Heuristic Projection*

David E. Broockman[†] Aaron R. Kaufman[‡] Gabriel S. Lenz[§]

June 4, 2019

Abstract

Can voters who know little about their representatives' actions effectively hold them accountable? An influential perspective argues that voters can infer their representatives' actions by using interest group ratings as heuristics. Across nine studies in four original samples, we show that information about interest group ratings can have surprisingly pathological effects on voters' judgments about their representatives. In our studies, voters shown interest group ratings are typically no more accurate at inferring their Member of Congress' votes, nor do they usually adjust their views of their representatives appropriately. But voters do often engage in *heuristic projection*: voters act as if interest groups share their own views, approving of their representatives more and perceiving their representatives as agreeing with them on more issues when they learn their representatives received favorable interest group ratings—regardless of whether their representatives earned favorable ratings by casting votes those same voters disagree with.

*We acknowledge the Institute of Governmental Studies at UC Berkeley, Bill and Patricia Brandt, and the Charles Percy Grant for Public Affairs Research for support. We thank Chris Tausanovitch and seminar participants at UC Berkeley and SPSA for helpful feedback. All remaining errors are our own. The studies reported herein were approved by the Committee for the Protection of Human Subjects at UC Berkeley and the Stanford University Institutional Review Board.

[†]Assistant Professor, Stanford Graduate School of Business. dbroockman@stanford.edu, <https://dbroock.people.stanford.edu>.

[‡]Assistant Professor, New York University, Abu Dhabi. aaronkaufman@nyu.edu, <http://www.aaronrkaufman.com/>.

[§]Associate Professor, Charles and Louise Travers Department of Political Science, University of California, Berkeley. glenz@berkeley.edu, <https://gabriellenz.me/>.

Democratic accountability hinges on voters' ability to reward and punish their representatives for taking actions they approve and disapprove of (Fearon 1999). However, typical voters know little about their representatives' actions in office (Converse 1964; Delli-Carpini and Keeter 1997). This has long left many scholars pessimistic about the potential for voters to "control" (Miller and Stokes 1963) their representatives (e.g., Achen and Bartels 2016; Tausanovitch and Warshaw 2018; Gilens 2012; Clinton 2006).

An influential claim in the study of democratic accountability is that many relatively uninformed voters, nevertheless, behave as if they were informed about their representatives' actions—and thus effectively hold their representatives accountable—by using ratings or endorsements from special interest groups (SIGs) as heuristics. This perspective dates back to McKelvey and Ordeshook (1985) and is ably summarized by Arceneaux and Kolodny (2009):

...to make good decisions, low-information voters need only look to someone who has an incentive to possess accurate information about the candidate... Issue advocacy groups are well suited to fill this role, because they have a strong incentive to know how the candidate votes on the issues important to their group. In fact, the group need not even be aligned with the voters' interests, because signals from opposition groups can also be informative by indicating whom the voter should not support... (p. 757)

Likewise, Druckman, Kifer and Parkin (2019) review conventional wisdom as holding that SIG ratings are "a common method by which voters infer [candidates'] issue positions" (p. 5). In Online Appendix B we catalog over two dozen studies that make this claim.

Such SIG ratings are a common feature of politics, frequently appearing in advertisements, on candidate websites, and in candidacy statements in official voter guides. For example, Druckman, Kifer and Parkin (2019) find that the average Congressional incumbent features 10 endorsements on their campaign website.¹ In addition, SIGs often advertise their own evaluations of politicians

¹Druckman, Kifer and Parkin (2009) likewise find an average of approximately 12 endorsements on the typical

during campaigns, especially following *Citizens United* (Petrova, Simonov and Snyder 2019).² Considering the frequent appearance of SIG ratings in campaigns and the strong theoretical reasoning that voters should be able to make inferences about politicians based on which SIGs support and oppose them, SIG ratings may play an important role in maintaining democratic accountability (Arceneaux and Kolodny 2009).

There is, however, another possibility. Based on insights from classic theories of interest groups and from research in psychology, we argue that SIG ratings could sometimes undermine accountability. Classic theories predict that interest groups typically form to support policies favored by concentrated groups but opposed by many in the broader public (Olson 1971; Bawn et al. 2012; Hertel-Fernandez 2014; Hacker and Pierson 2002). SIGs may create ratings and “scorecards” of politicians for many reasons, such as for the narrow audience of members who share their concentrated interests (Rapoport, Stone and Abramowitz 1991). However, SIGs should also recognize that many voters do not share their interests, and so should seek to frustrate voters’ ability to use their ratings as “signals...indicating whom [voters] should not support” (Arceneaux and Kolodny 2009, p. 757). To do so, SIGs may name and otherwise advertise themselves so to appear to have broad, cross-ideological appeal. And indeed, real SIGs have names such as “FreedomWorks,” “Federation for American Immigration Reform,” and the “American Energy Alliance” that voters may not only be unfamiliar with but, regardless of their own views, may interpret as indicating that these SIGs share widely-held interests, identities, or values that accord with their own (Weber, Dunaway and Johnson 2012). Voter psychology might assist SIGs in this aim: voters may be susceptible to false consensus, wherein they assume others share their views (Ross, Greene and House

Congressional campaign website. In addition, in our own analysis of data from the 2008 Wisconsin Advertising Project data, we find that 22% of 2008 US House elections in the data feature one of the candidates noting a SIG endorsement or rating in their television advertisements, as compared with only 15% of elections where candidates feature endorsements from other politicians (see also Paul and York 2015).

²In line with traditional theories of heuristics, campaign finance scholars and the United States Supreme Court itself have also argued that seeing which SIGs support which candidates through advertising may help inform voters about candidates (for review, see Wood 2018). In *Buckley v. Valeo*, the Court wrote that disclosures of which groups and individuals give to politicians’ campaigns “allows voters to place each candidate in the political spectrum more precisely than is often possible solely on the basis of party labels and campaign speeches.”

1977; Mutz 1998; Conover and Feldman 1989),³ or engage in a process of attribute substitution (Kahneman and Frederick 2002), wherein they focus on the positive or negative valence of a SIG rating when not familiar with a SIG (e.g., “a 100/100 rating sounds like a good score”).⁴ This could result in what we call *heuristic projection*: when voters respond to SIG ratings as if SIGs share their own preferences even when they know nothing about the SIG. Such behavior could produce perverse incentives for politicians, incentivizing them to earn positive ratings from SIGs by taking positions SIGs support but that voters disagree with.

In this paper, we examine the standard view of heuristics as helpful and the possibility of this novel pathology. Do interest group ratings usually buttress electoral accountability in the way many scholars hope? Can they also act more pathologically, undermining accountability because voters reward their representatives for earning positive ratings from essentially any SIG?

Across a series of studies, we find considerable support for this pathology. First, unsurprisingly, we find that voters are rarely aware of most SIGs’ actual stances. The exceptions only occur for the rare groups with names that clearly indicate their positions (e.g., “NARAL Pro-Choice America”) and with the National Rifle Association (NRA), where we do find evidence that voters update their views of their MCs based on SIG ratings in a manner consistent with classic heuristics theory (e.g., Lupia and McCubbins 1998; Boudreau, Elmendorf and MacKenzie 2019).⁵ What is more surprising is how voters react to ratings from the vast majority of SIGs, who are still very active in politics but seemingly unknown to most voters (e.g., the League of Conservation Voters).

³False consensus is also sometimes called egocentrism (Hertel-Fernandez, Mildenerger and Stokes 2019).

⁴This could also be consistent with the likeability heuristic if voters on average evaluate unknown groups positively, consistent with Weber, Dunaway and Johnson’s (2012) findings.

⁵When “Pro-Choice America” is removed from NARAL’s name in Study 7, all traces of respondent understanding about the group’s position disappears. Likewise, in the field experiment reported by Arceneaux and Kolodny (2009), canvassers for an abortion rights group had effects consistent with classic heuristics theory in a setting in which the group did not leave their position ambiguous: the canvassers described the group’s stances and indeed often directly informed voters of candidates’ issue stances on the issue of abortion. However, SIGs often do not provide information about their own positions in advertisements for or against candidates (e.g., in TV ads, see Franz, Fowler and Ridout 2016), nor would we expect candidates to provide the issue positions associated with each SIG when listing SIG ratings or endorsements on their websites (Druckman, Kifer and Parkin 2009; 2019). Ridout, Franz and Fowler (2015) likewise find that voters are regularly exposed to ads from SIGs that are “unfamiliar to them” (p. 157).

In response to information about ratings from the vast majority of SIGs, we find that heuristic projection is widespread: voters often assume that SIGs share their own views, and hence, when they see their representatives earn positive ratings from SIGs, think their representatives have cast more votes aligned with their own views and approve of their representatives more—regardless of whether their representatives actually earned these favorable SIG ratings from SIGs not aligned with voters’ own views.

We draw this surprising conclusion from a series of nine studies across four original samples. Our studies rely on a diverse set of approaches that entail different assumptions and have complementary strengths and weaknesses. Despite their differences, our studies all point toward these same findings.

In a first pair of studies, we show that voters informed of actual SIG ratings of their actual Members of Congress (MCs) typically do no better at inferring how their MCs actually voted in Congress (Studies 1 and 2). Next, we show that informing voters of SIG ratings also fails to change their approval of how their MC is representing them in the direction that conventional wisdom suggests: voters who learn an interest group on the opposite side of an issue from them gave their MC a high rating do not approve of their MCs less. Instead, consistent with heuristic projection, we find that voters reward their MCs for high SIG ratings and punish them for low SIG ratings regardless of whether these ratings come from SIGs that do not align with voters’ own views (Study 3).

In our next series of studies, we show that this may be because voters have little knowledge of most SIGs and engage in heuristic projection. Voters have little knowledge about the policy positions (Studies 4-5) or ideology (Studies 6-7) of the vast majority of SIGs. The little knowledge voters do have about SIG ideology is offset by projection, whereby voters on average assume that SIGs share their views; voters of all ideologies are most likely to perceive the average interest group in our survey as sharing their own ideology (Study 8). Moreover, in an experiment, upon learning that their actual representatives received a positive rating from a SIG, voters are more

likely to perceive that their representatives share their own views on issues, again regardless of the SIG issuing the rating (Study 9).

These findings suggest SIG ratings only rarely act to buttress electoral accountability; politicians appear to have little reason to fear that SIG ratings will alert voters to any out-of-step positions they take. But SIG ratings do often appear to buttress the power of interest groups: voters reward politicians for earning positive ratings from SIGs by casting votes voters dislike (Study 3), perhaps because they on average assume they SIGs share their own views (Study 8) and therefore that politicians that earn positive SIG ratings share their own views, too (Study 9). This pattern is discouraging for electoral accountability, but is exactly what SIGs themselves may hope for. Our work is the first we are aware of to identify this pathology.

In addition to identifying this novel pathology, this paper also significantly expands the body of empirical evidence on how voters use SIG ratings as heuristics to evaluate politicians (see Online Appendix Table B). Scholars note that it remains “a hard question...whether most people appropriately use” heuristics such as SIG ratings (Kuklinski and Quirk 2000, p. 156) and that “what types of information facilitate” voters voting on issues “remain unsettled questions” (Boudreau, Elmendorf and MacKenzie 2015, p. 853). Some studies find that voters change their candidate choices based on SIG endorsements in a manner predicted by heuristics theory (Arceneaux and Kolodny 2009; McDermott 2006; Neddenriep and Nownes 2014), as we do in rare cases, but this finding is not universal (Boudreau, Elmendorf and MacKenzie 2019; Lau and Redlawsk 2006).⁶ Our studies are the first we know of to experimentally manipulate voters’ knowledge about actual SIG ratings of their actual representatives or to measure voter perceptions of dozens of SIGs.

⁶Most empirical work on the use of SIG ratings as heuristics focuses on how they affect how individuals form preferences about *issues*, such as in referendums (e.g., Brady and Sniderman 1985; Lupia 1994). However, in the case of referendums, it is often difficult to determine whether SIG ratings are improving decision-making because it is often unclear how voters “should” be expected to behave if fully informed; there is rarely a clear benchmark for what a “better” decision is in such elections. Studies involving candidate choice entail less ambiguity. For example, in our studies we can measure whether voters form more accurate judgments about the votes their MCs actually cast, such as whether information about ratings from environmental groups improve voters’ accuracy in inferring MCs’ votes on environmental issues. A related body of work has also considered how voters use other heuristics, such as politicians’ party or demographics, with mixed results (e.g., Dancey and Sheagley 2013; McDermott 1998; Popkin 1994).

In the pages that follow we present nine original studies in support of these conclusions. We review our studies and the samples they rely on in Table 1. We present data on the representativeness of all four of our samples in Online Appendix C.

Table 1: Summary of Samples and Studies In This Paper

Study	Research Question	Sample	<i>N</i>	Date
1	Can voters infer representatives' votes from SIG ratings?	MTurk	1,372	March - April, 2013
2	Can voters infer representatives' votes from SIG ratings?	Sample Strategies	3,958	February 2018
3	How do SIG ratings affect voters' approval of their MC?			
4	Do voters know which policies SIGs support?			
5	Do voters know which policies SIGs support?	SSI in CA	1,625	April 2013
6	Do voters perceive SIG ideology accurately?			
7	Do voters perceive SIG ideology accurately?	Lucid	3,178	October 2017
8	Do voters project their own ideology onto SIGs?			
9	Do voters naively interpret positive SIG ratings as a signal their MC shares their issue views?	Same as Studies 2-4		

Notes: Details on sample representativeness are provided in Online Appendix C. Abbreviations: MC stands for Member of Congress; SIG stands for Special Interest Group.

Can Voters Use SIG Ratings to Infer How Their MCs Voted?

We first present two studies investigating whether voters informed of an interest group endorsement more accurately infer their Member of Congress' (MC's) vote on a related issue. For example, when voters learn that the League of Conservation Voters has given their MC a perfect 100/100 rating, how does that affect their beliefs about how their MC voted on a bill to repeal environmental

protections?

Study 1

For our first study, we recruited 1,372 respondents through Amazon.com’s Mechanical Turk in March and April 2013. See Online Appendix C for statistics on representativeness. To implement this experiment, we asked respondents for their nine-digit zip code to determine their actual representative in the US House. The experiment involved three treatment conditions and a control condition. In the control condition, we asked respondents to provide their best guess about their representative’s vote on one of seven issues, detailed in Table 2, with the following prompt: “Please give your best guess for the question below: Did [respondent’s representative in the US House] vote for [policy text]?” Respondents could answer “yes,” “no,” or “abstained.” The first treatment condition exposed respondents to interest group ratings (see Table 2) from an interest group related to that issue. The cues varied by interest group, but generally took the form of “Before you answer this question, here’s some information you might find relevant: Representative [Rep.] received a score of [x]% from the [Interest Group],” and presented all available ratings from the previous four years. Since voters know their MC’s party when voting in real world elections—it is on the ballot—the second treatment condition exposed respondents to their representative’s party: “Your representative is a member of the [respondent’s representative’s party] Party.” The third treatment condition presented respondents with both interest group ratings and their representative’s party. (In Study 1, we did not explain that SIG base these ratings on MC’s previous votes, but we did do so in Study 2.)

The policy summaries we provided to respondents are in the fourth column of Table 2. We determined each voter’s actual MC, and that MC’s votes, using data from Project Vote Smart (PVS). We selected interest group endorsements from several prominent SIGs. We matched 741 respondents to 278 MCs with SIG ratings and roll call votes.⁷

⁷From the original 1,372 respondents, we lost 162 because they did not enter their nine-digit zip codes, 420 because

Table 2: The issue area, interest group, House of Representatives bill identifier, survey prompt, and vote breakdowns for the six issues used in Study 1.

