

Scientists' political participation is not motivated by government benefits

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What motivates increasing levels of political participation among scientists? Some critics argue that scientists have become partisan political actors motivated by personal gain. However, we lack empirical evidence to assess this, and other, drivers of scientists' political participation. Here, we use a natural experiment to test whether scientists who receive federal funding are more likely to engage in either science-related and non-science-related political behaviors. Comparing otherwise similar individuals who received or did not receive a National Science Foundation Graduate Research Fellowship (NSF-GRF), we find that preferences for political advocacy are not shaped by receiving government benefits. Government funding did not shape scientists' support of the 2017 March for Science nor did it substantially shape the likelihood that scientists donated to either Republican or Democratic political groups. Our results offer strong empirical evidence to rebut claims that scientists' political participation is motivated by self-serving financial agendas.

March for Science | science policy | political activism

On Earth Day 2017, thousands of scientists and their supporters protested the Trump administration in Washington, DC as part of the March for Science; marches in other American cities drew tens of thousands (1). Some scientists expressed profound misgivings about such efforts to engage in partisan politics. They criticized their colleagues for having "crossed the imaginary line" from researcher to activist, worried that political advocacy might break the social contract underlying public science and research funding (2). From this perspective, scientists' credibility as impartial requires withdrawing from political life (3). Yet, other scientists defended their colleagues' political engagement (4, 5). If political actors ignore risks as existential as climate change, it might be unethical for scientists to stay silent for fear that future research funding could be compromised (6).

These debates have spilled into the public sphere with assertions that scientists' political activity reflects partisan preferences or self-interest in receiving government funding. In recent decades, the Republican Party has criticized scientists, threatening to cut science funding (7). American conservatives report over-time declines in trust in scientists (8). And after the March for Science, the percentage of conservatives who agreed that "scientists care less about solving important problems than their own personal gain" increased (9).

Yet, despite contentious debates about scientists' political behaviors, their motivations to engage in politics have rarely been examined empirically. In this paper, we use a natural experiment to test whether government subsidies increase scientists' civic engagement. Contrary to partisan critiques of scientists' political behavior, our study finds no robust evidence that scientists engage in science-related and non-science-

related political advocacy as a function of individual-level government benefits provision. We compare scientists who received a major government subsidy for science education, the National Science Foundation Graduate Research Fellowship (NSF-GRF) Program, with scientists who did not receive the fellowship but are otherwise similar. We find award recipients are no more likely to vote, donate to political candidates, or participate in the March for Science. Overall, our research provides credible empirical evidence against rhetorical arguments linking scientists' political behavior with self-serving financial agendas.

Data and Methods

We leverage a natural experiment to test whether government benefit receipt shapes scientists' willingness to engage in political advocacy. This experiment exploits features of the US government's NSF-GRF award, which provides a three-year tuition scholarship and living stipend for graduate studies in the sciences. The NSF-GRF also publishes honorable mentions: graduate students who are recognized for their achievement but who receive no financial benefits. NSF-GRF applications are highly competitive. In 2018, less than one-third of all applicants receive any recognition from the NSF (10).

Our research subjects are the special group of fellowship applicants who received either the award (treated group) or honorable mention (control group) in any given year after receiving honorable mention in the *previous* year. For instance, our research subjects for the year 1998 are fellowship awardees and honorable mention recipients who received honorable mentions in 1997. Conditional on performance in the previous year and other pre-treatment covariates (e.g., application year, field of study, undergraduate university, graduate university at time of application, gender, ethnicity, and immigration status), we argue that whether an applicant receives a fellowship or honorable mention in this subsequent year is conditionally as-if random. Social psychologists have used a similar research design to determine that winning an NSF-GRF increased an individual's likelihood of completing graduate school but did not improve the individual's labor market outcome (11).

Critically, our study focuses on making causal inference about the drivers of scientists' political participation, not descriptive inferences about scientists' political advocacy. We thus choose a sampling strategy tailored to causal inference-making over a design that optimizes for a descriptively representative sample of all American scientists. Still, while our

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subjects are not a random sample of American scientists, they represent a wide range of disciplines (e.g., computer scientists, engineers, biologists) and research institutions (e.g., universities, private companies, the government).

A total of 6,428 NSF-GRF applicants between 1995 and 2016 met the criteria for inclusion in our sample; the applicants and their basic biographical information are publicly available online. Given budget constraints, we randomly sampled 2,210 applicants using stratified sampling based on application year and field-of-study. Some year/field-of-study strata did not have at least one subject in each condition; we eliminated those strata and were left with 2146 subjects. For each subject, we collected the following information: full name at the time of the NSF application, undergraduate institution, and graduate institution. Using only this information, we were able to locate current contact information (e.g., email addresses, mailing addresses, web form URLs) using public online searches. We could not find any contact information for 27 subjects (1.2% of the sample), and so they were dropped from the study.

