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Does informing partisans about partisan bias reduce partisan bias?

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Replication files are available in the JOP Data Archive on Dataverse (<https://dataverse.harvard.edu/dataverse/jop>). The empirical analysis has been successfully replicated by the JOP replication analyst.

Supplementary material for this article is available in the online edition.

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Abstract

Party cues, which are signals of political parties' stances on policy issues, have been found to bias partisans' policy opinions toward the positions taken by the party they like. This registered report examines a metacognition bias-regulation hypothesis, investigating if making partisans aware of the potential bias their party attachment introduces into their policy judgments mitigates partisan bias. It employs an experimental design in which subjects are informed that party cues induce people who identify with a party to take policy positions because the party does and that relying on party cues instead of reflecting on the policy content can lead partisans to support policies that they otherwise wouldn't under more careful consideration of the policy. Results show that awareness attenuated the party cue effects in some cases and reduced partisans' confidence that they can infer policy content from party cues.

Replication files are available in the JOP Data Archive on Dataverse (<https://dataverse.harvard.edu/dataverse/jop>). The empirical analysis has been successfully replicated by the JOP replication analyst. Supplementary material for this article is available in the online edition.

Introduction

Researchers have extensively documented the impact of party cues on public support for policies (Campbell et al. 1960; Nie, Verba, and Petrocik 1979; Bullock 2011; Barber and Pope 2019; Slothuus and Bisgaard 2021b). Party cues are information about the political parties' positions on policy issues, and party cue effect refers to the partisans tendency to support policies when they receive cues that their preferred party endorses those policies, but do the opposite when the cue signals instead that either their party opposes or the opposite party supports the policies. Notably, these effects have been observed among both Democrat and Republican, liberal or conservative voters (Barber and Pope 2019) and even among well-informed citizens (Green, Palmquist, and Schickler 2004; Bullock 2011)

Party cue effects stand in contrast to normative views that suggest that democratic systems require citizens to recognize and express their interests on public policies based on the content of the policies rather than factors such as the charisma of the political leaders or the endorsement of public figures. According to this view, people ought to choose parties based on their policy and ideology preferences, instead of selecting or evaluating policies based on their party attachment (Carpini and Keeter 1996; Berelson 1952). But if partisans rely on party cues for policy evaluation, this information mechanism can “go bad” and mislead voters to support positions that they otherwise wouldn't under a proper consideration (Rahn 1993; Kahneman and Frederick 2002; Dancey and Sheagley 2013), distorting aspects of the democratic process that depends on citizens input, such as parties' responsivity and accountability (Arceneaux 2008).

Given the pervasive influence of party cues on partisans' expressed policy attitudes, and the normative notion that it can negatively impact the democratic process, it raises the question of whether reducing partisan bias on policy judgments is possible. Previous research has explored this question by examining the party cue effect under varying conditions. For example, Slothuus and Bisgaard (2021b) investigates whether the party cue influence diminishes when citizens have a clear material self-interest motivation on

supporting or opposing the policy. They found that party cues continue to influence opinion, despite citizens' self-interest motivation. Similarly, Bullock (2011) shows that citizens are influenced by party cues even when abundant policy information is provided, although this influence does not deter them from considering policy information.

In this article, I investigate whether voters' awareness of the party cue effect reduces the partisan bias on policy judgments. Instead of providing detailed policy information or making voters' material self-interest salient, I explore whether highlighting the potential drawbacks of relying on party cues as shortcuts for policy content evaluation mitigates voters' reliance on these cues when expressing their policy positions.

To investigate this question, I draw a link between research on party cues and the discoveries regarding the impact of metacognition on attitudes. Metacognition refers to the process of thinking about one's own thinking. When individuals engage in metacognitive processing, they focus on their own thought processes, become aware of how they use available information to form judgments, and evaluate whether the information they are using is appropriate to form their opinion on a particular topic.

Research has shown that metacognitive interventions, which increase individuals' awareness of potential biases influencing their opinions, can mitigate the influence of these biases on judgment. For example, Petty, Wegener, and White (1998) demonstrate that making individuals aware that the likability of a message source can influence their opinion reduces the impact of source likability on their opinion of the message content. This article builds upon that literature and connects it to studies on partisanship, motivated reasoning, and heuristic processing. From this discussion, I develop hypotheses regarding the potential for metacognitive regulation of partisan bias in policy evaluation, which can be induced by party cue effects. These hypotheses are examined through an experimental design that involves manipulating both party cues and participants' metacognitive awareness of the risks associated with following party cues.

The analyses reveal that a metacognitive intervention can diminish partisan bias linked to the effect of party cues on partisan policy support and reduce partisans' reliance on party cues as a dependable source of policy content. Specifically, when the cue indi-

cated that Republicans in Congress supported the policies, the metacognitive intervention reduced the influence of this cue on policy support by 13.8 percentage points among Republican and 6 percentage points among Democratic partisans. However, the results also revealed some heterogeneity. The effect for Democratic partisans was only marginally significant, and no significant effect was observed when the party positions were reversed in the cue. Overall, this study provides evidence that the awareness intervention can regulate partisan bias in policy support resulting from party policy endorsement, but the observed heterogeneities warrant further examination in future research.

Theory

Political science research has accumulated evidence that providing cues to voters about the policy positions of political parties can significantly impact partisans' policy support (Bullock 2011; Samuels and Zucco Jr 2014; Barber and Pope 2019; Bullock 2020; Slothuus and Bisgaard 2021a; Clifford, Leeper, and Rainey 2023). It can even compel liberal (conservative) voters to express support for conservative (liberal) policies. For example, Barber and Pope (2019) conducted a study in which Democrat and Republican voters were asked about their positions on various issues. Participants were randomly assigned to receive either a liberal or a conservative cue about the position of either Trump or Republicans in Congress on these issues. The cues included Trump expressing support for a minimum wage increase, or Trump opposing a minimum wage increase. The researchers found that Republican voters in the treatment group were significantly more likely than those in the control group (no party cue provided) to support or oppose the same policy statement, depending on whether they were informed that their party leadership held that position. These findings are consistent with other results showing similar patterns among voters of different party affiliations and ideological leanings (Barber and Pope 2019; Green, Palmquist, and Schickler 2004; Bullock 2011).

