

Online Appendix for
“An Assessment of Citizens’ Capacity for Prospective
Issue Voting using Incentivized Forecasting”

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A Sample Characteristics

Table A.1 depicts the sample characteristics compared to those of the American Community Survey.

B Survey Questions

Candidate Issue Positions

1. Political scientists use a measure called DW-NOMINATE to rank members of the Senate from 1 to 100 in terms of their level of conservatism or liberalism. The ranks are based on their voting behavior on roll call votes in the Senate. The Senator ranked 1 is the most conservative Senator, while the Senator ranked 100 is the most liberal Senator. The closer a Senator is to 1 the more conservative they are, and the closer a Senator is to 100 the more liberal they are.

If [candidate] wins the election, what will their DW-NOMINATE rank be for votes cast during the period January 2019 through December 2020? (Answer options are in terms of 10 points of rank, a.k.a. between 1 and 10, 11 and 20, etc.)

2. Abortion: National Right to Life Committee (NRLC)

NRLC is a pro-life organization that works through legislation and education to oppose abortion, infanticide, euthanasia, and assisted suicide.

If elected, what rating will [candidate] receive from the NRLC over the next two years?

3. Taxation: Club for Growth (CFG)

CFG believes that prosperity and opportunity come from economic freedom, and supports reducing income taxes and the size and scope of the federal government.

If elected, what rating will [candidate] receive from the CFG over the next two years?

4. LGBTQ rights: Human Rights Campaign (HRC)

HRC is America's largest civil rights organization working to achieve LGBTQ equality.

If elected, what rating will [candidate] receive from the HRC over the next two years?

5. Civil rights: National Association for the Advancement of Colored People (NAACP)

The NAACP seeks to eliminate racial hatred and discrimination and protect and enhance the civil rights of African Americans and other minorities.

If elected, what rating will [candidate] receive from the NAACP over the next two years?

6. Marijuana legalization: National Organization for the Reform of Marijuana Laws (NORML)

NORML's mission is to move public opinion sufficiently to achieve the repeal of marijuana prohibition so that the responsible use of cannabis by adults is no longer subject to penalty.

If elected, what rating will [candidate] receive from the NORML over the next two years?

7. Moral issues: American Family Association Action (AFA Action)

AFA Action is dedicated to advancing biblical, family values in society and government. If elected,

Table A.1: Sample Comparison to Current Population Survey

	Category	2018 ACS	Our Sample
Sex/Gender	Male	48.70%	54.71%
	Female	51.30%	44.92%
	TOTAL	100.00%	99.63%
Age	18 to 24 years old	12.08%	8.66%
	25 to 34 years old	17.87%	44.67%
	35 to 44 years old	16.34%	25.60%
	45 to 54 years old	16.39%	10.29%
	55 to 64 years old	16.66%	7.78%
	65 years old or older	20.65%	3.01%
	TOTAL	100.00%	100.00%
Race	White only	72.20%	69.51%
	African American only	12.70%	9.66%
	Asian only	5.60%	7.90%
	Other (including two or more races)	9.50%	5.15%
	TOTAL	100.00%	92.22%
Hispanic	Hispanic	18.30%	10.29%
	Not Hispanic	81.70%	89.71%
	TOTAL	100.00%	100.00%
Education	Less than high school graduate	11.77%	0.25%
	High school graduate	27.49%	11.92%
	Some college, no Bachelor's degree (assoc. degree incl.)	30.67%	34.25%
	Bachelor's degree or more	30.06%	53.58%
	TOTAL	100.00%	100.00%
		2020 ANES Time Series	Our Sample
Party identification	Democrat	36.09%	45.55%
	Independent	31.19%	30.24%
	Republican	32.72%	24.22%
	TOTAL	100.00%	100.00%
Ideology	Liberal	32.91%	53.45%
	Moderate	27.03%	20.08%
	Conservative	40.06%	26.47%
	TOTAL	100.00%	100.00%
Political attention	None at all	0.93%	1.25%
	A little	16.43%	14.93%
	A moderate amount	19.17%	31.74%
	A lot	40.02%	28.73%
	A great deal	23.46%	23.34%