Issue	Interest Group	Vote	As shown to respondent: Did your representative support...?	Dems in favor	Reps in favor
Abortion	NARAL Pro-Choice America	HV 292 2011	banning federal funding for elective abortions	8.3%	97.5%
Energy	Chamber of Commerce, League of Conservation Voters	HV 650 2011	building the new Keystone XL oil pipeline	24.4%	96.7%
Trade	AFL-CIO	HV 283 2011	the free trade agreement with Korea	30.7%	90.5%
Environment	League of Conservation Voters	HV 249 2011	preventing the Environmental Protection Agency from regulating greenhouse gases	9.9%	97.9%
Guns	NRA	HV 842 2011	allowing individuals to carry concealed firearms in all states if they have a licence in one state	21.9%	94.6%
Healthcare	Chamber of Commerce	HV 14 2011	universal healthcare	1.6%	100%

If these interest group ratings helped voters form more accurate impressions of how their MCs voted, then the treatment group that received SIG rating statements should be more accurate than the control group, and the joint cue condition should be more accurate than those receiving only their MC’s party affiliation.⁸ However, this is not what we find. On average, respondents in the control condition accurately reported their MCs’ votes 60% of the time. The top panel of Figure 1 shows the estimated effect on the proportion correct by condition, using a least squares regression and coding accuracy to 0/1. Being told MCs’ party affiliation improves accuracy by 0.10 (or 10 percentage points) over the control group ($p = 0.038$), but providing respondents with a SIG rating does not increase accuracy—if anything, it slightly decreases it relative to the control. The estimates are somewhat imprecise but when we estimate main effects for the SIG and the party conditions, with no interaction to increase precision, the point estimate for the interest group cue effect is close to zero, -0.0017, and the top of the 95% confidence interval is 0.066, implying that we can be reasonably sure the effect is smaller than a 6.6 percentage point increase.

An important wrinkle in this finding is that there is some heterogeneity among interest groups. Figure 1b shows change in respondents’ accuracy by treatment condition and interest group. En-

we lacked SIG ratings for their MCs, and 49 because their MC was not in office during the votes. We assessed these prior to random assignment, except for the 49 with an MC not in office.

With half the sample, we randomly assigned which vote in the third column of Table 2 we asked about. For the other half of the sample, we assigned a vote based on respondents’ answers to a question of what “political issues would you say is most important to you personally?” This manipulation had no effect on accuracy. To simplify the presentation, we pool the results for these conditions and discuss the details after presenting the main results.

⁸SIG ratings are in fact highly predictive of MC’s votes on these issues; on average a regression can predict votes on these issues correctly approximately 95% of the time.

Figure 1: Study 1—Can respondents infer how their representatives vote using heuristics?

Notes: $N = 741$. The top panel shows that providing respondents with special interest group ratings for their Member of Congress fails to improve respondents' accuracy at identifying how their representative voted on key legislation (coded to 0/1). In contrast, providing them with their Member's party affiliation does improve accuracy by about 0.10 (10 percentage points). Across the four conditions, the N s are 191, 214, 154, and 182, respectively. The bottom panels show that this pattern varies somewhat across groups, with NRA and NARAL ratings increasing accuracy but League of Conservation Voters (LCV), AFL-CIO, and Chamber of Commerce (CoC) reducing accuracy relative to the control group. Estimates are from least squares regression models with indicator variables for condition. 95% confidence intervals.

dorsements boost accuracy for “NARAL Pro-Choice America” and the NRA, but undermine accuracy for the League of Conservation Voters and the AFL-CIO. For the Chamber of Commerce and for the League of Conservation Voters endorsement related to the Keystone XL Pipeline, SIG ratings have effects close to zero.⁹ This mirrors findings in later studies that voters are aware of the NRA and interest groups with names that clearly signal their positions (e.g., “Pro-Choice”) but ap-

⁹Removing the NRA and “NARAL Pro-Choice America”, we find a 6.6 percentage point decrease in accuracy for the remaining groups, but this is only borderline significant ($p = 0.11$) and of course is a post hoc comparison.

pear to lack knowledge of essentially all other SIGs. This uneven pattern of accuracy even for very large and influential groups such as the AFL-CIO and League of Conservation Voters is consistent with our argument that voters usually have difficulty correctly using SIG ratings as heuristics and that they may even be pathological.¹⁰

Would respondents find the SIG ratings more helpful if they cared about the issue, perhaps because they are more familiar with the relevant SIGs? To explore this possibility, we asked before the experiment, “Which of the following issues would you say is most important to you personally?” Respondents could choose from a list of policies that matched the roll call votes we later asked them about, e.g., abortion, environment, guns and gun control, etc. Half of respondents were then asked about their MC’s roll call vote that corresponded to the policy they chose (for the other half, the issue was randomly assigned). Respondents shown a SIG rating were then, as before, shown a rating from a SIG relevant to that issue. If respondents can better use SIG ratings as heuristics on issues they care about, we should see the effect of providing a SIG rating on their accuracy increase. We do not find, however, any such effect. Even when respondents are assigned to the policy they say is most important to them, Online Appendix D reports that the SIG ratings continue to slightly decrease accuracy relative to the control condition. There we also show that the results are unchanged for individuals high in political knowledge.¹¹

¹⁰For most respondents, the SIG ratings sent a clear signal about how MCs voted, predicting votes with 95% accuracy. A small number of respondents did receive mixed signals. First, just over a dozen MCs had middling ratings (between 40 and 60). Second, since we showed SIG ratings from the previous four years, noticeable changes in ratings occurred, with 24 MCs experiencing ratings changes from under 50 to over 50. Finally, 31 MCs voted inconsistently with the ratings shown. To ensure that these mixed signals do not drive the findings, we discarded MCs whose average ratings were between 40 and 60, 30 and 70, 20 and 80, 10 and 90, whose ratings changed from below 50 to above 50, and who voted out of line with their ratings, reestimating after each discard. These robustness checks left the findings unchanged—the SIG-cue effect estimates remain stubbornly near zero and often negative.

¹¹Finally, we explored whether we could improve precision with random or fixed effects for Member and policy area or with probit or logit regressions, but the results remained unchanged.

Study 2

Study 2 again considers whether informing voters of SIG ratings allows them to more accurately infer how their MC voted on roll call votes, probing the generalizability of our findings from Study 1 on this question across time, additional SIGs, and in a larger and more representative sample. For Study 2, we gathered a national sample of 3,958 respondents recruited through Sample Strategies in February 2018. See Online Appendix C for statistics on representativeness. In this study we considered 17 issues that had been voted on in Congress and corresponding SIGs; each respondent saw questions about a random half of the issues to reduce survey fatigue. The large sample size of this study and the number of issues every respondent considered means we have 31,729 issue-responder observations. The roll call votes and SIGs we used in this study are shown in Table 3. We again identified the roll call votes and SIGs using Project Vote Smart, selecting the interest groups in each issue area that rated the largest number of sitting MCs. In the study we showed respondents the title of every vote as well as short summaries we prepared, also shown in Table 3. As in Study 1, the SIG ratings were typically very highly predictive of how MCs actually voted in this study, even conditional on MC party.¹²

¹²One exception is the “National Association of Police Organizations,” which, as shown in Figure OA2, gave positive ratings to essentially every sitting Member of Congress. The National Active and Retired Federal Employees Association and Center for Security Policy also scored two Congressional votes that were highly lopsided, but their ratings nevertheless very highly predict votes on other issues. As shown in Figure 2 our findings are consistent across groups and are not sensitive to the removal of these groups. Online Appendix Figure OA2 shows a histogram of all the ratings we presented by interest group.

Table 3: The SIG and corresponding bill for the seventeen issues used in Studies 2-4

SIG Used	Corresponding Bill Title	Corresponding Bill Description as Shown to Respondent
National Rifle Association	Sportsmen’s Heritage and Recreational Enhancement (SHARE) Act of 2015	Allows individuals to fish and hunt on federal lands without a license, unless the lands are closed for conservation, public safety, or national security.
Human Rights Campaign	Prohibits Use of Funds for Discrimination Based on Sexual Orientation or Gender Identity	Prohibits the government from doing business with companies that discriminate against individuals based on sexual orientation or gender identity.
NARAL Pro-Choice America	No Taxpayer Funding for Abortion and Abortion Insurance Full Disclosure Act of 2017	Prohibits the use of any federal funds for health insurance that provides abortion services.
Gun Owners of America	Veterans 2nd Amendment Protection Act	Allows any veteran deemed mentally incompetent to buy and own firearms and ammunition, unless a judge deems them dangerous.
Campaign for Working Families	Working Families Flexibility Act of 2017	Allows employers to give employees who worked overtime paid time off instead of only overtime pay.
Chamber of Commerce	American Health Care Act of 2017	Repeals “Obamacare”: 1) Allows states to allow insurance companies to charge individuals more for insurance if they have a pre-existing condition. 2) Removes the requirement that Americans must carry health insurance. 3) Reduces amount given to low-income Americans to help them purchase health insurance.
National Association of Police Organizations	Thin Blue Line Act	Allows the death penalty in the case of a murder or attempted murder of police officers, correctional officers, firefighters, or other first responders.
League of Conservation Voters	Reducing Regulatory Burdens Act of 2017	Allows pesticides to be sprayed near water sources without obtaining a permit.
Club for Growth	Financial CHOICE Act of 2017	Allows banks of sufficient size to take additional risk, and limits the power of the Consumer Financial Protection Bureau to investigate banks.
National Active and Retired Federal Employees Association	Department of Veterans Affairs Accountability and Whistleblower Protection Act of 2017	Authorizes the Secretary of Veterans Affairs to demote, suspend, or fire senior Veterans Affairs employees for performance or misconduct, but forbids retaliation against whistleblowers.
Federation for American Immigration Reform	Kate’s Law	Increases criminal penalties for unauthorized immigrants who re-enter the United States after having been deported.
National Federation of Independent Businesses	No Sanctuary for Criminals Act	Prohibits giving federal grants to cities with “sanctuary” policies, policies cities enact to limit their cooperation with federal immigration law enforcement.
National Parks Conservation Association	Ozone Standards Implementation Act of 2017	Delays the implementation of a rule that would have reduced ozone pollution, allowing previous levels of pollution until 2026.
American Energy Alliance	Promoting Cross Border Energy Infrastructure Act	Allows oil and natural gas pipelines that cross into Canada or Mexico to be built without the President’s permission.
Center for Security Policy	Countering America’s Adversaries Through Sanctions Act	Places additional sanctions on Iran, Russia, and North Korea, as well as individuals who conduct business with these countries.
Freedomworks	Tax Cuts and Jobs Act	Reduces corporate taxes from 35% to 20% permanently. Temporarily reduces individual income taxes, with larger reductions for wealthier individuals. Increases the federal budget deficit by \$1 trillion.
AFL-CIO	Save Local Businesses Act	If an employee working for a company through a ‘temp’ agency is injured, only the temp agency is responsible and not the company directing the worker day-to-day.

There was also an important difference between the design of this study and Study 1. In this study's treatment group, although we again randomly assigned which of multiple actual SIG ratings we showed, we asked respondents to guess their MC's votes on both a directly relevant issue and a number of unrelated issues (on which we could have shown them ratings from other interest groups, but did not). This means we can make two comparisons. We first compare how accurate respondents were in our control condition, which was shown no SIG ratings of their MC, to how accurate respondents were in our treatment condition when guessing how their MC voted on roll call votes directly related to the SIG rating they were shown. For example, we can test whether respondents informed that their MC received a 100/100% rating from the League of Conservation Voters were any more accurate than respondents shown no rating at inferring how their MC voted on the roll call vote we described as "Allows pesticides to be sprayed near water sources without obtaining a permit." Second, we can compare how accurate respondents were in the control group to how accurate respondents were in the treatment group on *other issues* not directly related to the interest group rating they were shown. This will allow us to detect whether respondents are able to, for example, infer that a positive rating from the League of Conservation Voters is also informative about how their Member voted on the other issues, such as the vote that "Prohibits the use of any federal funds for health insurance that provides abortion services." We pre-registered these comparisons and how we would conduct them in a pre-analysis plan, provided in Online Appendix G.

To implement this experiment, the survey firm provided us respondents' nine-digit zip code which we used to determine their actual representative in the US House. We then told respondents "Your representative in Congress is [Name] ([MC Party])."¹³ Treated respondents then saw this statement:

Various groups often provide "ratings" or "scorecards" of how much they approve

¹³We always showed MC party in Study 2 because, when voters make choices in elections, MC party is always available to them on the ballot (Bullock 2011). However, Study 1 did not find any interaction between the presence of the SIG and party cues.

the votes every Member of Congress has taken. We have compiled the “scorecards” of many such groups and have selected one at random to show you:

[Interest group] rated [MC name] at [score] (out of 100).

To confirm that any findings are not driven by innumeracy, we next asked respondents what they thought the rating meant about whether the SIG usually “agreed or disagreed” with how their MC “voted in Congress.” As shown in Appendix Figure OA3, respondents overwhelmingly understood that positive ratings indicate the SIGs usually agree with MC’s votes and the opposite for negative ratings.

Finally, we next asked respondents how they thought their MC voted on eight or nine bills Congress had voted on. Comparing how their MC actually voted with respondents’ perceptions of their MC’s votes allows us to compute our dependent variable for Study 2: whether respondents accurately identified each of their MC’s actual votes. In the control group shown no SIG ratings, respondents on average correctly identified 68% of their MC’s votes, a figure similar to the figure observed in Study 1 when MC party was provided (as it always was in Study 2). As random guessing would yield a 50% correct rate, under the assumption that respondents who did not know guessed, this 68% figure implies that approximately 36% of respondents actually knew their MC’s vote on the average issue.¹⁴

Analyzing the data from Study 2 correctly requires the presence of fixed effects. In Study 2 and the other studies that use this sample, when voters were randomly assigned to the treatment group that was shown a SIG rating, we randomly selected which SIG’s rating of their MC we then showed. As a result, among those shown SIG ratings, the probability of assignment to ratings from different groups, or that sent different signals, varied across respondents because their MCs varied in how many SIGs rated them. In the Studies that use data from this sample (2, 3, and 9), we therefore include fixed effects to ensure that we conduct all the comparisons among individuals

¹⁴If 36% of respondents actually knew their MC’s vote and the remaining 64% guessed randomly, we would anticipate observing $36\% + \frac{1}{2} * 64\% = 68\%$ of respondents selecting the correct option, which is what we observe. There was no “don’t know” option in this study.

who had the same probability of assignment to each kind of SIG rating treatment. For Study 2, these fixed effects are simply the number of SIG ratings available for each MC.¹⁵

Figure 2a shows our estimates for whether providing a SIG rating improved respondents' accuracy, using ordinary least squares regressions with the above mentioned fixed effects with the dependent variable coded 1 accurate, 0 inaccurate. First, on average, voters are actually 0.3 percentage points *less* accurate in identifying their MC's vote on an issue when a rating from a relevant SIG is shown, a difference statistically indistinguishable from zero (SE = 1.5 percentage points, $t = -0.21$). As shown in Figure 2b, voters are also unable to accurately infer what the SIG ratings imply about their MC's votes on other issues, with respondents only being 0.6 percentage points more accurate on other issues when shown an unrelated interest group rating versus when shown no interest group ratings whatsoever (SE = 0.9 percentage points, $t = 0.65$). However, Figure 2a shows that there may be some limited exceptions where voters are able to make inferences about particular policies: the National Parks Conservation Association and potentially the NRA. These are the exceptions to the rule (although given the large number of groups, this could be by chance). The NRA may be relatively alone in being an interest groups Americans are consistently familiar with, and the National Parks Conservation Association appears to have named itself to clearly indicate its position given its cause enjoys general support. However, these positive examples are offset by the other groups, which on average lead respondents to be less accurate.¹⁶

We find similar results for individuals high in political knowledge. Some previous work finds that individuals high in political knowledge are more likely to use SIG ratings as heuristics when

¹⁵Online Appendix Figure OA1 provides an overview of the experimental design. The regressions for Study 2 take place at the respondent-issue level. We only include respondent-issue observations for issues for which a SIG rating for a respondent's MC existed and therefore could have been shown. Because respondents in the treatment group were only eligible to be shown ratings from SIGs that actually rated their MCs, respondents differed in their probabilities of seeing each SIG rating. Our fixed effects ensure that we conduct all comparisons among respondents who had the same probability of seeing each SIG rating; e.g., comparing respondents in the control group who could have been shown any of 7 SIG ratings (but were shown none) with issue-respondent observations in the treatment group for individuals who also could have been shown any of 7 SIG ratings (but were shown one of the 7).