We conducted an original survey of these individuals in late April 2017, in the days after the March for Science. To recruit individuals, we emailed a link to an online, Qualtrics-hosted survey ($N = 2090$). We contacted a subset of individuals without locatable email addresses through their web contact forms ($N = 4$) or via postal mail invitations ($N = 25$). We recontacted respondents who did not take the survey a week later reminding them to take the survey. Our survey measured a series of political attitudes and behaviors, including 1) support for the March for Science, 2) attitudes towards government science funding 3) willingness to publicly communicate research findings, and 4) political identity.

We received complete responses from 499 individuals or 23% of our sample; our analysis uses responses from 408 subjects because we only include respondents from year/field-of-study blocks in which at least one winner and one non-winner responded. See the Supplementary Information (SI) for details regarding our methodology and additional results. For all individuals in our sample (irrespective of whether an individual responded to our survey), we also compiled applicants' political donation records using the OpenSecrets.org's Donor Lookup tool. We manually matched applicants to the political donation records via name, city, and employer (if available). We also detail the procedure used to match subjects with donation records in the SI.

Our natural experiment research design requires that treatment (receiving the government benefit) is independent of respondent background characteristics. In SI Figure A.2, we show there are no statistical or substantive differences between award winners and non-winners regarding missing email addresses, missing contact information, and such background covariates as quality of their undergraduate and graduate institutions, ethnicity and being born in the United States. We find that award winners were slightly more likely to have a ".edu" email address, suggesting that winners are more likely to work in academia. Also, winners are 5.7 percentage points ($SE = 1.4$) more likely to be female compared with non-winners. This difference is perhaps not surprising because the NSF seeks to increase diversity in STEM education; as a result, application reviewers might favor women and ethnic minorities. To address this imbalance, we condition on applicant gender (or ethnicity if the data is available) in subsequent analyses.

However, we note that respondent background characteristics do not individually or jointly predict who won a fellowship. These results increase our confidence in whether an individual received an NSF or honorable mention is conditionally as-if random in our survey sample. Full details are provided in the SI.

We analyze our data as a lock-randomized natural experiment, where each block is a year/field-of-study combination. For each main outcome measure, we estimate the effect of winning a fellowship by regressing the outcome on background characteristic of applicant, an indicator variable for whether applicant is award status, and an indicator variable for whether the applicant's year/field of study block. We standardize the block indicator variables and the background covariates so that our regression intercept represents the estimate of the mean baseline characteristic for the non-winner control group. The regression coefficient on the award status indicator variable is the estimated effect. Our model specifications are presented in the SI.

Results

Receiving a fellowship did little to change scientists' political attitudes or self-reported behavior as measured by our survey (see Figure 1). Award winners do not indicate greater support for federal funding for the sciences, for the NSF, or for the NSF-GRFP. Neither did winning the fellowship induce respondents to communicate their research findings with policymakers and journalists more frequently. Winning the fellowship also did little to alter the respondents' political identity, both regarding party affiliation or political ideology. In the SI, we report a donation experiment to show that respondents' willingness to donate, whether in general or to organizations with a political agenda, also remained unaffected by their award status.

We also directly evaluate individuals' political participation using campaign donation data. This analysis was conducted across all individuals in our sampling frame ($N = 2119$), not just individuals who responded to the survey ($N = 419$). We find some evidence that fellowship awardees, compared with non-winners, gave donations that are \$214.81 ($SE = \76.97) larger, entirely to Democratic candidates or causes (Figure 2). However, these results prove fragile to several robustness checks. We set the top one to four overall donors, Democratic donors, and Republican donors' donation to \$0 and performed the same regression analysis. The large treatment effect we estimated seems to be driven by the sample's top two donors, who gave \$66,700 and \$35,300, respectively. As shown in SI Figure A.3, setting these two individuals' donations to \$0 dramatically reduces the differences between winners and non-winners to \$38.71 ($SE = \26.54) for overall donations.

Discussion

Our results thus rebut claims that scientists willingness to engage in either science-related or non-science-related political advocacy is motivated by self-serving financial agendas. NSF fellowship winners are no more likely than non-winners to support and participate in the March for Science, and have identical attitudes towards government science funding. While winners are more likely to donate to Democrats, this result is driven primarily by a few extremely generous donors in the winner group.

