Chudy & Jefferson 2021) (e.g. the George Floyd protests). Although evidence suggests LGBTQ+ attitudes are subject to macro-level progressive shifts (Flores 2014), exposure to violence may not motivate persistent attitudinal shifts because of short-term impression management (Chudy & Jefferson 2021), the absence of persistent media messaging (Kalla & Broockman 2021), secular anti-LGBTQ+

²⁵See Appendix D.5 for more details on the falsification test outcomes.

cues from living in a heteronormative society (Vuletic & Payne 2019), and the predispositional qualities of group-specific attitudes (Sears 1993). On the other hand, some evidence suggests salient instances of group marginalization can persistently influence group-specific attitudes in a progressive direction if the informational aftermath was primarily sympathetic toward the aggrieved group (Oskooii et al. 2021).

In light of preexisting theoretical insights, we test if exposure to violence generates temporally durable prosocial attitudes among the mass public. For Studies 1 and 2, we remove observations in the days immediately after Pulse but not after those days, and then re-analyze the influence of being surveyed *post-Pulse*. The logic is that observations immediately after Pulse may be the most susceptible to shifting attitudes toward segments of the LGBTQ+ community. Removing them may help us evaluate the possibility of attitudinal decay by comparing respondents interviewed just before Pulse and some days after Pulse. After removing respondents interviewed between 1-10 days *post-Pulse*, the influence of being interviewed *post-Pulse* on *SSM support* is statistically null in Study 1 (Figure 10). Results of this exercise are mixed for Study 2 and conditional on model specifications and the number of days removed *post-Pulse*. However, there is no clear, persistent influence of taking the S-IAT *post-Pulse* on *heterocentrism* or the *D-score* for respondents that took the S-IAT several days *post-Pulse* (Figure C21). Additionally, Figure D22 shows beliefs homosexuality is morally wrong decrease relative to a stable baseline between 1978-1998 the moment Shepard is murdered, but reverts back to the pre-treatment mean by 2001. These findings comport with prior research demonstrating “focusing” events may only generate temporary support for marginalized groups and that punctuated information reducing anti-LGBTQ+ bias has temporally fickle effects. In summary, exposure to anti-LGBTQ+ violence may motivate prosocial attitudes, but only in the short-term.

9 Discussion and Conclusion

Across three studies, we demonstrate exposure to anti-LGBTQ+ violence generates prosocial attitudes toward segments of the LGBTQ+ community. Prior research at the intersection of trauma exposure and prosocial attitudes typically focuses on ingroup altruism or outgroup altruism toward marginalized groups outside the dimension of sexuality. A critical contribution inherent to our theory and evidence is that altruism born of suffering is not simply an intra-group phenomenon, but can extend across the mass public toward marginalized minority groups, specifically, sexual and gender minorities. In addition, our study demonstrates direct exposure to violence is not necessary to motivate prosocial beliefs toward marginalized minority outgroups, but rather incidental exposure through the mass media.

Although we do our best to ensure both the internal and external validity of our studies, they still pose a number of limitations that future research should resolve. We only assess prominent events with a high media salience, not quotidian instances of anti-LGBTQ+ violence or derogation. Future research should assess if exposure, direct or indirect, to lower salience anti-LGBTQ+ violence motivates prosocial beliefs. It is also unclear if the dynamics we observe extend to instances of targeted violence against other marginalized groups. Although some research assesses how exposure to anti-Black police violence informs prosocial attitudes toward Black people (Sigelman et al. 1997, Reny & Newman 2021), there is limited work on how non-police violence such as the 1998 James Byrd murder, the 2015 Charleston Church shooting, the 2015 Stanford sexual assault case, the 2019 El Paso shooting, or the 2021 Atlanta spa shooting informs attitudes toward the targeted group. Future research should continue to empirically test our theoretical framework outside the LGBTQ+ domain. In addition, a possible scope condition of our study is that media attention to the relevant violent events was relatively sympathetic, generating a potential basis for outgroup empathy by the mass public. Thus, future research should assess if the mass public responds in a prosocial manner conditional on unsympathetic media frames toward the victimized group. Moreover, our outcomes mostly implicate gay men and lesbians. Given differences in atti-

tudes toward other groups under the LGBTQ+ umbrella, future research should assess if instances of anti-gay or broader anti-LGBTQ+ violence generates prosocial attitudes toward other LGBTQ+ subgroups such as transgender or non-binary people.

Bibliography

- Atkeson, L. R. & Maestas, C. D. (2012), *Catastrophic politics: How extraordinary events redefine perceptions of government*, Cambridge University Press, Cambridge, UK.
- Ayoub, P. M. & Garretson, J. (2017), ‘Getting the message out: Media context and global changes in attitudes toward homosexuality’, *Comparative Political Studies* **50**(8), 1055–1805.
- Batson, C. D. (2014), *The altruism question: Toward a psychological answer*, Psychology Press, Hove, UK.
- Batson, C. D. & Ahmad, N. Y. (2009), ‘Using empathy to improve intergroup attitudes and relations’, *Social Issues and Policy Review* **3**(1), 141–177.
- Batson, C. D., Chang, J., Orr, R. & Rowland, J. (2002), ‘Empathy, attitudes, and action: Can feeling for a member of a stigmatized group motivate one to help the group?’, *Personality and Social Psychology Bulletin* **28**(12), 1656–1666.
- Benjamini, Y. & Hochberg, Y. (1995), ‘Controlling the false discovery rate: a practical and powerful approach to multiple testing’, *Journal of the Royal statistical society: series B (Methodological)* **57**(1), 289–300.
- Beyerlein, K. & Sikkink, D. (2014), ‘Sorrow and solidarity: Why americans volunteered for 9/11 relief efforts’, *Social Problems* **55**(2), 190–215.
- Birkland, T. A. (1997), *After disaster: Agenda setting, public policy, and focusing events*, Georgetown University Press, Washington D.C.
- Birkland, T. A. (1998), ‘Focusing events, mobilization, and agenda setting’, *Journal of Public Policy* **18**(1), 53–74.
- Birkland, T. A. & Lawrence, R. G. (2009), ‘Media framing and policy change after columbine’, *American Behavioral Scientist* **52**(10), 1405–1425.
- Bishop, B. H. (2014), ‘Focusing events and public opinion: Evidence from the deepwater horizon disaster’, *Political Behavior* **36**, 1–22.

Bowers, M. M. & Whitley, C. T. (2018), ‘Assessing voter registration among transgender and gender non-confirming individuals’, *Political Behavior* **42**(1), 143–164.

Brader, T. (2005), *Campaigning for Hearts and Minds: How Emotional Appeals in Political Ads Work*, University of Chicago Press, Chicago, IL.

Brader, T., Valentino, N. A. & Suhay, E. (2008), ‘What triggers public opposition to immigration? anxiety, group cues, and immigration threat’, *American Journal of Political Science* **52**(4), 959–978.

Brewer, P. R. (2003), ‘Values, political knowledge, and public opinion about gay rights: A framing-based account’, *Public Opinion Quarterly* **67**(2), 173–201.

Brooke, J. (1998), ‘Gay man dies from attack, fanning outrage and debate’, *The New York Times*.

URL: <https://www.nytimes.com/1998/10/13/us/gay-man-dies-from-attack-fanning-outrage-and-debate.html>

Calonico, S., Cattaneo, M. D. & Titiunik, R. (2015), ‘rdrobust: An r package for robust nonparametric inference in regression-discontinuity designs.’, *R J.* **7**(1), 38.

Cattaneo, M. D., Jansson, M. & Ma, X. (2020), ‘Simple local polynomial density estimators’, *Journal of the American Statistical Association* **115**(531), 1449–1455.

Chan, N. K. M. & Jasso, F. (2021), ‘From inter-racial solidarity to action: Minority linked fate and african american, latina/o, and asian american political participation’, *Political Behavior* pp. 1–23.

Chibbaro, L. (2019), ‘Fbi report shows increase in anti-lgbt hate crimes’, *Washington Blade*

URL: <https://www.washingtonblade.com/2019/11/20/fbi-report-shows-increase-in-anti-lgbt-hate-crimes/>

Chong, D. & Druckman, J. N. (2007), ‘Framing theory’, *Annual Review of Political Science* **10**, 103–126.

Chudy, J. & Jefferson, H. (2021), ‘Support for black lives matter surged last year. did it

last', *The New York Times*.

Compton, J. (2018), 'Two decades after matthew shepard's death, lgbtq community still battles hate violence', *NBC*.

URL: <https://www.nbcnews.com/feature/nbc-out/two-decades-after-matthew-shepard-s-death-lgbtq-community-still-n919401>

Coppock, A. (2019), 'Generalizing from survey experiments conducted on mechanical turk: A replication approach', *Political Science Research and Methods* **7**(3), 613–628.

Cotterll, C. A., Richards, D. A. R. & Nichols, A. L. (2010), 'Predicting policy attitudes from general prejudice versus specific intergroup emotions', *Journal of Experimental Social Psychology* **46**(2), 247–254.

Dawson, M. C. (2020), *Behind the Mule*, Princeton University Press, Princeton, NJ.

Dodge, K. A., Bates, J. E. & Pettit, G. S. (1990), 'Mechanisms in the cycle of violence', *Science* **250**(4988), 1678–1683.

Feezell, J. T., Glazier, R. A. & Boydston, A. E. (2019), 'Framing, identity, and responsibility: do episodic vs. thematic framing effects vary by target population?', *Politics, Groups and Identities* **9**(2), 286–294.

Fingerhut, A. W. (2011), 'Straight allies: What predicts heterosexuals' alliance with the lgbt community?', *Journal of Applied Social Psychology* **41**(9), 2230–2248.

Flores, A. (2014), 'National trends in public opinion on lgbt rights in the united states'.

Flores, A. R. & Barclay, S. (2016), 'Backlash, consensus, legitimacy, or polarization: The effect of same-sex marriage policy on mass attitudes', *Political Research Quarterly* **69**(1), 43–56.

Frazier, P., Greer, C., Gabrielsen, S., Tennen, H., Park, C. & Tomich, P. (2013), 'The relation between trauma exposure and prosocial behavior', *Psychological Trauma: Theory, Research, Practice, and Policy* **5**(3), 286–294.

Gelman, A. & Zelizer, A. (2015), 'Evidence on the deleterious impact of sustained use of polynomial regression on causal inference', *Research & Politics* **2**(1), 2053168015569830.

- Greenwald, A. G. & Lai, C. K. (2020), ‘Implicit social cognition’, *Annual Review of Psychology* **71**, 419–445.
- Greenwald, A. G., McGhee, D. E. & Schwartz, J. L. (1998), ‘Measuring individual differences in implicit cognition: the implicit association test.’, *Journal of personality and social psychology* **74**(6), 1464.
- Greenwald, A. G., Nosek, B. A. & Banaji, M. R. (2003), ‘Understanding and using the implicit association test: I. an improved scoring algorithm.’, *Journal of personality and social psychology* **85**(2), 197.
- Greitemeyer, T., Fischer, P., Kastenmüller, A. & Frey, D. (2006), ‘Civil courage and helping behavior’, *European Psychologist* **11**(2), 90–98.
- Greszki, R., Meyer, M. & Schoen, H. (2015), ‘Exploring the effects of removing “too fast” responses and respondents from web surveys’, *Public Opinion Quarterly* **79**(2), 471–503.
- Haider-Markel, D. P. & Joslyn, M. R. (2008), ‘Beliefs about the origins of homosexuality and support for gay rights: An empirical test of attribution theory’, *Public Opinion Quarterly* **72**(2), 291–310.
- Herek, G. M. (1984), ‘Attitudes toward lesbians and gay men: A factor-analytic study’, *Journal of Homosexuality* **10**(1–2), 39–51.
- Herek, G. M. (1988), ‘Heterosexuals’ attitudes toward lesbians and gay men: Correlates and gender differences’, *Journal of Sex Research* **25**(4), 451–477.
- Herek, G. M. (2008), ‘Hate crimes and stigma-related experiences among sexual minority adults in the united states: Prevalence estimates from a national probability sample’, *Journal of Interpersonal Violence* **24**(1), 54–74.
- Hersh, E. D. (2013), ‘Long-term effect of september 11 on the political behavior of victims’ families and neighbors’, *Proceedings of the National Academy of Sciences* **110**(52), 20959–20963.
- Iyengar, S. (1994), *Is anyone responsible?: How television frames political issues*, University of Chicago Press, Chicago, IL.

- Jenkins, M., Lambert, E. G. & Baker, D. N. (2009), ‘The attitudes of black and white college students toward gays and lesbians’, *Journal of black studies* **39**(4), 589–613.
- Kalla, J. L. & Broockman, D. E. (2021), “outside lobbying” over the airwaves: A randomized field experiment on televised issue ads’, *American Political Science Review* pp. 1–7.
- Kaniasty, K. & Norris, F. H. (1995), ‘In search of altruistic community: Patterns of social support mobilization following hurricane hugo’, *American Journal of Community Psychology* **23**(4), 447–477.
- Kazyak, E. & Stange, M. (2018), ‘Backlash or a positive response?: Public opinion of lgb issues after obergefell v. hedges’, *Journal of Homosexuality* **65**(14), 2028–2052.
- Keleher, A. & Smith, E. R. (2012), ‘Growing support for gay and lesbian equality since 1990’, *Journal of homosexuality* **59**(9), 1307–1326.
- Kingdon, J. W. (1995), *Agenda, Alternatives and Public Policies*, Harper Collins, New York City, NY.
- Klauer, K. C. & Mierke, J. (2005), ‘Task-set inertia, attitude accessibility, and compatibility-order effects: New evidence for a task-set switching account of the implicit association test effect’, *Personality and Social Psychology Bulletin* **31**(2), 208–217.
- Krebs, D. (1975), ‘Empathy and altruism’, *Journal of Personality and Social Psychology* **32**(6), 1134–1146.
- Krosnick, J. A. & Alwin, D. F. (1987), ‘An evaluation of a cognitive theory of response-order effects in survey measurement’, *Public opinion quarterly* **51**(2), 201–219.
- Laniyonu, A. (2021), ‘Phantom pains: The effect of police killings of black americans on black british attitudes’, *British Journal of Political Science* pp. 1–17.
- Lapointe, A. A. (2015), ‘Standing “straight” up to homophobia: Straight allies’ involvement in gsas’, *Journal of LGBT Youth* **12**(2), 144–169.
- Lee, D. S. & Lemieux, T. (2010), ‘Regression discontinuity designs in economics’, *Journal of economic literature* **48**(2), 281–355.
- Lengel, A. (1998), ‘Thousands mourn student’s death’, *The Washington Post*.

URL: <https://www.washingtonpost.com/archive/politics/1998/10/15/thousands-mourn-students-death/a118bfb-530e-47ab-853d-4fb5fc66dd25/>

- Lewis, D. C., Flores, A. R., Haider-Markel, D. P., Miller, P. R., Tadlock, B. L. & Taylor, J. K. (2017), ‘Degrees of acceptance: Variation in public attitudes toward segments of the lgbt community’, *Political Research Quarterly* **70**(4), 861–875.
- Lissitsa, S. & Kushnirovich, N. (2020), ‘Coevolution between parasocial interaction in digital media and social contact with lgbt people’, *Journal of Homosexuality* **68**(14), 1–24.
- Loffreda, B. (2001), *Losing Matt Shepard: Life and politics in the aftermath of anti-gay murder*, Columbia University Press, New York City, NY.
- Mackie, D. M., Devos, T. & Smith, E. R. (2000), ‘Intergroup emotions: Explaining offensive action tendencies in an intergroup context’, *Journal of Personality and Social Psychology* **79**(4), 602–616.
- Malhotra, N. (2008), ‘Completion time and response order effects in web surveys’, *Public opinion quarterly* **72**(5), 914–934.
- Miller, P. R., Flores, A. R., Haider-Markel, D. P., Lewis, D. C., Tadlock, B. & Taylor, J. K. (2020), ‘The politics of being “cait”: Caitlyn Jenner, transphobia, and parasocial contact effects on transgender-related political attitudes’, *American Politics Research* **48**(5), 622–634.
- Montada, L. & Schneider, A. (1989), ‘Justice and emotional reactions to the disadvantaged’, *Social Justice Research* **3**, 313–344.
- Morrison, M. A. & Morrison, T. G. (2003), ‘Development and validation of a scale measuring modern prejudice toward gay men and lesbian women’, *Journal of Homosexuality* **43**(2), 15–37.
- Muñoz, J., Falcó-Gimeno, A. & Hernández, E. (2020), ‘Unexpected event during survey design: Promise and pitfalls for causal inference’, *Political Analysis* **28**(2), 186–206.
- Norton, A. A. & Herek, G. M. (2013), ‘Heterosexuals’ attitudes toward transgender people: Findings from a national probability sample of u.s. adults’, *Sex Roles* **68**, 738–753.

