Seminar in Political Behavior

W12: Shaping Public Opinion

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Plan for Today

1. Basic Concepts
2. Difference-in-Differences (DiD) Method
3. Slothuus and Bisgaard 2021
4. Dickson and Hobolt 2025
5. Tips for Next Time

Basic Concepts

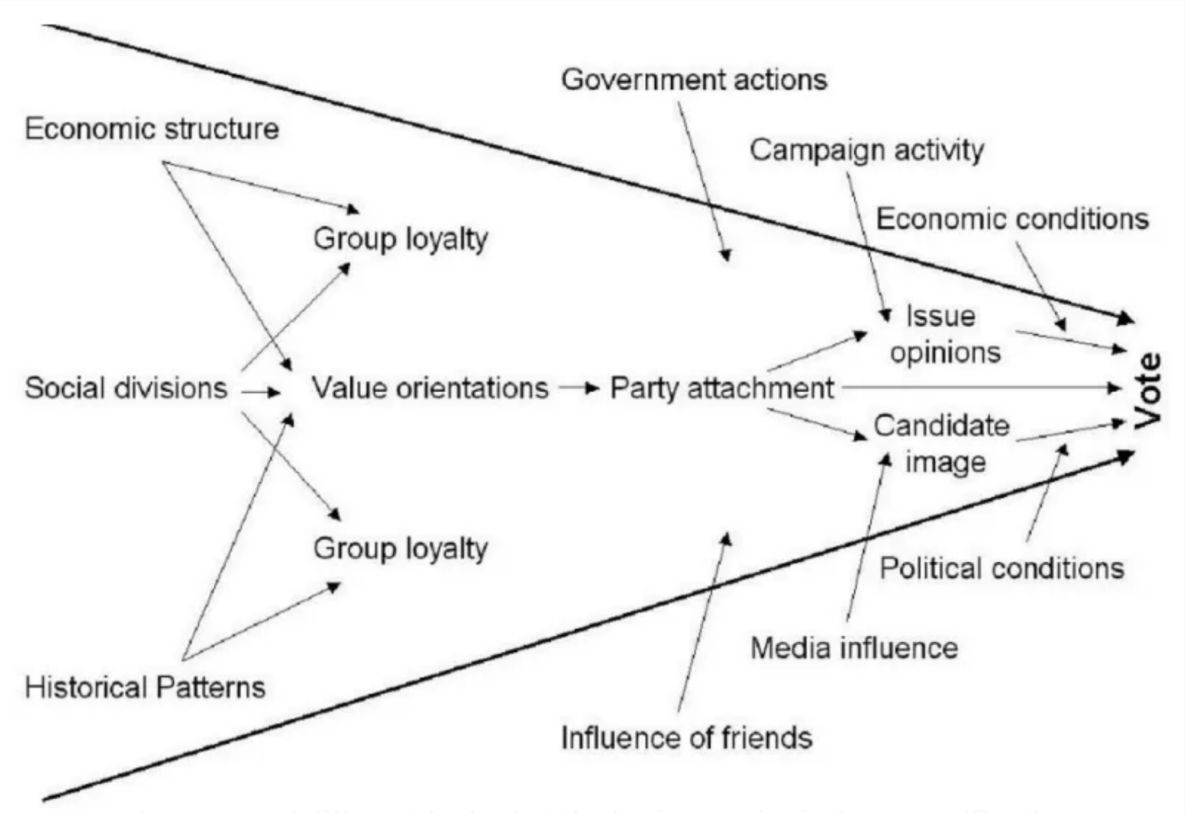
The American Voter

Campbell, Angus, Philip Converse, Warren Miller, and Donald E. Stokes. 1960. *The American voter*. New York: John Wiley & Sons, Inc..

- A seminal book of voting behavior in the United States.
- Using survey data (which becomes ANES today) to analyze voting behavior.
- Develop an innovative model of voting behavior.
    - ”Michigan” model of voting

Funnel of Causality

- Michigan model of voting:
  - Sociopsychological Model of Voting
  - Combining sociological and psychological perspectives
- ”Funnel of Causality”



Party Identification (Party ID)

- A long-term, affective, psychological identification with one's preferred political party.
- Distinct from voting preferences
- Partisanship as a ultimate heuristics
  - Provides a reference structure for evaluating many new political stimuli – What position does "my" party take on this issue? – and making political choices.
- How to obtain
  - Political socialization
  - Good electoral experience with the party

Impact of Party ID

- Party label as shortcuts/cues/heuristics
  - Issues and events frequently presented to the public in partisan terms
- Shaping nonpartisan attitudes
  - E.g. Republicans supporters are more optimistic about the economic fortune of the country when the Republicans control the White House – and vice versa.
- Mobilize people to be more politically active
- Stabilize voting patterns for the individual and the party system

Difference-in-Differences (DiD) Method

Difference-in-Differences[1]

- Political scientists see experiments as ”gold standard” of causality.
  - But sometimes it is almost impossible to run experiments.
  - Therefore we leverage some real-world variation to understand the causality between variables. We call them ”as-if experiment.”
  - We have introduced one of them: Regression discontinuity.
- Today: ***Difference-in-Differences***
  - Exploit two variations: Before-and-after, cross-sectional.
  - We will discuss them in the next slide.

[1] Content for this section is largely based on related slides for Harvard Gov 2003 by Matt Blackwell, Kosuke Imai, and Sooahn Shin

Canonical 2×2 DiD design

- Basic setup: two groups, two time periods.
- **Time period**
  - Pre-period ($t = 0$)
  - Post-period ($t = 1$)
- **Groups** defined by treatment status in post-period
  - $G_i = 1 \rightsquigarrow$ treated at $t = 1$
  - $G_i = 0 \rightsquigarrow$ always untreated
- **Treatment status** (D_{it})
  - Pre-period: Both untreated $D_{i0} = 0$
  - Post-period
    - Treatment group: $G_i = 1 \rightsquigarrow D_{i1} = 1$
    - Control group: $G_i = 0 \rightsquigarrow D_{i1} = 0$
- 2×2 DiD design

	Pre-period ($t = 0$)	Post-period ($t = 1$)
Control ($G_i = 0$)	$D_{i0} = 0$	$D_{i1} = 0$
Treatment ($G_i = 1$)	$D_{i0} = 0$	$D_{i1} = 1$

