

Partisan Bias and Expressive Voting*

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Abstract

We conduct an experiment to characterize the “expressive” voting behavior of political partisans. We find that participants who are asked to *vote* on the answer to factual questions tend to offer more partisan responses than those who must answer as decisive individuals. We further test whether voters exploit corrective information that sometimes challenges their partisan views. When information is available, we observe smaller partisan gaps and more correct responses, especially when the information is free. When information is costly to acquire, we find that voters generally choose to remain uninformed, consistent with the Downsian theory of rational ignorance.

JEL Classifications: D72, D83, C92

Keywords: Experiment, Voting Behavior, Expressive Voting, Information Aggregation, Rational Ignorance, Rational Irrationality.

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“We cannot ... explain voter behavior in terms of preferences over outcomes: Voter behavior must be explained on its own terms.” Brennan and Buchanan, 1984

1 Introduction

The morning after the Brexit referendum of June 23rd, 2016, British voters woke up to the news that they had collectively voted to exit the European Union. Remarkably, some of those most stunned and dismayed by the outcome were “Leave” voters themselves. That morning, for example, BBC viewers met “Adam from Manchester,” who had voted “Leave” but confessed “shock” at the outcome: “I didn’t think [my vote] was going to matter too much,” he admitted, “because I thought we were just going to remain.” He continued that he was now “quite worried” about the future. Adam quickly became one of the public faces of “Bregret,” and the predictable object of scorn on social media.¹ In at least one sense, however, the contempt was unwarranted: Adam’s expressive vote could have been rational. He didn’t expect to be pivotal and, inasmuch as the margin exceeded a million votes, he wasn’t. On the other hand, at least one subsequent opinion poll would suggest that an almost equal number shared his regret, raising the prospect that, had the British citizens voted for the option they genuinely believed was best, Britain’s future might be quite different.²

The anecdotal evidence emerging in the wake of the Brexit vote is a startling example of longstanding public choice theories of voter motivation in elections where the likelihood of casting a decisive vote is small. Voters who believe that they are unlikely to be pivotal in deciding the outcome have little incentive to gather information in advance or to vote for the outcome they truly prefer. Instead, such voters may use their vote as a form of expression - as in the case of Leave voters who sought to express their dissatisfaction with the EU - or an affirmation of partisan identity (Riker and Ordeshook, 1968; Fiorina, 1976; Schuessler, 2000, and, for a foundational survey, Hamlin and Jennings, 2011). Brennan and Buchanan (1984, p.187) famously draw an analogy between voting and cheering for a favorite sports team,

¹Coverage by the Daily Express on the day after the election catalogs outraged tweets directed at “Adam from Manchester” and others who had voted to leave and “regretted it by 8am” the following day (Beer, 2016).

²The regret of expressive votes is not limited to Britain, of course. Two months after Donald Trump won the New Hampshire Republican primary, for example, a WMUR poll of those who had voted revealed that more of them now preferred John Kasich, an example, according to Kasich, of buyer’s remorse on the part of voters who hadn’t expected the Trump campaign to succeed (Pazniokas, 2016).

explaining that “neither the act of voting nor the direction of a vote cast can be explained as a means to achieving a particular political outcome, any more than spectators attend a game as a means of securing the victory for their team.”

Evidence of such “political cheerleading” can be seen in unincentivized surveys, which regularly find that Democratic and Republican partisans provide very different answers when asked factual questions about objective economic conditions, and that the differences *increase* with civic engagement (Bartels, 2008). Important recent work suggests that these responses are driven at least partially by partisan expression, rather than sincere differences in beliefs, since the gap shrinks when respondents are offered small rewards for correct answers, incentivized to admit when they do not know, or simply encouraged to give accurate responses (Bullock et al., 2015; Prior et al., 2015).

It is critical to ask whether such partisan expression is limited to polls and surveys or, as suggested by the theoretical literature and the anecdotal evidence of regretful Brexit voters, partisan expression motivates voter behavior. In more precise terms, as the likelihood that a voter believes she might be pivotal decreases, votes should become more expressive and less instrumental. In this paper, we report the results of an experimental test of partisan expressive *voting*.

Voters, even expressive ones, must also decide how much additional knowledge to acquire before making their decisions. The day after the Brexit vote, NPR reported that Google searches for “what is the EU?” and “what is Brexit?” peaked in Britain in the early morning hours as news of the results trickled in, indicating that surprised voters sought to learn the consequences of their decision only after casting their ballots (Selyukh, 2016).³ However, it is not a surprise that voters who believed their ballot was unlikely to make a difference also did not choose to research the question in advance. Almost six decades have passed since Downs (1957) first observed that when either the costs of acquisition are too high or, in the case of “large N” elections, the benefits are too low, voters will remain “rationally ignorant” even while casting ballots (Feddersen and Sandroni, 2006). Furthermore, when there is some chance that new information will conflict with preferred beliefs, and so impose psychological costs, voters may

³As subsequent news stories pointed out, we note that this spike in search requests was driven by an extremely small fraction of the British electorate and that entering a simple question as search phrase does not necessarily imply that the requestor does not know the answer.

still prefer to remain uninformed, even when the costs of acquisition are otherwise negligible, a phenomenon sometimes described as “rational irrationality” (Caplan, 2001; Kahan et al., 2013; Nyhan and Reifer, 2016). Our experiment also allows us to test partisans’ willingness to acquire relevant information before voting and thus provide a test of both theories.

In this paper, we report on the results of what is, to our knowledge, the first experiment to examine partisan bias in voting behavior. In our 3 x 3 design, we vary both the size of the “electorate” and the accessibility of relevant information. American political partisans were asked to answer a series of factual political questions relevant to the 2016 election. Individuals were rewarded when group majorities provided correct answers to factual questions, where each group had 1, 5 or 25 voters, and had either no additional information, access at some (low) cost to information that would allow respondents to infer the correct answer, or free access to the same information.

Two broad themes emerged. First, we find strong evidence of expressive voting: The partisan gap when individual votes are aggregated (that is, the group size is either 5 or 25) is almost three times as large as it is when individuals answer for themselves. This matters because it shows that partisan bias is not an artifact of unincentivized questionnaires, but rather an important driver of voting behavior, even in small elections as in our experiment. In more prosaic terms, we shouldn’t be surprised that “Adam from Manchester,” and millions like him, felt comfortable expressing his frustration with the European Union in the voting booth, even if he never quite wanted to leave it.

Second, when voters had access to useful information, the size of the partisan gap decreased by more than half and the likelihood of providing a correct response dramatically increased. In the costly information case, we find, consistent with Downs (1957), that the likelihood that voters purchase information decreases as group size increases. Furthermore, we also find, in the spirit of Caplan (2001), that voters are more willing to purchase information about the answers to “neutral” or placebo questions than partisan ones, especially when the true state of the world conflicts with their partisan affiliation. In short, if information is available, but acquisition is relatively costly compared to the marginal expected benefit, we should not expect voters to make the best choices in large elections.

More encouraging, when information was free, most, but not all, participants chose to

access it and to provide the correct answer, even in “large” groups. In short, if information were free and credible, much of the partisan bias reflected in the differential interpretation of facts might be eliminated.

