Protests Increase Donations to Federal Political Campaigns

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Abstract

How do protests influence American donation behavior? We provide evidence that protests affect an individual's willingness to donate money to political campaigns. First, we implement a regression discontinuity design that leverages the random timing of the killing of George Floyd and the subsequent political protests following his death. After the murder of George Floyd, there is a 48.3 percent increase ($8,052,910) in the total daily amount of individual-level donations. These findings are robust to various model specifications and window sizes. Second, we utilize a staggered difference-in-differences design using county, week, and year fixed-effects and find that each additional protest within a county causes an increase of about 97 donations (or roughly $18,000) to federal political campaigns. With this estimated effect size, we extrapolate that protests have generated more than 550 million dollars to federal political campaigns over the last five years. Finally, we provide evidence that liberal protests increase donations to Democrats and conservative protests increase donations to Republicans, which supports the idea that ideological protests relay important mobilizing information. Overall, our analysis reveals that protests are a significant money generating exercise for candidates.

Introduction

American civilians routinely engage in political protests to express urgent concerns about government to political elites and other citizens. Over the last ten years, American protesters have taken to the streets to relay grievances related to climate change (Bugden 2020), women's rights (Weber et al. 2018), gun control (Sato and Haselswerdt 2022), immigration (Branton et al. 2015; Wallace et al. 2014), and civil rights for African Americans (Newman and Reny 2021). Increasing evidence around institutionalized racism (Alexander 2012) and police discrimination against African Americans (Knox et al. 2020) has led to the emergence of Black Lives Matter (BLM), a large-scale social movement that aims to promote civil rights and numerous forms of racial justice (Lebron 2020).

How do protests influence American political behavior? Past scholarship demonstrates that the information provided by protest activities can raise awareness on certain social issues, mobilize preexisting beliefs, and even rally individuals to vote. In this paper, we provide robust evidence that protests also affect an individual's willingness to donate money to a political campaign. When considered as investments and attempts to influence political outcomes, donation behavior shapes who gets elected and what types of policy are implemented. As a whole, campaign contributions are a multi-billion-dollar political industry in the United States. From 2017 to 2021, individual donors who gave under $3000 contributed more than 22 billion US dollars to federal elections across the country. Our analyses reveal that protests are fundamentally connected to this critical political industry.

We use various identification strategies to study the effect of protests on federal political donations. Across each empirical approach, the conclusion is the same: political protests are a significant money generating exercise for candidates. Overall, we show that protests shape *when* citizens donate money, *how much* money they donate, and *which candidates* receive these donations.

First, we implement a regression discontinuity design that leverages the random timing of the

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killing of George Floyd and the subsequent political protests following his death. We find that the BLM protests and related media coverage significantly increased campaign contributions in the United States. Following the killing of George Floyd, there is a 48.3 percent increase ($8,052,910) in the total daily amount of individual-level donations in US Dollars. This finding is robust to various model specifications and window sizes. Moreover, our findings suggest that numerous types of candidates witnessed increased donation flows following the killing of George Floyd. Importantly, our model reports the most consistent increases for Democratic, African American, and incumbent candidates. Although the results are less conclusive, our findings indicate that the BLM protests also caused a smaller increase in donations to Republican candidates, which suggests that conservative counter-mobilization tactics may have been slightly effective.

To bolster our findings from the first analysis, we utilize a staggered difference-in-differences design using county, week, and year fixed-effects. Using a novel dataset on protest activity over time, we find that counties that experience a protest with more than 30 participants in a given week have an increase of about 97 donations (or roughly $18,000) to federal political campaigns in the same week. This finding is robust to numerous model specifications. Because our dataset includes more than 30 thousand protest events over time, we estimate that protests from 2017 to 2021 have generated more than 550 million US dollars to federal political campaigns across the country. Additionally, this second analysis also provides suggestive evidence that liberal protests increase donations to Democratic candidates and conservative protests increase donations to Republican candidates.

Theory: Protests Influence on Donation Behavior

Social protest is a genuine form of political participation and a tool for constituents to express political preferences and grievances. In contrast to elections, protests are a direct and immediate way

to relay urgent concerns about government to political elites and other citizens. More specifically, we define protest activity as "a collective public action by a non-governmental actor who expresses criticism or dissent and articulates a societal or political demand" (Rucht et al. 1999, 68). Building on this definition, protests can refer to public collective gatherings ranging from demonstrations, rallies, marches, vigils, pickets, civil disobedience, riots, strikes, and boycotts.

Past research finds that protests influence the actions of political elites (Gillion 2013; Wasow 2020), public attitudes on race issues (Mutz 2022; Reny and Newman 2021), and citizen voting behavior (Enos et al. 2019; Gillion 2020; Gillion and Soule 2018; Wasow 2020). At the elite-level, Gillion (2012, 2013) argues that protest activity acts as a "continuum of information" that provides helpful indicators of constituent preference to politicians. Throughout his analyses, Gillion finds notable evidence that protests affect the behavior of federal legislators, the President, and Supreme Court Justices. For example, congressional representatives residing in counties with more protest activity tend to show more liberal voting records. Similarly, Wasow (2020) shows that protests maintain a notable effect on Congressional floor speeches during the 1960s.

At the mass-level, numerous scholars have provided convincing evidence that political protests effect the attitudes and voting behavior of American citizens. Exposure to protests reduces white prejudice (Mazumder 2019) and even changes the likelihood that an individual identifies as a Democrat years later (Mazumder 2018). Several studies narrowly examine the role of the BLM protests leading up to the 2020 presidential election and find that the protests caused heightened awareness of discrimination against African Americans and decreased favorability towards the police (Mutz 2022; Reny and Newman 2021).

Likewise, recent scholarship shows that when protests are more conservative (liberal) and higher in salience, the Republican (Democrat) vote share increases (Gillion 2020; Gillion and Soule 2018). For the 1960's, Wasow (2020) shows that the directional effect of protests on voting behavior is

contingent on whether protests are framed as nonviolent activism in the media (Wasow 2020), although Enos et al. (2019) do find compelling evidence for a liberal shift in voting behavior following the violent Rodney King Riots in 1992. More recently, using cross-county variation in rainfall as an instrument for protest activity in 2020, Teeselink and Melios (2021) find that counties that experience more protests are associated with a higher vote share for Democrats.

