A Measurement Gap? Effect of the Survey Instrument on the Partisan Knowledge Gap

Lucas Shen,[*] Gaurav Sood,[†] and Daniel Weitzel[‡]

December 6, 2022[§]

Abstract

Conventional wisdom suggests large, persistent gaps between partisans' stores of political knowledge, fanning concerns about democratic accountability. We reconsider the frequency and size of these "partisan knowledge gaps," in a series of experiments. Manipulating frequently used survey items we demonstrate that survey design can inflate the partisan gap by up to 71%. Our findings suggest that knowledge gaps—when they do exist—stem more from motivated responding than genuine differences in factual knowledge.

---

[*]Research Fellow at Asia Competitiveness Institute, Lee Kuan Yew School of Public Policy, at the National University of Singapore, lucas@lucasshen.com

[†]Independent researcher, gsood07@gmail.com

[‡]Assistant Professor, Colorado State University, daniel.weitzel@colostate.edu

The idea of a well-functioning representative democracy rests on the assumption of a more or less informed citizenry holding its representatives and political parties accountable for the successes and failures in office (Schattschneider 1960). Empirical examinations of this assumptions initially focused on the prevalence (or absence) of political knowledge (Delli Carpini and Keeter 1996) and then moved to the effect of the "perceptual screen" (Campbell et al. 1980, p. 133) of partisanship on the type of things people know (Bartels 2002). These partisan divisions raise concerns about the functioning of the above mentioned process of democratic accountability (Hochschild and Einstein 2015). In particular, research showing large differences in what partisans believe to be true about politically consequential things has cast a shadow on the prospect of democracy (Campbell et al. 1980; Jerit and Barabas 2012). If partisanship is in fact the pervasive force that perpetuates and reinforces how partisans see and understand the political world (Bartels 2002, p. 138) serious normative implications about the functioning of democracy arise. A new line of research, however, suggests that a large fraction of the observed partisan difference in beliefs is an artifact of the survey response process (Bullock et al. 2015; Huber and Yair 2018; Prior, Sood and Khanna 2015). For instance, Bullock et al. (2015) find that nearly half the partisan gap in political knowledge is not a result of differences in beliefs but a result of expressive responding or partisan inference.

In this paper, we extend the investigation into the role of survey design in explaining partisan differences.[1] We propose two theories of partisan knowledge gaps. The first argues that partisan gaps reflect actual differences in beliefs about the world. The second proposes that partisan gaps are, to a large part, artifacts of survey and questionnaire design. We report results from a new set of experiments that manipulate common features of frequently used survey items. The features we focus on plausibly encourage people to guess when they don't know or report attitudes instead of knowledge, and thereby encourage partisan inference causing

---

[1]We primarily focus on design features in non-academic surveys, which are substantially more prevalent than academic surveys.

inflated partisan gaps in knowledge. We also assess what difference items that not only assess knowledge but also confidence in that knowledge make on the prevelance and size of partisan gaps. After all, knowledge is a confidently held correct belief about something. Are partisan gaps then maybe a product of how we score answers to knowledge questions? Meaning, do the partisan gaps persist if only survey responses that participants are *confident* in are coded as correct?

Across two experiments and thirteen items, we find that about 38% to 49% of the knowledge differences between partisans are due to survey measures that encourage respondents to guess when they don't know. Across two other experiments, we find that survey features that encourage partisan inferences inflate the observed differences by up to 71%. Lastly, we find that a coding scheme that only codes answers that respondents are confident in reduces partisan gaps by 43% to 69%. Our findings support the second theory of partisan knowledge gap formation. Current designs of survey items can encourage participants to not report confidently held knowledge but use partisan cues to express attitudes and opinions about the world. In contrast to incentive-based experimental designs that use (monetary) rewards to encourage respondents to overcome their perceptual screen of partisanship when it comes to answering knowledge questions (for example, see Bullock et al. 2015; Peterson and Iyengar 2021) our research design examines the effect that question design has on increasing the partisan gaps in knowledge. Our findings offer practical advice on how to, with no additional costs, decrease the gap through simple and sensible adjustments to the questionnaire design.

Two Theories of Partisan Gaps

Research has repeatedly shown that partisan gaps in political knowledge are wide and widespread (Bartels 2002; Jerit and Barabas 2012; Lodge and Taber 2013). For instance, when Americans were quizzed at the end of Bill Clinton's first term in 1996 about whether the budget deficits increased, decreased, or remained the same, 39% of Democrats correctly identified that the budget deficit had decreased, only 25% of Republicans did the same (Achen and Bartels 2016, 280).

There are two broad explanations for these gaps: The first is that partisan gaps on partisan consequential knowledge and misinformation items are a result of the fact that partisans know different things. The second theory is that partisans gaps are an artifact of the survey design. In the following, we will elaborate on both of these theories and formulate empirical implications for each.

Partisan Differences in Beliefs

Partisan gaps in survey measures of political knowledge and misinformation may reflect *actual differences* in what partisans believe to be true. These differences in beliefs may, in turn, stem from selective exposure to information or motivated reasoning. Selective exposure to information—partisans being exposed to more congenial than uncongenial information–can affect what facts people know about the world (Redlawsk 2002; Stroud 2010). Even without partisans favoring congenial information, it could be that because of the kinds of people that partisans are, certain information is more readily available (e.g. Zaller 1992). As an example, African Americans, who overwhelmingly identify as Democrats, may be more exposed to negative consequences of economic downturns and may hence have different beliefs about economic conditions than Caucasians, a majority of whom identify as Republicans. Similarly, selective exposure may stem from different 'tastes' in politics. For instance, partisans of dif-

ferent stripes may be interested in different policies, politicians, etc. Taken thus, the partisan gap might be similar to other types of knowledge gaps across groups—see research on gaps in gender (Dolan 2011; Barabas et al. 2014) and race (Abrajano 2015). Conventionally, however, partisan gaps are thought to stem from information avoidance—people find information that is dissonant to their worldview to be painful and work to avoid it (e.g., Abelson 1959; Festinger 1962).

Whatever the cause, the effect of selective exposure is undoubtedly made worse by "motivated skepticism" (Taber and Lodge 2006; Stroud 2008). People are more skeptical of uncongenial than congenial information (Zaller 1992). This can have various consequences on how individuals engage with congenial and uncongenial information they might encounter. It is possible that citizens are more likely to follow up and do the due diligence to disprove uncongenial information. They may also simply be more likely to distrust and ignore uncongenial information. And lastly, even when people are receiving congenial and uncongenial informationa at the same rate, they may be less likely to actually remember uncongenial information (see, for example Bayes et al. 2020; Hill 2017; Flynn, Nyhan and Reifler 2017; Taber and Lodge 2006). Recently, Peterson and Iyengar (2021) have, for example, shown that political polarization increases the readiness of individuals to accept information that corroborates ideological or partiasan beliefs and vice versa disregard or challenge facts that run counter to them.

To summarize, it is possible that due to selective exposure or motivated skepticism the observed partisan gaps in political knowledge in survey research reflect actually existing differences in beliefs about what is true about the world.

Artifacts of Survey Design

Partisan gaps on partisan consequential knowledge and misinformation items in surveys may alternatively be an *artifact of questionnaire design*.

In aggregate, the answers to survey questions about factual beliefs reflect a mixture

of knowledge, inferences, cheating, expressive responding, and guesses by the respondents. Inferences, cheating, and guessing cause structured error in our estimates, by inflating our estimates of how many people believe something to be true. These three ways of answering survey questions also affect our estimates of partisan gaps in beliefs.

Primarily, inferences or guesses with a partisan tint and expressive responding–responding to questions about beliefs to indicate partisan positions–inflate the estimates. On partisan consequential items—items where the right answer has implications about how good the party looks—inferences with a partisan tint are likely common. For instance, when partisans don't know the answer to a question, they can fall back on affect and attachments as a guide to infer the answer (Malka and Adelman 2022). As an example, when asked about what happened to the federal deficit during the Obama administration, Republicans, thinking Democrats cause bad things, may infer that deficits increased under Obama. Alternately, partisans may rely on stereotypical inference. Republicans may think of Democrats as generally indifferent to deficits, and hence may infer, without actually knowing, that it increased under Mr. Obama (e.g. Rahn 1993; Goggin, Henderson and Theodoridis 2020). In a highly polarized political environment minimal information can be enough to switch individuals from answering a knowledge question to using affect or expressive motivations to answer a questions (Klar 2014; Merkley and Stecula 2018).

The extent to which survey responses are contaminated by responses other than strongly held beliefs is conditional on survey features. Surveys can encourage respondents to respond 'expressively' by highlighting partisan motivations over accuracy motivations (Zaller 1992; Petersen et al. 2013; Klar 2014). This explanation has attracted considerable research. Some of it shows that up to half of the partisan gaps are a result of expressive responding (Bullock et al. 2015; Huber and Yair 2018; Prior, Sood and Khanna 2015, though see Berinsky 2017).

Empirical Implications of the Theories

If partisan gaps are a result of actual knowledge disparities between Republicans and Democrats, minor differences in question wording and response options stem should principally have little effect on the gap we observe. This gap then ought to be the product of actual partisan-based variation in knowledge and not an artifact of survey design. On the other hand, if the gaps are sensitive to question and response attributes, it suggests that some of the partisan gaps may not be founded in actual differences in beliefs but artificial products of the way information is presented and questions are asked. In particular, we contend that political surveys, primarily commercial ones, regularly include features that inflate partisan gaps to produce sensational results.

Surveys regularly exclude don't know (Luskin and Bullock 2011), include guessing encouraging features such as providing background information and social proof in the stem that likely makes people think that they know something about the topic or give them extra information that they can use to guess the answer. Often enough, surveys also include partisan cues. And the scoring rules used by analysts don't disambiguate between respondents who are confident about their answers and those who aren't. We suggest that removing these inflationary features diminishes the partisan gaps in political knowledge.

To test the conditionality of partisan knowledge gaps in survey data we fielded four surveys that test the effect different aspects of survey and question design can have on (partisan) response patterns. In studies 1 and 4, we use Amazon Mechanical Turk (MTurk) to ask participants a variety of knowledge questions in different designs. These items aim at examining how survey instructions, question wording, response options, and response design in the survey affect partisans to respond to questions in specific ways. In studies 2 and 3, we use YouGov and a telephone survey to examine the role of question wording on response behavior in more detail by focusing on the effect that partisan-related auxilliary information can have on response patterns. We will first turn to the impact of inflationary survey design on knowl-

edge gaps (study 1) before examining partisan-related cues (studies 2 and 3). The empirical analysis concludes with an examination of the effect that response scoring has on the partisan gap. How does incorporating confidence in the correctness of a response affect the partisan gap (study 4)?

The Effect of Inflationary Survey Design on Partisan Gaps

The first study focuses on four survey design features that we suspect might inflate the partisan gap in political knowledge. These features are the absence of a "Don't Know" option, including partisan-related as well as neutral information in the question stem, and explicitly encouraging guesses.

Research Design and Data

For this study we fielded two surveys on Amazon's Mechanical Turk (Berinsky, Huber and Lenz 2012) in the second quarter of 2017. In the first survey, we randomly assigned 1,253 respondents to one of five conditions with varying experimental treatments testing the effect of inflationary components of survey questions.

In each condition in the two surveys respondents answered 9 misinformation items, ranging from citizenship and religion of Obama to whether global warming is happening or not.[2] Respondents assigned to the first two conditions (inflationary and commonly used design) saw a simple preface: "Now here are some questions about what you may know about politics and public affairs," while in all the other conditions, they were reassured that it is ok to not know answers to these questions and to commit to not looking up answers or asking anyone and to mark don't know when they, as research has shown is frequently the case, in

---

[2]The exact question wording for each of the items is presented in Appendix SI 2.

fact don't know the correct answer to a question.[3]

In the second survey, we randomly assigned 1,059 respondents to these conditions. The preamble, topics, and answer options of these questions were indentical to the first survey and included questions about the Affordable Care Act (2), the effect of greenhouse gases (1), and the consequences of then-president Trump's executive order on immigration(1). In the multiple choice version of the survey the participants received three options as answers. In two of the four conditions respondents also had a "Don't Know" option available to them.[4]

In total this yields four multiple choice conditions that successively remove inflationary survey design features, as shown in Table 1. Items can include a 'Don't Know' option, offer social proof of the incorrect answer (such as "some people belief that Barack Obama was not born in the U.S."), have neutral information that encourages people to guess, and explicitly encourage guessing. Each condition is explained in detail below:

Table 1: Experimental Treatments

| Condition | Label | Treatments | | | |
		Don't Know	Social Proof	Guessing Encouraged	Neutral Information
1	IDA	No	Yes	Yes	Yes
2	CUD	No	No	Yes	Yes
3	FSR	Yes	No	No	Yes
4	IMC	Yes	No	No	No

Inflationary Design Approach In the IDA, we replicate design features from highly partisan surveys that do not have the goal of collecting representative opinion data but push an agenda. In this design, 'Don't Know' options are never presented and respondents can't indicate lack of knowledge. These questions also include social proof about the incorrect answer, for instance, "Some people believe Barack Obama was not born in the United States, but was born in another country" on a question about where Mr. Obama was

---

[3]Again, see Appendix SI 2 for the specific wording.

