AMERICAN PSYCHOLOGICAL ASSOCIATION

Journal of Experimental Psychology: General

ISSN: 0096-3445

https://doi.org/10.1037/xge0001865

Children and Adults Think Truth-Seeking Should Prevail Over Partisanship

Joshua Rottman[1], Zoe Favilla[1], Nithyasri Ramaswamy[1], Caitlin Geller[1], Raluca Rilla[1], Nina Kegelman[1], Skylynn Coble[1], Jonathan D. Lane[2], S. Emlen Metz[3], Paul L. Harris[4], and Walter Sinnott-Armstrong[5]

[1] Department of Psychology, Franklin and Marshall College
[2] Department of Psychology and Human Development, Vanderbilt University
[3] Lawrence Hall of Science, University of California, Berkeley
[4] Graduate School of Education, Harvard University
[5] Department of Philosophy, Kenan Institute for Ethics, Duke University

People must sometimes choose between seeking accurate beliefs and upholding partisan beliefs. How do people evaluate individuals who diverge from an inaccurate ingroup consensus in their pursuit of truth? To answer this question, we conducted two preregistered studies with adults and 6- to 9-year-old children from the United States ($N = 632$). Participants evaluated information-seeking, belief change, belief stasis, and outgroup belief endorsement in scenarios involving conflicting intergroup ideologies, in which adopting a new belief entailed a departure from an ingrained belief held by fellow group members. Both adults and children praised others for pursuing the truth through information-seeking and belief revision and for telling others that an evidence-based outgroup belief is correct. However, these positive evaluations were less pronounced for real-world, politically divisive issues in which participants' own political group's beliefs were at stake (Study 1), as compared to hypothetical situations involving fictional groups and novel beliefs (Study 2). Overall, these results indicate that people think it is generally desirable for others to pursue accuracy even at the cost of group loyalty, and this is true by the age of 6. Thus, the formation and retention of unsupported partisan beliefs may frequently be misaligned with the epistemic values that people reflectively endorse.

Public Significance Statement

In a world increasingly characterized by echo chambers and polarization, reducing sectarianism and cultivating the pursuit of truth is critical. Knowing the extent to which people think it is good to aspire to hold true beliefs—even when ideological values are at stake—can produce valuable insights into possible interventions. Across two studies with children and adults, participants consistently thought others should be motivated to pursue accurate beliefs, despite inaccurate beliefs being meaningful signals of group membership. By recognizing that people typically favor prioritizing accuracy over partisanship even in intergroup contexts, policymakers may be better positioned to craft solutions for overcoming inaccurate partisan beliefs. Specifically, our research highlights the potential effectiveness of encouraging people to emulate the truth-seeking tendencies they praise in others.

Keywords: partisan beliefs, intergroup attitudes, metabeliefs, open-mindedness, intellectual humility

Supplemental materials: https://doi.org/10.1037/xge0001865.supp

Bolivar Reyes-Jaquez served as action editor.
Joshua Rottman https://orcid.org/0000-0003-2284-1428
Zoe Favilla https://orcid.org/0009-0009-6122-7827
Nithyasri Ramaswamy https://orcid.org/0009-0009-5743-1892
Raluca Rilla https://orcid.org/0009-0007-7588-2262
Jonathan D. Lane https://orcid.org/0000-0002-0792-6653
Paul L. Harris https://orcid.org/0000-0003-4907-0539
Walter Sinnott-Armstrong https://orcid.org/0000-0003-2579-9966

All stimuli, as well as anonymized data and R code, are available on the Open Science Framework at https://osf.io/mtqc6. Please see the additional online materials for additional details. These can be accessed at https://osf.io/mtqc6/files/osfstorage. The findings described in this article have been previously presented at the Budapest Central European University Conference on Cognitive Development, the Biennial Meeting of the Cognitive Development Society, the Annual Meeting of the Society for Philosophy and Psychology, and the Biennial Meeting of the Society for Research in Child Development.

The authors declare no competing interests. Funding for this research was provided by a subaward agreement (No. 283-4931) from Duke University, with funds provided by the John Templeton Foundation (Grant 62242 awarded to Joshua Rottman), as well as by the Franklin and Marshall College Committee on Grants. The contents of this article are solely the responsibility of the authors and do not necessarily represent the official views of the John Templeton Foundation or Franklin and Marshall College.

