

Partisan Misperception in Knowledge Gap and Biased Information Processing*

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Abstract

This paper introduces and tests a new concept—*partisan misperception in knowledge gap*—the tendency for partisans to believe their in-group is more knowledgeable than the opposing party, even about basic non-partisan facts. Using large-scale surveys and experiments in South Korea and the United States, we document a about 15-percentage-point perceived in-group accuracy advantage. This partisan misperception distorts information processing: when identical information is attributed to out-group sources, individuals are less likely to update, revealing an in-group bias beyond explicitly partisan issues. Corrective evidence that both sides are equally knowledgeable reduces partisan misperception and weakens this bias.

Keywords: Misperception; Partisan bias; Information processing; Polarization

JEL classification: D83, D91, D72

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1 Introduction

Political polarization has become one of the most pressing challenges for contemporary democracies (Dimant and Kimbrough, 2024). According to the Pew Research Center, a median of 65% of respondents across 19 countries report that their societies are experiencing strong partisan conflict (Silver et al., 2022). In highly polarized environments, party identification functions as a salient social identity: individuals regard co-partisans as in-group members and opposing partisans as out-group members (e.g., Green et al., 2002; Huddy et al., 2015). Such identity divisions can distort how people process information and interact with one another in everyday life.

A large body of research in economics, political science, and psychology shows that identity divisions foster systematic misperceptions about out-group members, including in partisan contexts (see Bursztyn and Yang, 2022). These misperceptions may arise from affective factors, such as hostility toward out-group members and favoritism toward in-group members, or from reduced contact across group lines, which makes it difficult to accurately understand out-group members. In either case, identity divisions can generate misperceptions. Indeed, people often misjudge the diversity of opinions within the opposing party (Dias et al., 2025) and overstate the degree of ideological conflict (Ahler, 2014). Yet the literature has paid little attention to a more fundamental dimension of misperception—how partisans perceive others’ *knowledge*.

This paper studies a novel form of bias which we term *partisan misperception in knowledge gap*. We posit that partisans may believe that supporters of their own party are more knowledgeable than supporters of the opposing party, even about basic *non-partisan* facts (e.g., whether the iPhone was invented before 2000). If present, this belief represents a new channel through which polarization distorts cognition and communication.

Partisan misperception matters for two reasons. First, it can generate an in-group bias in information processing. When an individual encounters information attributed to an out-group source, partisan misperception may lead them to discount it as unreliable—hindering information aggregation in everyday interactions and on social media, even in the absence of network homophily (Golub and Jackson, 2012). More generally, information frictions can arise at both the acquisition and processing stages, because individuals choose which signals to obtain and how much attention to allocate to them (Fuster et al., 2022). This mechanism differs from partisan selective exposure, which concerns whether individuals choose to encounter information in the first place (e.g., Peterson et al., 2021; Chopra et al., 2024). Closely related, Faia et al. (2024) show that partisan source cues strongly affect article choice and evaluations of the information received, although their

average effects on posterior belief revision are limited. We instead hold both exposure and informational content fixed and test whether attribution to an out-party source itself reduces updating on non-partisan facts. For example, even public communication by governments, such as during a natural disaster, may become ineffective for citizens who do not support the incumbent party, a pattern that is empirically documented in the contexts of COVID-19 (Fortunato and Lombini, 2025) and climate change (Wu, 2025).

Second, partisan misperception may amplify affective polarization. Contemporary political conflict is not only ideological but also emotional: many citizens dislike and distrust out-party members (Iyengar and Westwood, 2015; Iyengar et al., 2019; Boxell et al., 2024). Affective polarization may even undermine democratic norms, although the evidence is mixed (Druckman and Levendusky, 2019; Voelkel et al., 2023; Cox et al., 2025), and it distorts social interactions even in non-political domains (e.g., Fowler and Kam, 2007; Huber and Malhotra, 2017; Shafranek, 2021; Mill and Morgan, 2022; Dimant, 2024). If people view out-groups as less knowledgeable, such perceptions can intensify distrust and contempt, reinforcing affective polarization. Existing evidence also shows that fact-based information can shift highly negative attitudes toward an external group, although heterogeneous responses need not produce attitudinal convergence (Delavande and Zafar, 2018). We examine whether correcting a specific misperception about out-party competence can similarly improve affective evaluations across partisan lines.

Motivated by these considerations, we empirically examine the existence and consequences of partisan misperception. We address three questions: (1) Does partisan misperception exist in polarized societies? (2) Does it create an in-group bias in information processing, and can corrections reduce that bias? (3) Does reducing partisan misperception mitigate affective polarization?

To answer these questions, we conduct two online studies—a baseline survey and a survey experiment—in two highly polarized democracies, South Korea and the United States. Pew surveys indicate that 90% of South Koreans and 88% of Americans perceive intense partisan conflict (Silver et al., 2022). Both countries have clear two-party systems, allowing clean identification of in- and out-groups, yet they differ substantially in culture, institutions, and democratic history, which enhances the external validity of our findings.

In the baseline survey (approximately 1,500 respondents per country), participants evaluate eight true-or-false statements on non-partisan facts (both political and non-political). For each statement, respondents judge whether it is true or false and estimate what share of supporters in each political group would answer correctly. Comparing perceived accuracy rates across groups allows us to measure partisan misperception—the tendency to think that in-group members are better informed than out-groups, even on non-political

facts. We also run our additional U.S. survey, in which half of the participants are randomly offered an accuracy-based monetary bonus for their estimates, allowing us to assess whether our results persist under stronger incentives to make accurate estimates.

We find that partisans perceive the accuracy rate of in-party members in these judgment tasks to be higher than that of out-party members by approximately 15 percentage points (pp) for both partisans in the U.S. and South Korea in the baseline surveys. Given that the actual accuracy rates differ across partisan groups by less than 5 pp, this misperception is both substantial and striking. Moreover, monetary incentives do not reduce the magnitude of partisan misperception, suggesting that it reflects sincere misperceptions rather than cheerleading or expressive responding.

Building on these findings, we implement a large-scale survey experiment (approximately 4,200 respondents per country) to test the mechanisms linking partisan misperception to information processing and affective polarization. Participants first answer factual questions and estimate partisan accuracy rates, enabling us to measure each respondent's baseline misperception. Then, we randomly provide half of the respondents with corrective information showing that, in our baseline data, supporters of both parties were almost equally accurate. Next, all participants receive "signals" reporting the majority judgment of either in-group or out-group supporters on additional factual statements. Because the content of the signals is identical across groups, any differential updating reveals in-group bias in information processing. The main treatment analysis focuses on respondents who initially perceived an in-party accuracy advantage of at least 5 percentage points, since the corrective information is most directly expected to reduce misperception for this group.

Within this treatment-relevant subgroup, the treatment significantly reduces the perceived partisan knowledge gap and attenuates differential responses to in-party versus out-party signals. It also improves feelings toward out-group members, although it has no effect on preferences for avoiding relationships with out-group members measured at the end of the survey. This suggests that such interventions can reduce affective polarization, but the effect is modest.

Together, these results reveal that partisans not only distrust the opposing side's motives but also *underestimate its knowledge*. This misperception distorts information processing even on apolitical issues.

Related literature This study is related to three strands of the literature: (i) misperceptions about others, (ii) in-group bias in information selection and processing, and (iii) interventions to reduce affective polarization.

First, numerous studies in economics, political science, and psychology document that people hold systematic misperceptions about others, which are particularly pronounced when directed at out-groups (see [Bursztyn and Yang \(2022\)](#) for a review).¹ With the rise of affective polarization, partisanship has become a central dividing line between in- and out-groups ([Iyengar et al., 2019](#)), making misperceptions about out-partisans especially likely. Prior work shows that people misperceive the demographic composition of parties ([Ahler and Sood, 2018](#)), the diversity of opinions within the opposing party ([Dias et al., 2025](#)), the extent of ideological polarization ([Ahler, 2014](#)), the degree of affective polarization ([Druckman et al., 2022](#)), and the likely behavior of out-groups in strategic settings ([Dimant, 2024](#)). Relatedly, work in economics shows that misperceptions shape redistribution preferences (e.g., [Alesina et al., 2018](#)).² Our contribution is to identify and test a new type of misperception—*partisan misperception in knowledge gap*: the tendency to think co-partisans are more knowledgeable than out-partisans even about apolitical facts. Unlike previously studied misperceptions, this bias is unrelated to partisan *content* and concerns the perceived *competence* of the target group. In our additional U.S. survey, we find that partisans in both parties underestimate the ratio of college graduates of the out-party, and that larger partisan misperception is associated with greater underestimation of out-party education.

Second, we contribute to research on endogenous information acquisition and processing. [Fuster et al. \(2022\)](#) jointly study how individuals value, select, and incorporate information signals, showing that lowering information costs need not reduce disagreement when individuals acquire different signals. Many studies document partisan selective exposure (in-group biased *selection*) (e.g., [Peterson et al., 2021](#); [Chopra et al., 2024](#); [Dimant et al., 2024](#)); [Faia et al. \(2024\)](#) introduce partisan source identity into a related setting, showing that source cues strongly affect information selection and assessments of the information received, but have limited average effects on posterior belief revision. Our experiment shuts down the acquisition margin and varies only whether an otherwise identical signal is attributed to in- or out-partisans, thereby providing complementary evidence that partisan source identity can directly alter posterior updating even for apolitical facts.³ The broader updating literature documents systematic deviations from

¹Another implication of social identity is that altruism may be extended only to in-group members. The degree to which individuals exhibit the same level of altruism toward strangers as toward in-group members has been measured across many countries ([Enke et al., 2023](#); [Cappelen et al., 2025](#)).

²They document misperceptions about intergenerational inequality. See also [Alesina et al. \(2020\)](#).

³[Fang et al. \(2025\)](#) find that conversations with contrary-minded individuals did not lead to convergence in political views. [Hill \(2017\)](#) finds symmetric learning when information comes from computers (see also [Moorthy \(2025\)](#)), underscoring source identity. [Kashner and Stalinski \(2024\)](#) show that the order between partisan and non-partisan information matters even with identical content.

Bayesian updating, such as motivated reasoning and confirmation bias, in political settings (e.g., Lord et al., 1979; Taber and Lodge, 2006; Taber et al., 2009; Thaler, 2024) as well as in apolitical settings (e.g., Fryer Jr et al., 2019; Zimmermann, 2020; De Filippis et al., 2022; Angrisani et al., 2021), although some controversy remains (Coppock, 2023; Musolff and Yanay, 2025). Those accounts emphasize the *content* of information, whereas our setting isolates source identity.

We add two points to this literature. First, we isolate an in-group processing bias that operates through *distrust in others' knowledge*: identical signals are discounted when attributed to out-partisans. Thus, source identity directly shapes belief updating. Second, we show that this mechanism arises even on non-partisan facts. These features distinguish the bias we identify from selective exposure or content-driven motivated reasoning. Closely related are Zhang and Rand (2023), who document misperception in others' ability to detect fake news and a processing bias in the U.S.,⁴ and Moorthy (2025), who studies misperception in others' ability to apply Bayes' rule in India. We differ in the type of misperception (perceived general knowledge rather than fake-news detection or Bayesian application), in the non-partisan domain we study, and by showing that *correcting* misperception attenuates in-group processing bias.

Lastly, we contribute to research on mitigating affective polarization.⁵ Existing interventions include correcting misperceptions about out-party composition (e.g., Ahler and Sood, 2018), addressing misperceived motives (e.g., Lees and Cikara, 2020), reducing partisan identity salience (e.g., Levendusky, 2018), highlighting cross-party warmth among leaders (e.g., Huddy and Yair, 2021), and increasing intergroup contact (e.g., Whitt et al., 2021). Related information interventions examine whether factual evidence can change attitudes toward negatively viewed groups. Delavande and Zafar (2018), for example, show that fact-based information about the United States shifts anti-American attitudes on average, but does not generate convergence because responses are heterogeneous. We intervene on a different object—a second-order belief about the out-party's knowledge—and examine its consequences for both information processing and affective polarization. Compared with approaches that require direct intergroup contact or sustained elite cues, correcting perceived knowledge gaps may remain feasible even when polarization is advanced, although our estimated effect is modest.

⁴Braghieri et al. (2026) document misperception in others' knowledge about political facts and show that people are more willing to discuss these facts with in-group partisans than with out-group partisans. In contrast, we examine non-political domains as well as political domains, focus on biased information processing rather than selective information exposure, and analyze the effects of corrective information.

⁵Recent work advances comparative measurement and causal identification of affective polarization (Gidron et al., 2020, 2023), while new measures refine how polarizing everyday interactions are (Hudde et al., 2024).

The remainder of the paper is organized as follows. Section 2 describes the design and results of the baseline survey, demonstrating the prevalence of partisan misperception. Section 3 outlines the experimental design, Section 4 presents the empirical hypotheses, and Section 5 presents the experimental results. Section 6 concludes.

2 Prevalence of Partisan Misperception: Baseline Survey

The first objective of this study is to examine whether partisan misperception in knowledge gap—defined as the misperception that out-group members possess lower knowledge than in-group members—exists in two highly polarized countries: South Korea and the United States.

2.1 Case Selection: South Korea and the United States

South Korea provides an instructive case of severe yet distinctive partisan polarization. [Silver et al. \(2022\)](#) report that nearly 90% of South Koreans perceive strong or very strong partisan conflict—one of the highest shares among advanced democracies. The country’s two-party alignment between the conservative People’s Power Party and the liberal Democratic Party of Korea produces a clear division of political identity, making it easy to define in-groups and out-groups. Polarization in South Korea has intensified over time as corruption scandals, rapid social change, and generational cleavages over gender and inequality have deepened distrust between partisans ([Cheong and Haggard, 2023](#)). These tensions culminated in the 2024 martial-law crisis. Because South Korea’s democracy is relatively young and its partisan alignments have evolved rapidly since democratization in 1987,⁶ South Korea offers a useful context for examining how partisanship and cognitive bias can emerge in a newer democracy with high political engagement and low cross-party trust.

The United States, by contrast, represents a long-established democracy where polarization has become a defining feature of public life. Approximately 88% of Americans perceive intense partisan conflict, and affective polarization—defined as dislike and distrust of the opposing party—has increased sharply over the past four decades ([Silver et al., 2022](#)). The U.S. two-party system provides a clear and stable mapping of political identity, yet its institutional, cultural, and media environment differs sharply from South

⁶In contrast to the U.S., the party system in South Korea is unstable as seen in the frequent changes in the party names. However, the two streams of political camps, conservative and liberal, are relatively well-defined ([Cheong and Haggard, 2023](#)).

Korea's. Studying the United States, therefore, allows us to benchmark the mechanisms of partisan misperception in a mature democracy with entrenched ideological sorting and extensive exposure to partisan media.

Taken together, these two countries combine analytical clarity in identifying partisanship with contrasting historical and institutional backgrounds, enhancing the external validity of our findings on how polarization shapes perceptions of others' knowledge.

In what follows, we refer to the People's Power Party in South Korea and the Republican Party in the United States as Party R, and the Democratic Party of Korea in South Korea and the Democratic Party in the United States as Party L.

2.2 Survey Design

To investigate whether partisan misperception in knowledge gap exists in the two countries, we conducted a Qualtrics-based online survey in South Korea from May 26 to June 4, 2025⁷ and in the U.S. from August 12 to August 15, 2025. Respondents were recruited through PureSpectrum, an online survey platform used to recruit respondents for web-based research. PureSpectrum has also been used in published large-scale survey studies, including [Robertson et al. \(2023\)](#) and [Thompson and McCabe \(2025\)](#). We employed quota sampling on gender, age, and region of residence to ensure representativeness. Participants received a participation fee from the survey firm. The study was pre-registered on OSF (SK: [Kikuchi et al. \(2026b\)](#), U.S.: [Kikuchi et al. \(2026d\)](#)), and the survey was approved by the Institutional Review Board at Keio University. To ensure respondent quality, we implemented a directed-response attention check at the start of the survey. Respondents were instructed to demonstrate attention by choosing "I have a question" from the response set ("I understand," "I do not understand," "I have a question"). Those who selected any other option were screened out and prevented from continuing. In total, 1498 respondents completed the survey in South Korea and 1597 in the United States for the baseline survey. Out of these respondents, we keep the R party supporters, the L party supporters, and non-partisans. As a result, our number of observations is 1389 in South Korea and 1568 in the U.S.

Key variables of partisan misperception in knowledge gap: To measure partisan misperception in knowledge gap, respondents answered 8 true-or-false questions on non-partisan factual statements (political and non-political questions). The list of questions is provided in Table 1.

⁷The survey period overlaps with the presidential election on June 3, 2025.

For each statement, respondents indicated whether it was true or false and rated their confidence on a 0–100 scale. They were then asked to estimate the percentage of individuals in each of three groups—supporters of party R, supporters of party L, and non-partisans—who would correctly identify the statement as true or false. These responses form the basis for our measure of partisan misperception in knowledge gap.

The survey also included four additional questions that were similar to those described above, except that the statements concerned conspiracy theories—both right-wing and left-wing. These questions were included to examine partisan misperception regarding partisan facts. The analysis of partisan misperception in knowledge gap related to conspiracy theories is provided in the Appendix B.