- Ofosu, E. K., Chambers, M. K., Chen, J. M. & Hehman, E. (2019), ‘Same-sex marriage legalization associated with reduced implicit and explicit antigay bias’, *Proceedings of the National Academy of Sciences* **116**(18), 8846–8851.
- Oskooii, K. A., Lajevardi, N. & Collingwood, L. (2021), ‘Opinion shift and stability: The information environment and long-lasting opposition to trump’s muslim ban’, *Political Behavior* **43**(1), 301–337.
- Ott, B. L. & Aoki, E. (2002), ‘The politics of negotiating public tragedy: Media framing of the matthew shepard murder’, *Rhetoric and Public Affairs* **5**(3), 483–505.
- Paas, L. J. & Morren, M. (2018), ‘Please do not answer if you are reading this: Respondent attention in online panels’, *Marketing Letters* **29**(1), 13–21.
- Page, D. (2018), ‘When does sexuality-based discrimination motivate political participation’, *Political Psychology* **39**(5), 1013–1030.
- Ratliff, K. & Smith, C. (2021), ‘Lessons from two decades with project implicit’, *A Handbook of Research on Implicit Bias and Racism. APA Books*.
- Read, B., Wolters, L. & Berinsky, A. J. (2021), ‘Racing the clock: Using response time as a proxy for attentiveness on self-administered surveys’, *Political Analysis* pp. 1–20.
- Reny, T. T. & Newman, B. J. (2021), ‘The opinion-mobilizing effect of social protest against police violence: Evidence from the 2020 george floyd protests’, *American Political Science Review* **115**(4), 1499–1507.
- Roßmann, J. (2010), Data quality in web surveys of the german longitudinal election study 2009, in ‘3rd ECPR Graduate Conference’, Vol. 30.
- Scheer, J. R. & Poteat, V. P. (2016), ‘Factors associated with straight allies’ current engagement levels within gay–straight alliances’, *Journal of Applied Developmental Psychology* **43**, 112–119.
- Sears, D. O. (1993), 5. symbolic politics: A socio-psychological theory, in ‘Explorations in political psychology’, Duke University Press, pp. 113–149.
- Sigelman, L., Welch, S., Blesdloe, T. & Combs, M. (1997), ‘Police brutality and public

- perceptions of racial discrimination: A tale of two beatings', *Political Research Quarterly* **50**(4), 771–791.
- Staub, E. (2003), *The psychology of good and evil: Why children, adults, and groups help and harm others*, Cambridge University Press, Cambridge, UK.
- Staub, E. & Vollhardt, J. R. (2010), 'Altruism born of suffering: The roots of caring and helping after victimization and other trauma', *American Journal of Orthopsychiatry* **78**(3), 267–280.
- Steffan, S. L. & Fothergill, A. (2009), '9/11 volunteerism: A pathway to personal healing and community engagement', *The Social Science Journal* **46**(1), 29–46.
- Stephan, W. G. & Finlay, K. (1999), 'The role of empathy in improving intergroup relations', *Journal of Social Issues* **55**(4), 729–743.
- Stotzer, R. L. (2009), 'Straight allies: Supportive attitudes toward lesbians, gay men, and bisexuals in a college sample', *Sex Roles* **60**, 67–80.
- Taylor, P. (2013), *A survey of LGBT Americans: Attitudes, experiences and values in changing times*, Pew Research Center.
- Tedeschi, R. G. & Calhoun, L. G. (2004), 'Posttraumatic growth: conceptual foundations and empirical evidence', *Psychological Inquiry* **15**(1), 1–18.
- Thomas, E. F., McGarty, C. & Mavor, K. L. (2009), 'Transforming apathy into movement: The role of prosocial emotions in motivating action for social change', *Personality and Social Psychology Review* **13**(4), 310–333.
- Umberson, D., Olson, J. S., Crosnoe, R., Liu, H., Pudrovska, T. & Donnelly, R. (2017), 'Death of family members as an overlooked source of racial disadvantage in the united states', *Proceedings of the National Academy of Science* **114**(5), 915–920.
- Valcore, J. L. & Buckler, K. (2020), 'An act of terror and an act of hate: national elite and populace newspaper framing of pulse nightclub shooting', *Criminal Justice Studies* **33**(3), 276–296.
- van Doorn, J., Zeelenberg, M. & Breugelmans, S. M. (2014), 'Anger and prosocial behavior',

- Emotion Review* **6**(3), 261–268.
- Vollhardt, J. R. (2009), ‘Altruism born of suffering and prosocial behavior following adverse life events: A review and conceptualization’, *Social Justice Research* **22**, 53–97.
- Vollhardt, J. R. & Staub, E. (2011), ‘Inclusive altruism born of suffering: The relationship between adversity and prosocial attitudes and behavior toward disadvantaged outgroups’, *American Journal of Orthopsychiatry* **81**(3), 307–315.
- Vuletich, H. A. & Payne, B. K. (2019), ‘Stability and change in implicit bias’, *Psychological Science* **30**(6), 854–862.
- Yzerbyt, V., Dumont, M., Wigboldus, D. & Gordijn, E. (2003), ‘I feel for us: The impact of categorization and identification on emotions and action tendencies’, *British Journal of Social Psychology* **42**(4), 533–549.
- Zaller, J. R. et al. (1992), *The nature and origins of mass opinion*, Cambridge university press.

Supplemental Information

A Pulse Context	3
A.1 Salience Data Details	3
A.2 Media Attention Data Details	3
A.3 Chicago Council Study	4
A.3.1 Data Details	4
A.3.2 Outcome Items	4
A.3.3 Balance Plot	5
A.3.4 Regression Table	5
A.4 Google Trends Data Details	6
A.5 Hate Crime Perceptions Data Details	6
 B Study 1: TAPS	 6
B.1 Outcome Measurement	6
B.2 Manipulation Check	7
B.3 Insensitivity to Truncation	7
B.4 Baseline Covariate Measurement	8
B.5 SSM Support By Interview Date	9
B.6 Outcome Item Non-response Balance	10
B.7 Ruling Out Pre-Treatment Time Trends	10
B.8 RDiT Approach	10
B.9 Regression Tables	11
B.9.1 Balance Plot	11
B.9.2 Post-Pulse Influence on SSM Support	12
B.9.3 Falsification Tests	13
B.10 Temporal Placebo Tests	13
B.10.1 Temporal Placebo Test Survey Information	13
B.11 Alternative Bandwidths	14

B.12	Ordinal Outcome Re-estimation	14
C	Study 2: PI S-IAT	15
C.1	Baseline Covariate Measurement	15
C.2	Anti-Gay Attitudes Over Time	15
C.3	Regression Tables	16
	C.3.1 Balance Tests	16
	C.3.2 Influence of Pulse on Anti-Gay Attitudes	19
C.4	Re-analysis with controls	20
C.5	RDiT Estimates Near Cutpoint	21
	C.5.1 Triangular Kernel	21
	C.5.2 Uniform Kernel	22
	C.5.3 Epanechnikov Kernel	23
C.6	Temporal Placebo Tests	24
	C.6.1 Triangular Kernel	24
	C.6.2 Uniform Kernel	25
	C.6.3 Epanechnikov Kernel	26
C.7	Prior Year Temporal Placebo Test	27
C.8	IAT Taker Sorting	27
C.9	Donut Hole RDiT	28
	C.9.1 Triangular Kernel	28
	C.9.2 Uniform Kernel	29
	C.9.3 Epanechnikov Kernel	30
C.10	Non-Homonegative Attitudes Falsification Tests	31
	C.10.1 Anti-Black, Anti-Asian Attitudes	31
	C.10.2 Anti-Differently Abled, Anti-Arab Attitudes	32
	C.10.3 Anti-Dark Skinned, Anti-Woman Attitudes	33
C.11	Temporal Persistence	34

D Study 3: Matthew Shepard	35
D.1 Media Data Details	35
D.2 Homosexuality = Morally Wrong Outcome	35
D.2.1 Study Details	35
D.2.2 Temporal Placebo Details	36
D.2.3 Persistence of Post-Shepard Effect	36
D.3 Hire Gay People For Military Outcome	37
D.3.1 Study Details	37
D.3.2 Temporal Placebo Details	37
D.4 Regression Tables	39
D.4.1 Balance Test (CNN Jun '98/Oct '98)	39
D.4.2 Balance Test (Newsweek Jul '98/Gallup Feb '99)	39
D.4.3 Influence of Shepard's Murder on Attitudes Toward Gay People	40
D.4.4 Temporal Placebo Tests	41
D.4.5 Falsification Tests	42
D.5 Falsification Test Outcome Details	42

A Pulse Context

A.1 Salience Data Details

CBS News June 13-14 Poll is a nationally representative adult survey ($N = 1001$). The poll used a random digit dial methodology. Interviews were conducted in English and Spanish using live interviewers. The data are weighted to reflect U.S. census figures on demographic variables. The margin of error for the weighted data is ± 4 percentage points. The item of interest on Figure 1, Panel A is: “How closely have you been following news about the recent shooting at a nightclub frequented by gays and lesbians in Orlando, Florida where at least 49 people were killed – very closely, somewhat closely, not too closely, or not at all closely?” The item of interest on Figure 5, Panel A is “Do you think the shooting at the nightclub in Orlando, Florida was (mostly a terrorist act), (mostly a hate crime against people who are gay and lesbian), or both?”

Kaiser Family Foundation June 15-21 Poll is a nationally representative adult survey ($N = 1201$). The poll used a random digit dial methodology. The item of interest on Figure 1, Panel A is: “How closely have you been following news about the recent shooting at a nightclub frequented by gays and lesbians in Orlando, Florida where at least 49 people were killed – very closely, somewhat closely, not too closely, or not at all closely?”

A.2 Media Attention Data Details

We acquired media data on the daily number of web articles related to the topics of interest from Mediabase’s Explorer Search Tool (<https://explorer.mediacloud.org/>) from January 1, 2016 to October 15, 2016 to generate Figure 2. The reason we do not include data after October 15, 2016 in our analyses is because we do not want our analyses to be perturbed by the 2016 election, which increased attention to LGBTQ-related topics due to Trump’s anti-LGBTQ positions. The two measures of media attention we evaluate are the *article count* and *article ratio*. The article count is the raw number of web articles including a specific search term(s). The article ratio is the number of web articles including a specific search term(s) normalized over the total number of web articles.

We acquire article count and ratio data on three topics.

1. Pulse-related topics
2. LGBTQ-related topics
3. Terrorism-related topics.

Pulse-related topics are the article count sum and article ratio mean for queries on the terms “orlando massacre,” “orlando shooting,” “pulse nightclub,” “pulse shooting.” LGBTQ-related topics are the article count sum and article ratio mean for queries on the terms “anti-gay,” “anti-lgbt,” “gay marriage,” “gay rights,” “hate crime,” and “same sex marriage.” Terrorism-related topics are the article count sum and ratio mean for queries on the terms “isis,” “lone wolf,” “mass shooting,” “terror attack,” and “terrorism.”

A.3 Chicago Council Study

A.3.1 Data Details

The Chicago Council on Global Affairs Poll is a nationally representative adult survey fielded between June 10-26, 2016 ($N = 2061$). The survey was conducted by GfK Knowledge Networks. The margin of sampling error for the weighted data is ± 2.4 percentage points. The data are subsetted to respondents who took between 10-60 minutes to complete the roughly 120 item survey ($N = 1704$).

A.3.2 Outcome Items

“Less Safe Since 9/11” Do you think that, as a country, we are more safe, about as safe, or less safe than we were before the terrorist attacks of September 11th, 2001? 1) More safe, 2) About as safe 3) Less safe. Measured binary = 1 if respondent indicates “less safe.”

“Terror Attacks Likely” How likely is it that occasional acts of terrorism in the U.S. will be part of life in the future? 1) Very likely, 2) Somewhat likely, 3) Not very likely, 4) Not at all likely. Re-scaled from 0-1 with 1 = very likely.

“Terrorism = Critical Threat” Below is a list of possible threats to the vital interest of the United States in the next 10 years. For each one, please select whether you see this as a critical threat, an important but not critical threat, or not an important threat at all: International terrorism. 1) Critical threat, 2) Important but not critical threat, 3) Not an important threat. Measured binary = 1 if respondent indicates “critical threat.”

“Worried (Terrorism)” Are you very worried, somewhat worried, not very worried or not worried at all that: You or someone you know will be the target of a terrorist attack. 1) Very worried, 2) Somewhat worried, 3) Not very worried, 4) Not at all worried. Re-scaled from 0-1 with 1 = very worried.

“Worried (Gun Violence)” Are you very worried, somewhat worried, not very worried or not worried at all that: You or someone you know will be the target of gun violence. 1) Very worried, 2) Somewhat worried, 3) Not very worried, 4) Not at all worried. Re-scaled from 0-1 with 1 = very worried.

A.3.3 Balance Plot

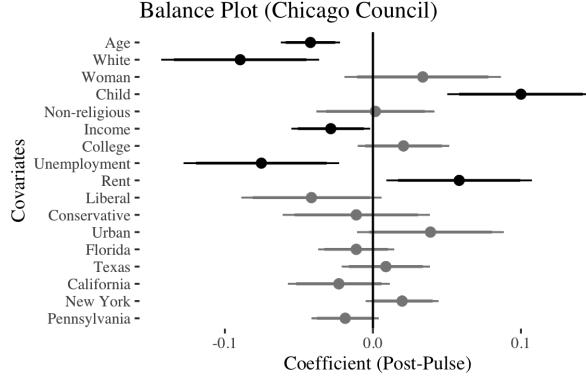


Figure A1: Covariate Balance for Survey Respondent Characteristics Before and After the Pulse Massacre in the Chicago Council on Global Affairs Survey (June 2016). Black coefficients are statistically significant, grey otherwise. All estimates use post-stratification survey weights to ensure representativeness. All covariates scaled between 0-1. 95% CIs displayed derived from HC2 robust standard errors.

A.3.4 Regression Table

Table A1: The Pulse Massacre Was Perceived by the Mass Public

	Less Safe (1)	Safe (2)	Terror (3)	Likely (4)	Terror (5)	Threat (6)	Worry (7)	(Terror) (8)	Worry (9)	(Gun Violence) (10)
Post-Pulse	0.10*** (0.03)	0.12*** (0.03)	0.07*** (0.02)	0.08*** (0.02)	0.03 (0.03)	0.05* (0.02)	0.06*** (0.02)	0.05** (0.02)	0.03* (0.02)	0.02 (0.02)
Age		0.19* (0.08)		0.09 (0.05)		0.24** (0.08)		-0.06 (0.05)		-0.07 (0.05)
White		0.10** (0.03)		0.05* (0.02)		0.01 (0.03)		-0.05** (0.02)		-0.06** (0.02)
Woman		0.03 (0.03)		0.02 (0.02)		0.07** (0.02)		0.09*** (0.02)		0.09*** (0.02)
Child		-0.01 (0.03)		-0.03 (0.02)		-0.09** (0.03)		-0.01 (0.02)		0.00 (0.02)
Non-Religious		-0.07 (0.04)		-0.02 (0.02)		-0.14*** (0.04)		-0.08*** (0.02)		-0.03 (0.02)
Income		-0.09 (0.06)		0.13** (0.05)		0.23*** (0.06)		-0.02 (0.04)		-0.03 (0.04)
College		-0.05 (0.04)		-0.03 (0.02)		-0.03 (0.03)		-0.02 (0.02)		0.00 (0.02)
Unemployed		-0.01 (0.03)		0.01 (0.02)		-0.04 (0.03)		0.01 (0.02)		-0.00 (0.02)
Rent		-0.02 (0.03)		0.01 (0.02)		0.09** (0.03)		0.01 (0.02)		0.03 (0.02)
Liberal		-0.08* (0.03)		-0.02 (0.02)		-0.02 (0.03)		-0.04 (0.02)		0.03 (0.02)
Conservative		0.16*** (0.03)		0.04 (0.02)		0.05 (0.03)		0.02 (0.02)		-0.06** (0.02)
Urban		-0.02 (0.03)		-0.02 (0.02)		-0.00 (0.03)		0.01 (0.02)		0.02 (0.02)
State FE	N	Y	N	Y	N	Y	N	Y	N	Y
R ²	0.01	0.09	0.02	0.10	0.00	0.08	0.01	0.07	0.00	0.08
N	1704	1704	836	836	1415	1415	1693	1693	1696	1696

Note: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$. Models 1, 3, 5, 7, 9 do not adjust for control covariates while Models 2, 4, 6, 8, and 10 do. All models use weights for representativeness. HC2 robust standard errors in parentheses.

A.4 Google Trends Data Details

We acquired Google Trends search data at the weekly level from the `gtrendsR` R package. We generate three different search intensity measures capturing interest in the Pulse nightclub shooting, LGBTQ-related issues, and terrorism-related issues. The Pulse-related issue measure is the average of the Google Trends search intensity measures for separate queries on the “pulse nightclub,” “pulse shooting,” “orlando massacre,” and “orlando shooting.” The LGBTQ-related issue measure is the average of the Google Trends search intensity measures for separate queries on “gay rights,” “gay marriage,” “same-sex marriage,” “hate crime,” “anti-gay,” and “anti-lgbt.” The terrorism-related issue measure is the average of the Google Trends search intensity measures for separate queries on “terrorism,” “terror attack,” “lone wolf,” “ISIS,” and “mass shooting.”

The search intensity measure is the number of total searches divided by the total searches of the geography (United States) and time range (January 1, 2016-October 1, 2016) it represents to compare relative popularity. The numbers are scaled on a range of 0-100 based on a topic’s proportion to all searches on all topics. For more information see <https://support.google.com/trends/answer/4365533?hl=en>

A.5 Hate Crime Perceptions Data Details

The AP/Black Youth Project July Poll is a nationally representative adult survey ($N = 1940$) fielded between July 9, 2016 and July 12, 2016. The data are weighted to reflect U.S. census figures on demographic variables. The margin of error for the weighted data is ± 4 percentage points. The item of interest on Figure 5, Panel B is: “You may recall that last month (June 2016), 49 people were shot and killed (and 53 people were injured) by 29-year-old Omar Mateen at Pulse nightclub in Orlando, Florida. From what you remember, do you think the shooting at the nightclub in Orlando, Florida was a terrorist act, a hate crime against people who are gay, lesbian, bisexual, and transgender, a hate crime against Latinos/Hispanics, or none of the above? Please select all that apply.”

B Study 1: TAPS

B.1 Outcome Measurement

To measure support for same-sex marriage, we use an item in the June 2016 TAPS survey asking respondents if “you generally support or oppose same-sex marriage.” with options to choose: 1) Support; 2) Oppose; and 3) No opinion.

B.2 Manipulation Check

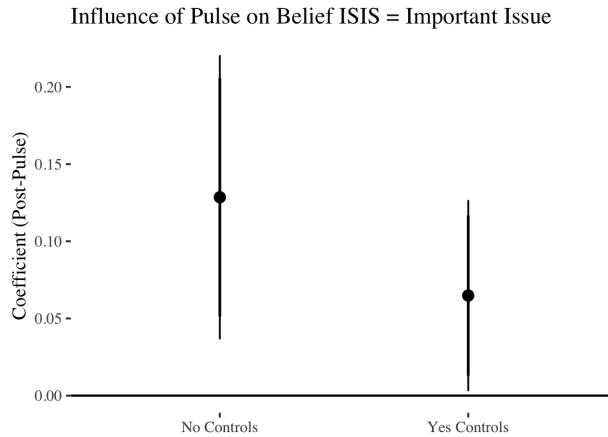


Figure B2: Belief ISIS = Most Important Issue Increases After Pulse. All estimates use post-stratification survey weights to ensure representativeness. All covariates scaled between 0-1. 95% CIs displayed derived from HC2 robust standard errors.