Data collection was supported by the assistance of Colleen Boggs, Lauren Chen, Jayda Cole, Kat Gunther, Mary Fouad, Joshua Kisilevich, Justin Lanzilotti, Maritza Marquez, Sara Silverman, and Julia Weber. The authors thank Lysa Adams and Valerie Zizik for illustrating the stimuli for Study 2. They are also grateful to Shauna Bowes, Aleks Cichocka, Audun Dahl, Rebekah Gelpi, Robert Hepach, Zach Horne, Neil Levy, Samuel Ronfard, and many others for invaluable feedback.

Joshua Rottman played a lead role in conceptualization, data curation, formal analysis, funding acquisition, investigation, methodology, project administration, supervision, visualization, writing–original draft, and

continued

Imagine a Democrat named Patricia, who has long supported increasing the federal minimum wage. One afternoon, after a conversation with a Republican who disagreed on this issue, Patricia decided to learn more by spending some time on a trustworthy nonpartisan website. To her surprise, Patricia became convinced by the evidence she found that raising the minimum wage would increase poverty by inflating costs of basic necessities and would weaken the economy by forcing many businesses to close. As Patricia sits in front of her laptop, she begins to question her position on raising the minimum wage.

If Patricia were to shift her stance, how would her fellow Democrats react? Would they admire her for seeking out further information and reconsidering the validity of her existing beliefs? Or would they admonish her for deviating from their partisan consensus? Across two studies, we examined the relative plausibility of these competing possibilities by investigating whether adults and children think it is better to inquisitively pursue the truth and revise their beliefs accordingly, even when the beliefs at stake are shibboleths of group identity, or better to continue accepting and adhering to partisan ideologies.

Do Partisan Beliefs Stem From Partisan Motivations?

Our beliefs are typically aligned with the beliefs of our ingroup members. Unlike Patricia, we do not typically seek out information that could discredit our existing ideological views, and we do not frequently change our minds about consequential partisan issues (see Sinnott-Armstrong, 2018). Some studies have found that people prioritize their ingroup's endorsement of beliefs over impartial considerations of evidence, especially when facts are ambiguous and when belongingness motives are salient (Cohen, 2003; Pereira et al., 2023). More generally, people show widespread tendencies toward ideological thinking, as characterized by dogmatic adherence to ingroup doctrines (Zmigrod, 2022). In general, it is clear that people are epistemically biased in their tendencies to search for confirmatory as opposed to contradictory evidence, in their tendencies to retain rather than update existing beliefs in the face of new evidence, and in their tendencies to share information that favors their ingroups (see Ditto et al., 2025). Yet, a straightforward account of the motivations that produce such partisan biases has been elusive.

One obvious way of explaining partisan tendencies is by positing that they are produced by underlying motivations to uphold partisanship. People tend to feel strong allegiances to the belief systems of their ingroups (Van Bavel & Pereira, 2018), and they appear to treat partisan beliefs as honest markers of group identity (Funkhouser, 2022; Pinsof et al., 2023). However, while many of the partisan effects in the research literature have been chalked up to various forms of directionally motivated reasoning, these effects could have instead stemmed from earnest motivations to form accurate beliefs. For example, there are rationally defensible motivations to weigh certain elements of the epistemic landscape less heavily than others. Because people tend to view fellow partisans as more trustworthy purveyors of information than outgroup members, they are more likely to defer to ingroup members when attempting to form accurate beliefs and to be dubious of contradictory claims (see Levy, 2022). Additionally, because baseline beliefs differ between ideological groups and evidence must be interpreted in light of other information and assumptions, members of these groups are sometimes warranted in updating their beliefs in opposing directions upon encountering the same evidence (Jern et al., 2014). In these ways, adopting partisan beliefs, resisting belief change in the face of contradictory evidence, and dismissing divergent viewpoints based on social factors (such as the political identity of a speaker) could occur in the absence of irrational biases. The pervasive difficulty of disentangling accuracy motivations from partisan motivations, given the similar outcomes predicted by each (see Druckman & McGrath, 2019), makes it difficult to know how much partisans are driven by truth-seeking and how much they are driven by affirming their values and identities, though progress is increasingly being made on this front (e.g., Celniker & Ditto, 2024).

In many situations, it is likely that accuracy motivations and partisan motivations both contribute to the formation and retention of partisan beliefs (Celniker & Ditto, 2024; De Cruz, 2020). The strength of each of these motivations is likely to change across contexts and individuals. When evaluating politically polarizing issues, group-affirming motivations may be a typical default (Bayes et al., 2020). However, people can also be incentivized to pursue accuracy in such partisan contexts (e.g., Rathje et al., 2023). Additionally, people vary in how much they value the pursuit of accuracy (Ståhl et al., 2016).