Parallel Trend (PT) Assumption

- Treatment and control groups are not totally identical!
- We allow the difference between two groups in pre-period
- But there is a problem
  - Confoundness!
- Thus we need **parallel trend (PT) assumption** to ensure the unconfoundness of the model.
  - Interpretation of PT assumption:
    - Two groups share a similarity in pre-period changes
    - Exploit this parallel trend to assume that, in a parallel universe without the treatment,
    - the treatment group would have a similar trend of change as the control group from pre-period to post-period.
- Formal expression of PT assumption:
  - $\mathbb{E}[Y_{i1}(D=0) - Y_{i0}(D=0)|G_i=0] = \mathbb{E}[Y_{i1}(D=0) - Y_{i0}(D=0)|G_i=1]$

Basic DiD estimation

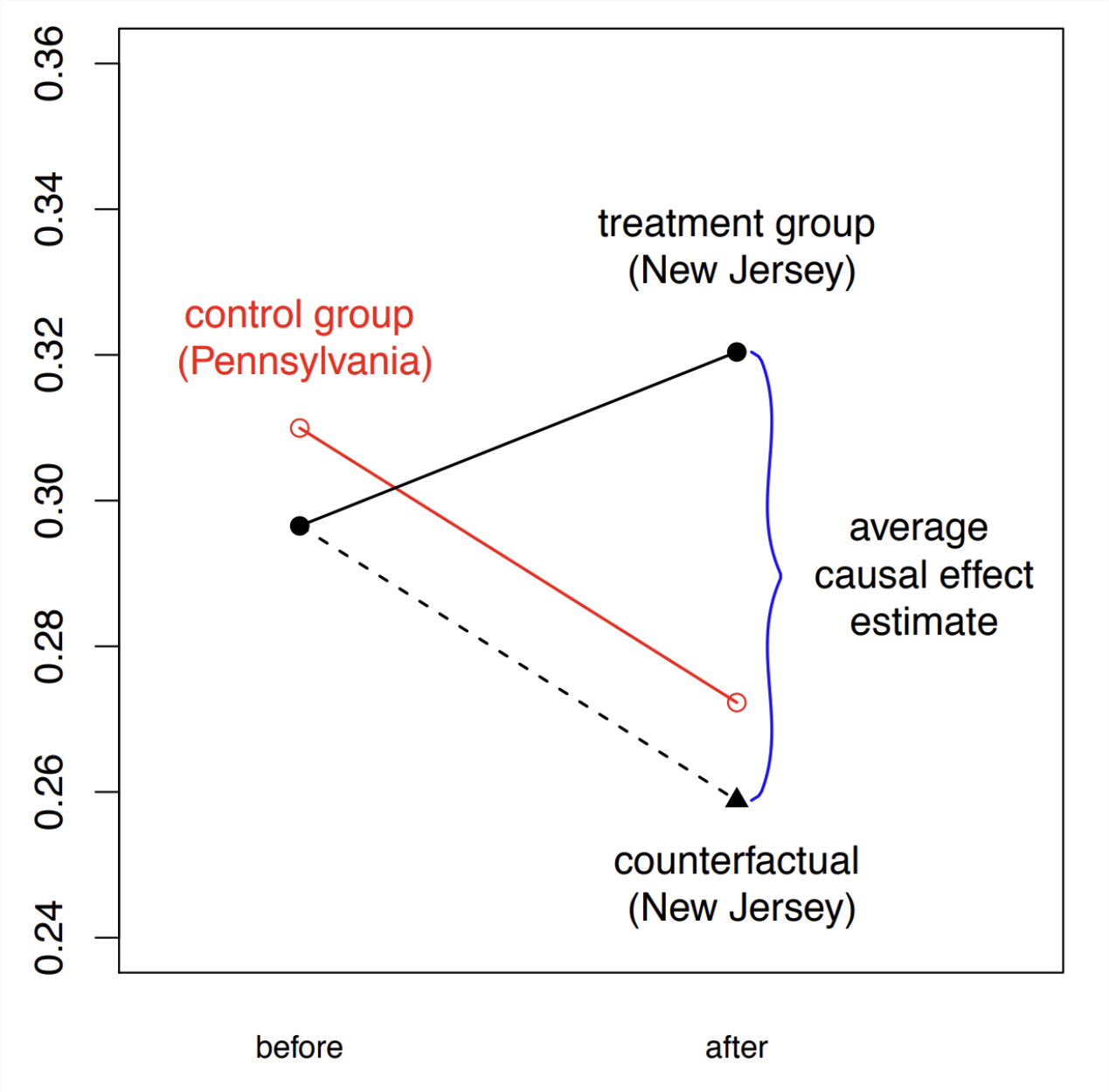
- $Y_i = \alpha + \beta Treated_i + \gamma Post_i + \delta[Treated_i \times Post_i] + \varepsilon_i$
- Both $Treated_i$ and $Post_i$ are dummy variables (0 or 1).
- 2×2 DiD again, but this time with the estimation

	$Post = 0$	$Post = 1$
$Treated = 0$ (Control)	α	$\alpha + \gamma$
$Treated = 1$ (Treatment)	$\alpha + \beta$	$\alpha + \beta + \gamma + \delta$

- The key estimand (τ_{ATT}) here: δ

$$\begin{aligned}\tau_{ATT} &= (\mathbb{E}[Y_{i1}|G_i = 1] - \mathbb{E}[Y_{i0}|G_i = 1]) - (\mathbb{E}[Y_{i1}|G_i = 0] - \mathbb{E}[Y_{i0}|G_i = 0]) \\ &= [(\alpha + \beta + \gamma + \delta) - (\alpha + \beta)] - [(\alpha + \gamma) - \alpha] = (\gamma + \delta) - \gamma = \delta\end{aligned}$$

Visualization of DiD: Card and Krueger (1994) as example



Some Examples of Research with DiD

- Card and Krueger (1994 *AER*)
  - Minimum wage policy $\rightsquigarrow$ (Un)employment?
  - Data from fast-food industry in NJ and PA
- Betchel and Hainmueller (2011 *AJPS*)
  - Disaster relief aid $\rightsquigarrow$ Lond-term voter gratitude?
  - Elbe flood in Germany as a natural experiment
- Hirano et al. (2010 *QJPS*)
  - Introduction of primary elections $\rightsquigarrow$ Congressional polarization?
  - Staggered DiD
- Lei and Zhou (2022 *JoP*)
  - Subway approval $\rightsquigarrow$ Mayor promotion (in China)?

Concluding Thoughts on DiD

- Very popular among political scientists.
- But we still have a lot of things to do with DiD (especially for political methodologists)
    - Staggered treatment: >2 Periods
    - Violation of PT assumption
    - Two-way fixed effects (2WFE) model
    - ...

Slothuus and Bisgaard 2021

Shaping Public Opinion

Slothuus, Rune, and Martin Bisgaard. 2021. "How Political Parties Shape Public Opinion in the Real World." *American Journal of Political Science* 65(4): 896-911.