[4]The exact question wording for each of the items is presented in Appendix SI 3.

born, and some neutral information about the topic, like "According to the Constitution, American presidents must be 'natural born citizens'" on the birthplace question, that may encourage the ignorant to take a guess. This condition does not score the confidence with which knowledge is held.

Commonly Used Design The CUD, reflects the real-world standards in (nonacademic) polling most closely. These questions are very similar to the IDA questions but usually do not include social proof. In our experiments, these questions do not feature a 'Don't Know' option, include neutral information in the question stem, encourage guessing, and do not ask respondents to report how confidently they hold the knowledge.

Fewer Substantive Responses The FSR design likely reduces the number of substantive responses to survey questions by including a 'Don't Know' option and thereby offering participants the option to reveal ignorance. In doing so, respondents are not forced to pick a substantive answer category when they don't have an opinion. Since research has repeatedly shown how prevelant the absence of political knowledge is we consider this an important feature for designing non-inflationary partisan knowledge surveys. These questions do not provide social poof but encourage guessing with a neutral question stem that might provide people information to base that guess on.

Improved Multiple Choice The IMC condition is the best version of multiple choice questions. It offers individuals a 'Don't Know' option, does not include any social proof, does not encourage guessing, and does not provide neutral information. These changes to question formulation and design have been done while maintaining commensurability with other items. This approach minimizes inflationary features in questions with minimal changes to questionnaire and survey design.

Coding rules across surveys and studies

We employ the following coding rules for the dependent and independent variables across our studies. Multiple choice answers are coded as correct when the respondents selected the correct answer from the five response options they were offered.

Partisanship is coded based on self-classification of respondents as Democrats or Republicans. Individuals that classify themselves as Independents with political leanings to one or another party are coded as supporters of that party. True independents are excluded from the partisan gap analysis (Bullock 2011; Klar and Krupnikov 2016).

Knowledge items or partisan cues are coded as congenial if the correct answer or the cue given in the question are congenial with the partisanship of the respondent (see Prior, Sood and Khanna 2015).

Results from Study 1 (MTurk)

We test the effect of these four different conditions on the partisan gaps in political knowledge and present results about gradually removing inflationary features from the questions.

We start by summarizing the average partisan gap for each survey item and each treatment arm from the MTurk sample of Study 1 in Figure 1. Each marker represents how much more congenial the responses of the Republicans are to the Democrats. In the baseline IDA condition (first column), when the correct response is congenial to the party of respondents, they are 35 percentage points more likely to choose the correct response. The subsequent three columns in Figure 1 show that, while the estimated differences in party-congenial responses are precise (the narrow horizontal bars), the differences attenuated substantially depending on the treatment arms. The IDA and CUD conditions have similar estimates. However, the estimates from the FSR and IMC conditions are approximately 14 percentage points lower compared to the IDA condition.

This means, that removing inflationary features from the questions decreases the partisan gap in political knowledge. In the IDA and CUD condition (first two columns) the partisan gap is larger than 35 percentage points. In the FSR and IMC conditions (last two columns), the gaps are approximately 20 percentage points. At a maximum the design-based attentuation of the partisan gap in this experiment constitutes a drop of 40% ($100 \times \frac{.35-.21}{.35}$). Figure 1 therefore gives us the first indication that partisan gaps arise, at least in part, from questionnaire artifacts present in the different survey conditions.

We formalize the above observation as follows. We regress the dependent variable, an indicator of whether the response is correct, on the interaction of the survey conditions and the congenial dummy:

$$\text{Correct}_{ijk} = \alpha + \beta \text{Congenial}_i + \gamma \text{Condition}_k + \delta_k (\text{Congenial}_i \times \text{Condition}_k) + \text{question}_j + \varepsilon_{ijk} \quad (1)$$

for respondent i, survey item j, and condition k. β captures the difference in proportion of correct responses when the answer is congenial to party, corresponding to the markers in Figure 1. A positive estimate suggests that respondents are more likely to choose the correct answer when it is congenial to their party. We focus on the δ_k's, which capture how the different conditions affect observed knowledge gaps (difference between columns in Figure 1). The baseline treatment arm is always IDA, so the δ_k's capture how the three conditions (CUD, FSR, IMC)—having the same questions with different questionnaire artifacts—mediates partisan knowledge gaps. We include the nine survey questions fixed effects to allow each question to elicit some constant amount of partisan gap, if any, from the respondents. Standard errors are clustered at the respondent level.

Table 2 reports the results from estimating Equation (1). Column (1) includes just the congenial variable, which is significant and consistent with conventional wisdom about gaps

Figure 1: Partisan Gap by Condition (MTurk)
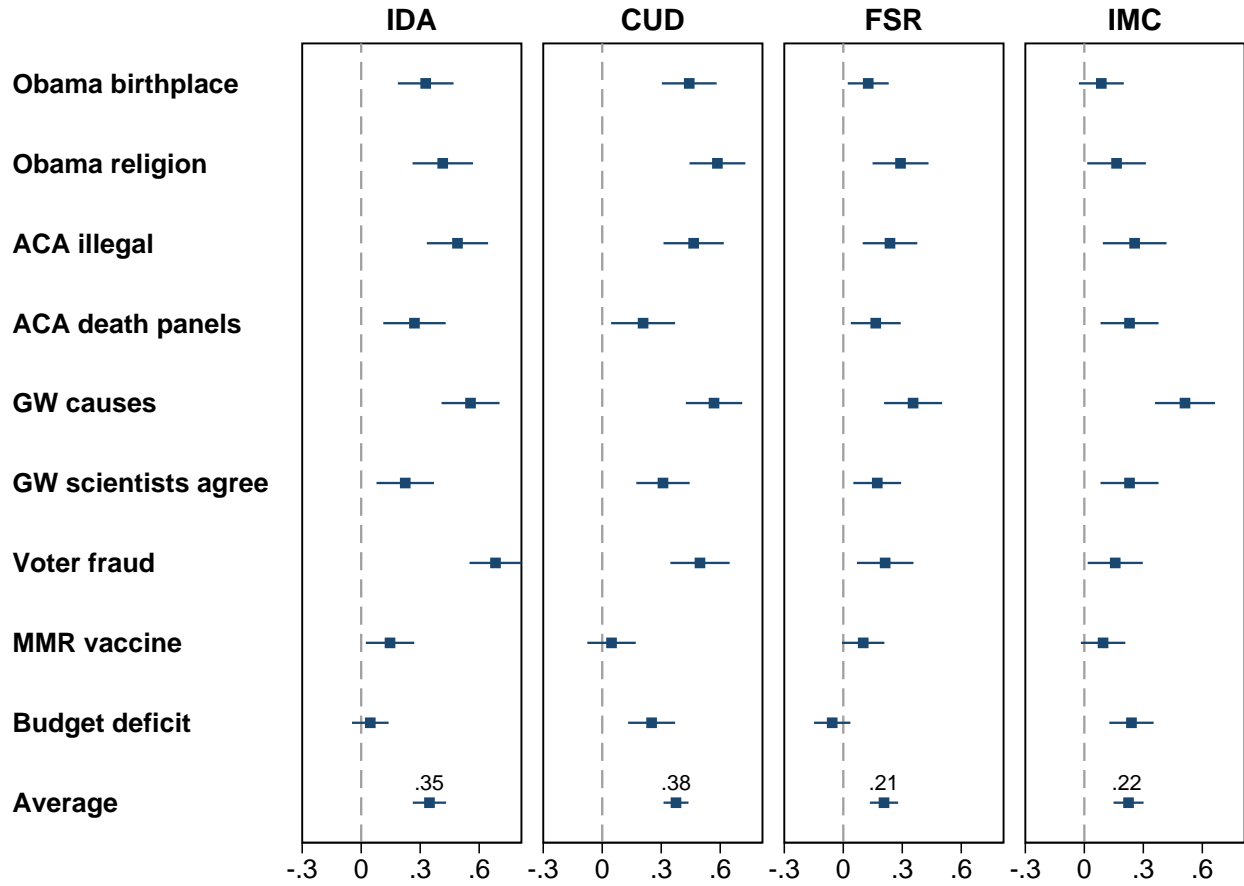
Each marker is the estimated difference in proportions for the proportion of correct responses when the correct response is congenial to party. Columns indicate the four different conditions described in Table 1. Rows indicate the nine individual survey question items described in Appendix SI 2 plus their average. Each point is the estimated β from estimating $1\{\text{Correct response}\}_i = \alpha + \beta \text{congenial}_i + \varepsilon_i$ for each of items and each of the four conditions. Congenial is the dummy for when the correct response is congenial to party. Horizontal bars are 95% confidence intervals constructed from robust standard errors.

in partisan knowledge (e.g. Bullock et al. 2015; Laloggia 2018). Column (2) includes only the survey conditions, and two of them (FSR, IMC) elicit differences in partisan gaps that are statistically different from the baseline IDA condition. This is consistent with our observation in Figure 1 While the treatment arm estimates are not as large as the Republican variable in column (1), it is still substantial evidence of how variable the estimated knowledge gap can be in the presence of questionnaire artifacts that inflate partisan gaps. Moreover, it is variable in a way that is independent of partisanship. Without accounting for partisanship, for instance,

Table 2: Partisan Knowledge Gaps: MTurk

|	(1)	(2)	(3)	(4)	(5)	(6)
Congenial	0.281***		0.351***	0.284***		0.353***
	(0.017)		(0.035)	(0.017)		(0.034)
CUD		0.010	0.000		0.011	0.002
		(0.028)	(0.022)		(0.028)	(0.021)
FSR		−0.064**	0.000		−0.063**	−0.001
		(0.024)	(0.019)		(0.024)	(0.019)
IMC		−0.080**	−0.023		−0.079**	−0.021
		(0.025)	(0.019)		(0.025)	(0.019)
Congenial × CUD			0.024			0.024
			(0.046)			(0.045)
Congenial × FSR			−0.173***			−0.163***
			(0.046)			(0.045)
Congenial × IMC			−0.132**			−0.136**
			(0.048)			(0.048)
Constant	0.179***	0.306***	0.184***	0.050	1.331	0.227
	(0.007)	(0.020)	(0.014)	(1.056)	(1.255)	(1.010)
R^2	0.315	0.234	0.328	0.324	0.243	0.337
Survey item FE	Yes	Yes	Yes	Yes	Yes	Yes
Demographic controls	.	.	.	Yes	Yes	Yes
Items	9	9	9	9	9	9
Respondents	628	628	628	627	627	627
Respondent-items	5,652	5,652	5,652	5,643	5,643	5,643

All models are linear probability models where the dependent variable indicates whether the response to a survey item is congenial to party affiliation. See Table 1 for the description of the conditions. Demographic controls include age cohort, gender, education level (college degree, high school, no high school, post-graduate, and some college), and race (Hispanic, Asian, Black, White, Others). All models include the nine survey item fixed effects. Standard errors are clustered at the respondent level. Significance levels: + 0.1 * 0.05 ** 0.01 *** 0.001.

the average respondent assigned to the IMC condition is 8 percentage points less likely to give the correct response than the baseline IDA condition ($p < 0.05$).

In column (3) of Table 2, we include the interaction of congenial and the four conditions (baseline is IDA). Now the congenial variable captures the knowledge gap in the IDA condition (corresponding to column (1) of Figure 1). The congenial and survey condition interactions reveal the extent to which partisan knowledge gaps change across the different survey conditions.

Figure 2 shows, in absolute terms, the estimates of how the different survey conditions

Figure 2: Partisan Gap by Condition: MTurk
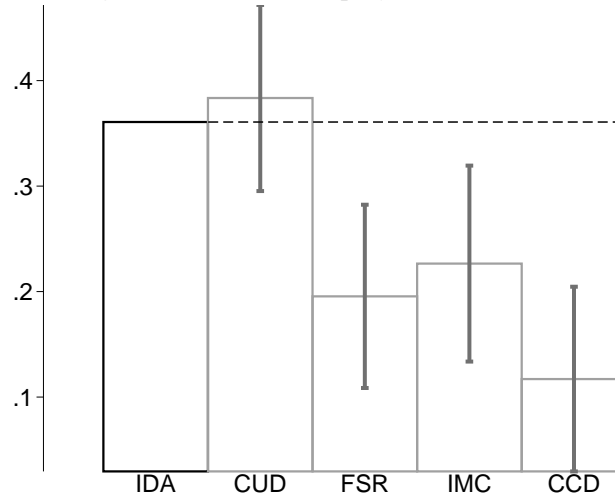
Difference between bars indicates the predicted partisan gap by the five conditions. Bars reconstructed from the interactions of the Republican indicator with the treatment arms as reported in column (3) of Table 2. The baseline arm is IDA. See Table 1 for the description of the conditions. Capped vertical bars are 95% confidence intervals.

attenuate the effect that has congeniality has on getting the correct response. For the FSR interaction term, just adding a 'Don't Know' response option reduces the estimated knowledge gap by more than 49% ($p < 0.001$). For the IMC interaction term, adding a 'Don't Know' without social proof and without encouragement to guess reduces the estimated knowledge gap by more than 37% ($p < 0.01$). In columns (4)–(6) of Table 2, we show that including the self-reported characteristics of respondents does not change the conclusion.[5] Overall, the MTurk sample of Study 1 reveals that measured partisan knowledge gaps are highly sensitive to different questionnaire artifacts in the same questions.

---

[5]See **??–??** for tests of balance between the four survey conditions.