One plausible but underexplored contributor to the relative strength of accuracy motives as compared to partisan motives is the extent to which people reflectively endorse norms for being accurate and norms for being loyal. Individual differences in second-order beliefs (i.e., beliefs about beliefs) are meaningfully associated with first-order beliefs and epistemic motivations. For example, endorsing religious criteria for beliefs strongly predicts the likelihood of rejecting evolution (Metz et al., 2018), and thinking that loyalty to existing beliefs is more important than open-mindedness strongly predicts conspiratorial beliefs (Pennycook et al., 2020). Thus, the extent to which people reflectively think that beliefs should be based on considerations beyond hard evidence (including partisan considerations) is likely to predict their firsthand tendencies to exhibit partisan bias in

writing–review and editing. Zoe Favilla played a supporting role in conceptualization, investigation, methodology, and writing–original draft. Nithyasri Ramaswamy played a supporting role in conceptualization, investigation, methodology, and writing–original draft. Caitlin Geller played a supporting role in conceptualization, investigation, methodology, and writing–review and editing. Raluca Rilla played a supporting role in conceptualization, investigation, methodology, and writing–review and editing. Nina Kegelman played a supporting role in conceptualization, investigation, methodology, and writing–review and editing. Skylynn Coble played a supporting role in conceptualization, investigation, methodology, and writing–review and editing. Jonathan D. Lane played a supporting role in conceptualization, methodology, and writing–review and editing. S. Emlen Metz played a supporting role in conceptualization, methodology, and writing–review and editing. Paul L. Harris played a supporting role in conceptualization, funding acquisition, methodology, and writing–review and editing. Walter Sinnott-Armstrong played a supporting role in conceptualization, funding acquisition, methodology, and writing–review and editing.

Correspondence concerning this article should be addressed to Joshua Rottman, Department of Psychology, Franklin and Marshall College, 415 Harrisburg Avenue, Lancaster, PA 17603, United States. Email: jrottman@fandm.edu

considering evidence that has the potential to threaten their ingroup's beliefs.

Of course, partisans' idealized motivations may be distinct from their actual motivations. People often fail to behave in accordance with their goals and values (due to insufficient willpower, competing motivations, and other factors), producing a gap between third-person evaluations and first-person tendencies. Nonetheless, it is valuable to know how people evaluate third parties who pursue accuracy or partisanship in scenarios that pit these motivations against one another—not least because this can indicate the extent to which people tend to live up to their reflectively endorsed ideals. For example, the evidence could indicate that people generally prioritize accuracy motives in others, despite not always pursuing accuracy themselves. Such a finding could motivate novel interventions in which people's pursuit of accuracy could be heightened by encouraging metacognitive reflection on epistemic motives. A very different approach would be needed if people reflectively endorse partisan motives. Thus, rather than attempting to peer directly into the minds of partisans when they seek information, consider revising their beliefs, and spread information to others, the present research focused on uncovering what epistemic tendencies people consider praiseworthy in intergroup situations.

Developmental Origins of Partisanship

Most research on partisan beliefs has been conducted with adults. However, evidence that children can form partisan beliefs is beginning to emerge (Confer et al., in press). By investigating the ontogeny of partisanship, researchers can better identify the processes that give rise to regularities and variation in adult tendencies (see Dunham & Olson, 2008; Reifen-Tagar & Cimpian, 2022). Gaining insight into children's weighing of accuracy motives and partisan motives can also help to identify how emerging cognitive competences and social proclivities can shape evaluations of others.

Motivations to be accurate and motivations to belong each exert a strong pull by early childhood. From infancy onward, children frequently turn to more knowledgeable others to form accurate beliefs (see Harris et al., 2018). Children also preferentially trust certain informants on the basis of social considerations (see Jaswal & Kondrad, 2016; Pesch et al., 2018). For example, children invest more trust in ingroup informants as compared to outgroup informants when learning about novel objects (Chen et al., 2013; Kinzler et al., 2011), especially when their sense of belonging has been threatened (Li & Koenig, 2022). If accuracy motives and social motives are pitted against each other, these competing motives appear to balance each other out. When faced with a reliable outgroup informant and an unreliable ingroup informant, preschoolers are at chance in deciding whom to trust (Elashi & Mills, 2014; MacDonald et al., 2013). Similarly, when 4- to 6-year-old children are given a choice between information that is reliable and information that favors their ingroup, they do not display systematic preferences (Chalik et al., 2022). The apparent uncertainty that arises in these cases is especially striking in light of findings that preschoolers are adept at resolving conflicting information in other domains (Bridgers et al., 2016). However, as children enter middle childhood (roughly, the elementary school years), they begin to aptly weigh accuracy against group loyalty by reducing their trust in inaccurate members of their ingroups (Elashi & Mills, 2014).