Note that in the baseline surveys, we did not provide monetary incentives to elicit precise estimates of the accuracy rates for each political group, although doing so would have been feasible. When individuals form beliefs, two considerations are at play: forming accurate beliefs is beneficial in terms of material payoff, but it may reduce psychological payoff by limiting their ability to continue believing what they wish to believe (Little, 2019). As a result, individuals engage in motivated reasoning (Lord et al., 1979; Taber and Lodge, 2006; Taber et al., 2009; Fryer Jr et al., 2019; Zimmermann, 2020; Thaler, 2024). Providing monetary incentives increases the relative weight of material payoff. Hence, the accuracy rates elicited under monetary incentives would likely diverge from the accuracy rates individuals hold in daily life. This concern dominates the advantage of monetary incentives in eliciting partisan beliefs in highly polarized societies. For this reason, we chose not to provide such incentives in the baseline surveys.

Separately, we ran an additional survey in the U.S., where we randomly gave monetary incentives to elicit precise estimates of the accuracy rates. See Section 2.6 for the details.

Individual-level measurement on polarization: In addition to measuring partisan misperception, we also assessed individual-level polarization in order to examine its correlation with partisan misperception.

First, we measured self-reported affective polarization using two approaches.⁸ The

⁸There are four measurements for affective polarization frequently used in the literature (Druckman and Levendusky, 2019): (i) feeling thermometers, (ii) how much respondents rate partisans when it comes to being hypocritical, selfish, honest, or generous, (iii) how much one can trust the parties, and (iv) social distance measures that ask about individuals' comfort in having their child marry someone from another party or having a friend from the other party. Our first measurement corresponds to (i), while our second measurement corresponds to (iv). Druckman and Levendusky (2019) find that all four measures are correlated, the former three measures document particularly high correlation, but (iv) is less strongly correlated with (i)-(iii). Therefore, we use (i) and (iv).

Table 1: List of True-or-False Questions

	South Korea	United States
<i>Political</i>	<ol style="list-style-type: none"> 1. The term of the National Assembly is 2 years. (F) 2. To revise the Constitution, a majority of votes in a national referendum is required. (T) 3. The country’s nominal GDP growth rate in the last year was lower than 5%. (T) 4. For every 100 people of working age (15–64), there are 40 people aged 65 or older. (T) 	<ol style="list-style-type: none"> 1. The term of office in the Senate is 4 years. (F) 2. To revise the Constitution, approval from more than three-fourths of the state legislatures is required. (T) 3. The country’s nominal GDP growth rate in the last year was lower than 7%. (T) 4. For every 100 people of working age (15–64), there are 40 people aged 65 or older. (F)
<i>Non-political</i>	<ol style="list-style-type: none"> 5. New Zealand is a country located in the Middle East. (F) 6. The iPhone was invented before 2000. (F) 7. By law, you must be at least 19 years old to drink alcohol. (T) 8. The highest mountain in the country is Hallasan. (T) 	<ol style="list-style-type: none"> 5. New Zealand is a country located in the Middle East. (F) 6. The iPhone was invented before 2000. (F) 7. Alaska is the largest state in the United States. (T) 8. The highest mountain in the United States is Mt. McKinley (Denali). (T)

first question asked respondents: “On a scale from 0 to 100, where 0 means very cold or unfavorable feelings and 100 means very warm or favorable feelings, how warmly do you feel toward supporters of each political party?” The second question asked respondents: “How would you feel about being in the following types of relationships with supporters of each political party: (i) colleagues at work, (ii) close friends, and (iii) your own or your child’s spouse?”

Second, we measured meta-perceived level of affective polarization by asking “On a scale from 0 to 100, where 0 means very cold or unfavorable feelings and 100 means very warm or favorable feelings, how warmly do you think party L (resp. R) supporters feel toward party R (resp. L) supporters?”

Lastly, we measured ideological polarization and meta-perceived ideological polarization. Respondents were asked: “On a scale from 0 to 10, where 0 means ‘extremely liberal’ and 10 means ‘extremely conservative,’ where would you place yourself and the average supporter of each political party?” From this, we derive measures of ideological extremity and meta-perceived ideological distance between the two parties.

2.3 Summary Statistics

Table 2 presents the summary statistics from the baseline survey. Several observations emerge. First, each political group differs in its demographic composition; for example, in South Korea, the share of respondents aged 50 and above is higher among supporters of the People’s Power Party. Second, in both countries, the average accuracy rates of party R supporters and party L supporters do not differ substantially.⁹ Third, polarization is pronounced in both countries, in terms of both affective and ideological polarization.

Table 2: Summary Statistics: Baseline Survey

Country Party	SK RP	SK LP	SK NP	US RP	US LP	US NP
Demographics						
Female Ratio	0.41	0.49	0.59	0.47	0.59	0.55
College-educated Ratio	0.83	0.77	0.75	0.52	0.54	0.37
Age (50+) Ratio	0.54	0.42	0.35	0.54	0.48	0.38
Judgments						
Average Accuracy Rate	0.74	0.74	0.73	0.67	0.63	0.57
Average Confidence	0.81	0.78	0.71	0.74	0.71	0.65
Affective Polarization (0 to 1)						
Warm toward RP	0.75	0.21	0.39	0.82	0.29	0.46
Warm toward LP	0.24	0.76	0.41	0.37	0.80	0.51
Comfortable with RP at Work	0.78	0.49	0.57	0.81	0.68	0.78
Comfortable with RP as Friend	0.78	0.46	0.55	0.82	0.66	0.78
Comfortable with RP as Child	0.78	0.43	0.53	0.82	0.63	0.78
Comfortable with LP at Work	0.47	0.78	0.57	0.68	0.88	0.80
Comfortable with LP as Friend	0.45	0.79	0.56	0.69	0.88	0.80
Comfortable with LP as Child	0.43	0.80	0.54	0.67	0.88	0.81
Ideological Polarization (0 to 1)						
Conservatism of Self	0.71	0.39	0.53	0.76	0.39	0.52
Extremity of Self (rel. to Center)	0.47	0.35	0.17	0.59	0.52	0.36
Conservatism of RP	0.78	0.73	0.64	0.79	0.60	0.53
Conservatism of LP	0.23	0.38	0.38	0.25	0.46	0.42
Observations	343	596	450	617	596	355

Note: This table shows the summary statistics for the baseline surveys in South Korea and the United States. We report the averages for each country and each partisan group. RP denotes right-wing party supporters, LP denotes left-wing party supporters, and NP denotes non-partisans.

⁹In the United States, non-partisans’ average accuracy rate is 9 pp lower than that of Republican Party supporters.

2.4 First Look at Partisan Misperception

With the rise of affective polarization, partisanship has become a central dividing line between in-group and out-group members (Iyengar et al., 2019), making misperceptions about out-party members particularly likely. We expect that partisans believe supporters of the opposing party are less knowledgeable about non-partisan facts than themselves.

To formally explore this hypothesis, let i denote individuals and $g \in \{R, L, N\}$ denote one of three political groups: supporters of party R (R), supporters of party L (L), and non-partisans (N). Let $g(i)$ be the party individual i supports. Let also j index the judgment tasks on non-partisan statements $j \in \{1, \dots, 8\}$. We then define $p_{i,j}^t$ as individual i 's estimated accuracy rate *towards* target group t .¹⁰

Results Figure 1 shows the distributions of the averages of $p_{i,j}^t$ across different factual question tasks ($j = 1, 2, \dots, 8$) for each perceiver and target group in South Korea, together with the actual accuracy rates. As confirmed in Table 2, the actual accuracy rates are similar across political groups. Nevertheless, the median supporter of party R perceives the in-party accuracy rate to be higher than 75%, whereas supporters of party L perceive the accuracy rate of right-wing party supporters to be around 62.5%. A similar pattern holds for supporters of party L. In contrast, non-partisans perceive the accuracy rates of party R and party L supporters to be roughly the same. This represents partisan misperception in knowledge gap. Specifically, it captures how each perceiver changes their estimation of the accuracy rate depending on the target. Therefore, we refer to this as *target-based partisan misperception*.

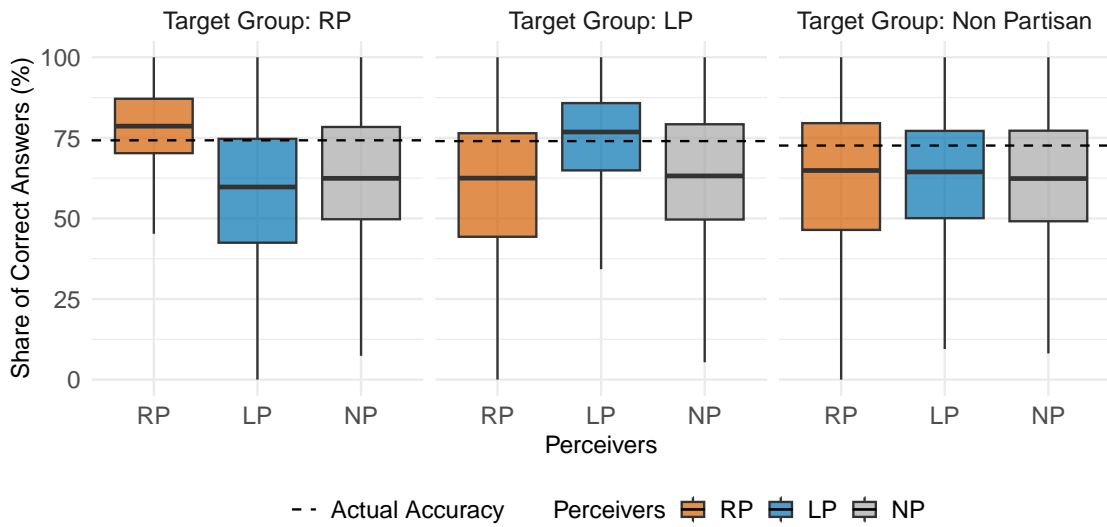
Another way to capture partisan misperception is to examine how the estimated accuracy rate of a particular political group differs depending on the perceiver's identity. For example, regarding the accuracy rate of party R supporters, the median supporter of party R predicts it to be higher than 75%, whereas the median supporter of party L predicts it to be lower than 62.5%. A similar pattern holds when the target is party L supporters. However, when the target group is non-partisans, such bias is not observed. We refer to this as *perceiver-based partisan misperception*.

Figure 2 shows the distributions of the average of $p_{i,j}^t$ across different factual question tasks ($j = 1, 2, \dots, 8$) for each perceiver and target group in the U.S., along with the actual accuracy rates. Although the exact numbers differ from those in South Korea, we observe both target-based and perceiver-based partisan misperception in the U.S.

Note that partisan misperception may arise from affective factors, such as hostility

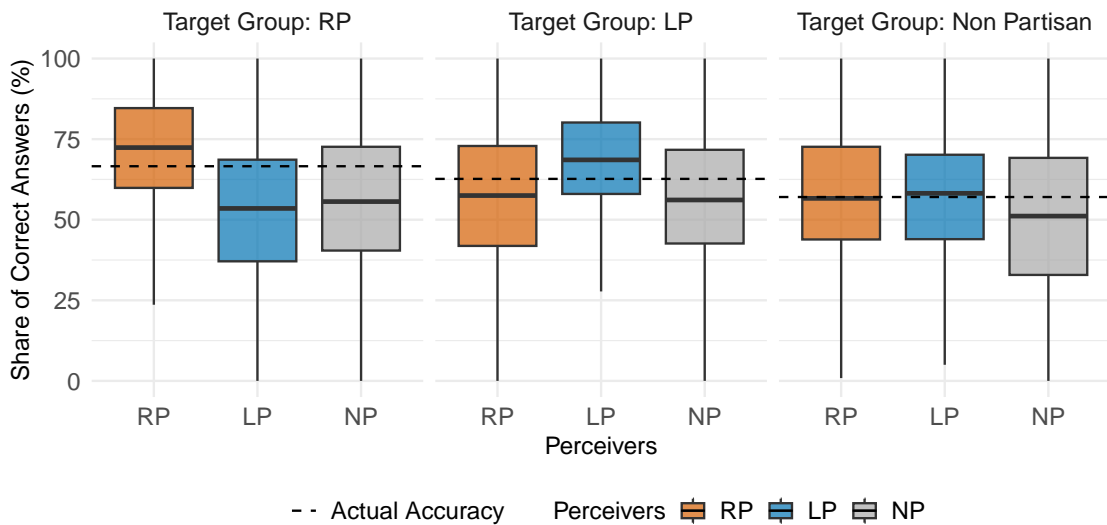
¹⁰The question was originally asked on a 0–100 scale, which we normalized to a 0–1 scale.

Figure 1: Partisan Misperception in South Korea: All Factual Questions



Notes: The figure plots the distributions of perceived accuracy, measured as the average of $p_{i,j}^t$ across all eight factual questions ($j = 1, \dots, 8$), for each combination of perceiver and target group in South Korea. Each box represents the interquartile range (25th–75th percentile), with the median indicated by a solid black line. The dashed horizontal line denotes the actual average accuracy of each target group.

Figure 2: Partisan Misperception in the United States: All Factual Questions



Notes: The figure plots the distributions of perceived accuracy, measured as the average of $p_{i,j}^t$ across all eight factual questions ($j = 1, \dots, 8$), for each combination of perceiver and target group in the United States. Each box represents the interquartile range (25th–75th percentile), with the median indicated by a solid black line. The dashed horizontal line denotes the actual average accuracy of each target group.

toward out-group members and favoritism toward in-group members, or from reduced contact across group lines, which makes it difficult to accurately understand out-group members. Because partisan misperception may arise through either channel, and because our interest is not in identifying its underlying cause, we remain agnostic about the specific mechanism behind it.

So far, we have graphically examined the partisan misperception in the two countries. In the next two sections, we formalize and empirically test the existence of partisan misperception.

2.5 Target-Based Partisan Misperception

We first formally define target-based partisan misperception. Citizens have target-based partisan misperception if the following two conditions are satisfied:

- (a) Supporters of each party believe that members of their own party are more knowledgeable than members of the opposing party. Formally, for each perceiver group $g(i) \in \{R, L\}$ separately, we estimate

$$p_{i,j}^t = \beta_1 \mathbb{1}\{t = g(i)\} + \mu_i + \mu_j + \varepsilon_{i,j}^t, \quad (1)$$

where μ_i and μ_j are individual- and task-fixed effects. We only use the data for targets being either R or L. We expect $\beta_1 > 0$.

- (b) By contrast, non-partisans are expected to view the two parties' supporters as equally knowledgeable. Formally, for individuals with $g(i) = N$, we estimate

$$p_{i,j}^t = \beta_2 \mathbb{1}\{t = R\} + \mu_i + \mu_j + \varepsilon_{i,j}^t. \quad (2)$$

We only use the data for targets being either R or L. We expect $\beta_2 = 0$, which indicates no perceived partisan difference in knowledge among non-partisans.

Target-based partisan misperception captures within-perceiver in-group favoritism.¹¹

Results Table 3 presents the results of estimating equations (1) and (2) for both countries. Each column reports estimates separately by country and by the perceiver's partisan group: right-wing party supporters (RP), left-wing party supporters (LP), and non-partisans (NP). The rows labeled "Target = RP" and "Target = LP" report the estimated

¹¹In Appendix A, we show that the results are the same if we use another definition of partisan misperception—perceiver-based partisan misperception.

perceived knowledge gap between RP and LP targets, evaluated from the perspective of the perceiver group in that column (with standard errors in parentheses). We drop each perceiver's estimates for NP targets. For each pair of an individual and a task, there are two targets—RP targets and LP targets. In each column, the omitted target category serves as the reference group, so the reported coefficient can be read as the perceived difference in knowledge between the indicated target group and the omitted target group.

Column (1) focuses on RP perceivers in South Korea. On average, they rate the accuracy of party supporters at 68.0%. Relative to that baseline, the coefficient in the “Target = RP” row is 0.178 (s.e. 0.014), implying that RP perceivers rate RP targets as more knowledgeable than LP targets by 17.8 pp. Column (2) reports the analogous estimate for LP perceivers in South Korea. Their mean perceived accuracy is 65.9%, and LP perceivers rate LP targets as more knowledgeable than RP targets by 17.2 pp (0.172, s.e. 0.009).

Columns (4) and (5) show the same pattern in the United States: RP perceivers have a mean estimate of 63.8% and assign RP targets a 16.0 pp advantage over LP targets (0.160, s.e. 0.009), while LP perceivers have a mean estimate of 60.4% and assign LP targets a 16.6 pp advantage (0.166, s.e. 0.010). These magnitudes are comparable across the two countries, and the associated standard errors are small relative to the point estimates, indicating that the perceived in-party advantage is precisely estimated in each partisan subsample.

In contrast, the NP columns show little perceived difference across party targets. In South Korea (column (3)), the “Target = RP” estimate is -0.001 (s.e. 0.007), and in the United States (column (6)) it is -0.005 (s.e. 0.012), both close to zero in magnitude. Consistent with this, the mean outcomes for non-partisans are lower—60.9% in South Korea and 55.0% in the United States—indicating that non-partisans, on average, rate targets' accuracy more conservatively, while not differentiating sharply between RP and LP targets.

Overall, the table shows a clear and symmetric partisan misperception—RP perceivers favor RP targets and LP perceivers favor LP targets—while non-partisans rate the two partisan groups as being almost equally knowledgeable. These results confirm the existence of target-based partisan misperception in both countries.