- Research questions:
  - How powerful are partisan elites in shaping public opinion?
  - Do citizens follow their party when it changes its policy position, or do they resist influence and stick to their existing opinions?

Shaping Public Opinion

Shaping Public Opinion

- Literature: Basics
  - *The American Voter*: political party as “an opinion-forming agency of great importance”
  - Citizens use cues about the policy position of their preferred party as an informational shortcut to reach an informed opinion.
  - Party identification is a central part of a person’s identity

Shaping Public Opinion

- Literature: 3 generations of study on how political parties shape public opinion
  - 1st gen:a robust correlation between citizens' party identification and their policy opinions
    - Example: *The American Voter*
    - Weakness:Difficult to identify the causal effect
  - 2nd gen: experiments to test causal effect
    - Example: Levendusky, Matthew S. 2010. "Clearer Cues, More Consistent Voters: A Benefit of Elite Polarization." *Political Behavior* 32(1): 111–131.
    - Finding: party positions move opinions, leading citizens to become more supportive of their own party's policy position.
    - Weakness:Conduct in a sterile environment without real-world noise
  - 3rd gen (this article):studying directly how citizens respond to changing party position in the real world. (Quasi-experiment in the real world)
    - obtaining observations from events in real-world settings that allow using sharp variation in party position-taking to draw inferences about the effects of changing party positions on policy opinion.

Shaping Public Opinion

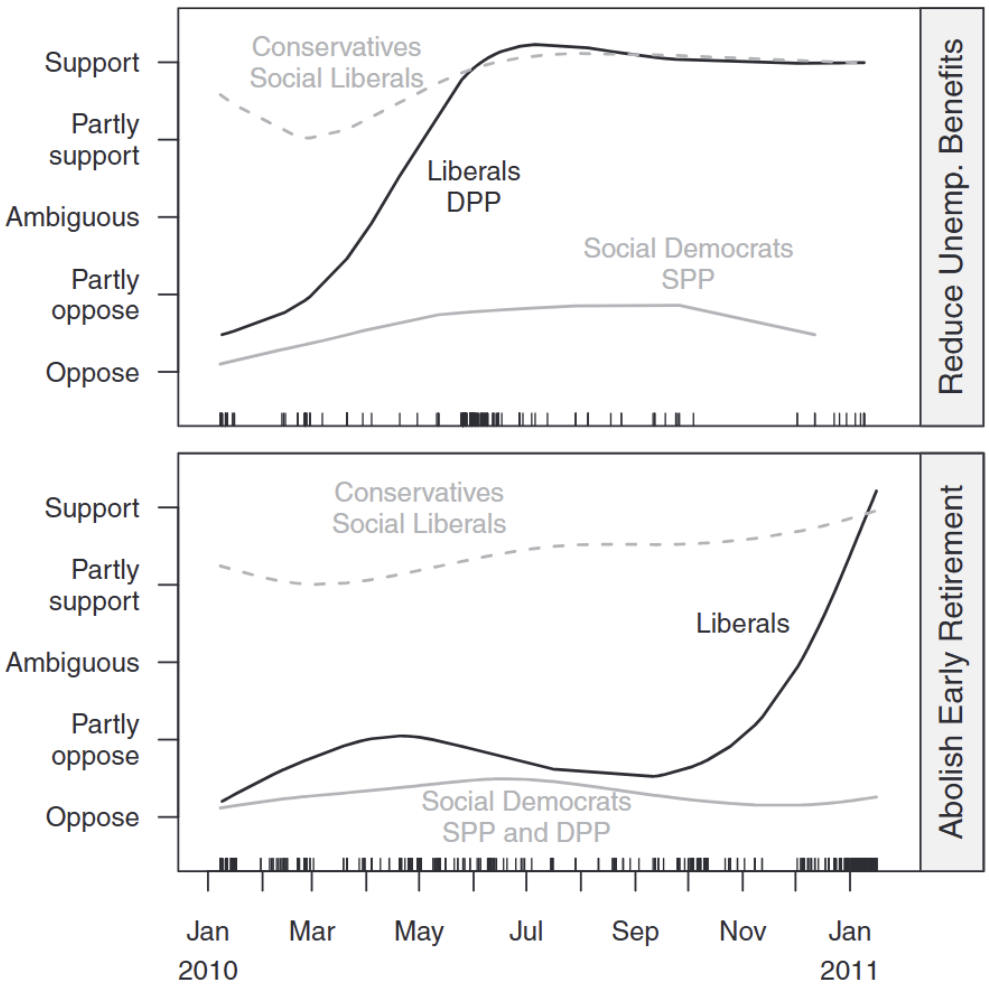
- Research design
  - Treatment:Two Sudden Changes in Party Positions
    - Background: The Great Recession in Denmark (2010-11)

    1. A surprise when the Liberals,on May 25, proposed cutting the unemployment benefit period in half, from 4 to 2 years.
    2. The Liberals' proposal to abolish the early retirement program. (taboo in Danish politics)

  - How dramatic the policy shift is?
    - Authors: human coding of party positions from news coverage!

Shaping Public Opinion

FIGURE 1 Two Dramatic Changes in Party Positions on Two Major Welfare Issues



Note: The figure displays party positions over time on whether the unemployment period should be reduced from 4 to 2 years (top) and whether the early retirement scheme should be abolished (bottom). Party positions were classified by human coders from a sample of 646 newspaper articles. Lines show a cubic smoothing spline. See SI Appendix A for all party-specific trends.