Categories for gender in our data do not sum to 100% because our survey allowed respondents to identify as “other.” Categories for race do not sum to 100% because we did not force a distinction between race and ethnicity; respondents could identify as Hispanic-only without choosing a separate racial category. 2018 ACS estimates are the American Community Survey one-year estimates, available at <https://data.census.gov>. ANES demographic proportions were calculated using the ANES’ recommended weights.

what rating will [candidate] receive from AFA ACTION over the next two years?

8. The environment: League of Conservation Voters (LCV)

The LCV advocates for sound environmental policies and works to elect pro-environment candidates who will adopt and implement such policies.

If elected, what rating will [candidate] receive from the LCV over the next two years?

9. Gun policies: National Rifle Association (NRA)

The NRA advocates for the right to keep and bear arms, and champions gun safety, education and training.

If elected, what rating will [candidate] receive from the NRA over the next two years?

10. Immigration: NumbersUSA (NUSA)

NUSA favors reductions in immigration numbers toward levels that would allow for a stable U.S. population

If elected, what rating will [candidate] receive from NUSA over the next two years?

11. Labor unions: American Federation of Labor and Congress of Industrial Organizations (AFL-CIO)

AFL-CIO is a federation of 55 national and international labor unions which give working people a collective voice to address workplace conditions.

If elected, what rating will [candidate] receive from the AFL-CIO over the next two years?

12. Poverty: RESULTS

RESULTS works to strengthen government health and assistance programs like food stamps and Medicaid and advances policies to reduce inequality.

If elected, what rating will [candidate] receive from RESULTS over the next two years?

Respondent Issue Positions

Respondents read the following instructions:

In this part of the study, we are interested in your opinions about important issues. We are going to show you descriptions of prominent issue interest groups in American politics. We would like you to tell us how much you support or oppose the policy goals of these interest groups on a scale from 0 to 100.

Ratings between 50 and 100 mean that you generally support the group's policy goals with higher values indicating greater support. Ratings between 0 and 50 mean that you generally oppose the group's policy goals with lower values indicating greater opposition.

Then, they saw the following descriptions of interest groups alongside a sliding scale from 0 to 100.

NRLC: NRLC is a pro-life organization that works through legislation and education to oppose abortion, infanticide, euthanasia, and assisted suicide.

CFG: CFG believes that prosperity and opportunity come from economic freedom, and supports reducing income taxes and the size and scope of the federal government

HRC: HRC serves as America's largest civil rights organization working to achieve LGBTQ equality

NAACP: The NAACP seeks to eliminate racial hatred and discrimination and protect and enhance the civil rights of African Americans and other minorities

AFA Action: AFA Action is dedicated to advancing biblical, family values in society and government

LCV: LCV advocates for sound environmental policies and works to elect pro-environment candidates who will adopt and implement such policies

AFL-CIO: AFL-CIO is a federation of 55 national and international labor unions which give working people a collective voice to address workplace conditions

NORML: NORML's mission is to move public opinion sufficiently to achieve the repeal of marijuana prohibition so that the responsible use of cannabis by adults is no longer subject to penalty

NRA: The NRA advocates for the right to keep and bear arms, and champions gun safety, education and training

NUSA: NUSA favors reductions in immigration numbers toward levels that would allow for a stable U.S. population

RESULTS: RESULTS works to strengthen government health and assistance programs like food stamps and Medicaid and advances policies to reduce inequality

Other Questions

We focus on respondents' forward-looking beliefs about candidates' issue positions and ideological orientations. But we also measured beliefs about several other topics, including recent economic changes, the campaign horse race, whether or not the candidate had been endorsed by President Trump, candidates' party identification, age, gender, race/ethnicity, religious identification, political experience, and their likelihood of engaging in an ethics violation if elected. There were 21 questions in all that were asked for both the Democratic and Republican candidate in the respondent's state.