¹⁶Removing the NRA, NARAL Pro-Choice America, and the National Parks Conservation Association produces a point estimate on the effect of showing a SIG rating on accuracy that is actually negative, -2.3 percentage points, although this is of course a post hoc selection.

Figure 2: Study 2—Effect of Showing Each Interest Group’s Heuristic on Accurate Perception of MC’s Vote

(a) Treatment Effect of Seeing SIG’s Rating on Accurate Perception of MC’s Vote on Relevant Issue

(b) Treatment Effect of Seeing SIG’s Rating on Accurate Perception of MC’s Vote on *Other* Issues

forming preferences about issues and candidates (e.g., Lau and Redlawsk 2001; 2006). However, we find that voters who answered all four questions correctly on a political knowledge battery are only 2.6 percentage points more accurate when guessing an MC vote related to the SIG rating shown, which is both substantively small and statistically insignificant ($SE = 2.6$ percentage points, $p = 0.30$). Individuals high in knowledge also show no sign of being able to use SIG ratings to infer how their MCs voted on other issues ($\beta = -0.7$ percentage points, $SE = 1.1$ percentage points, $t = -0.65$). These nulls are not driven by a ceiling effect, as knowledge of roll calls was 77% for high knowledge respondents, consistent with 54% possessing actual knowledge when correcting for guessing.

We return to this data in Study 9, where we find another, more surprising way that information about SIG ratings does affect how voters perceive how their MCs voted.

Study 3: Perverse Consequences of Interest Group Ratings

Electoral accountability ultimately manifests when voters actually decide how to vote in elections. What do our findings indicate for how voters will use interest group heuristics when making their voting decisions? One possibility is that voters may not be able to understand the implications of SIG ratings for particular roll call votes, but still may understand the broad signal sent by a SIG rating and update their approval of their Member of Congress as an optimistic understanding of heuristics would predict. Of course, it is also possible that voters, not understanding the implications of most interest group endorsements, will simply ignore them. We find that a third, perverse, and more surprising consequence is in fact also common: heuristic projection. In particular, we find that voters often interpret positive interest group ratings as sending positive signals about their representatives *regardless* of whether voters actually share that interest group's view on issues.

To measure our dependent variable in Study 3, after showing the SIG rating in Study 2 we also asked participants a series of three MC approval questions: an approval question, a favorability

question, and a generic ballot question.¹⁷ We combine these into an index standardized to standard deviation one, consistent with a pre-registration we filed (see Online Appendix G). This *MC Support Scale* is our dependent variable in Study 3.

To understand how SIG ratings affect voters' approval of their MCs, we define two treatment variables.

We code our first treatment variable, *SIG Rating Signals MC Matches Voter Issue Preference*, 1 if a SIG rating was shown that sends a signal that a voter's MC has cast a vote that matches the voter's issue preference, which was asked at the beginning of the survey prior to treatment. We code a SIG rating as sending a positive signal if an *aligned* SIG issues a positive rating or a *misaligned* SIG issues a negative rating, where a SIG is defined as aligned if it shares a voter's issue preference. We instead set this treatment variable to 0 if the voter was shown a rating from another SIG that would send a signal that the voter's MC cast a vote incongruent with the voter's issue preference. A negative rating from an aligned SIG or a positive rating from a misaligned MC would send such a signal.¹⁸

We code our second treatment variable, *SIG Rating Supportive*, as 1 if the rating is 51 or above and 0 if the rating is 50 or below, regardless of whether the SIG's issue preferences are aligned with voters' own or not.¹⁹

Our design generates random variation in both of these treatment variables. For example, suppose a voter gave a liberal answer to a question about gun control and a conservative answer to a question about taxes. If this voter had a Republican MC, this MC would likely have cast conservative votes on both issues and had high ratings from both the NRA and FreedomWorks.

¹⁷These items again contained MC party as this is present in the real world on ballots. Participants in the control condition were then exposed to material for another project, so we were unable to include control participants in this comparison. See Online Appendix Figure OA1 for an overview of the design.

¹⁸Consistent with our pre-analysis plan (see Online Appendix G), we code all ratings 50 and below as negative and ratings 51 and above as positive. As shown in Online Appendix Figure OA2, the ratings are largely bimodal. Only 0.5% of ratings are exactly 50.

¹⁹Ratings overwhelmingly concentrate near the poles of 0 or 100, so we are unable to examine variation among positive and negative ratings. Online Appendix Figure OA2 shows a histogram of all the ratings we presented by interest group.

If we randomly decided to show the NRA rating, this means the rating should send a negative signal about whether the MC matches the voter issue preference (corresponding with a value of the *SIG Rating Signals MC Matches Voter Issue Preference* treatment of 0). If we instead selected FreedomWorks, this MCs' high rating should be interpreted as a positive signal about whether the MC matches the voter issue preference (corresponding with a value of the *SIG Rating Signals MC Matches Voter Issue Preference* treatment of 1). However, the positive ratings from the NRA and FreedomWorks would both count as positive ratings, meaning the *SIG Rating Supportive* treatment variable would be set to 1 in either case.

Table 4 summarizes these two treatment variables. Because most respondents have a mix of liberal and conservative views across issues, our random assignment of which SIG rating to show produces random variation at the respondent level in whether we showed respondents a SIG rating of the four possible types shown in Table 4. This is what allows us to test whether, for example, “signals from opposition groups can also be informative by indicating whom the voter should not support” (Arceneaux and Kolodny 2009); we can compare how voters behave when they are shown positive ratings from misaligned groups to how they behave when they see positive ratings from aligned groups.

To estimate the impact of SIG ratings on MC approval, we use regression to compare individuals randomly assigned to be shown SIG ratings that send different signals and which are supportive and unsupportive. In our regressions we also include fixed effects for the average of these variables across all the comparisons that could have been shown; these have no interpretation but capture the endogenous relationship between the average value of treatments that could have been shown and the outcome.²⁰ To increase precision, we also include party identification as a control, coded such

²⁰Our causal identification comes from the random assignment of which SIG's rating we showed, which produces variation in the signal sent by the rating shown. For example, conditional on an MC having three positive SIG ratings and four negative SIG ratings, our treatment variable is what signal the one randomly shown rating actually sent. However, this is only random conditional on the number of positive and negative ratings that could be shown, and so we include fixed effects this—e.g., in the previous example, the fact that only three of seven total possible ratings were positive. We do not include the group shown no SIG endorsement at all in these comparisons because they were exposed to material from other project instead of asking them an MC approval question. They were assigned to this

Table 4: Treatments in Study 3

		SIG Rating Supportive =	
		0	1
SIG Rating Signals MC Matches Voter Issue Preference =	0	Negative rating from aligned SIG ($N = 223$)	Positive rating from misaligned SIG ($N = 244$)
	1	Negative rating from misaligned SIG ($N = 210$)	Positive rating from aligned SIG ($N = 303$)

Notes: A SIG is coded as aligned if that SIG's issue preference matches the voter's own issue preference as measured at the beginning of the survey. For example, an individual who favors gun control would be coded as misaligned with the NRA. N s record the number of respondents actually shown heuristics of each type as a result of the random assignment in Study 3. N s differ because the probabilities of receiving each treatment differs by respondent and MC, which our analysis takes into account using fixed effects for the probability of treatment.

that the traditional 7-point scale is oriented so that more positive values correspond with greater identification with their MCs' party.²¹

Table 5 presents the results. Column 1 shows that showing a rating that should send a positive instead of negative signal about issue alignment between the voter and their MC has no detectable effect on their support for their MC.²² Column 2, however, shows that seeing supportive instead of unsupportive ratings from interest groups in fact does boost voters' support. Column 3 shows that this finding survives when both coefficients are present in the same regression.²³

We see similar results across the spectrum of political knowledge. Although the standard errors

other project with $\frac{3}{4}$ probability, which is why the sample size in Table 5 is one fourth the size of the overall sample size. See Figure OA1 for an overview of the design.

²¹We also pre-registered our specification and use of this control variable in our pre-analysis plan, provided in Online Appendix G. However, the pre-analysis plan did not specify that we would test whether the rating's valence would have its own direct effect, as we find. As the p -value on this comparison is approximately 0.005, it would only be rendered insignificant under a Bonferroni correction if this were at least the tenth non-pre-registered comparison we ran. Our other deviation from the pre-analysis plan was to control for possible treatments using fixed effects, instead of a linear term, as we thought this would be less sensitive to functional form; the results are essentially identical when using a linear term. The estimates are similar when we use Weighted Least Squares, weighting by the inverse of the probability of assignment. We thank Joel Middleton for his expert advice on analyzing this experiment.

²²For a separate project, we showed the control group how their Members of Congress actually voted on these issues. That project finds very large effects on the Member support scale of providing this information, indicating that our null results here are not due to voters being indifferent to the position information these interest group ratings

Table 5: Study 3—Effect of SIG Rating Information on Support for Member of Congress

	Model 1	Model 2	Model 3
<i>Randomized Treatments</i>			
Shown SIG Rating Signals MC Matches Voter Issue Preference (0 = Signals MC Does Not Match / 1 = Signals MC Does Match)	-0.05 (0.05)		-0.07 (0.05)
Shown SIG Rating Supportive (0 = Unsupportive / 1 = Supportive)		0.12* (0.05)	0.14** (0.05)
<i>Control Variables for Precision</i>			
Party ID Match (1-7)	0.29** (0.01)	0.31** (0.01)	0.28 ** (0.01)
Fixed Effects for Possible Treatments?	✓	✓	✓
<i>N</i>	980	980	980
<i>R</i> ²	0.54	0.53	0.59

*Notes: The dependent variable in all regressions is the pre-registered MC Approval Scale, rescaled to have standard deviation one. Each column shows a separate regression. Model 1 includes fixed effects for (i.e., a separate dummy variable for each level of) the proportion of potential ratings respondents could have been shown that sent a positive signal that the MC matched the voter's issue preference. Model 2 includes fixed effects for the proportion of potential ratings respondents could have been shown that were positive. Model 3 includes the interaction of these fixed effects (i.e., a separate dummy variable for each combination of the fixed effects in the previous regression), such that all comparisons are conducted between units with the same probability of assignment to both treatments. Standard errors in parentheses. * indicates significance at $p < 0.05$, ** indicates significance at $p < 0.01$.*

are larger, the positive point estimates for the main effect of a supportive rating are similar for the highest knowledge respondents who answered all four political knowledge questions correctly

imply.

²³Running the regression in Model 2 separately for aligned and misaligned interest groups yields similar estimates—that is, positive ratings from both aligned and misaligned groups yield similar increases in the MC approval scale (0.111 for aligned groups and 0.112 for misaligned groups), although these coefficients are more imprecisely estimated than the omnibus regression.

($\beta = 0.13$ (0.10), as compared with $\beta = 0.13$ (0.05) for the entire sample), as are the null results for the effect of showing a rating that signals a voter–MC issue position match ($\beta = -0.01$ (0.11), as compared with $\beta = -0.06$ (0.05) for the entire sample). Online Appendix Figure OA4 also re-runs these regressions by SIG. The only clear exception to the results in Table 5 is that respondents do appear to accurately use the rating from the National Parks Conservation Association as a signal, consistent with the finding from Figure 2 that respondents are able to use this group as a heuristic.

These results indicate that voters rarely use heuristics in the way many scholars hope, but do often use them in the way interest groups might hope: instead of reacting negatively to positive ratings from SIGs who disagree with them, voters respond positively to positive ratings regardless of the ideological or policy position of the group issuing those ratings.

Studies 4-7: Voters Do Not Know What Policies SIGs Support

Studies 1-3 found that voters usually fail to use SIG ratings as signals of how their MCs voted or to hold them accountable, but do appear to naively reward them for receiving positive SIG ratings. Our remaining studies seek to explain these patterns. First, Studies 4-7 examine why voters fail to use SIG ratings as a signal. This next set of studies finds, for a wide range of interest groups, that voters simply do not know what policies nearly any SIGs support.²⁴ Studies 4 and 5 consider individual policies, and Studies 6 and 7 consider whether voters are able to perceive the overall ideology of SIGs.

²⁴Few previous studies to our knowledge systematically study how voters perceive the issue preferences or ideologies of SIGs. One rare exception is an unpublished paper by Leeper (2013), who, in studying how SIGs affect issue attitudes on immigration, finds many instances of clear misperceptions of SIG ideology (e.g., the National Council of La Raza as conservative and the Minuteman Project as liberal) and, in general, relatively low levels of familiarity with interest groups even among a relatively high knowledge sample.

Study 4: Policy Support Perceptions

First, at the end of the survey for our 2018 study, we asked respondents to identify which of two interest groups, both active in the same policy space, would be more likely to support a specific policy. For example, we asked some respondents to identify whether the Brady Campaign to Prevent Gun Violence or the National Rifle Association support requiring background checks before purchasing a firearm. We randomly assigned which of the interest groups appeared first to avoid order effects.

Table 6 shows the exact language used in the study and the results. In most cases voters are not much better than chance, picking the correct group only about 50% of the time. We only see evidence of greater accuracy from the NRA and the “National Committee to Preserve Social Security and Medicare”—another example of a rare group that names itself to send a clear signal about what policies it supports.

We also show the results among individuals who identified themselves as in a relevant issue public.²⁵ We might expect members of an issue public to more accurately guess which of two groups holds a given policy, but we do not find that to be the case. In fact, if anything, the issue publics are less accurate.

Study 5: Policy Support Perceptions

We next examine the perceptions of 1,181 respondents interviewed as part of a survey of 1,625 Californians recruited by Survey Sampling International (see Online Appendix C for information on representativeness). We asked these voters to guess which side of major legislation that prominent interest groups would be likely to support. We used the interest groups and bills from Study 1, but added a tax issue tied to a debt ceiling vote paired with the Club for Growth.

²⁵We asked “How important to you personally are each of the issues below?” and count an individual as in the issue public if they name an issue as “Extremely important” (Bizer and Krosnick 2001). We only asked this question to individuals in the control group for Studies 2, 3, and 9 (after the dependent variables for those studies had been collected), so unfortunately cannot use this question to test for moderation by issue public membership in those studies.