Our paper contributes to a long and robust experimental literature on expressive voting that can be traced back to Tullock’s (1971) gedankenexperiment concerning “the charity of the uncharitable,” the argument that most individuals will prefer to vote for a tax than donate an equivalent amount on their own. The earliest classroom implementations (Carter and Guerette, 1992; Fischer, 1995) of Tullock’s proposed design produced mixed results, and a number of subsequent lab experiments (Tyran, 2004 and Kamenica and Brad, 2014, for example) found little evidence of expressiveness. In contrast, Feddersen et al. (2009) and Shayo and Harel (2012) report on evidence of moral bias in elections, a particular manifestation of expressive behavior in which ethical concerns, as opposed to narrow self-interest, motivate both the participation and choices of voters in an experimental election. To the best of our knowledge, we provide the first experimental test of voting as a means of expressing one’s *partisanship* – a canonical and ubiquitous example of expressive voting (Brennan and Buchanan, 1984) – as well as the first experimental test outside of the domain of “moral” choices.⁴

Our experiment also relates to work on answers to factual questions. As noted earlier, Bullock et al. (2015) and Prior et al. (2015) find that partisan gaps in responses to factual political surveys can be diminished with financial incentives or appeals to accuracy. Our work differs from theirs in that our respondents are always incentivized, and we instead consider whether respondents provide more expressive partisan responses when they are *voting* than they would if they were answering the question for themselves; we also test the effect of available information. Our work also builds on an experiment by Morton et al. (2015) in which group members vote on the answer to factual questions. Their experiment was designed to address separate research questions, and, as such, participants are not asked political questions and there are no opportunities for voter “expression” or for information acquisition. There ex-

⁴While this is a question that is particularly amenable to experimental methods, some have discerned evidence of expressiveness in observational studies too. Feigenbaum et al (1988) infer the existence of expressive conduct from their review of California’s Nuclear Freeze Referendum in 1982, while Kan and Yang (2001) find significant “cheering” and “booing” effects in the U.S. presidential election of 1988. Sobel and Wagner (2004), who are interested in direct evidence of the Tullock logic, find support in the correlation between state-level welfare expenditures and the likelihood voters are decisive.

ists a distinct, but related, experimental literature on information acquisition and processing. Consistent with our results, for example, Nyhan and Reifler’s (2016) recent paper finds that exposure to “corrective” information reduces misperception in an otherwise unincentivized environment, and that self-affirmation encourages partisans to provide answers that are otherwise “psychologically threatening.” Both Elbittar et al. (2014) and Großer and Seebauer (2016) use a neutrally-framed experiment to test voter decisions to acquire costly, noisy signals of the true state of the world prior to voting on the best option. Contrary to the theoretical predictions and the theory of “rational ignorance,” neither find evidence that voters in groups of three are more likely to pay for information than voters in groups of seven. Our results dovetail with theirs, in that we find that voters in groups of 5 are not significantly more likely to access information than voters in groups of 25; however, we do find that respondents in groups of 1 are far more likely to access information, suggesting that the principle of rational ignorance holds even if voters are not very responsive to changes in electorate sizes.

In the next section of the paper, we describe our experimental design and, on the basis of theoretical work on expressive voting, rational ignorance, and rational irrationality, catalog a series of testable hypotheses. We then report our results in the third section, with separate subsections on expressive voting, information acquisition, and the effect of information on expression. In the fourth and final section, we provide further discussion and directions for future research.

2 Experimental Design

2.1 Procedures

Six hundred and twenty-seven American partisans participated in the experiment during May and June of 2016. Participants were recruited from Amazon Mechanical Turk, using a pre-survey that filtered out those who did not self-identify as Democrats or Republicans.⁵ Before being

⁵We chose to use Amazon Mechanical Turk (AMT) because it allows us access a more demographically and politically diverse sample than typically participates in campus laboratory experiments, and, logistically, the platform enables participants to dynamically request additional, graphical information as they are answering questions and to receive prompt payment on the basis of their responses. Numerous replication studies have found that AMT experiments produce data consistent with laboratory experiments (especially when comprehension questions are used to screen out participants who do not understand the instructions) and produce reliable self-reported demographics (e.g., see Rand, 2012). We shall not re-litigate the costs and benefits of AMT here, except

invited to participate in the experiment, eleven hundred respondents completed a brief survey, which included questions on demographics, political affiliation, citizenship, voting history and preferred candidate in the 2016 U.S. presidential primaries. Approximately one-third of respondents were excluded because they identified as independents or with a third party, while others were excluded because they were not American citizens, were not taking the survey within the United States, or did not correctly answer all instruction comprehension questions. In the main analysis, we also exclude another 31 individuals who stated that they most supported a candidate from the opposing party. Participants earned \$0.20 for completing the initial survey, a base wage of \$1 for completing the experiment, and additional bonuses up to \$7 depending on their responses, as described below.

We used a 3x3 design, in which we independently varied the election size and the availability of information. After completing the survey, partisans who passed through the initial filter were randomly assigned to one of nine conditions. In all conditions, participants were asked seven multiple choice questions. Six of the questions were “political” in the broadest possible sense, and were drawn at random from a menu of ten questions, presented in Table 1. The questions were selected to align with the issues dominating the current election cycle, with possible responses ranging from most “Republican” to most “Democratic.” All questions had “objective” answers, which nevertheless could challenge the preferred views of one or both types of partisans. By asking participants to identify verifiable, factual conditions, we avoid confounding partisan differences in how the evidence should be interpreted or how the situation should be addressed. We did not ask, for example, how much mean global temperature is expected to rise over the next two decades, or for the present discounted value of the flow of externalities associated with coal production, but rather how much higher mean global temperature was in 2015, relative to its 20th century average. Further, it’s worth noting that, in this particular example, we expected not just a partisan gap, but for partisans of both parties to err, on either side of the correct value. In addition to the six political questions, each participant was also asked a *neutral* question, drawn from a set of three questions about history, popular culture and sports, all of which are also presented in Table 1. Finally, our questions

to note that we share the now common view that with suitable recruitment policies and design choices, it is a useful source of experimental data (Paolacci and Chandler, 2014).

were chosen so that the correct answer could be readily displayed in the form of a graphical figure, in conditions where our design required us to provide information.

The first treatment variable is the group size, or the number of responses that are aggregated to determine the outcome. Each participant was randomly assigned to one of three possible group sizes: 1, 5, and 25. When group size was 1 (*Individual*), the respondent was, by definition, pivotal. Respondents understood that their response, which was not framed as a “vote,” was decisive. For each question that they answered correctly, participants in the *Individual* condition earned \$1. Given the usual task time and wage on Amazon Mechanical Turk, these are sharp incentives, and reflect our intention to make the stakes salient. When group size was 5 (*Small Voting*) or 25 (*Large Voting*), participants voted on the answer, and earned the \$1 bonus only if a majority of their group (at least 3 or 13 individuals, respectively) chose the correct answers. Participants never received feedback on their responses or, in the *Small* and *Large Voting* conditions, on the responses of their fellow voters.

The second treatment variable is the accessibility of relevant information. In the *No Information* condition, participants were not offered the chance to acquire additional information before answering or voting. To constrain the potential impulse to look up the answer outside the experiment, there was a 30 second time limit on each question. Those who did not submit their responses within the time limit forfeited the chance to earn a bonus for that question, and were advanced to the next one. A countdown clock on the screen showed the time remaining for each question, and very few participants allowed the time to expire. In the *Costly Information* and *Free Information* conditions, participants again had the thirty seconds to read the questions and multiple choice answers and to submit their responses. In these conditions, however, participants also had the option to acquire information before answering. Participants who chose to acquire information were shown a simple graph or figure, often with the relevant points highlighted, that allowed for straightforward inference about the correct answer. We did this - as opposed to providing text with the correct answer - to ensure that participants read and internalized the relevant question.

In the *Costly Information* condition, it cost participants fifty cents to acquire information, which was subtracted from their final earnings, while there was no cost to acquire information

Political Question	Text
Temperature	How much higher was mean global temperature in 2015, relative to its 20th century average?
Inequality	Democratic Presidential Candidate Bernie Sanders has claimed that “Americans don’t know that... almost all of the wealth rests in the hands of the few.” What percent of all the household wealth in the United States does the top 0.1% (that is, one in one thousand people) own?
Approval	How does President Barack Obama’s current approval rating compare with the approval ratings of former President Ronald Reagan and former President George W. Bush at the same point in their presidencies?
Immigration	In 2008, the year before President Obama took office, it was estimated that just under 12 million unauthorized immigrants were living in the United States. How has this number changed over the course of Obama’s administration?
Unemployment	How much has the unemployment rate increased or decreased between January 2009, when President Obama took office, and March 2016, the last month for which data is available?
Foreign Aid	Republican presidential candidate Donald Trump has proposed cutting foreign aid spending as a means of funding social security. What percentage of the U.S. federal budget each year goes to foreign aid (rounded to the nearest integer)?
Refugees	With almost five million refugees, the Syrian refugee crisis has been described as the worst in a generation or more. What fraction has come to the United States?
Officers	Over the past 10 years, how has the number of police officers killed in the line of duty (as the result of criminal acts) changed, according to the FBI?
Abortion	The national debate over Planned Parenthood has returned attention to the number of abortions in the United States. Relative to 1973, when the Roe v. Wade case was decided by the Supreme Court, would you say that the abortion rate (i.e., the most recently reported number of abortions per 1000 women aged 15-44) in the United States is:
Uninsured	At the end of 2013, just before Obamacare went into effect, over 17% of American adults were uninsured. What percent of American adults were uninsured at the end of 2015?
Neutral Question	Text
Popular Culture	What late night television talk show host, past or present, has been on the air longest?
History	Most historians now believe that the first European explorer to reach North America was Leif Erikson, who landed at l’Anse aux Meadows in about 1003. In what current Canadian province is l’Anse aux Meadows?
Sports	After the 2005 season, Major League Baseball introduced mandatory steroid testing and suspensions. Since then, how has the number of runs scored per game (by both teams) changed?