While we aggregate eight judgment tasks in the main analysis, Appendix C reports results for each judgment task separately. Our questions span a spectrum in terms of political relevance. At one extreme are questions that are entirely unrelated to politics, such as the iPhone question. At the other extreme are questions about the GDP growth rate, which are somewhat partisan in nature. Nevertheless, partisan misperception is observed across all questions.

Table 3: Target-based Partisan Misperception: Baseline Survey

Country	SK	SK	SK	US	US	US
Perceiver	RP	LP	NP	RP	LP	NP
	(1)	(2)	(3)	(4)	(5)	(6)
Target = RP	0.178 (0.014)		-0.001 (0.007)	0.160 (0.009)		-0.005 (0.012)
Target = LP		0.172 (0.009)			0.166 (0.010)	
Mean of Outcome	0.680	0.659	0.609	0.638	0.604	0.550
Observations	5488	9536	7200	9872	9536	5680
Num. of Indiv	343	596	450	617	596	355
Num. of Task	8	8	8	8	8	8

Note: This table reports the results of estimating equations (1) and (2) that test for target-based partisan misperception in South Korea (SK) and the United States (U.S.). Columns (1)–(3) use the SK sample and columns (4)–(6) use the U.S. sample. Within each country, columns correspond to the perceiver’s partisan group: supporters of the right party (RP), supporters of the left party (LP), and non-partisans (NP). The dependent variable p_{ij}^t is perceiver i ’s assessment of the accuracy (probability correct) of target group $t \in \{RP, LP\}$ on task j . The rows “Target = RP” and “Target = LP” indicate which target group’s perceived accuracy is being compared to the omitted target group in that column. All regressions include individual and task fixed effects. Robust standard errors clustered at the individual level are shown in parentheses.

2.6 Monetary Incentives and Partisan Misperception

Although surveys without monetary incentives have their own advantages, as discussed above, partisan misperception may in part reflect partisan cheerleading rather than genuine misperceptions (Bullock et al., 2015). To assess this possibility, we run another pre-registered survey with randomized monetary incentives in the U.S. (Kikuchi et al., 2026a). In this sample, respondents in the incentivized arm face an explicit reward for more accurate estimates.

Survey Design We conducted another Qualtrics-based online survey, in which half of the participants were randomly offered an accuracy-based monetary bonus for their estimates in the U.S. from February 11 to 13, 2026. Respondents were recruited via an established online panel (Prolific). We employed quota sampling on gender and age to ensure representativeness. All participants received a participation fee from the survey firm. In total, 1502 respondents completed the survey. Out of these respondents, we keep the R party supporters, the L party supporters, and non-partisans. As a result, our number of observations is 1471.

In addition, half of the participants were eligible for a \$1 bonus tied to the accuracy of their estimates. After respondents completed the task, one political group (Repub-

lican supporters, Democratic supporters, or non-partisans) was selected at random for payment. We then computed the absolute difference between the respondent’s estimate for that group and the group’s actual accuracy rate. The respondent’s probability of receiving the \$1 bonus decreased linearly in this absolute error according to the following rule: bonus chance (in percent) equals 20 minus (absolute difference)/5, so more accurate estimates translate into a higher chance of receiving the bonus. Under this setting, irrespective of risk attitudes, it is incentive-compatible for respondents to truthfully report the median of their subjective distribution of accuracy rates (Hossain and Okui, 2013). In the survey with the monetary incentives, questions 1, 2, 3, 5, 6, and 7 are asked for partisan misperception. Questions 4 and 8 are asked for misperception across education groups to benchmark the size of the partisan misperception.¹²

Table D.1 in Appendix D shows the summary statistics for the additional survey in the U.S.

Results Table 4 reports the target-based specifications separately by incentive status. The same qualitative pattern appears in both groups: Republican perceivers assign higher accuracy to Republican targets, Democratic perceivers assign higher accuracy to Democratic targets, and non-partisans show substantially smaller partisan gaps. The magnitudes (about 10 pp) are somewhat smaller than in the baseline U.S. sample (about 15 pp), but they remain positive for partisan perceivers under both conditions.

Table 4: Partisan Misperception with and without Monetary Incentives (U.S.)

Incentive				✓	✓	✓
Perceiver	RP	LP	NP	RP	LP	NP
	(1)	(2)	(3)	(4)	(5)	(6)
Target = RP	0.114 (0.012)		-0.015 (0.011)	0.088 (0.009)		0.007 (0.009)
Target = LP		0.122 (0.009)			0.112 (0.007)	
Mean of Outcome	0.678	0.619	0.611	0.664	0.627	0.620
Observations	3036	5016	972	2796	4728	1104
Num. of Indiv	253	418	81	233	394	92
Num. of Task	6	6	6	6	6	6

Note: This table reports target-based partisan misperception estimates in the U.S. additional survey sample. Columns are split by incentive status and by perceiver group (RP, LP, NP). The dependent variable is perceived accuracy for partisan target groups across factual tasks. Individual and task fixed effects are included. Robust standard errors clustered at the individual level are shown in parentheses.

¹²See the Appendix H for details.

To investigate whether the monetary incentives change partisan misperception formally, we define the average misperception toward the out-group. We first define misperception toward the out-group for each task j as follows:

$$\text{misperception}_{i,g(i),j} := p_{i,j}^{g(i)} - p_{i,j}^{g'} \quad (3)$$

where $p_{i,j}^{g(i)}$ is the estimated accuracy rate toward in-group $g(i)$, and $p_{i,j}^{g'}$ is the estimated accuracy rate toward out-group g' . A larger value means that a respondent estimates the accuracy rate higher for the in-group than for the out-group, implying larger misperception against out-groups.

We next define the average of the measure over factual question tasks j

$$\text{misperception}_{i,g(i)} := \frac{1}{6} \sum_{j=1}^6 \text{misperception}_{i,g(i),j}$$

We then run the regression of this average misperception on the dummy variable, which takes the value of one if the individuals are in the incentivized group.

Table 5 shows the effect of incentive assignment on the partisan misperception measure. The estimated coefficient on the incentive indicator is about -1.6 pp and is statistically insignificant. This indicates that monetary incentives do not materially reduce partisan misperception, supporting the interpretation that partisan misperception largely reflects sincere belief distortions rather than purely expressive responding.

Table 5: Effect of Monetary Incentives on Partisan Misperception (U.S.)

	(1)
Incentive	-0.016 (0.009)
Mean of Outcome	0.111
Observations	1298

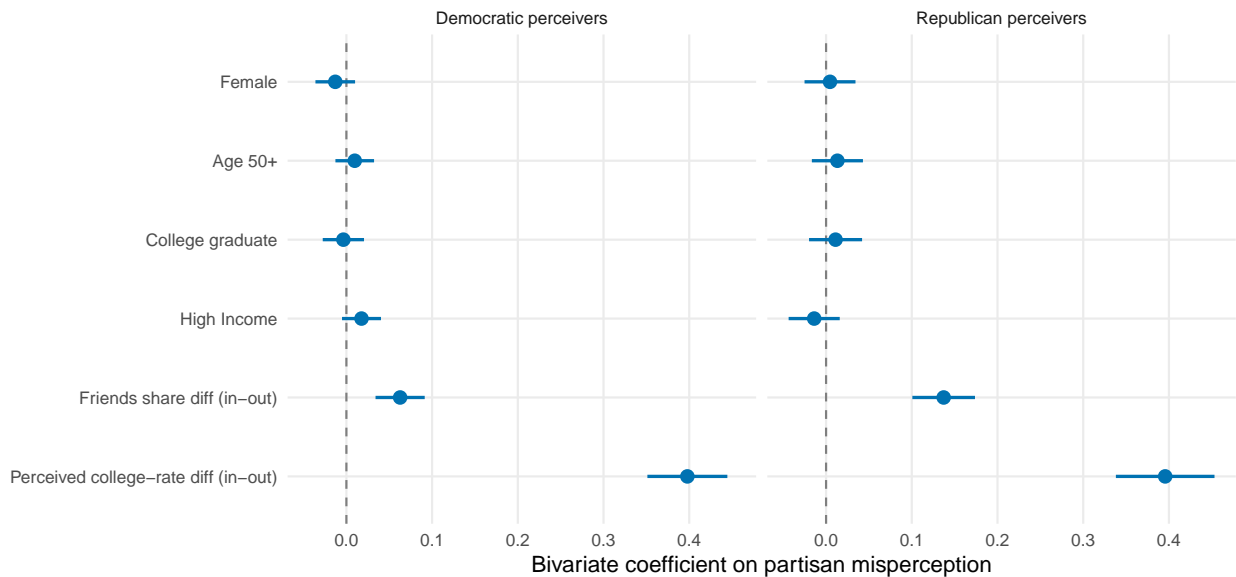
Note: This table reports the effect of monetary incentives on the partisan misperception. The dependent variable is the individual-level partisan misperception index, and the regressor is the incentive assignment indicator. The samples are restricted to Republican Party supporters and Democratic Party supporters. Standard errors are in parentheses.

2.7 Heterogeneity in Partisan Misperception

We next examine how partisan misperception covaries with respondent characteristics, using the data from the U.S. additional survey.¹³ We include samples with and without monetary incentives. Figure 3 plots bivariate coefficients separately for Republican and Democratic perceivers.

The figure shows no clear heterogeneity in partisan misperception across demographic groups, such as gender, age, education, or income groups. We also find that the partisan misperception is larger for people whose shares of in-party friends are higher. Moreover, we find a strong correlation between partisan misperception and the perceived gaps in college completion rates between in- and out-groups.

Figure 3: Heterogeneity in Partisan Misperception (U.S. Additional Sample)



Note: This figure reports point estimates and 95% confidence intervals from bivariate regressions of the partisan misperception index on respondent characteristics. Panels split the sample by perceiver party (Republican vs. Democratic).

2.8 Correlation with Ideological and Affective Polarization

In addition, we expect that partisan misperception is correlated with individual-level polarization. While its correlation with affective polarization, emotional and identity-

¹³Because the baseline survey in South Korea did not contain several variables (the share of in-party friends and the perceptions about college completion rates between in- and out-groups), we focus on the U.S. additional survey.

based animosity, is straightforward, additional explanation is warranted for why we also expect a correlation with ideological polarization, which is partisan difference in issue positions and ideological values. First, as partisans increasingly rely on in-group sources and reject out-group expertise due to partisan misperception, they accumulate different factual premises about the same political or social issues. This asymmetry in belief updating creates self-reinforcing ideological consistency within each group. Second, when individuals observe that the opinions of out-group members diverge from those of in-group members, they may attribute this divergence to a perceived lack of knowledge among out-group members rather than to fundamental differences in preferences.¹⁴ Together, these mechanisms imply that ideological polarization may reinforce partisan misperception, so we expect partisan misperception to be correlated with both ideological and affective polarization.

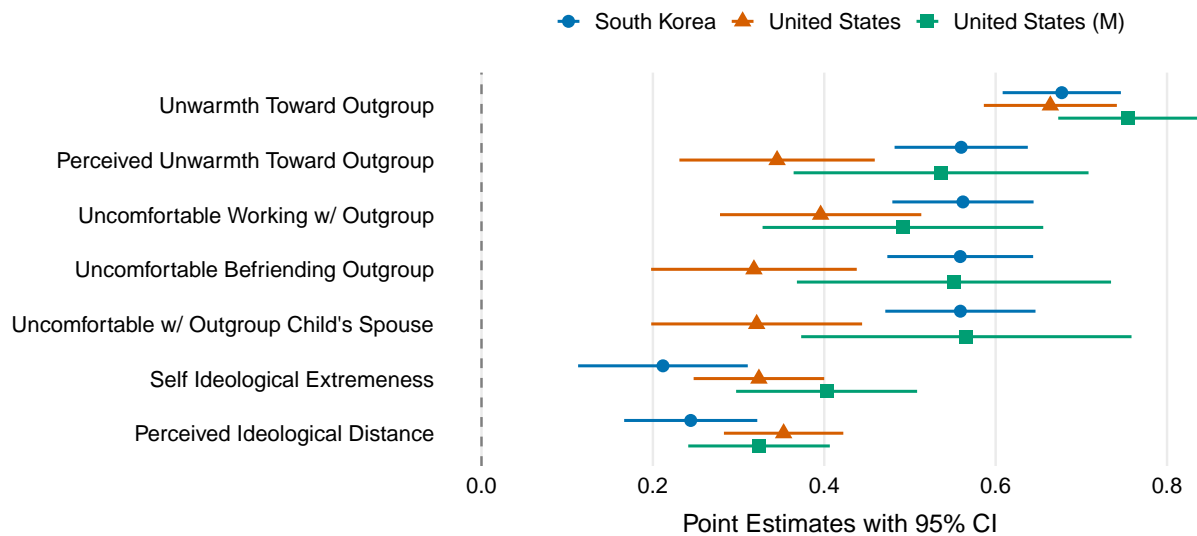
Results Figure 4 presents the correlation between partisan misperception and various forms of polarization across three different surveys: the surveys in South Korea, the United States, and the United States with monetary incentive designs. It shows that all measures of polarization—self-reported affective polarization, meta-perceived affective polarization, self-reported ideological extremeness, and meta-perceived ideological polarization—are positively correlated with partisan misperception. That is, partisan misperception is associated with polarization, although the causal direction may run both ways.

3 Correcting Partisan Misperception: Experimental Design

Section 2 documents that partisan misperception is prevalent in both polarized countries despite differences in institutions and cultures. Given this result, we aim to explore the effect of providing information that different partisan groups are equally knowledgeable in terms of judging whether several non-partisan statements are true or false. Specifically, we explore (1) the effect on misperception, (2) the effect on in-group bias in information processing, and (3) the effect on affective polarization. We focus on party R supporters and party L supporters in South Korea and the U.S.

¹⁴This is consistent with the theoretical prediction of Cheng and Hsiaw (2022) that disagreement in opinions is accompanied by disagreement about the credibility of experts.

Figure 4: Correlation between Partisan Misperception and Polarization: Baseline Surveys and U.S. Additional Survey



Note: This figure presents the correlations between target-based partisan misperception and various measures of polarization. Each point shows the estimated coefficient from a bivariate regression of individual-level misperception on a given polarization measure, with 95% confidence intervals.

3.1 Data Collection

We conducted an online pre-registered survey experiment using Qualtrics in September 2025 in South Korea and the United States. Respondents were recruited through Rakuten Insight in South Korea and PureSpectrum in the United States.¹⁵ We employed quota sampling based on gender and age. Since our focus is on individuals with partisan misperception, we restricted the sample to respondents who supported either party R or party L.¹⁶ Participants received a participation fee from the survey firm. The study was pre-registered with the AEA RCT Registry (Kikuchi et al., 2026c). To ensure respondent quality, we included an attention check at the beginning of the survey. Respondents who failed this check were not allowed to proceed further. In total, 4,734 respondents passed the attention check in South Korea, and 4,778 respondents passed it in the United States.

¹⁵Since we used PureSpectrum’s vendors in the baseline survey, we excluded respondents who completed the baseline survey from entering the experiment.

¹⁶At the beginning of the survey, respondents were asked which party they supported. Those who did not choose either party R or L were screened out and could not proceed further. Thus, the sample includes only supporters of party R or party L.

3.2 Survey Structure

The survey flow is given by Figure 5. The main part of this experiment contains nine tasks where respondents are asked to judge whether a statement is true or false: $j \in \{1, \dots, 9\}$. There are four types of tasks. First, we have two tasks on factual questions before the treatment ($j = 1, 2$). Second, after the treatment, we have three tasks on factual questions ($j = 3, 4, 5$) and two tasks on conspiracy theory questions with partisan signals ($j = 6, 7$). Finally, we have two tasks on factual questions with education group signals ($j = 8, 9$). The main focus of our analysis is tasks on non-partisan facts ($j = 1, \dots, 5$). The list of these tasks is available in Table 6. All of the tasks were used in the baseline survey. Note that the tasks with education group signals serve as a benchmark for gauging the magnitude of the partisan in-group bias in information processing.