While research shows that this mechanism of using endorsement cues to form policy evaluation can help voters with low information about policies make decisions as “good”

as they would if they were more informed (Lupia 1994; Lau and Redlawsk 2006), it can also have undesirable consequences. For instance, relying too heavily on party cues can worsen elite-induced public polarization (Skytte 2021). It can also mislead voters into supporting policies they would not have chosen if they had thought more carefully about their decision (Rahn 1993; Kahneman and Frederick 2002; Greitemeyer et al. 2009; Dancey and Sheagley 2013). Additionally, it can reduce the accountability and responsibility of political leaders (Arceneaux 2008). Even in the best-case scenario, overreliance on party cues can increase the vulnerability of partisans to their party, as they need to trust that their party is taking positions that align with partisans' interest. If parties fail to fulfill this expectation and voters rely promptly on party cues, they may end up endorsing policies that they would not have supported otherwise. Hence, while party cues can play a useful role in shaping voter decisions, they should be approached with caution, considering their potential drawbacks. This raises the question of whether there is a mechanism that can provoke voters to exercise that caution.

I explore this question from the perspective of the scholarship on party identification, partisan bias in policy evaluation under party cues, information processing, and the role of metacognition as a mechanism for bias regulation in information processing.

Metacognition refers to cognitions about cognitions (Norman et al. 2019). People engage in metacognitive processing when they direct their attention to the factors that affect their considerations of the attitude object. For instance, one might believe that an increase in government investment in national security technologies is beneficial, but could also engage in metacognitive consideration of one own's thought process, or how one is using accessible information or cues to form an opinion.

Metacognition plays a crucial role in regulating opinion biases that arise from relying on non-content information. Opinion bias can emerge, for instance, when one judges an argument (un)favorably simply because they like the source or because of cues indicating endorsement of the argument by liked public figures. In this sense, we can say that party cues have a biasing effect on policy opinions when the policy is judged based on the party endorsement of the policy rather than its actual content. This definition of biasing

effect of party cues does not imply that opinions based on cues are inherently incorrect or wrong, but that bias can emerge as a by-product of this judgment process (Petersen et al. 2013).

Extant literature on metacognition and bias regulation underscores that the biasing influence of non-content information tends to be attenuated by bringing the influence of the bias-causing element to individuals awareness. This regulation occurs through a process similar to the resistance to persuasion that materializes when one forewarns individuals about another’s intention to persuade (Papageorgis 1968; Petty and Cacioppo 1979). In this case, making someone aware of the intention to persuade increases motivational factors related to persuasion resistance. Analogously, the metacognition bias-correction argument is based on the idea that making individuals aware about the impact of non-content information, such as cues, on their evaluations activates motivational factors like the need for accuracy and cognition. This heightened awareness prompts individuals to scrutinize their cognitive processes more carefully, thereby diminishing the biasing effect of these non-content elements on their opinion formation. Awareness about the influence of non-content information can occur during, before, or even after forming a judgement about the target (Wegener, Petty, and Dunn 1998), and the source of correction can either be information stored in memory, or it could be generated on-line to address a particular judgement (Wegener, Petty, and Dunn 1998; Wilson, Houston, and Meyers 1998; Wegener, Petty, and Dunn 1998). As articulated by Wegener, Petty, and Dunn (1998), “if the person is warned of a bias (or realizes the potential for bias) before encountering the target [attitude-object], the person might engage in [...] corrections on-line during exposure to the target.”

Petty, Wegener, and White (1998) demonstrated this metacognitive correction process in their study on biased evaluation influenced by source likability. Source likability is a type of cue people use to construct opinions about a message. It can bias attitudes toward message contents and other more general attitude-objects, like policies and political settings (Sniderman, Brody, and Tetlock 1993). Increased likability of the message source generally translates to a stronger inclination towards favoring the content. In their

research, the Petty, Wegener, and White (1998) inspected what happens when subjects become aware that this potential biasing element is impacting their attitude formulation. They experimentally manipulated both the likability of the message source and the inclusion of awareness information that communicates how opinions often get swayed by factors unrelated to the content, such as the perceptions about the speaker. They found that people exhibit cognitive biases influenced by a peripheral cue related to the likability of the message source. Yet, when individuals were exposed to the bias-awareness treatment condition, this effect typically dissipated.

Other studies corroborate these findings, suggesting that the “debiasing” effect associated with making people aware of potential sources of bias is likely to be found in a variety of information and cue settings and for different attitude objects. This approach has been applied, for instance, to bias processing in attribution (Krull and Erickson 1995), stereotyping (Lambert et al. 1997), and the effect of mood on the evaluation of political candidates (Ottati and Isbell 1996).

There are various mechanisms of metacognitive bias correction that can lead to debiasing effects. These mechanisms include the subtraction of reactions to contextual stimuli, theory-based correction, or the suppression of thought reactions. Wegener et al. (2012) provides a comprehensive review of these mechanisms. One example of a subtraction mechanism occurs when a person’s primary cognition leads to a positive or negative evaluation of the target (e.g., a policy), but a secondary (meta)cognition leads the person to realize that her attitude was not based on the inherent properties of the target (e.g., policy content), but rather on contextual information (e.g., the party endorsement). If the person further determine that this contextual influence is inappropriate, she will attempt to subtract it from her judgment (Wegener et al. 2012).

Irrespective of the mechanism, the metacognition bias regulation process requires two conditions. First, individuals must have a certain level of conscious awareness of the potential source of bias influencing their judgment. Second, the bias correction process is set off by motivational factors, such as the need for cognition and accuracy. These motivational factors can be triggered by awareness interventions that alert individuals to the

potential source of bias (Kunda 1990; Wegener, Petty, and Dunn 1998) and contribute to individuals' metacognitive perception of how much the information influencing their judgment is inadequate or undesirable (Wegener et al. 2012). In the case of party cues, these motivational sources of metacognition bias correction, such as the need for accuracy, work alongside other motivations that lead partisans to follow party cues. Therefore, when considering the prospect of metacognitive bias correction for party cues, it is important to understand why partisans follow party cues in the first place.