Studying the impact of protests on campaign contributions is a meaningful addition to scholarship on protest activity. First, campaign contributions are a significant and understudied form of political behavior. From 2017 to 2021, individuals giving under $3000 to federal campaigns gave a cumulative total of $22,395,790,906 across the country. Second, studying the relationship between protests and campaign contributions also reveals important insights into the dynamics of protest activity. In contrast to inconsequential public opinion surveys, campaign contributions represent a more tangible and substantial form of action. Moreover, donating to a political campaign is a way to take *immediate* action in response to some type of social grievance. As a result, the possible time lag between a protest occurring and the act of giving to a campaign is plausibly shorter than the potential gap between a protest and an election. Put otherwise, if voters are myopic and the effects of information are short-lived (Achen and Bartels 2016; Chong and Druckman 2010; Hill, et al. 2013), then the link between protests and voting behavior should be weaker than the relationship between protests and donation behavior.

Protests primarily influence campaign contribution behavior through two pathways. First, political protests have a broad effect on the mass public and public discourse. Most importantly, protests relay important mobilizing information that leads an individual to donate money to a political campaign. As prior research routinely demonstrates, protests are an "informative cue" that operate "as an avenue of social communication between activists and nonactivists" (Gillion 2020). Likewise, Wasow (2020) argues that protests influence political behavior via information filtered

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through media coverage. As Wasow writes, "[a]ctivists use methods like disruption to capture the attention of media and overcome political asymmetries" (Wasow 2020).

Thus, both Gillion (2020) and Wasow (2020) promulgate theories that feature a mediating role for mobilizing information. Put otherwise, protests serve a critical role in the transferal of information between protestors and the rest of the public. The information provided to civilians—via a "social learning process"—relays some "level of discontent" about political and social grievances. As a result, protests can make certain issues more salient and "educate the public on the particular details of an issue" (Gillion and Soule 2018, 1650-1651). In this framework, the information provided by protest activities stimulates passion in constituents, intensifies their interest in a social issue, and consequently increases the likelihood that they donate money to a political campaign.

An information-driven theory of protest activity is a similar perspective to Zaller's (1992) "Receive-Accept-Sample" model of public opinion. As Zaller argues, people often do not have strongly held attitudes and instead have varying "considerations" about political issues. Therefore, Zaller argues that mass opinion is largely a reflection of variations in elite messages to the public. Similarly, protests hold the potential to influence what issues are salient and how they are framed. Since American voters often lack the political knowledge to hold stable and meaningful policy stances (Converse 1964; Freeder et al. 2019; Kalmoe 2020), protests can relay information that offers some indicator for the type of candidate a voter might ideally support. Unlike Zaller (1992), however, Lee (2002) argues that protests can "activate" mass opinion and serve as a bottom-up mechanism for opinion formation. Wasow (2020) also provides related evidence that protests are a bottom-up form of opinion change through a process of "agenda seeding," which articulates that protests "attempt to influence public opinion and politics by pushing issues onto news agendas and staging events that influence the valence of media coverage" (Wasow 2020, 1).

Recent scholarship has provided significant confirmatory evidence that protests indeed provide

important information that shapes the public discourse. In the 1960's, protests affected newspaper headlines and the valence of media coverage of certain political issues (Wasow 2020). More recently, Dunivin et al. (2022) document a profound change in social discourse and public attention following BLM protest activity. After a BLM event, Dunivin et al. (2022) find an increase in "antiracist terminology" (e.g., "systemic racism") across several online platform metrics including Google searches, Twitter mentions, Wikipedia page visits, and national news media mentions.

While protest activity clearly changes various types of political communication, we argue that protests influence the broader public by mechanisms beyond media coverage. Instead, we view protests as a "bundled treatment," which changes a variety of factors including news coverage, the actions of political and business leaders, and other individual-level psychological effects (Enos et al. 2019). As a result, we interpret the direct and indirect effects of political protests on the mass public to disseminate through numerous channels.

Other than its broad effect on the mass public and public discourse, the second pathway that protests affect donation behavior is from the influence that protests have on individuals participating in the protest event itself. Since political behavior is habitual (Meredith 2009), it is plausible that participation in protests may generally increase an individual's interest in politics and cause a protester to become more politically active overall. In fact, Enos et al. (2019) find that the Rodney King Riots of 1992 caused Los Angeles residents exposed to the protests to become more politically active by significantly increasing the number of individuals registered to vote. Likewise, it is possible that participating in a protest may change an individual's engagement with politics, which may affect the likelihood that they donate money to a political campaign. Finally—from a practical perspective—protests may also be a way for activists to directly connect with non-activists and prompt them to donate money. If millions of people participate in protests across the country, then this second pathway holds notable potential to sway aggregate donation patterns.

From these two causal pathways (i.e., broad effects on the mass public and narrow effects on protest participants), we develop our main hypotheses:

- H1: Political protests increase the number of federal campaign contributions and the total amount of campaign contributions in US dollars.

- H2: The effect of political protests on campaign contributions will vary based on the ideological valence of the protest and the candidate's characteristics (i.e., partisanship, incumbency status, and race).

If more protests are liberal in content and address issues relevant to racial justice, then we should observe Democrats and African American candidates receiving the largest boosts in donations following a protest (Petrocik 1996). On the other hand, if counter-mobilization tactics are effective, then conservatives and white candidates should see an increase in donations following liberal, racial justice protests. Likewise, if protests are fundamentally challenging the status quo, then challengers should benefit monetarily from political protests more than incumbents.

To test these hypotheses, we conduct two separate analyses: a regression discontinuity design and a staggered difference-in-differences design.

Analysis 1: Regression Discontinuity

Analysis 1: Methods and Data

Our first identification strategy leverages the random timing of the police killing of George Floyd and the subsequent political protests following his death. This econometric approach is often called a regression discontinuity design. Since the exact timing of the police killing of George Floyd and the subsequent nationwide protests were "as-if-random," we can analyze variation in donation behavior

before and after the killing of Floyd with causal interpretation. In short, there is no logical reason why donation behavior would be significantly different before and after an arbitrary threshold in time other than a major nationwide event. Put otherwise, the nationwide protests can serve as a "natural experiment," where the "treatment effect" is protests and media coverage of the protests. "Treated units" are individuals after the start of the protests and "control units" are individuals before the start of protests. Therefore, our theoretical model is:

$$\hat{Y}_t = \hat{\alpha} + \hat{\beta}X_t + \hat{\lambda}I(X_t > \tau) + \hat{e}\ (1),$$

where Y is the total daily donation amount in US dollars. $\hat{\alpha}$ is the intercept, X_t is days (i.e., the forcing variable), $\hat{\beta}$ is the regression coefficient for days, τ is the threshold, and $\hat{\lambda}$ is the regression coefficient for a discontinuous change at the threshold. For this analysis, the threshold is the date that George Floyd was murdered.