In the SI, we also report the results of two additional survey experiments embedded in our survey. In SI Experiment

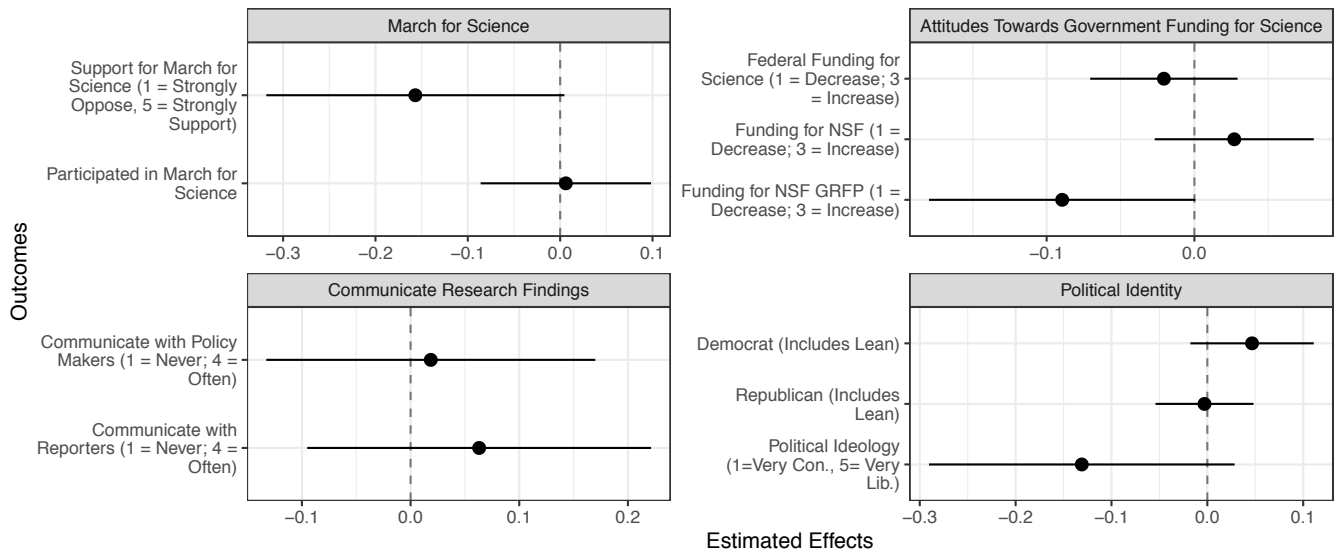


Fig. 1. Survey Results: Effect of Being Awarded the NSF Graduate Research Fellowship on Political Attitudes and Behavior. $N = 408$; heteroscedasticity-consistent standard errors are reported between the parentheses next to point estimates. The error bars represent 95% confidence intervals calculated from the robust standard errors.

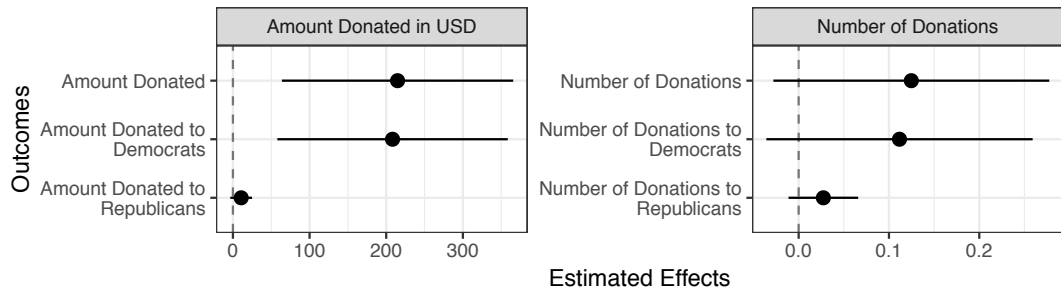


Fig. 2. Effect of Being Awarded the NSF Graduate Research Fellowship on Political Donations. $N = 2119$; heteroscedasticity-consistent standard errors are reported between the parentheses next to the effect estimates. The error bars represent 95% confidence intervals calculated from the robust standard errors. Table A.2 in the SI contains the effect estimates, standard errors, p -values, and baseline estimates.

1, we show how our sample's support for political advocacy is relatively non-responsive to partisan cues. In SI Experiment 2, we find that scientists' comfort with political advocacy does not shift as a function of advocacy content. These results, taken together with our core political advocacy and donation findings, offer an empirical basis to doubt criticism of scientists' political behaviors as being motivated by access to government benefits.

Other potential mechanisms might contribute to our findings. While the size of the benefit is significant (amounting to over \$200,000 in recent years) and the program is highly visible (recipients receive regular communication from the NSF), its duration is only three years. Furthermore, the program's beneficiaries might not view the fellowship as a government social program but rather as just reward for their hard work—much like the many Americans who failed to recognize that Social Security is a government social program (12). The results may also reflect high baseline levels of political engagement in our sample. Evidence from our survey and other surveys of scientists suggest that scientists, as a whole, are politically engaged; for example, over 98% of both sample winners and non-winners reported they were registered to vote. Interventions to increase their political engagement could hit a participation ceiling.