Table 1: Questions

in the Free Information condition. Participants who requested information were given an additional ninety seconds to answer, to allow sufficient time to read and interpret the graph. Accessibility of outside information was no longer a concern once participants requested information, since the answer that would earn them the bonus was already presented on their screen.

2.2 Predictions

The basic logic of expressive voting is both straightforward and well-established, and our design does not require a(nother) formal model. To fix ideas, however, imagine, following Hamlin and Jennings (2011), that all respondents weigh both instrumental and expressive motivations when answering or voting on questions in our experiment. The weights are not fixed, however, and depend on both the frame (that is, “answering” versus “voting”) and the likelihood that the respondent considers herself pivotal. The list of instrumental motives includes the direct “honesty” benefit of believing that one has provided the correct response (see Bullock et al., 2015) and the expected influence on the outcome, in this case, the product of the likelihood of being pivotal, the participant’s belief that the answer is correct, and the financial reward. As our results suggest, this estimated likelihood of being pivotal may be best understood in a behavioral sense: If the “deciding” versus “voting” frames are the most salient features of the environment, for example, individuals will not distinguish (much) between small and large electorates.⁶ On the other hand, the expressive benefits of offering a particular response depend on both the individual’s taste for “partisan cheerleading” and the degree to which that response aligns with her partisan identification. In our neutral questions, these expressive benefits are intended to be zero.

In the No Information condition, beliefs about the correct response are held constant, and the instrumental motivation varies only with the likelihood that one’s response or vote “matters” for the outcome. As the likelihood of being pivotal decreases – that is, we move from the Individual to the Small Voting to the Large Voting conditions – the instrumental motivation diminishes and the expressive motivation becomes relatively stronger. Since expression provides

⁶This is consistent with Brennan and Lomasky’s (1993) view that “considerations dormant in market behavior become significant in the polling booth.”

greater satisfaction the more partisan the response, we should observe a widening of the response gap between Democrats and Republicans as we move from (at least) the Individual to the Group conditions.

The relationship between “correctness” and expressiveness - and therefore the size of the electorate - is more subtle. In cases where the correct response is aligned with political affiliation, expressive behavior should not reduce the likelihood of a correct response, and might even increase it. Further, because there is no reason for expressive responses to neutral questions, the likelihood of a correct response to one of these should be invariant with respect to size. But for questions that challenge partisanship, however, we should expect that the likelihood of a correct response to diminish with partisan expression and therefore size. We then consolidate these arguments into the following:

Prediction 1 (**Expressive Voting**): *Partisans engage in significantly more “political cheerleading” as members of voting groups than decisive individuals. This implies that (A) the partisan gap between voting Democrats and Republicans should be larger than that between individual (decisive) Democrats and Republicans, and (B) the likelihood of a correct response should be greater for decisive individuals than voters. Further, absent additional behavioral considerations, partisan expression should be greater in Large groups than Small groups.*

We turn next to respondents’ willingness to acquire information which, in our design, allowed beliefs to be updated such that correct answers could be supplied, if so desired, with almost perfect confidence. This means that, for respondents who were uncertain of the correct answer, information increases instrumental benefits, as the expected payoff from submitting a “best guess” no longer need be discounted by the likelihood that this guess is correct. These benefits will be smaller for voters than individuals, however, since the likelihood that their response will be pivotal is still small. Consistent with the Downsian model of rational ignorance, there are natural effort costs to acquiring information, which must be weighed against the instrumental benefits. As the likelihood of being pivotal decreases, so does the expected benefit of supplying a correct response, suppressing the incentive to become informed. The Costly Information treatment allows us to test this logic, as embodied in our second prediction:

Prediction 2 (**Rational Ignorance**): *The hypothesis that individuals weigh the cost of infor-*

mation acquisition against the expected benefits has two implications in this model: (A) The likelihood that individuals and voters will access information in the Costly Information condition is smaller than in the Free Information condition; and (B) The likelihood that a voter will access information is smaller than that for decisive individuals. Further, absent additional behavioral considerations, we expect “ignorance” to be more prevalent in Large groups than Small groups.

Even freely accessible information that challenges partisan priors might impose non-trivial psychological costs. The Free Information condition allows us to separately consider intrinsic costs, and to determine whether partisans balance these against the likelihood that their responses will be pivotal. This argument, and the further observation that such costs should not attach to neutral questions, leads to our third prediction:

Prediction 3 (Rational Irrationality): *If individuals and voters are uncomfortable with information that challenges their political beliefs and treat its acquisition as another cost, it follows that: (A) Respondents will be less likely to seek information about political, as opposed to neutral, topics, especially when that information might challenge their partisan affiliation, and (B) Voters will be less likely to seek free information than decisive individuals. Further, absent additional behavioral considerations, we expect “ignorance” to be prevalent in Large groups than Small groups.*

3 Results

3.1 Expressive Voting

To determine the extent of expressive voting, we start with the No Information condition, in which possible confounds with the simultaneous decision whether to become (more) informed are ruled out. We first examine the extent to which Democrats and Republicans give *different* answers, as opposed to *incorrect* ones. In particular, we consider both whether participants provide partisan responses when “voting” on factual questions and, crucially, whether the resultant partisan gaps in the voting conditions are larger than when participants are answering on their own. Following Bullock et al. (2015)’s treatment of multiple choice questions, we rescale

the responses on the [0,1] interval, such that 0 represents the most Republican response and 1 represents the most Democratic response.

In short, we find strong evidence of a partisan gap when participants *vote* on the correct answer, but little evidence that the size of this gap depends on whether they vote in groups of 5 or 25. Figure 1 presents the scaled Democratic-Republican difference for individuals and voters in each group size, averaging across all ten political questions. (Given the normalization, the positive differences are expected.) The partisan gaps in Small (size 5) and Large (size 25) electorates are similar, equal to about 13 percentage points, and significant at all conventional levels (taking the voter as the unit of observation). If instead the differences are measured separately for each question, we observe gaps in the expected direction for *every* political question that are (also) statistically significant for about half.⁷

If Democratic and Republican partisans have sincere but different beliefs, the existence of a partisan gap in the two voting conditions does not constitute evidence of expressive behavior. Sincere differences should persist when individuals are on their own, however, so we compare participants' responses in the Individual condition, when their answers are "sure to count." As Figure 1 also reveals, the gap in Democratic and Republican responses shrinks substantially when participants answer for themselves rather than vote. More precisely, the partisan gap in the Individual condition is a little less than 5 percentage points and not quite significant at the 10% level ($p = 0.104$), which suggests that 60% or more of the difference observed in the Small and Large conditions is "expressive." We conclude that our respondents provided far more partisan answers as voters than decisive individuals, even with our small experimental "electorates" and "issues" for which there are verifiable answers.