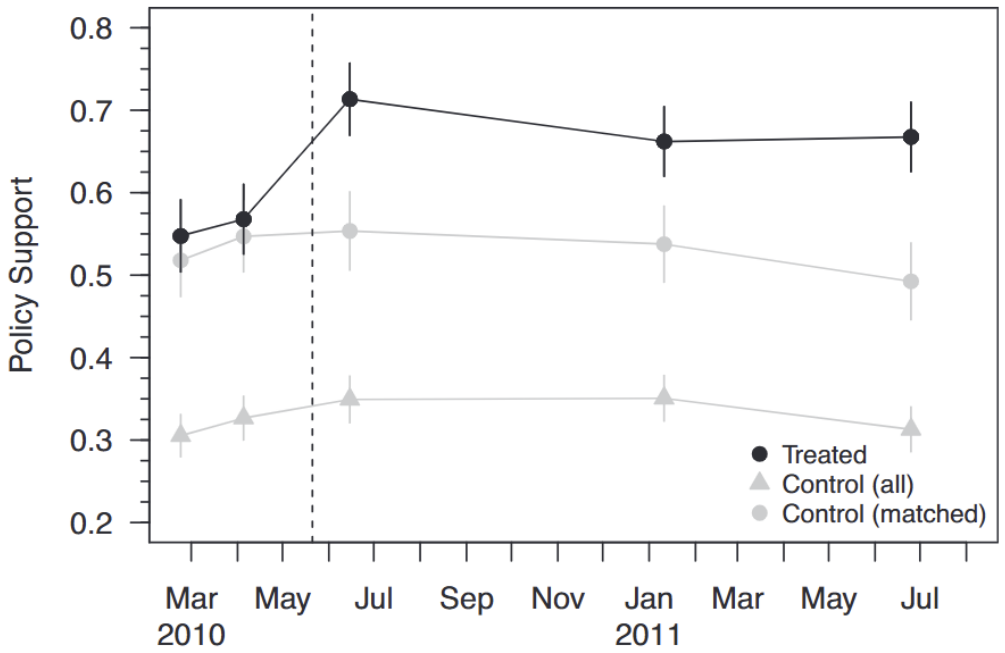
Shaping Public Opinion

- Research design
  - Data: Five-wave of panel survey conducted in Denmark
  - Key variables
    - Party ID
    - Policy opinion on the issue of unemployment benefits (5-point scale)
    - Policy opinion on the early retirement issue (5-point scale)
  - Method: Difference-in-Differences
    - Treated: Party ID = incumbent party
    - Control: Party ID = other parties
    - Model: $Y_{it} = \alpha + \beta Treated_{it=1} + \gamma Post_t + \delta[Treated_{it=1} \times Post_t] + u_{it}$
  - Justifying the DiD design and PT assumption
    - Placebo DiD
    - Matching
    - Add some time-varying controls

Shaping Public Opinion

- Result: Attitudes on unemployment benefits

FIGURE 3 When the Liberals and the DPP Proposed Cutting Down the Unemployment Benefit Period, Supporters Followed Suit

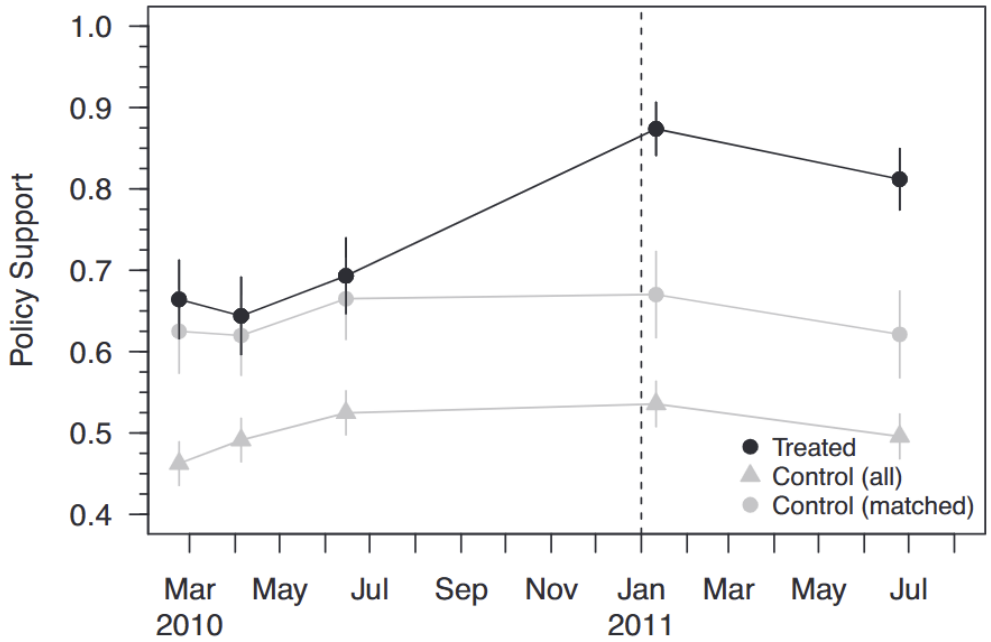


Note: Over-time changes in answers to "The unemployment benefit period should be cut from 4 to 2.5 years" for citizens who identify with the Liberals or the DPP (black dots, n = 273/N = 1,365), for all other citizens identifying with a party (gray triangles, n = 718/N = 3,590), and a control group that matches Liberal and DPP identifiers on sociodemographics as well as prior opinions (gray dots, n = 266/N = 1,330). Vertical lines indicate 95% confidence intervals. The vertical dotted line indicates timing of change in policy position of the Liberals and DPP.

Shaping Public Opinion

- Result: Attitudes on early retirement program

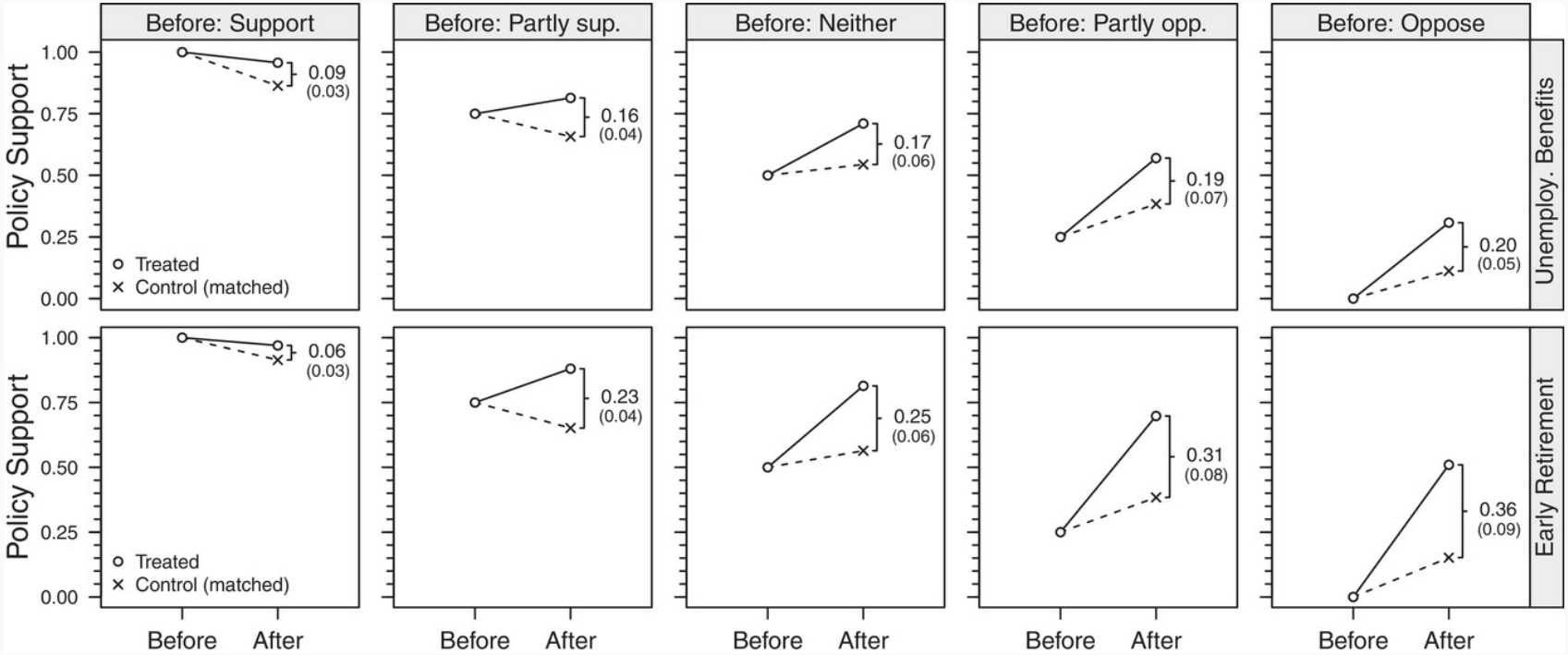
FIGURE 4 When the Liberals Proposed to Abolish Early Retirement, Liberal Supporters Became More Supportive