Figure 5: Survey Flow of the Experiment

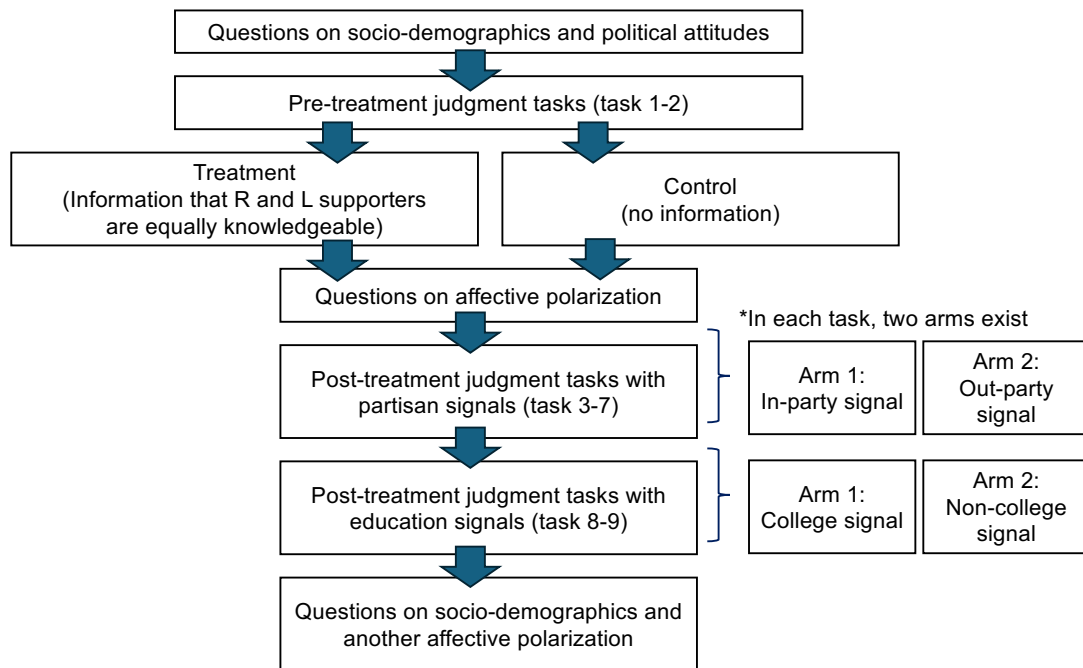


Table 6: List of True-or-False Questions in Experiment

South Korea	United States
1. The term of the National Assembly is 2 years. (F)	1. To revise the Constitution, approval from more than three-fourths of the state legislatures is required. (T)
2. New Zealand is a country located in the Middle East. (F)	2. New Zealand is a country located in the Middle East. (F)
Treatment	
3. To revise the Constitution, a majority of votes in a national referendum is required. (T)	3. The country's nominal GDP growth rate in the last year was lower than 7%. (T)
4. The iPhone was invented before 2000. (F)	4. The iPhone was invented before 2000. (F)
5. The highest mountain in the country is Hallasan. (T)	5. The term of office in the Senate is 4 years. (F)

3.3 Pre-Treatment Judgment Tasks

After socio-demographic questions, respondents were asked to conduct two true or false judgment tasks on non-partisan facts ($j = 1, 2$). In each task, each respondent was asked to judge whether the statement was true or false, rate their confidence in their answer, and guess the accuracy rates of R supporters and L supporters. This procedure matches the baseline survey design. The objective of these two tasks is to measure each individual's partisan misperception before the treatment intervention.

3.4 Treatment

After this stage, half of the respondents were randomly assigned to the treatment condition and the other half to the control condition. In the control group, respondents were reminded—via an interactive format—of their own estimated accuracy assessments of each party's supporters from the previous two judgment tasks. In the treated group, in addition to this reminder, respondents were also informed that supporters of party R and party L were almost equally knowledgeable in those two tasks, based on our baseline survey (specifically, the difference in accuracy rates was less than 5 pp). Figure 6 presents examples of the information shown in the control and treatment conditions when a respondent thinks that Republican Party supporters are more knowledgeable than Democratic Party supporters.

To ensure that respondents in the treated group carefully read the passage, we included a follow-up true-or-false question. Respondents could not proceed further with-

out selecting the correct answer.¹⁷ If they answered incorrectly, they were prompted to try again until the correct response was chosen.

For respondents who estimated that their in-group's accuracy rate exceeded the out-group's by at least 5 pp, the treatment information functioned as a corrective, addressing this misperceived partisan misperception. This design allows us to analyze the effect of correcting partisan misperception.

3.5 Post-Treatment Judgment Tasks

Subsequently, respondents were asked to do three additional judgment tasks about whether a non-partisan fact is true or false ($j = 3, 4, 5$). Each task proceeded as follows.

- (i) Each respondent was asked to judge whether the statement (X) is true or false, rate their confidence in their answer, and guess the accuracy rates of R supporters and L supporters.
- (ii) Each respondent randomly received one of the following two *signals*: the signal telling them the majority of R supporters' opinion and the signal telling them the majority of L supporters' opinion. The signal is independently drawn across respondents and across tasks (see Figure 7 as an example). The signal always reported the majority judgment, which coincided with the correct answer for both R and L supporters in our baseline survey.
- (iii) Respondents were again asked to judge whether the statement is true and rate their confidence in their answer.

The signal is used to estimate the degree of in-group bias in information processing.

For R (resp. L) supporters, the signal about R (resp. L) supporters' opinions is the in-party signal, whereas the signal about L (resp. R) supporters' opinions is the out-party signal. Thus, each task has two arms—the in-party and out-party signals—with respondents randomly assigned to one. By analyzing how the degree of judgment revisions before and after a signal differs depending on whether the signal is in-group or out-group, we estimated the degree of in-group bias in information processing.

In addition, we included four additional tasks ($j = 6, 7$ are tasks on conspiracy theories, and $j = 8, 9$ are tasks on non-partisan facts with education group signals). These are used in the supplementary analysis (see the Appendix for the details).

¹⁷The correct answer in the control group differs depending on respondents.

Figure 6: Treatment and Control (Example)

We asked you to evaluate the average accuracy rates of Republican Party supporters and Democratic Party supporters in the two true-or-false judgment tasks. Across two tasks, you estimated that on average,

- Republican Party supporters correctly judge true-or-false statements with [] % accuracy.
- Democratic Party supporters correctly judge true-or-false statements with [] % accuracy.

That is, you think that Republican Party supporters are more knowledgeable than Democratic Party supporters.

Control group: Please judge whether the following is true or not based on the above. You cannot move to the next question without choosing the correct answer. You estimated that Republican Party supporters are more knowledgeable than Democratic Party supporters in the two judgment tasks.

- True
- False

Treated group: But this is incorrect. In our earlier survey, we found that Republican Party supporters and Democratic Party supporters demonstrated nearly the same level of knowledge on the issues. To be specific, for each of the two true-or-false questions we asked, the difference in the percentage of correct answers between the two groups was consistently less than 5 pp.

Please judge whether the following is true or not based on the above. You cannot move to the next question without choosing the correct answer.

Republican Party supporters and Democratic Party supporters are nearly equally knowledgeable across the two judgment tasks (the difference in correct response rates between the two groups was consistently less than 5 pp).

- True
- False

Figure 7: Signal (Example)

Your judgment in the previous page is that “The country’s nominal GDP growth rate last year was lower than 7%.” is TRUE.

According to our previous survey, a majority of Republican Party supporters also say that “The country’s nominal GDP growth rate last year was lower than 7%” is TRUE.

A majority of Republican Party supporters
say that
“The country’s nominal GDP growth rate last
year was lower than 7%” is **TRUE**.



Please choose the appropriate sentence based on the above. You cannot move to the next question without choosing the correct answer.

- My initial judgment was different from the judgment by a majority of Republican Party supporters.
- My initial judgment was the same as the judgment by a majority of Republican Party supporters.

Table 7: Correlation between Attrition and Treatment: Experiment

	(1)	(2)
	SK	US
Treatment	-0.002 (0.009)	0.004 (0.008)
Observations	4734	4778
Mean of Outcome	0.099	0.084

Note: This table shows the correlation between treatment assignment and survey attrition among respondents who passed the attention check at the beginning of the survey. Each coefficient is estimated from a regression of an attrition dummy on the treatment indicator. Standard errors are reported in parentheses.

3.6 Measuring Affective Polarization

In addition, we measured affective polarization using two approaches, consistent with the baseline survey. The first question is the most commonly used one, which asks respondents: “On a scale from 0 to 100, where 0 means very cold or unfavorable feelings and 100 means very warm or favorable feelings, how warmly do you feel toward supporters of each political party?”

The second question measured preferences for avoiding social relationships with out-party members. Specifically, we asked respondents: “How would you feel about being in the following types of relationships with supporters of each political party: (i) colleagues at work, (ii) close friends, and (iii) your own or your child’s spouse?”

We administered the first question immediately after the treatment and the second question after the completion of all judgment tasks (see Figure 5).

3.7 Primary Analysis Sample and Estimand

In total, 4,734 respondents in South Korea and 4,778 respondents in the United States passed the attention check at the beginning of the survey and reached the point where half of the respondents received the treatment. Among them, 4,266 respondents in South Korea and 4,375 in the United States completed the entire survey. The corresponding attrition rates are 0.099 and 0.084, respectively.

Table 7 reports the relationship between attrition and treatment, estimated by regressing an attrition dummy on the treatment indicator among respondents who passed the attention check. The results indicate that the treatment did not increase attrition in either country.

Then, we restrict samples with the following criteria about the prior level of misperception. To formally define the criteria, for each individual i in group $g \in \{R, L\}$ and

task j , we define the (target-based) misperception on fact j , $\text{misperception}_{i,g(i),j}$, as in (3). Then, the pre-treatment misperception is given by

$$\text{misperception}_{i,g(i)}^{pre} := \frac{1}{2} \sum_{j=1}^2 \text{misperception}_{i,g(i),j}.$$

Because the treatment message states that the partisan accuracy difference in the baseline data was less than 5 percentage points, it functions as a directional correction only for respondents who had previously reported a perceived in-party accuracy advantage of at least 5 percentage points. We therefore define these respondents as our primary experimental analysis sample. The estimand reported in Tables 9–12 is the average effect of treatment assignment within this treatment-relevant subgroup, rather than the population average effect among all partisans. The treatment may have different effects among respondents with smaller or reversed perceived gaps, for whom the information does not directly contradict the elicited prior; those effects are outside the scope of the present analysis. Applying this criterion yields 2,314 respondents in South Korea and 2,879 respondents in the United States.

4 Correcting Partisan Misperception: Hypotheses

Unless otherwise stated, all experimental hypotheses and estimands below concern the primary analysis sample defined in Section 3.7.

First, we hypothesize that the treatment decreases misperception in the out-group’s performance in the post-treatment judgment tasks.

Hypothesis 1. (Treatment effect on misperception). The post-treatment misperception regarding non-partisan facts in tasks $j = 3, 4, 5$ is smaller in the treated group than in the control group.

Importantly, the treatment conveyed only that the accuracy rates in the pre-treatment judgment tasks were nearly identical across partisan groups. It remains logically possible that, although the accuracy rates were identical in the pre-treatment tasks, in-group members could outperform out-group members in the post-treatment tasks. Thus, whether the treatment reduces misperception in the post-treatment tasks is not evident *ex ante*. This is especially true when partisan misperception is driven by motivated reasoning, because providing factual information that contradicts desired conclusions is often ineffective (e.g., [Taber and Lodge, 2006](#); [Taber et al., 2009](#)). This hypothesis should therefore

not be interpreted as a mere manipulation check of the treatment. Rather, it tests whether correcting misperception in knowledge about specific issues can generate a spillover effect on misperception in knowledge about other issues. Because it is impossible to address all possible issues through correction, examining this hypothesis is important.

The next hypothesis concerns in-group bias in information processing. Suppose an individual encounters information provided by a supporter of the opposing party. If partisan misperception is present, the individual deems this information unreliable solely because it comes from someone perceived to have low knowledge due to their party affiliation. This mechanism can be represented as a source-specific belief about signal precision. In settings with endogenous information acquisition and attention, the weight attached to information depends partly on perceived precision and allocated attention (Fuster et al., 2022). Partisan misperception therefore predicts a lower effective weight on out-party signals. In-group bias in information processing may thus exist even for non-partisan issues, and its existence is expected in the control group. Furthermore, the treatment is expected to reduce this bias because it would mitigate partisan misperception from Hypothesis 1. These considerations lead to the following two hypotheses:

Hypothesis 2. (In-group bias in information processing). Partisans have an in-group bias in information processing for non-partisan facts in the control group.

Hypothesis 3. (Treatment effect on in-group bias in information processing). Partisans have a smaller in-group bias in information processing for non-partisan facts in the treated group than in the control group.

Lastly, when individuals perceive out-group members as having low levels of knowledge, they would develop greater distrust toward them. Therefore, partisan misperception may exacerbate affective polarization.¹⁸ Therefore, we expect that the treatment reduces affective polarization:

Hypothesis 4. (Treatment effect on affective polarization). The treatment decreases the affective polarization.

In the following, we test these four hypotheses based on our experiment.

¹⁸While he does not consider partisan misperception, Stone (2020) theoretically demonstrate that a combination of three types of misperceptions (a prior bias against the other agent's character, the false consensus bias, and limited strategic thinking) creates affective polarization. Furthermore, Bowen et al. (2023) theoretically demonstrate that misperceptions about friends' sharing on social media induce opinion polarization.

5 Correcting Partisan Misperception: Analysis

All estimates in this section are conditional average treatment effects for the primary analysis sample and should not be interpreted as population-level effects among all partisans.

This section presents the empirical specifications used to evaluate the hypotheses and the corresponding results.

5.1 Summary Statistics and Balance Check: Experiment

Table 8 presents the summary statistics of respondents with misperception $\mathbb{1}_{i,g(i)}^{pre} \geq 0.05$. The primary analysis sample is characterized by a large average pre-treatment perceived in-party advantage—approximately 34–35 percentage points—and high baseline factual accuracy. These characteristics define the population to which the subsequent experimental estimates apply. The female ratio is lower in the treated group than in the control group in the U.S.; other baseline differences are small relative to their standard errors. Overall, the randomization worked reasonably well.

Table 8: Summary Statistics: Experiment

	SK Treated	SK Control	SK Diff	US Treated	US Control	US Diff
RP Supporters Ratio	0.256	0.249	0.007 (0.018)	0.543	0.522	0.021 (0.019)
Female Ratio	0.482	0.484	-0.002 (0.021)	0.474	0.517	-0.043 (0.019)
College-educated Ratio	0.804	0.795	0.010 (0.017)	0.547	0.531	0.016 (0.019)
Age (50+) Ratio	0.709	0.709	-0.000 (0.019)	0.662	0.689	-0.027 (0.017)
Pre-treatment Accuracy Rate	0.955	0.957	-0.002 (0.006)	0.849	0.832	0.017 (0.009)
Pre-treatment Partisan Misperception	0.351	0.342	0.009 (0.011)	0.342	0.337	0.005 (0.009)
Observations	1170	1144		1428	1451	

Note: This table reports summary statistics for the primary experimental analysis sample in South Korea (SK) and the United States (U.S.): respondents with a pre-treatment perceived in-party accuracy advantage of at least 5 pp. Columns show means for treated and control groups, along with their differences and standard errors in parentheses.

5.2 Effect on Partisan Misperception

We start by testing Hypothesis 1: the treatment effect on partisan misperception.

Measurement To test the hypothesis, we need to define the measurement of misperception about non-partisan facts after receiving the treatment. As in the case of the ex-ante misperception, this ex-post misperception is measured by

$$\text{misperception}_{i,g(i)}^{post,f} := \frac{1}{3} \sum_{j=3}^5 \text{misperception}_{i,g(i),j}. \quad (4)$$

We use this measurement to test the hypothesis.

Specification for Hypothesis 1 To test Hypothesis 1, we run the following regression:

$$\text{misperception}_{i,g(i)}^{post,f} = \alpha T_i + \text{const.} + \varepsilon_i, \quad (5)$$

where $T_i = 1$ if individual i is treated. Given this, we expect $\hat{\alpha} < 0$ as the empirical specification of Hypothesis 1.

Results Table 9 presents the results. In the primary analysis sample, the treatment reduced misperception by 4.9 pp in South Korea and 7.5 pp in the United States, both statistically significant effects. Nevertheless, partisan misperception did not disappear entirely. The mean level of partisan misperception is 0.231 (23.1%) in South Korea and 0.196 (19.6%) in the United States. Thus, the treatment reduced only part of the overall misperception. Overall, Hypothesis 1 was supported.

5.3 In-Group Bias in Information Processing

Next, we test Hypotheses 2 and 3: the presence of in-group bias in the control group and the treatment effect on this bias. The key idea for measuring in-group bias is as follows. For all non-partisan statements, the majority's judgment was identical; hence, the informational content of the signals was constant, with only the source identity varying. Accordingly, if respondents revised their answers toward the correct response more frequently when the signal came from the in-group than when it came from the out-group, we interpret this as evidence of in-group bias in information processing.

Table 9: Treatment Effects on Partisan Misperception

	(1)	(2)
	SK	US
Treatment	-0.049 (0.010)	-0.075 (0.009)
Observations	2314	2879
Mean of Outcome	0.231	0.196

Note: This table reports the estimated treatment effects on post-treatment partisan misperception in South Korea (SK) and the United States (U.S.) for the primary analysis sample: respondents with a pre-treatment perceived in-party accuracy advantage of at least 5 pp. The dependent variable is the average difference in perceived accuracy between in-group and out-group supporters across three non-partisan factual statements ($j = 3, 4, 5$). Each coefficient represents the effect of being assigned to the treatment group ($T_i = 1$) relative to the control group. Standard errors, shown in parentheses, are robust to heteroskedasticity.

Measurement To formalize this idea, let respondent i 's judgment in task j before signals be $J_{i,j,0} \in \{0, 1\}$, where $J_{i,j,0} = 1$ if and only if i 's judgment on fact j before the signal is correct. Furthermore, let the estimated accuracy of their own judgment before the signal be $a_{i,j,0} \in [0, 100]$. Then, we define

$$\mu_{i,j,0} = \begin{cases} \frac{a_{i,j,0}}{100} & \text{if } J_{i,j,0} = 1 \\ 1 - \frac{a_{i,j,0}}{100} & \text{if } J_{i,j,0} = 0 \end{cases} \quad (6)$$

Here, $J_{i,j,0}$ is respondent i 's *binary opinion* on task j . On the other hand, $\mu_{i,j,0}$ is the *continuous opinion*.