Children also acquire a basic understanding of the nature and sources of knowledge in early childhood (see Ronfard et al., 2018). Yet, it is not until middle childhood that children gain a more sophisticated appreciation for how knowledge is uncertain and reliant upon available evidence (Kuhn et al., 2000). They begin to understand that people can form diverse interpretations of equivocal evidence (Carpendale & Chandler, 1996; Lalonde & Chandler, 2002). When faced with informants making conflicting empirical claims, children increasingly acknowledge uncertainty and appropriately adjust their existing beliefs by attending to the strength of the evidence being provided to them (Langenhoff et al., 2023; Schleihauf et al., 2022; Yang et al., 2023).

During the same period of middle childhood, social identity becomes particularly salient, with outgroup prejudice peaking between 5 and 7 years of age (Raabe & Beelmann, 2011). Children by this age clearly value group loyalty (Misch et al., 2014) and typically denounce deviations from arbitrary group norms (Roberts et al., 2017). Such social evaluations are also impacted by similarities in beliefs; children prefer others who share their beliefs and opinions (see Heiphetz, 2018), and they are particularly intolerant of belief diversity compared to adults (e.g., Wainryb et al., 1998). Middle childhood is thus a ripe developmental period for investigating how epistemic concerns regarding accuracy compete with various social motivations.

Evaluating Others' Epistemic Tendencies

In comparison to the voluminous research that has been conducted on people's own tendencies toward accuracy and partisanship in intergroup situations (see Ditto et al., 2025), there is scant research investigating folk evaluations of such tendencies in others. However, studies are beginning to fill this void in ways that usefully inform the present research.

The collection of dispositions that promote accurate beliefs—including curiosity, open-mindedness, and intellectual humility—have long been lauded by academics as virtuous (e.g., Baehr, 2011). This appears to also be reflected in folk evaluations. By middle childhood and into adulthood, people generally prefer and trust intellectually humble individuals over both arrogant individuals and acquiescent individuals (Bowes et al., 2025; Hagá & Olson, 2017), particularly if they themselves are high in intellectual humility (Huynh & Romero Gonzalez, 2024). Children and adults also prefer curious over incurious individuals (Mosley et al., 2024; White et al., 2024) and individuals who seek out alternative perspectives (Ransom et al., 2025). However, these studies asked participants to evaluate others in situations devoid of any specific context (Huynh & Romero Gonzalez, 2024) or in innocuous situations: identifying unfamiliar or ambiguous objects and words (Bowes et al., 2025; Hagá & Olson, 2017), learning more about widely accepted beliefs (Mosley et al., 2024; White et al., 2024), or obtaining information that is contrary to inaccurate or ambiguous beliefs (Ransom et al., 2025). This is an important limitation because people are typically less sanguine about beliefs being overturned for issues in which they have a strong personal investment (see Ståhl & Cusimano, 2024).

Given that the tolerance of divergent beliefs is highly context-dependent throughout development (Verkuyten & Killen, 2021; Wainryb et al., 2004), it is reasonable that evaluations of epistemic tendencies would similarly be context-dependent. Thus, a stronger test of whether people positively evaluate being curious and receptive

to alternative beliefs would be to examine whether such tendencies continue to be praised in intergroup contexts where controversial beliefs are at stake. When motivations to be accurate can directly conflict with motivations to belong to an ingroup or to affirm ingroup values, people might cease to praise epistemic tendencies otherwise considered virtuous. Recent work examining adults' evaluations of political leaders has shown that positive perceptions of intellectual humility are partisan. Praise of intellectual humility is especially pronounced for political candidates who hold opposing viewpoints (and for whom intellectual humility would increase the chances of a belief change in the direction of one's own views), but is reduced for same-party candidates for whom belief change would deviate from the participants' views (Cooper & Olcaysoy Okten, 2024; Koetke & Schumann, 2025). However, information-seeking is broadly praised even when others are seeking out alternative perspectives on controversial political issues (Heltzel & Laurin, 2021).