To operationalize the dependent variable (i.e., donation behavior), we access all individual-level campaign contributions to American federal elections from 2017 to 2021. This data comes from the Federal Election Commission (FEC), which is available for public download. Founded in 1975, the FEC is a federal organization created for the primary purpose of enforcing campaign finance law. In the name of campaign finance transparency, this federal agency has maintained standardized collections of all individual-level contributions for over twenty years. The data includes the name of the contributor, the contributor's zip code, the contributor's employer, the contributor's occupation, the date of the contribution, the donation amount, and who received the donation. Second, we utilize a dataset that includes the race of every candidate running for federal office in the year 2020. This is a nonpublic dataset that was originally gathered by a nonpartisan nonprofit called OpenSecrets. Exploratory visualizations of the FEC data are displayed in **S1** of the supplemental material.

Analysis 1: Results

How do political protests influence campaign contributions? Is there a discontinuous increase in campaign contributions after the killing of George Floyd? **Figure 1** shows the relationship between federal campaign contributions, political protests, and the killing of George Floyd. The X-axis displays the number of days before and after the killing of George Floyd. The scatterplot and associated fitted (red) line show the amount of individual-level donations to a federal campaign each day. The dark grey columns indicate the number of protests occurring in the United States each day.

Figure 1 **Federal Campaign Contributions and Political Protests**
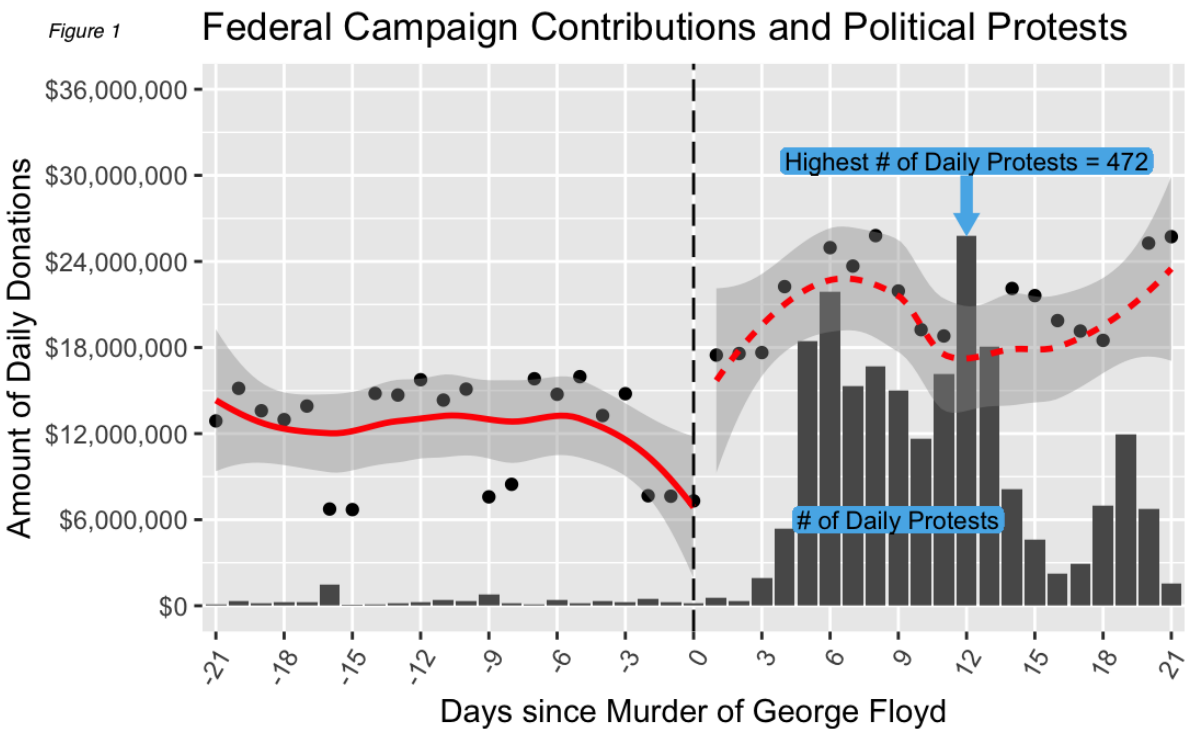
Several observations are immediately clear. First, the number of daily protests sharply increase following Floyd's killing—with the largest peak of protests occurring 12 days after Floyd's death. Second, **Figure 1** shows a notable increase in the amount of donations to federal campaigns after

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Floyd's death. Since the timing of Floyd's death was random, there is no theoretical explanation as to why donation behavior immediately before and immediately after should be systematically different other than the sharp increase in political protests.