Petersen et al. (2013) discuss two psychological processes that account for the impact of party cue on partisans' policy attitudes: heuristic processing and motivated reasoning (see also Bullock (2020)). These two accounts lead to different expectations regarding the debiasing potential of metacognitive awareness when party cues are involved. First, let us consider the case of heuristic processing.

The view of party cues as inducing heuristic processing states that cues influence policy opinions because they serve as informational shortcuts for policy content. Becoming more informed about policy details and consequences requires time and mental effort. When people are concerned about policy content, heuristic processing of party cues can take place because these cues can act as informational shortcuts for policies about which citizens know little about, thereby reducing the cost of information acquisition and the information processing efforts (Lupia 1994; Koch 2001; Lau and Redlawsk 2001). Partisans might trust that their party has utilized its expertise and resources to evaluate the consequences of the policies the party endorses. If the party considers the policy desirable, partisans may infer that the policy content aligns with their interests and ideology.

This mechanism implies that partisans view party endorsement as a reliable indicator of policy content, and use it when policy information is scarce. The relevance of perceiving party cues as reliable indicators of policy content is heightened when partisanship is *instrumental* for partisans. Partisanship is instrumental when it means to voters "a running tally of party performance, ideological beliefs, and proximity to the party in terms of one's preferred policies" (Huddy, Mason, and Aarøe 2015). In this perspective, it is assumed that voters place value on policy content and that their support for a

political party is a way to achieve their policy goals. There is evidence to support this idea, as individuals actively seek and use policy information to form their policy opinions, even when they receive signals about a party’s policy position (Bullock 2011; Boudreau and MacKenzie 2014; Bullock 2020).

If the effects of party cues are due to their use by voters as information heuristics, then voters are likely motivated by accuracy concerns (Petersen et al. 2013; Bullock 2020). If this is the case, citizens’ reliance on party cues for policy evaluation can change if it becomes salient to them that these cues may not be a reliable proxy for policy content. That is, in line with the metacognition argument, if voters are reminded of the risks of inferring policy content from non-content information (cues), they are expected to be less inclined to promptly rely on such cues.

Based on this perspective, we can state the two hypotheses H_1 and H_{2a} below regarding the effect of party cues on policy evaluation, and whether informing voters about the risks associated with using party cues for that evaluation can mitigate the influence of these cues on voters’ opinions. First, in the baseline case (H_1), party cues have an impact on partisan policy opinions. Second, a metacognitive intervention that alerts partisans to the potential risks of relying on cues to evaluate policy content should decrease the effect of party cues on partisan policy opinions (H_{2a}).

H_1 : Partisan voters are more likely to support (or oppose) a policy when they are informed that their preferred party supports (or opposes) the policy.

H_{2a} : Voters who are informed about the risks of following the party cues are less likely to rely on those cues when making policy judgments compared to voters who are not informed.

Now, let us consider the motivated reasoning perspective. It has been proposed that partisans follow party cues not only because they serve as shortcuts for policy content information, but also or maybe mostly because these cues trigger motivated reasoning (Petersen et al. 2013; Druckman, Leeper, and Slothuus 2018; Bullock 2020). The motivated reasoning argument states that all reasoning is driven by psychological motivations

that may not always be conscious or under the control of individuals (Kunda 1987; Taber and Lodge 2006). For example, Taber and Lodge (2006) argue that there is a tension between a psychological need for accuracy—that is, the yearning to be “right” or reach a “correct” conclusion based on evidence—and directional motives—that is, a need to defend one’s pre-existing beliefs or arrive at desired conclusions. Applying this argument to political objects, they argue that policy opinions are “hot” cognitions, which means that attitudes towards policies are emotionally charged and tend to surface automatically, before a semantic or content-based analysis takes place. As a result, they argue, processing of political information is not accuracy-oriented. They illustrate, for instance, that even when opposing political arguments of comparable strength are presented and participants are instructed to suppress personal emotions, evaluate the statements impartially and aim for utmost objectivity, individuals consistently rate the arguments aligned with their pre-existing beliefs as being more persuasive than the counterarguments. Moreover, when individuals encounter views that challenge their pre-existing positions, they increase their processing efforts to formulate counterarguments to justify their stances (Taber and Lodge 2006). This confirmation bias often influences the processing of information in such a way that individuals are, or at least appear to be, generally unaware of its impact, even when consciously arguing in favor of their perspectives. As Taber and Lodge (2006, p. 757) put it, “people are largely unaware of the power of their priors; [...] they try hard to [...] at least preserve the ‘illusion of objectivity’ [...] but they are frequently unable to do so.”

If the psychological process driving the party cue effects is motivated reasoning, then the source of the underlying directional motivation discussed by Taber and Lodge (2006), which leads to motivated reasoning, is very likely voters’ psychological (as opposed to instrumental) attachment to their party. Scholars have highlighted that many citizens develop stable and enduring attachments to political parties, often formed during citizens’ youth and initial years of political socialization (Campbell et al. 1960; Lewis-Beck et al. 2008). Partisanship can function as a social identity (Greene 1999; Petersen et al. 2013; Huddy, Mason, and Aarøe 2015), and partisans often act like sports fans, supporting

their party regardless of the specific issue at hand (Mason 2015). The term *expressive* partisanship has been utilized to describe this form of party attachment, as well as its connection to fundamental psychological needs of maintaining or enhancing in-group social status (Huddy, Mason, and Aarøe 2015).

This psychological attachment to the group can lead partisans to endorse party positions as an expression of support for their in-group, and motivated reasoning surfaces as an information processing mechanism to accomplish such aims. Druckman, Leeper, and Slothuus (2018) summarizes how party cues effects can be a manifestation of reasoning motivated by party identity: “partisanship can work as a preexisting attitude that motivates the individual to [...] interpret, [...] and assess [...] a policy proposal, in a way that is favorable to their own party and bolster their affiliation with the party.”