However, none of these potential explanations provide evidence in support of critics' key claim: that scientists' political behavior reflects individual financial self-interest. Even at a moment of heightened science politicization, we cannot find empirical evidence in support of the proposition scientists' political behavior is shaped by having received individual-level government benefits provision. Scientists and their critics should look elsewhere to make sense of scientists' political interventions.

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Online Supplement for: Scientists' political behaviors are not driven by individual-level government benefits

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Procedure to Match Subjects with Political Donation Records

For all individuals in our sample (irrespective of whether an individual responded to our survey), we also compiled applicants political donation records using the OpenSecrets.orgs Donor Lookup tool. We manually matched applicants to the political donation records via name, city, and employer (if available). We use the following procedure:

1. Search if any donor matches the subject's first and last name.
2. For female subjects who changed their last name, search using both their maiden names and married names.
3. For subjects with nicknames or more commonly use their middle names, also search using their nicknames or middle names.
4. If there are no name matches, record the subject's donation as \$0.
5. If there is a name match, check if the donor's middle name matches the subject's middle name. In addition, check if the donor's employers and locations (i.e., city and state) match the subject's current or past employers or locations. If all three matches, record the matched donor's donation record. If the donor's middle name is not available, download if her employers and location match those of the subject.

Political donation records were compiled into six outcome variables: 1) amount donated (in USD), 2) amount donated to Democrats or Democratic causes, 3) amount donated to Republicans or Republican causes, 4) number of donations, 5) number of donations to Democrats or Democratic causes, and 6) number of donations to Republicans or Republican causes.

Main Results Tables

The following tables present the numerical results that are used to generate the two figures in the main text.

Table 1: Effect of Being Awarded the NSF Graduate Research Fellowship on Political Attitudes and Behavior ($N = 408$)

Outcomes	Estimates	Baseline	p -value
Support for March for Science (1 = Strongly Oppose, 5 = Strongly Support)	-0.157 (0.082)	4.489	0.058
Participated in March for Science	0.006 (0.047)	0.356	0.896
Federal Funding for Science (1 = Decrease; 3 = Increase)	-0.021 (0.025)	2.937	0.418
Funding for NSF (1 = Decrease; 3 = Increase)	0.027 (0.027)	2.890	0.326
Funding for NSF GRFP (1 = Decrease; 3 = Increase)	-0.089 (0.046)	2.771	0.053
Communicate with Policy Makers (1 = Never; 4 = Often)	0.019 (0.077)	1.604	0.810
Communicate with Reporters (1 = Never; 4 = Often)	0.063 (0.081)	1.642	0.435
Donation Dollar Amount	3.311 (4.08)	36.424	0.418
Amount Donated to Organizations with Political Agenda (in USD)	2.111 (3.202)	13.308	0.510
Democrat (Includes Lean)	0.047 (0.033)	0.847	0.156
Republican (Includes Lean)	-0.003 (0.026)	0.063	0.910
Political Ideology (1=Very Con., 5= Very Lib.)	-0.131 (0.081)	4.093	0.109

Table 2: Effect of Being Awarded the NSF Graduate Research Fellowship on Political Donations ($N = 2119$)

Outcomes	Estimates	Baseline	p -value
Amount Donated	214.81 (76.97)	29.82	0.005
Amount Donated to Democrats	208.28 (76.67)	25.06	0.007
Amount Donated to Republicans	10.8 (7.25)	4.58	0.136
Number of Donations	0.12 (0.08)	0.22	0.109
Number of Donations to Democrats	0.11 (0.08)	0.21	0.138
Number of Donations to Republicans	0.03 (0.02)	0.01	0.164

Additional Figures

In this subsection, we present information about the survey sample and robustness checks related to the political donation aspect of our study.

Table 3: Summary Statistics of Respondents and Non-respondents

	Did Not Take Surve	Took Survey	Difference
Award Winner	0.480	0.511	-0.031 (0.026)
Undergraduate Institute Is an Ivy League	0.134	0.122	0.012 (0.017)
Undergraduate Institute Is an Ivy League Plus	0.271	0.269	0.002 (0.023)
Graduate Institute Is an Ivy League	0.161	0.180	-0.019 (0.019)
Graduate Institute Is an Ivy League Plus	0.419	0.421	-0.002 (0.025)
Applicant is Male	0.560	0.481	0.080 (0.026)**
Year Applied	2007.309	2008.731	-1.422 (0.306)***
Field: Chemistry	0.066	0.058	0.008 (0.012)
Field: Computer Science	0.042	0.034	0.008 (0.010)
Field: Engineering	0.183	0.156	0.026 (0.019)
Field: Geosciences	0.023	0.016	0.007 (0.007)
Field: Life Sciences	0.378	0.387	-0.008 (0.025)
Field: Material Sciences	0.001	0.002	-0.001 (0.002)
Field: Math	0.026	0.042	-0.016 (0.010)
Field: Physics and Astronomy	0.064	0.056	0.008 (0.012)
Field: Psychology	0.122	0.132	-0.010 (0.017)
Field: Social Sciences	0.094	0.116	-0.022 (0.016)