B.3 Insensitivity to Truncation

Table B2: Comparison Between truncated TAPS June '16 Sample and ANES '16 Sample

Covariate	TAPS Jun. '16	ANES '16	Diff.	T-test	p-value
Woman	0.51	0.51	0.01	0.73	
White	0.78	0.78	0.01	0.71	
Age (18-29)	0.20	0.18	0.03	0.03	
Age (30-44)	0.24	0.23	0.00	0.76	
Age (45-59)	0.29	0.32	-0.02	0.13	
Age (60+)	0.26	0.27	-0.01	0.55	
College	0.31	0.29	0.02	0.16	
Liberal	0.39	0.41	-0.02	0.32	
California	0.10	0.09	0.01	0.49	
New York	0.05	0.04	0.01	0.36	
Florida	0.05	0.06	-0.01	0.22	
Pennsylvania	0.05	0.05	-0.00	0.93	
Texas	0.07	0.08	-0.01	0.18	

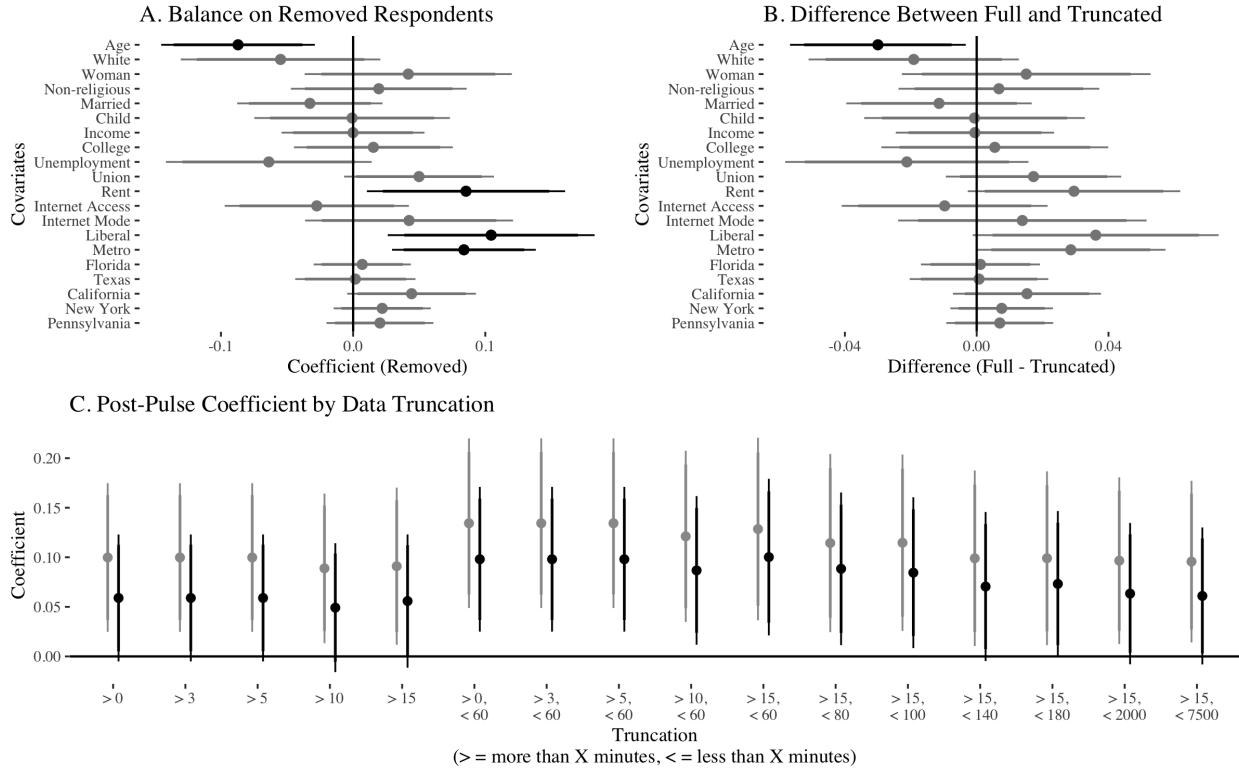


Figure B3: Truncated Estimates. Panel A displays balance between removed respondents (who finished the survey in less than 15 minutes, more than 60) and respondents that were not removed. Panel B displays balance between the full and the truncated sample. Panel C displays coefficients characterizing the influence of *post-Pulse* on *SSM support* based on various samples removing respondents who took more than or less than a particular number of minutes (defined on the x-axis).

B.4 Baseline Covariate Measurement

Age is a 4 category index from 0-3 characterizing respondents aged 18-29, 30-44, 45-59, 60+. Scaled between 0-1.

White is a binary indicator equal to 1 if the respondent indicates that “white” is a race they currently identify as.

Woman is a binary indicator equal to 1 if the respondent indicates they are “female” in response to a question asking if they are female or male.

Child is a binary indicator equal to 1 if the respondent indicates they have children in response to an item asking if they have biological or adopted children.

Non-religious is a binary indicator equal to 1 if the respondent indicates they are “not religious” in response to an item asking if they consider themselves Christian, Jewish, Muslim, Buddhist, Hindu, or another religion.

Married is a binary indicator equal to 1 if the respondent did not indicate they were divorced, widowed, separated from their partner, or never married.

Income is a 0-5 scale of the respondents self-reported household income from < \$10,000, \$10-29,999, \$30-49,999, \$50-79,999, \$80-99,999, \$100,000 or more. Scaled between 0-1.

College is a binary indicator equal to 1 if the respondent reports the highest level of school they have completed is at or above a bachelor's degree.

Unemployment is a binary indicator equal to 1 if the respondent reports they are not working at a job for pay.

Union is a binary indicator equal to 1 if the respondent reports they or someone in their household is a member of a labor union.

Rent is a binary indicator equal to 1 if the respondent reports they rent when asked if they rent or own their home.

Internet Access is a binary indicator equal to 1 if the respondent reports they have household internet access.

Internet Mode is a binary indicator equal to 1 if the respondent was recruited via an online mechanism instead of mail, call-in, or outbound calls.

Liberal is a binary indicator equal to 1 if the respondent indicates they are “slightly liberal,” “liberal,” or “very liberal” in addition to indicating that they are “liberal if they had to choose” in an additional question conditional on indicating “don’t know” or “moderate” in the initial question.

Metro is a binary indicator equal to 1 if the respondent lives in a zipcode that is a metropolitan area.

State indicators (Florida, Texas, California, New York, Pennsylvania) are equal to 1 if the respondent self-reports they live in the respective states.

B.5 SSM Support By Interview Date

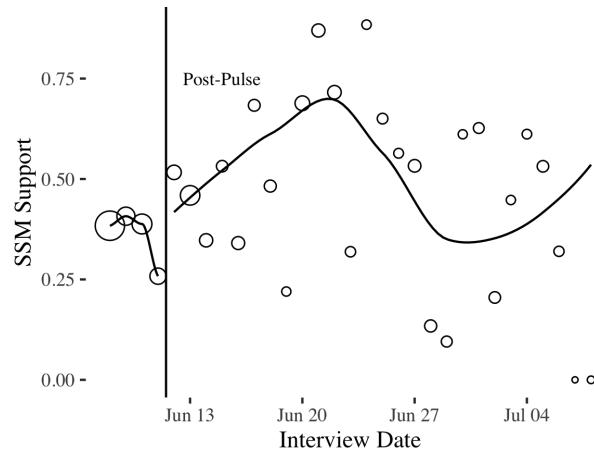


Figure B4: Support for Same Sex Marriage (y-axis) Across Interview Dates (x-axis). Vertical line is the moment the Pulse nightclub shooting occurred. Loess models are fit on each side of the moment the Pulse shooting occurred and are weighted based on the interview date sample size. Larger circles denote more interviews on a given date. All covariates re-scaled between 0-1.

B.6 Outcome Item Non-response Balance

Table B3: Outcome Item Non-response is Balanced Between Pre and Post-Pulse Periods

SSM Item Non-Response	
Post-Pulse	0.008 (0.005)
R ²	0.003
N	1142

Note: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$. HC2 robust standard errors in parentheses.

B.7 Ruling Out Pre-Treatment Time Trends

Table B4: The Effect of Pulse On SSM Support is Not Driven by Pre-Treatment Time Trends

SSM Support	
Post-Pulse Placebo	-0.035 (0.063)
R ²	0.001
N	679

Note: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$. HC2 robust standard errors in parentheses.

B.8 RDiT Approach

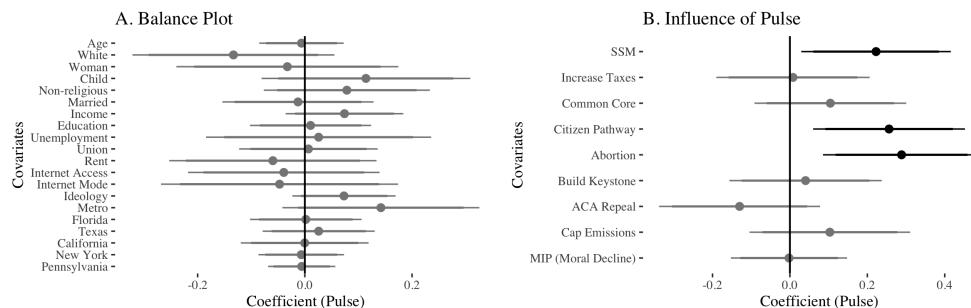


Figure B5: Regression Discontinuity-In-Time Estimates Characterizing Pre/Post Pulse Covariate Balance (Panel A) and the Influence of the Pulse Nightclub Shooting on Policy Preferences (Panel B). 95% CIs displayed derived from HC2 robust standard errors.

B.9 Regression Tables

B.9.1 Balance Plot

Outcome	Post-Pulse Coef.	SE	p	N
Age	-0.18	0.03	0.00	1142
White	-0.06	0.04	0.17	1142
Woman	0.04	0.05	0.42	1142
Non-religious	0.06	0.04	0.16	1142
Married	0.04	0.03	0.13	1142
Child	-0.06	0.05	0.18	1142
Income	-0.02	0.03	0.48	1142
College	-0.06	0.03	0.07	1140
Unemployment	-0.05	0.05	0.27	1142
Union	0.01	0.03	0.69	1142
Rent	0.04	0.04	0.39	1142
Internet Access	-0.01	0.04	0.79	1142
Internet Mode	0.01	0.05	0.80	1142
Liberal	0.06	0.05	0.18	1142
Metro	0.01	0.04	0.78	1142
Florida	0.01	0.02	0.62	1142
Texas	0.02	0.03	0.56	1142
California	-0.03	0.03	0.18	1142
New York	0.03	0.02	0.17	1142
Pennsylvania	-0.01	0.02	0.66	1142

B.9.2 Post-Pulse Influence on SSM Support

Table B5: Support for Same Sex Marriage Increases After Pulse

	SSM Support	
	(1)	(2)
Post-Pulse	0.13** (0.05)	0.10* (0.04)
Age	0.02 (0.07)	
White	0.20*** (0.05)	
Woman	0.05 (0.04)	
Non-religious	0.25*** (0.06)	
Married	-0.01 (0.05)	
Child	-0.09 (0.05)	
Income	0.03 (0.07)	
College	0.11** (0.04)	
Unemployed	-0.03 (0.05)	
Union	-0.05 (0.05)	
Renter	0.03 (0.06)	
Internet Access	-0.02 (0.05)	
Internet Mode	0.01 (0.04)	
Liberal	0.38*** (0.04)	
Metro Area	0.06 (0.05)	
State FE	N	Y
R ²	0.02	0.35
N	1134	1132

Note: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$. HC2 robust standard errors in parentheses.

B.9.3 Falsification Tests

Table B6: LGBTQ-Irrelevant Attitudes Do Not Change Post-Pulse

	Increase Taxes (1)	Common Core (2)	Citizen Pathway (3)	Abortion (4)	Build Keystone (5)	Repeal ACA (6)	Cap Emissions (7)
Post-Pulse	-0.02 (0.05)	0.02 (0.05)	0.01 (0.05)	0.05 (0.05)	-0.02 (0.05)	-0.06 (0.05)	-0.02 (0.05)
R ²	0.00	0.00	0.00	0.00	0.00	0.00	0.00
N	1135	1138	1137	1132	1136	1137	1135

Note: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$. HC2 robust standard errors in parentheses.

B.10 Temporal Placebo Tests

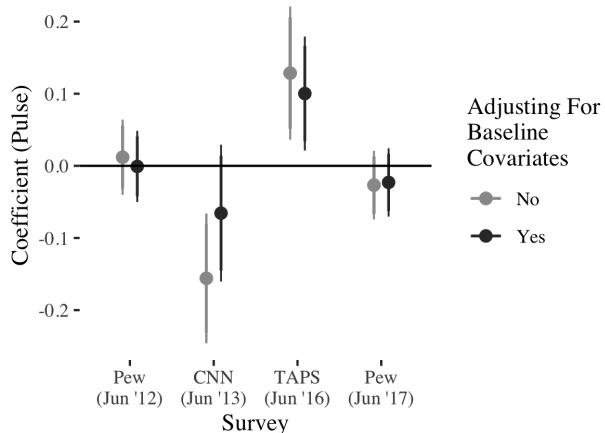


Figure B6: The Effect of Pulse is Unique to 2016. The x-axis is the survey at use. The y-axis is the coefficient for a binary indicator if the respondent was interviewed the calendar day after the Pulse massacre in 2012, 2013, 2016, and 2017 respectively. The outcome for all studies/models is support for same sex marriage. Color denotes the inclusion/exclusion of adjustment for baseline covariates between respondents interviewed before and after the calendar day of the Pulse massacre. All covariates rescaled between 0-1. 95% CIs displayed from HC2 robust standard errors.

B.10.1 Temporal Placebo Test Survey Information

Pew 2012: The 2012 Pew Voter Attitude Survey obtained telephone interviews with a nationally representative sample of $N = 2013$ adults living in the United States. The interviews were conducted by Princeton Survey Research Associates International between

June 7, 2012 to June 17, 2012. The margin of sampling error for the complete set of weighted data is ± 2.6 percentage points. The same sex marriage outcome asks respondents if they “strongly favor, favor, oppose or strongly oppose allowing gays and lesbians to marry legally.” The outcome is coded 1 if the respondent indicates strongly favor or favor, 0 otherwise.

CNN 2013: The 2013 CNN poll is a nationally representative survey using landline and cell phone sampling ($N = 1014$). The poll was in the field between June 11, 2013 and June 13, 2013. The same sex marriage outcome asks respondents if they “think marriages between gay and lesbian couples should or should not be recognized by the law as valid, with the same rights as traditional marriages?” The outcome is coded 1 if the respondent indicates gay and lesbian couples should be recognized by the law, and 0 otherwise.

Pew 2017: The 2017 Pew Political Landscape Survey was in the field between June 8, 2017 and June 18, 2017. It is a nationally representative survey of 2504 respondents. Interviews were conducted via landline and cell phone. The survey was conducted by Princeton Survey Research Associates International. The margin of error is ± 1.6 percentage points. The same sex marriage outcome asks respondents if they “strongly favor, favwor, oppose or strongly oppose allowing gays and lesbians to marry legally.” The outcome is coded 1 if the respondent indicates strongly favor or favor, 0 otherwise.

B.11 Alternative Bandwidths

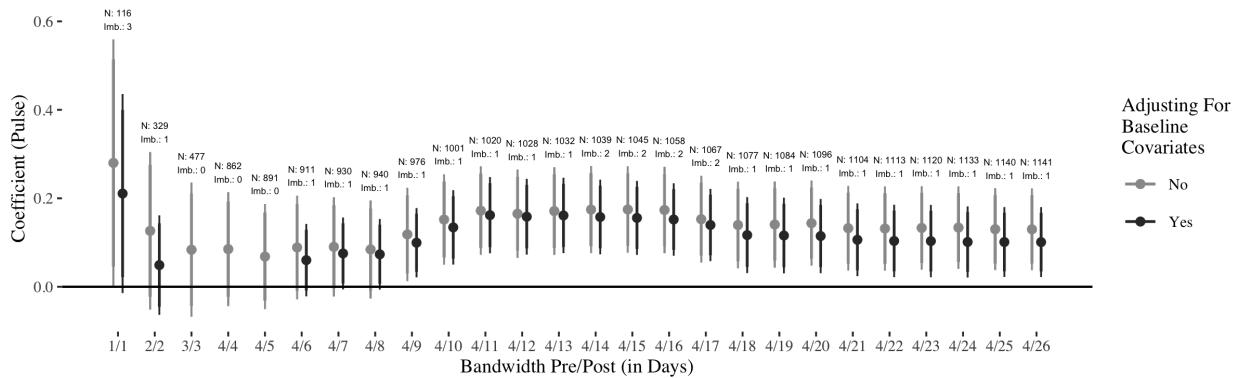


Figure B7: The Effect of Pulse is Robust to Alternate Bandwidths. The x-axis is the bandwidth (in days) for the pre and post Pulse period. The y-axis is the coefficient for a binary indicator if the respondent was interviewed after the Pulse nightclub shooting. Color denotes the inclusion/exclusion of control covariates adjusting for covariate imbalance between respondents interviewed before and after the Pulse nightclub shooting. Annotations denote sample size for each estimate in addition to the number of imbalanced covariates. All covariates re-scaled between 0-1. 95% CIs displayed from HC2 robust standard errors.

B.12 Ordinal Outcome Re-estimation

Table B7: Findings Are Robust To Using Ordinal Outcome

	SSM Support (Ordinal)	
	(1)	(2)
Post-Pulse	0.102* (0.044)	0.068† (0.038)
R ²	0.012	0.351
N	1134	1132
Controls	N	Y

Note: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, † $p < 0.1$. All covariates re-scaled between 0-1. HC2 robust standard errors in parentheses.

C Study 2: PI S-IAT

C.1 Baseline Covariate Measurement

Age: Self-reported age, rescaled between 0-1.

Woman: 1 if respondent indicates they are “female,” 0 otherwise.

White: 1 if respondent indicates they are “white,” 0 otherwise.

College: 1 if respondent indicates the highest level of education they have is a “bachelor’s degree,” “some graduate school,” a “master’s degree,” a “J.D.,” a “M.D.,” a “PhD,” an other “advanced degree” or a “M.B.A.” 0 otherwise.

Liberal: 1 if respondent indicates their political identity is “slightly liberal,” “moderately liberal,” or “strongly liberal.” 0 otherwise.

Religious: 1 if respondent indicates they are not “not at all religious,” 0 otherwise

Non-Metro: 1 if respondent is not from a “nonmetropolitan area,” 0 otherwise.

California/Pennsylvania/New York/Florida/Illinois: 1 if respondent indicates their state of residence is California/Pennsylvania/New York/Florida/Illinois, 0 otherwise.

C.2 Anti-Gay Attitudes Over Time

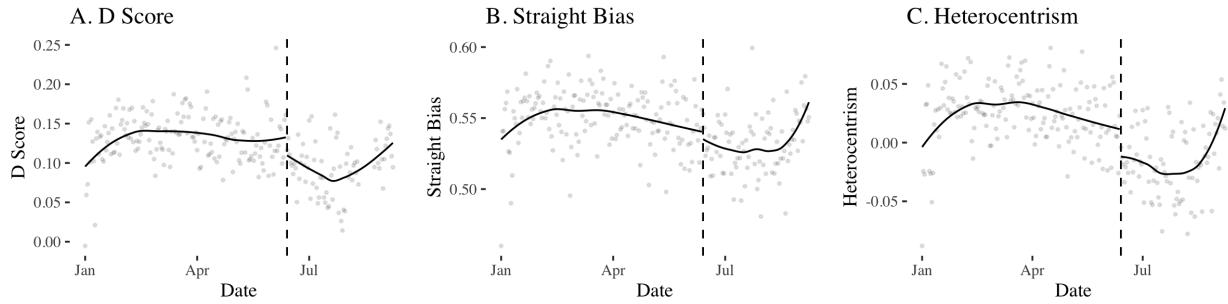


Figure C8: Anti-Gay Attitudes (y-axis) Over Time (x-axis, in days) Between 2016-01-01 and 2016-09-07. Dashed vertical line is the moment the Pulse nightclub shooting occurred. Loess models are fit on each side of the Pulse discontinuity. All covariates re-scaled between 0-1.