Figure 2
Varying Window Sizes:
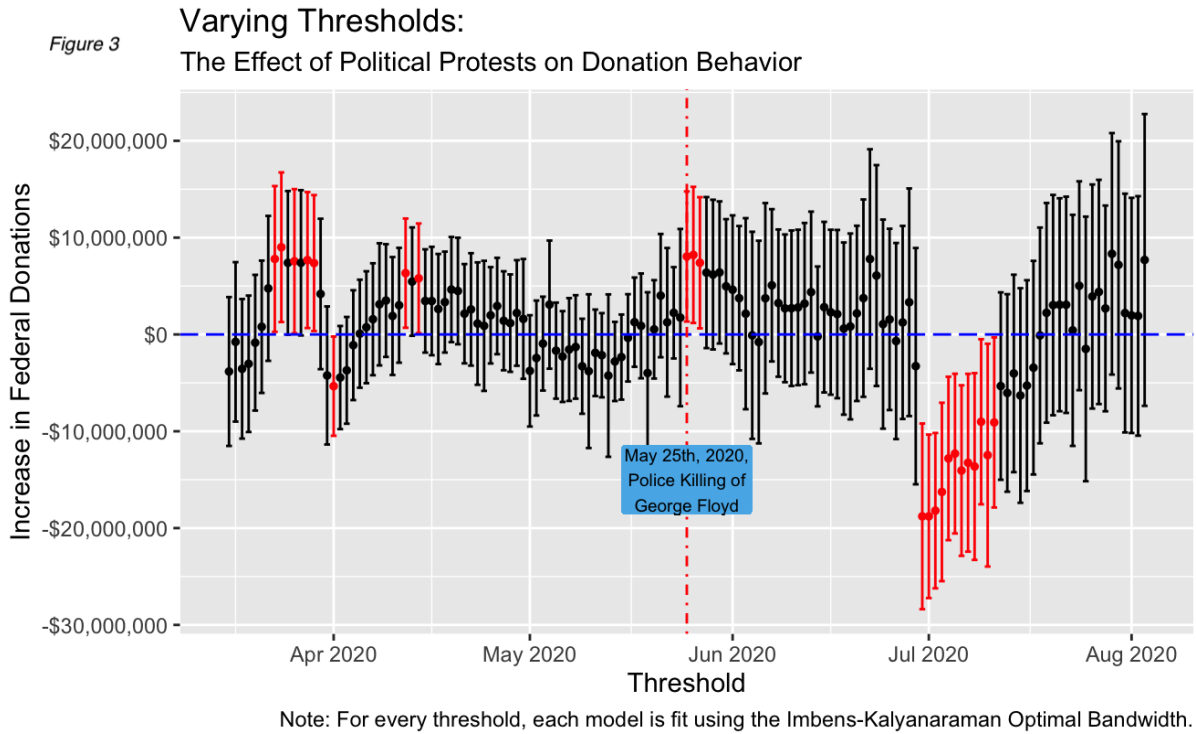The Effect of Political Protests on Donation Behavior
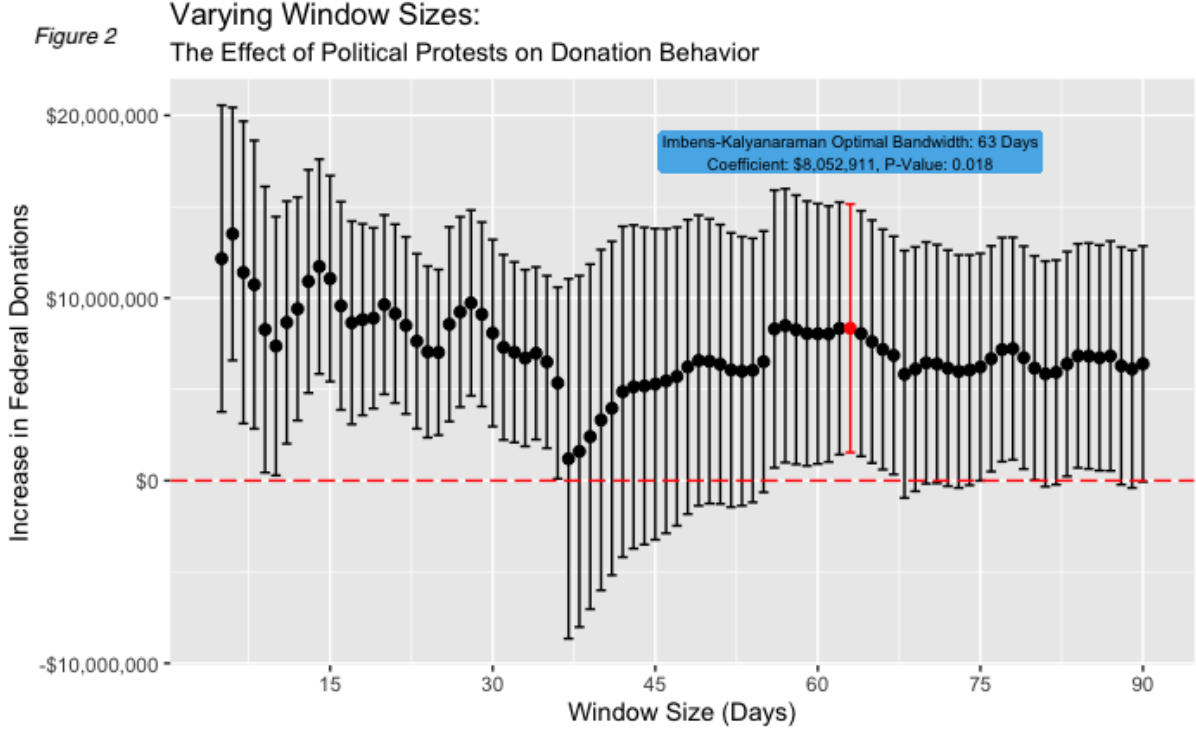
Using a regression discontinuity design, **Figure 2** assesses whether the increase in federal donations after the killing of George Floyd is statistically significant across varying window sizes (i.e., subsets of the data). For each window size, the dependent variable is daily donation amount in US dollars. In **Figure 2**, the X-axis is the window size in days in either direction from the selected threshold and the Y-axis is the discontinuous change at the threshold for varying window sizes. Across all window sizes, there is a notable increase in campaign contributions following the killing of George Floyd. For all window sizes less than 35 days, the regression estimates are positively signed and statistically significant. In total, 54 of the 86 bandwidths show statistically significant increases. Across each regression coefficient, the mean increase is $7,234,058 and the median is

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$6,847,223. For these coefficients, the mean p-value is 0.08 and the median p-value is 0.03.

As is standard for regression discontinuity designs, calculations for an optimal window size remove researcher subjectivity and encourage objective selection of model hyperparameters (Imbens and Kalyanaraman 2012). Using the Imbens-Kalyanaraman Optimal Bandwidth calculation, we find that the optimal bandwidth is 63 days. With this value as our default window size, we find that BLM protests in response to the killing of George Floyd significantly increased campaign contributions. After the killing of George Floyd, there is a 48.3 percent increase ($8,052,910) in the total daily amount of individual-level FEC donations in US Dollars. **S2** reports the full regression table for this analysis. **S2** also includes robustness checks for this analysis, including replications using poisson and negative binomial regression. **S3** reports the same analysis using number of daily donations as the dependent variable. This analysis returns similar, but weaker conclusions. As a result, there is stronger evidence that the BLM protests increased the amount of total donations in US dollars rather than the number of donations made across the country.

As an additional robustness check, we assess whether federal campaign contributions fluctuate at arbitrary discontinuous thresholds. 2020 was an especially tumultuous political year. A competitive presidential election and the outbreak of a global pandemic present alternative explanations for a sudden, unexpected increase in donation behavior. **Figure 3** provides strong evidence *against* random discontinuous changes at different thresholds.