Table 4: Predicting Survey Response Using Applicants' Characteristics

	Estimates	<i>p</i> -value
Award Winner	0.016 (0.018)	0.392
Undergraduate Institute Is an Ivy League	-0.025 (0.036)	0.482
Undergraduate Institute Is an Ivy League Plus	0.013 (0.028)	0.640
Graduate Institute Is an Ivy League	0.027 (0.029)	0.361
Graduate Institute Is an Ivy League Plus	-0.006 (0.022)	0.779
Applicant is Male	-0.045 (0.020)	0.020
Year Applied	0.006 (0.001)	<0.001
Field: Computer Science	0.003 (0.057)	0.953
Field: Engineering	0.011 (0.041)	0.781
Field: Geosciences	-0.051 (0.065)	0.433
Field: Life Sciences	0.023 (0.039)	0.545
Field: Material Sciences	0.260 (0.370)	0.482
Field: Math	0.136 (0.068)	0.047
Field: Physics and Astronomy	0.016 (0.050)	0.755
Field: Psychology	0.030 (0.045)	0.497
Field: Social Sciences	0.070 (0.047)	0.136
Intercept	-12.496 (3.008)	<0.001
N	2119	
<i>F</i> -statistic	$F(16, 2102) = 2.475$	<i>p</i> -value = 0.001

Table 5: Summary Statistics of the Survey Sample

	No Award	Award	Difference
Undergraduate Institute Is an Ivy League	0.127	0.127	<-0.001 (0.033)
Undergraduate Institute Is an Ivy League Plus	0.245	0.240	-0.005 (0.043)
Graduate Institute Is an Ivy League	0.181	0.181	<0.001 (0.038)
Graduate Institute Is an Ivy League Plus	0.402	0.407	0.005 (0.049)
Applicant is Male	0.505	0.417	-0.088 (0.049)
Under-represented Minority	0.064	0.074	0.010 (0.025)
Asian	0.103	0.108	0.005 (0.030)
Born in the US	0.900	0.895	-0.005 (0.030)
<i>N</i> = 408			

Table 6: Predicting Award Using Survey Sample's Respondent Characteristics

	Estimates	<i>p</i> -value
Undergraduate Institute Is an Ivy League	0.033 (0.103)	0.746
Undergraduate Institute Is an Ivy League Plus	-0.023 (0.081)	0.772
Graduate Institute Is an Ivy League	-0.006 (0.080)	0.943
Graduate Institute Is an Ivy League Plus	0.017 (0.064)	0.784
Applicant is Male	-0.091 (0.051)	0.074
Under-represented Minority	0.028 (0.099)	0.775
Asian	0.004 (0.087)	0.962
Born in the US	-0.002 (0.089)	0.985
Intercept	0.537 (0.093)	<0.001
<i>N</i>	408	
<i>F</i> -statistic	$F(8, 399) = 0.434$	<i>p</i> -value = 0.901