To formalize these results, we report the estimates of a set of regression models in Table 2, organized along the same lines as Bullock et al. (2015). In the first two columns, the participant's response (coded on the [0,1] interval) is regressed on indicators for whether the participant is voting on the answer (Voting), is a Democratic partisan (Democrat), and the interaction (Voting x Democrat), as well as a set of controls and their interactions with the Democrat indicator (since we expect expression to move the participant's response in opposite

⁷The individual questions are reported in Table A1 in the Appendix. To avoid issues of endogeneity, our main analysis reports all ten political questions, even those that do not produce a partisan response.

directions for Democrats and Republicans). In the first and third column, the unit of observation is the response and the errors are clustered at the level of the individual, while in the second and fourth, the unit of observation is the individual, and the results are almost identical.⁸ Given our defaults, the small and insignificant estimated coefficient on Democrat indicates that with controls in place, there is little or no partisan gap in responses in the Individual condition. The significant positive coefficient on Voting x Democrat in the first two columns indicates, however, that with controls in place, there is an almost 10 percentage point *increase* in the partisan gap when participants must vote on the correct answer. Thus, consistent with Figure 1, we find that *responses become significantly more partisan when participants are voting*. We further note that the significant negative coefficient on Voting, combined with the nearly offsetting coefficient on Voting x Democrat, indicates that, with controls in place, almost all of the increased “expressiveness” in the Voting conditions owes to Republican partisans.

The third and fourth columns report the results when “Voting” is separated into Small and Large conditions, and provide evidence of the robustness of these patterns. The surprise, perhaps, is that the size of the electorate does not seem to matter: The coefficients on Small and Large are more or less equal ($p = 0.918$), as are the coefficients on their respective interactions ($p = 0.958$). In other words, the “expressive possibilities of crowds” emerge even in small groups and do not expand when group size increases.

In sum, we confirm Prediction 1A: there is a partisan gap in *voter* responses that is much greater than that between decisive Democrats and Republicans.

What these results do not tell us, however, is whether the partisan differences we observe are “centered around the truth.” To this end, we also ask whether participants’ answers are *correct*. Overall, participants in the No Information condition provided correct answers to 28.25% of all questions. When participants answered for themselves, there was no difference ($p = 0.74$, clustering at the subject level) in the likelihood of correct answers to *neutral*, as opposed to political, questions. When voting, however, the likelihood of a correct answer to political questions was 15 percentage points smaller ($p < 0.01$ clustering at subject level) than that for neutral questions. The data also show that across all conditions, the likelihood of a correct answer is 5 percentage points smaller when the respondent is a Republican, but there

⁸Likewise, a two-limit Tobit model provides substantively unchanged results.

	(1)	(2)	(3)	(4)
Voting	-0.109*** (0.0370)	-0.113*** (0.0381)		
Voting x Democrat	0.0944** (0.0442)	0.0987** (0.0453)		
Democrat	-0.0309 (0.106)	-0.0403 (0.108)	-0.0322 (0.108)	-0.0429 (0.111)
Male	0.0553 (0.0345)	0.0544 (0.0360)	0.0550 (0.0350)	0.0540 (0.0368)
Age	-0.00294 (0.00181)	-0.00291 (0.00188)	-0.00296 (0.00183)	-0.00295 (0.00190)
Male x Democrat	-0.0751* (0.0419)	-0.0737* (0.0434)	-0.0747* (0.0423)	-0.0731* (0.0441)
Age x Democrat	0.00333 (0.00224)	0.00332 (0.00231)	0.00341 (0.00226)	0.00342 (0.00233)
Follow News	0.0746* (0.0387)	0.0693* (0.0410)	0.0745* (0.0387)	0.0691* (0.0412)
Follow News x Democrat	-0.0664 (0.0574)	-0.0610 (0.0597)	-0.0691 (0.0606)	-0.0636 (0.0632)
Past Voter	-0.00673 (0.0337)	-0.00957 (0.0350)	-0.00695 (0.0348)	-0.0100 (0.0364)
Past Voter x Democrat	0.0457 (0.0419)	0.0485 (0.0432)	0.0467 (0.0430)	0.0497 (0.0446)
Small			-0.111** (0.0466)	-0.117** (0.0491)
Large			-0.107*** (0.0357)	-0.109*** (0.0364)
Small x Democrat			0.0924 (0.0570)	0.0987* (0.0595)
Large x Democrat			0.0950** (0.0438)	0.0971** (0.0448)
Constant	0.555*** (0.0808)	0.564*** (0.0829)	0.556*** (0.0838)	0.566*** (0.0864)
Observations	1186	199	1186	199
Adjusted R^2	0.024	0.138	0.022	0.129

Robust standard errors reported.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Standard errors clustered by individual in (1) and (3)

Individual is level of observation in (2) and (4).

Table 2: Voting and the Partisan Gap (No Information)

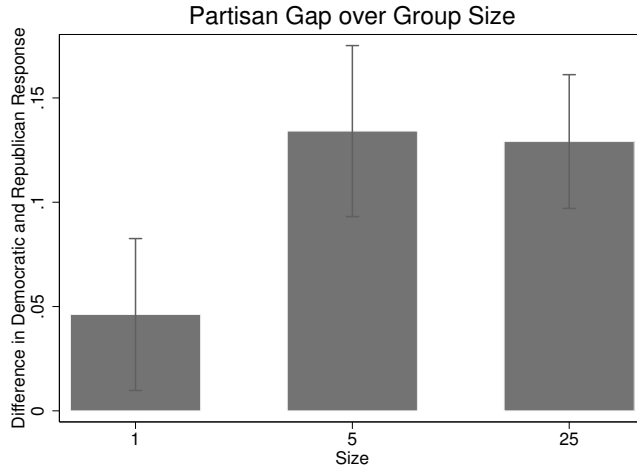


Figure 1: Average Gap in Partisan Responses by Group Size without Information
 Notes: Figure presents the average *difference* in responses by Democrats and Republicans for each group size. Standard error bars reported. Individual is the unit of observation.

is an important caveat to this result, noted below.

Figure 2 presents the likelihood of a correct response by group size across all questions (left panel) and for questions that challenge the respondent’s partisan affiliation, in that the correct response falls on the opposite side of the [0,1] interval (right panel). Across all questions, there is no clear size trend, but the likelihood of a correct answer is somewhat higher (5%, $p = 0.06$) when respondents answer for themselves. For questions that challenge the respondent’s views, however, there is a sharp decrease in the likelihood of correct answers, from 32% when decisive to less than 19% in the Large electorate condition.