Note: The figure displays over-time changes, conditional on party affiliation measured in Wave 1, in answers to "In the long run, early retirement benefits will have to be abolished" for citizens who identify with the Liberals (black dots, n = 198/N = 990), for all other citizens (gray triangles, n = 778/N = 3,890), and a control group that matches Liberal identifiers on sociodemographics as well as prior opinions (gray dots, n = 194/N = 970). Vertical lines indicate 95% confidence intervals. The vertical dotted line indicates timing of change in policy position of the Liberals.

Shaping Public Opinion

- Do citizens follow their party regardless of prior opinions?
  - Yes.



Shaping Public Opinion

- Concluding thoughts on this article:
  - Their findings support the view of partisan-motivated reasoning and that many citizens tend to follow their party "rather blindly."
  - Parties could apparently reverse their policy positions—and move citizens' opinion accordingly—with little risk of losing voters
- Any thought?

Dickson and Hobolt 2025

Elite Cues and Noncompliance

Dickson, Zachary P., and Sara B. Hobolt. 2025. "Elite Cues and Noncompliance." *American Political Science Review* 119(2): 870–86.

- Research question: How much can elite cues shape offline political behavior?
- Literature: The effect of elite cues on citizens' attitudes and behaviors
  - Messages from political actors = the most widely available and influential information shortcuts
  - High perceived credibility and trustworthiness for citizens
  - Social media $\rightsquigarrow$ easier for politicians to address their supporters directly
  - Citizens tend to follow the cues of their preferred party or politicians
  - Partisan cues thus shape how citizens perceive policies and the political world

Elite Cues and Noncompliance

- Literature: elite cues during crisis
  - "rally' round the flag": citizens tend to be more supportive of and receptive to their political leaders during crisis
- US context: polarized political environment
  - Interpret cues from the perspective of in-groups and out-groups
  - the effect of elite cues is conditioned by the partisanship of the receiver
- Case in this article: President Trump's calls for the "liberation" of Michigan, Minnesota, and Virginia

Elite Cues and Noncompliance

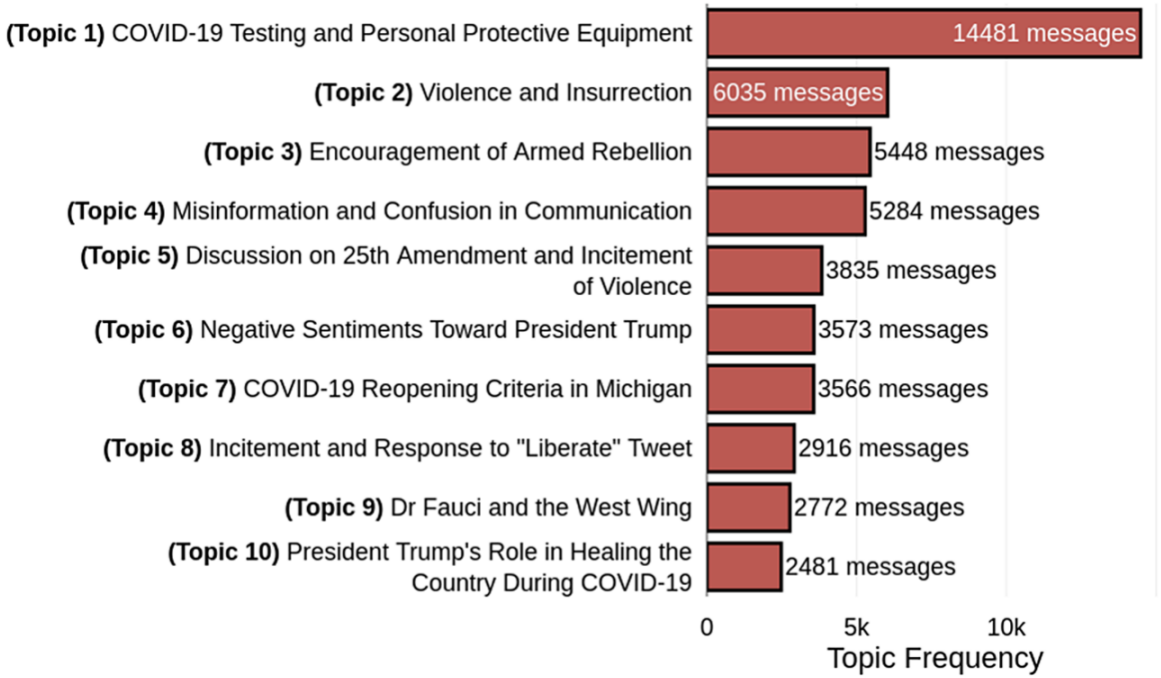
Elite Cues and Noncompliance

- Hypotheses:
  - H1: Individuals in states targeted by Trump's messages $\rightsquigarrow$ Less compliant with COVID-19 stay-at-home orders
  - H1a: The effects are observed in predominantly Republican counties.
  - H2: Individuals in states targeted by Trump's messages $\rightsquigarrow$ Commit crimes $\uparrow$

Elite Cues and Noncompliance

- Some empirical evidence of Trump's LIBERATION tweets:
  - Top topics in LIBERATE quote tweets