Looking to **Figure 3**, the X-axis shows varying daily thresholds in relation to the timing of Floyd's death and the Y-axis is the discontinuous change at each threshold using the optimal bandwidth as the window size. Put otherwise, the analysis in **Figure 3** iteratively varies the value of τ from Model (1) across 141 different dates (i.e., 70 days before and after the killing of Floyd). As the figure shows, there are 23 statistically significant regression coefficients of the 141 possible thresholds. Only 10 of these 23 significant coefficients are positively signed. Most importantly,

Figure 3

Varying Thresholds:
The Effect of Political Protests on Donation Behavior

Note: For every threshold, each model is fit using the Imbens-Kalyanaraman Optimal Bandwidth.

3 of the positive, significant coefficients are immediately following the killing of George Floyd, which adds strong evidence for our theory. Moreover, there are plausible explanations for the other discontinuous changes in donation behavior across **Figure 3**. The first grouping of increases (i.e., mid to late March 2020) is when the first Covid-19 lockdowns began to affect cities and states across the country. The second brief increase (i.e., mid-April 2020) is when Bernie Sanders dropped out of the U.S. Presidential race and Joe Biden became the main Democratic candidate. The large decrease throughout July is harder to explain, but possibly connected to the aftermath of increased donation behavior throughout June.

To test **H2**, we examine which candidates monetarily benefited from the 2020 BLM protests. **Figure 4** assesses whether the discontinuous increase in campaign contributions varies by partisanship, race, and incumbency status. For this analysis, we subset the FEC contribution data to only donations made to certain types of candidates (i.e., Democrats, Republicans, Incumbents,

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Challengers, African American candidates, and White candidates). Because each candidate subset receives different daily donation rates, we standardize the number of donations made to each group by subtracting the mean from each daily donation amount and dividing by the standard deviation.
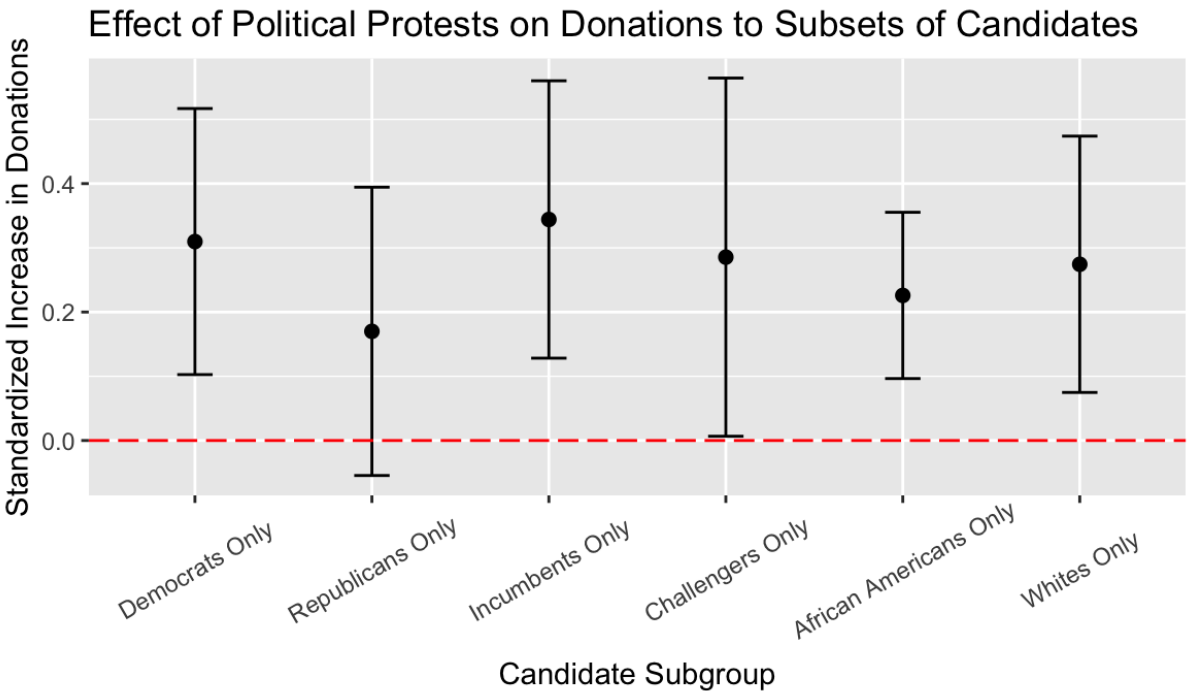

Figure 4

Note: Each model is fit using the Imbens-Kalyanaraman Optimal Bandwidth.

Figure 4 shows that both Democrats and Republicans saw notable increases in campaign contributions following the killing of George Floyd. The (unstandardized) regression coefficient for Democratic candidates is $2,617,291 and $1,052,460 for Republicans. Importantly, the standardized discontinuous increase is significantly higher for Democrats than Republicans and the effect is not statistically significant for Republicans. The remaining coefficients reveal that incumbents, challengers, African American candidates, and White candidates all saw similar increases to their political campaigns following the BLM protests of 2020. **S4** presents additional analysis into these subgroup variations.

Analysis 1: Discussion

Thus far, we have provided notable evidence that the BLM protests following the killing of George Floyd significantly increased federal donations in the United States. These findings are both statistically and substantively significant: the BLM protests in 2020 injected millions of dollars into political campaigns across the country. Moreover, we have also provided evidence that the 2020 BLM protests increased donations among numerous subgroups—with the important exception of Republican candidates. Although there is some evidence for a counter-mobilization among conservative donors (as the analyses in **S4B** show), this backlash effect is smaller in magnitude than the benefits witnessed by Democratic candidates. The larger increase for Democrats over Republicans strongly supports the notion that ideological protests relay information that benefits certain parties more than others, which is in line with the issue ownership literature (Petrocik 1996). Since the Democrats are viewed as the party of racial justice, it follows that they would see the largest increases in donation activity after a series of racial justice protests. At the same time, however, we do not see any special boosts for challenger candidates or African American candidates—although each group did experience a significant increase in donations (See **S4E** and **S4I**, respectively).

An interesting null finding is that there is much less evidence supporting the idea that the 2020 BLM protests increased the *number* of donations made across the country. This finding suggests that the BLM protests caused individuals to donate *more money* rather than motivating *more people* to donate. Still, our findings in **S3A**—which feature number of donations as the dependent variable—show that 30 of the 86 window sizes report statistically significant increases at the threshold. Moreover, nearly every coefficient with a window size under 35 days is statistically and substantively significant. Thus, while the evidence is weaker, it is possible that the BLM protests may have still increased the number of donations made across the country as well.