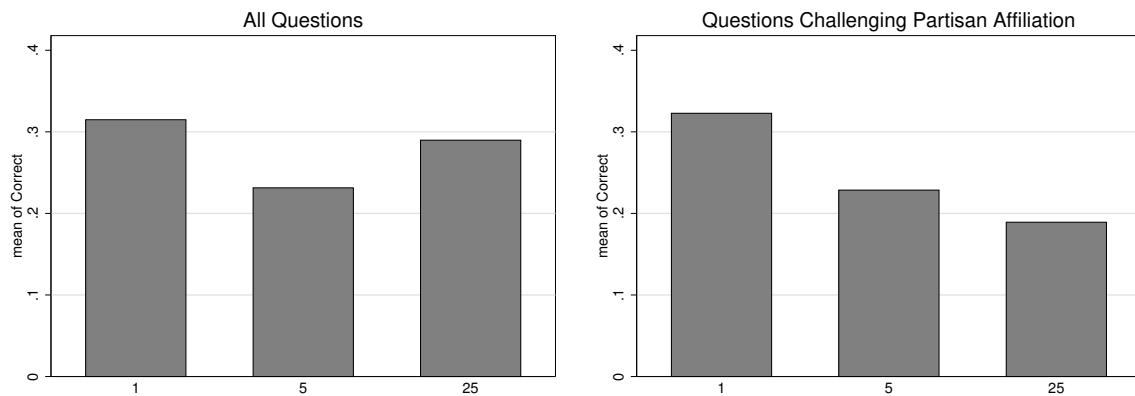


Figure 2: Likelihood of Correct Response without Information

This analysis is formalized in Table 3, which estimates a series of linear probability models, in which the outcome variable is defined to be 1 for a correct response. The sample for the first column is *all* questions - neutral and political questions that either challenge or are consistent with the respondent's affiliation. The results suggest, consistent with the observations above, that the likelihood of a correct response is about 5 percentage points lower ($p = 0.057$) when the respondent is in one of the voting conditions and about 5 percentage points greater ($p = 0.034$) when she is a Democratic partisan. In the next three columns, we report results for the same model, but estimated over the three subsamples of neutral, confirming, and challenging questions. The second column reveals that other than a small gender difference, there is nothing remarkable in the answers to neutral questions, while the third column suggests the somewhat curious inference that the "Democratic effect" is the result of differences in responses to confirming questions: the likelihood of a correct answer to such questions is almost 20 percentage points higher when the respondent is a partisan Democrat. More important, however, the fourth column reveals that *the voting effect is completely driven by questions that challenge a respondent's partisan views*: Specifically, the likelihood of a correct answer to a challenging question is 12 percentage points lower ($p = 0.016$) when the respondent is in one of the two Voting conditions than when she answers for herself. The results in column 5 further demonstrate that the effect is similar ($p = 0.598$) in Small (10%, $p = 0.089$) and Large (14%, $p = 0.015$) elections. The sixth and final column reports the estimates of a two limit Tobit model in which the individual, not the response, is the unit of observation, and provides further support for these results ($p < .01$ for both Small and Large groups and there are no significant differences between the group sizes).

We therefore confirm Prediction 1B: the likelihood that political partisans provide correct answers to questions that challenge their predispositions is smaller when their votes are not decisive.

In sum, we have provided evidence that when individuals' answers to factual questions are not decisive - that is, the respondents are *voters* - their responses are significantly more partisan in two distinct and important senses. There is a *significant increase in the size of the partisan gap* between Democrats and Republicans and there is a *significant decrease in the likelihood of correct answers* to questions that challenge partisan priors.

	(1)	(2)	(3)	(4)	(5)	(6)
	All	Neutral	Confirming	Challenging	Challenging	Challenging
Voting	-0.0526* (0.0274)	0.0631 (0.0697)	-0.0439 (0.0434)	-0.122** (0.0501)		
Democrat	0.0527** (0.0247)	0.120 (0.0761)	0.183*** (0.0415)	-0.0713 (0.0531)	-0.0706 (0.0529)	-0.199 (0.136)
Age	0.000461 (0.00124)	-0.000550 (0.00379)	-0.00122 (0.00226)	0.00245 (0.00229)	0.00219 (0.00239)	0.0128** (0.00639)
Male	0.0341 (0.0266)	-0.139* (0.0718)	-0.000278 (0.0446)	0.1000** (0.0454)	0.0996** (0.0452)	0.301** (0.124)
Past Voter	0.00626 (0.0354)	0.0519 (0.0984)	0.0545 (0.0531)	-0.0150 (0.0631)	-0.0180 (0.0632)	-0.128 (0.166)
Follow News	-0.00532 (0.0596)	0.0125 (0.132)	-0.0227 (0.0795)	0.0249 (0.0702)	0.0347 (0.0761)	0.0102 (0.204)
Small					-0.104* (0.0610)	-0.435*** (0.155)
Large					-0.135** (0.0550)	-0.398*** (0.144)
Constant	0.243*** (0.0737)	0.285 (0.192)	0.275** (0.118)	0.228** (0.116)	0.230** (0.116)	-0.207 (0.327)
Observations	1384	198	464	514	514	199
Adjusted R^2	0.003	0.006	0.029	0.024	0.022	0.067

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Standard errors clustered by individual in (1) - (5).

(6) Reports Two Limit Tobit with individual as the unit of observation.

Dependent variable is 1 if response is correct.

Table 3: Likelihood of Correct Response without Information

3.2 Information Acquisition

We next consider participants' decisions to seek additional information, both costly and free. Each of the four panels in Figure 3 presents the relative frequencies of information requests by cost and group size, for each of four categories of questions (all, neutral, challenging, and confirming). Table 4 then reports the estimates of the related linear probability models, with additional controls.

Consistent with Prediction 2A, all four panels in Figure 3 confirm that there are far more requests for information when it is free than when it is costly to acquire. Indeed, the first column of Table 4 suggests that requests are 49 percentage points ($p < .001$) more probable when information is free.

An examination of the left sides of all four panels in Figure 3 further suggests, consistent with the theory of rational ignorance, that costly information is sought much less often when individuals are voting than when deciding for themselves. There is some indication that costly information is sought more often in the Small condition than the Large. The second column of Table 4 reports estimates of the same the model using only the Costly Information observations and largely confirms this: Respondents in the Small condition are 26.2 percentage points ($p < 0.001$) less likely to purchase of information than decisive respondents, while respondents in the Large are 28.2 percentage points ($p < 0.001$) less likely to do so. The difference, however, is not significant ($p = 0.676$). We therefore conclude that Proposition 2B, that voters will acquire less information than decisive respondents, is validated.

In contrast, there is little evidence, based on the right hand sides of the panels in Figure 3, or the third column in Table 4, which reports the estimates for the Free Information condition, that the acquisition of free information is smaller in either voting condition ($p = 0.305$ and $p = 0.653$ in the Small and Large cases, respectively) or in both considered jointly ($F = 1.17$; $p = 0.313$). We therefore find little or no support for Proposition 3B, namely, that voters are less interested in even *free* information than decisive individuals.

We do find some evidence of rational ignorance, however. To motivate this, recall that the neutral questions are no harder, and perhaps easier, than the political ones: In the No Information condition, the percent of correct responses was 36.9% for neutral and 26.8% for

political questions.⁹ It is therefore remarkable that, as the first column implies, neutral questions drew 4.6 percentage points ($p = 0.002$) more requests for information across all conditions, and that it didn't matter much whether respondents paid for this information (4.4 percentage points, $p = 0.07$) or it was available for free (4.9 percentage points, $p = 0.008$). While we do not report these results in Table 4, the contrast is even sharper when neutral and challenging questions are compared: In this case, neutral questions are 5.7 percentage points ($p = 0.001$) more likely to induce information requests overall, 6.3 percentage points ($p = 0.021$) more likely when information is costly, and 5 percentage points ($p = 0.015$) more likely when it is free. We therefore find support for Prediction 3A, that respondents will be more reluctant to seek out information on political, as opposed to neutral, questions, especially when the political question challenges their partisan affiliation. More important, these results suggest that for a small but hard core group of respondents - and, we venture, voters in the wider world - there exists a strain of "I Don't Want To Know"-ism that is insensitive with respect to incentives.

3.3 The Effect of Information Availability on the Partisan Gap and Accuracy

Last, we consider the effect of information access on partisan voting. Our approach, following Section 3.1, is to first consider the size of the partisan gap and then the likelihood of a correct response. We note that, to a large extent, the results mirror our findings on information acquisition, since those who request information provide the correct answer about 85% of the time, across all conditions and categories of questions. Further, there is no evidence that the likelihood of a correct response varies with role (individual versus voter) or whether the question challenges partisan affiliation.

To determine whether access to information after learning the question affects the partisan gap, we regress responses on indicators for partisan affiliation, information treatment, their interactions and the standard controls, and report the results in Table 5. In the first column, we pool responses from the Individual and Voting conditions. Given the omitted condition (No Information), the significant positive coefficient on Democrat in the first column reflects the partisan gap first documented in Section 3.1. When information is accessible, however, there is a substantial reduction in the size of the gap. For questions asked in the Costly Information

⁹Taking the participant as the level of observation, this difference is significant at $p < 0.01$ ($Z = 2.667$).