C Determining Correct Answers to Candidate Placement Questions

We incentivized respondents to give their best approximation of accurate answers to the interest group rating question. Because we allowed probabilistic guesses (with say, 0.2 in one category and 0.8 percent in another), we needed to translate these guesses into chances of winning for respondents. We did so by taking the following steps, which respondents were informed of before beginning the placement of candidates' interest group ratings:

1. Divide all beliefs (or probabilities) provided by the participant by 100, so that all these values are on a 0 to 1 scale.
2. Determine which answer is correct, subtract the participant's provided value for that answer from 1, and square this difference.
3. Subtract the respondent's values for all incorrect answers from zero and square these differences.
4. Add up all of the squared differences from steps 2 and 3.
5. Draw a random number from 0 to 1, where all values are equally likely to be drawn.
6. If the randomly drawn value is greater than or equal to the total calculated in 4, the participant wins the prize. If it is less than this value, the participant does not win the prize.

For example, take a respondent (Respondent A) who put down 0-19 with 0.2 probability and 20-40 with 0.8 probability. Say that the candidate is rated (2 years in the future) at 30. We would take the following steps:

1. 0-19: 0.2; 20-40: 0.8
2. $1 - 0.8 = 0.2$
 $0.2^2 = 0.04$
3. $0 - 0.2 = 0.2$
 $0.2^2 = 0.04$
4. $0.04 + 0.04 = 0.08$
5. Draw a random number from 0 to 1 ; if this is ≥ 0.08 , Respondent A would win.

Compare this to someone (Respondent B) who put down 0-19 with 0.2 probability, 20-39 with 0.6 probability, and 40-59 with 0.2 probability. Say that the candidate is rated at 30. The following steps give:

1. 0-19: 0.2 ; 20-39: 0.6; 40-59 = 0.2

2. $1 - 0.6 = 0.4$.

$0.4^2 = 0.16$

3. $0 - 0.2 = -0.2$.

$-0.2^2 = 0.04$.

$0 - 0.2 = -0.2$.

$-0.2^2 = 0.04$.

$0.04 + 0.04 = 0.08$.

4. $0.08 + 0.16 = 0.24$

5. Draw a random number from 0 to 1 ; if this is ≥ 0.24 , Respondent B wins.

Respondent A has a better chance of winning than Respondent B (A’s chance = 0.92; B’s chance = 0.76). This explains why it was not in respondents’ interest to put down 0.20 for all possible answers.

D Results with an Alternative Measure of Accuracy

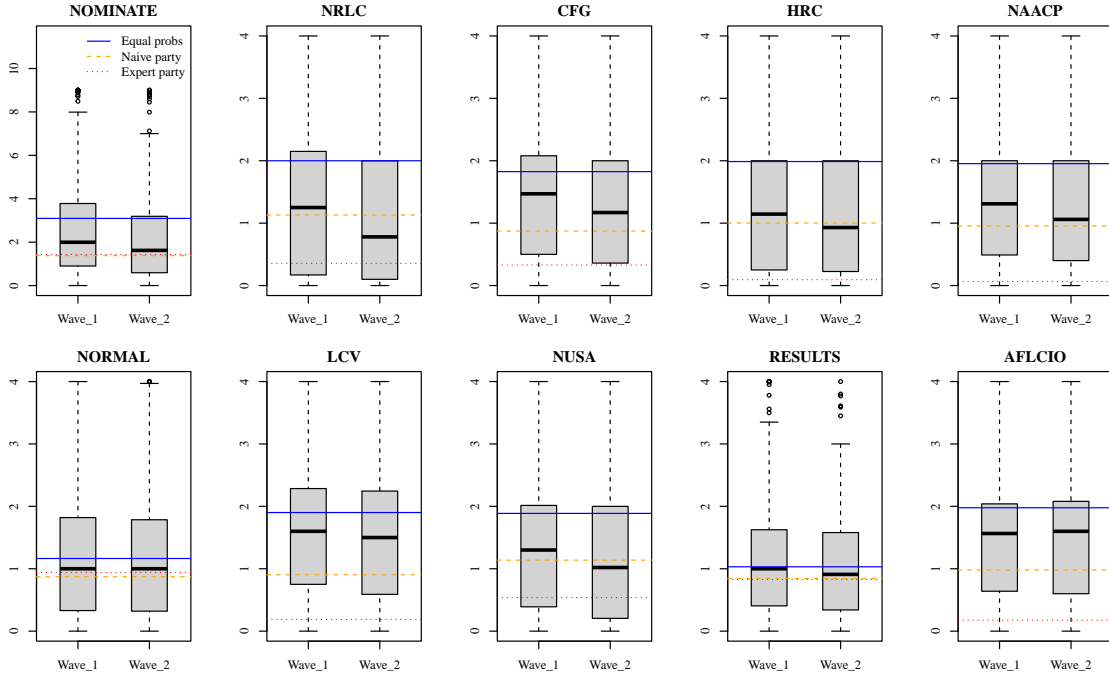
Here we present an alternative measure of respondent accuracy to Brier scores. Specifically, we calculated the absolute distance between the *expected value* of respondents’ beliefs about each winning candidate on each issue dimension and the actual value that was obtained for that winning candidate. We plot the distributions of these absolute distances in Figure A.1, along with markers for the three comparison rules examined in the main text: “no information”, “naive party”, and “expert party”.