One major methodological limitation in this analysis is the selection of the window size. In

Figure 2, more than a third of the regression coefficients lack statistical significance. While there is certainly a logical argument that the window size should be reasonably small, we have tried to overcome the subjective selection of window sizes by choosing the Imbens-Kalyanaraman Optimal Bandwidth.

There are also several theoretical critiques to our analysis. First, some may argue that the actual effects of protests are zero and that the real increase in 2020 donations was driven by media coverage of police brutality. We do not find this critique compelling because, as we have argued, protests are fundamentally linked to shifting media coverage. A core idea of protests is disruption, which often affects how the media covers certain issues. It is possible that media coverage drove many of the reported results in the previous analysis, but this media coverage was influenced by protests in the first place. We maintain that protests are a "bundled treatment" that can affect donation behavior through various avenues.

A second more compelling critique is that the police killing of George Floyd was an unusually rare event during an extremely unique time in American history. After all, the BLM protests occurred in the heat of a presidential campaign and in the midst of a global pandemic, which provided the grounds for "an unusually attentive audience" (Chudy and Jefferson 2021). As a result, it is possible that the results from this analysis will not generalize to other time periods. We address this potential shortcoming in the following analysis.

Analysis 2: Staggered Difference-in-Differences

Analysis 2: Methods and Data

To assess whether the effects of protests on donation behavior extend beyond the BLM protests following the killing of George Floyd, we conduct a broader analysis using a staggered difference-in-differences design with county, year, and week fixed effects. By controlling for all time-variant

factors and de-meaning all estimates, we identify within-county effects of political protests over time. Critically, this design accounts for all observed and unobserved characteristics of each county, week, and year. As a result, there is no need to include additional covariates in our model. Thus, our second model is:

$$\hat{Y_{c,w,y}} = \hat{\beta}_1 Protest_{c,w,y} + \hat{\beta}_2 Y_{c,w-1,y} + \hat{\beta}_3 Protest_{c,w-1,y} + \hat{\gamma}_c + \hat{\theta}_w + \hat{\phi}_y + \hat{e_{c,w,y}} \ (2),$$

where Y is the total donation amount in US dollars, c is county, w is week, and y is year. $\hat{\beta}_1$ is the regression coefficient for *protest count*. $Y_{c,w-1,y}$ is the dependent variable lagged one week. $Protest_{c,w-1,y}$ is the independent variable lagged one week. $\hat{\gamma}_c$ is the county fixed-effect, $\hat{\theta}_w$ is the week fixed-effect, and $\hat{\phi}_y$ is the year-fixed effect.

The dependent variable in the second model is the same as the first (i.e., individual-level FEC donations), except this second analysis covers the years 2017-2021. To measure the independent variable (i.e., protest activity), we harness a dataset on the timing and location of protests occurring across the United States (2017-2021) from a nonpartisan, nonprofit called the Crowd Counting Consortium (CCC). The CCC collects data on protest activity reported in the United States. Specifically, the CCC defines protests as "any type of activity that involves more than one person and is carried out with the explicit purpose of articulating a grievance against a target, or expressing support of a target" (Pressman et al. 2021; Soule and Davenport 2009). The CCC draws its raw data from numerous informational sources, including web scrapers, social media feeds, news sites, and public submissions (Pressman et al. 2021). The CCC partners with Count Love, an organization who crawls local newspaper and television sites on a daily basis to identify protest events. Count Love's crawler technologies and natural language models are peer reviewed in *Computation and Language* (Leung and Perkins 2021). The raw data gathered by the CCC is then validated by a

team of research assistants. Moreover, researchers have substantiated the accuracy of the CCC data by comparing its protest estimates to highly localized cellphone location data (Sobolev et al. 2020). Exploratory visualizations of the CCC protest data are displayed in **S5** of the supplemental material.

Analysis 2: Results

Does the effect of protests on campaign contributions extend beyond the 2020 BLM movement? To answer this question, we implement a staggered difference-in-differences (DiD) design with county, year, and week fixed effects. **Table 1** shows the results of the DiD model where the total weekly donation amount in a county is the dependent variable and the number of protests with over 30 participants is the independent variable. **Table 1** includes three model specifications: a base DiD model (left), a DiD model with lags for the dependent and independent variables (middle), and a DiD model with lags for the dependent and independent variables with a logarithmic transformation for the dependent variable (right). As **S1** shows, a log transformation of the dependent variable may be necessary and, as a result, we include it as a robustness check.

Model 2 in **Table 1**—our main DiD model—shows the within-county effect of political protests on federal donations made between 2017 and 2021. The estimate shows that a one-unit increase in protest activity within a county is associated with approximately a $17,608 increase in political donations, controlling for lagged donations, lagged protests, year, and week of the year. Interestingly, the effect of *lagged* protests is significant and negatively signed. Looking to Model 1 and Model 3 in **Table 1**, the regression coefficients are statistically and substantively significant. Model 1 reports similar findings to Model 2 and Model 3 shows that a one-unit increase in protest activity within a county is associated with a 1.33 percent increase in donation activity.

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Table 1: Staggered Difference-in-Differences Model

Dependent Variable:	Daily Amount of FEC Campaign Contributions in US Dollars		
Model:	(1) Base Model	(2) Lagged Model	(3) Lagged Model (Log DV)
Variables			
Number of Protests	18,885.3***	17,608.6***	0.0133***
	(2,009.8)	(1,980.0)	(0.0034)
Lagged Donations		0.0006	0.0305***
		(0.0068)	(0.0017)
Lagged Protests		-21,301.9***	0.0152***
		(2,158.0)	(0.0026)
Fixed-effects			
County	Yes	Yes	Yes
Year	Yes	Yes	Yes
Week	Yes	Yes	Yes
Fit statistics			
Observations	843,230	827,320	827,320
R^2	0.47267	0.47945	0.75926
Within R^2	0.00276	0.00605	0.00097

Clustered (County) standard-errors in parentheses

*Signif. Codes: ***: 0.01, **: 0.05, *: 0.1*

As an additional robustness check, **S6A** reports the same DiD analysis with alternative feature

transformations and different measures of protest activity. In addition to the amount of weekly donations per county, **S6A** also reports the number of weekly donations per county as the dependent variable. As a whole, **S6A** repeats the DiD analyses across five different measures of protest activity in the CCC data: all events in the CCC data (**S6A1**), protests including more than 30 participants (**S6A2**), only protests explicitly labeled as "protests" (**S6A3**), all events in the CCC data excluding "rallies" (**S6A4**), and only protests resulting in arrests, injuries, or deaths (**S6A5**). For each analysis, we replicate the DiD model across six separate feature transformations: no feature transformations, log of the dependent variable, log of the dependent variable and independent variable, a base lagged model, a lagged model with a log of the dependent variable, and a lagged model with a log of the dependent variable and independent variable. Finally, **S6A6** replicates the same analyses but excludes all data from 2020.