The Effects of Partisan Cues on Partisan Gaps

The aim of the studies 2 and 3 is to present experimental evidence about effect of partisan cues in the question stem on responses by partisans. We examine closed-ended items asking about policy-relevant facts or objective performance, particularly those items stirring affective consistency, stereotyping, or both. In the first case, items whose correct response option one side or the other would like to disbelieve, or at least one of whose incorrect response options one side or the other would like to believe, or both; in the second case items whose correct response option defies stereotype, or at least one of whose incorrect response options conforms to stereotype, or both.

Research Design and Data

For exploring the research question, we exploit two datasets— study 2 is a national survey conducted by YouGov, and study 3 is a telephone survey of a random sample of adults in Texas. The YouGov survey interviewed 2000 respondents between July 10th and 12th, 2012. In Texas, a total of 1003 interviews were conducted between September 10th and 21st, 2012.

In the YouGov survey, respondents were randomly assigned to factual questions with either a Republican or Democratic cue in the stem. In a question about whether "since 2010 midterm elections, the unemployment rate [had] gone up, down, or remained the same, or couldn't you say?", we inserted either the phrase "when Republicans regained control of the U.S. Congress" or "when Democrats retained control of the Senate" right after the first phrase. We employed a similar manipulation for the question on budget deficit, asking how the budget deficit had fared "since the 2010 midterm elections, when Republicans regained control of the U.S. Congress (or "when Democrats retained control of the Senate"), has the budget deficit gone up, gone down, remained the same, or couldn't you say?"

In the Texas survey, we added another condition to the above design – no partisan cue

15

Figure 3: Partisan Knowledge Gaps with Partisan Cues: YouGov Survey

(a) Unemployment   **(b)** Budget deficit

Bars indicate the predicted percent of responses saying that unemployment or the budget deficit have gone up (correct responses) as reported in Table 3 (columns (1) and (4)). Capped vertical bars indicate 95% confidence intervals.

in the stem. So a third of the respondents were assigned to a question that simply read, "since the 2010 midterm elections, has the unemployment rate gone up, gone down, or remained the same? Or couldn't you say?" For the second question we changed our design to – no partisan cue, Democratic cue, and Democratic cue plus the following introduction "based on what you have heard". The question read, "since January 2009, have federal taxes increased, decreased, or remained the same or couldn't you say?." The second version gave respondents a Democratic cue by changing the initial part of the sentence; the question now read, "Since Barack Obama took office…" The third version prepended a cue designed to encourage guessing to the second version; the version read, "Based on what you have heard, since Barack Obama took office, …"

Results from Study 2 (YouGov)

We start with the YouGov survey to provide experimental evidence that cues in survey questions can affect responses to questions about policy-relevant and objectively verifiable facts. This survey includes questions about changes in unemployment and the budget deficit since the 2010 midterm elections, with manipulated partisan cues in the stem.

Table 3: Partisan Knowledge Gaps with Partisan Cues: YouGov

	Unemployment has gone up			Deficit has gone up		
	(1)	(2)	(3)	(4)	(5)	(6)
Congenial	0.144***	0.111***	0.112***	0.178***	0.182***	0.190***
	(0.019)	(0.025)	(0.026)	(0.021)	(0.030)	(0.029)
Republican		0.067**	0.071**		0.232***	0.162***
		(0.025)	(0.027)		(0.030)	(0.031)
Congenial × Republican		0.069[+]	0.071[+]		−0.009	−0.009
		(0.038)	(0.039)		(0.040)	(0.039)
Constant	0.199***	0.168***	3.170[+]	0.552***	0.443***	7.056***
	(0.012)	(0.016)	(1.874)	(0.015)	(0.021)	(1.837)
R^2	0.026	0.041	0.069	0.035	0.090	0.190
Demographic controls	.	.	Yes	.	.	Yes
Respondent-items	2,104	2,104	2,066	2,104	2,104	2,066

Dependent variables indicate whether the individual responded that unemployment or the budget deficit had gone up since the 2010 midterm elections (which are the correct responses). Congenial cue indicates whether the question stem includes the cue towards getting the correct response. For Democrats, this is when the question stem includes the cue "when Republicans gained control of the US Congress." For Republicans, this is when the question stem includes the cue "when Democrats retained control of the Senate." Demographic controls include age cohort, gender, education level, marital status, employment status, news interest, family income, and race. Standard errors are heteroskedasticity-robust. All models are linear probability models. Significance levels: + 0.1 * 0.05 ** 0.01 *** 0.001.

Using the YouGov survey responses, we estimate

$$\text{Correct}_i = \alpha + \beta(Congenial\ Cue)_i + \varepsilon_i, \tag{2}$$

where the dependent variable is the indicator of whether the response to the question is correct. As discussed above, we model the correct response rate as dependent on whether the cue presented to individuals is congenial to responding correctly. Specifically, the congenial cue indicator is coded as one when a Democrat receives a question stem with the cue "when Republicans gained control of the US congress." This cue manipulates Democrats into blaming the Republicans by suggesting that unemployment has gone up, which is the correct response. The reverse happens for Republicans. The congenial cue for Republicans is coded as one when they receive the cue "When Democrats retained control of the Senate."

Panel (a) of Figure 3 shows that, by manipulating the partisan cue that respondents

Figure 4: Partisan Gap by Treatment Arm: Texas Lyceum, Unemployment

Bars indicate the predicted percent of responses saying that unemployment has gone up (correct response) as reported in column (1) of Table 4. Capped vertical bars indicate 95% confidence intervals.

receive, the probability of getting the correct response for the unemployment question differs by 14 percentage points ($p < 0.001$, reported in Table 3).

Panel (b) of Figure 3 shows that this systematic difference is not unique to the unemployment question. We reestimate Equation (2) where the dependent variable is getting the correct response that the budget deficit has gone up. When the individuals get a congenial cue, they are 18 percentage points more likely to get the correct response ($p < 0.001$). Presumably, we observe this congenial cue effect because the question stem holds the other party responsible for the increase in unemployment and deficit, which are both undesirable.[6]

Results from Study 3 (Texas Lyceum)

We further supplement our results with the Texas Lyceum survey, which includes a third cue: a neutral cue. For the question about unemployment in this survey, in addition to congenial and uncongenial cues, individuals can also be randomly assigned a neutral cue where the additional question stem assigning blame to a party is absent, giving us a total of three groups: (i) no cue, (ii) congenial cue, and (iii) uncongenial cue.

Figure 4 shows that our results above still hold when we include a neutral cue. Compared to individuals who received a neutral cue, individuals who receive an uncongenial cue are 17 percentage points less likely to get the correct answer that unemployment has gone up ($p < 0.001$). Individuals who receive a congenial cue are 8 percentage points more likely to get the correct answer ($p < 0.1$). These results are tabulated in Table 4.

Finally, we examine the federal taxes question in the Texas Lyceum survey, where individuals are asked whether federal taxes have increased, decreased, or remained the same. For this question, individuals are randomly assigned (i) the Democratic cue "Since Barack Obama took office", (ii) the Democratic cue with an additional cue that encourages guessing "Based on what you have heard, since Barack Obama took office...", and (iii) a neutral stem.

Based on the estimates in Table 5, we observe that randomly receiving a congenial cue still leads to a higher correct response rate of 21.5 percentage points relative to receiving a neutral cue ($p < 0.001$). On the other hand, an uncongenial cue leads to a lower correct response of 29.8 percentage points ($p < 0.001$). We also estimate how the cue that encourages guessing affects the "Don't Know" response rate. Presumably, a cue that encourages guessing

---

[6]Figure SI 1.5 show that there is some heterogeneity in how the congenial cue affects Republicans as opposed to Democrats. However, the effect is not unique to either party since partisans of both types are more likely to get the correct response when randomly assigned the congenial cue.

Table 4: Partisan Knowledge Gaps with Partisan Cues: Texas Lyceum, Unemployment

	Unemployment has gone up		
	(1)	(2)	(3)
Congenial	0.084$^+$	0.088	0.072
	(0.044)	(0.061)	(0.066)
Uncongenial	−0.172***	−0.134**	−0.164**
	(0.040)	(0.050)	(0.058)
Republican		0.273***	0.203**
		(0.058)	(0.074)
Congenial x Republican		0.009	0.030
		(0.085)	(0.091)
Uncongenial x Republican		−0.065	−0.042
		(0.075)	(0.084)
Constant	0.395***	0.236***	0.056
	(0.030)	(0.041)	(0.170)
R^2	0.048	0.118	0.170
Demographic controls	.	.	Yes
Respondent-items	758	758	752

Dependent variable indicates whether the individual responded that unemployment has gone up since the 2010 midterm elections (which is the correct response). Congenial cue indicates whether the question stem includes the cue towards getting the correct response. For Democrats, this is when the question stem includes the cue "when Republicans regained control of the US Congress." For Republicans, this is when the question stem includes the cue "when the Democrats retained control of the Senate." Demographic controls include age cohort, gender, education level, marital status, number of children, children school enrollment, family income, religion, liberalism/conservatism, and race. Standard errors are heteroskedasticity-robust. All models are linear probability models. Significance levels: + 0.1 * 0.05 ** 0.01 *** 0.001.

would lead to a lower response rate for Don't Know. We find that the guessing cues do not have a very different effect from cues that do not.

Overall, we find again using the YouGov survey and Texas Lyceum survey that questionnaire artifacts, via the addition of partisan cues in the same questions, affects the measured gaps in political knowledge.

Table 5: Partisan Knowledge Gaps with Partisan Cues: Texas Lyceum, Federal Taxes

	Responded "Gone up"		Responded "Don't Know"	
	(1)	(2)	(3)	(4)
Congenial	0.215***	0.171**	−0.077*	−0.081*
	(0.051)	(0.056)	(0.036)	(0.038)
Uncongenial	−0.298***	−0.228***	−0.063	−0.077
	(0.042)	(0.048)	(0.042)	(0.050)
Congenial w/ guessing	0.091+	0.042	−0.074*	−0.066+
	(0.052)	(0.057)	(0.036)	(0.038)
Uncongenial w/ guessing	−0.290***	−0.234***	−0.038	−0.051
	(0.040)	(0.047)	(0.041)	(0.043)
Constant	0.381***	−0.223	0.187***	0.884***
	(0.031)	(0.177)	(0.025)	(0.180)
R^2	0.151	0.219	0.009	0.126
Demographic controls	.	Yes	.	Yes
Respondent-items	758	752	758	752

Dependent variables indicate whether the individual responded that federal taxes had gone up since the 2010 midterm elections (which are the correct responses) or "don't know". Congenial cue indicates whether the question stem includes the cue towards getting the correct response. Only Republicans can get a congenial cue for these questions. This happens when Republicans receive the question stem that includes the cue "since Barack Obama took office." Separately, individuals can also be assigned a cue that encourages guessing. This happens when the question stem includes "Based on what you have heard, since Barack Obama took office..." Demographic controls include age cohort, gender, education level, marital status, number of children, children school enrollment, family income, religion, liberalism/conservatism, and race. Standard errors are heteroskedasticity-robust. All models are linear probability models. Significance levels: + 0.1 * 0.05 ** 0.01 *** 0.001.

The Effects of Scoring Responses on Partisan Gaps

In a last study we examine the consequences of scoring decisions in surveys. How do decisions in *how we score knowledge* affect the partisan gaps? Does the classic multiple choice design affect the partisan gaps we find? We depart from this design prevalent in survey questions about political knowledge and introduce an assessment that includes an evaluation of respondents confidence in knowledge.

Research Design and Data

Usually respondents see a survey question and can select a single response out of a set of n given options. Knowledge is then coded as selecting the one correct response to the question out of the n options (see, for example, Plescia, Kritzinger and Eberl 2021). Question design like this does not differentiate between confidently held beliefs, vague hunches, lucky guesses, or expressive responses that are guided by partisan or ideological attachments. In our Confidence Coding Design (CCD) the respondents rate a series of claims on a 0 to 10 Likert scale going from 'definitely false' to 'definitely true.' We hence focuses on the confidence scoring of knowledge. Survey participants are asked to indicate how certain they are that a given statement is factually true. Asking respondents not only whether they think a statement is true but also how confident they are that the statement is true reduces the likelihood that we conflate confidently held knowledge with any of the other response types that might lead to a correct answer in the multiple choice coding scheme.

In order to be able to compare this question design to the previous studies in this manuscript we examine the effect of the CCD approach on the partisan gaps with the same knowledge questions presented in the first study at the beginning of the manuscript. Using the same questions and answers allows us to directly compare the responses to the multiple choice questions in Study 1 to the Likert scale responses in Study 4. Our question design is inspired by other attempts to take account of confidence in distinguishing misinformation from incorrect responses stemming from processes like inference, unlucky guessing, and such (for instance, Pasek, Sood and Krosnick 2015). While we consider this confidence coding to be the gold standard when it comes to removing inflationary features from the survey design it is a larger deviation from common survey design features. In our surveys this question design does not encourage guessing and features no social proof.[7] As before, congenial partisanship

---

[7]The exact question wording for each of the items is presented in Appendix SI 3.

is coded for as 1 for instances where the individuals partisanship aligns with the content of the question and 0 otherwise. For example, the question about Donald Trump's executive order is coded as congenial for Republican survey participants but as uncongenial for Democrats.