C.3 Regression Tables

C.3.1 Balance Tests

Table C8: Balance Tests

Outcome	Post-Pulse Coef.	SE	p	Kernel	Polynomial	N
Age	-0.01	0.01	0.53	Triangular	DIM	23
Age	-0.01	0.01	0.49	Triangular	Linear	53
Age	-0.00	0.01	0.99	Triangular	Quadratic	47
Age	-0.01	0.01	0.24	Uniform	DIM	15
Age	-0.01	0.01	0.46	Uniform	Linear	43
Age	0.00	0.01	0.83	Uniform	Quadratic	45
Age	-0.01	0.01	0.42	Epanechnikov	DIM	21
Age	-0.01	0.01	0.40	Epanechnikov	Linear	53
Age	-0.00	0.01	0.98	Epanechnikov	Quadratic	47
Woman	-0.01	0.03	0.86	Triangular	DIM	23
Woman	-0.01	0.04	0.80	Triangular	Linear	53
Woman	-0.05	0.06	0.40	Triangular	Quadratic	57
Woman	-0.00	0.03	0.90	Uniform	DIM	17
Woman	0.01	0.03	0.71	Uniform	Linear	47
Woman	-0.04	0.05	0.42	Uniform	Quadratic	51
Woman	-0.01	0.03	0.87	Epanechnikov	DIM	21
Woman	0.00	0.03	0.97	Epanechnikov	Linear	57
Woman	-0.05	0.06	0.40	Epanechnikov	Quadratic	55
White	-0.05	0.03	0.05	Triangular	DIM	31
White	-0.06	0.03	0.04	Triangular	Linear	73
White	-0.05	0.05	0.35	Triangular	Quadratic	57
White	-0.05	0.03	0.08	Uniform	DIM	21
White	-0.07	0.04	0.07	Uniform	Linear	43
White	-0.03	0.04	0.43	Uniform	Quadratic	61
White	-0.05	0.03	0.05	Epanechnikov	DIM	27
White	-0.06	0.04	0.07	Epanechnikov	Linear	55
White	-0.05	0.05	0.34	Epanechnikov	Quadratic	55
College	0.04	0.05	0.44	Triangular	DIM	19
College	0.10	0.07	0.16	Triangular	Linear	33
College	0.13	0.09	0.13	Triangular	Quadratic	49
College	0.02	0.05	0.71	Uniform	DIM	13
College	0.06	0.07	0.41	Uniform	Linear	23
College	0.13	0.09	0.14	Uniform	Quadratic	41
College	0.03	0.05	0.57	Epanechnikov	DIM	17
College	0.09	0.06	0.16	Epanechnikov	Linear	35
College	0.13	0.09	0.14	Epanechnikov	Quadratic	47
Liberal	-0.02	0.02	0.35	Triangular	DIM	31
Liberal	-0.03	0.03	0.34	Triangular	Linear	61
Liberal	-0.03	0.04	0.35	Triangular	Quadratic	73
Liberal	-0.02	0.02	0.34	Uniform	DIM	21
Liberal	-0.02	0.03	0.49	Uniform	Linear	53
Liberal	-0.05	0.03	0.14	Uniform	Quadratic	77
Liberal	-0.02	0.02	0.31	Epanechnikov	DIM	29
Liberal	-0.03	0.03	0.31	Epanechnikov	Linear	53
Liberal	-0.03	0.04	0.38	Epanechnikov	Quadratic	67
Religious	0.04	0.03	0.17	Triangular	DIM	25
Religious	0.05	0.03	0.12	Triangular	Linear	43
Religious	0.05	0.03	0.13	Triangular	Quadratic	61
Religious	0.04	0.03	0.18	Uniform	DIM	17
Religious	0.05	0.03	0.12	Uniform	Linear	33
Religious	0.05	0.04	0.16	Uniform	Quadratic	67
Religious	0.04	0.03	0.13	Epanechnikov	DIM	21
Religious	0.05	0.03	0.11	Epanechnikov	Linear	39
Religious	0.06	0.04	0.11	Epanechnikov	Quadratic	55

Robust SEs presented. N size determined by mean-squared error optimal bandwidth selection (Calonico et al. 2015).

Table C9: Balance Tests Cont.

Outcome	Post-Pulse Coef.	SE	p	Kernel	Polynomial	N
Non-Metro	-0.01	0.01	0.55	Triangular	DIM	47
Non-Metro	0.00	0.01	0.84	Triangular	Linear	45
Non-Metro	0.01	0.02	0.54	Triangular	Quadratic	59
Non-Metro	-0.01	0.01	0.54	Uniform	DIM	21
Non-Metro	0.00	0.02	0.89	Uniform	Linear	35
Non-Metro	0.01	0.02	0.68	Uniform	Quadratic	59
Non-Metro	-0.01	0.01	0.48	Epanechnikov	DIM	39
Non-Metro	0.01	0.01	0.72	Epanechnikov	Linear	39
Non-Metro	0.01	0.02	0.63	Epanechnikov	Quadratic	59
California	0.01	0.02	0.69	Triangular	DIM	29
California	-0.00	0.03	0.95	Triangular	Linear	39
California	0.02	0.04	0.58	Triangular	Quadratic	55
California	0.01	0.01	0.44	Uniform	DIM	17
California	0.01	0.02	0.59	Uniform	Linear	49
California	-0.01	0.04	0.80	Uniform	Quadratic	45
California	0.01	0.02	0.53	Epanechnikov	DIM	29
California	-0.01	0.03	0.81	Epanechnikov	Linear	41
California	0.01	0.04	0.72	Epanechnikov	Quadratic	53
Pennsylvania	-0.01	0.01	0.45	Triangular	DIM	25
Pennsylvania	-0.02	0.02	0.31	Triangular	Linear	35
Pennsylvania	-0.03	0.02	0.22	Triangular	Quadratic	61
Pennsylvania	-0.01	0.01	0.32	Uniform	DIM	15
Pennsylvania	-0.01	0.02	0.48	Uniform	Linear	27
Pennsylvania	-0.02	0.02	0.51	Uniform	Quadratic	47
Pennsylvania	-0.01	0.01	0.42	Epanechnikov	DIM	21
Pennsylvania	-0.02	0.02	0.36	Epanechnikov	Linear	31
Pennsylvania	-0.03	0.02	0.24	Epanechnikov	Quadratic	59
New York	0.02	0.02	0.43	Triangular	DIM	17
New York	0.03	0.03	0.27	Triangular	Linear	33
New York	0.03	0.03	0.32	Triangular	Quadratic	63
New York	-0.00	0.01	1.00	Uniform	DIM	21
New York	0.01	0.02	0.52	Uniform	Linear	33
New York	0.02	0.03	0.37	Uniform	Quadratic	55
New York	0.01	0.02	0.48	Epanechnikov	DIM	17
New York	0.03	0.03	0.24	Epanechnikov	Linear	31
New York	0.03	0.03	0.32	Epanechnikov	Quadratic	61
Florida	0.02	0.03	0.36	Triangular	DIM	33
Florida	0.04	0.04	0.27	Triangular	Linear	59
Florida	0.08	0.05	0.11	Triangular	Quadratic	65
Florida	0.02	0.02	0.36	Uniform	DIM	27
Florida	0.08	0.04	0.05	Uniform	Linear	35
Florida	0.08	0.05	0.09	Uniform	Quadratic	55
Florida	0.02	0.03	0.37	Epanechnikov	DIM	29
Florida	0.04	0.04	0.27	Epanechnikov	Linear	53
Florida	0.08	0.05	0.09	Epanechnikov	Quadratic	59
Illinois	0.01	0.01	0.60	Triangular	DIM	29
Illinois	0.00	0.02	0.87	Triangular	Linear	49
Illinois	0.00	0.02	0.81	Triangular	Quadratic	73
Illinois	0.00	0.01	0.84	Uniform	DIM	17
Illinois	0.01	0.01	0.70	Uniform	Linear	41
Illinois	-0.01	0.02	0.51	Uniform	Quadratic	39
Illinois	0.00	0.01	0.71	Epanechnikov	DIM	23
Illinois	-0.00	0.02	0.99	Epanechnikov	Linear	43
Illinois	0.00	0.02	0.82	Epanechnikov	Quadratic	65

Robust SEs presented. N size determined by mean-squared error optimal bandwidth selection (Calonico et al. 2015).

C.3.2 Influence of Pulse on Anti-Gay Attitudes

Table C10: Post-Pulse Influence on Anti-Gay Attitudes

Outcome	Post-Pulse Coef.	SE	p	Kernel	Polynomial	N
D-Score	-0.03	0.02	0.04	Triangular	DIM	37.00
D-Score	-0.04	0.02	0.04	Triangular	Linear	69.00
D-Score	-0.04	0.02	0.05	Triangular	Quadratic	77.00
D-Score	-0.03	0.02	0.11	Uniform	DIM	25.00
D-Score	-0.04	0.02	0.05	Uniform	Linear	49.00
D-Score	-0.05	0.02	0.02	Uniform	Quadratic	75.00
D-Score	-0.03	0.02	0.04	Epanechnikov	DIM	33.00
D-Score	-0.04	0.02	0.04	Epanechnikov	Linear	61.00
D-Score	-0.04	0.02	0.04	Epanechnikov	Quadratic	83.00
Straight Bias	-0.01	0.01	0.37	Triangular	DIM	33.00
Straight Bias	-0.01	0.01	0.40	Triangular	Linear	55.00
Straight Bias	-0.01	0.01	0.33	Triangular	Quadratic	79.00
Straight Bias	-0.01	0.01	0.23	Uniform	DIM	19.00
Straight Bias	-0.00	0.01	0.70	Uniform	Linear	47.00
Straight Bias	-0.01	0.01	0.41	Uniform	Quadratic	75.00
Straight Bias	-0.01	0.01	0.35	Epanechnikov	DIM	27.00
Straight Bias	-0.01	0.01	0.30	Epanechnikov	Linear	51.00
Straight Bias	-0.02	0.01	0.24	Epanechnikov	Quadratic	69.00
Heterocentrism	-0.03	0.01	0.02	Triangular	DIM	31.00
Heterocentrism	-0.03	0.01	0.03	Triangular	Linear	57.00
Heterocentrism	-0.04	0.02	0.04	Triangular	Quadratic	67.00
Heterocentrism	-0.04	0.01	0.01	Uniform	DIM	21.00
Heterocentrism	-0.02	0.01	0.08	Uniform	Linear	51.00
Heterocentrism	-0.04	0.02	0.02	Uniform	Quadratic	65.00
Heterocentrism	-0.03	0.01	0.01	Epanechnikov	DIM	29.00
Heterocentrism	-0.03	0.01	0.03	Epanechnikov	Linear	55.00
Heterocentrism	-0.04	0.02	0.04	Epanechnikov	Quadratic	59.00

Note: Robust SEs presented. N size determined by mean-squared error optimal bandwidth selection (Calonico et al. 2015).

C.4 Re-analysis with controls

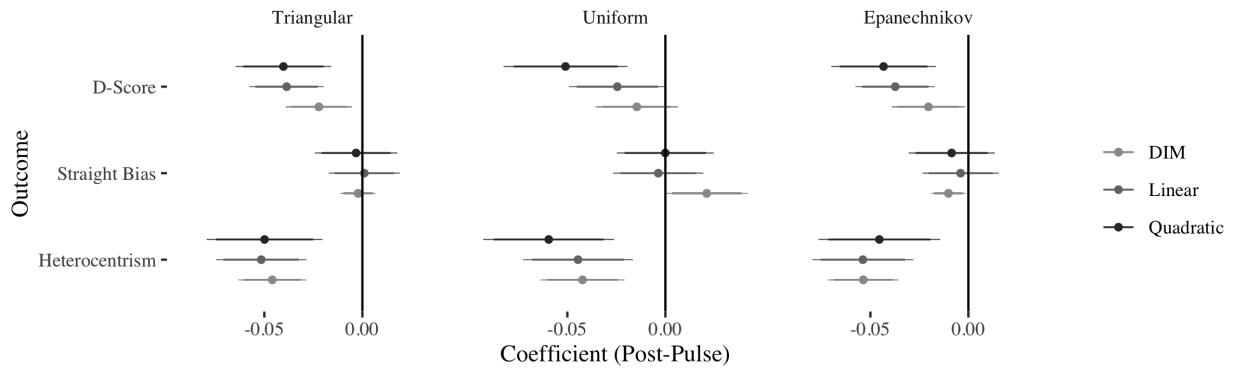


Figure C9: RDiT Estimates for *post-Pulse* Adjusting for Baseline Covariates. The x-axis is the *post-Pulse* RDiT coefficient, the y-axis is the outcome of interest. Each panel characterizes kernel at use. Color denotes the running variable polynomial degree. All covariates rescaled between 0-1. 95% CIs displayed derived from robust standard errors.

C.5 RDiT Estimates Near Cutpoint

C.5.1 Triangular Kernel

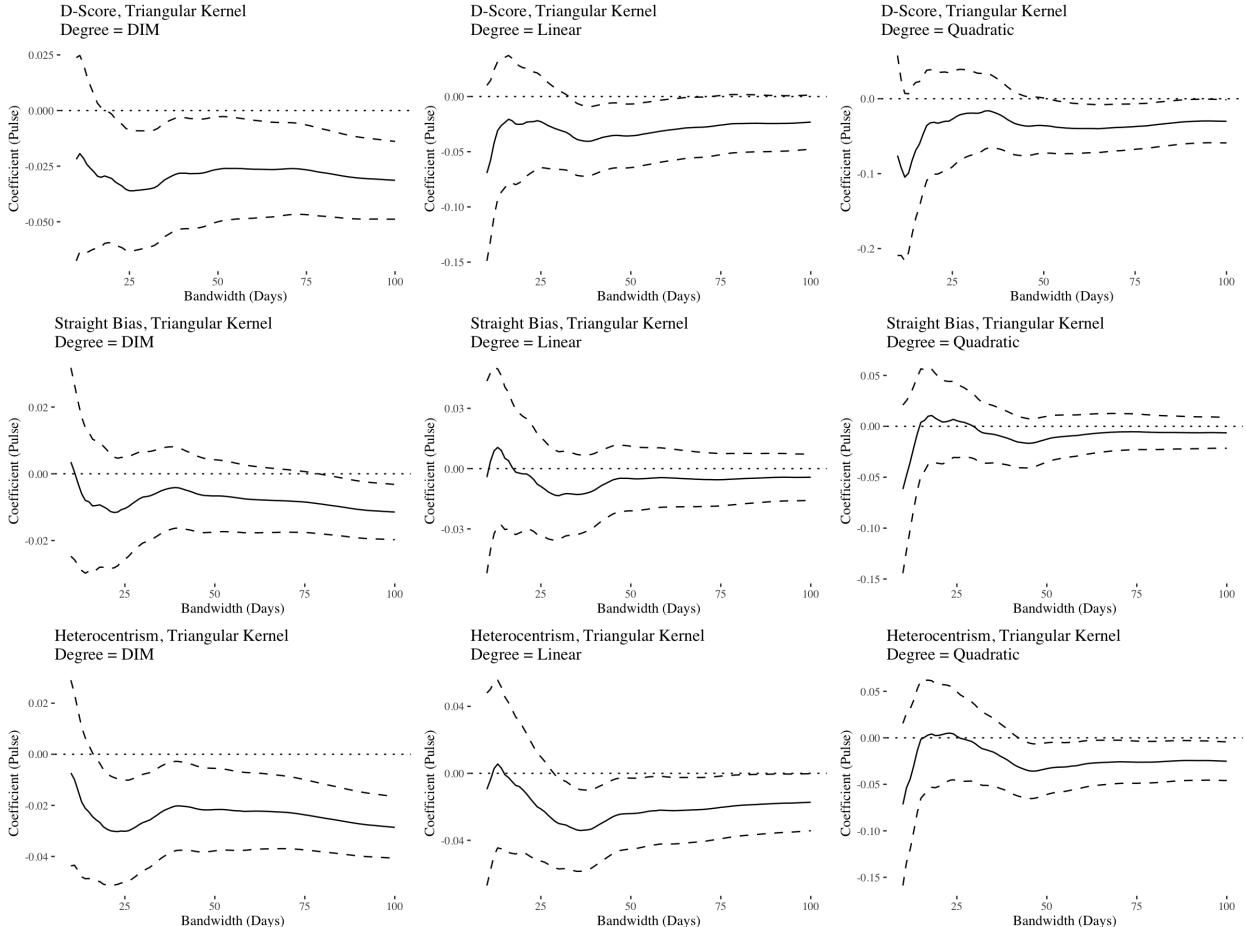


Figure C10: Re-analyzing RDiT Estimates For post-Pulse Using Data Close to the Discontinuity (10-100 days) and a Triangular Kernel. The y-axis is the RDiT effect of the massacre, the x-axis characterizes the number of days before and after Pulse used in the data. From left to right, each panel characterizes RDiT estimates using a running variable with polynomial degree 0-2 respectively. The top, middle and bottom panels characterize RDiT estimates for the *D-score*, *straight bias*, and *heterocentrism* outcomes respectively. All covariates rescaled between 0-1. 90% CIs displayed derived from robust standard errors.

C.5.2 Uniform Kernel

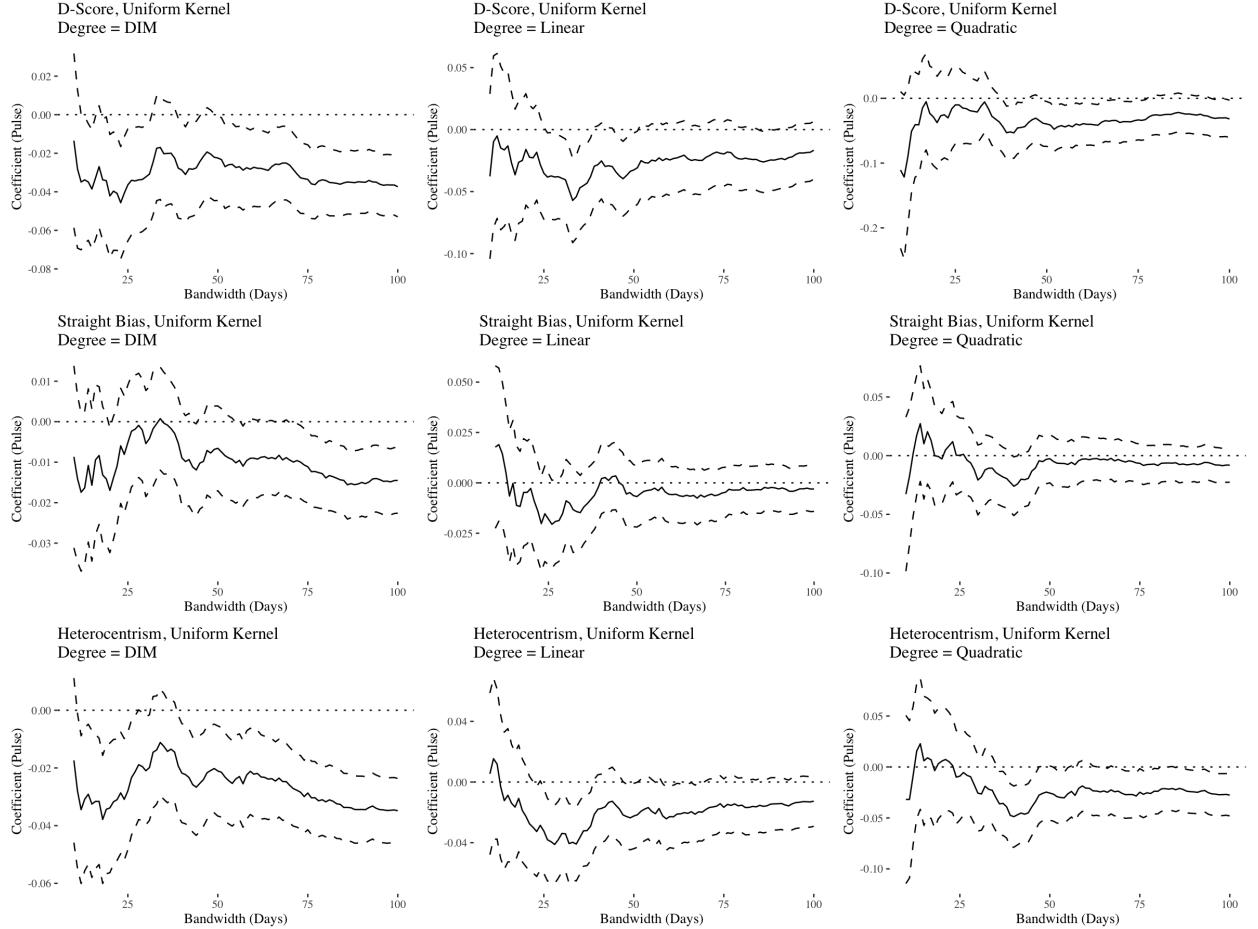


Figure C11: Re-analyzing RDiT Estimates For *post-Pulse* Using Data Close to the Discontinuity (10-100 days) and a Uniform Kernel. The y-axis is the RDiT effect of the massacre, the x-axis characterizes the number of days before and after Pulse used in the data. From left to right, each panel characterizes RDiT estimates using a running variable with polynomial degree 0-2 respectively. The top, middle and bottom panels characterize RDiT estimates for the *D-score*, *straight bias*, and *heterocentrism* outcomes respectively. All covariates rescaled between 0-1. 90% CIs displayed derived from robust standard errors.