Supporting this viewpoint, various studies have illustrated that partisans adhere to party stances even when the party embraces policies deviating from its typical ideological positions (Cohen 2003). Petersen et al. (2013) show evidence that partisans follow party cues and increase their cognitive processing efforts when faced with cues that contradict the typical party stance. This finding is significant because heuristic processing typically reduces cognitive efforts in information processing. Thus, it suggests that motivated reasoning plays a role in shaping voters’ opinions when policies are presented with party cues.

If partisans are not driven by accuracy-related motives (Taber and Lodge 2006), and party cue effects are dominated by voters’ underlying motivation to affirm their group loyalty and support their party (Huddy, Mason, and Aarøe 2015; Mason 2015; Druckman, Leeper, and Slothuus 2018; Barber and Pope 2019), then it is possible that increasing voters’ awareness of the risks associated with relying on party cues to judge policy content may not significantly change their reaction to those cues. This leads to the following hypothesis regarding the effect of a metacognitive awareness intervention:

H_{2b} : The effect of party cues on partisan policy support is the same, regardless of whether or not voters are warned of the risks of following party cues for policy evaluation

To summarize, *partisan bias* in policy judgment emerges when cues about party policy positions induce partisans to support or oppose the policy, irrespective of the issue at stake (H_1). Previous studies on metacognition have demonstrated that metacognitive interventions, which involve alerting individuals to how their opinions may be influenced by non-content information such as cues, can lead to a reduction in bias when making judgments about content. I extend this argument to evaluate if metacognitive awareness of party cue effects reduces partisans' reliance on party cues when expressing policy opinions. This should be the case especially if individuals are motivated by accuracy concerns, process party cues heuristically to infer policy content, and are reminded that party cues can be misleading in that regard (H_{2a}). However, party cues may also activate motivated reasoning, in which case directional motives can lead voters to support policies endorsed by their party to affirm their identity and express their in-group support. In this case, alerting voters of the risks of following party cues may not change their attitudes or behavior (H_{2b}).

The next section describes the experimental design used to test these hypotheses. Before proceeding, it is important to note some caveats. First, this study does not aim to test whether partisans use motivated reasoning or heuristic processing to process party cues, or whether voters' motivations stem from identity-based or instrumental party attachment. Petersen et al. (2013) has investigated the former (motivated reasoning versus heuristic processing), and Huddy, Mason, and Aarøe (2015) provides an assessment of the latter (expressive versus instrumental partisanship). Instead, the goal here is to evaluate whether the influence of party cues on voters' policy opinions changes when they are warned of the risks associated with following these cues.

Second, rejecting H_{2b} in favor of H_{2a} indicates that the awareness intervention works as expected according to the metacognition argument. However, this does not mean that partisans do not engage in motivated reasoning when reacting to party cues. It also does not mean that people do not have an identity attachment to their party. While there is a tension between directional motivations behind motivated reasoning (Taber and Lodge 2006) and accuracy motivations behind metacognitive bias regulation mechanisms

(Wegener et al. 2012), it is possible that metacognition interventions operate in parallel with motivated reasoning and partisan identity motives. For example, accuracy-related concerns may become more prominent under metacognitive awareness while partisan motivations remain constant. Changes may occur only in relative terms, which can be sufficient for a metacognitive intervention to show effects.

Third, caution should be exercised when interpreting the meaning of rejecting H_{2a} . It is possible that awareness of the influence of party cue effects on policy judgment does not have the same impact as awareness does on bias due to some other heuristic processes, such as the influence of source likability on positive attitudes toward the message content (Petty, Wegener, and White 1998). This could be the case if there is a strong motivated reasoning operating, fueled by party identity. But it is also possible that a specific metacognitive intervention may fail to elicit the intended level of metacognitive attention when other similar interventions might have succeeded. Although this latter possibility cannot be completely eliminated as we can only test one or a few interventions at a time, this study uses manipulation checks to evaluate that possibility. Future studies should explore whether the results change when different types of metacognitive interventions are used.

Finally, this study aims to assess whether the impact of party cues is altered under conditions of metacognitive awareness. This question has not yet been investigated by the literature. Future research should explore the underlying mechanisms at play, such as whether the awareness intervention works as party cue bias regulation through theory-based correction, subtraction of reactions to cues, suppression of thoughts, and so on.

Data and Experimental Design

To test the hypotheses, this study employs a between-subject 2x2 online survey experimental design. Subjects were recruited by Bilendi, a well-known survey firm that provides services for online academic research. Individuals needed to be US citizens and at least 18 years old to participate. I used quotas to ensure that the sample matched the

census proportions of the population on education, income, age, and race. In total, 798 subjects took part in the experiment. To ensure the quality of the responses, subjects needed to answer different attention checks questions. For further information regarding the sample size rationale, demographics of the sample, adherence to ethical research principles, question wording, and the attention checks used in the survey, please refer to the online supplement.

The survey collected data on subjects' partisanship using ANES questions and items specifically designed to measure partisanship as a social identity (Huddy, Mason, and Aarøe 2015). For the ANES items, I assigned a partisan score based on a scale that ranged from 1 (indicating strong Republicans) to -1 (indicating strong Democrats). Republicans (or Democrats) who did not feel strongly about their party received a score of 0.5 (or -0.5). For the partisanship as a social identity measurement (Huddy, Mason, and Aarøe 2015), I created an additive index and rescaled the variable to range from 0 to 1. For comparability, the scores of self-identified Democratic voters were inverted, so the final scale ranges from -1 to 1, where the extreme points represent strong Democrats and strong Republicans, respectively. This article uses the ANES format, and the online supplement replicates the results using the social identity scale. As the focus is on partisans, independents were excluded.

While my primary focus is on examining the average effect of party cue effect awareness in reducing party cue effects, these effects may vary across different levels of education and need for cognition and accuracy (Bullock 2011; Druckman and Leeper 2012; Wegener et al. 2012; Chong and Druckman 2013; Bullock 2020). Items capturing need for cognition follow Bullock (2011), and I use the personal fear of invalidity scale to capture accuracy predisposition (Thompson 2001). Though conducting subgroup analyses based on education and the need for cognition and accuracy is not the focus of the study, and such an analysis is unfeasible here due to sample size limitations, I measured these factors and used them as adjustment variables in the regression models.