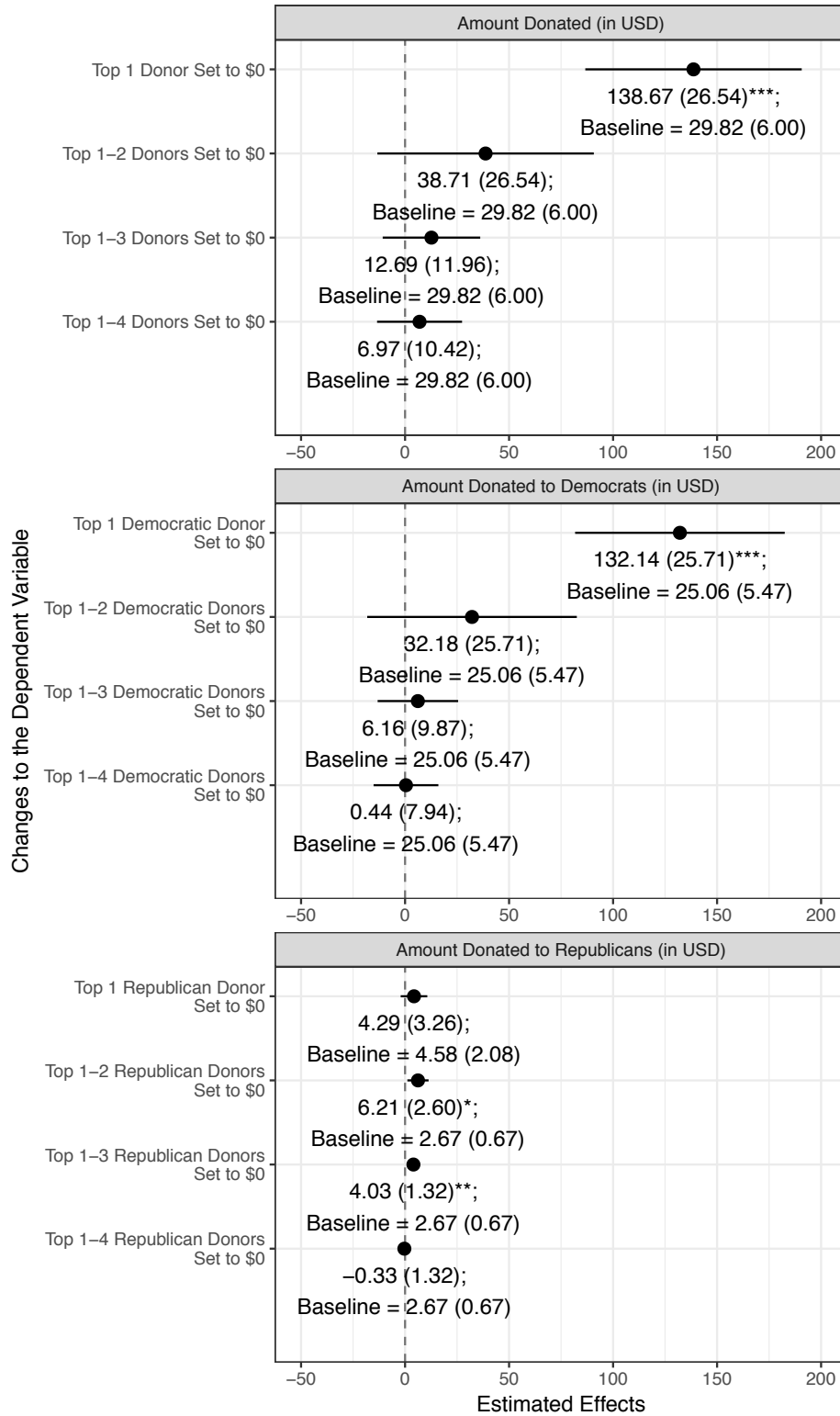


Figure 1: Robustness Check: Effect of Being Awarded the NSF Graduate Research Fellowship on Political Donations ($N = 2119$)

Additional Survey Experimental Results

This subsection describes the two experiments embedded in our survey.

Partisan Cues Survey Experiment

In Experiment 1, we randomly divided the survey sample into three groups. The first group received a politically neutral statement about the 2017 March for Science. The second group received the same message with additional content noting that “many March participants wanted to resist Republican party attacks on science and protest federal science policy’s general direction.” A third group received a message that framed the perceived attacks as coming from the Trump administration rather than the Republican party. All respondents were then asked to indicate their support or opposition to the March for Science on a 5-point scale from “strongly support” to “strongly oppose.”

Support for the March for Science was statistically identical across all three experimental groups, as shown in Table 7. We do not find greater support for the March for Science for respondents given the Trump cue or Republican cue, relative to the neutral message. These null results could plausibly be a function of ceiling effects in political support for the Science March.

Table 7: Experiment 1 Results: March for Science Support as a Function of Exposure to Partisan Cue Conditions

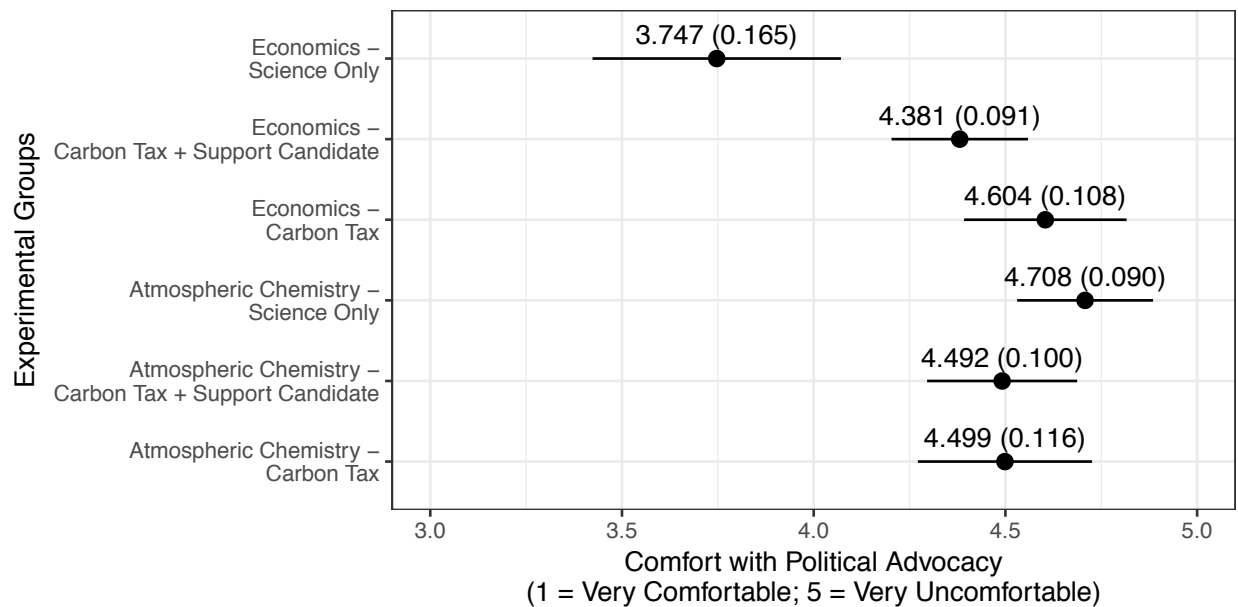
Variables	Estimates
Trump Cue Treatment	0.119 (0.086)
Republican Cue Treatment	0.113 (0.108)
(Intercept: Mean Outcome for Neutral Condition)	4.327 (0.108)
$N = 408$	