Taken together, the findings in **S6A** strongly reinforce the results in **Table 1**. Across each operationalization of protest activity, the regression coefficients remain positive, large, and statistically significant. Looking to the table in **S6A2**, a one-unit increase in within-county protest activity (i.e., protests with more than 30 participants) is associated with approximately 97 additional donations, after controlling for lagged donations, lagged protests, year, and week of the year. Looking back to the regression estimate in **Table 1** (i.e., $17,608), we conclude that the average additional donation amount per protest is around 181 US dollars.

While the results of **S6A** reinforce the findings in **Table 1**, there are several interesting observations. First, for both the analyses examining only protests explicitly labeled as "protests" (**S6A3**) and only protests resulting in arrests, injuries, or deaths (**S6A5**), the regression coefficients dramatically increase along with their standard errors. This is plausibly due to fewer protest events in the dataset. Second, the analysis that examines all events in the CCC data excluding "rallies" (**S6A4**), reports very similar results to **Table 1**, which assuages any concerns that the effects are

artificially driven by political rallies. Finally, the analysis that excludes any data from 2020 (**S6A6**) also displays similar findings, which illustrates that our theory generalizes beyond the 2020 BLM protests.

In **S6B**, we investigate whether liberal protests benefit Democratic candidates and whether conservative protests benefit Republican candidates. The results in **S6B1** examine the effect of liberal protests on donations to Democrats and the effect of liberal protests on donations to Republicans. The findings in **S6B1** are clear: liberal protests have a much stronger effect on donations to Democrats than Republicans. In line with our theory, the regression estimate in **S6B1** shows that a one-unit increase in liberal protest activity within a county is associated with roughly a \$6,833 increase in Democratic political donations. The effect on Republicans, however, reveals a small, but meaningful backlash effect. In particular, a one-unit increase in liberal protest activity within a county is associated with nearly a \$1,578 increase in political donations made to Republican candidates. Each of the regression coefficients in **S6B1** are statistically significant at the 0.01 level.

The results in **S6B2** reveal a slightly more complicated finding. While a one-unit increase in conservative protests leads to \$42,247 additional donations to Republicans, it also leads to \$51,795 additional donations to Democrats. It is possible that these results lack meaningful interpretation because there are far fewer conservative protests in the dataset when compared to liberal protests, which is why the standard errors are so high. While the CCC protest data contain more than 22,000 instances of liberal protest activity, there are only 3524 conservative protests. Still, the results from this analysis provide suggestive evidence that Democrats mobilize in response to conservative protest activity. Republican counter-mobilization tactics do not appear as effective as efforts by Democrats.

Analysis 2: Discussion

Overall, our staggered difference-in-differences analysis provides notable confirmatory evidence that protests have a meaningful effect on campaign contributions in the United States. Using $17,608 as our estimated effect of protests, we conclude that protests have the ability to significantly reshape the domain of money in politics. Because the CCC includes 31,605 protests with more than 30 participants from 2017 to 2021, we estimate that protests have generated $556,519,803 for candidates across the country running for federal office.

One perplexing result in our analysis is the effect of *lagged* protest activity, which consistently suggests that more protests in the week prior leads to fewer donations the next week. One possible methodological explanation lies in the nature of fixed-effects models. For example, Vaisey and Miles (2016) describe, "when x has a causal effect on y that is fully contemporaneous, [...] any lagged-x FE model will yield a coefficient of opposite sign and half the magnitude of the true causal effect." Either way, this discussion highlights a notable weakness in our analysis: there is no real reason that the effect of protests should be restricted to one week—as we do in this analysis. Moreover, our model would not identify a link between a protest occurring on a Saturday, for example, and a subsequent donation made on the following Monday, because our analysis groups protests and donations by week (i.e., Monday through Sunday).

One additional weakness in this analysis is the fluctuation in regression estimates after applying feature transformations to the data. Several of the regression coefficients across the analyses in **S6A** are either not statistically significant or report the opposite effect when applying different transformations. This may plausibly be because different subsets of the protest data reveal inconsistent measures of protest variation.

Conclusion

Past scholarship has investigated the extent to which protests influence the actions of political elites, public opinion, and voting behavior. To date, however, researchers have not explored how political protests affect an individual's willingness to donate money to a political campaign. Moreover, previous research into protest activity often fails to identify effects with causal interpretation. In this paper, we have provided robust evidence that protests also affect donation behavior as well. Using two different identification strategies and numerous robustness checks, we find that political protests shape campaign contributions in the United States.

This is encouraging information to activists across the globe and especially minority activists with limited resources. As prior work has shown, individuals with fewer resources are often limited in their ability to influence the political process (e.g., Verba, Schlozman, and Brady 1995). Protests, however, provide a vehicle for minority citizens to dramatically alter the political landscape. If one protest of more than 30 people leads to more than $17,000 in campaign contributions, then hundreds of protests across the country over time can yield millions of dollars to candidates and political parties. When considered in this light, protests can significantly affect who gets elected and what type of policy is implemented. Therefore, the effect of protests on campaign contributions provides one more glimpse into how activists can shape the political system by non-electoral behavior.

References

1. Achen, Christopher H., and Larry M. Bartels. 2016. "Democracy for Realists : Why Elections Do Not Produce Responsive Government."

2. Alexander, Michelle. 2010. "The New Jim Crow : Mass Incarceration in the Age of Colorblindness." New York :: New Press ;.

3. Branton, Regina, Valerie Martinez-Ebers, Tony E. Carey, and Tetsuya Matsubayashi. 2015. "Social Protest and Policy Attitudes: The Case of the 2006 Immigrant Rallies: Social Protest and Policy Attitudes." *American journal of political science* 59: 390-402.

4. Bugden, Dylan. 2020. "Does Climate Protest Work? Partisanship, Protest, and Sentiment Pools." *Socius : sociological research for a dynamic world 6*

5. Chong, Dennis, and James N. Druckman. 2010. "Dynamic Public Opinion: Communication Effects over Time." *The American political science review* 104: 663-80.