After participants agreed to the informed consent and responded to the demographic and partisanship questions, they were surveyed about their attitudes toward various pol-

icy areas. One challenge in investigating the influence of party cues on voters' policy attitudes is the potential pre-exposure of subjects to manipulated information during the experiment (Gaines, Kuklinski, and Quirk 2006; Druckman and Leeper 2012; Barber and Pope 2019; Slothuus and Bisgaard 2021a). In other words, when policies are more salient, subjects may already be familiar with their party's position. For example, some participants may disregard party cues in the experiment due to their prior exposure to party positions, or individuals in the control group may respond to attitudinal questions in a specific manner due to the same prior exposure. As a result, the effects of party cues on policy attitudes may differ across policy areas depending on pre-exposure and pre-experimental conditions. Tappin (2022) and Clifford, Leeper, and Rainey (2023) demonstrate this empirically. Moreover, high salient policies are more likely to be processed via motivated reasoning and trigger processing efforts than less salient ones (Petersen et al. 2013; Bullock 2020). For these reasons, I investigate the hypotheses using two groups of policies. The policies in *Group 1* were chosen based on the findings of Barber and Pope (2019), who examined the impact of party cues on Democratic and Republican voters in relation to various salient policy areas, including minimum wage, healthcare, and welfare policies. *Group 2* consists of low-salience policies regarding administrative reforms and reallocating government budget between agencies. These policies are not publically debated by parties (see, for instance, the list in Clifford, Leeper, and Rainey (2023) and the Roper Center iPool database¹), making it highly likely that participants were unaware of the parties position on these issues. By incorporating two sets of policies with varying levels of salience, the analysis expands the range of effects that can be identified, and it is possible to estimate the overall effects across issues with different degrees of salience. Table 1 provides an overview of the two groups of policies selected and the specific issues within each group.

For each policy, subjects were randomly assigned to receive a cue about the position (support or oppose) of the parties (Republicans vs Democrats) toward the policy, as well as information about the effect of party cues on people's policy attitudes (awareness

¹Available at <https://ropercenter.cornell.edu/ipoll/>. Last access on September, 2023.

Table 1: Policy areas used to measure voters’ policy attitudes

Group 1: High-salience	Group 2: Low-salience
1. Minimum wage 2. Taxes on the rich 3. Health care 4. Gun owner checks	Budget allocation (Group 2.1) 1. Reallocate budget between from FDA ^a and CPS ^a 2. Increase budget for research institutes of oceanography Administrative reform (Group 2.2) 3. Electronic filing systems for government agencies 4. Training period for administrative government staff

^a FDA: Food and Drug Administration; CPS: to the Child Protection Services (CPS)

Table 2: Treatment Groups and Theoretical Expectations. The “+” (“-”) sign indicates a positive (negative) effect of party cues and capture H_1 ; 0 and $\downarrow$ means that effects of party cues are the same (H_{2b}) or are mitigated (H_{2a}) when voters’ are informed about the risks of following party cues to evaluate policy content.

Group	Party Cue	Information of party cue effect	Theoretical Expectations	
			Democrat voters	Republican voters
G0	None	No		
G1	Dem. Support/Rep. Oppose	No	+	-
G2		Yes	0, $\downarrow$	0, $\downarrow$
G3	Rep. Support/Dem. Oppose	No	-	+
G4		Yes	0, $\downarrow$	0, $\downarrow$

message). Following Clifford, Leeper, and Rainey (2023), contrasting cues from both parties were presented simultaneously. The control group didn’t receive any treatment. Both the party cues and the awareness treatment were assigned independently. The same participant either received or did not receive the awareness message before answering the policy question, and could be assigned to receive cues for some policies but not others. That is, party cues were fully randomized for each policy.

The main relevant treatment groups and their corresponding randomized information, as well as the theoretical expectations, are summarized in Table 2. For example, the fourth row of the table (Group 3) indicates a group of subjects assigned to receive a cue that Republicans in Congress support the policy and Democrats in Congress oppose it, but no information about the party cue effect. Based on the party cue literature, we should expect that the proportion of Republican voters who support the policy will be

higher among the group that received that cue compared to the group of Republican voters who didn't receive any cue (H_1). This is indicated by the positive sign in the fifth column of the fourth row. The fifth row of Table 2 (Group 4) shows a group of subjects assigned to receive the same information as the group on the fourth row, but with the additional information that party cues bias opinion. According to H_{2b} , this additional information should not cause much change in party cue effects. This is represented by the "0" character in the fourth and fifth columns. However, if the bias regulation metacognition mechanism applies to party cue effects, then the combined effect of party cues and awareness information could either nullify or lessen the effect relative to cases treated with party cues only. This could mitigate the directional bias among partisans towards supporting party positions. This is represented by the symbol " $\downarrow$ " in the table and corresponds to H_{2a} . The table does not include the group who received only the awareness message but no party cues, as there is no clear theoretical prediction for this case. The initial expectation is that this group will behave similarly to the control group, which can be empirically verified.

Following the design adopted in Petty, Wegener, and White (1998), subjects assigned to receive information about the party cue effects read the following message:

(Common prompt)

*Now, we want to know **your own opinion** about a series of issues and policies that may come up in the coming months. Please think carefully about them and indicate whether you support or oppose the statement. We will let you know if the Republicans or Democrats in Congress support the policy whenever that applies.*

(Priming awareness)

Be aware that <in-party> in Congress sometimes support policies that many <in-party> voters wouldn't support if they had thought carefully about them. Likewise, <out-party> in Congress sometimes support policies that many <out-party> voters wouldn't support if they had thought carefully about them.

The <in-party> and <out-party> placeholders are replaced following voters' party identification. For instance, a Republican subject assigned to receive the awareness message will read "Republican(s)" on <in-party> and "Democrat(s)" on <out-party>. This

increases the symmetry of the treatment across partisans. Subjects not assigned to receive the information about party cue effects read only the common prompt.