Table 6: Study 4—Perceptions of Interest Group Policy Positions

Groups Shown	Issue	% Correct, All Respondents	% Correct, Issue Public Members	% Correct, High Political Knowledge Respondents
Null of Random Guessing		50%	50%	50%
J Street PAC vs. Security PAC	“a Palestinian state in the Middle East”	50% (2%)	-	52% (4%)
Jobs, Opportunities, and Education PAC (Joe PAC) vs. Prosperity PAC	“expanding access to charter schools”	24% (2%)	-	26% (4%)
League of Conservation Voters vs. the Committee for the Preservation of Capitalism	“reducing regulations on greenhouse gas emissions”	55% (2%)	36% (11%)	50% (4%)
NARAL Pro-Choice America vs. Susan B Anthony List	“requiring parental permission for underage women to have abortions”	54% (2%)	29% (18%)	63% (4%)
National Committee to Preserve Social Security & Medicare PAC vs. FreedomWorks for America	“cutting taxes on corporations”	72% (2%)	67% (33%)	81% (3%)
Progressive Change Campaign vs. the Campaign for Working Families	“repealing the Affordable Care Act, also known as ‘Obamacare’”	55% (2%)	53% (9%)	55% (5%)
San Franciscans for Good Government vs. Conservative Victory Fund	“reducing the influence of money on politics”	57% (2%)	-	58% (4%)
The Brady Campaign to Prevent Gun Violence vs. The National Rifle Association	“requiring background checks before purchasing firearms”	76% (2%)	52% (5%)	81% (4%)

Notes: SEs shown in parentheses. Each respondent was shown one randomly assigned match-up. N = 3,958.

We asked respondents to identify the position each interest group took on the relating item of legislation for three issue-group pairs. We asked “Did [group] support [policy text]?” For example, “Did the League of Conservation Voters (LCV) support building the Keystone XL oil pipeline?” (see Online Appendix E for wording). Respondents could answer “yes,” “no,” “did not take a position,” or “don’t know.” Table 7 shows that only 10-36% of respondents correctly answer the questions across the seven issue-group pairs, usually because they say they do not know what the group’s position is. Even the minority of respondents who hazard a guess do so correctly only 49% of the time on average (chance would be 33% because there is one right answer out of three). Again we only see noticeable respondent knowledge about the NRA and “NARAL Pro-Choice America.”

Table 7: Study 5—Can voters guess the positions SIGs take on key bills?

	AFL-CIO	Club for Growth	Chamber of Commerce	LCV (EPA)	LCV (Pipeline)	NARAL Pro-Choice America	NRA
Correct %	10	10	18	11	14	21	36
DK %	71	73	63	72	66	65	45
Correct % exclud. DK	35	36	49	40	41	59	66
N	522	470	502	512	527	507	488

Notes: $N = 3,532$. 1,181 respondents guessed which side of major legislation prominent interest groups supported for three of the seven issue-group pairs. Null of random guessing is 25% for the “Correct” row and 33% for the “Correct % exclud. DK” row. LCV = League of Conservation Voters.

Study 6: Ideological Perceptions

It is plausible that respondents are confused by issue questions but would be capable of identifying an interest group’s overall ideological position. To test this hypothesis, we first asked a different set of respondents from the California sample in Study 5 to rate the same six interest groups on a seven-point ideology scale. We presented 444 respondents with three interest groups each and prompted “We would like you to rate the following special interest groups from liberal to

conservative. Where would you place [interest group] on this scale?” We did not provide a “don’t know” option but respondents could skip the question and a handful did.

We show the results in Figure 3. NARAL Pro-Choice America and the NRA are the only groups voters are consistently able to place. For example, many respondents guess that the League of Conservation Voters is a conservative SIG. The extremely conservative Club for Growth also receives more liberal ratings than conservative ratings, and the modal respondent guesses that the Club is moderate.

Figure 3: Study 6–Interest Group Ideological Placements

Note: 444 respondents each rated three interest groups.

Study 7: Ideological Perceptions of 45 SIGs Active in Campaigns

Thus far, we have only studied 17 interest groups. Although these SIGs were the most active in rating MCs and we suspected would be the most likely for voters to know, many more interest

groups are active in US politics and voters may have greater knowledge about others. To consider additional groups voters might be exposed to advertising from or be aware of, we selected the top 45 SIGs in terms of 2016 total campaign receipts.²⁶ Consistent with the heuristics literature, campaign finance scholars and the U.S. Supreme Court itself have speculated that campaign spending and contributions from SIGs active in campaigns could serve as particularly strong heuristics (for a review, see Wood 2018).

To see whether the public knows about this broader set of SIGs active in campaigns, or whether they might engage in heuristic projection when perceiving them, we conducted a demographically representative survey of US residents with Lucid in October 2017. (See Online Appendix C for information about representativeness.) We asked 3,178 Americans, “How liberal or conservative is [interest group]?” and gave them seven response options, from “extremely liberal” to “extremely conservative,” and a “don’t know” option. We asked each respondent about two randomly chosen groups.²⁷

To measure these SIG’s actual ideology, we use Adam Bonica’s Campaign Finance scores (CFscores) (Bonica 2014). For ease of interpretation and to avoid making strong assumptions about the comparability of the CFscores and 7-point ideological scales, we trichotomize the SIG CFscores and the 7-point ideological scale into conservative, moderate, and liberal.²⁸

Consistent with our earlier studies, we found only low levels of knowledge about this larger set of SIGs.

First, as Figure 4a shows, the vast majority of these SIGs are either conservative or liberal.²⁹

²⁶We gathered the receipt information from an updated version of the data from Bonica (2014), excluding SIGs that were specific to the 2016 election or did not have a website.

²⁷We drop an additional 87 respondents who dropped out of the survey prior to answering this question and an additional 2 respondents who did not provide an ideological self-placement.

²⁸We code the middle 1 unit of the range of CFscores as moderate; i.e., the range from -0.5 to 0.5. This codes six PACs as moderate: the Blue Dog Democrats (a PAC supporting moderate Democrats), the Tuesday Group (a PAC supporting moderate Republicans), and several explicitly bipartisan Israeli PACs: the Heartland PAC, NAC-PAC, the Desert Caucus, and the Washington PAC. The most moderate SIG we code as conservative is the Texas Freedom Fund, which describes itself as “acting in defense of private property, privacy, and the 2nd amendment” (see texasfreedom.org). The most moderate SIG we code as liberal is JoePAC, the leadership PAC of former Democratic Member of Congress Joe Crowley.

²⁹Although many access-seeking SIGs are coded as moderate in the Bonica (2014) data, we use the largest SIGs

However, Figure 4b shows that respondents place under half of SIGs as either conservative or liberal, with respondents indicating many of these SIGs are moderate and, most often, simply skipping the questions (despite a request for a response).

Second, respondents are barely more likely to identify conservative groups as conservative and liberal groups as liberal. Figures 4c and 4d show respondents' placements of liberal and conservative SIGs, respectively. For example, respondents are only about 10 percentage points more likely to rate liberal groups as liberal than conservative groups as liberal. About 40% skipped the question and another 15% gave midpoint responses, sometimes a sign of ignorance.

To address concerns about respondents using ideological scales idiosyncratically, we conduct a second analysis within respondent, exploiting the fact that we had each respondent rate two groups. We check whether respondents placed the more liberal group to the left of the more conservative group. If respondents know something about the ideology of these groups, they should do so more often than chance. Given the seven-point scale and the don't know option, we calculate chance here as $(21/(8 * 8) =) 33\%$ —the odds of placing the liberal group anywhere to the left of where they placed the more conservative group with a skip choice counted as incorrect. Using CFscores as the benchmark, we find that respondents do *worse* than chance, with only 16% placing the groups on the correct side of each other. If we limit the analysis to those asked about groups on opposite sides of the spectrum (either side of zero on CFscores), this rises to only 17%. When excluding respondents who skipped either group, this rises to 36%, whereas chance would be $(21/(7 * 7) =) 43\%$.

Online Appendix Figure OA5 gives all 45 SIGs and shows the relationship between each SIG's CFscore and its average ideological placement by respondents. As groups become more conservative, the figure shows that respondent perceptions become slightly more conservative as well,

by receipts, the vast majority of which are more ideologically oriented. Consistent with this, Bonica (2014) notes that “labor and single-issue PACs tend to locate towards the extremes” (p. 301). Online Appendix Figure OA5 names all the groups we used. Investigating the particular groups we code as liberal and conservative reliably shows that they are clearly affiliated with one side.

Figure 4: Study 7 Results

(a) Actual SIG Ideology for 45 SIGs In Study 7

(b) Respondent Placements of SIG Ideology

(c) Respondent Placements of SIG Ideology—Conservative SIGs Only

(d) Respondent Placements of SIG Ideology—Liberal SIGs Only

Note: 3,178 respondents each rated two interest groups. Given the large sample size, the standard errors are very small for the estimates in panels b-d, about 1%, so we omit confidence intervals.

but the relationship is weak. (Unlike in previous studies, we did not label NARAL as “NARAL Pro-Choice America” but just as “NARAL.” Consistent with the presence of “pro-choice” in the SIG’s name producing respondent knowledge and correct heuristic use, the evidence of respondent knowledge about this group in earlier studies vanishes in this study where “pro-choice” was absent

from the name.) Among liberal groups and among conservative groups, the relationship is even weaker.

The slight knowledge of SIG ideologies we do find appear to be driven largely by respondents high in political knowledge. High knowledge respondents do appear well-informed about the ideology of some well-known SIGs, with 95% accurately placing gun groups and abortion groups with clear names. We present this result and report on the correlates of SIG ideological knowledge in Online Appendix F.

Heuristic Projection

It may not be surprising that voters know little about most SIGs, as we found in Studies 4-7 and that, as we found in Studies 1-2, voters are therefore almost never able to make more accurate inferences about their MC's voting behavior based on SIG ratings. However, our finding from Study 3 that despite this ignorance voters nevertheless reward MCs for earning positive ratings from *any* SIG suggests SIG ratings may be far from innocuous. How is this possible? In this section we present two pieces of evidence consistent with a novel process that may contribute to this pathology: *heuristic projection*, whereby voters who are unfamiliar with a SIG often assume the SIG shares their own views.

Study 8: Projection and Ideological Perceptions of 45 SIGs

First, we examine whether respondents project their own ideologies on to interest groups, using the same data as Study 7. Figure 5 tests for this projection. Figure 5a shows how respondents placed SIGs, broken down by respondents' own ideologies. Respondents all rated the same SIGs regardless of their own ideology. However, among liberal respondents, the most common placement given for SIGs was liberal. Among moderate respondents, the most common placement given for SIGs was moderate. Among conservative respondents, the most common placement given for SIGs

was conservative. All three of these patterns are consistent with widespread projection (Conover and Feldman 1982).

To break down these perceptions by the actual ideology of the SIGs, Figures 5b and 5c shows how respondents perceived SIGs that were actually conservative and actually liberal, respectively. When liberals perceive conservative SIGs or when conservatives perceive liberal SIGs, they barely do better than chance at determining whether these SIGs are on their side or not. Likewise, moderates are most likely to perceive SIGs as moderate regardless of the SIG's actual ideology.

One pattern evident in Figures 5b and 5c is that respondents are more accurate when perceiving groups on their side. This accuracy could also result from projection, however: for example, when conservative respondents perceive a conservative SIG as conservative, this could be because they truly know the SIG is conservative or because they are projecting onto the SIG. To better appreciate the relative magnitudes of projection and reality in informing respondent's perceptions of SIGs, Table 8 reports a regression of respondents' perceptions of SIGs on both the SIG's actual ideology and respondent's own ideological self-placements, in all cases trichotomized to liberal, moderate, and conservative. The results show that respondents' own self-placements drive their perceptions of SIGs as much as SIGs' actual ideologies. This suggests that projection essentially offsets any knowledge respondents might have about the ideology of SIGs they actually differ with ideologically, leading respondents to be most likely to perceive SIGs as on their side on average.

Online Appendix Figure OA6 visually shows this projection across the full range of respondents' self-placement on the 7-point ideological scale.

Study 9: Experimental Test

Study 9 demonstrates this projection experimentally and reveals that it affects how voters perceive their MCs as well, returning to the data from Study 2. Recall that in Study 2, we randomly assigned whether voters were shown an actual SIG rating of their actual MC and, if one was shown, which was shown. Study 2 reported the effects of showing a SIG rating on whether voters *accurately*

Figure 5: Study 8—Projecting One’s Own Ideology onto SIGs

Note: $N = 3,178$ respondents each rated two interest groups. Given the large sample size, the standard errors are very small, about 1%, so we omit confidence intervals.

Table 8: Study 8—Predicting Respondents’ Placements of SIGs Based on Their Own Ideology and Reality

	Model 1	Model 2	Model 3
Actual SIG CFscore Recoded (-1, 0, 1)	0.192*** (0.015)		0.189*** (0.015)
Respondent Self-Placement Recoded (-1, 0, 1)		0.181*** (0.017)	0.177*** (0.017)
Intercept	0.007 (0.014)	-0.002 (0.014)	0.000 (0.014)
<i>N</i>	3541	3541	3541
<i>R</i> ²	0.05	0.03	0.07

*Notes: Dependent variable in all regressions is respondents’ ideological placements of the SIGs. Each observation corresponds with one respondent-placement. Missing placements are dropped, leaving us with fewer than 2 * 3, 178 placements. Respondent interest group placements, self-placements, and the SIG CFscores are recoded such that -1 corresponds with liberal, 0 with moderate, and 1 with conservative. Standard errors are given in parentheses. † significant at $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$.*

perceived their MC’s roll call votes and found little evidence that it did. Here, we revisit this data and uncover a more surprising effect is present, consistent with projection: voters on average act as if all SIGs are aligned with their own issue preferences, inferring that their MC agrees with their own views on more issues more when they see a positive rating from any SIG, and inferring that their MC *disagrees* with their own views on more issues when they see a negative rating from any SIG.

To demonstrate this effect, Table 9 presents regressions where the outcome is defined as the number of issues where voters perceived that their actual Member of Congress cast a vote that accorded with their own issue preference (as measured pre-treatment).³⁰ The treatment variable in

³⁰See Figure OA1 for an overview of the design. Our dependent variable in this study is computed by comparing respondents’ own issue preferences asked pre-treatment with their perception of MC votes collected after the SIG rating was (if respondents were in the treatment group) shown.

the regression is whether the actual SIG rating that we showed to the respondent was positive (i.e., >50), negative (i.e., ≤ 50), or whether no rating was shown. We also include controls for voter-MC party match and fixed effects for the number of positive or negative ratings a voter's MC received. These fixed effects ensure that all our comparisons are conducted among individuals who had the same probability of being shown positive SIG ratings. Since we asked some respondents about eight issues and others about nine, we include fixed effects for this as well.

Model 1 in Table 9 shows that the estimated causal effect of being shown a positive instead of negative SIG rating is an approximately 0.35 vote increase in the perception of the number of votes that one's MC cast that agreed with one's own views ($p < 0.01$).³¹ This is equivalent to what we would observe if seeing a positive instead of negative SIG rating caused more than one in three respondents to change their perceptions of their MC's votes on an additional issue. Model 2 splits this by negative and positive SIG ratings, including indicators for each and making the control group shown no ratings the omitted baseline category; individuals react to both negative and positive ratings in the predicted directions. Finally, Models 3 and 4 show a version of Model 1 that is estimated separately by whether the voter and the MC are of the same party; we find the effects are if anything larger in cases when voters are forming perception of outparty MCs, suggesting that our findings are not driven by simple motivated reasoning in favor of copartisan MCs. The point estimate for the effect on perceptions of outparty MCs is equivalent to what we would observe if seeing a positive instead of negative SIG rating caused nearly half of respondents to believe that they agreed with their outparty MC on an additional issue.³² Surprisingly, these effects are almost as large as the descriptive relationship between the number of issues where voters and MCs actually agree; in other words, the causal effect of learning about a positive SIG

³¹Because the average respondent provided their perception of their MC's vote on 8.45 issues, this is equivalent to a 4.1 percentage point effect on the average issue. This test was not pre-registered, but under a conservative Bonferroni correction the p -value of 0.0038 would only be rendered insignificant at the 0.05 level if we had first conducted 13 other uncorrelated tests.