In our final analysis, we examine how congenial partisanship affects answers to survey questions in multiple choice and the Likert scale response options of the CCD approach. As before, correct responses in the multiple choice treatment are responses that select the correct option out of the n answer options presented in the question. In the CCD treatment the scoring of questions is more complicated. Survey participants see the same question as in the multiple choice treatment but have to rank the correctness of all of the n answer option from the multiple choice treatment. We code a response to a question as correct if four conditions are met

1. The correct answer must have a confidence of 10.

2. The correct answer must be the maximum response.

3. The correct answer must also be unique.

4. The confidence in the incorrect answers cannot be above a threshold θ.

This means that we only code an answer to a question as correct if the respondent indicates that they are fully confident that the correct answer is correct and that they do not indicate that any of the incorrect options might also be correct.[8].

---

[8]We set the threshold θ to be at 0 in the analysis that follows but also present a robustness check in the *TODO appendix XYZ* where correct responses are coded if the confidence for the correct answers is larger than 7 and the confidence in incorrect responses is less than 3. Conditions 2 always applies in the original coding but must be specified for the robustness checks.

Results from Study 4 (MTurk 2)

Using the data from study 4 we formalize the above observation as before. We regress the dependent variable, an indicator of whether the response is correct, on the interaction of the survey conditions (Multiple Choice and Relative Scoring) and the congenial dummy:

$$\text{Correct}_{ijk} = \alpha + \beta \text{Congenial}_i + \gamma \text{Condition}_k + \delta_k(\text{Congenial}_i \times \text{Condition}_k) + \varepsilon_{ijk} \quad (3)$$

for respondents i, survey item j, and condition k. As in Equation (1) β captures the difference in proportion of correct responses when the answer to the question is congenial to the respondents party affiliation. A positive estimate indicates that respondents are more likely to choose the correct response when it is congenial to their party affiliation. δ captures the difference in how the two scoring treatments, multiple choice and confidence coding, affect the knowledge gaps across partisans. In the pooled equation, which includes all questions we also include four question fixed effects, question$_j$.

TODO Discussion below depends on final models

Table 6 reports the results from Equation (3). Columns 1 through 4 report the question specific estimates. Column 5 pools all questions and adds question fixed effects to the model.

Figure XYZ reports

Table 6: NEW Results Study 4

	Individual survey question				
	Affordable Care Act (1)	Affordable Care Act 2 (2)	Greenhouse Gases (3)	Donald Trump (4)	All (5)
Intercept	0.18*	0.21*	0.22*	0.79*	0.29*
	[0.12; 0.23]	[0.15; 0.27]	[0.16; 0.28]	[0.75; 0.84]	[0.25; 0.32]
Congenial	0.09*	0.08*	0.09*	0.00	0.03
	[0.02; 0.17]	[0.01; 0.16]	[0.01; 0.17]	[−0.07; 0.08]	[−0.02; 0.07]
Relative Scoring (RS)	−0.18*	−0.20*	−0.21*	−0.74*	−0.38*
	[−0.23; −0.12]	[−0.26; −0.14]	[−0.27; −0.14]	[−0.79; −0.68]	[−0.41; −0.34]
Congenial*RL	−0.07	−0.07	−0.10*	0.03	0.02
	[−0.15; 0.01]	[−0.15; 0.01]	[−0.18; −0.02]	[−0.06; 0.12]	[−0.03; 0.07]
R^2	0.12	0.13	0.15	0.53	0.30
Survey item FE	No	No	No	No	Yes
Items	1	1	1	1	4
Respondents	902	902	902	902	3608
Respondent-Items	902	902	902	902	902

* Null hypothesis value outside the confidence interval.

Figure 5: Partisan Gaps in Knowledge in different question designs
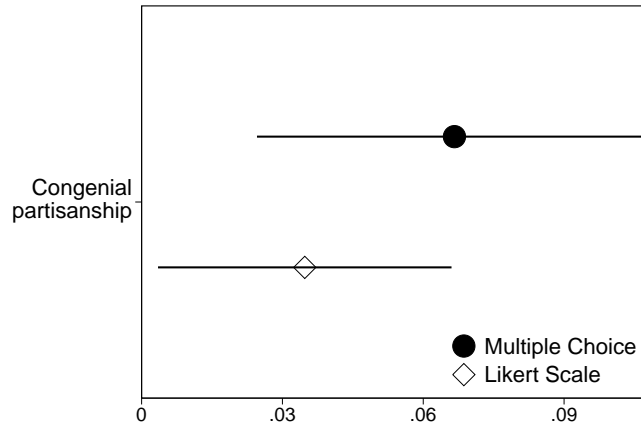
Figure shows the estimated partisan gaps in knowledge from the MTurk sample for Study 2 for two different survey conditions. The multiple choice condition provides five closed-ended options, including the correct answer and a "Don't Know". The Likert scale condition only considers the selection of the correct answer with a full confidence of 10 (see Appendix SI 3). Estimates correspond to those reported in Table 7. Horizontal bars are 95% confidence intervals.

Table 7: Partisan Gaps in Knowledge in different question designs

	IMC	CCD
	Multiple Choice	Likert Scale
Congenial	0.07*	0.03*
	[0.02; 0.11]	[0.00; 0.07]
(Intercept)	0.19*	0.08*
	[0.15; 0.24]	[0.05; 0.12]
R^2	0.24	0.25
Survey item FE	Yes	Yes
N Clusters	480	422
Num. obs.	1920	1688

* Null hypothesis value outside the confidence interval.

Table 8: Confidence Scoring and Knowledge Gaps: MTurk Study 2

	Individual survey question				
	Affordable Care Act	Affordable Care Act 2	Greenhouse gases	President Trump	All
	(1)	(2)	(3)	(4)	(5)
Congenial	0.098*	0.089*	0.103*	0.011	0.062**
	(0.039)	(0.040)	(0.041)	(0.038)	(0.021)
CCD	0.003	−0.145***	−0.026	−0.169***	−0.097***
	(0.042)	(0.036)	(0.043)	(0.039)	(0.022)
Congenial × CCD	−0.208***	−0.113*	0.234***	−0.092	−0.019
	(0.051)	(0.046)	(0.060)	(0.063)	(0.027)
R^2	0.045	0.095	0.079	0.053	0.231
Survey item FE	No	No	No	No	Yes
Items	1	1	1	1	4
Respondents	878	878	878	878	878
Respondent-items	878	878	878	878	3,512

Dependent variables indicate whether the respondent answered the question(s) correctly. See Appendix SI 3 for exact wording of the four questions. Columns (1)–(4) estimates by the individual survey questions. Column (5) includes all questions and adds the survey question fixed effects. All models are linear probability models. In the CCD (Confidence-coding design), a response is correct only if the correct answer is selected with a full confidence of 10. The baseline are the multiple choice designs. Standard errors are clustered at the respondent level. Significance levels: + 0.1 * 0.05 ** 0.01 *** 0.001.

26

Discussion and Conclusion

Since at least the publication of Bartels (2002), the conventional wisdom has been that partisan gaps in beliefs about politically consequential facts are wide and pervasive. The conventional wisdom in academia has also become the received wisdom for the mass public — nearly 80% of Americans believe that Democrats and Republicans disagree on facts (Laloggia 2018).

In line with other research on this topic (Bullock et al. 2015; Prior, Sood and Khanna 2015; Schaffner and Luks 2018, though see Berinsky 2017 and Peterson and Iyengar 2020), our results suggests that a big chunk of partisan gap is not founded in differences in beliefs. We find that conventional aspects of survey items like not asking don't know, inserting a partisan cue, and treating inconfident answers as knowledge inflate the patisan gaps that we see on surveys.

The fact that partisan gaps are smaller may seem at odds with some political behavior research but a careful reading of recent research suggests that small partisan gaps are to be expected. For instance, at odds with the theory of selective exposure, which posits vast imbalances in consumption of partisan news, recent studies show that most people consume very little political news (Prior 2007; Flaxman, Goel and Rao 2016), and the news that they do consume is relatively balanced (Flaxman, Goel and Rao 2016; Garz et al. 2018; Gentzkow and Shapiro 2011; Guess 2020). Other evidence points to the fact that Democrats and Republicans update in light of events in a similar fashion (Gerber and Green 1999; Kernell and Kernell 2019).

The results however paint a mixed picture about democratic competence. Small gaps are partly a consequence of the fact that the average respondent doesn't have any confidently held beliefs about the issue at hand. It is mostly ignorance masquerading as partisan gaps. The upside is that partisan gaps are small and the downside is that people know even less than we assume.

References

Abelson, Robert P. 1959. "Modes of Resolution of Belief Dilemmas." *Journal of Conflict Resolution* 3(4):343–352.

Abrajano, Marisa. 2015. "Reexamining the "racial gap" in political knowledge." *The Journal of Politics* 77(1):44–54.

Achen, Christopher H. and Larry M. Bartels. 2016. *Democracy for Realists: Why Elections Do Not Produce Responsive Government*. Princeton: Princeton University Press.

Barabas, Jason, Jennifer Jerit, William Pollock and Carlisle Rainey. 2014. "The question (s) of political knowledge." *American Political Science Review* 108(4):840–855.

Bartels, Larry M. 2002. "Beyond the Running Tally: Partisan Bias in Political Perceptions." *Political Behavior* 24(2):1061–1078.

Bayes, Robin, James N Druckman, Avery Goods and Daniel C Molden. 2020. "When and how different motives can drive motivated political reasoning." *Political Psychology* 41(5):1031–1052.

Berinsky, Adam J. 2017. "Telling the Truth About Believing the Lies? Evidence for the Limited Prevalence of Expressive Survey Responding." *Journal of Politics* 80(1):211–224.

Berinsky, Adam J., Gergory A. Huber and Gabriel S. Lenz. 2012. "Evaluating Online Labor Markets for Experimental Research: Amazon.com's Mechanical Turk." *Political Analysis* 20(2):351–368.

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.

Campbell, Angus, Philip E Converse, Warren E Miller and Donald E Stokes. 1980. *The american voter*. University of Chicago Press.

Delli Carpini, MIchel X. and Scott Keeter. 1996. *What Americans Know About Politics and Why It Matters*. New York: Yale University Press.

Dolan, Kathleen. 2011. "Do women and men know different things? Measuring gender differences in political knowledge." *The Journal of Politics* 73(1):97–107.

Festinger, Leon. 1962. *A Theory of Cognitive Dissonance*. Palo Alto: Stanford University Press.

Flaxman, Seth, Sharad Goel and Justin M. Rao. 2016. "Filter Bubbles, Echo Chambers, and Online News Consumption." *Public Opinion Quarterly* 80(S1):298–320.

Flynn, DJ, Brendan Nyhan and Jason Reifler. 2017. "The nature and origins of misperceptions: Understanding false and unsupported beliefs about politics." *Political Psychology* 38:127–150.

Garz, Marcel, Gaurav Sood, Daniel F. Stone and Justin Wallace. 2018. "What Drives Demand for Media Slant?" Working paper.

Gentzkow, Matthew and Jesse M. Shapiro. 2011. "Ideological Segregation Online and Offline." *Quarterly Journal of Economics* 126(4):1799–1839.

Gerber, Alan and Donald Green. 1999. "Misperceptions About Perceptual Bias." *Annual Review of Political Science* 2:189–210.

Goggin, Stephen N, John A Henderson and Alexander G Theodoridis. 2020. "What goes with red and blue? Mapping partisan and ideological associations in the minds of voters." *Political Behavior* 42(4):985–1013.

Guess, Andrew M. 2020. "(Almost) Everything in Moderation: New Evidence on Americans' Online Media Diets." *American Journal of Political Science* forthcoming.

Hill, Seth J. 2017. "Learning together slowly: Bayesian learning about political facts." *The Journal of Politics* 79(4):1403–1418.

Hochschild, Jennifer and Katherine Levine Einstein. 2015. "'It isn't what we don't know that gives us trouble, it's what we know that ain't so': Misinformation and democratic politics." *British Journal of Political Science* 45(3):467–475.

Huber, Gregory A. and Omer Yair. 2018. How Robust is Evidence of Partisan Perceptual Bias in Survey Responses? A New Approach for Studying Expressive Responding. In *Annual Meeting of the Midwest Political Science Association*. Chicago: .

Jerit, Jennifer and Jason Barabas. 2012. "Partisan Perceptual Bias and the Information Environment." *The Journal of Politics* 74(3):672–684.

Kernell, Georgia and Samuel Kernell. 2019. "Monitoring the Economy." *Journal of Elections, Public Opinion, and Parties* forthcoming.

Klar, Samara. 2014. "Partisanship in a social setting." *American journal of political science* 58(3):687–704.

Klar, Samara and Yanna Krupnikov. 2016. *Independent Politics: How American Disdain for Parties Leads to Political Inaction*. Cambridge University Press.

Laloggia, John. 2018. "Republicans and Democrats Agree: They Can't Agree on Basic Facts." *Pew Research FactTank* August 23.

Lodge, Milton and Charles S. Taber. 2013. *The Rationalizing Voter*. New York: Cambridge University Press.

Luskin, Robert C. and John G. Bullock. 2011. ""Don't Know" Means "Don't Know": DK Responses and the Public's Level of Political Knowledge." *The Journal of Politics* 73(2):547–557.

Malka, Ariel and Mark Adelman. 2022. "Expressive survey responding: A closer look at the evidence and its implications for American democracy." *Perspectives on Politics* pp. 1–12.