C.5.3 Epanechnikov Kernel

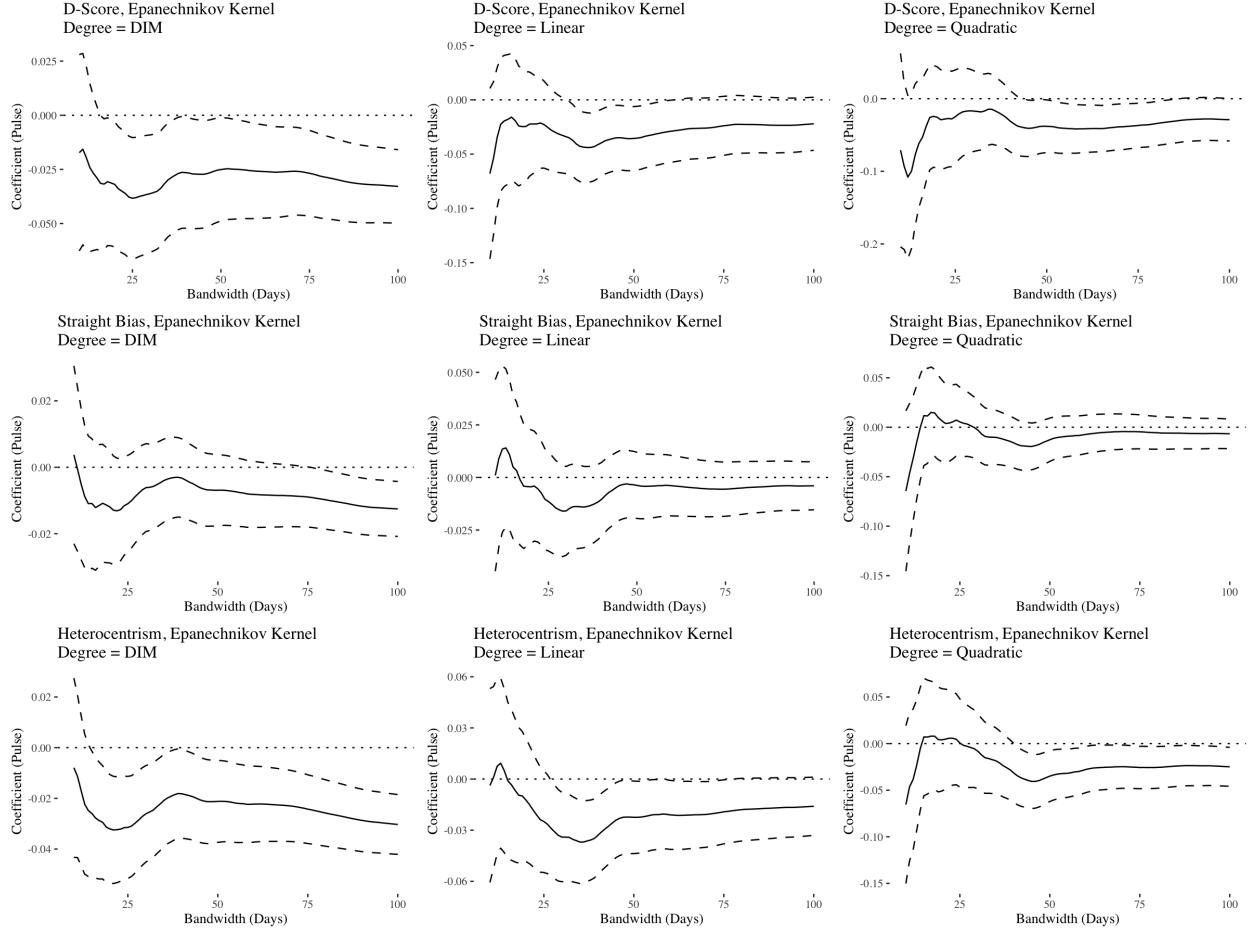


Figure C12: Re-analyzing RDiT Estimates For *post-Pulse* Using Data Close to the Discontinuity (10-100 days) and a Epanechnikov Kernel. The y-axis is the RDiT effect of the massacre, the x-axis characterizes the number of days before and after Pulse used in the data. From left to right, each panel characterizes RDiT estimates using a running variable with polynomial degree 0-2 respectively. The top, middle and bottom panels characterize RDiT estimates for the *D-score*, *straight bias*, and *heterocentrism* outcomes respectively. All covariates rescaled between 0-1. 90% CIs displayed derived from robust standard errors.

C.6 Temporal Placebo Tests

C.6.1 Triangular Kernel

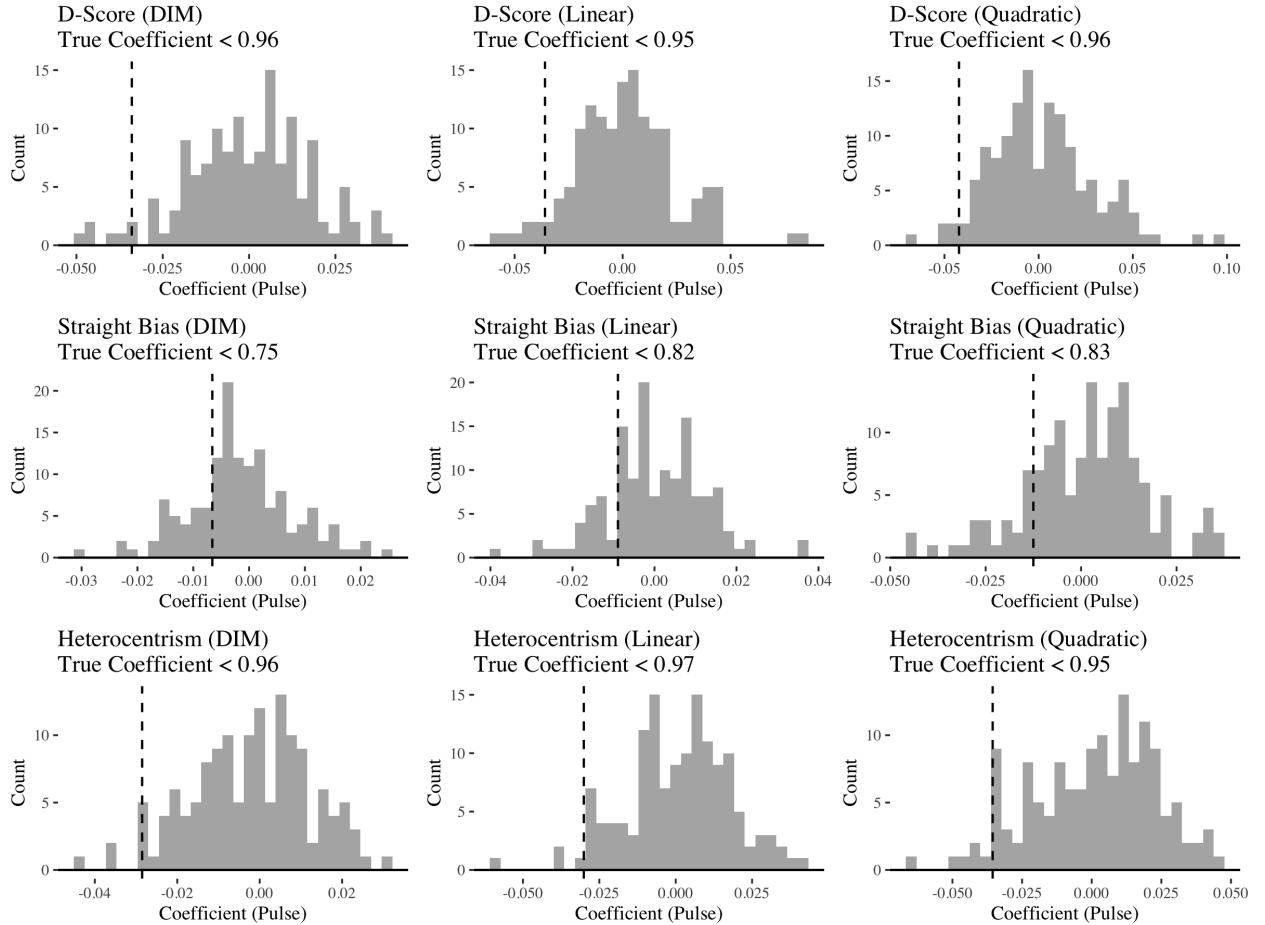


Figure C13: Comparing True *post-Pulse* RDiT Effect to Discontinuities Prior To Pulse With the Exception of the 20 Days at the Start of 2016 (Triangular Kernel). The top, middle, and bottom 3 panels characterize the placebo effects on the *D-score*, *straight bias*, and *heterocentrism* outcome. From left to right, the plots characterize placebo effects using a running variable to polynomial degree 0, 1, and 2 respectively. The x-axis characterizes placebo coefficients. The y-axis characterizes the number of coefficients along the distribution. The dashed vertical line characterizes the true effect of Pulse. Each panel title denotes the proportion of placebo coefficients the true coefficient is smaller than.

C.6.2 Uniform Kernel

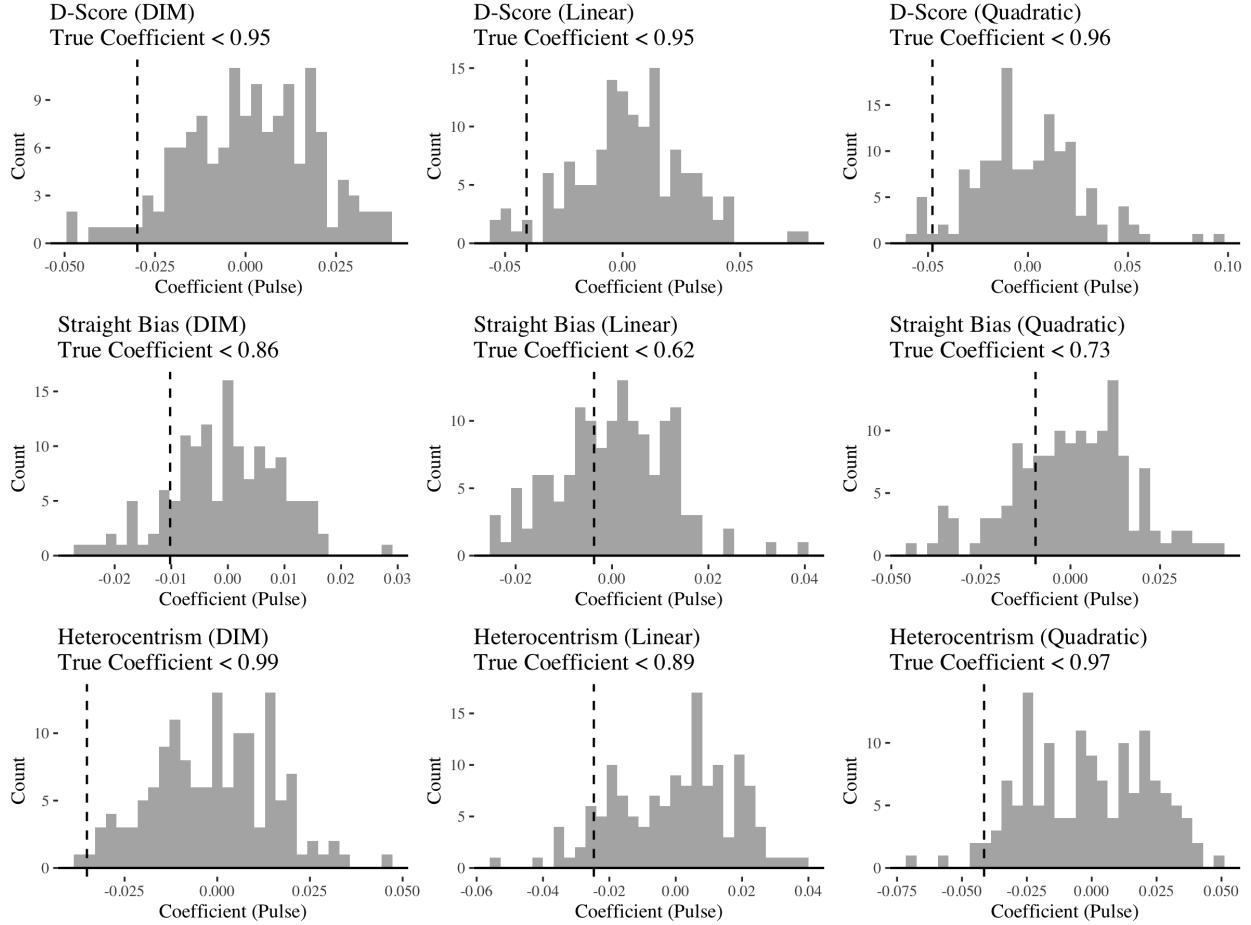


Figure C14: Comparing True *post-Pulse* RDiT Effect to Discontinuities Prior To Pulse With the Exception of the 20 Days at the Start of 2016 (Uniform Kernel). The top, middle, and bottom 3 panels characterize the placebo effects on the *D-score*, *straight bias*, and *heterocentrism* outcome. From left to right, the plots characterize placebo effects using a running variable to polynomial degree 0, 1, and 2 respectively. The x-axis characterizes placebo coefficients. The y-axis characterizes the number of coefficients along the distribution. The dashed vertical line characterizes the true effect of Pulse. Each panel title denotes the proportion of placebo coefficients the true coefficient is smaller than.

C.6.3 Epanechnikov Kernel

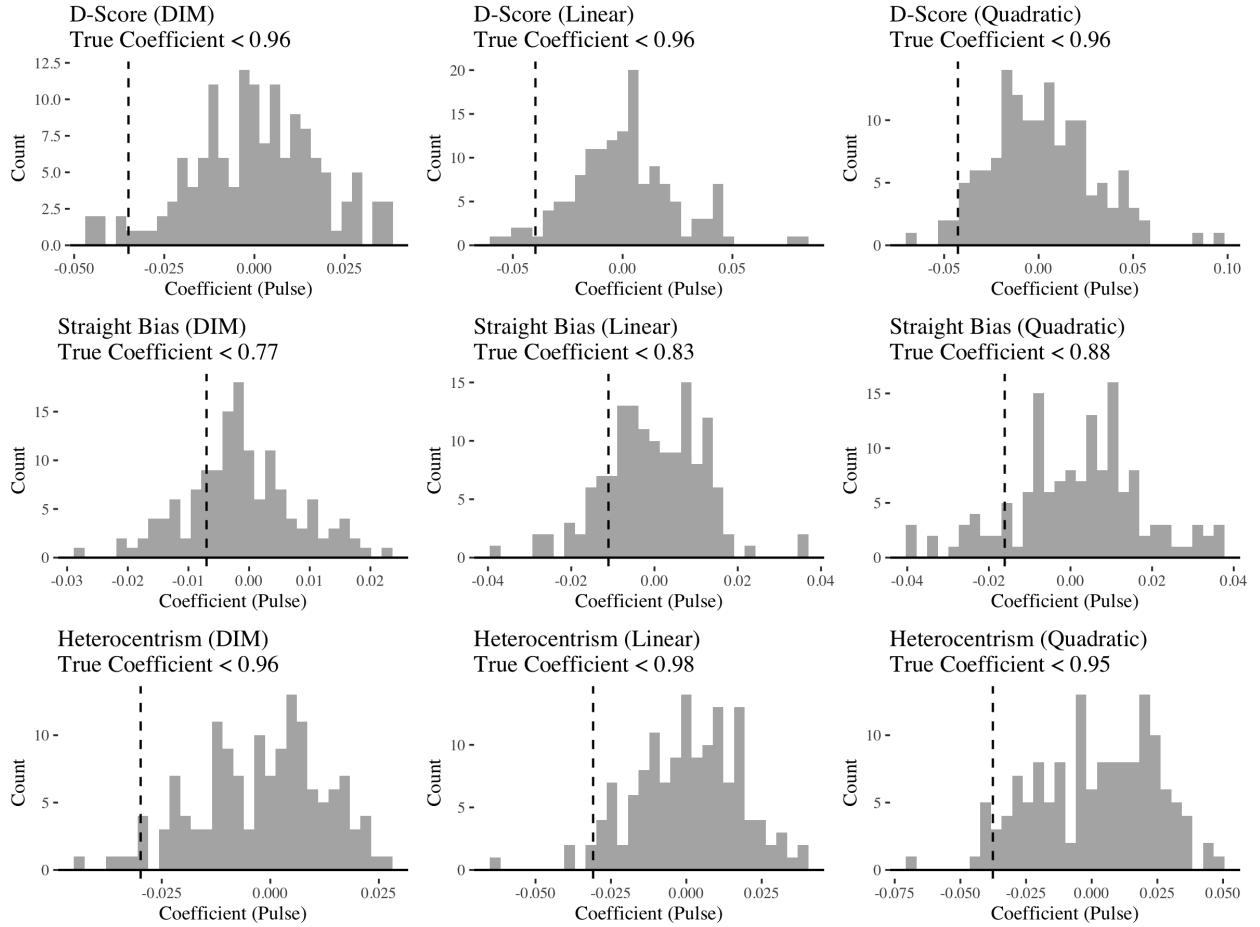


Figure C15: Comparing True *post-Pulse* RDiT Effect to Discontinuities Prior To Pulse With the Exception of the 20 Days at the Start of 2016 (Epanechnikov Kernel). The top, middle, and bottom 3 panels characterize the placebo effects on the *D-score*, *straight bias*, and *heterocentrism* outcome. From left to right, the plots characterize placebo effects using a running variable to polynomial degree 0, 1, and 2 respectively. The x-axis characterizes placebo coefficients. The y-axis characterizes the number of coefficients along the distribution. The dashed vertical line characterizes the true effect of Pulse. Each panel title denotes the proportion of placebo coefficients the true coefficient is smaller than.