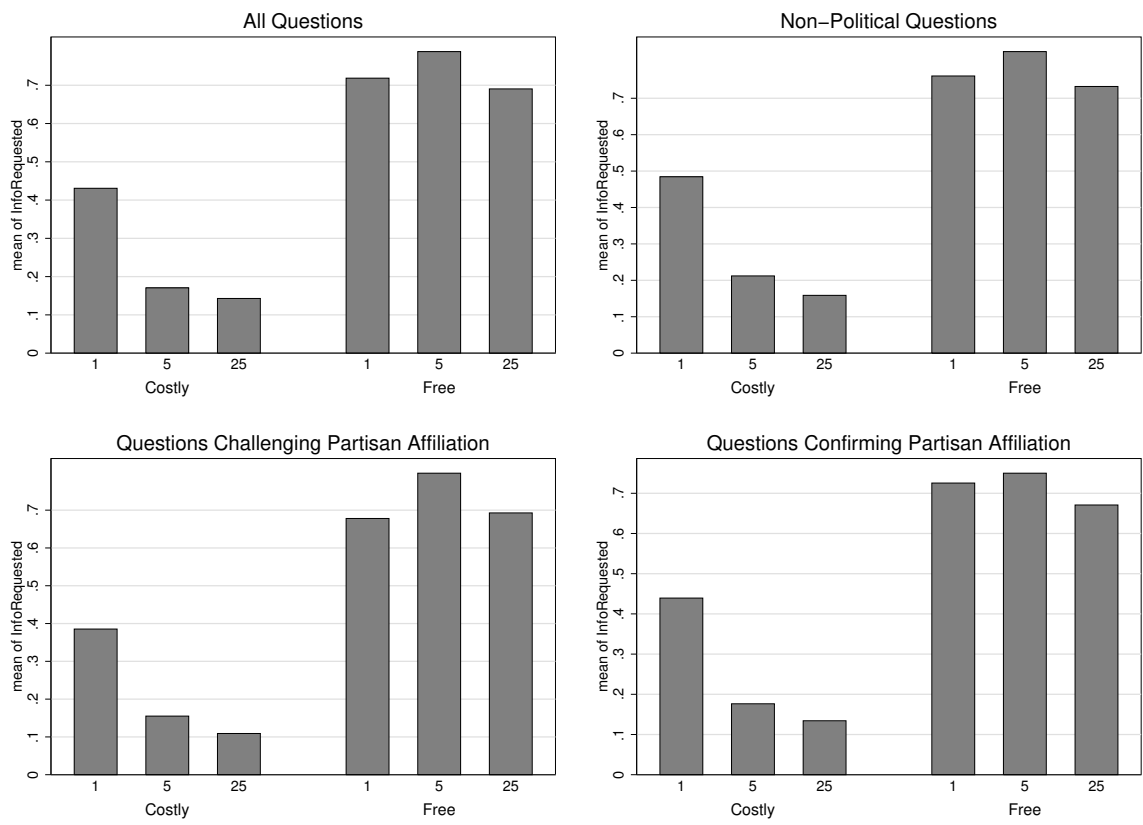


Figure 3: Likelihood of Requesting Information, by Cost, Size, and Question Type

	(1)	(2)	(3)
	All	Costly	Free
Costly	-0.488*** (0.0358)		
Small	-0.0930** (0.0464)	-0.262*** (0.0606)	0.0687 (0.0668)
Large	-0.151*** (0.0452)	-0.282*** (0.0567)	-0.0302 (0.0670)
Neutral	0.0462*** (0.0150)	0.0436* (0.0242)	0.0485*** (0.0182)
Democrat	-0.0300 (0.0397)	-0.00976 (0.0509)	-0.0464 (0.0583)
Male	0.0454 (0.0367)	0.0797* (0.0456)	0.0115 (0.0563)
Age	-0.000245 (0.00170)	-0.0000935 (0.00224)	-0.000311 (0.00242)
Past Voter	0.0670 (0.0509)	0.0900 (0.0586)	0.0451 (0.0813)
Follow News	0.00744 (0.0594)	0.101 (0.0726)	-0.0486 (0.0824)
Constant	0.755*** (0.0990)	0.226* (0.121)	0.757*** (0.152)
Observations	2779	1358	1421
Adjusted R^2	0.253	0.104	0.009

Robust standard errors reported.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Standard errors clustered by individual.

Dependent variable is 1 if information is requested.

Table 4: The Choice to Become Informed

Condition, it shrinks 5.4 percentage points ($p = 0.042$), from an initial difference of almost 12 percentage points ($p = 0.020$), while for those in the Free Information Condition, it shrinks 6.2 percentage points ($p = 0.017$). In both information conditions, however, the remaining gaps (0.063, $p < 0.01$ for Costly and 0.054, $p < 0.01$ for Free) are still different than zero and, to our surprise, it does not appear that the price of information matters much: One cannot reject the null that the interactions are different from one another ($p = 0.682$).

The second and third columns, which split the sample into questions asked of voters and individuals, reveal that it is the behavior of voters that drives these results.¹⁰ For voters, both information treatments reduce the partisan gap to less than half of its No Information level. And as before, the null that the price of information does not matter much cannot be rejected ($p = 0.745$). For individuals, however, no treatment or control variables are significant, suggesting that decisiveness more or less eliminates partisan bias. Our somewhat reassuring conclusion is that most partisans do not ignore accessible information, and that access has a debiasing effect on voters, who are more susceptible to expressive behavior.

The introduction of an information source also has a strong positive effect on the likelihood of a correct answer, our second outcome measure. We plot this likelihood across conditions in the left panel of Figure 4 and provide supporting analysis of the effect of information in Table 6. Given that the likelihood of a correct answer in the No Information treatment was 28.3%, the histogram suggests a large increase in this likelihood when information is costly (to 43.2%, when averaged across the individual and both voter conditions), and a still larger increase (to 68.5%) when information is free. The first column in Table 6 confirms that these results are robust with respect to the addition of various controls: The estimated differential effects of costly and free information are 15.1 percentage points ($p < 0.001$) and 40.7 percentage points ($p < 0.001$), respectively. As columns (2) and (3) indicate, however, the two information conditions have different effects on individual respondents and voters. For individuals, the chance to purchase useful information increases the likelihood of a correct response 23.4 percentage points ($p < 0.001$), while access to free information increases it 36.2 percentage points ($p < 0.001$), a difference of 12.8 percentage points ($p = 0.019$). Voters do not seem to benefit as much from the

¹⁰Given the lack of any significant differences in Small and Large Voting conditions found in sections 3.1 and 3.2, in this section we pool voters in both group sizes for clarity.

	(1)	(2)	(3)
	All	Voters	Individuals
Democrat	0.116** (0.0499)	0.162*** (0.0505)	0.0241 (0.0901)
Costly	0.0462** (0.0218)	0.0925*** (0.0237)	-0.0376 (0.0417)
Free	0.0404* (0.0217)	0.0803*** (0.0232)	-0.0129 (0.0424)
Democrat x Costly	-0.0535** (0.0263)	-0.0975*** (0.0299)	0.0284 (0.0492)
Democrat x Free	-0.0624** (0.0261)	-0.0890*** (0.0292)	-0.0277 (0.0499)
Male	0.0510*** (0.0173)	0.0556*** (0.0181)	0.0265 (0.0356)
Age	-0.000345 (0.000755)	-0.000213 (0.000786)	-0.000266 (0.00173)
Male x Democrat	-0.0679*** (0.0211)	-0.0670*** (0.0231)	-0.0590 (0.0418)
Age x Democrat	0.000985 (0.000975)	0.00143 (0.00105)	-0.000649 (0.00217)
Follow News	0.0193 (0.0272)	0.0282 (0.0246)	0.0234 (0.0532)
Follow News x Democrat	0.0113 (0.0333)	0.00478 (0.0335)	0.00785 (0.0641)
Past Voter	0.0331 (0.0226)	0.0520*** (0.0197)	-0.0474 (0.0485)
Past Voter x Democrat	-0.0387 (0.0268)	-0.0707*** (0.0262)	0.0767 (0.0542)
Constant	0.405*** (0.0401)	0.337*** (0.0367)	0.538*** (0.0723)
Observations	3554	2337	1217
Adjusted R^2	0.008	0.012	-0.001

Robust standard errors reported.
 $*p < 0.10$, $**p < 0.05$, $***p < 0.01$.
Standard errors clustered by individual.