FIGURE 1. Top-10 Topics of LIBERATE Quote Tweets

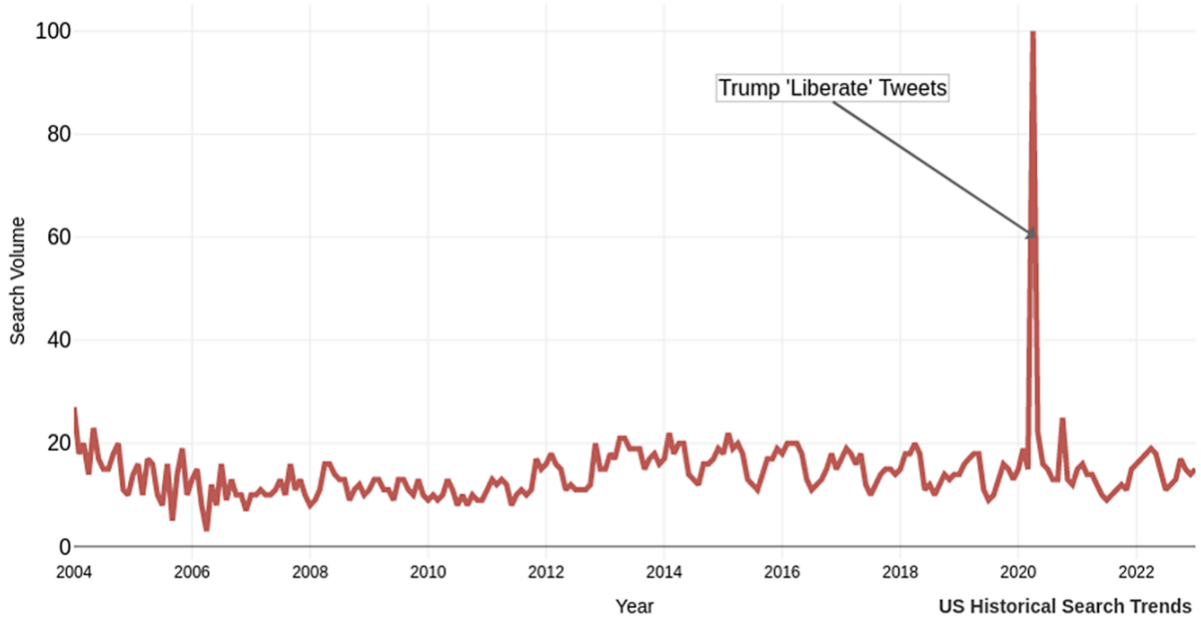


Note: Top-10 topics from 143,171 messages quote tweeting President Trump's "Liberate" tweets. Further details about the topic model are provided in Supplementary Appendix C.

Elite Cues and Noncompliance

- Some empirical evidence of Trump's LIBERATION tweets:
  - Top topics in LIBERATE quote tweets

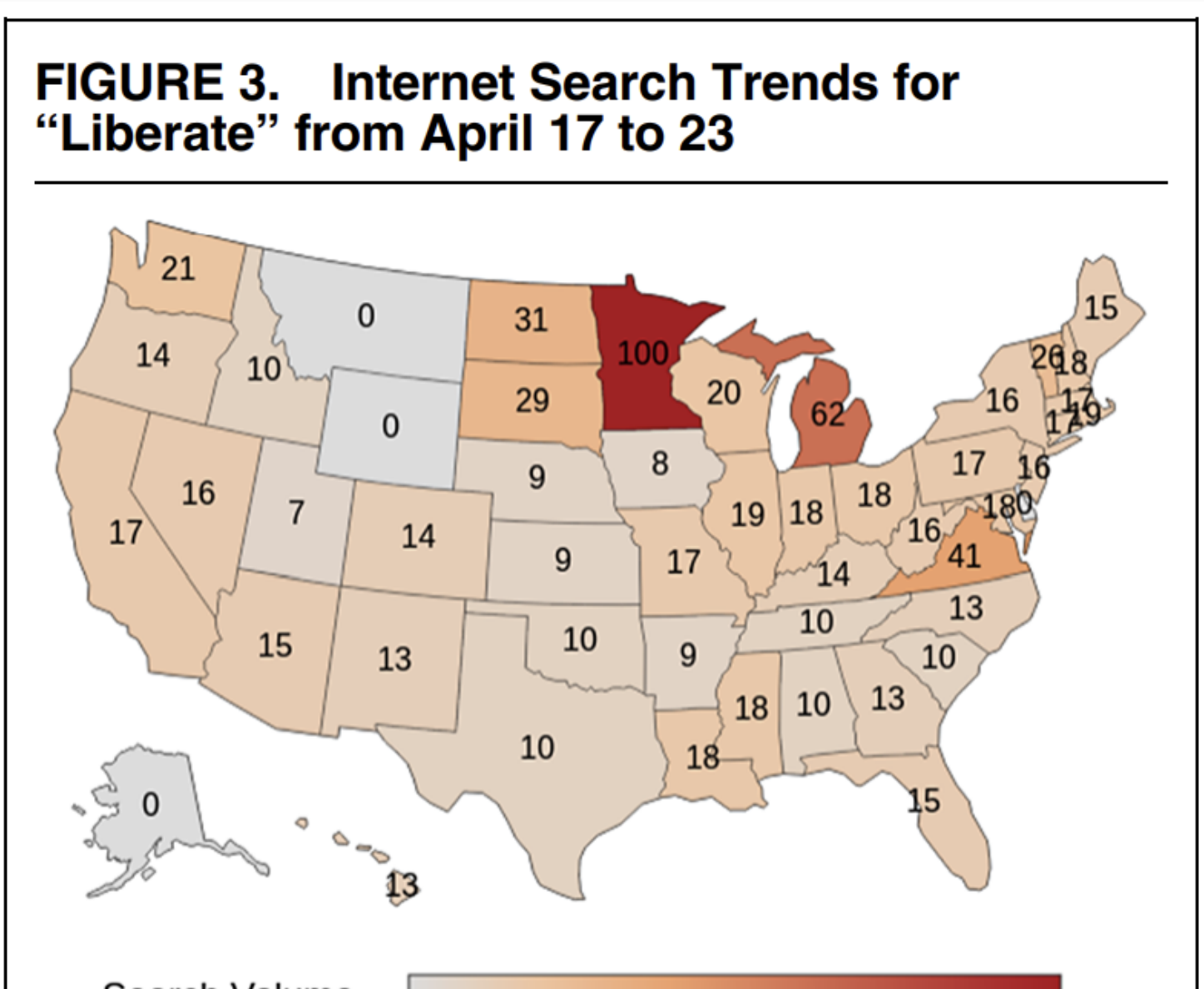
FIGURE 2. Historical Internet Search Trends for "Liberate"



Note: Historical Google Trends searches for *liberate* in the United States. Google Trends data are normalized and scaled according to time period and geography to represent the relative popularity of a search term on a range between 0 and 100 (Google 2023).