³²Defining the outcome as whether voters have *accurate* perceptions of their MC's vote, as in Study 2, we find that when voters see a misaligned SIG's rating they are *less* accurate by 1.9 percentage points on the typical vote, although this is only borderline significant with MC fixed effects ($p = 0.08$).

Table 9: Study 9—Effect of SIG Rating on Perception that Member of Congress Cast Congruent Votes

	Model 1	Model 2	Model 3 (Same Party MC)	Model 4 (Different Party MC)
<i>Randomized Treatments</i>				
Rating Treatment (0 = SIG Rating ≤ 50 , 0.5 = No SIG Rating Shown, 1 = SIG Rating > 50)	0.349** (0.120)		0.301* (0.154)	0.447* (0.222)
Rating ≤ 50 Shown (0/1)		-0.196* (0.096)		
Rating > 50 Shown (0/1)		0.157 [†] (0.086)		
<i>Control Variables for Precision</i>				
Number of Issues Where Voter <i>Actually</i> Shares MC Issue Preference	0.474** (0.017)	0.474** (0.017)	0.364 *** (0.022)	0.610 ** (0.032)
Voter–MC Party Match (1-7)	0.394** (0.015)	0.394** (0.015)	0.306** (0.048)	0.137* (0.069)
<i>Fixed Effects</i>				
Fixed Effects for Possible Treatments?	✓	✓	✓	✓
Fixed Effect for Eight vs. Nine Issues?	✓	✓	✓	✓
<i>N</i>	3940	3940	2041	1348
<i>R</i> ²	0.297	0.297	0.049	0.096

*Notes: The dependent variable in all regressions is the number of issues on which respondents indicated they thought their Member of Congress cast a vote that matched their own issue preference, which was measured pre-treatment. Each column shows a separate regression model. Standard errors in parentheses. [†] indicates significance at $p < 0.10$, * indicates significance at $p < 0.05$, ** indicates significance at $p < 0.01$.*

rating on perceptions of agreement with one's MC is similar in size to the association between actual agreement on an additional issue with one's MC and perceptions of agreement with them.

Studies 8 and 9 suggest Study 3's finding that voters reward MCs for positive SIG ratings regardless of the SIG may be driven at least in part by changes in how voters perceive MC's policy positions. However, a valence interpretation for Study 3's findings is also possible: voters may

also see high SIG ratings of their MCs as signals that their MCs are competent, which lead voters to approve more of their members and infer they make “good” policy decisions.

Discussion

How can voters who know little about their representatives’ actions in office effectively hold them accountable? An influential perspective has long argued that many uninformed voters are able to use ratings and endorsements from special interest groups (SIGs) to do so (see review in Online Appendix B). Such ratings and endorsements are ubiquitous in politics and campaigns, being present in candidates’ campaign advertisements, candidacy statements, and in advertisements placed by SIGs themselves (Druckman, Kifer and Parkin 2009; 2019; Weber, Dunaway and Johnson 2012). Heuristics theory thus gives reason to be optimistic that the common presence of interest group endorsements in politics significantly enhances electoral accountability (Grossman and Helpman 1999; McKelvey and Ordeshook 1985). However, only a small number of studies have evaluated how voters actually use the information in SIG ratings to form judgments about their representatives. Moreover, little literature has considered how SIGs might strategically respond to the possibility that voters might use their ratings as signals of who to support, and what implications this might have for voters’ judgments.

With a series of studies considering how voters perceive dozens of SIGs and their ratings, we first showed that voters know little about the vast majority of major interest groups’ stances, frustrating their ability to use interest group ratings as effective heuristics. They are typically unable to determine which side of an issue an interest group sits on, are unable to infer what a rating from them means about what their representatives have done in office on either closely related or other issues, and therefore do not appropriately adjust their evaluations of their representatives upon receiving these cues. There are exceptions to this pattern in the case of interest groups with names

that clearly signal their positions, such as in the case of “NARAL Pro-Choice America.”³³ The NRA is another exception, potentially because of media coverage and its large and active membership (Lacombe 2019). These groups satisfy the necessary conditions that have been identified for the correct use of SIG ratings as heuristics (Lupia and McCubbins 1998). In these cases, we find that voters do behave consistently with the classic predictions of heuristics theory.

But our findings are in most cases less encouraging. Despite candidates regularly featuring endorsements and ratings from over a dozen SIGs (Druckman, Kifer and Parkin 2009; 2019), we find that voter ignorance is the norm for the vast majority of SIGs. Consistent with this, Ridout, Franz and Fowler (2015) find that voters are usually “unfamiliar” with the SIGs who sponsor ads in elections (p. 157); and such ads rarely provide information about SIGs’ own stances (Franz, Fowler and Ridout 2016).

Moreover, and most surprisingly, we find that voters do not disregard information about SIG ratings despite usually lacking the knowledge of how to interpret them. Instead, we find evidence for a novel dynamic we call *heuristic projection*: voters on average behave as if all SIGs share their views, even though many SIGs do not. We find evidence of heuristic projection in three conceptually and methodologically distinct ways: voters on average believe SIGs share their broad left-right ideology (Study 8); in an experiment, voters interpret positive SIG ratings as indicating their MCs agrees with them on issues, regardless of whether the SIG is aligned with them (Study 9); and, perhaps as a result, voters more highly approve of MCs when they earn positive SIG ratings, regardless of whether the SIG shares their views (Study 3). We find these patterns across the spectrum of political knowledge and issue public membership, and regardless of whether voters had access to their MC’s party affiliation.

In summary, our findings indicate that voters are psychologically capable of using SIG ratings as heuristics correctly when the SIG’s positions are clear, but that their behavior in the far more

³³Instructively, when we removed “Pro-Choice” from the name of NARAL in Study 7, we found that respondents were then unable to place it ideologically.

common instance that they are unfamiliar with the SIG means that SIG ratings may easily generate perverse incentives on net. Our findings thus add to long-standing pessimism toward voters' abilities to hold their representatives accountable (Druckman 2001; Hertel-Fernandez, Mildemberger and Stokes 2019; Oliver and Ha 2007; Gilens and Page 2014). Heuristics have long been held up as a key strategy voters may use to produce meaningful accountability, but we find that a common form of this strategy is itself susceptible to elite manipulation. In an ideal world for voters, voters would be able to infer how their representatives voted based on knowledge of SIGs' ratings of their legislators. However, it appears voters act in a way that is much more ideal for SIGs: voters appear to incentivize their representatives to earn positive ratings from SIGs regardless of whether voters agree with the policies SIGs want. This may be exactly why SIGs so often give themselves names that imply they support consensus causes with broad, cross-ideological appeal. It appears many voters believe them. Heuristic projection may also serve the purposes of politicians. The frequent presence of SIG ratings in campaign materials such as candidate websites (Druckman, Kifer and Parkin 2009; 2019) represents a puzzle from the perspective of traditional heuristics theory, as such ratings could be used as a negative cue by many voters (Arceneaux and Kolodny 2009). However, it is entirely rational for politicians to feature many SIG ratings and endorsements if voters engage in heuristic projection and typically interpret positive ratings as positive signals.

Our findings raise a number of interesting questions for future research. First, given the presence of SIG ratings in many campaigns, to what extent do SIGs help create an "electorate blind spot" (Bawn et al. 2012) that helps officeholders avoid accountability for casting unpopular votes? That is, how often do MCs cast votes out of step with public opinion expecting that a positive rating from a sympathetic SIG will help offset any electoral costs (Grossman and Helpman 1999)?

Second, although there are clear theoretical reasons to expect SIGs to strategically contribute to heuristic projection and for voters to be susceptible to it, future research could help understand to what extent each of these potential forces contributes. For example, one possible mechanism, consistent with the mere exposure effect (Panagopoulos and Green 2008) and the likeability heuristic

(Brady and Sniderman 1985; Sniderman, Tetlock and Brody 1993), would be that voters have positive affect towards unknown groups. Consistent with this, Weber, Dunaway and Johnson (2012) find that completely unknown SIGs are actually seen as the most credible messengers in campaign advertisements (see also Brooks and Murov 2012; Ridout, Franz and Fowler 2015; Pfau et al. 2007; Dowling and Wichowsky 2013). On the other hand, SIGs may also actively name themselves vaguely enough to allow voters to engage in this projection instead of clearly signaling their viewpoints. Better understanding the underpinnings of heuristic projection would help identify remedies and scope conditions; it presents a puzzle that voters act as if they have positive views towards unknown SIGs even though voters regularly express disdain for “special interests” in general. Future research could also focus on the incentives provided by group members or donors, who could be the primary intended audience for many SIG ratings (Rapoport, Stone and Abramowitz 1991; Lacombe 2019). Such research could also benefit from tracing the impacts of SIG ratings on behavior, as one clear limitation of our research is its focus on survey-based outcomes (Bullock et al. 2015, although see Berinsky (2018)). For example, it may be that in the real world voters seek out information about SIG endorsements from SIGs they are familiar with, cases in which we would expect heuristic projection to be more muted.

Finally, our findings may have implications for transparency measures such as the DISCLOSE Act, which seeks to force campaigns to disclose their major donors as part of their advertisements. The underlying assumption behind these efforts is that voters will be able to use these donations as negative cues about politicians’ stances when appropriate. Our findings suggest that voters may need additional information to use SIG ratings as effective cues (e.g., Dowling and Wichowsky 2013), but that when this information is present voters may be able to do so. As it stands, however, voters are unlikely to be able to make accurate inferences from SIG ratings in many cases. Indeed, there may be a perverse consequence of such regulations: they may simply increase politicians’ incentives to secure support from special interest groups and electorally advantage the politicians that do so.

References

- Achen, Christopher H. and Larry M. Bartels. 2016. *Democracy for realists: Why elections do not produce responsive government*. Princeton University Press.
- Arceneaux, Kevin and Robin Kolodny. 2009. "Educating the least informed: Group endorsements in a grassroots campaign." *American Journal of Political Science* 53(4):755–770.
- Bawn, Kathleen, Martin Cohen, David Karol, Seth Masket, Hans Noel and John Zaller. 2012. "A theory of political parties: Groups, policy demands and nominations in American politics." *Perspectives on Politics* 10(3):571–597.
- Berinsky, Adam J. 2018. "Telling the truth about believing the lies? Evidence for the limited prevalence of expressive survey responding." *The Journal of Politics* 80(1):211–224.
- Bizer, George Y. and Jon A. Krosnick. 2001. "Exploring the structure of strength-related attitude features: The relation between attitude importance and attitude accessibility." *Journal of Personality and Social Psychology* 81(4):566–586.
- Bonica, Adam. 2014. "Mapping the ideological marketplace." *American Journal of Political Science* 58(2):367–386.
- Boudreau, Cheryl, Christopher S. Elmendorf and Scott A. MacKenzie. 2015. "Lost in space? Information shortcuts, spatial voting, and local government representation." *Political Research Quarterly* 68(4):843–855.
- Boudreau, Cheryl, Christopher S. Elmendorf and Scott A. MacKenzie. 2019. "Racial or Spatial Voting? The Effects of Candidate Ethnicity and Ethnic Group Endorsements in Local Elections." *American Journal of Political Science* 63(1):5–20.
- Brady, Henry E. and Paul M. Sniderman. 1985. "Attitude attribution: A group basis for political reasoning." *American Political Science Review* 79(4):1061–1078.

- Brooks, Deborah Jordan and Michael Murov. 2012. "Assessing accountability in a post-Citizens United era: The effects of attack ad sponsorship by unknown independent groups." *American Politics Research* 40(3):383–418.
- Bullock, John G. 2011. "Elite influence on public opinion in an informed electorate." *American Political Science Review* 105(3):496–515.
- Bullock, John G., Alan S. Gerber, Seth J. Hill and Gregory A. Huber. 2015. "Partisan Bias in Factual Beliefs about Politics." *Quarterly Journal of Political Science* 10:519–578.
- Clinton, Joshua D. 2006. "Representation in Congress: constituents and roll calls in the 106th House." *The Journal of Politics* 68(2):397–409.
- Conover, Pamela Johnston and Stanley Feldman. 1982. "Projection and the perception of candidates' issue positions." *Western Political Quarterly* 35(2):228–244.
- Conover, Pamela Johnston and Stanley Feldman. 1989. "Candidate perception in an ambiguous world: Campaigns, cues, and inference processes." *American Journal of Political Science* pp. 912–940.
- Converse, Phillip E. 1964. The Nature of Belief Systems in Mass Publics. In *Ideology and Discontent*, ed. David E. Apter. New York: Free Press.
- Dancey, Logan and Geoffrey Sheagley. 2013. "Heuristics behaving badly: Party cues and voter knowledge." *American Journal of Political Science* 57(2):312–325.
- Delli-Carpini, Michael X. and Scott Keeter. 1997. *What Americans Know about Politics and Why It Matters*. Yale University Press.
- Dowling, Conor M. and Amber Wichowsky. 2013. "Does it matter who's behind the curtain? Anonymity in political advertising and the effects of campaign finance disclosure." *American Politics Research* 41(6):965–996.

- Druckman, James N. 2001. "The implications of framing effects for citizen competence." *Political Behavior* 23(3):225–256.
- Druckman, James N., Martin J. Kifer and Michael Parkin. 2009. "Campaign communications in US congressional elections." *American Political Science Review* 103(3):343–366.
- Druckman, James N., Martin J. Kifer and Michael Parkin. 2019. "Campaign Rhetoric and the Incumbency Advantage." *American Politics Research* .
- Fearon, James D. 1999. "Electoral accountability and the control of politicians: selecting good types versus sanctioning poor performance." *Democracy, accountability, and representation* 55:61.
- Franz, Michael M., Erika Franklin Fowler and Travis N. Ridout. 2016. "Loose cannons or loyal foot soldiers? Toward a more complex theory of interest group advertising strategies." *American Journal of Political Science* 60(3):738–751.
- Gilens, Martin. 2012. Two-thirds Full? Citizen Competence and Democratic Governance. In *New directions in public opinion*. Routledge pp. 65–89.
- Gilens, Martin and Benjamin I. Page. 2014. "Testing theories of American politics: Elites, interest groups, and average citizens." *Perspectives on Politics* 12(3):564–581.
- Grossman, Gene M. and Elhanan Helpman. 1999. "Competing for endorsements." *American Economic Review* 89(3):501–524.
- Hacker, Jacob S. and Paul Pierson. 2002. "Business power and social policy: employers and the formation of the American welfare state." *Politics & Society* 30(2):277–325.
- Hertel-Fernandez, Alexander. 2014. "Who passes business's "model bills"? Policy capacity and corporate influence in US state politics." *Perspectives on Politics* 12(3):582–602.