In order to assess whether subjects read and processed the awareness treatment message, I used two manipulation check questions. The first asked whether participants agreed with the statement, “Party endorsement is always a reliable indicator of what the policy is actually about.” The second stated, “I can always confidently infer the content of a policy just by looking at which party endorses it.” These questions were randomized to avoid interference with the experiment. Further details can be found in the online supplement.

After reading the message, participants were asked to answer a series of questions aimed at measuring their attitudes. All questions adhered to a standardized format, which is as follows: “ <Policy statement>. <Party cue?> Do you support or oppose this policy?”. To provide a concrete example, consider the following question related to the minimum wage policy, with a cue about Republican support:

Increase the minimum wage by 10%. Republicans in Congress support this policy, while Democrats in Congress oppose it. How about you? Do you support or oppose this policy?

Following Clifford, Leeper, and Rainey (2023), policy questions with no party cues are asked first. For questions with party cues, the policies in Group 2 are presented to participants in a random order, but before the policies in Group 1. The policies in Group 1 are presented in order of credibility, ranging from most credible to least credible. Some policy-party position pairs may be considered less credible by voters due to their prior knowledge of party positions. For example, participants may receive information stating that Republicans in Congress support increasing taxes on the rich, while Democrats oppose it. For certain participants, this information may be less credible than information stating that Democrats in Congress support the policy. If we were to exclude all these less likely pairs, we would not be able to evaluate how participants react to certain combinations of party cues and awareness information about the effect of these cues. However, including these pairs in the analysis would reasonably imply

that if respondents encounter an unlikely pair as the first question, it could diminish the credibility of subsequent cues. Therefore, instead of excluding all the less likely pairs, they were asked at the end. These unlikely pairs are identified in the online supplement.

The main parameters of interest are the differences in the effect of party cues under different awareness conditions. This is a difference-in-differences parameter that can be defined using potential outcomes as follows. Denote $Y_i(a, c)$ as the potential outcome, i.e., policy support, of individual i under awareness condition a and party cue c . Denote P_i as the individual's party identification. Let $c = 0$ and $a = 0$ indicate no party cue and no exposure to awareness, respectively. The difference in the party cue effects among partisans of party P under different awareness conditions for party cue $c \neq 0$ can be defined as follows:

$$\tau_c^{(P)} = \underbrace{\mathbb{E}[Y_i(1, c) - Y_i(1, 0) \mid P_i = P]}_{\text{Effect of cue } c \text{ among partisans of party } P \text{ under awareness exposure}} - \underbrace{\mathbb{E}[Y_i(0, c) - Y_i(0, 0) \mid P_i = P]}_{\text{Effect of cue } c \text{ among partisans of party } P \text{ under NO awareness exposure}}$$

Under randomization of awareness and party cues, these parameters for each P and c are point identified, and they can be estimated using a regression model with terms capturing the interaction of party identity (P_i), awareness exposure, and the type of party cue. The proof is in the online supplement. The outcome is created by stacking the policy issues, and I estimate the parameters using hierarchical regression models with random effects at the policy and respondent levels to account for variability across persons and policy areas (Tappin 2022; Clifford, Leeper, and Rainey 2023). As the outcome is binary, I use a linear probability model in the main analysis to facilitate interpretation of the results. Estimations using logistic models are provided in the online supplement, which also provides results for policy-by-policy analyses.

Empirical Analysis

The online supplement contains the descriptive statistics, balance checks, and regression tables for the results reported in this section. Figure 1 shows the raw percentage

of support (y-axis) for each policy (panels) by party cue (x-axis) among Democratic and Republican partisans who were exposed or not to the awareness message (legend color code and shapes). First, we clearly see that partisans tend to follow party cue in the expected direction (H_1). Across partisans, Democratic voters support the policies at a higher rate than Republican voters in general. Looking within partisan groups, Democratic (Republican) voters support the policies at a higher rate when they receive a cue that Democrats (Republicans) in Congress support the policies. For low-salience policies (bottom rows), party cues invert which partisan majority supports the policy in some cases. Apparently, there is little distinction between the attitudes of partisans who were exposed to the awareness message and those who were not, which would support H_{2b} but not H_{2a} .

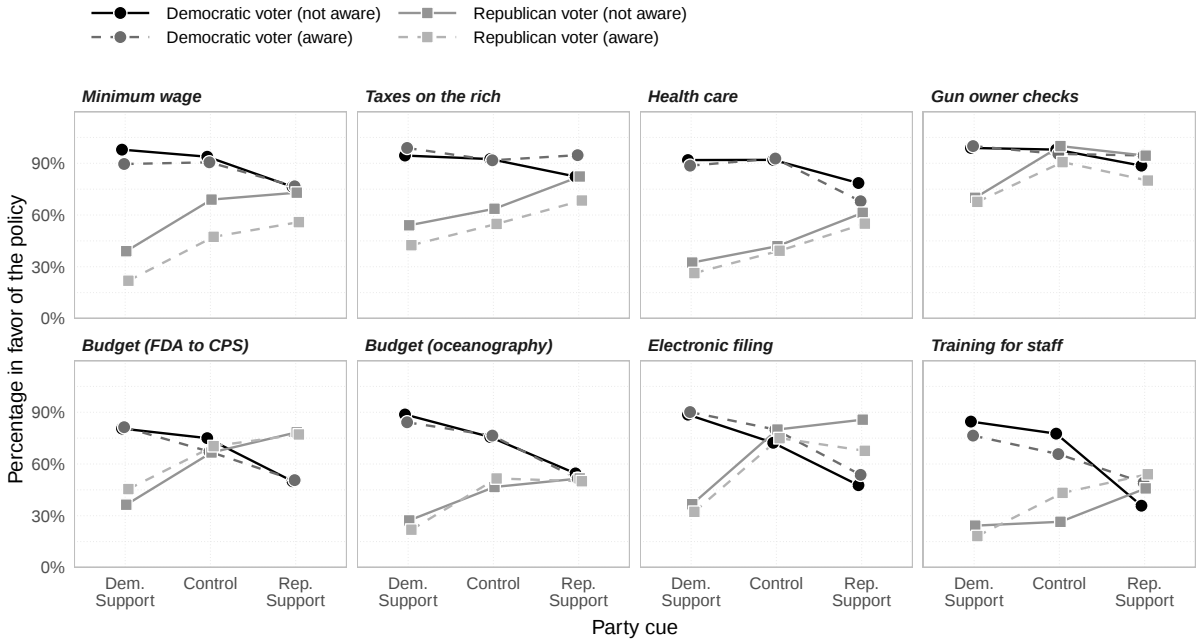


Figure 1: Percentage of support (y-axis) for different policies (panels) by voters’ party identification (color code and shapes), awareness (color code and shapes), and party cue (x-axis). Top four panels show high-salience policies, while the bottom four panels show the low-salience ones.