Elite Cues and Noncompliance

- Some empirical evidence of Trump's LIBERATION tweets:
  - Historical Internet Search Trends for "Liberate"



Elite Cues and Noncompliance

- Data and variables
  - Outcome
    - Movement $\rightsquigarrow$ Meta's Data for Good project
    - Daily time spent at home $\rightsquigarrow$ Meta's Data for Good project
    - Arrests for crimes related to disorderly conduct and rebellion $\rightsquigarrow$ FBI's National Incident-Based Reporting System
  - Treatment: Trump's LIBERATION tweets toward Virginia, Minnesota, and Michigan
  - Method: Difference-in-Differences
    - Cross-sectional variation: Michigan, Minnesota, and Virginia vs. the rest of the country
    - Temporal variation: Before and after Trump's LIBERATION tweets
    - There are more details about identification strategy. Let's skip it.

Elite Cues and Noncompliance

- Result: Movement

TABLE 1. Cumulative Effect of "Liberate" Cues on Movement

	Movement			
	Entire state	Dem. counties	Rep. counties	Dem. governor only
Trump cues (ATT)	1.710***	−0.533	2.246***	1.619***
Standard error	0.257	0.400	0.285	0.239
CI lower	1.206	−1.317	1.687	1.150
CI upper	2.214	0.251	2.806	2.088
P-value	0.000	0.183	0.000	0.000
County	✓	✓	✓	✓
Time (day)	✓	✓	✓	✓
No. of obs.	29,064	5,516	23,548	13,902

Note: Model 1 estimates the effect of the cues on movement in all counties within the targeted states. Model 2 uses only Democrat-majority counties in the targeted states as the treatment group and Democratic-majority counties elsewhere around the country under the same stay-at-home orders as the control groups. Model 3 follows the same partisan format with only Republican-majority counties for the treated and control groups. Model 4 uses only counties in states with Democratic governors as the control group and all counties in the targeted states as the treatment group. *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

Elite Cues and Noncompliance

- Result: Stay-at-home

TABLE 2. Cumulative Effect of "Liberate" Cues on Stay-at-Home Compliance

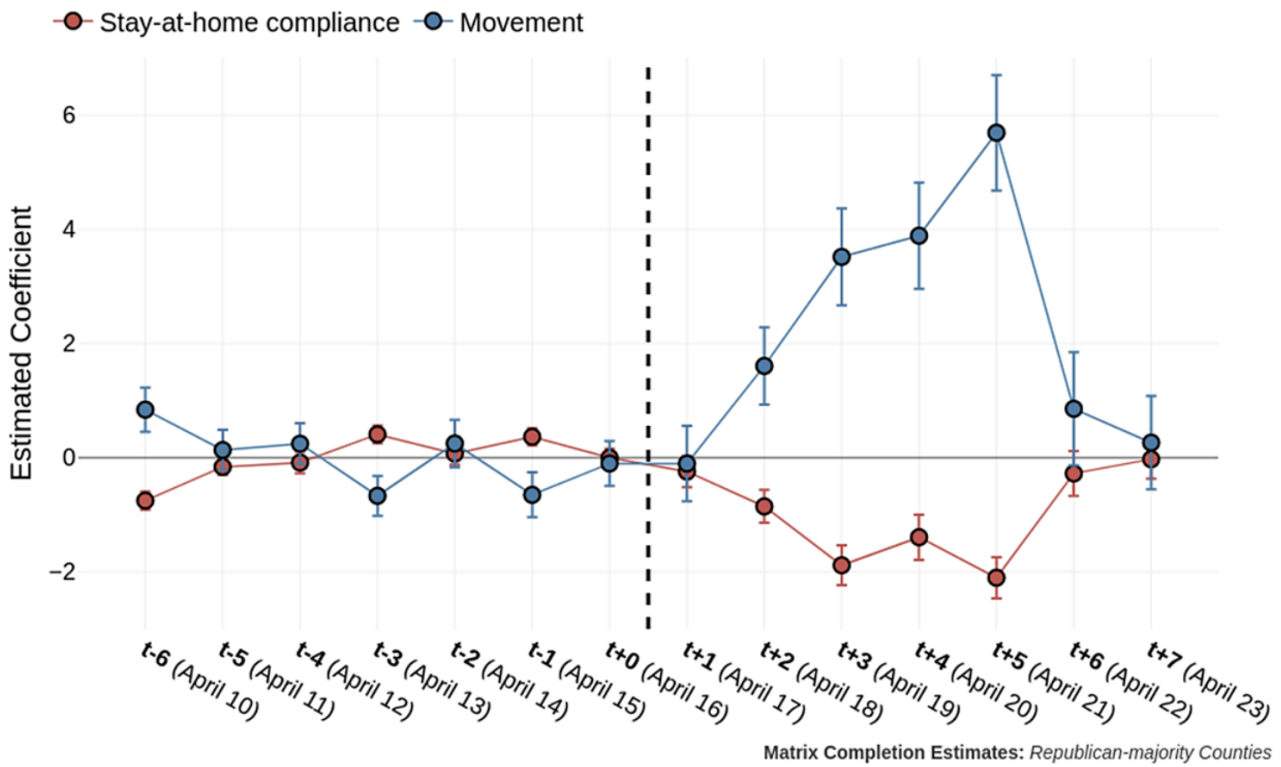
	Stay-at-home compliance			
	Entire state	Dem. counties	Rep. counties	Dem. governor only
Trump cues (ATT)	−0.787***	0.034	−0.968***	−0.754***
Standard error	0.102	0.225	0.121	0.112
CI lower	−0.986	−0.406	−1.206	−0.973
CI upper	−0.588	0.474	−0.731	−0.535
P-value	0.000	0.881	0.000	0.000
County	✓	✓	✓	✓
Time (day)	✓	✓	✓	✓
No. of obs.	29,064	5,516	23,548	13,902

Note: Model 1 estimates the effect of the cues on movement in all counties within the targeted states. Model 2 uses only Democrat-majority counties in the targeted states as the treatment group and democratic-majority counties elsewhere around the country under the same stay-at-home orders as the control groups. Model 3 follows the same partisan format with only Republican-majority counties for the treated and control groups. Model 4 uses only counties in states with Democratic governors as the control group and all counties in the targeted states as the treatment group. *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

Elite Cues and Noncompliance

- Result: Visualization

FIGURE 5. Dynamic Effects of "Liberate" Cues on Mobility in Republican Counties



Note: Matrix completion coefficient estimates and 95% confidence intervals for the effect of the cues on movement (blue) and stay-at-home compliance (red) in Republican-majority counties (e.g., model 3 in Tables 1 and 2). The counterfactual includes Republican-majority counties around the country that were not targeted in the President calls for liberation and were under the same mandatory state restrictions.