Merkley, Eric and Dominik A Stecula. 2018. "Party elites or manufactured doubt? The informational context of climate change polarization." *Science Communication* 40(2):258–274.

Pasek, Josh, Gaurav Sood and Jon A Krosnick. 2015. "Misinformed about the affordable care act? Leveraging certainty to assess the prevalence of misperceptions." *Journal of Communication* 65(4):660–673.

Petersen, Michael Bang, Martin Skov, Søren Serritzlew and Thomas Ramsøy. 2013. "Motivated reasoning and political parties: Evidence for increased processing in the face of party cues." *Political Behavior* 35(4):831–854.

Peterson, Erik and Shanto Iyengar. 2020. "Partisan Gaps in Political Information and Information-Seeking Behavior: Motivated Reasoning or Cheerleading?" *American Journal of Political Science* forthcoming.

Peterson, Erik and Shanto Iyengar. 2021. "Partisan Gaps in Political Information and Information-Seeking Behavior: Motivated Reasoning or Cheerleading?" *American Journal of Political Science* 65(1):133–147.

Plescia, Carolina, Sylvia Kritzinger and Jakob-Moritz Eberl. 2021. "'The enemy within': Campaign attention and motivated reasoning in voter perceptions of intra-party conflict." *Party Politics* 27(5):917–927.

Prior, Markus. 2007. *Post-Broadcast Democracy: How Media Choice Increases Inequality in Political Involvement and Polarizes Elections*. New York: Cambridge University Press.

Prior, Markus, Gaurav Sood and Kabir 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(4):489–518.

Rahn, Wendy M. 1993. "The role of partisan stereotypes in information processing about political candidates." *American Journal of Political Science* pp. 472–496.

Redlawsk, David P. 2002. "Hot cognition or cool consideration? Testing the effects of motivated reasoning on political decision making." *Journal of Politics* 64(4):1021–1044.

Schaffner, Brian F. and Samantha Luks. 2018. "Misinformation or Expressive Responding? What an Inauguration Crowd Can Tell Us About the Source of Political Misinformation in Surveys." *Public Opinion Quarterly* 82(1):135–147.

Schattschneider, Eric Elmer. 1960. "The Semisovereign people; a realist's view of democracy in America.".

Stroud, Natalie Jomini. 2008. "Media use and political predispositions: Revisiting the concept of selective exposure." *Political Behavior* 30(3):341–366.

Stroud, Natalie Jomini. 2010. "Polarization and Partisan Selective Exposure." *Journal of Communication* 60:556–576.

Taber, Charles S and Milton Lodge. 2006. "Motivated Skepticism in the Evaluation of Political Beliefs." *American Journal of Political Science* 50(3):755–769.

Zaller, John R. 1992. *The Nature and Origins of Mass Opinion*. Cambridge: Cambridge University Press.

SUPPORTING INFORMATION

SI 1   Supporting figures

Figure SI 1.1: MTurk Study 1—IDA and CUD

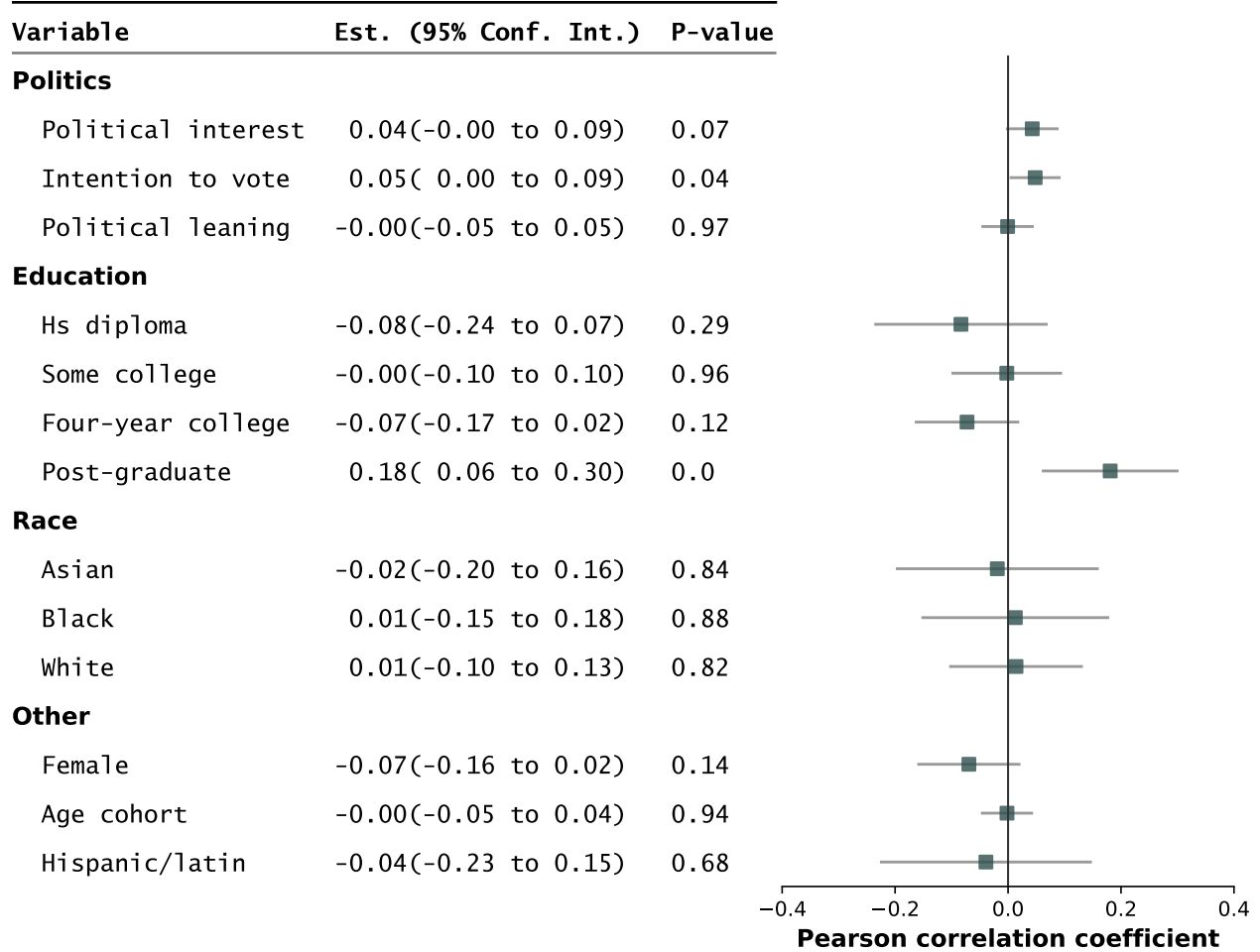| Variable	Est. (95% Conf. Int.)	P-value
Politics		
Political interest	0.04(-0.00 to 0.09)	0.07
Intention to vote	0.05(0.00 to 0.09)	0.04
Political leaning	-0.00(-0.05 to 0.05)	0.97
Education		
Hs diploma	-0.08(-0.24 to 0.07)	0.29
Some college	-0.00(-0.10 to 0.10)	0.96
Four-year college	-0.07(-0.17 to 0.02)	0.12
Post-graduate	0.18(0.06 to 0.30)	0.0
Race		
Asian	-0.02(-0.20 to 0.16)	0.84
Black	0.01(-0.15 to 0.18)	0.88
White	0.01(-0.10 to 0.13)	0.82
Other		
Female	-0.07(-0.16 to 0.02)	0.14
Age cohort	-0.00(-0.05 to 0.04)	0.94
Hispanic/latin	-0.04(-0.23 to 0.15)	0.68

Pearson correlation coefficient

Figure shows the balance tests of respondent characteristics for the Amazon Mechanical Turk Study 1 sample. The tests compares respondents assigned to the IDA condition vs. respondents assigned to the CUD condition. See Table 1 in The Effect of Inflationary Survey Design on Partisan Gaps. Rows are self-reported characteristics. Second column reports the estimates from regressing the characteristics on the CUD dummy, with IDA as the baseline. Third column reports the p-values. Horizontal bars are 95% confidence intervals constructed from robust standard errors.

Figure SI 1.2: MTurk Study 1—IDA and FSR

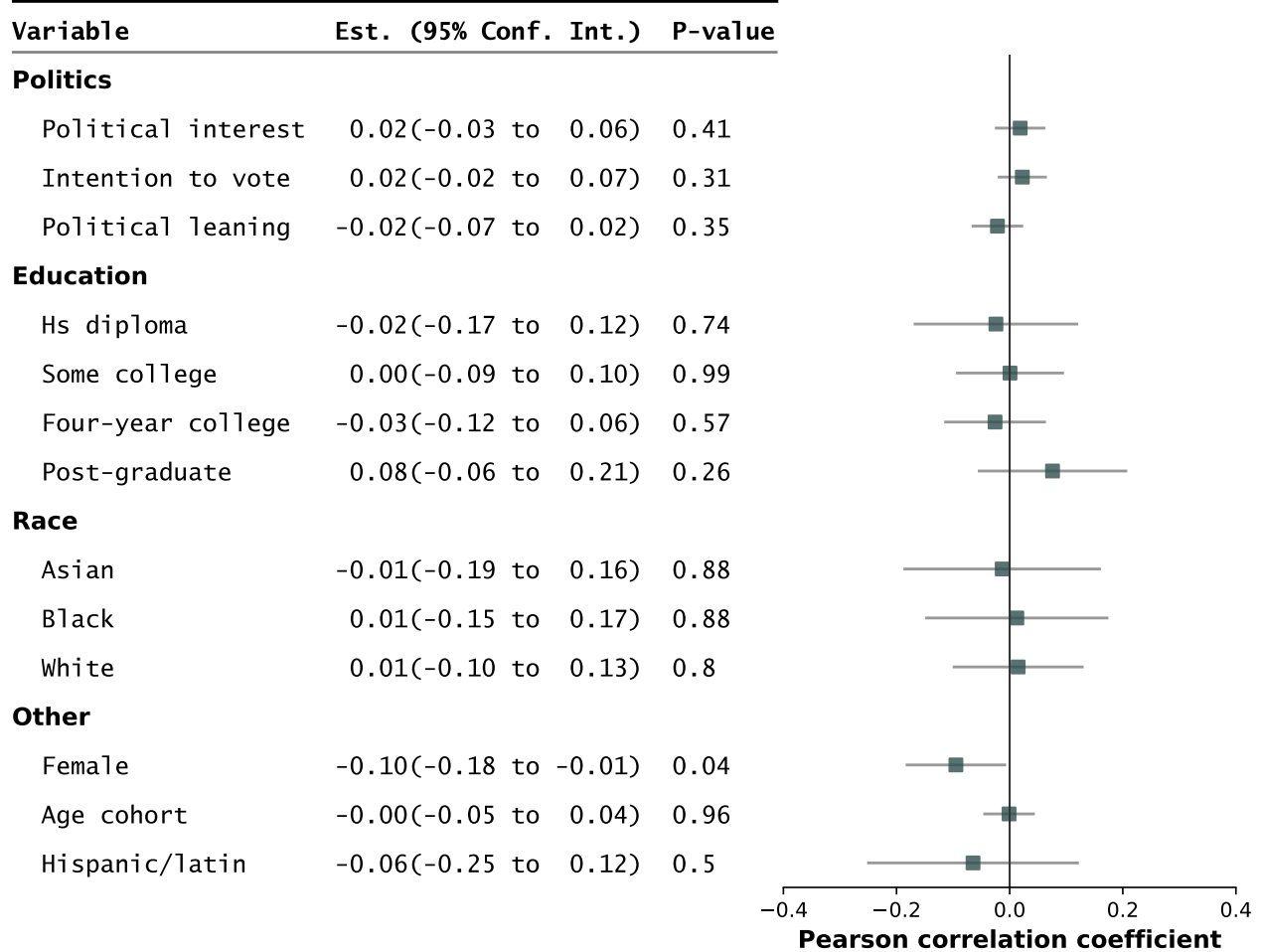| Variable	Est. (95% Conf. Int.)	P-value
Politics		
Political interest	0.02(-0.03 to 0.06)	0.41
Intention to vote	0.02(-0.02 to 0.07)	0.31
Political leaning	-0.02(-0.07 to 0.02)	0.35
Education		
Hs diploma	-0.02(-0.17 to 0.12)	0.74
Some college	0.00(-0.09 to 0.10)	0.99
Four-year college	-0.03(-0.12 to 0.06)	0.57
Post-graduate	0.08(-0.06 to 0.21)	0.26
Race		
Asian	-0.01(-0.19 to 0.16)	0.88
Black	0.01(-0.15 to 0.17)	0.88
White	0.01(-0.10 to 0.13)	0.8
Other		
Female	-0.10(-0.18 to -0.01)	0.04
Age cohort	-0.00(-0.05 to 0.04)	0.96
Hispanic/latin	-0.06(-0.25 to 0.12)	0.5

Pearson correlation coefficient

Figure shows the balance tests of respondent characteristics for the Amazon Mechanical Turk Study 1 sample. The tests compares respondents assigned to the IDA condition vs. respondents assigned to the FSR condition. See Table 1 in The Effect of Inflationary Survey Design on Partisan Gaps. Rows are self-reported characteristics. Second column reports the estimates from regressing the characteristics on the FSR dummy, with IDA as the baseline. Third column reports the p-values. Horizontal bars are 95% confidence intervals constructed from robust standard errors.