Table 3 presents the formal test of the hypotheses. It shows results from a hierarchical linear probability model with random effects at both the policy and respondent levels. The dependent variable is policy support, with Democratic partisans under the control condition—those who received no party cue and were not exposed to the aware-

Table 3: Adjusted and unadjusted linear probability model estimates of the effect of the treatment conditions on partisans’ policy support. Random effects used at policy and respondent levels. The 95% confidence intervals of the estimates are shown in parenthesis. The reference groups are Democratic voters under no party cue and no awareness exposure.

	Unadjusted	Adjusted ^a
Dem. voter (baseline)	0.853*** (0.771, 0.935)	0.720*** (0.598, 0.841)
Dem. voter x Aware	-0.024 (-0.072, 0.024)	-0.023 (-0.071, 0.025)
Dem. voter x Dem. support cue	0.052* (0.003, 0.100)	0.052* (0.006, 0.098)
Dem. voter x Dem. support cue x Aware	0.005 (-0.056, 0.065)	0.005 (-0.056, 0.067)
Dem. voter x Rep. support cue	-0.202*** (-0.259, -0.146)	-0.201*** (-0.259, -0.143)
Dem. voter x Rep. support cue x Aware	0.060+ (-0.008, 0.129)	0.061 (-0.012, 0.133)
Rep. voter	-0.239*** (-0.302, -0.177)	-0.245*** (-0.308, -0.183)
Rep. voter x Aware	0.004 (-0.083, 0.092)	0.000 (-0.087, 0.088)
Rep. voter x Dem. support cue	-0.260*** (-0.338, -0.182)	-0.258*** (-0.336, -0.180)
Rep. voter x Dem. support cue x Aware	-0.040 (-0.151, 0.072)	-0.041 (-0.152, 0.071)
Rep. voter x Rep. support cue	0.304*** (0.225, 0.384)	0.306*** (0.227, 0.386)
Rep. voter x Rep. support cue x Aware	-0.138* (-0.249, -0.026)	-0.143* (-0.255, -0.032)
Num.Obs.	5349	5349
R2 Marg.	0.151	0.159

+ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

^a Adjustment variables: Education (std), Age (std), Income (std), Race (white), Gender (female), Need for cognition, Need for accuracy

ness intervention—serving as the reference group. The second column reports results that do not include covariate adjustments, while the third column contains results after covariate adjustments. Since both sets of results are largely similar, let us focus on the unadjusted findings.

The data indicates that the average baseline support among Democratic partisans is notably high for the array of policies analyzed in this study, with 85.3% (95% CI: [77.1, 93.5]; p -value < 0.001) of Democratic partisans on average supporting the policies. When these partisans are exposed to a cue indicating support for the policies by Democrats in Congress (row “Dem. voter x Dem. support cue”), their support rose by 5.2 percentage points (p.p.) ([0.3, 10]; p -value = 0.037). This modest increase may be due to ceiling effects. Conversely, when Democratic partisans received a cue indicating that Republicans in Congress support the policy while Democrats oppose it (row “Dem. voter x Rep. support cue”), their support diminished by 20.2 p.p. ([-25.9, -14.6]; p -value < 0.001). For Republican partisans at baseline, without any party cue or exposure to awareness (row “Rep voter”), support for the policies is lower by 23.9 p.p. ([-30.2, -17.7]; p -value

< 0.001) relative to Democratic partisans at the baseline. However, when they were informed that Republicans in Congress oppose the policies while Democrats support them (row “Rep. voter x Dem. support cue”), Republican voters reduced their support by an additional 26 p.p. $([-33.8, -18.2]; p\text{-value} < 0.001)$, compared to baseline Democratic voters. In contrast, a cue indicating policy support by Republicans in Congress resulted in a substantial increase in support by 30.4 p.p. $([22.5, 38.4]; p\text{-value} < 0.001)$ among Republican partisans. These results confirm the influence of party cues on partisan policy support identified in prior research, consistent with the prediction articulated in hypothesis H_1 .

Next, let us assess whether awareness modifies these effects. Notably, the impact of awareness alone, in the absence of any party cues, was statistically indistinguishable from zero for both Democratic and Republican voters, as indicated by the terms “Dem. voter x Aware” and “Rep voters x Aware” in Table 3. However, the awareness intervention produced statistically significant changes for voters who were exposed to party cues. Specifically, for Democratic voters, exposure to the awareness intervention and receiving a cue that Republicans in Congress support the policy while Democrats in Congress oppose it, led to an increase of 6 p.p. $([-0.8, 12.9]; p\text{-value} = 0.085)$ in those voters’ policy support. The result was marginally statistically significant, and its direction means an *attenuation* in the effect of the party cue. That is, as previously noted, Democratic voters’ policy support declined by 20.2 p.p. on average when they learned that Republicans in Congress endorse the policies (row “Dem. voter x Rep. support cue” in Table 3). However, this negative effect was attenuated by 6 p.p. when voters became aware that relying on party cues to form policy judgments can be misleading (row “Dem. voter x Rep. support cue x Aware” of Table 3). No statistically significant effects of awareness was observed among Democratic voters receiving cues of policy support from Democrats in Congress, as shown in the row “Dem. voter x Dem. support cue x Aware” in Table 3.