Similarly, let respondent i 's judgment on fact j after the signal be $J_{i,j,1}$ and the estimated accuracy of their own judgment after the signal be $a_{i,j,1} \in [0, 100]$. Then, we define

$$\mu_{i,j,1} = \begin{cases} \frac{a_{i,j,1}}{100} & \text{if } J_{i,j,1} = 1 \\ 1 - \frac{a_{i,j,1}}{100} & \text{if } J_{i,j,1} = 0 \end{cases} \quad (7)$$

$(J_{i,j,0}, J_{i,j,1})$ and $(\mu_{i,j,0}, \mu_{i,j,1})$ serve as measurements of each respondent's binary and continuous opinions before and after signals.

Given these variables, we construct the following two variables for changes in the respondent's opinion. First, let the "dummy update", $y_{i,j}^J \in \{0, 1\}$, where $y_{i,j}^J = 1$ if and only if $J_{i,j,0} = 0$ and $J_{i,j,1} = 1$. This measures if respondents update their beliefs from incorrect to correct answers using only the T/F dichotomy response. Second, let the "continuous update", $y_{i,j}^H \in \{0, 1\}$, where $y_{i,j}^H = 1$ if and only if $\mu_{i,j,1} > \mu_{i,j,0}$. This measures both if respondents update their beliefs from incorrect to correct answers using

both the T/F dichotomy response and if they increase the level of confidence in their own T/F responses.

In the dummy update measure, respondents whose initial judgments were correct are always coded as $y_{i,j}^J = 0$. The advantage of the continuous update measure is that it allows us to capture cases in which a respondent’s judgment does not change because the initial judgment was correct, but their confidence in that judgment is revised upward in response to a signal.

Specification for Hypothesis 2 Let s_{ij} be the signal respondent i receives in task j . $s_{ij} = I$ if the signal is about in-party members’ opinions and $s_{ij} = O$ if the signal is about out-party members’ opinions.

Let $y_{i,j} = \{y_{i,j}^J, y_{i,j}^M\}$ be the *change* in respondent i ’s opinion on the same task j before and after the signals. We estimate the following separately for the treated group ($T_i = 1$) and the control group ($T_i = 0$) for the identical task j .

$$y_{i,j} = \beta \mathbb{1}\{s_{i,j} = I\} + \eta_j + \varepsilon_{i,j} \quad (8)$$

We denote the estimands of β for the treated group β^T and the control group β^C .

We use both measures $(y_{i,j}^J, y_{i,j}^M)$ as $y_{i,j}$. In the post-treatment judgment tasks on non-partisan facts, the majority in both political parties give the correct answer, based on our previous survey. Thus, the content of the signal is the same across the two signals. Thus, partisans have an in-group bias in information processing if $\beta > 0$. In other words, β represents the degree of in-group bias in information processing. Therefore, we expect that $\hat{\beta} > 0$ in (8) holds in the control group as Hypothesis 2.

We include task fixed effects, η_j , to isolate any unobserved heterogeneity in the propensity of updating beliefs for each task.

Results for Hypothesis 2 Table 10 reports the results on in-group bias in the control group. In South Korea, in-group signals prompted respondents to revise their opinions toward the correct choice more frequently than out-group signals. Specifically, in-group signals increased the probability of a “dummy update” by 5.7 pp and a “continuous update” by 7.6 pp, both statistically significant effects. That is, in-group bias in information processing exists even for non-partisan issues.

It is worth noting that, on average, only 10.3% of respondents engaged in dummy updates. In our judgment tasks, a majority of respondents initially selected the cor-

rect answer; for them, the signals merely confirmed their prior judgment, and thus no dummy update could occur. Hence, the relatively low rate of dummy updates is unsurprising. Moreover, the effect size was larger for continuous updates than for binary updates, which is consistent with the same logic: binary updates are inherently less likely to occur than continuous updates.

Appendix E further examines this measurement issue. First, when we restrict the sample to respondent-task observations where the initial answer was wrong, so that binary updating is mechanically possible, an in-group signal raises the probability of moving from an incorrect to a correct answer by 17.1 pp in South Korea and 2.3 pp in the United States in the control group; the treatment reduces this gap by 7.4 pp in South Korea, while the corresponding U.S. interaction is close to zero. Second, when we replace the indicator for any continuous increase with the signed change in the continuous opinion measure, in-group signals increase the correctness-weighted confidence measure by 4.9 pp in South Korea and 3.1 pp in the United States in the control group. Among initially wrong or initially uncertain respondent-task observations (confidence at or below 70), the corresponding estimates are 8.8 pp and 4.6 pp, and the treatment interactions are -4.2 pp in both countries. These results suggest that the source-based response is not only confidence reinforcement among respondents who already knew the answer, although the U.S. evidence remains weaker for binary updates.

Table 10: In-Group Bias in Information Processing (Control Group)

	(1) SK Dummy	(2) SK Continuous	(3) US Dummy	(4) US Continuous
In-Group Signal	0.057 (0.011)	0.076 (0.017)	0.006 (0.012)	0.044 (0.015)
Observations	3432	3432	4353	4353
Num. of Indiv	1144	1144	1451	1451
Num. of Task	3	3	3	3
Mean of Outcome	0.103	0.425	0.170	0.480

Note: This table reports the estimated in-group bias in information processing for the control group in South Korea (SK) and the United States (U.S.) for the primary analysis sample: respondents with a pre-treatment perceived in-party accuracy advantage of at least 5 pp. The dependent variable is the change in respondents' judgments before and after receiving a signal, measured as either a binary ("dummy") update or a continuous update. The regressor is an indicator of whether the signal originates from in-group members. Task fixed effects are included. Robust standard errors clustered at the individual level are shown in parentheses.

The presence of in-group bias in the United States is more nuanced. In-group signals increased the probability of a continuous update by 4.4 pp. Although this effect is

smaller than that observed in South Korea, it is statistically significant. By contrast, in-group signals increased the probability of a dummy update by only 0.6 pp, which was not statistically significant. Thus, evidence of in-group bias is found only for continuous updates. These results suggest that in-group bias in information processing is stronger in South Korea than in the United States. This is consistent with the fact that the average partisan misperception is larger in South Korea than in the U.S. (Table 9). Overall, Hypothesis 2 is supported in South Korea and partly supported in the U.S.

It should be emphasized that we measure in-group bias in information processing not directly but indirectly through respondents' judgments in each task. That is, it is a revealed attitude rather than a stated attitude. Accordingly, our design is less susceptible to social desirability bias and experimenter demand effects, as is typical of conjoint experiments (Horiuchi et al., 2022).

Specification for Hypothesis 3 Having the result in hand, we next test Hypothesis 3: the treatment effect on in-group bias. For this, we interact the in-group signal dummy with the treatment as follows.

$$y_{i,j} = \beta_1 \mathbb{1}\{s_{i,j} = I\} + \beta_2 T_i + \beta_3 (\mathbb{1}\{s_{i,j} = I\} \times T_i) + \eta_j + \varepsilon_{i,j} \quad (9)$$

Hypothesis 3 predicts $\hat{\beta}_3 < 0$.

Results for Hypothesis 3 Table 11 shows the results. In South Korea, within the primary analysis sample, estimates of $\hat{\beta}_3$ were negative and statistically significant for both binary and continuous measures, indicating that the treatment reduced in-group bias. The effect size was substantial: in both cases, the treatment reduced more than half of the in-group bias. For example, in the control group, in-group signals increased the probability of a continuous update by 7.6 pp, whereas in the treated group, the increase was only 1.8 (= 7.6 – 5.8) pp. This indicates that partisan misperception has a causal effect on in-group bias in information processing for this estimand, and that correcting misperception through information provision is highly effective in reducing it.

In the U.S., the results are more nuanced because in-group bias was not observed for binary updates even in the control group. First, in the case of continuous updates, the result is consistent with what we expected. The estimate of $\hat{\beta}_3$ was negative and statistically significant. In the control group, in-group signals increased the probability of a continuous update by 4.5 pp, whereas in the treated group, the increase was only 1.0 pp (= 4.5 – 3.5). Therefore, the treatment was highly effective. However, for binary

Table 11: Treatment Effects on In-Group Bias in Information Processing

	(1) SK Dummy	(2) SK Continuous	(3) US Dummy	(4) US Continuous
In-Group Signal	0.057 (0.011)	0.076 (0.008)	0.006 (0.009)	0.045 (0.012)
Treatment	0.016 (0.009)	0.021 (0.018)	-0.019 (0.008)	0.020 (0.018)
In-Group Signal x Treatment	-0.031 (0.002)	-0.058 (0.026)	0.015 (0.005)	-0.035 (0.011)
Observations	6942	6942	8637	8637
Num. of Individ	2314	2314	2879	2879
Num. of Task	3	3	3	3
Mean of Outcome	0.103	0.421	0.164	0.481

Note: This table reports the treatment effects on in-group bias in information processing for South Korea (SK) and the United States (U.S.) for the primary analysis sample: respondents with a pre-treatment perceived in-party accuracy advantage of at least 5 pp. The dependent variable measures the change in respondents’ judgments before and after receiving a signal, defined either as a binary (“dummy”) update or a continuous update. The key variable *In-Group Signal* \times *Treatment* captures the differential effect of in-group versus out-group signals for treated respondents relative to the control group. Task fixed effects are included. Robust standard errors clustered at the individual level are shown in parentheses.

updates, we did not obtain such a result because in-group bias was not observed even in the control group. Although the effect size was much smaller, the estimate of $\hat{\beta}_3$ was not negative but positive. This may suggest a backfire effect of the treatment when the initial level of in-group bias is negligible.¹⁹ Overall, Hypothesis 3 is supported in South Korea and partly supported in the U.S.

5.4 Affective Polarization

Finally, we test Hypothesis 4: the treatment effect on affective polarization.

Measurement For this purpose, we measure respondents’ favorable feelings toward out-party members and in-party members using both a warmth question and an (un)comfort level question about social relationships. The difference between them is:

$$\text{pol}_{i,g(i)} := \text{fav}_{i,g(i)}^g - \text{fav}_{i,g(i)}^{g'}$$

¹⁹Several papers show a possibility that belief correction or priming has a backfire effect (e.g., Nyhan and Reifler, 2010; Bicchieri and Dimant, 2022; Colonnelli et al., 2024).

where $\text{fav}_{i,g(i)}^g$ is the degree of favorable feelings toward in-party members and $\text{fav}_{i,g(i)}^{g'}$ is the degree of favorable feelings toward out-party members. This is our measurement of affective polarization.

Favorable feelings were measured in two ways. First, just after the treatment information, we asked respondents to rate warmth toward out-party members and in-party members from 0 to 100. We normalize this measure of $\text{fav}_{i,g(i)}^g$ and $\text{fav}_{i,g(i)}^{g'}$ to range from 0 to 1. We denote $\text{pol}_{i,g(i)}$ using this measurement by $\text{unfav}_{i,g(i)}$.²⁰ Second, after the completion of all judgment tasks, we asked respondents about their (un)comfort level with having relationships as colleagues, friends, or children’s spouses. By aggregating them, we construct the second measurement, denoted $\text{uncomf}_{i,g(i)}$.

Specification for Hypothesis 4 To test the hypothesis, we estimate the following:

$$\text{pol}_{i,g(i)} = \text{const.} + \gamma T_i + \varepsilon_i. \quad (10)$$

Then, Hypothesis 4 predicts $\hat{\gamma} < 0$.

Results Table 12 shows the results. First, columns (1) and (3) present the short-run effects on affective polarization, as this measure was collected immediately after the treatment. In the primary analysis sample, the treatment reduced affective polarization by 2.4 pp in South Korea and by 7.8 pp in the United States, both statistically significant effects.

Columns (2) and (4) present the effects on this second measure, showing that the treatment effects were not statistically significant, although the point estimates remained negative.

Note that the content of the questions, as well as their timing, differs across the two measures. Therefore, we cannot distinguish whether the null effect arises because the treatment improved feelings toward out-groups but did not alter preferences for avoiding relationships with out-groups, or because the treatment effect faded over time. In either case, the effect of the intervention on affective polarization is more nuanced than our initial hypothesis suggests.

5.5 Experimenter Demand Effects

Previous research shows that experimenter demand effects are limited in online survey experiments (Mummolo and Peterson, 2019). Furthermore, we measured in-group

²⁰ $\text{pol}_{i,g(i)}$ ranges from -1 to 1.

Table 12: Treatment Effects on Affective Polarization

	(1)	(2)	(3)	(4)
	SK	SK	US	US
	Unfav	Uncomf	Unfav	Uncomf
Treatment	-0.024	-0.002	-0.078	-0.022
	(0.012)	(0.012)	(0.013)	(0.016)
Observations	2314	2314	2879	2879
Mean of Outcome	0.527	0.433	0.490	0.268

Note: This table reports the estimated treatment effects on affective polarization in South Korea (SK) and the United States (U.S.) for the primary analysis sample: respondents with a pre-treatment perceived in-party accuracy advantage of at least 5 pp. The dependent variable is the difference in favorable feelings toward in-party versus out-party members, measured either by self-reported warmth ratings (*Unfav*) or by (un)comfort level in social relationships with out-party members (*Uncomf*). Each coefficient represents the effect of being assigned to the treatment group ($T_i = 1$) relative to the control group. Robust standard errors are reported in parentheses.

bias in information processing not directly but indirectly through respondents' judgments in each task. Accordingly, our design is less susceptible to such effects. Nevertheless, it remains important to examine whether our findings could be driven by such effects. To ensure that our results are not driven by experimenter demand, we reanalyze the data after excluding respondents who appeared to pander to the hypothesis presented by the experimenter. A similar approach was also taken by [Dhar et al. \(2022\)](#). They measured each respondent's propensity to provide socially desirable answers based on a questionnaire used in social psychology and found that the treatment effect did not differ across propensities.

Specifically, we exclude those who change their answers to the following question about risk attitudes between the beginning and the end of the survey.²¹ We asked in the survey: "We ask about your attitude towards risk. Suppose that according to the weather forecast, the probability of rain today is 35%. In such a case, do you usually take an umbrella when you go out?" Then, we asked the same question at the end of the survey, but we added "Our hypothesis is that people dislike risks, so they usually take an umbrella" for those who answered "No" at the beginning of the survey. Similarly, we added "Our hypothesis is that people like risks, so they usually do not take an umbrella" for those who answered "Yes" at the beginning of the survey. If the answers differ between the beginning of and the end of the survey, it would be because a respondent panders to the hypothesis presented by the experimenter ([Mummolo and Peterson, 2019](#)). Thus, such respondents are subject to the experimenter demand effect.

²¹The same approach was taken by [Kishishita and Matsumoto \(2024\)](#).

As a result, we excluded such respondents, which left us 2120 respondents in South Korea and 2573 respondents in the U.S.

Table 13 presents the treatment effect on this in-group bias (see Appendix F for other results). Overall, the results are consistent with those from the main analysis, indicating that experimenter demand effects are not a serious concern in our experiment.

Table 13: Treatment Effects on In-Group Bias in Information Processing: EDE

	(1) SK Dummy	(2) SK Continuous	(3) US Dummy	(4) US Continuous
In-Group Signal	0.059 (0.011)	0.082 (0.008)	0.008 (0.011)	0.051 (0.010)
Treatment	0.017 (0.008)	0.022 (0.017)	-0.026 (0.013)	0.019 (0.020)
In-Group Signal x Treatment	-0.035 (0.002)	-0.062 (0.031)	0.012 (0.009)	-0.047 (0.018)
Observations	6360	6360	7719	7719
Num. of Individ	2120	2120	2573	2573
Num. of Task	3	3	3	3
Mean of Outcome	0.100	0.420	0.164	0.483

Note: This table reports the treatment effects on in-group bias in information processing after excluding respondents susceptible to experimenter demand effects. The dependent variable measures the change in respondents’ judgments before and after receiving a signal, defined either as a binary (“dummy”) update or a continuous update. The key variable *In-Group Signal* \times *Treatment* captures the differential effect of in-group versus out-group signals for treated respondents relative to the control group. Task fixed effects are included. Robust standard errors clustered at the individual level are shown in parentheses.

5.6 Additional Analyses

The Online Appendix provides supplementary analyses of the experiment.

Conspiracy Theory. The experiment also included two additional judgment tasks involving conspiracy theories. Appendix G presents the results. Contrary to our expectation, we did not find evidence of in-group bias in information processing for these tasks. One possible explanation is that, for highly partisan issues such as conspiracy beliefs, a signal indicating that a majority of a party’s supporters endorse or reject a conspiracy theory may not be interpreted literally by respondents.

Education Group. The experiment included two additional judgment tasks on non-partisan issues in which each respondent randomly received one of two signals: one

indicating the majority opinion among college graduates, and the other indicating the majority opinion among non-college graduates. Respondents might update their opinions differently depending on whether the signal originated from college graduates. This serves as a benchmark for gauging the magnitude of the partisan in-group bias in information processing observed in the main analysis. Appendix H.2 presents the results; Tables H.2 and H.3 report the education-signal benchmark estimates. We found that the partisan in-group bias is substantially larger than this education-based bias, suggesting that partisan in-group bias cannot simply be attributed to misperceptions about the educational composition of each political group, although partisan misperception is correlated with these types of misperceptions.

6 Conclusion

This paper introduced and empirically validated a new concept—*partisan misperception in knowledge gap*: the belief that one’s in-group is more knowledgeable than the opposing party, even about basic, non-partisan facts. Across large baseline surveys in South Korea and the United States, we show that this misperception is widespread: partisans perceive higher accuracy among co-partisans than among the out-party by roughly 15 pp or more when judging true–false statements about non-partisan facts.