- Hertel-Fernandez, Alexander, Matto Mildemberger and Leah C. Stokes. 2019. "Legislative staff and representation in congress." *American Political Science Review* 113(1):1–18.
- Kahneman, Daniel and Shane Frederick. 2002. Representativeness revisited: Attribute substitution in intuitive judgment. In *Heuristics and biases: The psychology of intuitive judgment*. Cambridge University Press pp. 49–81.
- Kuklinski, James H. and Paul J. Quirk. 2000. "Reconsidering the rational public: Cognition, heuristics, and mass opinion." *Elements of reason: Cognition, choice, and the bounds of rationality* pp. 153–82.
- Lacombe, Matthew J. 2019. "The Political Weaponization of Gun Owners: The NRA's Cultivation, Dissemination, and Use of a Group Social Identity." *Journal of Politics* .
- Lau, Richard R. and David P. Redlawsk. 2001. "Advantages and disadvantages of cognitive heuristics in political decision making." *American Journal of Political Science* pp. 951–971.
- Lau, Richard R. and David P. Redlawsk. 2006. *How voters decide: Information processing in election campaigns*. Cambridge University Press.
- Leeper, Thomas J. 2013. "Interest Groups and Political Attitudes." Working paper, Available at <http://dpsa.dk/papers/ImmigrationGroupsFraming2013-10-21.pdf>.
- Lupia, Arthur. 1994. "Shortcuts Versus Encyclopedias: Information and Voting Behavior in California Insurance Reform Elections." *American Political Science Review* 88(1):63–76.
- Lupia, Arthur and Mathew D. McCubbins. 1998. *The Democratic Dilemma: Can Citizens Learn What They Need to Know?* New York: Cambridge University Press.
- McDermott, Monika L. 1998. "Race and gender cues in low-information elections." *Political Research Quarterly* 51(4):895–918.

- McDermott, Monika L. 2006. "Not for members only: Group endorsements as electoral information cues." *Political Research Quarterly* 59(2):249–257.
- McKelvey, Richard D. and Peter C. Ordeshook. 1985. "Sequential elections with limited information." *American Journal of Political Science* pp. 480–512.
- Miller, Warren E. and Donald E. Stokes. 1963. "Constituency influence in Congress." *American Political Science Review* 57(1):45–56.
- Mutz, Diana C. 1998. *Impersonal influence: How perceptions of mass collectives affect political attitudes*. Cambridge University Press.
- Neddenriep, Gregory and Anthony J. Nownes. 2014. "An experimental investigation of the effects of interest-group endorsements on poorly aligned partisans in the 2008 presidential election." *Party Politics* 20(4):617–631.
- Oliver, J. Eric and Shang E. Ha. 2007. "Vote choice in suburban elections." *American Political Science Review* 101(3):393–408.
- Olson, Mancur. 1971. *The Logic of Collective Action: Public Good and the Theory of Groups*. Cambridge, MA: Harvard University Press.
- Panagopoulos, Costas and Donald P. Green. 2008. "Field experiments testing the impact of radio advertisements on electoral competition." *American Journal of Political Science* 52(1):156–168.
- Paul, Newly and Chance York. 2015. "I Approve This Candidate: The Strategic Use of Ad Endorsements in the 2008 Election." *PS: Political Science & Politics* 48(4):584–589.
- Petrova, Maria, Andrei Simonov and James M. Snyder. 2019. "The Effects of Citizens United on US State and Federal Elections." Working paper, available at <https://sites.google.com/site/mariapetrovaphd/Citizens%20United%20draft.pdf>.

- Pfau, Michael, Michel M Haigh, Jeanetta Sims and Shelley Wigley. 2007. "The influence of corporate front-group stealth campaigns." *Communication Research* 34(1):73–99.
- Popkin, Samuel. 1994. *The Reasoning Voter: Communication and Persuasion in Presidential Campaigns*. 2nd ed. Chicago: University of Chicago Press.
- Rapoport, Ronald B., Walter J. Stone and Alan I. Abramowitz. 1991. "Do endorsements matter? Group influence in the 1984 Democratic caucuses." *American Political Science Review* 85(1):193–203.
- Ridout, Travis N., Michael M. Franz and Erika Franklin Fowler. 2015. "Sponsorship, Disclosure, and Donors: Limiting the Impact of Outside Group Ads." *Political Research Quarterly* 68(1):154–166.
- Ross, Lee, David Greene and Pamela House. 1977. "The "false consensus effect": An egocentric bias in social perception and attribution processes." *Journal of experimental social psychology* 13(3):279–301.
- Sniderman, Paul M., Phillip E. Tetlock and Richard A. Brody. 1993. *Reasoning and choice: Explorations in political psychology*. Cambridge University Press.
- Tausanovitch, Chris and Christopher Warshaw. 2018. "Does the Ideological Proximity Between Candidates and Voters Affect Voting in US House Elections?" *Political Behavior* 40(1):223–245.
- Weber, Christopher, Johanna Dunaway and Tyler Johnson. 2012. "It's all in the name: Source cue ambiguity and the persuasive appeal of campaign ads." *Political Behavior* 34(3):561–584.
- Wood, Abby K. 2018. "Campaign finance disclosure." *Annual Review of Law and Social Science* 14(1):11–27.

Online Appendix

A Appendix Figures and Tables

Figure OA1: Design of Sample Strategies Survey Used for Studies 2, 3, and 9

Figure OA2: SIG ratings used in Study 2

Figure OA3: Studies 2 and 3—Do Respondents Understand High Ratings Indicate MC Usually Votes In Ways SIG Usually Agrees With?

Notes: After showing the SIG ratings for Studies 2 and 3, we asked respondents “To make sure you understand what this rating means, do you think it means that [SIG Name] usually agrees or disagrees with how [name of respondent’s MC] has voted in Congress?” Respondents had three response options: usually agrees, neither, and usually disagrees. This Figure plots the proportion that selected the “usually agrees” and “usually disagrees” options as a function of the value of the rating they were just shown. Note that the vast majority of SIG ratings fall from 0 to 10 or 90 to 100, as shown in Figure OA2.

Figure OA4: Study 3—Effects of SIG Rating Information on Support for Member of Congress, by SIG

(a) Effect on MC Approval Scale of Showing Positive SIG Rating (0/1)

(b) Effect on MC Approval Scale of Showing SIG Rating that Signals Voter–MC Issue Position Match (0/1)

Notes: This Figure shows the results of Model 3 in Table 5 when this regression is run separately by SIG. The MC Approval Scale is rescaled to mean zero standard deviation one.

Figure OA5: Respondent Perceptions of SIGs in Study 7 by SIG CFscore
(a) All SIGs

(b) Conservative SIGs Only

(c) Liberal SIGs Only

Note: CCLife (Citizens Concerned for Life), CGS (Citizens for Global Solutions), CUPVF (Citizens United Political Victory Fund), CWF (Campaign for Working Families), CenterPAC (Center for Coastal Conservation Political Action Committee), Ferris (Friends of Ferris), Fipac (Friends of Israel Political Action Committee Fipac), FriendsEarth (Friends of the Earth), GunOwners (Gun Owners of America), HumaneUSA (Humane USA Political Action Committee), JACPA (Joint Action Committee for Political Affairs), JoePAC (Jobs, Opportunities and Education PAC (Joe PAC)), LCV (League of Conservation Voters), NAUS (National Association for Uniformed Services), NCEC (National Committee for an Effective Congress), NOW (National Organization for Women), NPLA (National Pro Life Alliance), NRA (National Rifle Association), NRL (National Right to Life), Nacpac (National Action Committee), PACe (National Association of Social Workers Incorporated Political Action for Candidate Election), PAPAC (Peace Action PAC), PAWVF (Peace Action West Voter Fund), PCCC (Progressive Change Campaign Committee), PCPAC (Progressive Choices PAC), RL (Right to Life), SBAL (Susan B Anthony List), TDC (The Desert Caucus), TFF (Texas Freedom Fund), TG (Tuesday Group), VN (Victory Now), WAND (Womens Action for New Directions Incorporated), WOF (Winning Our Future), WPAC (Washington Political Action Committee). Forward Together and Environment America Action Fund are not shown because they are extreme outliers on the left.

Figure OA6: Study 8–Respondent Perceptions of SIG Ideology, by Respondent Own Ideology

Notes: Each point corresponds with how respondents of a given ideology rated a given interest group. Points are scaled by the number of respondents with each ideology rating each SIG. Respondents' own ideology is jittered to improve readability.

B Conventional Wisdom from the Literature

In Table OA1 we review over two dozen quotes from existing literature asserting that information about SIG ratings or endorsements can help voters cast more informed votes. This table is intended to show that there is a conventional wisdom in the literature that SIG ratings help voters make accurate inferences about their representatives and use these inferences to help hold their representatives accountable.

Note that the literature we quote below is diverse. Some of it mainly focuses on advancing claims about the use of SIG ratings as heuristics either theoretically or empirically (such as McKelvey and Ordeshook (1985)). However, other literature we quote below (such as Achen and Bartels (2016)) focuses on other topics but reviews the literature on SIG heuristics, therefore capturing the conventional wisdom in the field about the state of the SIG heuristics literature. There is also additional literature we quote in the main text; neither the main text nor Table OA1 is meant to be exhaustive.

Table OA1: Conventional Wisdom (Alphabetical Order by Citation)

Citation	Quote
Achen and Bartels (2016)	“In the early 1990s, a spate of books with such reassuring titles as <i>The Reasoning Voter</i> (Popkin 1991), <i>Reasoning and Choice</i> (Sniderman, Brody and Tetlock 1991), and <i>The Rational Public</i> (Page and Shapiro 1992) argued that voters could use ‘information shortcuts’ or ‘heuristics’ to make rational electoral choices even though they lacked detailed knowledge about candidates and policies. These shortcuts could take a variety of forms, including ‘cues’ from trusted political figures or groups, inferences derived from political or social stereotypes, or generalizations from personal experience or folk wisdom.”

Continued on next page

Table OA1 – *Continued from previous page*

Citation	Quote
Arceneaux and Kolodny (2009)	“Rather than undermining their ability to make good decisions, low-information voters need only look to someone who has an incentive to possess accurate information about the candidate (Lupia and McCubbins 1998). Issue advocacy groups are well suited to fill this role, because they have a strong incentive to know how the candidate votes on the issues important to their group. In fact, the group need not even be aligned with the voters’ interests, because signals from opposition groups can also be informative by indicating whom the voter should not support (Lupia 1994; Lupia and McCubbins 1998). Thus, by using an endorsement as a heuristic for whether the candidate would be a good representative for their interests, politically unaware voters can make decisions as if they possessed full information about the candidates.”
Delli-Carpini and Keeter (1997)	“Though the use of ‘heuristics,’ or informational shortcuts, citizens can reach decisions about where they stand on certain issues or whom they will vote for in a given election. These shortcuts usually consist of following the lead of a group or an individual that citizens believe have their interests at heart or that have interests similar to their own” (p. 44-45)
Dalton (2013)	“Many voters decide between competing parties based on cues that social groups provide—the endorsements of labor unions, business associations, religious groups, and the like—as well as the parties’ appeals to these groups. In most cases, this process produces reasonable voting choices, even if the voter is not fully informed on all the relevant issues.”
De Ferrari (2017)	“In judging either policies or candidates, citizens can use the statements of politicians that they trust as cues (Mondak, 1993a). Alternatively, “they can consider the positions of interest groups whose policy preferences they are generally inclined to support or oppose” (Kuklinski and Quirk, 2000, p. 155). In short, they can use endorsements to make reasoned choices without having to acquire deep knowledge of the issue at hand.”
Dowling and Wichowsky (2013)	“several studies have shown that voters can use heuristics, such as group cues, party labels, and endorsements, to make more informed political decisions despite their lack of political sophistication”
Druckman (2005)	“citizens can compensate for a lack of political information by using shortcuts to make the same decisions they would have made if they had that information” through “elite endorsements (e.g., from interest groups)”
Druckman and Lupia (2016)	“A common theme in research on this topic is that people seek information that is easy to use, and many political scientists have examined how commonly available types of easy-to-use information such as party labels and interest group endorsements affect preferences.”

Continued on next page

Table OA1 – *Continued from previous page*

Citation	Quote
Fjałkowski et al. (2014)	“Facing uncertainty about Politicians voters turn to Social Leaders as information short-cuts. Leaders include NGOs, the media and religious organizations.”
Garrett (2002)	“Another effective voter shortcut is provided by information that reveals which groups support a candidate and the intensity of their support. Voters often use group affiliation as a heuristic, relying either on information about a candidate’s membership in groups or on knowledge about interest group endorsements. ... Ordinary voters can free-ride on the information about groups, financial support, and endorsements in campaigns, using it to determine what programs candidates are likely to implement.”
Gilens (2012)	“A somewhat more complex understanding of cue taking as a basis for political preference formation allows citizens to adapt cues to their own purposes by adopting the position of like-minded cue-givers and adopting the opposite position of those espoused by the non-like-minded.”
Graber (2004)	“monitorial citizens need not stay fully informed about political developments at all times. [...] monitorial citizens should consult news stories, party and interest group pronouncements ... Reliance on information shortcuts yields acceptable results”
Grofman and Norrander (1990)	“If there are groups whose endorsements voters can use as positive (or negative) cues, we [theoretically] demonstrate that voters do not need to know anything directly about candidate positions to be able to identify the candidate whose issue positions and performance is likely to be closest to the voter’s own preferences”
Grossman and Helpman (1999)	“individuals may look for readily available cues to guide them in the polling booth. In this context, endorsements by group leaders may convey useful information to like-minded voters. ... If groups of voters use endorsements as cues—as the evidence suggests—then candidates and parties may well have incentives to compete for these endorsements.”
Kelley (2018)	“Endorsements are the focus of much attention in studies of voter information processing ”
Kinder (1998)	“Granted tha encyclopedic knowledge is out of reach—and perhaps even irrational—the public may nevertheless muddle through. How? By relying on a variety of sensible and mostly adaptive shortcuts ... The vital piece of information here was the position taken by special interest groups.”

Continued on next page

Table OA1 – *Continued from previous page*

Citation	Quote
Krishnakumar (2006)	“if there exists another, related, set of facts that leads her to make the same choice she would have made with knowledge of Candidate X’s position on 100 political issues — e.g., the related fact that Candidate X is endorsed by the NRA — then knowledge of the full set of facts is not necessary to cast a competent vote. In other words, voters need not possess all available information about a candidate in order to vote competently; they can instead rely on “particular pieces of information, connected non-accidentally to accurate conclusions about the consequences of [their] vote[s],” and still make competent electoral decisions. Smaller, digestible, “particular pieces of information” thus serve as cues, or heuristics, that enable citizens to vote competently with limited information. As the use of the NRA in the above example suggests, an incumbent’s or challenger’s (if the challenger has held prior elective office) connection to a particular interest group can serve as one important heuristic for voters.”
Kuklinski and Quirk (2000)	“In judging either candidates or policies, people can use statements by...interest-group leaders...as cues. ... They can consider the positions of interest groups whose policy preferences they are generally inclined to support or oppose. Such cues arguably eliminate the need for substantive information about an issue.”
Kuklinski and Quirk (2001)	“researchers have proposed a wide range of potential cues—including but not limited to...interest groups [...] The heuristics literature is characterized by a focus on clear, well-defined tasks. ... for the most part, the citizen’s task in this work is to make decisions about policies and candidates, that is, to express preferences”
Kuklinski et al. (2001)	“Some of the influence of the political-heuristics literature arises from its normatively appealing claim that citizens can perform reasonably well by taking cues from parties, politicians, and interest groups.”
Larcinese (2006)	“In the context of heuristic decision-making, parties, pressure groups, opinion leaders etc. transmit simple and effective information to voters.”
McKelvey and Ordeshook (1985a)	“We develop models of policy formation in two candidate elections where most voters have little or no information about the policies or platforms adopted by the candidates. ... When voters do not possess the perfect information assumed in earlier models, and when it is costly to obtain this information relative to the presumed expected benefits, we assume that voters take cues from other sources, endogenous in the system, that are easily observable and which they believe may convey useful information. Such sources may [include]...interest groups. ... The model developed in this paper assumes the information source for uninformed voters is poll data and interest group endorsements.”