The outcome is the support for the March for Science, in which 1 means “strongly oppose” and 5 means “strongly support.” The heteroskedasticity-robust standard errors are reported in the parentheses after the point estimates.

Domain Expertise Survey Experiment

In a separate survey experiment, we presented respondents with a simple vignette describing the climate advocacy behavior of a hypothetical scholar. We varied both the scholar’s discipline (atmospheric chemistry, economics) as well as the nature of the scholar’s advocacy (communication about atmospheric climate science, public endorsement of a carbon tax, public endorsement of a carbon tax plus endorsement of political candidates who support carbon taxes).

Figure 2: Experiment 2 Results: Comfort with Political Advocacy as a Function of Advocates' Message and Discipline



The figure above shows the group mean, standard error, and 95% confidence interval for each experimental group; $N = 408$.

Scientists' comfort with political advocacy does not shift as a function of advocacy content. Scientists are as comfortable with a peer advocating for a carbon tax and endorsing candidates who advocate for climate policies, as they are with a peer who limits their advocacy to climate science communication. Further, scientists are equally comfortable with scientists and economists making these types of political interventions. The only exception is that scientists are less comfortable with economists intervening in political debates to speak on behalf of climate science.

Text of the survey

The text of the survey appears below.

NSF apply: Have you ever applied to the National Science Foundation Graduate Fellowship Program?

- Yes
- No
- I don't remember

Those who replied "No" are taken to a page that states they are not eligible to take the survey.

edu: What degrees do you have? Please check all that apply.

- Bachelor's Degree
- Masters Degree
- PhD
- MD
- Law Degree
- Other advanced degree(s)

identity: Would you describe yourself as a scientist or social scientist?

- Yes, always
- Yes, sometimes
- No, never

If the subject answered “No, never” to the previous question, they are shown this message:

That's OK! In fact, we want to hear your opinions even more. We hope you'll continue taking our survey. Your opinion is particularly important to us.

fund: Within the last five years, have you received any funding for a research project?

- Yes
- No

Those who answered “Yes” to the previous question are shown this following question:

funder: Over the past five years, which sources did you receive research funding from? Select as many as apply.

- US federal government
- State government
- Foreign government
- Private foundations or non-profit organizations
- Industry

- Direct support from a university or college
- Scientific professional associations

group: Are you a member of the following scientific organizations? Select as many as apply.

- American Association for the Advancement of Science
- National Academy of Sciences
- National Academy of Engineering
- National Academy of Medicine
- Union of Concerned Scientists
- A scientific organization within my discipline
- Other [text box]

policy1 Which of these statements comes closer to your own view, even if neither is exactly right?

- Scientists should take an active role in public policy debates about issues related to science and technology.
- Scientists should focus on establishing sound scientific facts and stay out of public policy debates.
- I dont know

policy2: Which of these statements comes closer to your own view, even if neither is exactly right?

- Scientists should take an active role in public policy debates when they are topic experts on an issue.
- Scientists should focus on establishing sound scientific facts and stay out of public policy debates, even when they are topic experts on an issue.
- I dont know

fedfund: Do you think that government funding for scientific research should be increased, kept the same, or decreased?

- Increased

- Kept the same
- Decreased
- I dont know

nsf1: Do you think that government funding for the National Science Foundation should be increased, kept the same, or decreased?

- Increased
- Kept the same
- Decreased
- I dont know

nsf2: Do you think that government funding for the National Science Foundation Graduate Research Fellowship Program should be increased, kept the same, or decreased?

- Increased
- Kept the same
- Decreased
- I dont know

comm1: How often, if ever, do you talk with policymakers about research findings?