Figure SI 1.3: MTurk Study 1—IDA and IMC

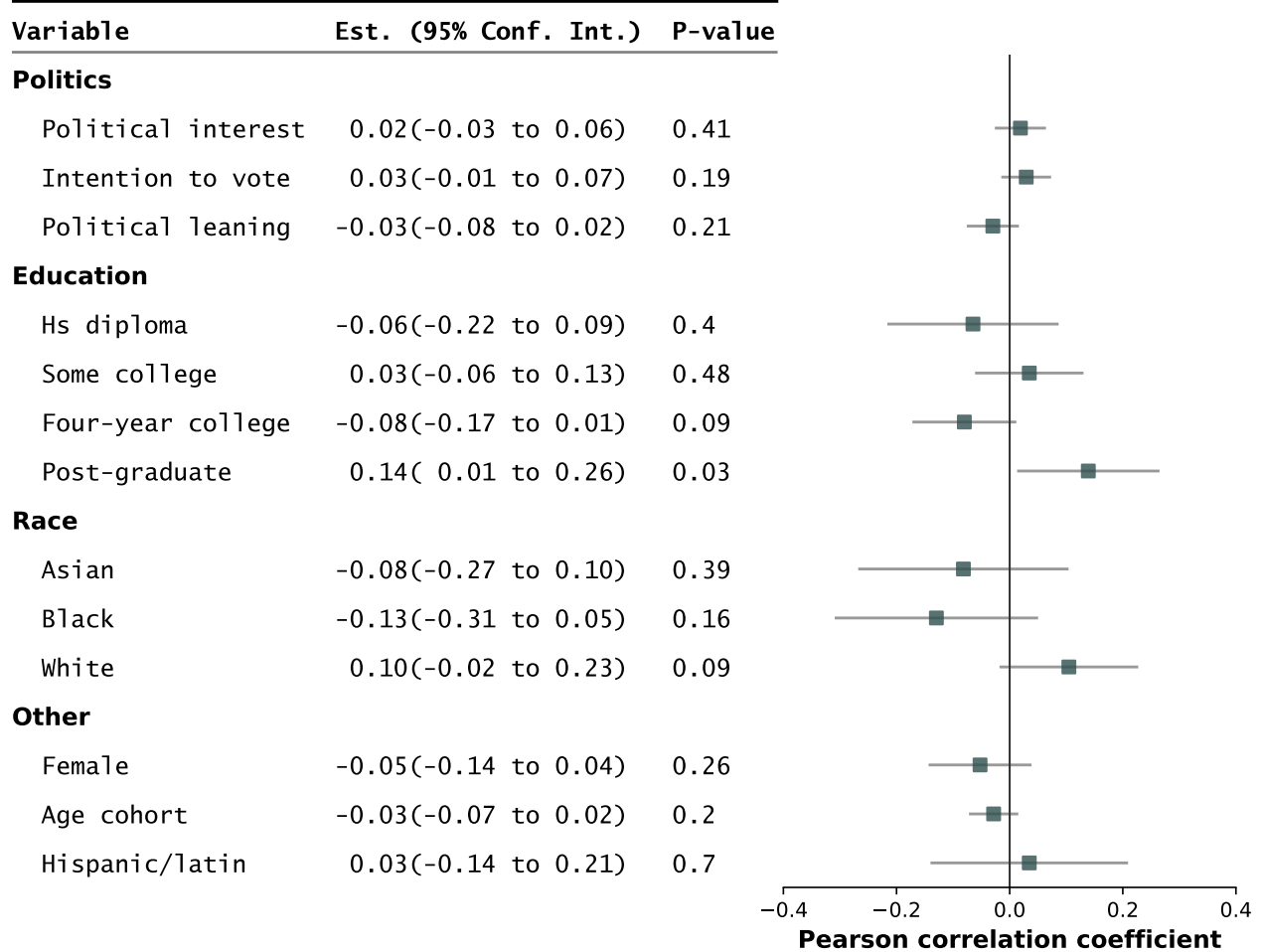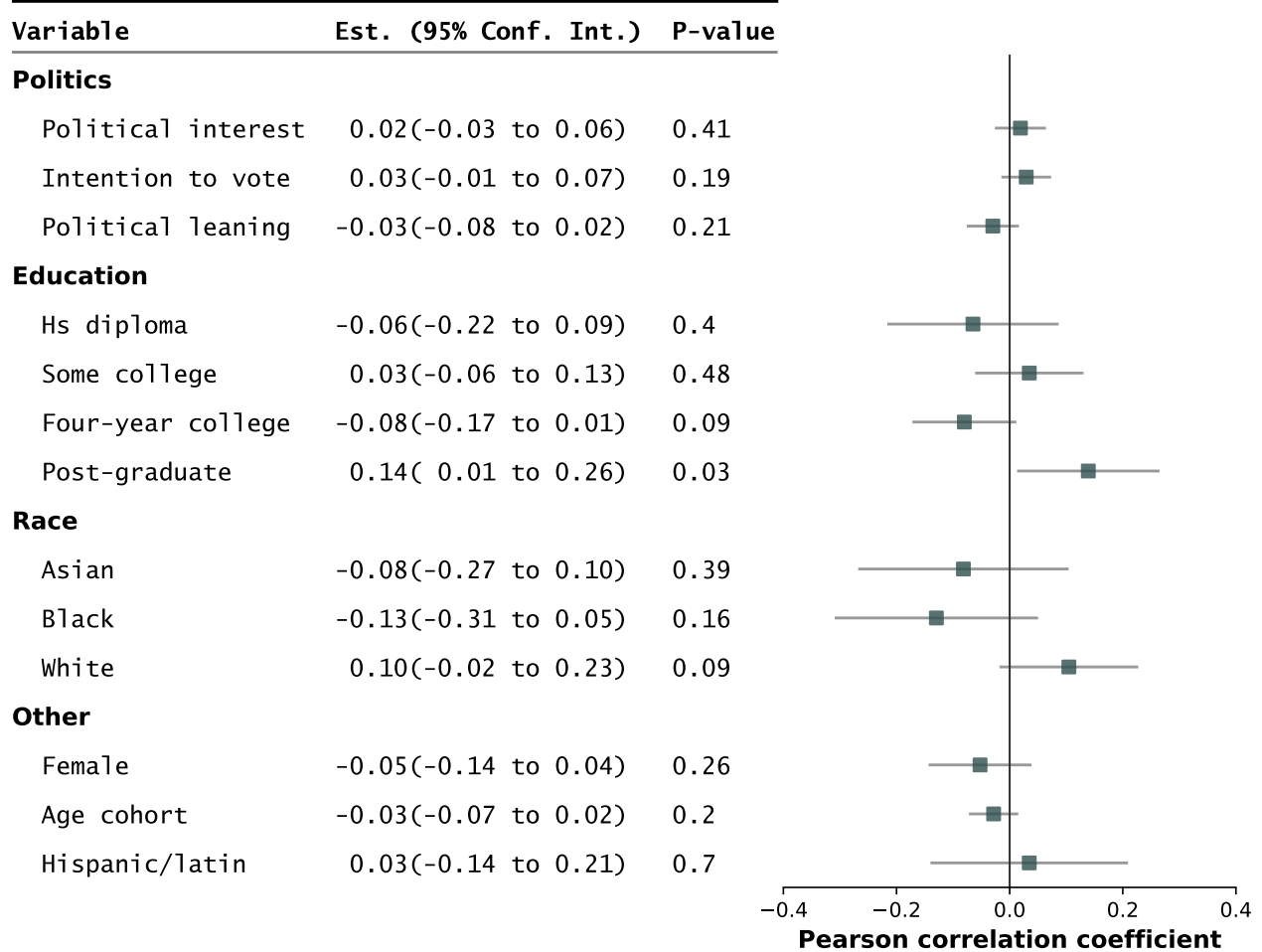| Variable	Est. (95% Conf. Int.)	P-value
Politics		
Political interest	0.02(-0.03 to 0.06)	0.41
Intention to vote	0.03(-0.01 to 0.07)	0.19
Political leaning	-0.03(-0.08 to 0.02)	0.21
Education		
Hs diploma	-0.06(-0.22 to 0.09)	0.4
Some college	0.03(-0.06 to 0.13)	0.48
Four-year college	-0.08(-0.17 to 0.01)	0.09
Post-graduate	0.14(0.01 to 0.26)	0.03
Race		
Asian	-0.08(-0.27 to 0.10)	0.39
Black	-0.13(-0.31 to 0.05)	0.16
White	0.10(-0.02 to 0.23)	0.09
Other		
Female	-0.05(-0.14 to 0.04)	0.26
Age cohort	-0.03(-0.07 to 0.02)	0.2
Hispanic/latin	0.03(-0.14 to 0.21)	0.7

Figure shows the balance tests of respondent characteristics for the Amazon Mechanical Turk Study 1 sample. The tests compares respondents assigned to the IDA condition vs. respondents assigned to the IMC condition. See Table 1 in The Effect of Inflationary Survey Design on Partisan Gaps. Rows are self-reported characteristics. Second column reports the estimates from regressing the characteristics on the IMC dummy, with IDA as the baseline. Third column reports the p-values. Horizontal bars are 95% confidence intervals constructed from robust standard errors.

Figure SI 1.4: MTurk Study 1—IDA and CCD

Variable	Est. (95% Conf. Int.)	P-value
Politics		
Political interest	0.02(-0.03 to 0.06)	0.41
Intention to vote	0.03(-0.01 to 0.07)	0.19
Political leaning	-0.03(-0.08 to 0.02)	0.21
Education		
Hs diploma	-0.06(-0.22 to 0.09)	0.4
Some college	0.03(-0.06 to 0.13)	0.48
Four-year college	-0.08(-0.17 to 0.01)	0.09
Post-graduate	0.14(0.01 to 0.26)	0.03
Race		
Asian	-0.08(-0.27 to 0.10)	0.39
Black	-0.13(-0.31 to 0.05)	0.16
White	0.10(-0.02 to 0.23)	0.09
Other		
Female	-0.05(-0.14 to 0.04)	0.26
Age cohort	-0.03(-0.07 to 0.02)	0.2
Hispanic/latin	0.03(-0.14 to 0.21)	0.7

Pearson correlation coefficient

Figure shows the balance tests of respondent characteristics for the Amazon Mechanical Turk Study 1 sample. The tests compares respondents assigned to the IDA condition vs. respondents assigned to the CCD condition. See Table 1 in The Effect of Inflationary Survey Design on Partisan Gaps. Rows are self-reported characteristics. Second column reports the estimates from regressing the characteristics on the CCD dummy, with IDA as the baseline. Third column reports the p-values. Horizontal bars are 95% confidence intervals constructed from robust standard errors.

Figure SI 1.5: Partisan Knowledge Gaps with Partisan Cues: YouGov

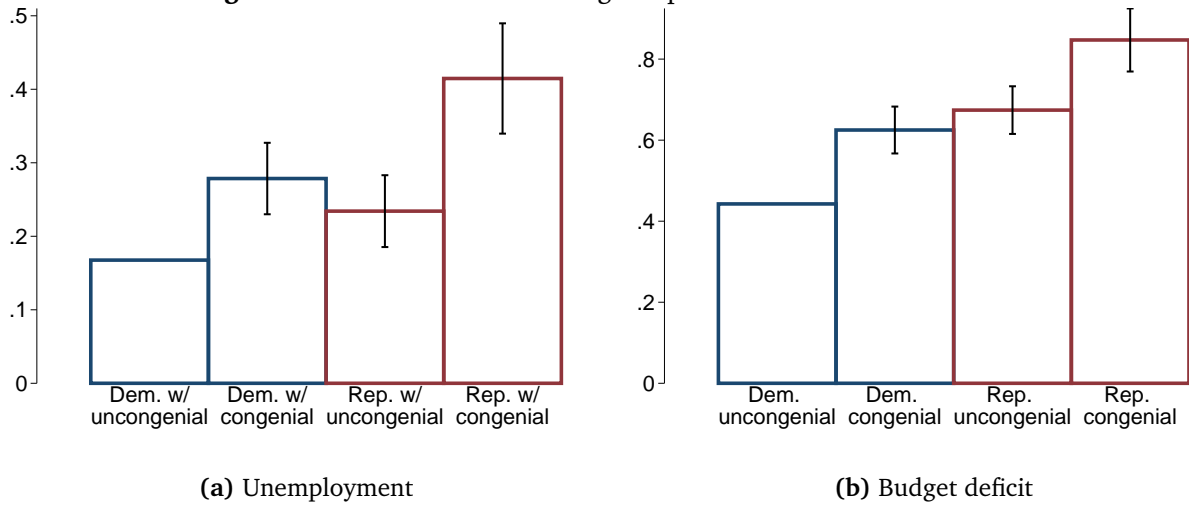**(a)** Unemployment   **(b)** Budget deficit

Figure shows the effect of congenial cues for the YouGov survey by partisanship. Bars indicate the predicted percent of responses saying that unemployment have gone up (correct response) as retrieved from the estimates in Table 3 (columns (2) and (5)). The estimates are obtained by estimating:

$$\text{correct response}_i = \alpha + \beta(congenial\ cue)_i + \gamma(Rep)_i + \delta(congenial\ cue \times Rep)_i + \varepsilon_i.$$

Capped vertical bars indicate 95% confidence intervals.