Continued on next page

Table OA1 – *Continued from previous page*

Citation	Quote
McKelvey and Ordeshook (1985)	“...the voter is aware of the endorsement of some specific interest group in society. Recognizing the policy preference of that group, he may use the endorsement to form a belief about the candidate most likely to yield him the greatest benefit.”
McKelvey and Ordeshook (1986)	“Citizens possess highly imperfect information about candidates and public issues, and in deciding how to vote, they rely on a variety of indirect and possibly irrelevant cues, such as...group endorsements...” “Knowledge of...which candidate is to the left, and which is to the right...can come from a variety of sources, such as the endorsements of interest groups”
Neddenriep and Nownes (2014)	“interest-group endorsements may act as cues that simplify the electoral process and help potential voters formulate judgments about candidates, especially in low information settings ... Group endorsements...serve as ‘sign posts’ that tell potential voters whether or not a given candidate shares their views. ... potential voters will form a favourable opinion of candidates endorsed by groups they support and a negative opinion of candidates endorsed by groups they oppose.”
Renno (2004)	“This is why endorsements are so important in elections. The reasoning is that voters who like specific groups or personalities will also like the candidates these groups and personalities endorse.”
Staszewski (2009)	“if voters can accurately decide which candidates they prefer based on party labels, endorsements, or other simple cues, elected officials could be held politically accountable”
Tolbert and Hero (2001)	“Research suggests that voters use endorsements by political candidates and interest groups as cues in deciding how to vote in issue elections (Bowler and Donovan 1998; Lupia 1994). Through endorsements of ballot initiatives, candidates for elected office link their political campaign to prominent issue elections. Political party and interest group endorsements allow voters to make decisions in ballot measure contests consistent with their policy preferences (Bowler and Donovan 1998).”

C Representativeness

Table OA2 provides demographic statistics for the four samples we use in this paper in the middle four columns. The last column displays the same statistics in the 2017 American Community Survey (ACS) from the US Census Bureau, a benchmark. Unsurprisingly the MTurk sample from Study 1 is fairly unrepresentative on gender, income, and education. However, our remaining samples are broadly representative, with the main differences with the ACS being that some of our samples are slightly whiter, underrepresent individuals without high school degrees, and underrepresent individuals with incomes over \$80,000 per year. Note that the ‘SSI in CA’ sample would not be expected to match the 2017 ACS exactly, as the SSI in CA sample was conducted only in California whereas the 2017 ACS is nationwide.

Table OA2: Representativeness of Four Samples Used in Paper

	Study 1	Studies 2-4, 9	Studies 5-6	Studies 7-8	Benchmark: 2017 ACS
Sample					
Provider	MTurk	Sample Strategies	SSI in CA	Lucid	US Census
<i>N</i>	1,220	3,958	4,298	3,178	-
Gender					
Female	36	55	57	59	51
Age					
18-24	-	3	15	14	13
25-34	-	11	17	24	18
35-49	-	22	20	27	25
50-64	-	31	30	23	25
65+	-	32	18	12	19
Race					
Non-Hispanic White	77	83	59	74	61
Black	6	6	7	10	13
Asian + Other	11	9	17	6	7
Hispanic	5	3	15	9	18
Education					
No HS Degree	0	1	2	6	11
HS Degree	10	19	13	25	29
Some College / Associate Degree / 2 year degree	43	36	37	39	28
College Degree	37	29	30	21	21
Graduate Degree	9	15	17	9	12
Income					
<\$19k	30	11	17	50	16
\$20-39k	30	22	20	19	19
\$40-59k	20	21	16	11	16
\$60-79k	10	17	9	7	12
\$80k+	9	28	24	11	36
Unknown	0	0	13	3	0

Notes: All cell entries provide the percentage of each sample present in each demographic category. In rare cases age and income categories were inconsistent across surveys and were either combined or averaged across other categories.

D Study 1

D.1 Study 1 Robustness—Political Knowledge

It is possible that SIG ratings may be more useful as a heuristic for voters higher in political knowledge. For example, Lau and Redlawsk (2001) find that only respondents with a high level of political sophistication can effectively use heuristics. However, as Figure OA7 shows, the various treatment conditions have no effect on high-knowledge voters at all. One explanation might be a ceiling effect: high-knowledge voters are already so knowledgeable about their representatives' behavior that the treatment has no impact. However, their accuracy in the control condition is barely three-quarters, indicating room for improvement. For low-knowledge voters the effect for the endorsement condition is statistically insignificant, and in fact the point estimate is negative.

D.2 Study 1 Robustness—Issue Publics

Figure OA8 finds that the endorsement condition has no effect among individuals who are say that the corresponding issue is important to them personally: both issue public members and non-members have similar but statistically insignificant differences from those in the control group.

Figure OA7: Study 1—Can high political knowledge respondents infer how their representatives vote using heuristics? Treatment effects by number of correct responses on a five point scale.

Figure OA8: Study 1—Can respondents who are members of an issue public infer how their representatives vote using heuristics?

D.3 Study 1 Means—by condition, by policy, by political knowledge, and by issue publics.

Figure OA9: Study 1—Means by condition and by policy

Figure OA10: Study 1—Means by number of correct political knowledge responses

Figure OA11: Study 1—Means by whether respondents chose policy

E Study 5

Question wording:

- Did NARAL Pro-Choice America support banning federal funding for elective abortions?
- Did the League of Conservation Voters (LCV) support preventing the Environmental Protection Agency from regulating greenhouse gases?
- Did the National Rifle Association (NRA) support allowing individuals to carry concealed firearms in all states if they have a license in one state?
- Did the Club for Growth support a tax increase on individuals with \$400,000 or more in income to avert the fiscal cliff?
- Did the American Federation of Labor and Congress of Industrial Organizations (AFL-CIO) support a free trade agreement with South Korea?
- Did the League of Conservation Voters (LCV) support building the Keystone XL oil pipeline?
- Did the Chamber of Commerce support universal healthcare?

Response options:

- Yes
- No
- Did not take a position
- Don't know

F Correlates of SIG Knowledge

Here we examine the correlates of knowledge about SIGs. Since it has a very large sample, we used the survey from Studies 7 and 8, which asked respondents to place SIGs on a seven-point ideology scale. We coded respondents as having placement accuracy if they placed the interest groups correctly using the three-point classification of CF scores we use in the paper as the benchmark, i.e., liberal, moderate, or conservative. As we discussed, most groups we analyzed are either liberal or conservative and most are relatively extreme. Although no measure of respondent accuracy will be perfect, we think this one is relatively straightforward.

Overall, we find some relationship between general political knowledge and accuracy. As respondents' general political knowledge rises from the bottom to the top quintile, we find that accuracy rises from 20% to 34% ($n = 6,356$).

However, if we look only among respondents who attempted to place interest groups (exclude those who skip the question), accuracy increases from 35% to 62% ($n = 3,541$).

The groups the top quintile knew best (when they placed groups) were the National Organization for Women (100% correct), Gun Owners of America (95%), NRA (95%), National Pro-Life and Alliance (86%), Right to Life (75%). The groups they knew least were the League of Conservation Voters (43% correct), Susan B Anthony List (36%), Prosperity PAC (56%), Campaign for Working Families (44%), and Blue Dog (0%).

We see no sign that general political knowledge lowers rates of skipping the question, which is unusual. If anything, high general political knowledge individuals were slightly more likely to refuse to answer the question.

Examining demographic correlates, we find that accuracy increases with education (and variables associated with education). We also see signs of learning with age, with accuracy peaking around 65 years.

G Pre-Analysis Plan for Studies 2-4

We made the following deviations from the pre-analysis plan:

- In Studies 2-3, as described in Footnote 21 in the main text, we originally pre-specified that we would control for possible treatments using a linear term. We now use fixed effects for every level of this variable, as we thought this would be less sensitive to functional form. The results are nevertheless essentially identical when using a linear term.
- As also noted in Footnote 21, in Study 3, we did not originally anticipate that respondents would naively react to whether the rating was positive or negative regardless of the SIG issuing the rating. However, the p -value on this comparison is 0.005, it would only be rendered insignificant under a Bonferroni correction if this were at least the tenth non-pre-registered comparison we ran.
- In Study 4, Table 6, the PAP verbally indicated that we would perform a guessing correction procedure, but the code we provided did not actually implement a guessing correction procedure. In Table 6 we report raw means that are not guess-corrected, consistent with the code, instead providing guess-corrected percentages.

Pre-Analysis Plan for Interest Group Heuristics Survey Experiment

BLINDED

Background

This experiment replicates and extends work by [BLINDED] in 2013:

- That earlier work examined the extent to which interest group endorsements of Members of Congress provide useful information in helping constituents guess their representatives' votes on key issues, finding that they largely do not. In this experiment, we will replicate previous findings using additional interest groups and additional key votes.
- As well, it attempts to identify reasons for the unhelpfulness of interest group cues by testing whether respondents can identify which of two interest groups on opposing sides of an issue is the liberal organization.
- Finally, we address a follow-up question related to approval, and ask whether learning of interest group alignment increases support for one's member of congress.

Experimental Design

We plan to recruit a nationally representative sample to complete our online survey.

This experiment involves the following steps:

1. Identify a respondent's Member of Congress using their 9-digit zip code.
2. Gather respondent's preferences on about 10 policy issues.
3. If respondent is in the control group, show no treatment. If respondent is in the treatment group, show a randomly selected interest group rating for her MoC. These are the real interest group ratings for respondents' real MoCs.
4. Gather respondent's guesses about her MoC's preferences on the same policy issues.
5. If a respondent is in the treatment group, gather respondent's approval of her MoC.
6. Ask all respondents to identify which of two related interest groups supports a given policy.

Outcomes

We collect three outcomes.

Outcomes in Experiment

- *mcratingscale* measures R's support for her Member of Congress
- *position_correct* indicates whether R correctly guessed her MoC's position on the policy

Descriptive Statistics

- *org_correct* indicates whether R successfully identified which interest groups supports a given policy; each R is shown two

This diagram shows how respondents will flow through the survey and when each outcome is collected.

Data In This PAP

This pre-analysis plan using a limited pilot of this design ran in November 2017. Given the limited sample size, we cannot use it to draw inferences about the results of the experiment to be completed.

```
dat <- read.csv('heuristics_cleaned.csv', stringsAsFactors = FALSE)

# Our control respondents were given a different experiment. The project identifier 'heuristics' distinguishes our pure control from our two endorsement-receiving groups.
dat$ratingsshown <- dat$project == 'heuristics'
```

30 respondents completed this pilot pre-survey. To write this PAP, we use this real pre-survey data. We will not use this pre-survey data for the paper.

Experiment: Effect of heuristics on correct perception of MC votes and MC approval

Effect of heuristics on correct perception of MC votes

Does showing the heuristic make people guess the MC's position more accurately on that or other issues?

To answer this question we reshape the dataset to the respondent by issue level. All respondents made guesses about their Member of Congress' position across approximately ten issues each. A randomly selected subset of respondents (the treatment group) were shown heuristics relevant to one randomly selected issue. There are therefore three groups we can compare:

1. How accurate were respondents in the treatment group about the issue on which they were shown a relevant heuristic?
2. How accurate were respondents in the treatment group about the issues on which they were *not* shown relevant heuristics?
3. How accurate were respondents in the control group about all the issues?

Comparing groups 1 and 3 reveal the 'direct effect' of heuristics. Comparing groups 2 and 3 reveal any 'spillover' effect of heuristics. Therefore, we will run a regression with a) an indicator for whether a respondent was shown a heuristic on this issue (i.e., group 1 above), identifying the *direct effect* of a heuristic; and b) an indicator for whether a respondent was shown a heuristic on a different issue (i.e., group 2 above), identifying the *indirect effect* on other issues. The control group will be the base category. We will also use issue fixed effects to increase precision.

```

# Reshape the data frame so the unit of analysis is the respondent * issue area
# To perform this reshape, I use two melt() calls then merge the two.

# A helper function to extract issue area from a variable name
substrRight <- function(x, n){
  substr(x, nchar(x)-n+1, nchar(x))
}

# This first melt call produces a respondent * issue area data frame with the responden
t's guess regarding their Congressman's vote.
dat_t1 = reshape2::melt(dat[,c(19:35, 47)], id = "workerId")
dat_t1$variable = as.character(dat_t1$variable)
dat_t1$issue = sapply(dat_t1$variable, FUN=function(x) substrRight(x, 5))
dat_t1 = dat_t1[,c(1,3,4)]
colnames(dat_t1) = c("workerId", "guess", "issue")

# This second melt call produces a respondent * issue area data frame with their Congres
sman's actual vote.
dat_t2 = reshape2::melt(dat[,c(67:83, 47)], id = "workerId")
dat_t2$variable = as.character(dat_t2$variable)
dat_t2$issue = sapply(dat_t2$variable, FUN=function(x) substrRight(x, 5))
dat_t2 = dat_t2[,c(1,3,4)]
colnames(dat_t2) = c("workerId", "truth", "issue")

# Then we merge the two data frames together along with an identifier for which issue ar
ea the respondent received a SIG rating for
dat_t = merge(dat_t1, dat_t2)
dat_t = merge(dat_t, dat[,c("randomrating_house_vote_id", "workerId",
                           "project", "num_eligible_ratings", "survey_version")])

# Calculate the dependent variable: whether the respondent guessed the MoC's vote correc
tly on each issue.
dat_t$correct = dat_t$guess == dat_t$truth

dat_t = dat_t[!is.na(dat_t$correct),] # There should be no NAs here in the real data.

# Create variables indicating which treatment group each observation falls in
dat_t$indirect = dat_t$project == "heuristics" & dat_t$issue != as.character(dat_t$rand
omrating_house_vote_id)
dat_t$direct = dat_t$project == "heuristics" & dat_t$issue == as.character(dat_t$random
rating_house_vote_id)
dat_t$control = dat_t$project != "heuristics"

# Regress whether the respondent guessed correctly on whether they were cued, with issue
area fixed effects and respondent-level clustered SEs.
# Respondents in the treatment group are only randomly assigned to one rating among the
ratings that it makes sense to show them for their MoC (because the MC has both the rat
ing and the corresponding vote). Some MCs are missing different numbers than others, mea
ning that respondent's probability of assignment to each issue depends on how many other
issues there. E.g., if you got issue A and your MC has 3 other issues, your prob of assi
gnment is 1/4, but if your MC has 7 other issues, your prob of assignment is 1/8. So we
need fixed effects for the number of issues to which you were assigned.
summary(miceadds::lm.cluster(data = dat_t,