Elite Cues and Noncompliance

- Result: Arrest rate

TABLE 3. Cumulative Conditional Effect of "Liberate" Cues on Arrest Rate of White Americans

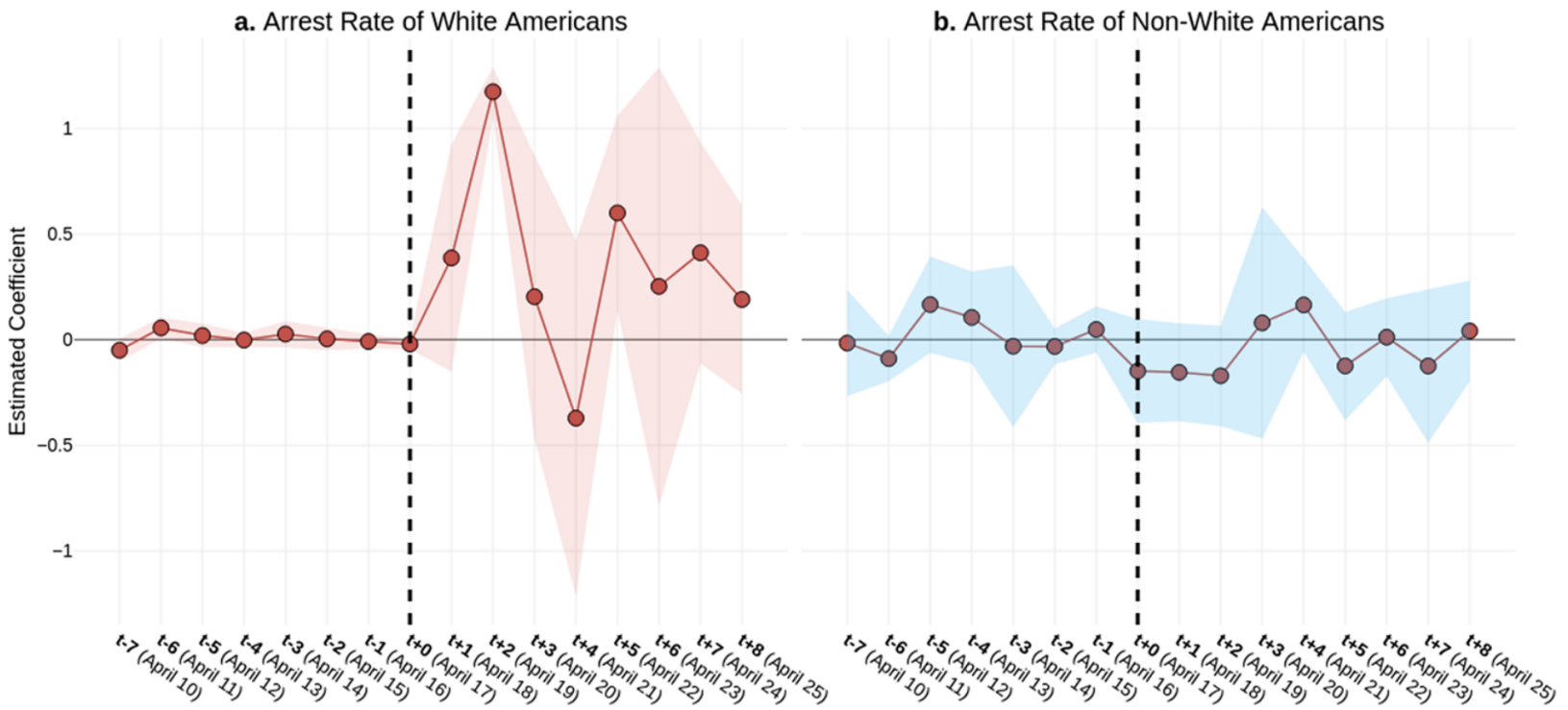
	Arrests				
	Per million	Per million (IVHS)	Per million (w/temp.)	Count	Count (w/temp.)
Trump cues (CATT)	0.324**	0.324**	0.325**	3.146**	3.006*
Standard error	0.123	0.123	0.119	1.194	1.183
CI lower (2.5%)	0.083	0.083	0.092	0.805	0.686
CI upper (97.5%)	0.566	0.566	0.558	5.487	5.325
P-value	0.009	0.009	0.006	0.008	0.011
Daily state temp.			✓		✓
State	✓	✓	✓	✓	✓
Time (day)	✓	✓	✓	✓	✓
Racial group	✓	✓	✓	✓	✓
No. of obs.	3,600	3,600	3,600	3,600	3,600

Note: All results presented use matrix completion to estimate the effect of the targeted messages on the arrest rate of white Americans. Model 1 uses the arrest rate (per million). Model 2 uses an inverse hyperbolic sine transformation of the arrests rate (per million). Model 3 uses the arrest rate per million and conditions on daily state temperature. Model 4 uses the number of arrests and model 5 uses the number of arrests when conditioning on daily state temperature. *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$.

Elite Cues and Noncompliance

- Result: Visualization

FIGURE 6. Conditional Effects of Trump Cues on Arrest Rate



Note: Matrix completion estimates for the effect of targeted cues on the arrest rate for white and non-white Americans for crimes related to assault, disorderly conduct, and vandalism/destruction of property. Shaded area indicates 95% confidence intervals. Estimates include daily temperature at the state level. Full results are presented in Supplementary Appendix L. Matrix completion estimates: Arrest rate of white and non-white americans.

Elite Cues and Noncompliance

- Concluding thoughts
  - The effect of elite cues can go beyond attitudes.
  - Polarizing elite messages can lead to more serious forms of disobedience among supporters.
- Any thoughts?

Tips for Next Time

Tips for Next Time

- Next time will be W14(12/3)
- Two articles:
  - Kalla and Broockman (2016)
    - Campaign contributions $\rightsquigarrow$ Access to congressional officials?
    - Using field experiments to investigate this question.
  - Goldstein and You (2017)
    - Would cities in U.S. engage in lobbying?
    - If yes, does this really help?
    - Using OLS + Instrumental variable
    - I will go over instrumental variable next week.