Table 5: The Partisan Gap and Information

chance to *purchase* information - the likelihood of a correct answer increases 11.3 percentage points ($p < 0.001$) - but access to free information induces a 43.4 percentage points ($p < 0.001$) increase, an enormous difference of more than 32 percentage points ($p < 0.001$). In different terms, access to free, as opposed to costly, information causes the likelihood of a correct answer from a voter to almost double. A chi-squared test confirms that the difference between Costly and Free information is significantly greater for voters than for individual respondents ($\chi^2 = 9.07$; $p = 0.003$).

The strong influence of *free* information on voter behavior is further underscored when attention is focused on the answers to challenging questions, as depicted on the right hand side panel of Figure 4 and Columns (4) through (6) of Table 6. For questions that challenge a voter’s predisposition, access to free (and, we shall later emphasize, credible) information increases the likelihood of a correct response almost 50 percentage points ($p < 0.001$).

There is some indication of rational ignorance in these findings, too. That is, it appears that voters (in electorates of either size) weigh the cost of information acquisition against the likelihood that the information so acquired will influence the outcome. Figure 4 reveals that, as group size increases in the Costly Information condition, the proportion of correct responses decreases. Table 7 formalizes the effect of Voting (overall and in Small and Large groups) on correctly answering in the Costly and Free Information conditions. The first and fifth columns provide statistical support for this finding: When information is costly, voters are significantly less likely to answer correctly than are individual respondents, by 16.4 percentage points ($p < 0.001$) for all questions and 22.1 percentage points ($p < 0.001$) for challenging questions. This contrasts with the results in the No Information condition (reported in section 3.1), in which voters were only around 5 percentage points ($p = 0.057$) less likely than individual respondents to answer correctly across all questions. The result holds for both voting group sizes, as seen in the second and sixth columns of Table 7. With free information, however, there is no such decline. As seen in the right side of Figure 4 and the third, fourth, seventh, and eighth columns of Table 7, voters in both Small and Large groups who have access to free information perform no worse than individuals, *even* on politically challenging questions.

To summarize, we have shown that, as information becomes available in our design, the size of the partisan gap shrinks. And as the cost of that information falls, the likelihood that

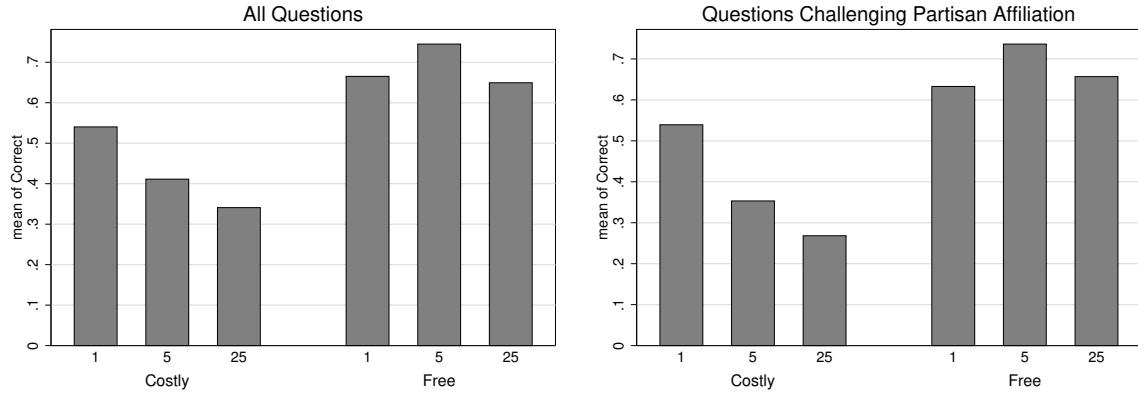


Figure 4: Likelihood of Correct Response with Costly or Free Information

	(1) All	(2) Voters	(3) Individuals	(4) All Challenging	(5) Voters Challenging	(6) Individuals Challenging
Costly	0.151*** (0.0239)	0.113*** (0.0264)	0.234*** (0.0452)	0.153*** (0.0333)	0.114*** (0.0366)	0.224*** (0.0613)
Free	0.407*** (0.0259)	0.434*** (0.0318)	0.362*** (0.0443)	0.440*** (0.0351)	0.497*** (0.0413)	0.332*** (0.0629)
Democrat	0.0257 (0.0231)	0.0514* (0.0269)	-0.0163 (0.0414)	-0.0856*** (0.0322)	-0.0338 (0.0367)	-0.152** (0.0587)
Male	0.0628*** (0.0228)	0.0445* (0.0267)	0.106*** (0.0409)	0.103*** (0.0293)	0.0839** (0.0338)	0.155*** (0.0531)
Age	0.000467 (0.00105)	0.000571 (0.00124)	0.000260 (0.00209)	0.00130 (0.00132)	0.00112 (0.00145)	0.00314 (0.00296)
Follow News	-0.0459 (0.0392)	-0.0343 (0.0425)	-0.0831 (0.0870)	-0.0734 (0.0459)	-0.0739 (0.0481)	-0.0880 (0.0942)
Past Voter	0.0586* (0.0309)	0.0384 (0.0343)	0.101 (0.0692)	0.0491 (0.0392)	0.0530 (0.0398)	-0.00738 (0.0983)
Constant	0.207*** (0.0591)	0.183*** (0.0691)	0.250** (0.112)	0.238*** (0.0739)	0.169** (0.0818)	0.335** (0.149)
Free - Costly	.255*** (.0300)	.320*** (.0346)	.128** (.0540)	.287*** (.0363)	.384*** (.0418)	.108* (.0650)
Observations	4147	2727	1420	1616	1059	557
Adjusted R^2	0.117	0.139	0.098	0.142	0.191	0.097

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Robust standard errors clustered by individual.

First three columns report all questions.

Last three columns report only politically challenging questions.

Dependent variable is 1 if response is correct.

Table 6: Correct Responses and Information

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Costly	Costly	Free	Free	Costly	Costly	Free	Free
Voting	-0.164*** (0.0443)		0.0250 (0.0473)		-0.221*** (0.0521)		0.0524 (0.0573)	
Democrat	0.00331 (0.0412)	0.000400 (0.0411)	0.0271 (0.0473)	0.0244 (0.0477)	-0.132*** (0.0502)	-0.136*** (0.0499)	-0.0348 (0.0583)	-0.0382 (0.0593)
Age	0.000352 (0.00191)	0.000273 (0.00190)	0.000663 (0.00198)	0.000454 (0.00193)	0.00185 (0.00224)	0.00170 (0.00224)	0.000714 (0.00233)	0.000358 (0.00233)
Male	0.111*** (0.0392)	0.104*** (0.0389)	0.0415 (0.0473)	0.0391 (0.0473)	0.148*** (0.0473)	0.140*** (0.0474)	0.0664 (0.0554)	0.0638 (0.0554)
Follow News	0.0232 (0.0597)	0.0283 (0.0596)	-0.122* (0.0669)	-0.119* (0.0656)	-0.00831 (0.0582)	0.000487 (0.0604)	-0.170** (0.0740)	-0.166** (0.0744)
Past Voter	0.101* (0.0574)	0.102* (0.0565)	0.0421 (0.0645)	0.0452 (0.0644)	0.114* (0.0676)	0.114* (0.0669)	0.000766 (0.0680)	0.00696 (0.0686)
Small		-0.137*** (0.0504)		0.0740 (0.0549)		-0.189*** (0.0589)		0.0920 (0.0653)
Large		-0.192*** (0.0473)		-0.0186 (0.0536)		-0.255*** (0.0573)		0.0170 (0.0656)
Constant	0.366*** (0.110)	0.368*** (0.110)	0.680*** (0.121)	0.685*** (0.120)	0.413*** (0.116)	0.417*** (0.116)	0.763*** (0.136)	0.772*** (0.137)
Observations	1345	1345	1418	1418	539	539	563	563
Adjusted R^2	0.038	0.039	0.007	0.013	0.082	0.084	0.013	0.015

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Robust standard errors clustered by individual.

(1) to (4) include all questions.

(5) to (8) include only politically challenging questions.

Dependent variable is 1 if response is correct.