```

```
formula = correct ~ indirect + direct +  
  factor(issue) + factor(num_eligible_ratings),  
cluster = 'workerId'))
```

```

## R^2 = 0.18537
##
##
##               Estimate Std. Error   t value
## (Intercept)      0.61518611 0.14897133  4.1295605
## indirectTRUE      0.03507197 0.08724910  0.4019752
## directTRUE        0.02041088 0.13740111  0.1485496
## factor(issue)56612 0.12947236 0.13794377  0.9385880
## factor(issue)58622 0.09022441 0.15765367  0.5722950
## factor(issue)58745 0.09022441 0.16437523  0.5488930
## factor(issue)59180 -0.22351944 0.18001315 -1.2416840
## factor(issue)59189 0.08900265 0.15139017  0.5879025
## factor(issue)59434 -0.07766401 0.17819378 -0.4358402
## factor(issue)59438 0.03567088 0.14332081  0.2488883
## factor(issue)59632 -0.02884819 0.17689180 -0.1630838
## factor(issue)59737 -0.26737983 0.21507530 -1.2431917
## factor(issue)60053 0.26030710 0.16618639  1.5663563
## factor(issue)60153 -0.07766401 0.17118095 -0.4536954
## factor(issue)60587 0.08900265 0.15969201  0.5573394
## factor(issue)60590 0.08642376 0.14190385  0.6090304
## factor(issue)60787 0.22011050 0.15142124  1.4536303
## factor(issue)61746 -0.09766513 0.17944912 -0.5442497
## factor(issue)61788 0.09022441 0.15754915  0.5726747
## factor(num_eligible_ratings)4 -0.18702638 0.05312124 -3.5207460
## factor(num_eligible_ratings)7 -0.02050322 0.08688560 -0.2359795
## factor(num_eligible_ratings)8 -0.01520914 0.09255921 -0.1643180
## factor(num_eligible_ratings)9 0.24246561 0.07358140  3.2952024
##
##               Pr(>|t|)
## (Intercept)      3.634574e-05
## indirectTRUE      6.877023e-01
## directTRUE        8.819091e-01
## factor(issue)56612 3.479423e-01
## factor(issue)58622 5.671221e-01
## factor(issue)58745 5.830789e-01
## factor(issue)59180 2.143532e-01
## factor(issue)59189 5.565978e-01
## factor(issue)59434 6.629527e-01
## factor(issue)59438 8.034472e-01
## factor(issue)59632 8.704524e-01
## factor(issue)59737 2.137972e-01
## factor(issue)60053 1.172652e-01
## factor(issue)60153 6.500481e-01
## factor(issue)60587 5.772955e-01
## factor(issue)60590 5.425043e-01
## factor(issue)60787 1.460488e-01
## factor(issue)61746 5.862697e-01
## factor(issue)61788 5.668650e-01
## factor(num_eligible_ratings)4 4.303347e-04
## factor(num_eligible_ratings)7 8.134486e-01
## factor(num_eligible_ratings)8 8.694808e-01
## factor(num_eligible_ratings)9 9.835082e-04

```



```
# We will test whether there is a positive coefficient on direct, our main effect, or in direct, our spillover effect.
```

We also calculate a variable which indicates whether respondents understand that a MoC receiving a low grade from an interest group means that interest group's policy preferences do not align with the MoC's. This serves as a manipulation check: if we find that respondents do not adequately consider SIG endorsements when guessing their MoC's votes, we can use this mediating variable to rule out the possibility that they do not understand the meaning of an SIG endorsement.

```
# First, we calculate the mediating variable -- whether respondents understand what an i  
nterest group endorsement means regarding their Member of Congress.  
dat$understandsrating_correct <- ifelse(((dat$randomrating_sig_rating > 50 & dat$underst  
andrating == 1) |(dat$randomrating_sig_rating < 50 & dat$understandrating == 3)), 1, 0)
```

Effect of heuristics on MC approval

Here we address our second question: when people see a heuristic that suggests an MC agrees with them on an issue, do they like the MC more?

```
# Note: for this analysis, can't use respondents in the other project as a control grou  
p, since for the other project other information was shown before the MC approval questi  
on was asked. So we are just going to use within-subject variation among our treatment g  
roup.  
dat <- filter(dat, project == 'heuristics')  
  
# Our dependent variable: the respondents' favorability toward their Member of Congress  
dat$mcratingscale
```

```
## [1] 1.19682466 -0.43407833 0.01572741 -0.81655608 2.02910815  
## [6] 0.78068291 0.81434691 0.78068291 0.22123354 -0.81655608  
## [11] -0.62531721 -0.81655608 0.01572741 0.39820516 -0.81655608
```

```

# Preliminary step: identify the issues where the liberal position is support and the is
sues where the liberal position is oppose
temp = data.frame(randomrating_sig_name = unique(dat$randomrating_sig_name))
temp$randomrating_sig_libcon = c(-1, -1, 1, 1, -1, 1, 1, -1, 1, -1)
dat = merge(dat, temp)
rm(temp)

# Identify how the respondent voted on the issue relating to the heuristic
# This variable is stored as bill_pref, and is coded as either -1 (liberal) or +1 (conse
rvative)
ownview_heuristic_var = paste0("ownview", dat$randomrating_house_vote_id)
idx = sapply(ownview_heuristic_var, FUN=function(x) which(colnames(dat)==x))
temp0 = c()
for(i in 1:length(idx)){
  temp0[i] = dat[i, idx[i]]
}
temp0[temp0==0] = -1

dat$bill_pref = temp0 * dat$randomrating_sig_libcon
rm(temp0)
rm(idx)
rm(vec)

dat$randomrating_sig_rating[dat$randomrating_sig_rating < 50] = -1
dat$randomrating_sig_rating[dat$randomrating_sig_rating >= 50] = 1
dat$heuristic_candpref = dat$randomrating_sig_rating * dat$randomrating_sig_libcon
dat$heuristic_candpref_binary = dat$heuristic_candpref > 0

# Define heuristicagree as whether the respondent's preference on an issue matches the c
andidate's preferences as indicated by an endorsement
# Note that the endorsement may be misleading! A candidate with a 90% grade from a SIG s
till votes against them 10% of the time.
dat$heuristicagree = dat$bill_pref == dat$heuristic_candpref
by(dat$heuristicagree, dat$mcratingscale, mean)

```

```
## dat$mcratingscale: -0.816556083439987
## [1] 0
## -----
## dat$mcratingscale: -0.625317206839052
## [1] 0
## -----
## dat$mcratingscale: -0.434078330238116
## [1] 0
## -----
## dat$mcratingscale: 0.0157274068804401
## [1] 0.5
## -----
## dat$mcratingscale: 0.2212335403044
## [1] 1
## -----
## dat$mcratingscale: 0.398205160082311
## [1] 0
## -----
## dat$mcratingscale: 0.780682913284182
## [1] 1
## -----
## dat$mcratingscale: 0.814346905242525
## [1] 1
## -----
## dat$mcratingscale: 1.1968246584444
## [1] 0
## -----
## dat$mcratingscale: 2.02910814876482
## [1] 0
```

```
## Calculate the proportion of votes in which the respondent agrees with the member of C
ongress's votes
dat$rep_agree_proportion = sapply(1:nrow(dat), FUN=function(x) mean(dat[x,3:19]==dat[x,2
0:36], na.rm=T))

## Regress respondents' support for their member of Congress on the proportion of votes
on which they agree, and whether the SIG heuristic suggests policy preference congruenc
e
summary(lm(mcratingscale ~ rep_agree_proportion + heuristicagree, dat))
```

```
##
## Call:
## lm(formula = mcratingscale ~ rep_agree_proportion + heuristicagree,
##     data = dat)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -0.73533 -0.30369  0.09695  0.26610  0.58738
##
## Coefficients:
##              Estimate Std. Error t value Pr(>|t|)
## (Intercept)    -0.9315     0.1964  -4.742 0.000478 ***
## rep_agree_proportion  2.4655     0.4002   6.161 4.86e-05 ***
## heuristicagreeTRUE   -0.3746     0.2854  -1.312 0.213949
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.4355 on 12 degrees of freedom
## Multiple R-squared:  0.7861, Adjusted R-squared:  0.7505
## F-statistic: 22.05 on 2 and 12 DF,  p-value: 9.578e-05
```

If people are learning adequately, there will be a positive coefficient on heuristicagree independent of allagree

Secondary hypothesis: recent research (Russell 2017, "US Senators on Twitter: Asymmetric Party Rhetoric in 140 Characters") suggests that Democrats care more about policy alignment than Republicans

Test this hypothesis by adding PID to the above regression

```
by(INDICES = list(dat$heuristicagree, dat$pid), data=dat$mcratingscale, FUN = function(x) mean(x, na.rm=T))
```

```
## : FALSE
## : 1
## [1] -0.8165561
## -----
## : TRUE
## : 1
## [1] 0.7806829
## -----
## : FALSE
## : 2
## [1] -0.2091755
## -----
## : TRUE
## : 2
## [1] 0.01572741
## -----
## : FALSE
## : 4
## [1] -0.6253172
## -----
## : TRUE
## : 4
## [1] 0.8143469
## -----
## : FALSE
## : 6
## [1] 0.01572741
## -----
## : TRUE
## : 6
## [1] NA
## -----
## : FALSE
## : 7
## [1] 2.029108
## -----
## : TRUE
## : 7
## [1] NA
```

```
summary(lm(mcratingscale ~ rep_agree_proportion + heuristicagree + pid, dat))
```

```
##
## Call:
## lm(formula = mcratingscale ~ rep_agree_proportion + heuristicagree +
##     pid, data = dat)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -0.54745 -0.10752  0.03072  0.19735  0.34248
##
## Coefficients:
##              Estimate Std. Error t value Pr(>|t|)
## (Intercept)   -1.115139    0.186707  -5.973 0.000333 ***
## rep_agree_proportion  2.024957    0.381840   5.303 0.000726 ***
## heuristicagreeTRUE  -0.006571    0.288451  -0.023 0.982385
## pid            0.110972    0.058056   1.911 0.092323 .
##
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.3283 on 8 degrees of freedom
## (3 observations deleted due to missingness)
## Multiple R-squared:  0.9057, Adjusted R-squared:  0.8703
## F-statistic: 25.61 on 3 and 8 DF,  p-value: 0.0001873
```

Do people correctly perceive PACs and SIGs?

Here we produce a table indicating the interest groups for which respondents most often correctly guess their positions on a related policy. We showed respondents pairs of interest groups and PACs on different sides of a policy issue and asked them to guess which was on which side.

```
dat <- read.csv('heuristics_cleaned.csv', stringsAsFactors = FALSE) # Reread the original dataset since we subsetted it above
dat$orgs <- with(dat, paste0(org1, ' and ', org2))
by(dat$org_correct, dat$orgs, mean)
```

```

## dat$orgs: J Street PAC and Security PAC
## [1] 0.75
## -----
## dat$orgs: Jobs, Opportunities, and Education PAC (Joe PAC) and Prosperity PAC
## [1] 0.5
## -----
## dat$orgs: League of Conservation Voters and the Committee for the Preservation of Capitalism
## [1] 0.75
## -----
## dat$orgs: NARAL Pro-Choice America and Susan B Anthony List
## [1] 1
## -----
## dat$orgs: National Committee to Preserve Social Security & Medicare PAC and FreedomWorks for America
## [1] 0.75
## -----
## dat$orgs: Progressive Change Campaign and the Campaign for Working Families
## [1] 0.75
## -----
## dat$orgs: San Franciscans for Good Government and Conservative Victory Fund
## [1] 0.75
## -----
## dat$orgs: The Brady Campaign to Prevent Gun Violence and The National Rifle Association
## [1] 1

```

Guess Correction

Many of our outcomes are whether R correctly guessed her MoC's policy preferences. This is subject to measurement error, since an uninformed respondent may correctly guess without knowing any real information. Therefore we perform statistical guess correction on our outcomes to estimate the treatment effect; otherwise we will underestimate it. Our guess correction formula is $S = R - W / (k-1)$: corrected score is equal to the number of correct answers minus the number of incorrect answers, divided by the number of choices for each question minus one.

References for Online Appendix

- Achen, Christopher H. and Larry M. Bartels. 2016. *Democracy for realists: Why elections do not produce responsive government*. Princeton University Press.
- Arceneaux, Kevin and Robin Kolodny. 2009. “Educating the least informed: Group endorsements in a grassroots campaign.” *American Journal of Political Science* 53(4):755–770.
- Dalton, Russell J. 2013. *Citizen politics: Public opinion and political parties in advanced industrial democracies*. CQ Press.
- De Ferrari, Ignazio. 2017. “The accountability effect of endorsements: A survey experiment.” *Electoral Studies* 45:1–13.
- Delli-Carpini, Michael X. and Scott Keeter. 1997. *What Americans Know about Politics and Why It Matters*. Yale University Press.
- Dowling, Conor M. and Amber Wichowsky. 2013. “Does it matter who’s behind the curtain? Anonymity in political advertising and the effects of campaign finance disclosure.” *American Politics Research* 41(6):965–996.
- Druckman, James N. 2005. “Does political information matter?” *Political Communication* 22(4):515–519.
- Druckman, James N. and Arthur Lupia. 2016. “Preference change in competitive political environments.” *Annual Review of Political Science* 19:13–31.
- Fijałkowski, Karol et al. 2014. “Politicians and social leaders. Introducing a model of mutual relations and shaping beliefs of voters.” *Ekonomia i Prawo. Economics and Law* 13(3):359–375.

- Garrett, Elizabeth. 2002. "The Future of Campaign Finance Reform Laws in the Courts and in Congress." *Oklahoma City University Law Review* 27:665–692.
- Gilens, Martin. 2012. *Affluence and Influence: Economic Inequality and Political Power in America*. Princeton University Press.
- Graber, Doris. 2004. "Mediated politics and citizenship in the twenty-first century." *Annual Review of Psychology* 55:545–571.
- Grofman, Bernard and Barbara Norrander. 1990. "Efficient use of reference group cues in a single dimension." *Public Choice* 64(3):213–227.
- Grossman, Gene M. and Elhanan Helpman. 1999. "Competing for endorsements." *American Economic Review* 89(3):501–524.
- Kelley, James B. 2018. *Reputational Effects in Legislative Elections: Measuring The Impact of Repeat Candidacy and Interest Group Endorsements* PhD thesis Temple University.
- Kinder, Donald R. 1998. "Communication and opinion." *Annual review of political science* 1(1):167–197.
- Krishnakumar, Anita S. 2006. "Towards a Madisonian, Interest-Group-Based Approach to Lobbying Regulation." *bepress Legal Series* pp. 513–573.
- Kuklinski, James H. and Paul J. Quirk. 2000. "Reconsidering the rational public: Cognition, heuristics, and mass opinion." *Elements of reason: Cognition, choice, and the bounds of rationality* pp. 153–82.
- Kuklinski, James H. and Paul J. Quirk. 2001. "Conceptual foundations of citizen competence." *Political Behavior* 23(3):285–311.

- Kuklinski, James H., Paul J. Quirk, Jennifer Jerit and Robert F. Rich. 2001. "The political environment and citizen competence." *American Journal of Political Science* 45(2):410–424.
- Larcinese, Valentino. 2006. "Information, Elections and Public Policy in a Rational Choice Perspective." Available at http://personal.lse.ac.uk/LARCINES/Summer_School_08/SurveyPSR.pdf.
- Lau, Richard R. and David P. Redlawsk. 2001. "Advantages and disadvantages of cognitive heuristics in political decision making." *American Journal of Political Science* pp. 951–971.
- McKelvey, Richard D. and Peter C. Ordeshook. 1985a. "Elections with limited information: A fulfilled expectations model using contemporaneous poll and endorsement data as information sources." *Journal of Economic Theory* 36(1):55–85.
- McKelvey, Richard D. and Peter C. Ordeshook. 1985b. "Sequential elections with limited information." *American Journal of Political Science* pp. 480–512.
- McKelvey, Richard D. and Peter C. Ordeshook. 1986. "Information, electoral equilibria, and the democratic ideal." *The Journal of Politics* 48(4):909–937.
- Neddenriep, Gregory and Anthony J. Nownes. 2014. "An experimental investigation of the effects of interest-group endorsements on poorly aligned partisans in the 2008 presidential election." *Party Politics* 20(4):617–631.
- Renno, Lucio R. 2004. *Information and Voting: Microfoundations of Accountability in Complex Electoral Environments* PhD thesis University of Pittsburgh.
- Staszewski, Glen. 2009. "Reason-Giving and Accountability." *Minn. L. Rev.* 93:1253–1326.
- Tolbert, Caroline J. and Rodney E. Hero. 2001. "Dealing with diversity: Racial/ethnic context and social policy change." *Political Research Quarterly* 54(3):571–604.