SI 2 Item Text for the MTurk Study

Preface for Different Conditions

      RW, IP

Now here are some questions about what you may know about politics and public affairs.

      FSR, 14k, 24k

Now here are some questions about what you may know about politics and public affairs. We are interested in measuring what people currently know and can recall on their own and are just as interested in what people don't know as in what they do know. So we'd like your agreement to just say "don't know" if you don't know the answer—without looking anything up or talking with anyone about it.

      Item Text 24k

Now here are a series of statements. On a scale of 0 to 10, where 0 means definitely false, 10 means definitely true, and 5 is exactly in the middle, how definitely true or false is each statement?

- Barack Obama was born in the US (T)

- Barack Obama is a Muslim (F)

- The Affordable Care Act gives illegal immigrants financial help to buy health insurance (F)

- The Affordable Care Act does not create government panels to make decisions about end-of-life care (T)

- Temperatures around the world are increasing because of human activity, like burning coal and gasoline (T)

- Most climate scientists believe that global warming is not occurring (F)

- In the 2016 presidential election, President Trump won the majority of the legally cast votes (F)

- The vaccine for measles, mumps, and rubella (MMR) causes autism in children. (F)

- Since 2012, the annual federal budget deficit has increased. (T)

      Rest of the Conditions, By Item

- Obama's Birthplace

  RW and IP

  According to the Constitution, American presidents must be "natural born citizens." Some people believe Barack Obama was not born in the United States, but was born in another country. Do you think Barack Obama was born in ...?

- The US
  - Another country

FSR

Some people believe Barack Obama was not born in the United States, but was born in another country. Was he born in ...?

  - The US
  - Another country
  - DK (plus DK pref)

14k

Was Barack Obama born in ...?

  - the US
  - Another country
  - DK (plus DK pref)

- Obama Religion
  RW

Do you personally believe that Barack Obama is a ...?

  - Muslim
  - Christian

IP

Most people have a religion. Some people believe Barack Obama is a Muslim. Do you personally believe that Barack Obama is a ...?

  - Muslim
  - Christian

FSR

Some people believe Barack Obama is a Muslim. Is he a ...?

  - Muslim
  - Christian
  - DK (+ DK pref)

14k

Is Barack Obama a . . . ?

- – Muslim
- – Christian
- – DK (plus DK pref)

- ACA Illegal
  RW

To the best of your knowledge, would you say the Affordable Care Act. . . ?

- – Gives illegal immigrants financial help to buy health insurance
- – Does not give illegal immigrants financial help to buy health insurance

IP

As you may know, there is currently talk of changing the Affordable Care Act (ACA), enacted in 2010. Some people believe that the ACA gives illegal immigrants financial help to buy health insurance. To the best of your knowledge, would you say the ACA. . . ?

- – Gives illegal immigrants financial help to buy health insurance
- – Does not give illegal immigrants financial help to buy health insurance

FSR

Some people believe that Affordable Care Act gives illegal immigrants financial help to buy health insurance. Does the Affordable Care Act. . . ?

- – Give illegal immigrants financial help to buy health insurance
- – Not give illegal immigrants financial help to buy health insurance
- – DK (+ DK pref)

14k
Does the Affordable Care Act. . . ?

- – Give illegal immigrants financial help to buy health insurance
- – Not Give illegal immigrants financial help to buy health insurance
- – Don't know (+ DK pref)

- ACA—Death Panels
  RW
  To the best of your knowledge, would you say that the Affordable Care Act . . . ?

    - Creates government panels to make decisions about end-of-life care
    - Does not create government panels to make decisions about end-of-life care

  IP

  Some people believe that Affordable Care Act establishes a government panel to make decisions about end-of-life care. To the best of your knowledge, would you say that the Affordable Care Act . . . ?

    - Creates government panels to make decisions about end-of-life care
    - Does not create government panels to make decisions about end-of-life care

  FSR

  Some people believe that Affordable Care Act establishes a government panel to make decisions about end-of-life care. Does the Affordable Care Act. . . ?

    - Creates government panels to make decisions about end-of-life care
    - Does not create government panels to make decisions about end-of-life care
    - DK (+ DK pref)

  14k
  Does the Affordable Care Act . . . ?

    - Creates government panels to make decisions about end-of-life care
    - Does not create government panels to make decisions about end-of-life care
    - DK (+ DK pref)

- Global Warming—Happening + Causes
  RW
  Which of the following best fits your view about this? Are temperatures around the world . . . ?

    - Increasing because of natural variation over time, such as produced the ice age
    - Increasing because of human activity, like burning coal and gasoline
    - Staying about the same as they have been

IP
Recently, you may have noticed that global warming has been getting some attention in the news. Some people believe that temperatures are increasing around the world because of natural variation over time, such as produced the ice age. Which of the following best fits your view about this? Would you say that temperatures around the world are...?

- – Increasing because of natural variation over time, such as produced the ice age
- – Increasing because of human activity, like burning coal and gasoline
- – Staying about the same as they have been

FSR

Some people believe that temperatures are increasing around the world because of natural variation over time, such as produced the ice age. Are temperatures around the world ...?

- – Increasing because of natural variation over time, such as produced the ice age
- – Increasing because of human activity, like burning coal and gasoline
- – Staying about the same as they have been
- – DK (+ DK pref)

14k
Are temperatures around the world ...?

- – Increasing because natural variation over time, such as produced the ice age
- – Increasing because human activity, like burning coal and gasoline
- – Staying about the same as they have been
- – DK (+ DK pref)

- GW—Scientist Agreement
  RW
  Just your impression, which one of the following statements do you think is most accurate?

  - – Most climate scientists believe that global warming is occurring.
  - – Most climate scientists believe that global warming is not occurring.
  - – Climate scientists are about equally divided about whether global warming is occurring or not

IP

As you may know, the term "global warming" refers to the claim that temperatures have been increasing around the world. Some people believe that most climate scientists believe that global warming is not occurring. Just your impression, which one of the following statements do you think is most accurate?

– Most climate scientists believe that global warming is occurring.

– Most climate scientists believe that global warming is not occurring.

– Climate scientists are about equally divided about whether global warming is occurring or not

FSR

Some people believe that most climate scientists believe that global warming is not occurring. Which one of the following statements is most accurate?

– Most climate scientists believe that global warming is occurring.

– Most climate scientists believe that global warming is not occurring.

– Climate scientists are about equally divided about whether global warming is occurring or not

– DK (+ DK pref)

14k

Which one of the following statements is most accurate?

– Most climate scientists believe that global warming is occurring.

– Most climate scientists believe that global warming is NOT occurring.

– Climate scientists are about equally divided about whether global warming is occurring or not

– DK (+ DK pref)

- Voter Fraud

  RW

  As you may know, President Trump has said that several million people voted illegally in the 2016 presidential election and that he won the majority of the legally cast votes. Do you believe that President Trump . . . ?

  – Won the majority of the legally cast votes

  – Did not win the majority of the legally cast votes

  IP

  As you may know, not everyone living in the US has the legal right to vote. President Trump has said that several million people voted illegally in the 2016 presidential election and that he won the majority of the legally cast votes. Do think that that President Trump . . . ?

    – Won the majority of the legally cast votes

    – Did not win the majority of the legally cast votes

FSR
As you may know, President Trump has said that several million people voted illegally in the 2016 presidential election and that he won the majority of the legally cast votes. Did President Trump ...?

    – Won the majority of the legally cast votes

    – Did not win the majority of the legally cast votes

    – DK (+ DK pref)

14k
In the 2016 presidential election, did President Trump ...?

    – Won the majority of the legally cast votes

    – Did not win the majority of the legally cast votes

    – DK (+ DK pref)

- Vaccines
  RW
  From what you have read or heard, do you personally think that the vaccine for Measles, Mumps, and Rubella (MMR):

    – Causes autism in children

    – Does not cause autism is children

IP
As you may know, most children receive the vaccine for Measles, Mumps, and Rubella (MMR). Some people believe that the MMR vaccine causes autism in children. From what you have read or heard, do you personally think that the MMR vaccine:

    – Causes autism in children

    – Does not cause autism is children

FSR
Some people believe that the vaccine for Measles, Mumps, and Rubella (MMR) causes autism in children. Does the MMR vaccine ...?

    – Cause autism in children

    – Not cause autism in children.

    – DK (+ DK pref)

14k
Does the vaccine for Measles, Mumps, and Rubella (MMR) . . . ?

- – Cause autism in children
- – Not cause autism in children.
- – DK (+ DK pref)

- Obama—Budget Deficit
RW
As you may know, the federal government runs a deficit when it spends more than it takes in. Since 2012, would you say that the annual federal budget deficit has . . .

- – Increased
- – Stayed about the same
- – Decreased

IP
As you may know, the federal government runs a deficit when it spends more than it takes in. Since 2012, with the Republicans having the majority in the U.S. House of Representatives, would you say that the annual federal budget deficit has . . .

- – Increased
- – Stayed about the same
- – Decreased

FSR
Since 2012, with the Republicans having the majority in the U.S. House of Representatives,

- – has the annual federal budget deficit . . . .
- – Increased
- – Stayed about the same
- – Decreased
- – DK (+ DK pref)

14k

Since 2012, has the annual federal budget deficit . . .

- – Increased
- – Stayed about the same
- – Decreased
- – DK (+ DK pref)

SI 3 Item Text for the Second MTurk Study

The second Amazon MTurk survey was fielded in April 2017 and had 1,059 participants. In this survey we made use of new questions and probes to examine the effect of question design on (partisan) knowledge. We asked the participants four questions about the Affordable Care Act (2), the effect of greenhouse gases (1), and Donald Trump's recent executive order on immigration (1).

One half of the survey respondents got a conventional closed-ended item with five options including the opportunity to mark Don't know. The other half of the respondents had to assess the truth of statements on a scale from definitely false (0) to definitely true (10).

1. Does the Affordable Care Act ...?

   - CE: Provide coverage for people who are currently in the country illegally, Replace private health insurance with a "single payer system", **Increase the Medicare payroll tax for upper-income Americans**, Reimburse routine mammograms only for women older than 50, Don't know (5)

   - Scale: Rating each response option above from definitely false (0) to definitely true (10). Don't know was not included. See Figure SI 3.1.

2. Are greenhouse gases ...?

   - CE: A cause of respiratory problems, A cause of for lung cancer, Damaging the ozone layer, **A cause of rising sea levels**, or Don't know

   - Scale: Rating each response option above from definitely false (0) to definitely true (10). Don't know was not included. See Figure SI 3.2.

3. And does the Affordable Care Act ...?

   - CE: Create government panels to make end-of-life decisions for people on Medicare, Replace Medicare with a "public option", **Limit future increases in payments to Medicare providers**, Cut benefits to existing Medicare patients, Don't know

   - Scale: Rating each response option above from definitely false (0) to definitely true (10). Don't know was not included. See Figure SI 3.3.

4. Does President Trump's most recent executive order on immigration ...?

   - CE: Subject immigrants living in the U.S. illegally to deportation, Strip immigrants from countries supporting terrorism of their green cards, Strip immigrants from several Muslim-majority countries of their green cards, **Temporarily ban immigrants from several majority-Muslim countries**, Don't know

   - Scale: Rating each response option above from definitely false (0) to definitely true (10). Don't know was not included. See Figure SI 3.4.

If the close-ended questions 3 and 4 were not answered with Don't know the respondents received one of two a follow- up question:

- OE: What made you choose that response?