C.7 Prior Year Temporal Placebo Test

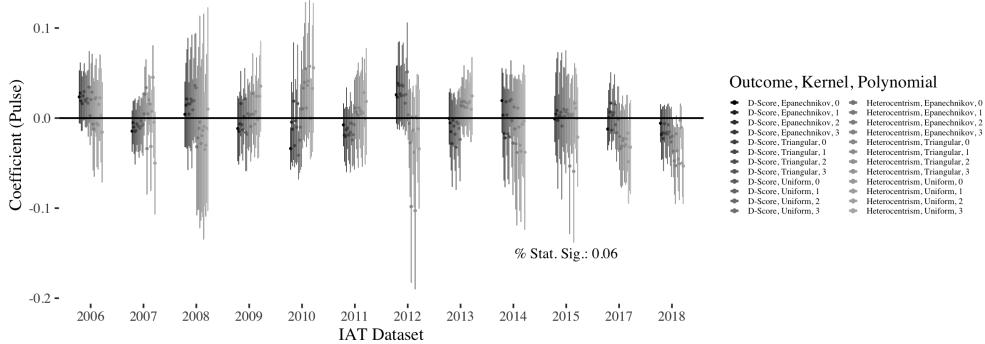


Figure C16: Temporal Placebo Tests Using IAT Data From Non-2016 Years. The x-axis is the IAT dataset at use. The y-axis is the coefficient characterizing the discontinuous effect of taking the IAT after the calendar day after the Pulse nightclub shooting occurred (June 13). Color denotes the outcome, kernel, and polynomial used in the specification. Annotations denote the proportion of tests that are statistically significant. All estimates use mean-squared optimal bandwidths. 95% CIs displayed derived from robust standard errors.

C.8 IAT Taker Sorting

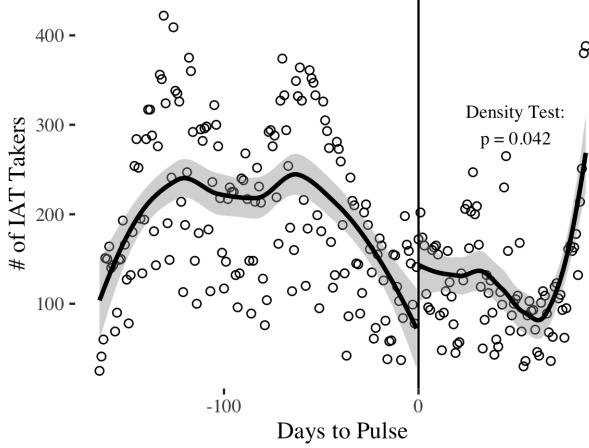


Figure C17: Accounting for S-IAT Taker Sorting. Y-axis is the number of S-IAT takers at the daily level. X-axis is the running variable. Vertical line is the moment the Pulse massacre occurs. Loess lines fit on each side of the moment the Pulse massacre occurs. Annotations denote the statistical test for sorting developed by Cattaneo et al. (2020).

C.9 Donut Hole RDiT

C.9.1 Triangular Kernel

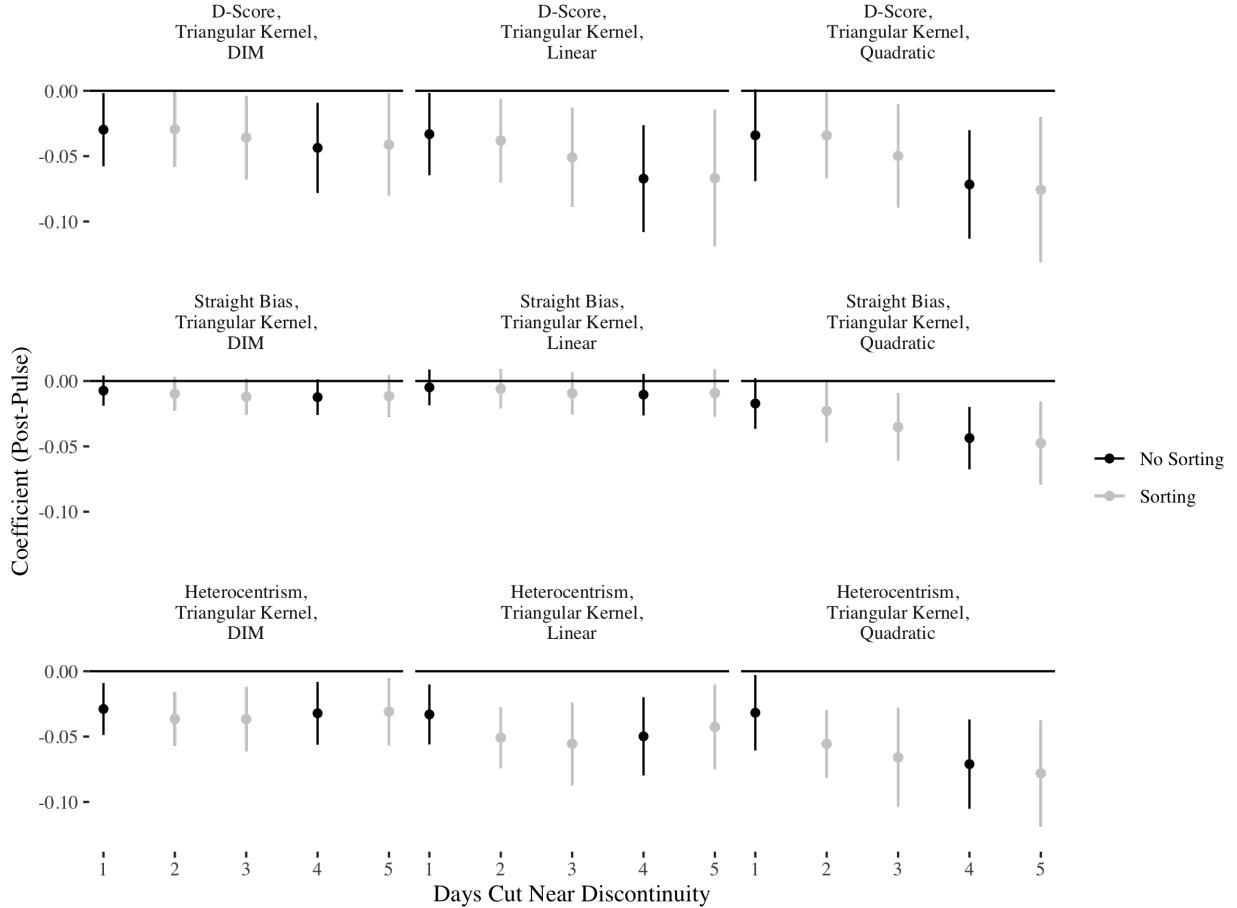


Figure C18: Donut Hole RDiT Estimates After Removing Days Near the Pulse Discontinuity (Triangular Kernel). The top, middle and bottom 3 plots characterize the effect of Pulse on the IAT D Score, straight bias, and heterocentrism. From left to right, the plots characterize donut hole RDiT coefficients using a running variable to polynomial degree 0, 1 and 2 respectively. The x-axis is the number of days removed near the discontinuity. The y-axis is the Pulse RDiT coefficient. 90% confidence intervals displayed derived from robust standard errors.

C.9.2 Uniform Kernel

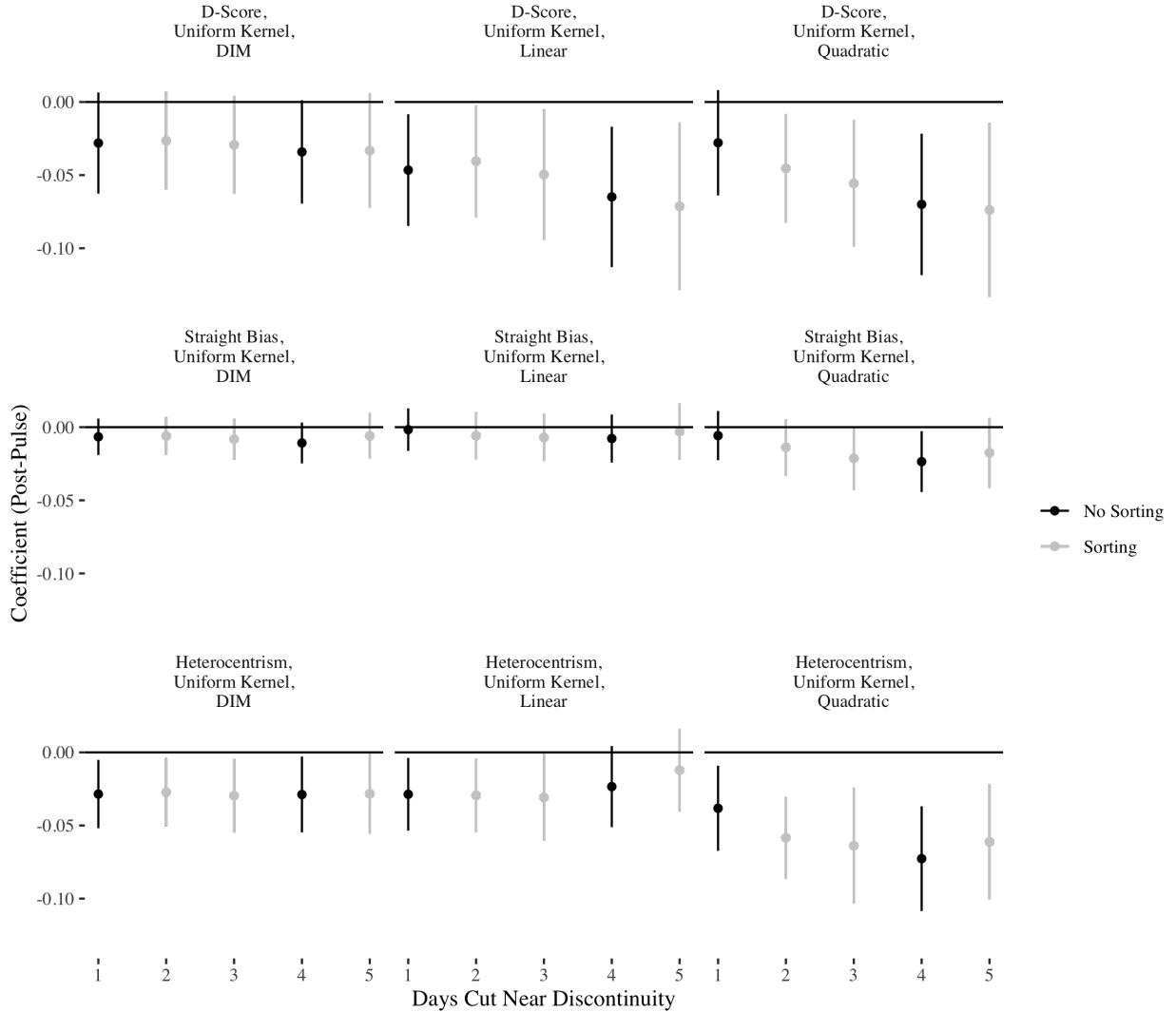


Figure C19: Donut Hole RDiT Estimates After Removing Days Near the Pulse Discontinuity (Uniform Kernel). The top, middle and bottom 3 plots characterize the effect of Pulse on the IAT D Score, straight bias, and heterocentrism. From left to right, the plots characterize donut hole RDiT coefficients using a running variable to polynomial degree 0, 1 and 2 respectively. The x-axis is the number of days removed near the discontinuity. The y-axis is the Pulse RDiT coefficient. 90% confidence intervals displayed derived from robust standard errors.

C.9.3 Epanechnikov Kernel

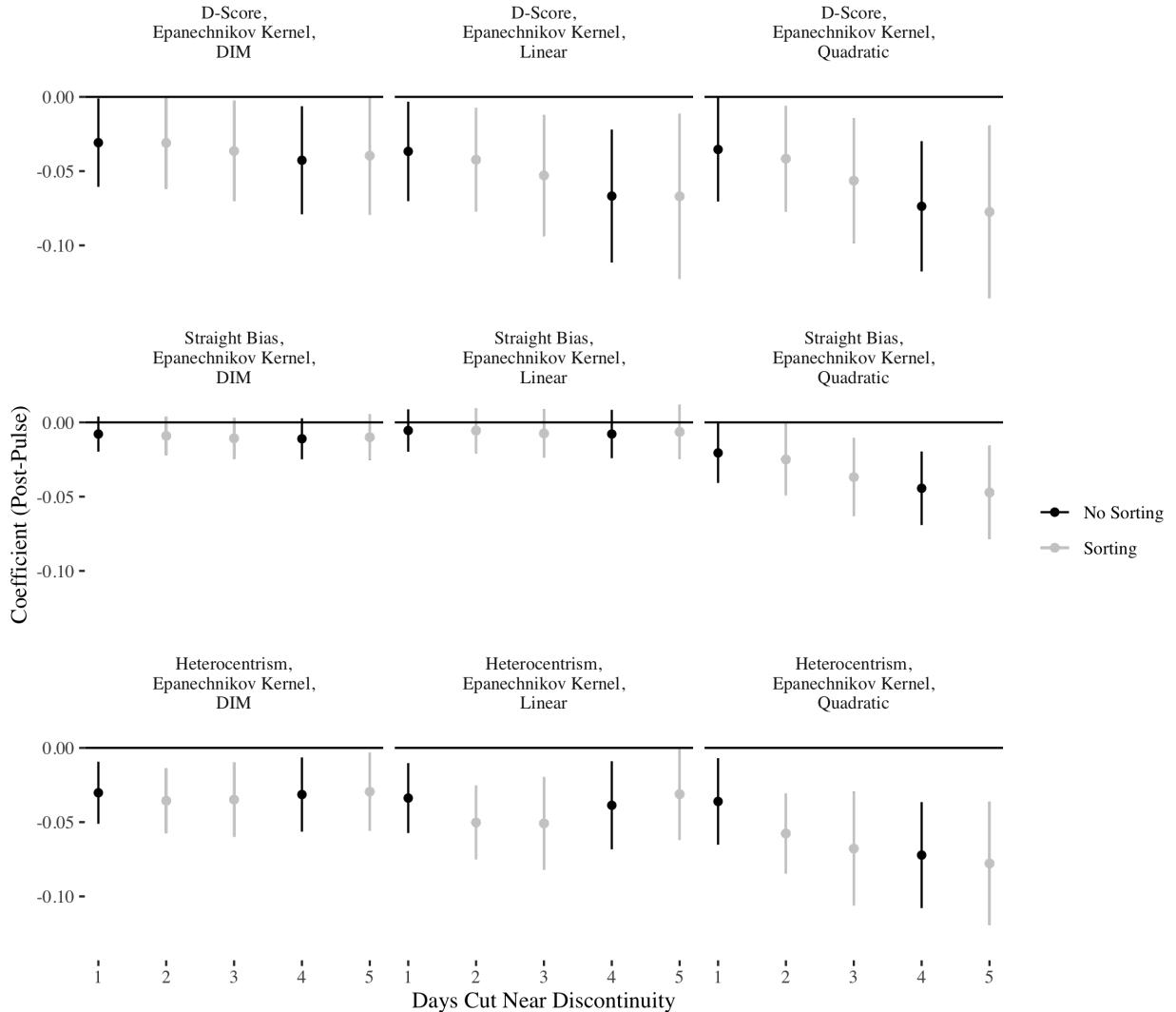


Figure C20: Donut Hole RDiT Estimates After Removing Days Near the Pulse Discontinuity (Epanechnikov Kernel). The top, middle and bottom 3 plots characterize the effect of Pulse on the IAT D Score, straight bias, and heterocentrism. From left to right, the plots characterize donut hole RDiT coefficients using a running variable to polynomial degree 0, 1 and 2 respectively. The x-axis is the number of days removed near the discontinuity. The y-axis is the Pulse RDiT coefficient. 90% confidence intervals displayed derived from robust standard errors.