Our survey experiments in the U.S. and South Korea clarify why this matters. Partisan misperception distorts information processing even outside explicitly political domains. Our experimental estimates apply to partisans who initially reported a perceived in-party advantage of at least 5 percentage points. They do not establish population-wide treatment effects among all partisans, including respondents whose initial perceived gaps were small or reversed. Within the primary analysis sample, simple corrective evidence that both sides are similarly knowledgeable reduces partisan misperception and dampens the resulting in-group bias. These corrections also lower affective polarization, albeit transiently.

Taken together, the findings shift the focus of polarization from differences in attitudes alone to differences in perceived competence. We identify a cognitive mechanism—rooted in social identity—that obstructs information exchange and mutual understanding. The experimental findings provide proof-of-concept evidence that equality information can alter immediate beliefs and responses among partisans who begin with a sizable perceived in-party advantage. Future work should test how to sustain these gains over time and at scale, and examine whether complementary interventions (e.g., repeated exposure, messenger choice, or institutional cues) can entrench more accurate

beliefs about out-party competence while preserving open disagreement on values.

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Online Appendices for “Distrusting the Out-Party: Partisan Misperception and Biased Information Processing.” (Not for Publication)

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A Perceiver-based Partisan Misperception

In the main text, we use target-based partisan misperception. Here, we instead define perceiver-based partisan misperception. Citizens have perceiver-based partisan misperception if the following two conditions are satisfied:

- (a) Supporters of each political party believe that members of their own party are more knowledgeable than the opposing party’s supporters believe them to be. Formally, for each target group $t \in \{R, L\}$ separately, we estimate

$$p_{i,j}^t = \beta_3 \mathbb{1}\{g(i) = t\} + \eta_t + \eta_j + \varepsilon_{i,j}^t, \quad (11)$$

for group $g(i) \in \{R, L\}$. A positive β_3 indicates that partisans rate their own group as more knowledgeable than out-partisans do, and (a) expects $\beta_3 > 0$.

- (b) By contrast, supporters of both parties and non-partisans are expected to hold similar views about how knowledgeable non-partisans are. Formally, for the target group $t = N$, we estimate

$$p_{i,j}^t = \beta_4 \mathbb{1}\{g(i) = R\} + \beta_5 \mathbb{1}\{g(i) = L\} + \mu_j + \varepsilon_{i,j}^t \quad (12)$$

If perceptions of non-partisans do not differ by perceiver type, (b) expects $\beta_4 = \beta_5 = 0$.

Perceiver-based partisan misperception captures cross-perceiver disagreement in evaluations of partisan knowledge. Note that the model cannot include individual (here, an individual perceiver) fixed effects because the key running variable is $\mathbb{1}\{g(i) = t\}$, which only varies across the individual level.

Results Table A.1 reports the results of estimating equations (11) and (12). Each column is defined by a country and a target group (RP, LP, or NP), while the rows compare how different perceiver groups rate the same target. For RP targets, RP perceivers assign higher perceived accuracy than LP perceivers by 19.6 pp in South Korea and 19.7 pp in the United States. For LP targets, LP perceivers assign higher perceived accuracy than RP perceivers by 15.4 pp in South Korea and 12.9 pp in the United States. For NP targets, perceived accuracy varies less across perceiver groups; in the U.S., however, the corresponding coefficients are positive and statistically significant (0.052 for RP perceivers and 0.045 for LP perceivers). Overall, the table indicates systematic differences in perceived knowledge across perceivers for partisan targets in both countries, consistent with

perceiver-based partisan misperception.

Table A.1: Perceiver-based Partisan Misperception: Baseline Survey

Country	SK	SK	SK	US	US	US
Target	RP	LP	NP	RP	LP	NP
	(1)	(2)	(3)	(4)	(5)	(6)
Perceiver = RP	0.196 (0.012)		0.007 (0.018)	0.197 (0.012)		0.055 (0.016)
Perceiver = LP		0.154 (0.015)	0.022 (0.015)		0.129 (0.011)	0.049 (0.016)
Mean of Outcome	0.645	0.689	0.603	0.622	0.622	0.547
Observations	7512	7512	11112	9704	9704	12544
Num. of Indiv	939	939	1389	1213	1213	1568
Num. of Task	8	8	8	8	8	8

Note: This table reports the results of estimating equations (11) and (12) that test for perceiver-based partisan misperception in South Korea (SK) and the United States (U.S.). Columns (1)–(3) use the SK sample and columns (4)–(6) use the U.S. sample. Each column corresponds to a target group $t \in \{RP, LP, NP\}$, where RP denotes supporters of the right party, LP denotes supporters of the left party, and NP denotes non-partisans. The dependent variable p_{ij}^t is perceiver i 's assessment of the accuracy (probability correct) of target group t on task j . The rows “Perceiver = RP” and “Perceiver = LP” indicate the perceiver group whose ratings are being compared to the omitted perceiver group in that column. All regressions include task fixed effects. Robust standard errors clustered at the individual level are shown in parentheses.

B Baseline Survey: Partisan Misperception for Conspiracy Theory Questions

In the baseline survey, we asked respondents about conspiracy theories as well as non-partisan facts (see Table B.1 for the list of true-or-false questions about conspiracy theories). This section reports partisan misperception for conspiracy theory questions.

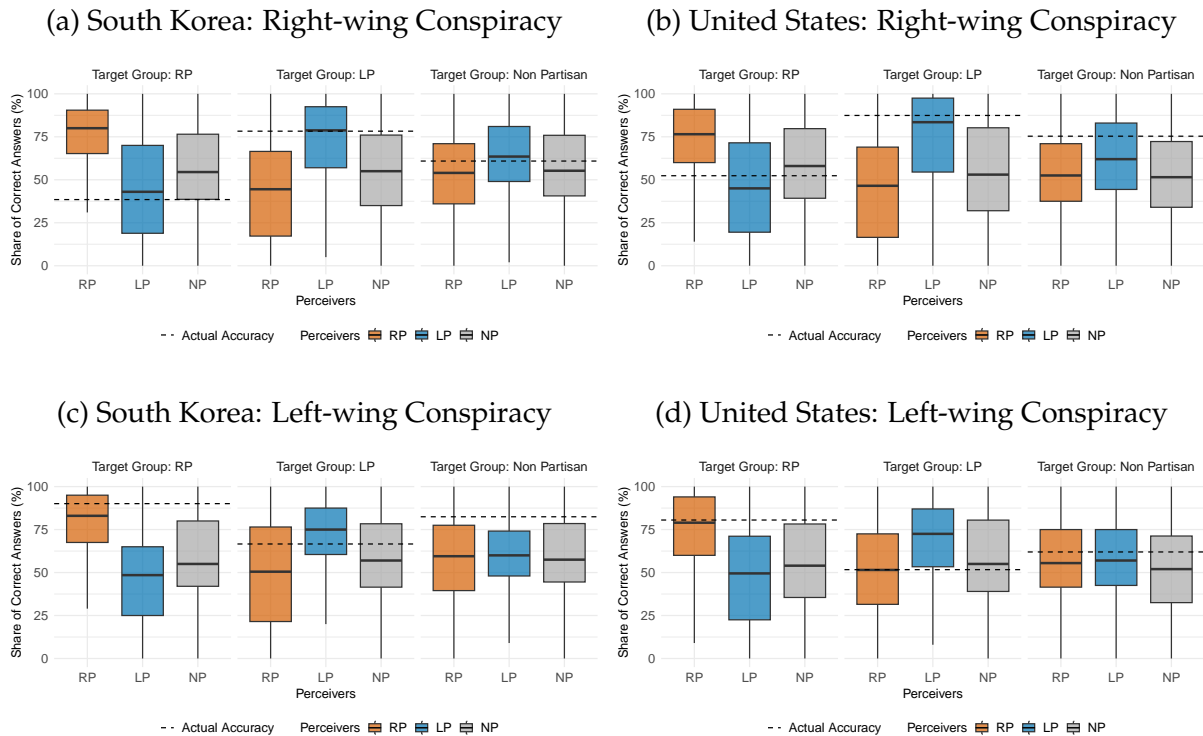
Figure B.1 presents the results. Contrary to the case of non-partisan facts, even the actual accuracy rates differ substantially across political groups.²² That said, we observe a pattern similar to partisan misperception for non-partisan facts. However, the degree of partisan bias in conspiracy theories is considerably larger than that in partisan misperception for non-partisan facts. For example, the median supporter of party R believes that they are more knowledgeable about right-wing conspiracy theories than party L supporters by approximately 40 pp.

²²We define “False” as the correct answer for all conspiracy theories, although there may be debate over whether a given conspiracy theory is indeed false.

Table B.1: List of True-or-False Questions on Conspiracy Theories

	South Korea	United States
<i>Right-wing</i>	<ol style="list-style-type: none"> 1. There was widespread election fraud in the parliamentary elections of 2020 and 2024. 2. China is systematically infiltrating major institutions in South Korea to undermine democracy and sovereignty. 	<ol style="list-style-type: none"> 1. The Democratic Party stole the 2020 presidential election. 2. Climate change is a hoax created to push socialist policies and destroy American industry.
<i>Left-wing</i>	<ol style="list-style-type: none"> 3. The Supreme Court colluded with Yoon Suk-yeol and decided to disqualify Lee Jae-myung from the presidential election. 4. The U.S. government controls major political decisions in Korea, such as suppressing opposition parties under conservative governments. 	<ol style="list-style-type: none"> 3. The Republican administration initiated the Iraq War for oil. 4. The Republicans stole the 2024 presidential election.

Figure B.1: Partisan Misperception by Conspiracy Theory Questions

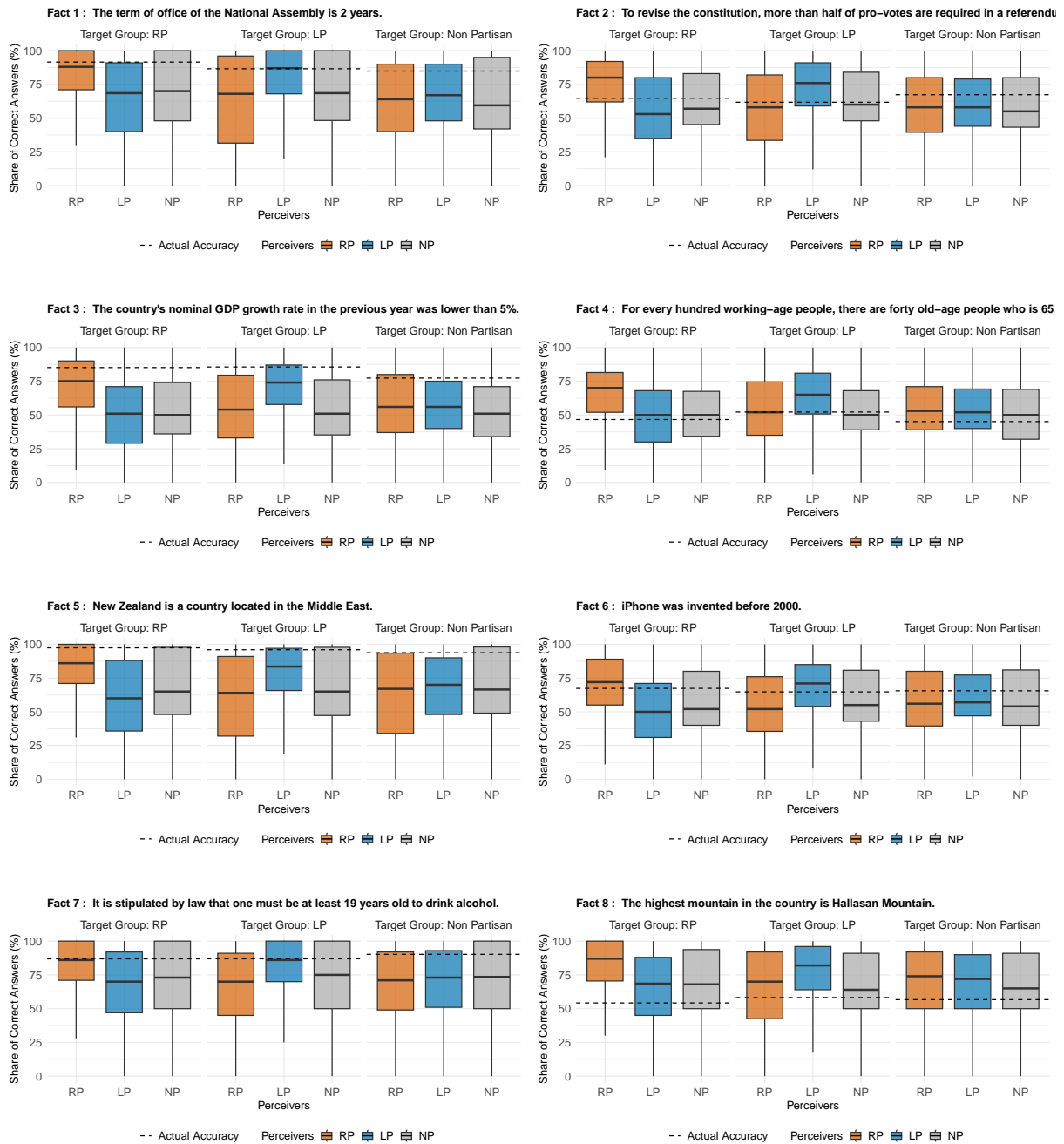


Note: These figures display the distributions of perceived accuracy for conspiracy theory questions by perceiver and target groups in South Korea and the United States. Panels (a) and (b) correspond to right-wing conspiracy items, while panels (c) and (d) correspond to left-wing conspiracy items. The boxes show the interquartile range (25th–75th percentiles), with medians indicated by black lines. Dashed lines represent the actual accuracy rates for each question set. Colors denote perceiver groups: blue for right-party supporters (RP), orange for left-party supporters (LP), and gray for non-partisans (NP).

C Baseline Survey: Partisan Misperception for Each Task

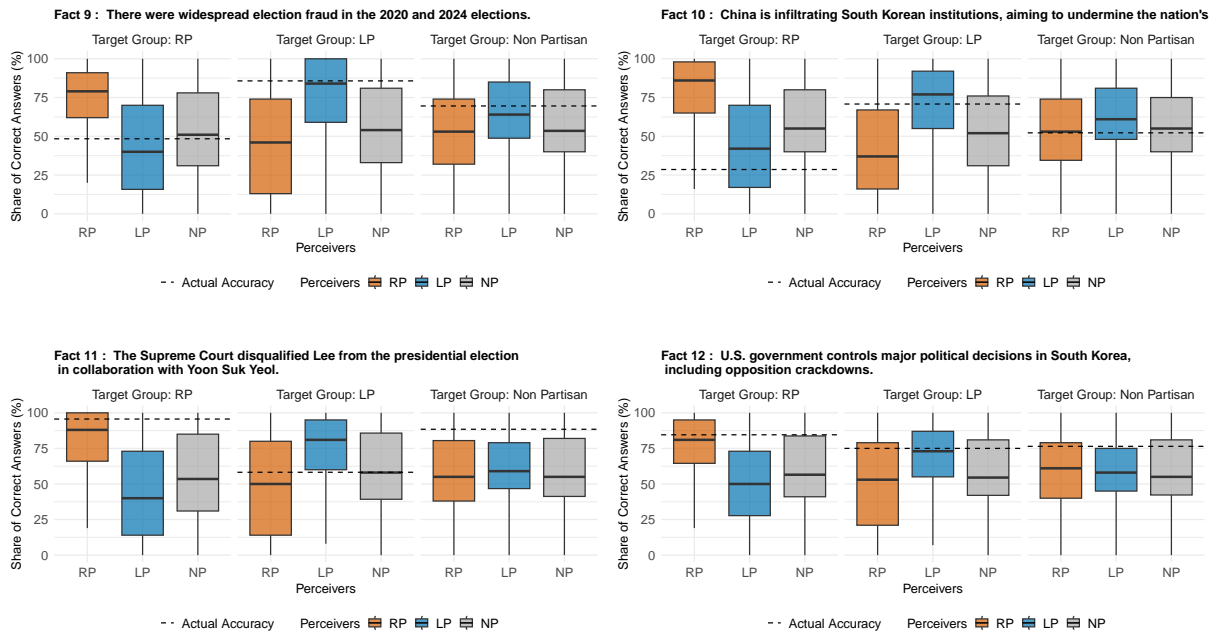
In the main text, we showed partisan misperception for all non-conspiracy questions combined. In this section, we study the partisan misperception for each task separately, including conspiracy theory questions. Figure C.1 reports target-based partisan misperception for each non-partisan fact, and Figure C.2 reports that for each conspiracy theory in South Korea. Figure C.3 reports target-based partisan misperception for each non-partisan fact, and Figure C.4 reports that for each conspiracy theory in the U.S. The results are consistent with the findings based on the average across tasks.