6. Converse, Philip E. 1964. "The Nature of Belief Systems in Mass Publics." *Critical review* (New York, N.Y.) 18: 1-74.

7. Chudy, Jennifer and Hakeem Jefferson. 2021. "Support for Black Lives Matter Surged Last Year. Did It Last?" *New York Times.*

8. Dunivin, Zackary Okun, Harry Yaojun Yan, Jelani Ince, and Fabio Rojas. 2022. "Black Lives Matter Protests Shift Public Discourse." *Proceedings of the National Academy of Sciences - PNAS* 119

9. Enos, Ryan D., Aaron R. Kaufman, and Melissa L. Sands. 2019. "Can Violent Protest Change Local Policy Support? Evidence from the Aftermath of the 1992 Los Angeles Riot." *The American political science review* 113: 1012-28.

10. Freeder, Sean, Gabriel S. Lenz, and Shad Turney. 2019. "The Importance of Knowing "What Goes with What": Reinterpreting the Evidence on Policy Attitude Stability." *The Journal of politics* 81: 274-90.

11. Gillion, Daniel Q. 2020. "The Loud Minority : Why Protests Matter in American Democracy."

12. ———. 2012. "Protest and Congressional Behavior: Assessing Racial and Ethnic Minority Protests in the District." *The Journal of politics* 74: 950-62.

13. Gillion, Daniel Q., and Sarah A. Soule. 2018. "The Impact of Protest on Elections in the United States." *Social science quarterly* 99: 1649-64.

14. Hill, Seth J., James Lo, Lynn Vavreck, and John Zaller. 2013. "How Quickly We Forget: The Duration of Persuasion Effects from Mass Communication." *Political communication* 30: 521-47.

15. Imbens, G., and K. Kalyanaraman. 2012. "Optim*al Bandwidth Choice for the Regression Discontinuity Estimator.*" The Review of economic studies 79: 933-59.

16. Kalmoe, Nathan P. 2020. "Uses and Abuses of Ideology in Political Psychology." *Political psychology* 41: 771-93.

17. Katznelson, Ira. 2005. "When Affirmative Action Was White : An Untold History of Racial Inequality in Twentieth-Century America." 1st ed. ed. New York :: W.W. Norton.

18. King, Desmond S., and Rogers M. Smith. 2005. "Racial Orders in American Political Development." *The American political science review* 99: 75-92.

19. Knox, Dean, Will Lowe, and Jonathan Mummolo. 2020. "Administrative Records Mask Racially Biased Policing." *The American political science review* 114: 619-37.

20. Lebron, Christopher J. 2020. "The Making of Black Lives Matter : A Brief History of an Idea."

21. Lee, Taeku. 2002. "Mobilizing Public Opinion : Black Insurgency and Racial Attitudes in the Civil Rights Era." Chicago :: University of Chicago Press.

22. Leung, Tommy, and L. Nathan Perkins. 2021. "Counting Protests in News Articles: A Dataset and Semi-Automated Data Collection Pipeline." *Computation and Language*

23. Mazumder, Soumyajit. 2019. "Black Lives Matter for Whites' Racial Prejudice: Assessing the Role of Social Movements in Shaping Racial Attitudes in the United States." Not Published.

24. ———. 2018. "The Persistent Effect of U.S. Civil Rights Protests on Political Attitudes." *American journal of political science* 62: 922-35.

25. Meredith, Marc. 2009. "Persistence in Political Participation." *Quarterly journal of political science* 4: 187-209.

26. Mutz, Diana C. 2022. "Effects of Changes in Perceived Discrimination During Blm on the 2020 Presidential Election." *Science advances*

27. Petrocik, John R. 1996. Issue Ownership in Presidential Elections, with a 1980 Case Study. *American Journal of Political Science* 40(3): 825-825.

28. Pressman, Jeremy, Erica Chenoweth, Tommy Leung, L. Nathan Perkins, and Jay Ulfelder. 2022. "Protests Under Trump, 2017-2021." *Mobilization*

29. Reny, Tyler T., and Benjamin J. Newman. 2021. "The Opinion-Mobilizing Effect of Social Protest against Police Violence: Evidence from the 2020 George Floyd Protests." *The American political science review* 115: 1499-507.

30. Rucht, Diete, Ruud Koopmans, Friedhelm Niedhardt, Mark R. Beissinger, Louis J. Crishock, Grzegorz Ekiert, Olivier Fillieule, Pierre Gentile, Peter Hocke, Jan Kubik, John D. McCarthy, Clark McPhail, Johan L. Olivier, Susan Olzak, David Schweingruber, Jackie Smith, and Sidney Tarrow. 1999. "Acts of Dissent: New Developments in the Study of Protest." *Rowman Littlefield Publishers.*

31. Sato, Yuko, J. Haselswerdt 2022. "Protest and State Policy Agendas: Marches and Gun Policy after Parkland." *Policy studies journal.*

32. Sobolev, Anton, M. Keith Chen, Jungseock Joo, and Zachary C. Steinert-Threlkeld. 2020. "News and Geolocated Social Media Accurately Measure Protest Size Variation." *The American political science review* 114: 1343-51.

33. Soule, Sarah A. and Christian Davenport. 2009. "Velvet Glove, Iron Fist, or Even Hand? Protest Policing in the United States, 1960-1990." *Mobilization* 14(1): 1-22

34. Tilly, Charles. 2007. "Contentious Politics." ed. Sidney G. Tarrow. Boulder, Colo. :: Paradigm Publishers.

35. Vaisey, Stephen, and Andrew Miles. 2017. "What You Can—and Can't—Do with Three-Wave Panel Data." *Sociological methods research* 46: 44-67.

36. Wallace, Sophia J., Chris Zepeda-Millán, and Michael Jones-Correa. 2014. "Spatial and Temporal Proximity: Examining the Effects of Protests on Political Attitudes: Spatial and Temporal Proximity." *American journal of political science* 58: 433-48.

37. Wasow, Omar. 2020. "Agenda Seeding: How 1960s Black Protests Moved Elites, Public Opinion and Voting." *The American political science review* 114: 638-59.

38. Weber, Kirsten M., Tisha Dejmanee, and Flemming Rhode. 2018. "The 2017 Women's March on Washington: An Analysis of Protest-Sign Messages." *International journal of communication* (Online): 2289.

39. Zaller, John. 1992. "The Nature and Origins of Mass Opinion." Cambridge [England] ;: Cambridge University Press.