C.10 Non-Homonegative Attitudes Falsification Tests

C.10.1 Anti-Black, Anti-Asian Attitudes

Table C11: Falsification Tests (Anti-Black Attitudes, Anti-Asian Attitudes)

Est. (Pulse)	SE	p-value	Outcome	Polynomial	Kernel	Dataset
-0.00	0.01	0.73	D Score	0.00	Triangular	Black/White IAT
-0.01	0.01	0.54	D Score	1.00	Triangular	Black/White IAT
-0.02	0.02	0.38	D Score	2.00	Triangular	Black/White IAT
-0.00	0.01	0.94	D Score	0.00	Uniform	Black/White IAT
-0.00	0.01	0.90	D Score	1.00	Uniform	Black/White IAT
-0.01	0.02	0.60	D Score	2.00	Uniform	Black/White IAT
-0.00	0.01	0.84	D Score	0.00	Epanechnikov	Black/White IAT
-0.01	0.01	0.65	D Score	1.00	Epanechnikov	Black/White IAT
-0.01	0.02	0.49	D Score	2.00	Epanechnikov	Black/White IAT
-0.05	0.03	0.06	White Bias	0.00	Triangular	Black/White IAT
0.00	0.06	0.98	White Bias	1.00	Triangular	Black/White IAT
-0.00	0.06	0.93	White Bias	2.00	Triangular	Black/White IAT
-0.03	0.03	0.36	White Bias	0.00	Uniform	Black/White IAT
0.00	0.06	0.97	White Bias	1.00	Uniform	Black/White IAT
0.01	0.05	0.85	White Bias	2.00	Uniform	Black/White IAT
-0.05	0.03	0.07	White Bias	0.00	Epanechnikov	Black/White IAT
0.01	0.06	0.87	White Bias	1.00	Epanechnikov	Black/White IAT
0.01	0.06	0.92	White Bias	2.00	Epanechnikov	Black/White IAT
-0.05	0.04	0.22	Ethnocentrism	0.00	Triangular	Black/White IAT
-0.04	0.05	0.46	Ethnocentrism	1.00	Triangular	Black/White IAT
-0.02	0.08	0.85	Ethnocentrism	2.00	Triangular	Black/White IAT
-0.04	0.05	0.43	Ethnocentrism	0.00	Uniform	Black/White IAT
-0.04	0.09	0.68	Ethnocentrism	1.00	Uniform	Black/White IAT
0.01	0.11	0.96	Ethnocentrism	2.00	Uniform	Black/White IAT
-0.05	0.04	0.22	Ethnocentrism	0.00	Epanechnikov	Black/White IAT
-0.04	0.05	0.50	Ethnocentrism	1.00	Epanechnikov	Black/White IAT
-0.01	0.08	0.88	Ethnocentrism	2.00	Epanechnikov	Black/White IAT
-0.01	0.02	0.82	D Score	0.00	Triangular	Asian/European IAT
0.01	0.03	0.77	D Score	1.00	Triangular	Asian/European IAT
0.02	0.04	0.59	D Score	2.00	Triangular	Asian/European IAT
0.00	0.03	0.89	D Score	0.00	Uniform	Asian/European IAT
0.01	0.03	0.83	D Score	1.00	Uniform	Asian/European IAT
0.02	0.04	0.55	D Score	2.00	Uniform	Asian/European IAT
-0.01	0.02	0.81	D Score	0.00	Epanechnikov	Asian/European IAT
0.01	0.03	0.85	D Score	1.00	Epanechnikov	Asian/European IAT
0.02	0.04	0.57	D Score	2.00	Epanechnikov	Asian/European IAT
-0.00	0.09	0.96	White Bias	0.00	Triangular	Asian/European IAT
-0.02	0.12	0.90	White Bias	1.00	Triangular	Asian/European IAT
-0.01	0.12	0.92	White Bias	2.00	Triangular	Asian/European IAT
0.01	0.07	0.93	White Bias	0.00	Uniform	Asian/European IAT
-0.01	0.11	0.94	White Bias	1.00	Uniform	Asian/European IAT
-0.02	0.13	0.91	White Bias	2.00	Uniform	Asian/European IAT
-0.01	0.08	0.94	White Bias	0.00	Epanechnikov	Asian/European IAT
-0.02	0.12	0.86	White Bias	1.00	Epanechnikov	Asian/European IAT
-0.01	0.12	0.91	White Bias	2.00	Epanechnikov	Asian/European IAT

C.10.2 Anti-Differently Abled, Anti-Arab Attitudes

Table C12: Falsification Tests (Anti-Differently Abled Attitudes, Anti-Arab Attitudes)

Est. (Pulse)	SE	p-value	Outcome	Polynomial	Kernel	Dataset
0.05	0.03	0.07	D Score	0.00	Triangular	Disabled/Abled IAT
0.07	0.03	0.02	D Score	1.00	Triangular	Disabled/Abled IAT
0.07	0.03	0.03	D Score	2.00	Triangular	Disabled/Abled IAT
0.04	0.03	0.13	D Score	0.00	Uniform	Disabled/Abled IAT
0.05	0.03	0.08	D Score	1.00	Uniform	Disabled/Abled IAT
0.08	0.04	0.05	D Score	2.00	Uniform	Disabled/Abled IAT
0.04	0.03	0.10	D Score	0.00	Epanechnikov	Disabled/Abled IAT
0.07	0.03	0.03	D Score	1.00	Epanechnikov	Disabled/Abled IAT
0.07	0.03	0.04	D Score	2.00	Epanechnikov	Disabled/Abled IAT
0.04	0.05	0.42	Abled Bias	0.00	Triangular	Disabled/Abled IAT
0.04	0.07	0.57	Abled Bias	1.00	Triangular	Disabled/Abled IAT
0.07	0.09	0.43	Abled Bias	2.00	Triangular	Disabled/Abled IAT
0.06	0.06	0.29	Abled Bias	0.00	Uniform	Disabled/Abled IAT
0.07	0.08	0.37	Abled Bias	1.00	Uniform	Disabled/Abled IAT
0.07	0.09	0.46	Abled Bias	2.00	Uniform	Disabled/Abled IAT
0.04	0.05	0.44	Abled Bias	0.00	Epanechnikov	Disabled/Abled IAT
0.04	0.07	0.60	Abled Bias	1.00	Epanechnikov	Disabled/Abled IAT
0.08	0.09	0.39	Abled Bias	2.00	Epanechnikov	Disabled/Abled IAT
0.03	0.10	0.77	Abledcentrism	0.00	Triangular	Disabled/Abled IAT
-0.03	0.15	0.84	Abledcentrism	1.00	Triangular	Disabled/Abled IAT
-0.11	0.16	0.50	Abledcentrism	2.00	Triangular	Disabled/Abled IAT
0.09	0.11	0.40	Abledcentrism	0.00	Uniform	Disabled/Abled IAT
0.12	0.13	0.38	Abledcentrism	1.00	Uniform	Disabled/Abled IAT
-0.08	0.17	0.62	Abledcentrism	2.00	Uniform	Disabled/Abled IAT
0.04	0.09	0.70	Abledcentrism	0.00	Epanechnikov	Disabled/Abled IAT
-0.00	0.15	0.99	Abledcentrism	1.00	Epanechnikov	Disabled/Abled IAT
-0.13	0.17	0.44	Abledcentrism	2.00	Epanechnikov	Disabled/Abled IAT
-0.02	0.03	0.56	D Score	0.00	Triangular	Arab/Non-Arab IAT
-0.01	0.04	0.77	D Score	1.00	Triangular	Arab/Non-Arab IAT
-0.01	0.04	0.88	D Score	2.00	Triangular	Arab/Non-Arab IAT
-0.03	0.02	0.26	D Score	0.00	Uniform	Arab/Non-Arab IAT
-0.01	0.04	0.77	D Score	1.00	Uniform	Arab/Non-Arab IAT
-0.01	0.04	0.87	D Score	2.00	Uniform	Arab/Non-Arab IAT
-0.02	0.03	0.49	D Score	0.00	Epanechnikov	Arab/Non-Arab IAT
-0.01	0.04	0.74	D Score	1.00	Epanechnikov	Arab/Non-Arab IAT
-0.01	0.04	0.85	D Score	2.00	Epanechnikov	Arab/Non-Arab IAT
-0.03	0.07	0.70	Non-Arab Bias	0.00	Triangular	Arab/Non-Arab IAT
-0.05	0.08	0.54	Non-Arab Bias	1.00	Triangular	Arab/Non-Arab IAT
-0.07	0.12	0.57	Non-Arab Bias	2.00	Triangular	Arab/Non-Arab IAT
-0.01	0.09	0.90	Non-Arab Bias	0.00	Uniform	Arab/Non-Arab IAT
-0.04	0.09	0.65	Non-Arab Bias	1.00	Uniform	Arab/Non-Arab IAT
-0.06	0.12	0.62	Non-Arab Bias	2.00	Uniform	Arab/Non-Arab IAT
-0.02	0.07	0.74	Non-Arab Bias	0.00	Epanechnikov	Arab/Non-Arab IAT
-0.03	0.08	0.66	Non-Arab Bias	1.00	Epanechnikov	Arab/Non-Arab IAT
-0.06	0.11	0.60	Non-Arab Bias	2.00	Epanechnikov	Arab/Non-Arab IAT
-0.02	0.13	0.90	Ethnocentrism	0.00	Triangular	Arab/Non-Arab IAT
0.03	0.15	0.86	Ethnocentrism	1.00	Triangular	Arab/Non-Arab IAT
0.04	0.14	0.79	Ethnocentrism	2.00	Triangular	Arab/Non-Arab IAT
0.08	0.17	0.66	Ethnocentrism	0.00	Uniform	Arab/Non-Arab IAT
0.05	0.16	0.75	Ethnocentrism	1.00	Uniform	Arab/Non-Arab IAT
0.01	0.16	0.97	Ethnocentrism	2.00	Uniform	Arab/Non-Arab IAT
-0.03	0.14	0.81	Ethnocentrism	0.00	Epanechnikov	Arab/Non-Arab IAT
0.02	0.15	0.88	Ethnocentrism	1.00	Epanechnikov	Arab/Non-Arab IAT
0.06	0.15	0.69	Ethnocentrism	2.00	Epanechnikov	Arab/Non-Arab IAT

C.10.3 Anti-Dark Skinned, Anti-Woman Attitudes

Table C13: Falsification Tests (Anti-Dark Skinned Attitudes, Anti-Woman Attitudes)

Est. (Pulse)	SE	p-value	Outcome	Polynomial	Kernel	Dataset
-0.02	0.02	0.17	D Score	0.00	Triangular	Dark Skin/Light Skin IAT
-0.03	0.02	0.13	D Score	1.00	Triangular	Dark Skin/Light Skin IAT
-0.03	0.02	0.18	D Score	2.00	Triangular	Dark Skin/Light Skin IAT
-0.02	0.02	0.20	D Score	0.00	Uniform	Dark Skin/Light Skin IAT
-0.02	0.02	0.24	D Score	1.00	Uniform	Dark Skin/Light Skin IAT
-0.02	0.02	0.31	D Score	2.00	Uniform	Dark Skin/Light Skin IAT
-0.03	0.02	0.16	D Score	0.00	Epanechnikov	Dark Skin/Light Skin IAT
-0.03	0.02	0.14	D Score	1.00	Epanechnikov	Dark Skin/Light Skin IAT
-0.03	0.02	0.17	D Score	2.00	Epanechnikov	Dark Skin/Light Skin IAT
0.01	0.02	0.34	D Score	0.00	Triangular	Man/Woman IAT
0.03	0.02	0.11	D Score	1.00	Triangular	Man/Woman IAT
0.04	0.02	0.09	D Score	2.00	Triangular	Man/Woman IAT
-0.01	0.02	0.49	D Score	0.00	Uniform	Man/Woman IAT
0.04	0.02	0.09	D Score	1.00	Uniform	Man/Woman IAT
0.03	0.02	0.20	D Score	2.00	Uniform	Man/Woman IAT
0.01	0.02	0.52	D Score	0.00	Epanechnikov	Man/Woman IAT
0.03	0.02	0.12	D Score	1.00	Epanechnikov	Man/Woman IAT
0.03	0.02	0.11	D Score	2.00	Epanechnikov	Man/Woman IAT

C.11 Temporal Persistence

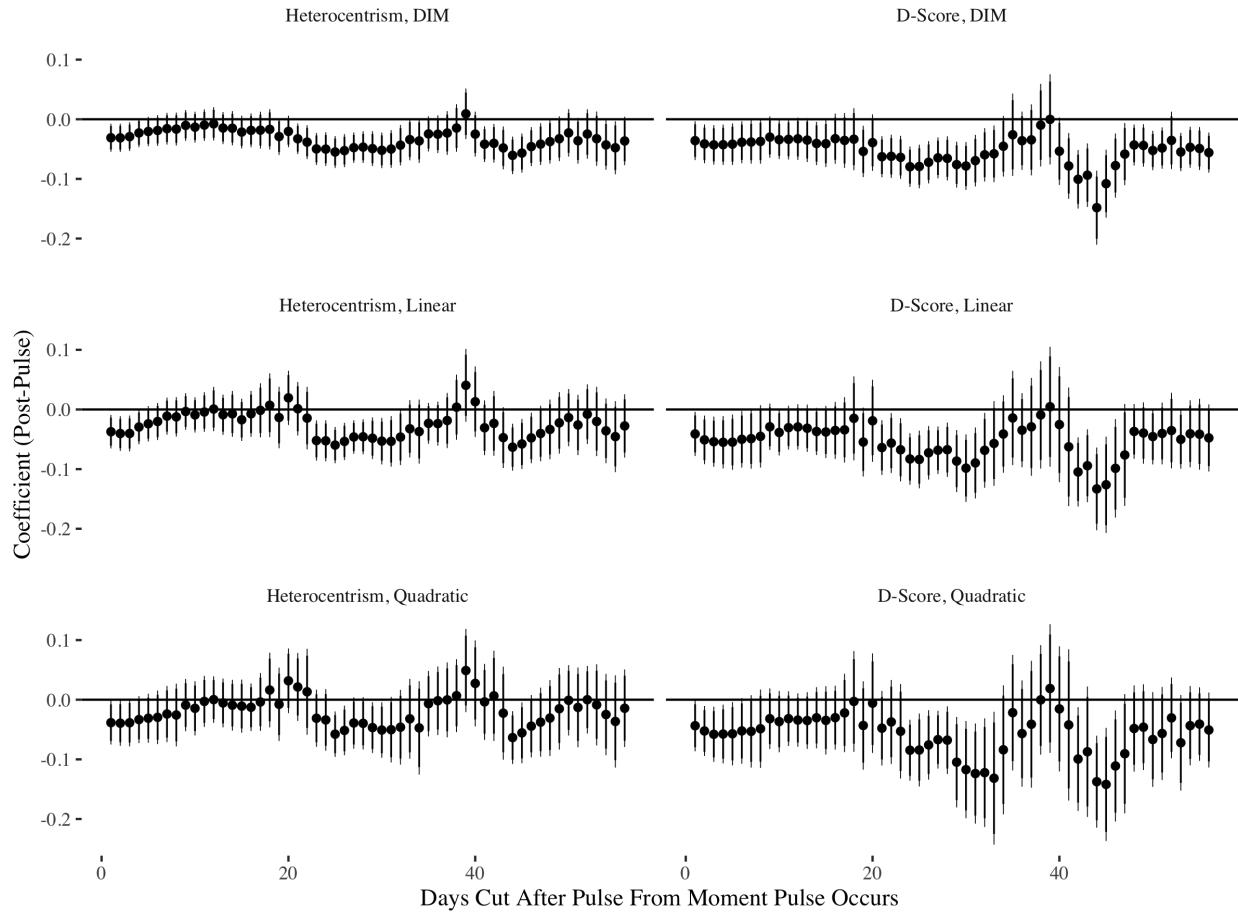


Figure C21: RDiT Estimates Removing Days From the Moment Pulse Occurs (x-axis) to Assess Post-Pulse Effect Persistence (y-axis). Top 2, middle 2, bottom 2 plots characterize estimates where the running variable polynomial degree is set to 0, 1, and 2. Left panels are RDiT effects on heterocentrism, right panels are RDiT effects on D-Score. All estimates use a triangular kernel. 95% confidence intervals displayed derived from robust standard errors.

D Study 3: Matthew Shepard

D.1 Media Data Details

We collect data on the number of gay-related newspaper articles in the New York Times and Washington Post. Data on the number of gay-related NYT newspaper articles per month are from the NYT article API. We use the `rtimes` package to query data from the NYT article API. Gay-related NYT newspaper articles include the terms “homosexual” or “gay” in their text (Figure 8, Panel A). Shepard-related articles are gay-related NYT newspaper articles with the terms “wyoming,” “shepard,” “student,” “laramie,” “beat,” “beaten,” “bias,” and “hate (Figure 8, Panel C).”

Data on the number of gay-related Washington Post articles per month are acquired from the ProQuest Washington Post historical newspaper database (Figure 8, Panel B). Gay-related articles are those that include the terms “homosexual,” “gay,” or “homosexuality” in their text.

D.2 Homosexuality = Morally Wrong Outcome

D.2.1 Study Details

The two studies we use to assess if the belief homosexuality is immoral decreased after Shepard’s murder are the CNN/USA Today Jun 22-23 1998 poll and CNN/TIME Oct 14-15, 1998 poll. Both are nationally representative adult telephone surveys ($N = 1016$, $N = 1036$) and are population weighted to census demographic benchmarks.

The outcome item of interest from the CNN/USA Today Jun 1998 poll is “do you personally believe homosexual behavior is morally wrong or is not morally wrong” with response choices of 1) Yes, morally wrong and 2) No, not morally wrong. The outcome is binary, equal to 1 if the respondent indicates “Yes, morally wrong.” The outcome item of interest from the CNN/TIME Oct 1998 poll is “do you personally think that homosexual relationships between consenting adults is morally wrong, or not a moral issue?” with response choices of 1) Yes, morally wrong and 2) Not a moral issue. The outcome is binary, equal to 1 if the respondent indicates “Yes, morally wrong.” The weights, outcome, and baseline covariates are then stacked amongst each other across the two polls, with respondents from the CNN Oct. 1998 poll being defined as *post-Shepard* respondents (measured as a binary indicator equal to 1 if the respondent is from the October 1998 poll, 0 otherwise) and respondents from the CNN Jun. 1998 poll being defined as pre-Shepard respondents.

Although a benefit of these outcome items across the two surveys is they ask about the immorality of homosexuality very closely to the moment Matthew Shepard was murdered, they are worded slightly different from one another in that the post-Shepard survey references “homosexual relationships between consenting adults” while the pre-Shepard survey references “homosexual behavior.” Therefore, it is plausible the decrease in support for the belief homosexuality is morally wrong may be a function of the specification that the homosexual behavior referenced in the post-Shepard survey relates specifically to behavior among consenting adults. Consequently, we re-estimate our findings with a different pre-Shepard survey from 1994 with a similar item wording. Consistent with the main findings,

we find that respondents interviewed after Shepard’s murder were less likely to believe homosexual relationships between consenting adults is morally wrong. A shortcoming of the re-estimation is that our findings may be the result of secular time trends or intervening factors outside Shepard’s murder. These alternative explanations are unlikely. First, the temporal placebo test comparing attitudes regarding “homosexual behavior” between April 1997-June 1998 on Figure 9, Panel F is statistically null. These findings suggest attitudes regarding the immorality of homosexuality were not trending in a liberal direction between 1994 to 1998 prior to Shepard’s murder. Second, belief in the notion that “homosexual relationships between consenting adults” are “morally wrong” is *remarkably stable* between 1978-2004, with the exception of respondents interviewed in the few days after Matthew Shepard was murdered (Figure D22). These empirical findings suggest that item wording does not drive our main results and that Shepard’s murder shifted anti-gay attitudes and not other temporal intervening factors.

D.2.2 Temporal Placebo Details

To conduct a temporal placebo test ruling out secular trends that may drive our finding that respondents interviewed after Shepard’s murder were less likely to believe homosexuality is morally wrong, we use a third survey, the Gallup Apr 11-13 1997 poll. The Gallup Apr 1997 poll is a nationally representative telephone survey ($N = 1003$) and is population weighted to census demographic benchmarks. The Gallup Apr 1997 poll includes an item asking respondents if they “personally believe homosexual behavior is morally wrong or is not morally wrong” with responses 1) Yes, morally wrong and 2) No, not morally wrong. We then compare the average level of support for belief homosexual behavior is morally wrong between the Gallup Apr. 1997 poll and CNN Jun. 1998 poll.

D.2.3 Persistence of Post-Shepard Effect

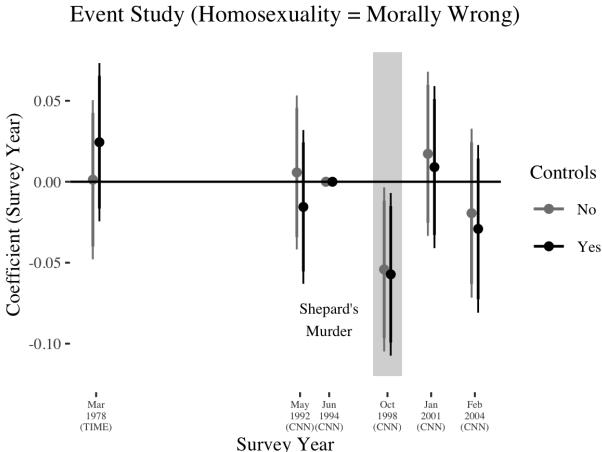


Figure D22: Belief in Notion Homosexual Relationships Between Consenting Adults Are “Morally Wrong” is Stable Between 1978-2004 With the Exception of the Moment Shepard Was Murdered. Data from a 1978 TIME poll, 1992 CNN poll, 1994 CNN Poll, 1998 CNN poll, 2001 CNN poll, and 2004 CNN poll. Reference study is the 1994 CNN poll (hence no CIs displayed). Color denotes the inclusion/exclusion of control covariates adjusting for age, education, gender, partisanship, and race. All estimates use survey weights to ensure representativeness. All covariates scaled between 0-1. 95% CIs displayed derived from HC2 robust standard errors.