Figure C.1: Partisan Misperception for Each Question: South Korea, Factual



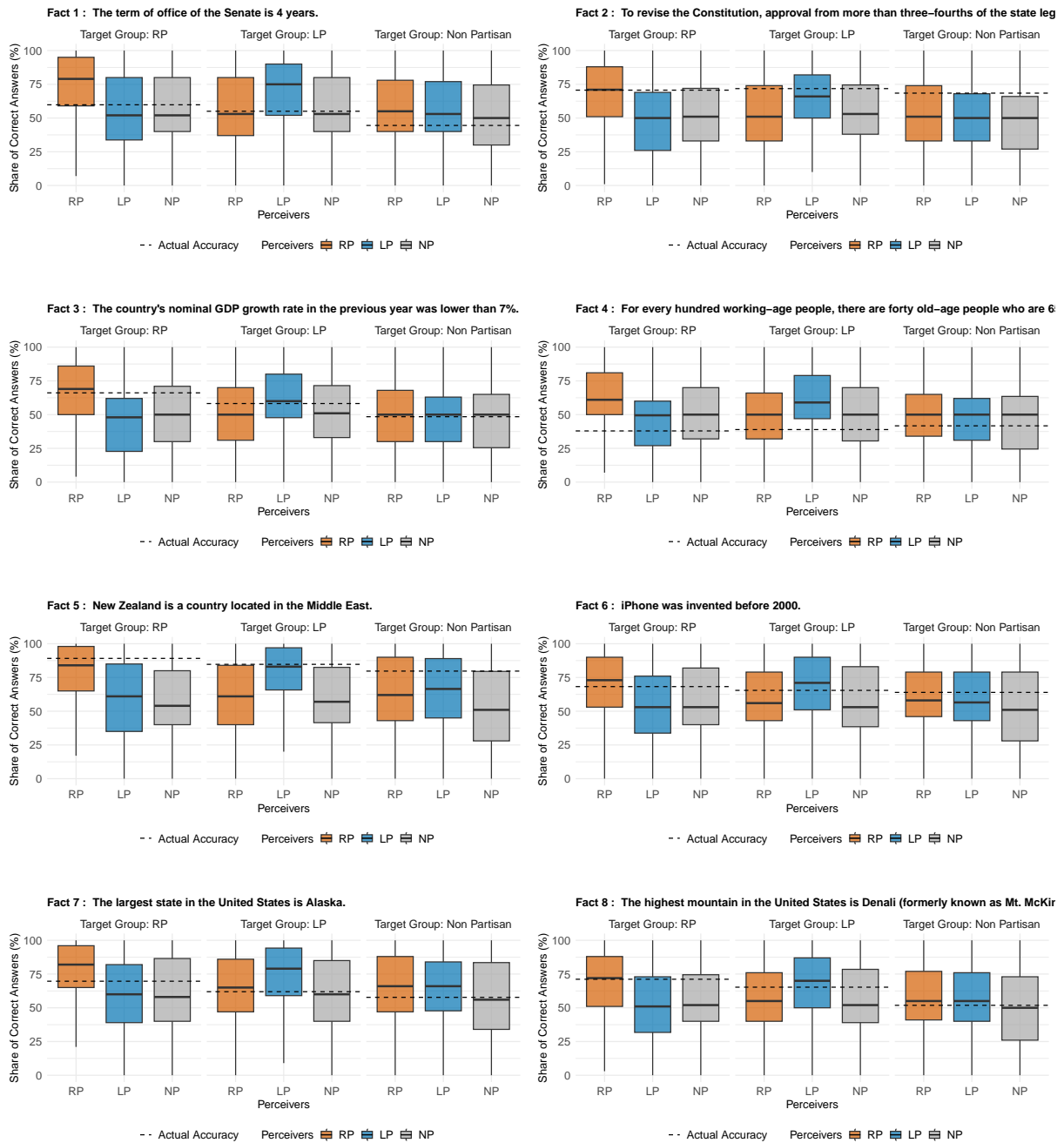
Note: These figures display the distributions of perceived accuracy for each of the non-conspiracy questions by perceiver and target groups in South Korea. Each panel corresponds to one statement. The boxes show the interquartile range (25th–75th percentiles) with medians indicated by black lines. Dashed lines represent the actual accuracy rates for each fact. Colors denote perceiver groups: blue for right-party supporters (RP), orange for left-party supporters (LP), and gray for non-partisans (NP).

Figure C.2: Partisan Misperception for Each Question: South Korea; Conspiracy



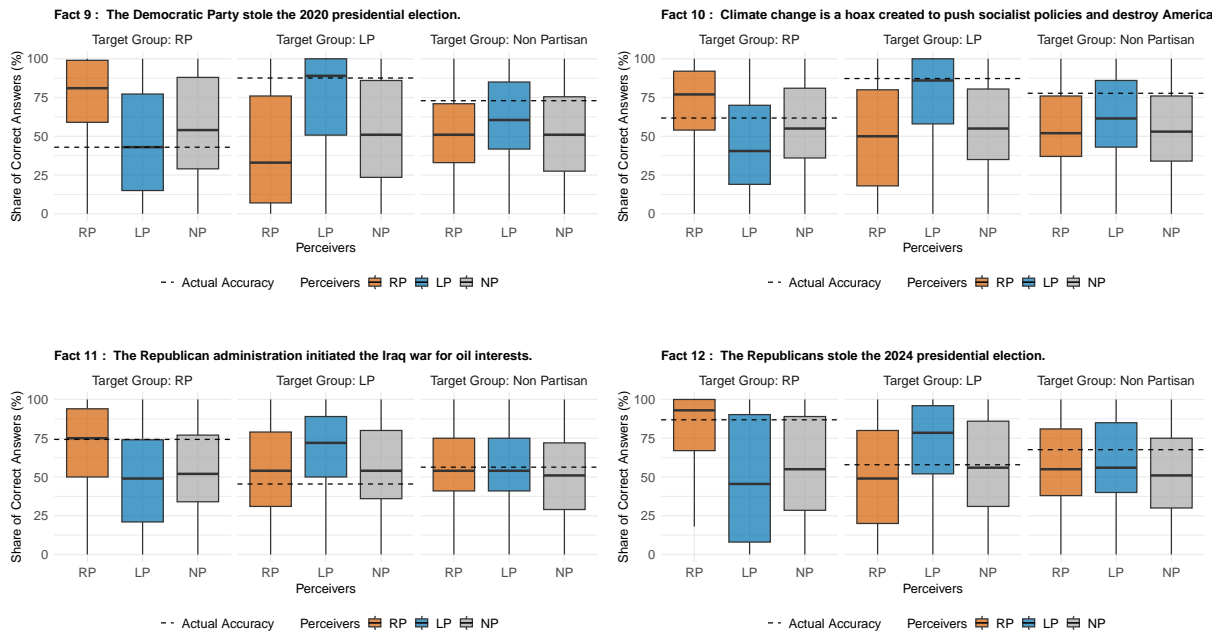
Note: These figures display the distributions of perceived accuracy for each of the conspiracy theory questions by perceiver and target groups in South Korea. Each panel corresponds to one statement. The boxes show the interquartile range (25th–75th percentiles) with medians indicated by black lines. Dashed lines represent the actual accuracy rates for each fact. Colors denote perceiver groups: blue for right-party supporters (RP), orange for left-party supporters (LP), and gray for non-partisans (NP).

Figure C.3: Partisan Misperception for Each Question: United States, Factual



Note: These figures display the distributions of perceived accuracy for each of the factual questions by perceiver and target groups in the U.S. Each panel corresponds to one statement. The boxes show the interquartile range (25th–75th percentiles) with medians indicated by black lines. Dashed lines represent the actual accuracy rates for each task. Colors denote perceiver groups: blue for right-party supporters (RP), orange for left-party supporters (LP), and gray for non-partisans (NP).

Figure C.4: Partisan Misperception for Each Question: United States, Conspiracy



Note: These figures display the distributions of perceived accuracy for each of the conspiracy theory questions by perceiver and target groups in the U.S. Each panel corresponds to one statement. The boxes show the interquartile range (25th–75th percentiles) with medians indicated by black lines. Dashed lines represent the actual accuracy rates for each task. Colors denote perceiver groups: blue for right-party supporters (RP), orange for left-party supporters (LP), and gray for non-partisans (NP).

D Additional Survey with Monetary Incentives

Table D.1 shows the summary statistics of the additional survey in the U.S., where half of the respondents receive a monetary bonus.

Table D.1: Summary Statistics: Additional Survey in the U.S.

Country	US	US	US
Party	RP	LP	NP
Demographics			
Female Ratio	0.49	0.53	0.49
College-educated Ratio	0.64	0.68	0.58
Age (50+) Ratio	0.42	0.44	0.42
Judgments			
Average Accuracy Rate	0.77	0.80	0.77
Average Confidence	0.77	0.77	0.73
Affective Polarization (0 to 1)			
Warm toward RP	0.80	0.21	0.42
Warm toward LP	0.36	0.78	0.46
Comfortable with RP at Work	0.82	0.71	0.80
Comfortable with RP as Friend	0.82	0.59	0.78
Comfortable with RP as Child	0.82	0.55	0.77
Comfortable with LP at Work	0.73	0.92	0.82
Comfortable with LP as Friend	0.71	0.92	0.81
Comfortable with LP as Child	0.67	0.92	0.79
Ideological Polarization (0 to 1)			
Conservatism of Self	0.77	0.22	0.52
Extremity of Self (rel. to Center)	0.57	0.60	0.20
Conservatism of RP	0.81	0.75	0.64
Conservatism of LP	0.21	0.31	0.32
Social Network and Education Gaps (RP/LP)			
In-out Friends Share Gap	0.31	0.44	
Perceived College Completion Gap	0.03	0.19	
Observations	486	812	173

Note: This table shows the summary statistics for the additional surveys in the United States. We report the averages for each partisan group. RP denotes right-wing party supporters, LP denotes left-wing party supporters, and NP denotes non-partisans.

E Experiment: Updating Outcomes

This section reports robustness checks for the updating outcomes. The main binary update measure can equal one only when a respondent’s pre-signal answer is incorrect. Table E.1 reports how often such cases occur. We also define a broader wrong-or-uncertain sample: all initially wrong observations plus initially correct observations with stated confidence no greater than 70.

Table E.1: Updating Outcome Constraints

	SK	US
Respondent-task observations	6,942	8,637
Respondents	2,314	2,879
Pre-treatment task accuracy	0.956	0.840
Pre-signal accuracy, tasks 3–5	0.672	0.638
Initially wrong observations	2,274	3,125
Initially wrong respondents	1,593	2,045
Wrong or uncertain observations	3,550	5,209
Wrong or uncertain respondents	1,938	2,542

Note: This table reports sample sizes and baseline accuracy for the updating analysis in Study 2. Pre-treatment task accuracy is measured across the two tasks before treatment. Pre-signal accuracy is measured across the three post-treatment factual tasks used in the information-processing analysis. Wrong or uncertain observations include all initially wrong respondent-task observations and initially correct observations with stated confidence of 70 or below.

Table E.2 restricts the analysis to initially wrong respondent-task observations. In this subsample, the binary update outcome directly measures movement from an incorrect to a correct answer after the signal. The specification follows the main text: columns (1) and (2) estimate the in-group signal effect in the control group, while columns (3) and (4) interact the in-group signal with treatment assignment.

Table E.3 replaces the indicator for any increase in the continuous opinion measure with the signed change in that measure, $\mu_{i,j,1} - \mu_{i,j,0}$. This outcome preserves the direction and magnitude of belief movement. The table reports estimates for the full analysis sample and for the subset of initially wrong or initially uncertain respondent-task observations.

Table E.2: Binary Updates among Initially Wrong Respondent-Task Observations

	(1) SK Control Wrong	(2) US Control Wrong	(3) SK All Wrong	(4) US All Wrong
In-Group Signal	0.171 (0.028)	0.023 (0.025)	0.172 (0.018)	0.023 (0.019)
Treatment			0.047 (0.031)	-0.025 (0.015)
In-Group Signal \times Treatment			-0.074 (0.028)	0.009 (0.008)
Observations	1138	1593	2274	3125
Num. of Indiv	792	1032	1593	2045
Num. of Task	3	3	3	3
Mean of Outcome	0.310	0.464	0.314	0.453

Note: This table reports information-processing estimates among respondent-task observations where the pre-signal answer was incorrect. The dependent variable equals one if the respondent moved from an incorrect to a correct answer after receiving the signal. Task fixed effects are included. Standard errors clustered at the individual level are shown for control-group specifications; standard errors clustered by individual and task are shown for treatment-interaction specifications.

Table E.3: Magnitude of Continuous Opinion Movement

	(1) SK Control Full	(2) US Control Full	(3) SK Control Wrong/Unc.	(4) US Control Wrong/Unc.	(5) SK All Full	(6) US All Full	(7) SK All Wrong/Unc.	(8) US All Wrong/Unc.
In-Group Signal	0.049 (0.009)	0.031 (0.010)	0.088 (0.014)	0.046 (0.014)	0.049 (0.012)	0.031 (0.011)	0.089 (0.014)	0.046 (0.009)
Treatment					0.014 (0.005)	0.012 (0.014)	0.028 (0.004)	0.025 (0.010)
In-Group Signal \times Treatment					-0.023 (0.015)	-0.024 (0.013)	-0.042 (0.016)	-0.042 (0.006)
Observations	3432	4353	1767	2635	6942	8637	3550	5209
Num. of Indiv	1144	1451	974	1290	2314	2879	1938	2542
Num. of Task	3	3	3	3	3	3	3	3
Mean of Outcome	0.051	0.088	0.130	0.171	0.052	0.088	0.133	0.173

Note: This table reports information-processing estimates using the signed change in the continuous opinion measure as the dependent variable. The full sample includes all respondent-task observations in the main information-processing analysis. The wrong/uncertain sample includes initially wrong observations and initially correct observations with stated confidence of 70 or below. Task fixed effects are included. Standard errors clustered at the individual level are shown for control-group specifications; standard errors clustered by individual and task are shown for treatment-interaction specifications.

F Experiment: Experimenter Demand Effect

Results Table F.1 presents the treatment effect on partisan misperception; Table F.2 reports the in-group bias in information processing in the control group; and Table F.3 shows the treatment effect on affective polarization. Overall, the results are consistent with those from the main analysis, indicating that experimenter demand effects are not a serious concern in our experiment.

Table F.1: Treatment Effects on Partisan Misperception: EDE

	(1)	(2)
	SK	US
Treatment	-0.048 (0.011)	-0.075 (0.010)
Observations	2120	2573
Mean of Outcome	0.227	0.192

Note: This table reports the estimated treatment effects on partisan misperception after excluding respondents identified as susceptible to experimenter demand effects. The dependent variable is the post-treatment measure of partisan misperception, defined as the difference in perceived accuracy between in-group and out-group supporters across non-partisan factual questions. Each coefficient represents the effect of being assigned to the treatment group ($T_i = 1$) relative to the control group. Standard errors, shown in parentheses, are robust to heteroskedasticity.

Table F.2: In-Group Bias in Information Processing (Control Group): EDE

	(1)	(2)	(3)	(4)
	SK	SK	US	US
	Dummy	Continuous	Dummy	Continuous
In-Group Signal	0.059 (0.011)	0.082 (0.018)	0.008 (0.012)	0.051 (0.016)
Observations	3147	3147	3879	3879
Num. of Individ	1049	1049	1293	1293
Num. of Task	3	3	3	3
Mean of Outcome	0.101	0.424	0.174	0.485

Note: This table reports the estimated in-group bias in information processing for the control group after excluding respondents susceptible to experimenter demand effects. The dependent variable measures the change in respondents' judgments before and after receiving a signal, defined either as a binary ("dummy") update or a continuous update. The key regressor is an indicator for whether the signal originates from in-group members. Task fixed effects are included. Robust standard errors clustered at the individual level are shown in parentheses.

Table F.3: Treatment Effects on Affective Polarization: EDE

	(1)	(2)	(3)	(4)
	SK	SK	US	US
	Unfav	Uncomf	Unfav	Uncomf
Treatment	-0.026 (0.013)	-0.001 (0.012)	-0.085 (0.013)	-0.024 (0.016)
Observations	2120	2120	2573	2573
Mean of Outcome	0.530	0.439	0.494	0.273

Note: This table reports the estimated treatment effects on affective polarization after excluding respondents identified as susceptible to experimenter demand effects. The dependent variable is the difference in favorable feelings toward in-party versus out-party members, measured either by self-reported warmth ratings (*Unfav*) or by (un)comfort level in social relationships with out-party members (*Uncomf*). Each coefficient represents the effect of being assigned to the treatment group ($T_i = 1$) relative to the control group. Robust standard errors are shown in parentheses.

G Experiment: Conspiracy Theory Questions

G.1 Overview

After judgment tasks on non-partisan facts, respondents were asked to do another two tasks ($j = 6, 7$). These tasks were structured as described above, but tasks $j = 6, 7$ asked whether a conspiracy theory is true or false. We presented the position most supported by the majority of R/L supporters. The list of statements used in these tasks can be seen in Table G.1.