For Republican voters, exposure to awareness corresponded to a reduction of 13.8 p.p. $([-24.9, -2.6]; p\text{-value} = 0.016)$ in the biasing effect of the party cue. That reduction was observed for the cue that Republicans in Congress endorse the policy. More specifically,

a cue that Republicans in Congress support the policies increased Republican voters’ policy support by 30.6 p.p. (row “Rep. voter x Rep. support cue” of Table 3), but awareness exposure attenuated that increase by an average of 13.8 p.p. (row “Rep. voter x Rep. support cue x Aware” of Table 3). Similar to Democratic voters, the awareness effect among Republican voters was not statistically distinguishable from zero for the cue indicating that Democrats in Congress endorse the policies.

The online supplement provides a series of robustness checks and additional analyses. It includes replication of the results using logistic regression in place of linear probability models. The findings remain essentially the same across models. Additionally, the online supplement provides a policy-by-policy analysis of the metacognition effect, along with analyses that split the sample by party cue type. The analysis using splitted sample confirmed the differences by type of party cue found in the analysis above. For the policy-by-policy results, the direction of the average effects of awareness aligned with theoretical expectations (H_{2a}) in nearly all instances. However, only one case showed statistical significance, namely taxes on the wealthy, and again only for the cue regarding Republican party support. This lack of significance may be due to the sample size, which is reduced in that analysis by one-eighth.

To summarize the findings, first, the article demonstrated a strong partisan bias effect on partisans’ policy judgement due to parties’ policy endorsement. This confirms previous findings in the literature and supports H_1 . Second, the results showed that a metacognition intervention attenuated that bias on average by 6 p.p. among Democratic voters and 14 p.p. among Republican voters who were cued that the Republican Party endorses and the Democratic Party opposes the policies. These effects were significant at the 0.1 and 0.05 α -levels for Democratic and Republican partisans, respectively. This supports the metacognitive awareness hypothesis (H_{2a}). No effect of awareness was found when the positions of the parties were reversed in the cue. The lack of significance in this case is consistent with H_{2b} .

Final Discussion

It is well-established that partisans tend to follow party cues when expressing policy opinions. Support for policies among partisans increases when they receive cues that their favorite party supports the policy. The results in this article confirm this mechanism of opinion formation. Normatively, this cue-driven mechanism may help partisans take positions under low-information conditions, but it can also be detrimental to the democratic process to the extent that it can induce partisan bias, that is, lead partisans to support policies that they would not necessarily support under more careful consideration. The underlying operation that can lead to partisan bias is based on using non-content information, such as policy endorsement cues, to express policy opinions.

This article investigated the hypothesis that a metacognitive intervention could have a bias-regulation effect by reducing the impact of party cues on partisans' policy positions. The metacognitive intervention involved prompting partisans to reflect on their own thought process, indicating that they might be relying on a party cue (non-content information) rather than policy content to form their opinion, and emphasizing that this opinion formation mechanism can bias opinion. The paper asks: Can partisan bias in policy opinion be attenuated by drawing partisans' attention to their own partisan biases? Can warnings that party cues may not reliably indicate policy content reduce partisans' inclination to support a policy just because their preferred party endorses it? To investigate these questions, an online survey experiment was conducted to gather public opinion on eight policies with varying levels of salience. The experiment randomly assigned participants to receive cues about party endorsement of the policies, as well as exposure to an awareness condition, which provided metacognitive information that following party cues may lead partisans to support policies they would not support otherwise.

The evidence presented in this study provides some support the metacognition bias-regulation hypothesis when cues that Republicans in Congress support and Democrats in Congress oppose the policy were presented, but not when the party positions were reversed in the cue. The question that arises from these results is why there were dif-

ferences in the awareness effects by cue types, and why the effect seems stronger among Republican voters. The online supplement contains some analyses that help to rule out possible explanations. For instance, one possibility is that the awareness intervention has failed to elicit the kind of metacognitive attention it was supposed to elicit. However, this does not appear to be the case. As shown in Figure H1 and Table H1 in the online supplement, people exposed to the awareness message became less confident that policy content could be inferred from party endorsement, and that does not vary by party identity. Another possibility is that randomization failed to create balance in the sample, resulting in treatment groups that were not comparable. This is also unlikely for two reasons. The treatment groups are balanced on the pre-treatment variables (see online supplement Figure F1), and all the results are basically the same with or without adjustment covariates. Attrition is also probably not the problem because missing values are not associated with treatment conditions or pre-treatment covariates (see online supplement Table F7).

A complete answer to why those differences emerged is beyond the scope of this study because the data and design were conceived with the general question of theorizing and identifying the existence of metacognition bias-regulation effects in mind, rather than to investigate differences by cue type or partisans groups. Fully exploring this latter issues requires further research. For instance, it is possible that there was a ceiling effect among Democratic partisans, as this group already supported the policies at high rates at the baseline level. Evaluating this requires studies with other policies, but this does not explain differences by cue type among Republicans. Another possible explanation is that Democratic partisans in the sample were proportionally more driven by motivated reasoning and party identity than Republicans partisans, who may have relied more on heuristic mechanism. This would be consistent with the theory discussed here, but seems unlikely at face value. Either way, this study cannot rule out these possibilities. Future research should test variations in the format and strenght of the metacognitive intervention and see if similar findings hold in replication studies. If differences by cue type and partisans remain, studies with a research design dedicated to invagate those

differences should be conducted.

In any case, the results here open the venue for more research on the role of metacognition interventions in politics. This includes investigating the mechanisms involved in dealing with metacognitive awareness. For instance, it is important to understand whether the underlying process engenders information withdrawal or discounting, as it appears that these metacognitive awareness mechanisms are interrupted, and individuals continue to follow partisan cues to some degree despite recognizing their unreliability.

Finally, while this paper focused on exploring the bias-regulation effect of a metacognitive intervention, it did not manipulate partisans' information environment. Future research should also investigate what information voters rely upon, if any, when they become aware that party endorsement can be misleading. Future research should investigate if metacognitive interventions increase information seeking and engagement with policy content when policy information is made available, and whether that alters the effects of party cues.

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