D.3 Hire Gay People For Military Outcome

D.3.1 Study Details

The two studies we use to assess if the belief homosexuals should be hired for the military increases after Shepard’s murder are a Newsweek Jul. 30-31 1998 poll and a Gallup Feb. 8-9 1999 poll. Both are nationally representative adult telephone surveys ($N = 602$, $N = 1054$) and are population weighted to census demographic benchmarks.

The outcome item of interest from the Newsweek poll is “Tell me if you think gays and lesbians should be hired as members of the armed forces” with response choices of 1) Should and 2) Should not. The outcome is binary, equal to 1 if the respondent indicates “Should.” The outcome item of interest from the Gallup poll is “Do you think homosexuals should or should not be hired for the armed forces” with response choices of 1) Should and 2) Should not. The weights, outcome, and baseline covariates are then stacked amongst each other across the two polls, with respondents from the Gallup Feb. 1999 poll being defined as *post-Shepard* respondents (measured as a binary indicator equal to 1 if the respondent is from the October 1998 poll, 0 otherwise) and respondents from the Newsweek Jul. 1998 poll being defined as pre-Shepard respondents.

D.3.2 Temporal Placebo Details

To conduct a temporal placebo test ruling out secular trends that may drive our finding that respondents interviewed after Shepard’s murder were more likely to support hiring homosexuals in the military, we use a third survey, the Gallup Nov 21-24 1996 poll. The

Gallup Nov 1996 poll is a nationally representative telephone survey ($N = 1003$) and is population weighted to census demographic benchmarks. The Gallup Nov 1996 poll includes an item asking respondents if they think “homosexuals should or should not be hired for the armed forces” with responses 1) Should and 2) Should not. We then compare the average level of support for whether homosexuals should be hired for the armed forces in the Gallup 1996 poll with the Newsweek 1998 poll.

D.4 Regression Tables

D.4.1 Balance Test (CNN Jun '98/Oct '98)

Table D14: Post-Shepard Balance Test (CNN Jun '98/Oct '98)

Outcome	Post-Shepard Coef.	SE	p	N
White	-0.08	0.02	0.00	2052
Woman	-0.01	0.02	0.79	2052
College	0.02	0.02	0.26	2052
Age (18-24)	0.01	0.02	0.48	2052
Age (25-29)	0.01	0.02	0.63	2052
Age (30-34)	-0.02	0.01	0.14	2052
Age (35-39)	-0.02	0.01	0.30	2052
Age (40-49)	0.00	0.02	0.98	2052
Age (50-64)	0.01	0.02	0.73	2052
Age (65+)	-0.02	0.02	0.27	2052
Income (20-50k)	-0.02	0.02	0.52	2052
Income (50-75k)	0.00	0.02	0.84	2052
Income (75k+)	-0.05	0.01	0.00	2052
Democrat	0.02	0.02	0.44	2052
Registered	-0.02	0.02	0.45	2052
Texas	0.00	0.01	0.98	2052
California	-0.01	0.02	0.37	2052
New York	0.01	0.01	0.60	2052
Florida	0.01	0.01	0.49	2052
Pennsylvania	0.01	0.01	0.51	2052

D.4.2 Balance Test (Newsweek Jul '98/Gallup Feb '99)

Table D15: Post-Shepard Balance Test (Newsweek Jul. '98/Gallup Feb. '99)

Outcome	Post-Shepard Coef.	SE	p	N
White	-0.02	0.02	0.30	1656
Woman	-0.00	0.03	0.89	1656
College	0.00	0.02	0.84	1656
Age (18-24)	-0.01	0.02	0.60	1656
Age (25-29)	0.01	0.02	0.51	1656
Age (30-34)	-0.02	0.02	0.19	1656
Age (35-39)	0.00	0.02	0.82	1656
Age (40-49)	-0.02	0.02	0.31	1656
Age (50-64)	0.03	0.02	0.22	1656
Age (65+)	0.00	0.02	0.82	1656
Democrat	0.02	0.03	0.48	1656

Note: HC2 robust standard errors presented.

D.4.3 Influence of Shepard's Murder on Attitudes Toward Gay People

Table D16: Respondents Interviewed Post-Shepard Are Less Likely To Believe Homosexuality is Morally Wrong and Gay People Should Not Be Hired For the Military

	Morally Wrong (1)	Morally Wrong (2)	Hire Gay People (3)	Hire Gay People (4)
Post-Shepard	-0.11*** (0.02)	-0.12*** (0.02)	0.05† (0.03)	0.05† (0.03)
White		-0.10* (0.04)		0.05 (0.04)
Woman		-0.08* (0.03)		0.13*** (0.03)
College		-0.17*** (0.04)		0.15*** (0.03)
Age (18-24)		-0.24*** (0.07)		0.16** (0.06)
Age (25-29)		-0.20** (0.07)		0.21*** (0.06)
Age (30-34)		-0.13† (0.07)		0.06 (0.06)
Age (35-39)		-0.04 (0.06)		-0.02 (0.06)
Age (40-49)		-0.18** (0.06)		0.06 (0.05)
Age (50-64)		-0.04 (0.06)		0.02 (0.05)
Income (20-50k)		0.01 (0.04)		
Income (50-75k)		-0.01 (0.06)		
Democrat		0.06† (0.03)		0.15*** (0.03)
Registered		-0.02 (0.05)		
R ²	0.00	0.07	0.00	0.08
N	2052	2052	1656	1656
State FE	N	Y	N	Y
Surveys	CNN Jun/Oct '98	CNN Jun/Oct '98	Newsweek/Gallup	Newsweek/Gallup

Note: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, † $p < 0.1$. HC2 robust standard errors in parentheses.

D.4.4 Temporal Placebo Tests

Table D17: Respondents Interviewed Post-Shepard Are Less Likely To Believe Homosexuality is Morally Wrong and Gay People Should Not Be Hired For the Military

	Morally Wrong		Hire Gay People	
	(1)	(2)	(3)	(4)
Post-Shepard	-0.11*** (0.02)	-0.12*** (0.02)	0.05† (0.03)	0.05† (0.03)
White		-0.10* (0.04)		0.05 (0.04)
Woman		-0.08* (0.03)		0.13*** (0.03)
College		-0.17*** (0.04)		0.15*** (0.03)
Age (18-24)		-0.24*** (0.07)		0.16** (0.06)
Age (25-29)		-0.20** (0.07)		0.21*** (0.06)
Age (30-34)		-0.13† (0.07)		0.06 (0.06)
Age (35-39)		-0.04 (0.06)		-0.02 (0.06)
Age (40-49)		-0.18** (0.06)		0.06 (0.05)
Age (50-64)		-0.04 (0.06)		0.02 (0.05)
Income (20-50k)		0.01 (0.04)		
Income (50-75k)		-0.01 (0.06)		
Democrat		0.06† (0.03)		0.15*** (0.03)
Registered		-0.02 (0.05)		
R ²	0.00	0.07	0.00	0.08
N	2052	2052	1656	1656
State FE	N	Y	N	Y
Surveys	CNN Jun/Oct '98	CNN Jun/Oct '98	Newsweek/Gallup	Newsweek/Gallup

Note: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, † $p < 0.1$. HC2 robust standard errors in parentheses.

D.4.5 Falsification Tests

Table D18: Falsification Tests

Outcome	SE	p	Post-Shepard Coef.	N	Survey(s)
Ban Abortion	0.00	0.02	0.88	1757	CNN Jan '98/CNN Oct '98
Raise Retirement Age	-0.03	0.02	0.19	2018	CNN Mar '98/AP Dec '98
Increase Gov. Spending	0.00	0.02	0.94	2468	Kaiser Aug '98/Kaiser Nov '98
Allow Sue HMOs	-0.02	0.02	0.34	2041	CNN Jun '98/CNN Jul '99
Affirmative Action 1	-0.04	0.03	0.14	1970	CBS Dec '97/CBS Jul '00
Affirmative Action 2	0.02	0.02	0.31	2741	ANES '96-'98
Death Penalty	0.02	0.02	0.49	2557	Kaiser Jul '98/Gallup Feb '99
Black People Unintelligent	0.01	0.00	0.05	4202	GSS '98-'00
Black People Lazy	0.00	0.01	0.56	4202	GSS '98-'00
Spending 2 Aid Black People 1	0.00	0.02	0.96	2790	GSS '98-'00
Spending 2 Aid Black People 2	0.04	0.02	0.04	2859	GSS '98-'00
Black/White Inequality = Discrim.	0.01	0.02	0.42	3748	GSS '98-'00
Black/White Inequality = In-Born Ability	0.03	0.01	0.02	3748	GSS '98-'00
Black/White Inequality = No Education	0.02	0.02	0.35	3748	GSS '98-'00
Black/White Inequality = No Motivation	0.03	0.02	0.11	3748	GSS '98-'00
Oppose Living w/Black People	-0.01	0.01	0.31	4202	GSS '98-'00
Black Feeling Therm.	0.04	0.01	0.00	2692	ANES '96-'98
Abortion Any Time	-0.01	0.02	0.56	3546	GSS '98-'00
Support Female Politicians	0.01	0.02	0.67	3477	GSS '98-'00
Working Women Good	-0.06	0.02	0.00	3686	GSS '98-'00
Working Women Bad 1	0.04	0.02	0.01	3615	GSS '98-'00
Working Women Bad 2	0.04	0.02	0.07	2248	GSS '98-'00

Note: HC2 robust standard errors presented.

D.5 Falsification Test Outcome Details

Outcome: Ban Abortion. **Surveys:** CNN Jan. '98, CNN Newsweek Oct. '98. **Pre-Shepard Outcome:** "Do you think abortions should be 1) legal under any circumstance, 2) legal under certain circumstances, or 3) illegal in all circumstances." Coded 1 if respondent indicates "legal under any circumstance" and 0 otherwise. **Post-Shepard Outcome:** Same as pre-Shepard

Outcome: Raise Retirement. **Surveys:** CNN AP Mar. '98, AP Dec. '98. **Pre-Shepard Outcome:** "The current eligibility age for full Social Security benefits is 65. But, to help save money, it is scheduled to rise gradually to 67. Do you favor or oppose further increasing the retirement age to 70?" 1) Favor, 2) Oppose. Coded 1 if favor, 0 otherwise. **Post-Shepard Outcome:** Same as pre-Shepard

Outcome: Increase Domestic Spending. **Surveys:** Kaiser Aug. '98, Kaiser Nov. '98. **Pre-Shepard Outcome:** "As you may know, the federal government has a budget SURPLUS this year. Please tell me which ONE of the following four things YOU would like to see done with the available money. Do you think this surplus money should be used to..." 1) cut taxes, 2) pay off the national debt, 3) increase spending on domestic programs, such as health, education, and the environment, 4) to help make the social security and medicare programs financially sound. Coded 1 if respondent indicates increase spending on domestic programs, 0 otherwise. **Post-Shepard Outcome:** Same as pre-Shepard

Outcome: Allow Lawsuits Against HMOs. **Surveys:** CNN Jun. '98, CNN Jul. '99. **Pre-Shepard Outcome:** "As you may know, Congress is considering several bills which would require HMOs and other managed care providers to provide more services to their patients. Please tell me whether you think the government should regulate these providers in each of the following ways to protect consumers, or should not do so because it would raise health care costs and increase government bureaucracy. Allow patients to

sue their HMO or managed care provider for decisions made regarding the patient's medical care" 1) Should, 2) Should Not. Coded 1 if respondent indicates should, 0 otherwise. **Post-Shepard Outcome:** Same as pre-Shepard

Outcome: Affirmative Action 1. **Surveys:** CBS Dec. '97, CBS Jul. '00. **Pre-Shepard Outcome:** "In order to make up for past discrimination, do you favor or oppose programs which make special efforts to help minorities get ahead?" 1) Favor, 2) Oppose. Coded 1 if respondent indicates favor, 0 otherwise. **Post-Shepard Outcome:** Same as pre-Shepard

Outcome: Affirmative Action 2. **Surveys:** ANES 96-'98. **Pre-Shepard Outcome:** "Some people say that because of past discrimination, blacks should be given preference in hiring and promotion. Others say that such preference in hiring and promotion of blacks is wrong because it gives blacks advantages they haven't earned. What about your opinion – are you FOR or AGAINST preferential hiring and promotion of blacks? " 1) For preferential hiring and promotion of blacks, 2) Against preferential hiring and promotion of blacks. Coded 1 if respondent indicates for preferential hiring, 0 otherwise. **Post-Shepard Outcome:** Same as pre-Shepard

Outcome: Death Penalty. **Surveys:** Kaiser Jul. '98, Gallup Feb. '99 **Pre-Shepard Outcome:** "Do you favor or oppose the death penalty for persons convicted of murder?" 1) Favor, 2) Oppose. Coded 1 if favor, 0 otherwise. **Post-Shepard Outcome:** "Are you in favor of the death penalty for a person convicted of murder?" 1) Yes, in favor, 2) No, not in favor. Coded 1 if favor, 0 otherwise.

Outcome: Black People are Unintelligent. **Surveys:** GSS '98-'00. **Pre-Shepard Outcome:** "Do people in these groups tend to be unintelligent or tend to be intelligent? Where you you rate Blacks in general on this scale?" 1-7 scale from 1 = unintelligent to 7 = intelligent, reverse coded and rescaled between 0-1. **Post-Shepard Outcome:** Same as pre-Shepard

Outcome: Spending Too Little on Helping Black People 1 **Surveys:** GSS '98-'00. **Pre-Shepard Outcome:** "We are faced with many problems in this country, none of which can be solved easily or inexpensively. I'm going to name some of these problems, and for each one I'd like you to tell me whether you think we're spending too much money on it, too little money, or about the right amount: improving the conditions of Blacks" Coded 1 if too little, 0 otherwise. **Post-Shepard Outcome:** Same as pre-Shepard

Outcome: Spending Too Little on Helping Black People 2 **Surveys:** GSS '98-'00. **Pre-Shepard Outcome:** "We are faced with many problems in this country, none of which can be solved easily or inexpensively. I'm going to name some of these problems, and for each one I'd like you to tell me whether you think we're spending too much money on it, too little money, or about the right amount: assistance to blacks" Coded 1 if too little, 0 otherwise. **Post-Shepard Outcome:** Same as pre-Shepard

Outcome: Black-White Inequality is Because of Discrimination. **Surveys:** GSS '98-'00. **Pre-Shepard Outcome:** "On the average (Negroes/Blacks/African-Americans) have worse jobs, income, and housing than white people. Do you think these differences are: mainly due to discrimination" 1) Yes, 2) No. Coded 1 if yes, 0 otherwise. **Post-Shepard Outcome:** Same as pre-Shepard

Outcome: Black-White Inequality is Because of In-Born Ability. **Surveys:** GSS '98-'00. **Pre-Shepard Outcome:** "On the average (Negroes/Blacks/African-Americans) have worse jobs, income, and housing than white people. Do you think these differences are: Because most (Negroes/Blacks/African-Americans) have less in-born ability to learn?" 1) Yes, 2) No. Coded 1 if yes, 0 otherwise. **Post-Shepard Outcome:** Same as pre-Shepard

Outcome: Black-White Inequality is Because of No Chance for Education. **Surveys:** GSS '98-'00. **Pre-Shepard Outcome:** "On the average (Negroes/Blacks/African-Americans) have worse jobs, income, and housing than white people. Do you think these differences are: Because most (Negroes/Blacks/African-Americans) don't have the chance for education that it takes to rise out of poverty?" 1) Yes, 2) No. Coded 1 if yes, 0 otherwise. **Post-Shepard Outcome:** Same as pre-Shepard

Outcome: Black-White Inequality is Because of No Motivation. **Surveys:** GSS '98-'00. **Pre-Shepard Outcome:** "On the average (Negroes/Blacks/African-Americans) have worse jobs, income, and housing than white people. Do you think these differences are: Because most (Negroes/Blacks/African-Americans) just don't have the motivation or will power to pull themselves up out of poverty?" 1) Yes, 2) No. Coded 1 if yes, 0 otherwise. **Post-Shepard Outcome:** Same as pre-Shepard

Outcome: Oppose Living with Black People. **Surveys:** GSS '98-'00. **Pre-Shepard Outcome:** "Now I'm going to ask you about different types of contact with various groups of people. In each situation would you please tell me whether you would be very much in favor of it happening, somewhat in favor, neither in favor nor opposed to it happening, somewhat opposed, or verymuch opposed to it happening? Living in a neighborhood where half of your neighbors were blacks?" 1-5 scale from 1 = Strongly Favor to 5 = Strongly Oppose. Coded 1 if oppose or strongly oppose, 0 otherwise. **Post-Shepard Outcome:** Same as pre-Shepard

Outcome: Black Feeling Thermometer. **Surveys:** ANES '96-'98. **Pre-Shepard Outcome:** "How would you rate Blacks?" 0-100 scale, rescaled between 0-1. **Post-Shepard Outcome:** Same as pre-Shepard

Outcome: Abortion Any Time. **Surveys:** GSS '98-'00. **Pre-Shepard Outcome:** 'Please tell me whether or not you think it should be possible for a pregnant woman to obtain a legal abortion if the woman wants it for any reason?' 1 if yes. **Post-Shepard Outcome:** Same as pre-Shepard

Outcome: Support Female Politicians. **Surveys:** GSS '98-'00. **Pre-Shepard Outcome:** "Tell me if you agree or disagree with this statement: Most men are better suited emotionally for politics than are most women" 1 if agree, 0 otherwise. **Post-Shepard Outcome:** Same as pre-Shepard

Outcome: Working Women Good. **Surveys:** GSS '98-'00. **Pre-Shepard Outcome:** "Now I'm going to read several more statements. As I read each one, please tell me whether you strongly agree, agree, disagree, or strongly disagree with it. For example, here is the statement: A working mother can establish just as warm and secure a relationship with her children as a mother who does not work." 1 if agree, 0 otherwise. **Post-Shepard Outcome:** Same as pre-Shepard

Outcome: Working Women Bad 1. **Surveys:** GSS '98-'00. **Pre-Shepard Outcome:** "Now I'm going to read several more statements. As I read each one, please tell me whether you strongly agree, agree, disagree, or strongly disagree with it. For example, here is the statement: A preschool child is likely to suffer if his or her mother works." 1 if agree, 0 otherwise. **Post-Shepard Outcome:** Same as pre-Shepard

Outcome: Working Women Bad 2. **Surveys:** GSS '98-'00. **Pre-Shepard Outcome:** "Now I'm going to read several more statements. As I read each one, please tell me whether you strongly agree, agree, disagree, or strongly disagree with it. For example, here is the statement: It is much better for everyone involved if the man is the achiever outside the home and the woman takes care of the home and family." 1 if agree, otherwise. **Post-Shepard Outcome:** Same as pre-Shepard