Table G.1: Full List of True-or-False Questions in Experiment

	South Korea	United States
non-partisan facts	<ol style="list-style-type: none"> The term of the National Assembly is 2 years. (F) New Zealand is a country located in the Middle East. (F) 	<ol style="list-style-type: none"> To revise the Constitution, approval from more than three-fourths of the state legislatures is required. (T) New Zealand is a country located in the Middle East. (F)
Treatment		
non-partisan facts	<ol style="list-style-type: none"> To revise the Constitution, a majority of votes in a national referendum is required. (T) The iPhone was invented before 2000. (F) The highest mountain in the country is Hallasan. (T) 	<ol style="list-style-type: none"> The country's nominal GDP growth rate in the last year was lower than 7%. (T) The iPhone was invented before 2000. (F) The term of office in the Senate is 4 years. (F)
conspiracy theories	<ol style="list-style-type: none"> The Supreme Court colluded with Yoon Suk-yeol and decided to disqualify Lee Jae-myung from the presidential election. There was widespread election fraud in the parliamentary elections of 2020 and 2024. 	<ol style="list-style-type: none"> The Republican administration initiated the Iraq War for oil. The Democratic Party stole the 2020 presidential election.
non-partisan facts for education signals	<ol style="list-style-type: none"> The country's nominal GDP growth rate in the last year was lower than 5%. (T) By law, you must be at least 19 years old to drink alcohol. (T) 	<ol style="list-style-type: none"> Alaska is the largest state in the United States. (T) The highest mountain in the United States is Mt. McKinley (also known as Denali). (T)

G.2 Treatment Effects on Misperception

We first examine whether the treatment reduces misperception for conspiracy theory questions. Table G.2 shows the results. For South Korea, the point estimate is -2.8 pp with the standard error of 1.5 pp. This is small, compared to the baseline misperception of 34.3%. For the U.S., the magnitude is larger. The treatment reduces misperception in conspiracy theory questions by 6.3 pp, where the baseline is 23.9%.

Table G.2: Treatment Effects on Partisan Misperception: Conspiracy Theory

	(1)	(2)
	SK	US
Treatment	-0.028 (0.015)	-0.063 (0.013)
Observations	2314	2879
Mean of Outcome	0.343	0.239

Note: This table reports the estimated treatment effects on post-treatment partisan misperception in South Korea (SK) and the United States (U.S.). The dependent variable is the average difference in perceived accuracy between in-group and out-group supporters across two conspiracy statements. Each coefficient represents the effect of being assigned to the treatment group ($T_i = 1$) relative to the control group. Standard errors, shown in parentheses, are robust to heteroskedasticity.

G.3 Information Processing

Measurement. We need to modify our outcome variable $y_{i,j} \in \{0,1\}$. The partisan signals given for conspiracy theory questions presented as tasks $j = 6,7$ differ between R and L supporters. This is because, for example, the majority of L (resp. R) supporters believe in left-wing (resp. right-wing) conspiracy theory, $j = 6$ (resp. $j = 7$).

Thus, we modify our outcome variable $y_{i,j} \in \{0,1\}$ as follows. Let us denote the type of conspiracy theory tasks $g(j) = L$ for $j = 6$ and $g(j) = R$ for $j = 7$. We define the information updating in conspiracy theory tasks $y_{i,j}^C$ as follows.

$$y_{i,j}^C = \begin{cases} y_{i,j} & \text{if } g(i) = g(j) \\ 1 - y_{i,j} & \text{if } g(i) \neq g(j) \end{cases} \quad (13)$$

Thus, $y_{ij}^C > 0$ means that respondent i updates the opinion toward that held by a majority of the opposing-party members.

Specification We run the following regression for the treated and control groups separately:

$$y_{i,j}^C = \beta^I \mathbb{1}\{s_{i,j} = I\} + \beta^O \mathbb{1}\{s_{i,j} = O\} + \eta_j + \varepsilon_{i,j}. \quad (14)$$

Given this specification, we hypothesize as follows:

- Signals affect information processing. That is, $\widehat{\beta}^I < 0$ and $\widehat{\beta}^O > 0$ for both the control and the treated groups.
- Partisans have an in-group bias in information processing for conspiracy theory questions in the control group. That is, $\widehat{\beta}^I + \widehat{\beta}^O < 0$ for the control group.
- Partisans have a smaller in-group bias in information processing for conspiracy theory questions in the treated group than in the control group. That is, $|\widehat{\beta}^I + \widehat{\beta}^O|$ for the treated group is smaller than $|\widehat{\beta}^I + \widehat{\beta}^O|$ for the control group.

Results Table G.3 presents the results. The starting point is the hypothesis that $\widehat{\beta}^I < 0$ and $\widehat{\beta}^O > 0$. That is, in-group (resp. out-group) signals are expected to move beliefs away from (resp. toward) the opinion held by a majority of out-party members. Although this may appear straightforward at first glance, the results show that this pattern does not necessarily hold. Accordingly, the two subsequent hypotheses are also not supported.

Conspiracy theories are highly partisan issues; thus, respondents may infer the opposite meaning from the signals. For example, when a majority of the opposing party rejects a conspiracy theory, respondents may interpret this as evidence that the conspiracy is true. This could be a reason why the expected results were not obtained.

Alternative measure As an alternative measure, we define $y_{ij} = J_{ij1} - J_{ij0} \in \{-1, 0, 1\}$.

$$y_{i,j}^C = \begin{cases} y_{i,j} & \text{if } g(i) = g(j) \\ -y_{i,j} & \text{if } g(i) \neq g(j). \end{cases} \quad (15)$$

This measure enables us to account for not only updates toward the correct decision ($J_{ij0} = 0$ and $J_{ij1} = 1$) but also updates toward the wrong decision ($J_{ij0} = 1$ and $J_{ij1} = 0$).

Table G.4 reports the results when this alternative measure is adopted. The results diverge from our initial hypotheses even under this alternative measure.

Table G.3: Information Processing for Conspiracy Theory

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	SK	SK	SK	SK	US	US	US	US
	Dum	Dum	Cont	Cont	Dum	Dum	Cont	Cont
	C	T	C	T	C	T	C	T
In-Group Signal	0.734 (0.016)	0.724 (0.016)	0.567 (0.018)	0.607 (0.018)	0.429 (0.016)	0.448 (0.016)	0.442 (0.016)	0.435 (0.016)
Out-Group Signal	0.738 (0.016)	0.724 (0.016)	0.634 (0.018)	0.620 (0.017)	0.555 (0.017)	0.528 (0.016)	0.635 (0.016)	0.645 (0.016)
Observations	2288	2340	2288	2340	2902	2856	2902	2856
Num. of Individ	1144	1170	1144	1170	1451	1428	1451	1428
Num. of Task	2	2	2	2	2	2	2	2

Note: This table reports the results of regressions examining information processing in conspiracy theory tasks for South Korea (SK) and the United States (U.S.). The dependent variable is an indicator for whether a respondent's post-signal belief aligns with the position held by a majority of out-party members. The key regressors are indicators for in-group and out-group signals, estimated separately for the control (C) and treated (T) groups. Columns labeled "Dum" refer to binary belief updates. Task fixed effects are included. Robust standard errors clustered at the individual level are shown in parentheses.

Table G.4: Information Processing for Conspiracy Theory: Alternative Measure

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	SK	SK	SK	SK	US	US	US	US
	Dum	Dum	Cont	Cont	Dum	Dum	Cont	Cont
	C	T	C	T	C	T	C	T
In-Group Signal	-0.010 (0.011)	-0.014 (0.011)	-0.101 (0.027)	-0.067 (0.027)	-0.099 (0.012)	-0.076 (0.012)	-0.199 (0.024)	-0.202 (0.024)
Out-Group Signal	0.027 (0.010)	0.007 (0.011)	0.017 (0.027)	-0.015 (0.026)	0.121 (0.012)	0.135 (0.013)	0.186 (0.024)	0.223 (0.026)
Observations	2288	2340	2288	2340	2902	2856	2902	2856
Num. of Individ	1144	1170	1144	1170	1451	1428	1451	1428
Num. of Task	2	2	2	2	2	2	2	2

Note: This table reports the results of regressions analyzing information processing in conspiracy theory tasks using an alternative measure of belief updating. The dependent variable takes values in $-1, 0, 1$ to capture both correct and incorrect updates. Positive values indicate movement toward the position held by a majority of out-party members, and negative values indicate movement away from that position. The key regressors are indicators for in-group and out-group signals, estimated separately for the control (C) and treated (T) groups. Columns labeled "Dum" correspond to binary belief updates. Task fixed effects are included. Robust standard errors clustered at the individual level are shown in parentheses.

H Education Groups

H.1 Additional Survey: Education Groups

In our additional U.S. survey, we included two additional factual tasks that compare beliefs about education groups (college graduates vs. non-college respondents). We use these tasks as a benchmark to gauge the magnitude of partisan misperception in the main analysis.

Table H.1 reports the same target-based specification by perceiver education status and incentive assignment. Columns (1) and (2) are the non-incentivized sample, while columns (3) and (4) are the incentivized sample. Across all columns, the coefficient on $Target = College$ is positive and precisely estimated, indicating that respondents perceive college graduates as more likely to answer correctly than non-college respondents. The magnitude is stable across incentive conditions, which is consistent with our main finding that monetary incentives do not meaningfully change cross-group misperception.

Table H.1: Education-group Misperception (U.S. Additional)

Incentive			✓	✓
Perceiver	College	Non-college	College	Non-college
	(1)	(2)	(3)	(4)
Target = College	0.153 (0.007)	0.115 (0.010)	0.143 (0.007)	0.133 (0.011)
Mean of Outcome	0.580	0.579	0.580	0.584
Observations	1956	1024	1872	988
Num. of Indiv	489	256	468	247
Num. of Task	2	2	2	2

Note: This table reports education-group misperception estimates in our additional U.S. survey. Columns are split by incentive status and by perceiver group (College vs. Non-college). In the row labeled *Incentive*, checkmarks indicate incentivized columns. The dependent variable is perceived accuracy in factual tasks where targets are either college graduates or non-college respondents. The row $Target = College$ reports the perceived accuracy gap relative to the omitted target group (non-college). Individual and task fixed effects are included. Robust standard errors clustered at the individual level are shown in parentheses.

H.2 Experiments: Education Signals

At the end of the survey, respondents were asked to do another two tasks ($j = 8, 9$). The tasks are almost the same for partisan signals about non-partisan facts, but at this time, each respondent randomly received one of the following two signals: the signal telling them the majority of college graduates' opinion or the signal telling them the majority of non-college graduates' opinion. The list of statements used in these tasks can be seen in Table G.1.

Figure H.1: Education Signal

Your judgment on the previous page is that "Alaska is the largest state in the United States" is TRUE.

According to our previous survey, a majority of college graduates also say that "Alaska is the largest state in the United States" is TRUE.

A majority of college graduates
say that
"Alaska is the largest state in the United
States" is **TRUE**.



Please choose the appropriate sentence based on the above. You cannot move to the next question without choosing the correct answer.

- My initial judgment was different from the judgment by a majority of college graduates.
- My initial judgment was the same as the judgment by a majority of college graduates.

To benchmark the size of in-group bias in information processing with partisan signals in the main analysis, we compare it to the bias in information processing when respondents are given signals across different education groups. Specifically, we compare how much respondents update their beliefs based on college graduates' opinions compared to non-college graduates' opinions.

Specification The estimated effect of in-group signals depends on the accuracy rate of the judgment tasks before receiving the signals. For instance, if everyone correctly judges whether statements are true or false even before receiving any signals, they will not respond to those signals (thus, the estimated effect will be small). Because the accuracy rates differ between the tasks used for partisan signals and those used for education signals, this poses a challenge when comparing the effects of the two types of signals. To address this issue, we restrict samples (i, j) to the control group whose pre-signal answers are wrong. We run the following three regressions. For $j = 3, 4, 5$, we run

$$y_{i,j} = \tilde{\beta}_1 \mathbb{1}\{s_{i,j} = I\} + \eta_j + \varepsilon_{i,j}. \quad (16)$$

where η_j is a task fixed effect. For $j = 8, 9$, we run

$$y_{i,j} = \tilde{\beta}_2 \mathbb{1}\{s_{i,j} = \text{College}\} + \eta_j + \varepsilon_{i,j} \quad (17)$$

$$y_{i,j} = \tilde{\beta}_3 \mathbb{1}\{s_{i,j} = I_E\} + \eta_j + \varepsilon_{i,j} \quad (18)$$

(16) estimates the effect of in-group partisan signals, while (17) and (18) estimate the effects of education signals.

The effect of education signals may differ depending on whether the signal refers to the opinions of college graduates or non-graduates, for two reasons. First, regardless of respondents' own educational background, they may respond more strongly to signals from college graduates. Second, respondents may react more strongly to signals from individuals who share the same educational profile. $\mathbb{1}\{s_{i,j} = \text{College}\}$ takes one if the signal comes from college-graduates, whereas $\mathbb{1}\{s_{i,j} = I_E\}$ takes one if the signal comes from those who share the same education profile with respondent i . Therefore, equation (17) captures the first scenario, whereas equation (18) captures the second.²³

By comparing $\widehat{\beta}_1$ with $\widehat{\beta}_2$ and $\widehat{\beta}_3$, we get a sense of the magnitudes of in-group bias in information processing across partisan groups, relative to the bias based on education groups.

Results Table H.2 shows the results in South Korea, and Table H.3 shows the results in the U.S. Specifically, column (1) reports $\widehat{\beta}_2$, (2) reports $\widehat{\beta}_3$, and (3) reports $\widehat{\beta}_1$ for the binary opinion. Columns (4)–(6) present the corresponding estimates for the continuous opinion measure.

The results indicate that respondents do not respond significantly to education signals.

²³In the pre-analysis plan, we specified (17), but (18) was not included.

In South Korea (Table H.2), the coefficient on the college signal is 0.006 (s.e. 0.014) for the dummy update measure and -0.003 (s.e. 0.025) for the continuous update measure. Similarly, the coefficient on the same-education signal is -0.004 (s.e. 0.014) for dummy updates and -0.025 (s.e. 0.024) for continuous updates. These estimates are much smaller than the corresponding in-group partisan signal estimates: 0.171 (s.e. 0.028) for dummy updates and 0.140 (s.e. 0.029) for continuous updates.

In the U.S. (Table H.3), the coefficient on the college signal is 0.032 (s.e. 0.035) for dummy updates and 0.052 (s.e. 0.033) for continuous updates, while the coefficient on the same-education signal is -0.042 (s.e. 0.035) for dummy updates and -0.040 (s.e. 0.033) for continuous updates. The in-group partisan signal estimate is small and not statistically significant for dummy updates, 0.023 (s.e. 0.025), but is larger and statistically significant for continuous updates, 0.091 (s.e. 0.025).

These results yield two key implications. First, partisan in-group bias in information processing is substantial, especially in South Korea and for the continuous update measure in the U.S. Second, the findings suggest that this bias cannot be simply attributed to misperceptions about the educational composition of each political group. If partisan misperception merely reflected such misperceptions, the effect of partisan signals should not exceed that of education signals.

Table H.2: In-Group Bias Compared to Education Signals: South Korea

	(1) Dummy Educ	(2) Dummy Educ	(3) Dummy Party	(4) Continuous Educ	(5) Continuous Educ	(6) Continuous Party
In-Group Signal		-0.004 (0.014)	0.171 (0.028)		-0.025 (0.024)	0.140 (0.029)
College Signal	0.006 (0.014)			-0.003 (0.025)		
Observations	1191	1191	1138	1191	1191	1138
Num. of Individ	1073	1073	792	1073	1073	792
Num. of Task	2	2	3	2	2	3
Mean of Outcome	0.070	0.070	0.310	0.257	0.257	0.529

Note: This table compares the magnitude of in-group bias in information processing with the effect of education-based signals in South Korea. The dependent variable measures the change in respondents' opinions before and after receiving a signal, conditional on incorrect pre-signal answers. The key regressors are indicators for in-group partisan signals and education signals. Columns (1)–(3) report results for the binary (“dummy”) update measure, while columns (4)–(6) use the continuous update measure. Task fixed effects are included. Robust standard errors clustered at the individual level are shown in parentheses. “College Signal” indicates signals from college graduates, and “In-Group Signal” refers to signals from respondents' own partisan group.

Table H.3: In-Group Bias Compared to Education Signals: United States

	(1)	(2)	(3)	(4)	(5)	(6)
	Dummy Educ	Dummy Educ	Dummy Party	Continuous Educ	Continuous Educ	Continuous Party
In-Group Signal		-0.042 (0.035)	0.023 (0.025)		-0.040 (0.033)	0.091 (0.025)
College Signal	0.032 (0.035)			0.052 (0.033)		
Observations	847	847	1593	847	847	1593
Num. of Individ	656	656	1032	656	656	1032
Num. of Task	2	2	3	2	2	3
Mean of Outcome	0.521	0.521	0.464	0.603	0.603	0.530

Note: This table compares the magnitude of in-group bias in information processing with the effect of education-based signals in the U.S. The dependent variable measures the change in respondents' opinions before and after receiving a signal, conditional on incorrect pre-signal answers. The key regressors are indicators for in-group partisan signals and education signals. Columns (1)–(3) report results for the binary (“dummy”) update measure, while columns (4)–(6) use the continuous update measure. Task fixed effects are included. Robust standard errors clustered at the individual level are shown in parentheses. “College Signal” indicates signals from college graduates, and “In-Group Signal” refers to signals from respondents' own partisan group.

I Questionnaires

I.1 Baseline Survey in South Korea

[Link to PDF \(in Korean\)](#) [Link to PDF \(English translation\)](#)

I.2 Baseline Survey in the United States

[Link to PDF](#)

I.3 Experiment in the United States

[Link to PDF](#)

I.4 Experiment in South Korea

[Link to PDF \(in Korean\)](#) [Link to PDF \(English translation\)](#)

I.5 Additional Survey with Incentives

[Link to PDF](#)