E Results Controlling for Same-State Senators

Our results suggest that people predict the future policy-related behavior of Congressional candidates with a good degree of accuracy. This could be because they pay attention to the behavior of their specific Congressional candidates. However, the same result could stem from people instead using the average politics of their state of residence as a heuristic to infer candidates’ issue positions. For example, people may consider the citizens of California to be more liberal than Michigan and so guess that the Senators from those states will follow a similar ideological pattern. The broad conclusion would be the same: people use cues other than partisanship when thinking about candidates and differentiate candidates within parties in terms of ideological extremity. But our data allow for analyses that provide suggestive evidence about the extent to which respondents use candidate-specific information, above and beyond the average politics of their state.

Specifically, we restrict the sample to senators where the other senator from their state is in the same party. Then, we regress the respondents’ predictions about the focal senator’s positions

Figure A.1: Predictors of Accuracy, Wave 1, Wave 2, and Change Between Waves



on the actual positions of that senator and the actual positions of the other senator from the same party and state. If the coefficient for the focal senator remains significant in the expected direction, this indicates that citizens can distinguish between even moderate and extreme members from the same state and party rather than simply using the state as a heuristic to infer policy positions. Given the strong correlation between positions of same-state and same-party senators, and given the smaller sample size associated with this restriction, we note that our power for this test is limited relative to those report in the main text.

Figure A.2 depicts the original estimates, as reported in the main body of the paper, as well as estimates from the model with the same-state and same-party senators' actual ratings included as a covariate. Each point represents the relationship between the actual ratings received by the focal senator and the respondents' predicted ratings.

We do not observe large reductions in estimated associations comparing the original and adjusted estimates; and in all cases, the estimate is still positive. In several cases, however, the standard errors of the adjusted estimates are very large. The reason for this is the very high correlation between the two same-state and same-party senators for these interest groups. All such correlations are listed down the left side of the figure and approach 1.00 for the estimates with especially large confidence bounds. For one interest group, the National Right to Life Council (NRLC), the sample correlation is exactly 1.00, which means the model controlling for the same-state senator is unidentified (NRLC ratings are nearly always 0 or 100). We thus exclude

the estimates for the NRLC from this figure. The correlation for Human Rights Council (HRC) is listed as 1.00, but this is rounded – it is not exactly 1.00.

While somewhat limited by the high correlations, we interpret these results as suggesting that people do have candidate specific information and are not only using states as a heuristic to infer candidates' positions.

Figure A.2: Relationship of Forecasts to Actual Ratings, Controlling for Same-State Senators