Table 7: Voting and Information

partisans will provide the correct answers to questions, even ones that challenge their beliefs, increases. Consistent with the notion of rational ignorance, however, voters tend to free ride on costly information acquisition and, as a result, such information has a stronger effect on individual respondents than it does on voters. There is no evidence that partisan voters free ride on information that costs nothing to acquire in financial terms but that could challenge their views. As a result, it appears that reducing the cost of information has a strong (and desirable) effect on the likelihood that voters provide correct answers.

4 Discussion

First and foremost, our results offer strong and we believe unique evidence on the importance of expressive voting in even small electorates. We also provide clear evidence of rational ignorance, in the sense that voters, as opposed to decisive individuals, often choose not to purchase useful information. The evidence concerning rational irrationality is mixed: individuals will acquire information about neutral questions more often than political ones, but the information avoidance is not related to the likelihood of being pivotal.

One of our provocative and, at first blush, optimistic results is the (near) elimination of partisan gaps when information is free. We would caution against such optimism, however, and suggest some possible avenues for future research. It should be emphasized that our questions were both narrow and factual - whatever one believes about the official jobless rate as a measure of labor market slack, how much this (perhaps flawed) measure has changed since the beginning of the Obama administration is not a matter of much debate - and the information we provided to those who requested it was, at least in terms of the incentives we offered, objective. Our design reflects a conscious desire to focus on the decision *whether* to acquire information and not *how*, or *from whom*, but comes at the cost of some realism: real-world partisans also choose their own information sources, and the choice could reflect the desire to receive biased information that confirms, rather than challenges or corrects, their current views.

It also isn't clear, in a world of increased partisanship, in which most questions are too complicated to be "factual" alone, whether it is possible for information sources to be considered both objective and credible across the spectrum. In Mullainathan and Shleifer's (2005) model

of the “market for news,” for example, even a competitive media market will sometimes exhibit segmentation, with increased representation of extreme views. And no less important for our present purposes, there is empirical evidence that consumers believe the news sources whose biases match their own to be more accurate (Gentzkow and Shapiro 2006). All of this suggests a natural next step for the research program described in this paper, namely, to capture the effects not just of information costs - and therefore the decision whether or not to become more informed - but the choice of information source.

5 References

- Bartels, L.M. (2008). “Unequal Democracy: The Political Economy of the New Gilded Age.” Princeton, NJ: Princeton University Press.
- Beer, S. (2016). “BBC guest who voted for Brexit mocked after admitting he didn’t think his vote would count.” *The Daily Express*. 24 June 2016.
- Brennan, G. and J. Buchanan (1984). “Voter Choice: Evaluating Political Alternatives.” *The American Behavioral Scientist*, 28(2): 185-201.
- Bullock, J.G., Gerber, A.S., Hill, S.J., and G.A. Huber (2015). “Partisan Bias in Factual Beliefs about Politics.” *Quarterly Journal of Political Science*, 10: 519-578.
- Caplan, B. (2001). “Rational Irrationality: A Framework for the Neoclassical-Behavioral Debate.” *European Economic Review*, 26(2): 191-211.
- Carter, J.R. and S.D. Guerette (1992). “An Experimental Study of Expressive Voting.” *Public Choice*, 73: 251-260.
- Downs, A. (1957). “An Economic Theory of Democracy.” New York: Harper.
- Elbittar, A., Gomberg, A., Martinelli, C., and T.R. Palfrey (2014). “Ignorance and Bias in Collective Decisions.” Working Paper.
- Fedderson, T., Gailmard, S. and A. Sandroni (2009). “Moral Bias in Large Elections: Theory and Experimental Evidence.” *The American Political Science Review*, 103(2): 175-192.
- Fedderson, T. and A. Sandroni (2006). “Ethical Voters and Costly Information Acquisition.” *Quarterly Journal of Political Science*, 1: 287-311.
- Feigenbaum, S., Karoly, L., and D. Levy (1988). “When Votes are Words Not Deeds: Some Evidence from the Nuclear Freeze Referendum.” *Public Choice*, 58: 201-216.

- Fischer, A.J. (1995). "A Further Experimental Study of Expressive Voting." *Public Choice*, 88(1): 171-184.
- Fiorina, M.P. (1976). "The Voting Decision: Instrumental and Expressive Aspects." *Journal of Politics*, 38: 390-415.
- Gentzkow, M. and J.M. Shapiro (2006). "Media Bias and Perception." *Journal of Political Economy*, 114(2): 280-316.
- Großer, J. and M. Seebauer (2016). "The Curse of Uninformed Voting: An Experimental Study." *Games and Economic Behavior*, 97: 205-226.
- Hamlin, A. and C. Jennings (2011). "Expressive Political Behaviour: Foundations, Scope and Implications." *British Journal of Political Science*, 41: 645-670.
- Kahan, D., Peters, E., Dawson, E.C., and P. Slovic (2013). *Motivated Numeracy and Enlightened Self-Government.* The Cultural Cognition Project, Working Paper No. 116.
- Kamenica, E. and L.E. Brad (2014). "Voters, Dictators, and Peons: Expressive Voting and Pivotality." *Public Choice*, 159(1): 159-176.
- Kan, K. and C.C. Yang (2001). "On Expressive Voting: Evidence from the 1988 Presidential Election." *Public Choice*, 108(3): 295-312.
- Morton, R.B., Piovesan, M. and J-R. Tyran (2015). "The Dark Side of the Vote: Biased Voters, Social Information, and Information Aggregation Through Majority Voting." Working Paper.
- Mullainathan, S. and A. Shleifer (2005). "The Market for News." *The American Economic Review*, 95(4): 1031-1053.
- Nyhan, B. and J. Reifer (2016). "The Roles of Information Deficits and Identity Threat." Working Paper.
- Paolacci, G. and J. Chandler (2014). "Inside the Turk: Understanding Mechanical Turk as a Participant Pool." *Current Directions in Psychological Science*, 23(3): 184-188.
- Pazniokas, M. (2016). "Kasich makes late Connecticut push, backed on TV by Super PAC." *The Connecticut Mirror*. 22 April 2016.
- Prior, M., Sood, G., and K. Khanna (2015). "You Cannot Be Serious: The Impact of Accuracy Incentives on Partisan Bias in Reports of Economic Perceptions." *Quarterly Journal of Political Science*, 10: 489-518.
- Rand, D. (2012). "The Promise of Mechanical Turk: How Online Labor Markets Can Help Theorists Run Behavioral Experiments." *Journal of Theoretical Biology*, 299: 172-179.
- Riker, W.H. and P.C. Ordeshook. (1968). "A Theory of the Calculus of Voting." *The American Political Science Review*, 62(1): 25-42.

Schuessler, A.A. (2000). "A Logic of Expressive Choice." Princeton, NJ: Princeton University Press.

Selyukh, A. (2016). "After Brexit Vote, Britain Asks Google: 'What Is The EU?'" NPR, All Things Considered. 24 June 2016.

Shayo, M. and A. Harel (2012). "Non-consequentialist Voting." *Journal of Economic Behavior and Organization*, 81: 299-313.

Sobel, R.S. and G.A. Wagner (2004). "Expressive Voting and Government Redistribution: Testing Tullock's 'Charity of the Uncharitable.'" *Public Choice*, 119: 143-159.

Tullock, G. (1971). "The Charity of the Uncharitable." *Western Economic Journal*, 9(4): 379-392.

Tyran, J-R. (2004). "Voting When Money and Moral Conflict: An Experimental Test of Expressive Voting." *Journal of Public Economics*, 88: 1645-1664.

6 Appendix

Table A1: Partisan Gap (No Information)

Question	N=25	N=5	N=1
Temperature	.065	.021	.045
Inequality	.028	.12	.052
Approval	.225**	.270**	.155*
Immigration	.38***	.367***	.282***
Unemployment	.208**	.187**	-.016
Foreign Aid	.026	.161**	.056
Refugees	.124*	.003	.028
Officers	.07	.058	-.009
Abortion	.139	.216**	-.016
Uninsured	.164**	.08	-.012
Overall	.129***	.134***	.046
Participants	70	56	73

Notes: Reports the difference responses from Democrats and Republicans

1 (0) indicates the most Democratic (Republican) response

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, one-sided t-test reported