- CE: What made you choose that response? I asked someone I know, I looked it up, I've read, seen, or heard that, It makes me feel good to think that, It makes sense, in view of other things I know, I just thought I'd take a shot

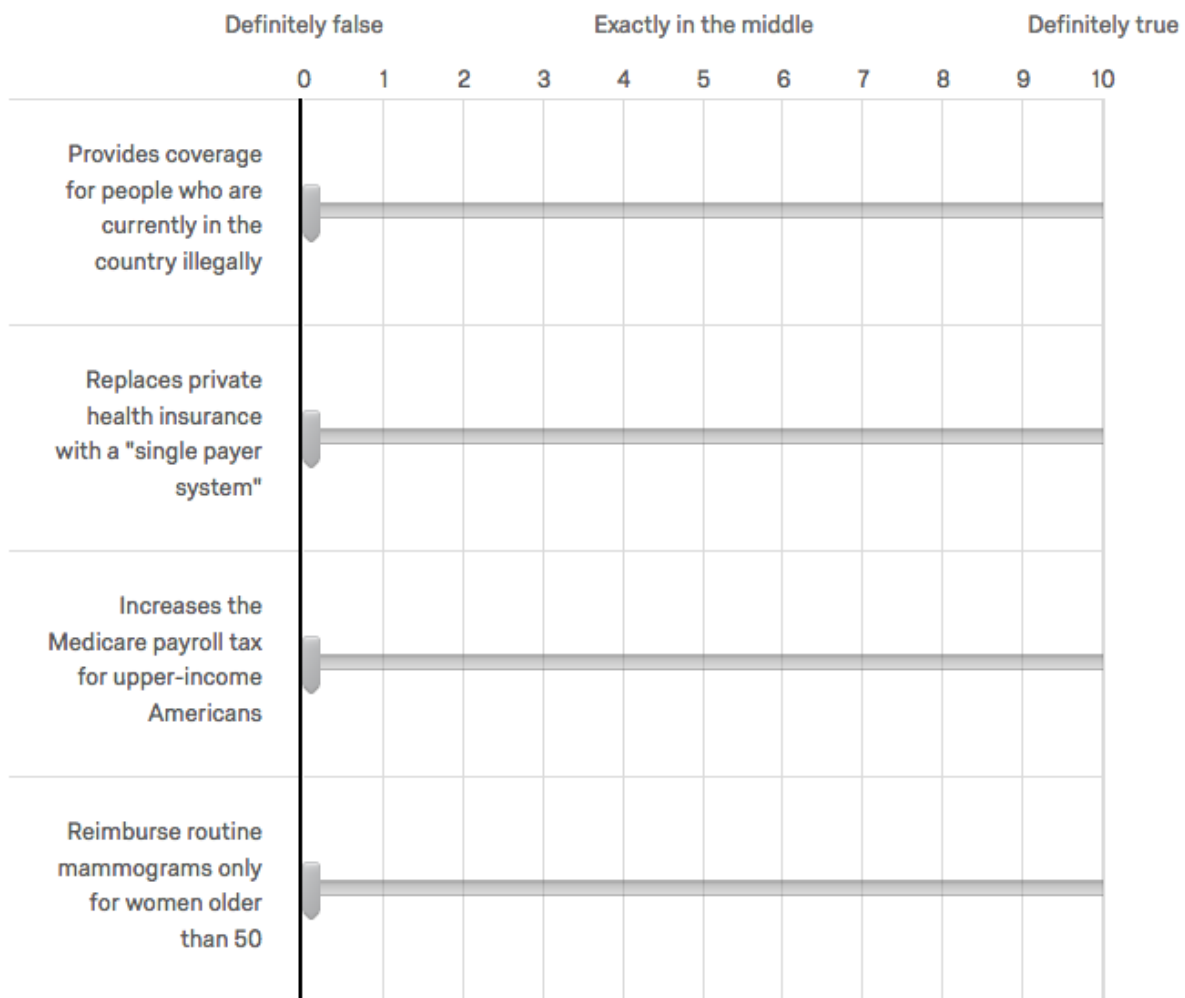**Figure SI 3.1:** Affordable Care Act 1 Scale Question

Figure SI 3.2: Greenhouse Gases Scale Question
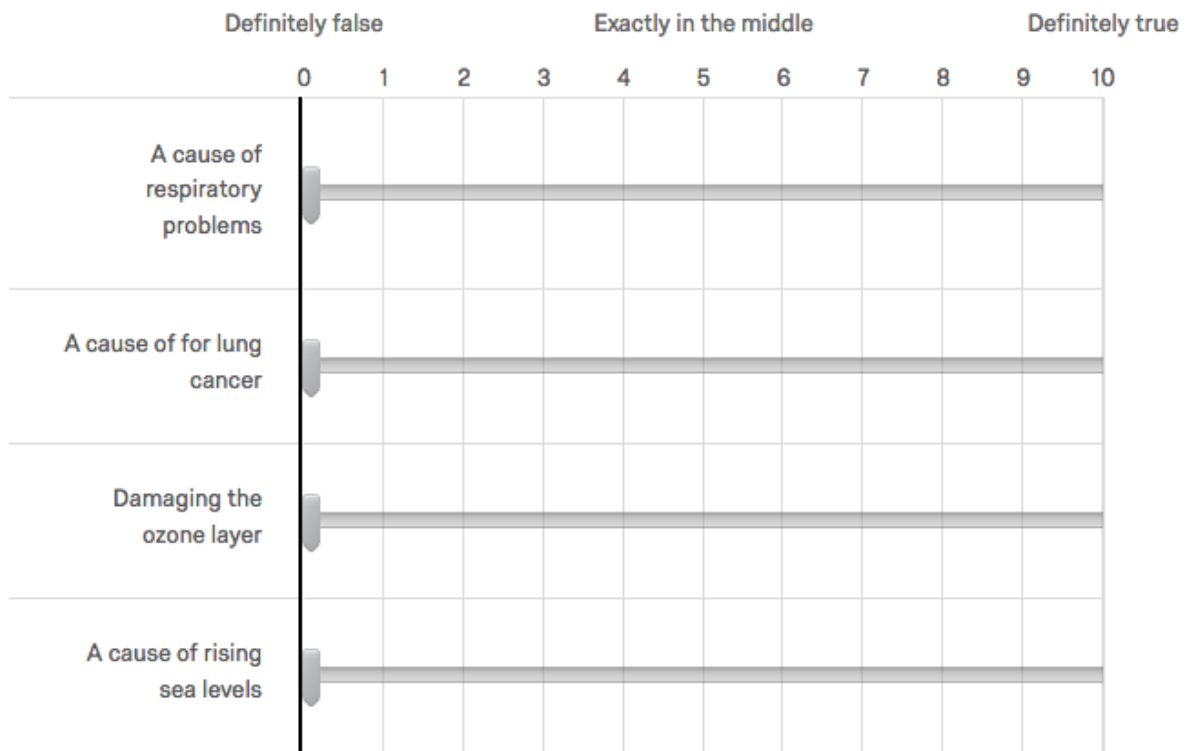
Figure SI 3.3: Affordable Care Act 2 Scale Question
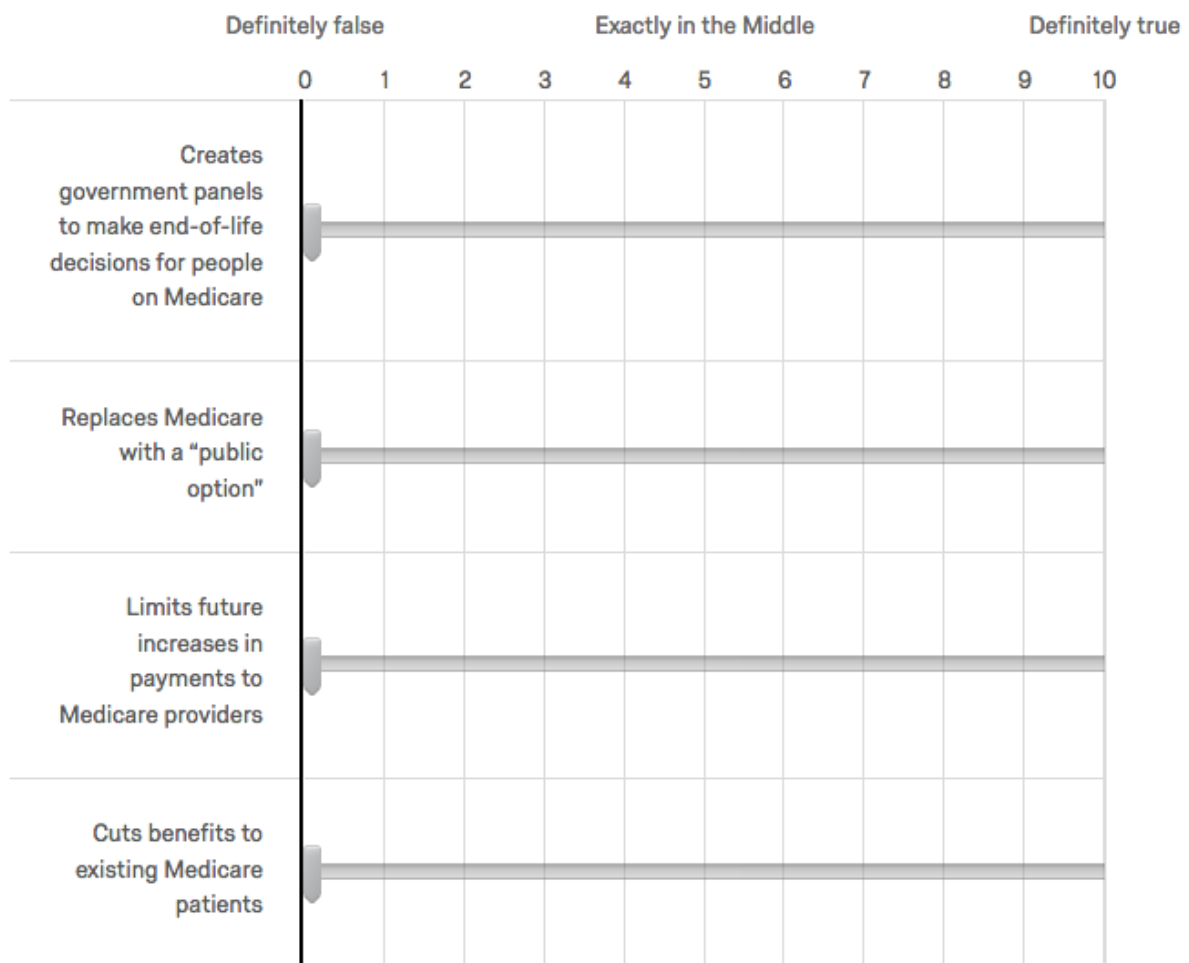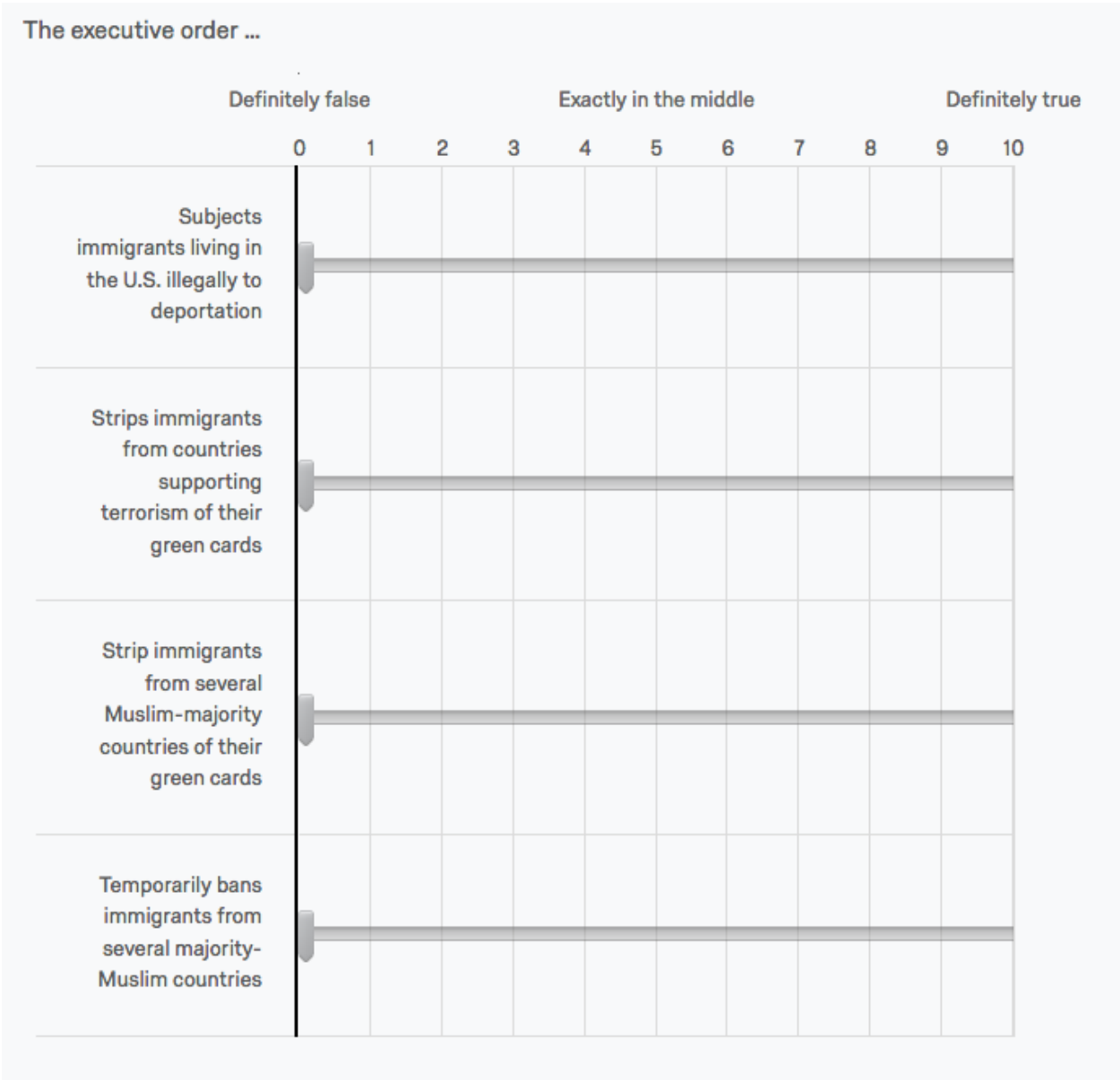
The Affordable Healthcare Act ...

Figure SI 3.4: Executive Order Scale Question

Inference

The following close-ended two deficit related questions were presented to all survey participants.

1. During the time Barack Obama was president, the federal deficit: **Increased**, Remained about the same, Decreased, Don't Know

2. During the time George W. Bush was president, the federal deficit: **Increased**, Remained about the same, Decreased, Don't Know

Both questions were followed by a probe. For one half of the respondents this probe was open and for the other one the probe was closed.

- OE: What made you choose that response?

- CE: What made you choose that response? I asked someone I know, I looked it up, I've read, seen, or heard that, It makes me feel good to think that, It makes sense, in view of other things I know, I just thought I'd take a shot