- Often
- Occasionally
- Rarely
- Never

comm2: How often, if ever, do you talk with reporters about new research findings?

- Often
- Occasionally
- Rarely
- Never

social1: How often, if ever, do you post about science on social media?

- Often
- Occasionally
- Rarely
- Never

social2: How often, if ever, do you post about political issues on social media?

- Often
- Occasionally
- Rarely
- Never

This is the first of two experiments embedded within the survey. Respondents are randomly assigned to read one of three paragraphs before answering the questions `march1` and `march2`.

Condition 1: The March for Science was a series of rallies and marches held in Washington, DC and over 300 cities across the world on April 22, 2017. The goal of the March was to promote science and to call on politicians and policymakers to enact policies based on scientific evidence.

Condition 2: The March for Science was a series of rallies and marches held in Washington, DC and over 300 cities across the world on April 22, 2017. The goal of the March was to promote science and to call on politicians and policymakers to enact policies based on scientific evidence. Many March participants wanted to resist the Trump Administration's attacks on science and protest federal science policy's general direction.

Condition 3: The March for Science was a series of rallies and marches held in Washington, DC and over 300 cities across the world on April 22, 2017. The goal of the March was to promote science and to call on politicians and policymakers to enact policies based on scientific evidence. Many March participants wanted to resist Republican party attacks on science and protest federal science policy's general direction.

march1: Did you support or oppose the March for Science?

- Strongly support
- Somewhat support

- Neither support nor oppose
- Somewhat oppose
- Strongly oppose
- I don't know

march2: Did you participate in the March for Science? Select as many as apply.

- I participated in the march in Washington, DC
- I participated in the march in another city
- I donated to the March for Science
- I did not participate in the March for Science

This is the second of two experiments embedded within the survey. Respondents are randomly assigned to read the following before answering the question `comfort`.

`comfort` experiment: Imagine you have a colleague who studies climate change. Their specific expertise is on [economics/climate science]. In recent years, your colleague has become frustrated with the slow pace of climate change policy action in the United States. This colleague has begun to make public statements, speeches, and testimony in support of the US taking more aggressive climate [economics/climate science].

`comfort`: How comfortable are you with the behavior of your colleague?

- Very comfortable
- Somewhat comfortable
- Neither comfortable or uncomfortable
- Somewhat uncomfortable
- Very uncomfortable

age: In what year were you born? [Drop-down menu]

race: What is your race or origin? Select as many as apply.

- White
- Hispanic, Latino or Spanish origin
- Black or African American

- Asian
- Native American
- Native Hawaiian or Other Pacific Islander
- Other

employ: What is your current employment status?

- Working full time now
- Working part time now
- Temporarily laid off
- Unemployed
- Student
- Homemaker
- Retired
- Permanently disabled
- Other

Those who selected “working full time now” or “working part time now” are asked the following question:

employer: Which of these best describes your current employer?

- University or college
- Business or industry
- Government
- Non-profit organization
- Other

field: What is your primary field or scientific discipline?

- Chemistry
- Computer and Information Sciences & Engineering

- Engineering
- Geoscience
- Life Science
- Materials Research
- Mathematical Science
- Physics & Astronomy
- Psychology
- Social Science
- STEM Education & Learning Research
- I no longer work in any scientific discipline

citizen: Which of these statements best describes you?

- I was born in the USA.
- I am an immigrant to the USA and a naturalized citizen.
- I am an immigrant to the USA but not a citizen.

Those who indicated that they are US citizens are asked the following question:

register Which of these statements best describes you?

- I am absolutely certain that I am registered to vote in my precinct, election district, or by mail.
- Im not sure if I am registered to vote.
- I am not registered to vote.

party: In politics today, do you consider yourself a Republican, Democrat, Independent, or something else?

- Republican
- Democrat
- Independent

- Something else

Those who answered “Independent” or “Something else” in the previous question is asked the following question:

party: As of today, do you lean more to the Republican Party or more to the Democratic Party?

- Republican Party
- Democratic Party
- I do not lean to either party

ideo: In general, would you describe your political views as...

- Very conservative
- Conservative
- Moderate
- Liberal
- Very Liberal

amount: Thank you for completing this survey! You have been entered into a lottery to win one of three \$100 cash prizes. If you want, we can donate a portion of your prize to one of the following organizations should you win the prize. Please let us know below how much you would like to donate and which organization you would like to donate.

Optional Donation Amount:

org: Preferred Donation Organization:

- American Association for the Advancement of Science
- American Cancer Society
- Union of Concerned Scientists
- The Red Cross
- March for Science
- None

End of the Survey Text:

Thanks for your participation in this survey! Your responses will help us better understand the role of science in American society today. We will be in touch by email if you are selected to win one of the three \$100 cash prizes.

We welcome feedback from you. If you have suggestions or comments for us, please write in the textbox below.