Despite general approbation of accuracy-seeking tendencies, biased forms of thinking are not consistently denounced. People endorse having relatively high thresholds for being convinced of beliefs that they perceive to be risky or offensive and relatively low thresholds for adopting beliefs that they favor (see Cusimano, 2025; Cusimano & Lombrozo, 2023). People are also less likely to condemn misinformation when it aligns with their values (Effron & Helgason, 2022), and such moral commitments are thought to justify forming beliefs on the basis of their potential benefits rather than on the basis of objective evidence (Cusimano & Lombrozo, 2021a, 2021b). Additionally, even though information-seeking is generally considered to be positive, some people think that it signals reduced religious commitment (Gill & Lombrozo, 2023). It is plausible that gathering additional evidence to inform other types of ideological beliefs would also be interpreted as indicating disloyalty.

Some research has begun to investigate the boundary conditions for when people value unquestioning conformity to group-based beliefs. In cases where children and adults know that a group holds a socially unimportant factual belief (e.g., believing that a red circle is blue), it is considered more wrong for group members to adopt the group's belief when it is clearly false than when it is clearly true; that is, when beliefs are inconsequential, group consensus does not override the importance of accuracy (Roberts et al., 2021). For opinions (e.g., which berries are tastiest) and unverifiable ideological beliefs (e.g., whether spirits live in trees or on mountains), 7- to 9-year-old children and adults are somewhat more disapproving of those who deviate from their groups compared to those who conform (Roberts et al., 2021). In these latter cases, however, accuracy becomes irrelevant. Thus, while the relative importance of group beliefs differs across epistemic contexts, this research does not indicate how strongly people think others should cling to meaningful ingroup beliefs when there is clear evidence favoring an outgroup's beliefs.

Other recent research is beginning to assess how the acceptance of false claims is evaluated in contexts where group membership is salient. In one study, 8- to 15-year-old participants were presented with a situation in which an ingroup member spread misinformation about an outgroup member that allowed the ingroup to win a competition. The participants favored individuals who did not blindly accept the ingroup member's false claim but instead awaited additional information (Farooq et al., 2024), suggesting that children and adolescents value accuracy over loyalty. However, a significant confound was introduced by the involvement of slander and cheating in the scenario; indeed, participants primarily appealed to moral reasons when justifying their positive evaluations of those who did not endorse the misinformation. Thus, this study cannot speak to how accuracy motives would be evaluated in the absence of moral violations. Furthermore, both Roberts et al. (2021) and Farooq et al. (2024) focused on evaluations of *individuals* rather than evaluations of *epistemic tendencies*.

Overview of Current Research

Existing research provides valuable insights into how people evaluate others' accuracy motives and partisan motives. However, many open questions remain. Do people tend to admire or abhor truth-seeking tendencies when such tendencies lead individuals to discover evidence favoring outgroup beliefs, thus wresting them away from an ingroup consensus? Do children and adults produce similar or divergent evaluations of prioritizing accuracy over loyalty in these intergroup situations?

Because it can often be socially adaptive for individuals to adopt false ideological beliefs that affirm group identity (Barlev & Neuberg, 2025; Kahan, 2013; Williams, 2021), there are compelling reasons to expect that people would endorse the pursuit of partisanship over accuracy in intergroup contexts. Yet, given that people typically admire truth-seeking (e.g., Gill & Lombrozo, 2023; Hagá & Olson, 2017; Heltzel & Laurin, 2021) and given that ingroup favoritism can be overridden by more objective considerations (see Rutland et al., 2010), there are also strong reasons to form the opposing prediction that people would consistently praise accuracy motivations over partisan motivations. Overall, the existing evidence does not clearly warrant favoring one hypothesis over the other. As such, although we preregistered some tentative hypotheses (most of which were not borne out), our studies were largely exploratory rather than hypothesis-driven and confirmatory, following recommendations from Rozin (2001).

Our research investigated whether adults (Studies 1 and 2) and children (Study 2) from the United States would favor partisanship or truth-seeking in situations where (a) outgroup beliefs are discovered to be more accurate than ingroup beliefs, but (b) adopting a new belief would reflect a clear divergence from the beliefs held by ingroup members. Study 1 focused on real-world political contexts where the stakes of particular beliefs are elevated, while Study 2 focused on fictional contexts. Across all studies, participants were presented with vignettes describing two groups that diverged on their beliefs about a particular issue. Participants evaluated how good or bad it would be for a person in these circumstances to engage in three behavioral tendencies associated with prioritizing accuracy: information-seeking (i.e., actively pursuing impartial evidence to resolve group-based belief disagreements), belief change (i.e., changing one's mind in light of strong evidence), and outgroup belief endorsement (i.e., telling others it would be good to adopt the outgroup's belief). They also judged how good or bad it would be to prioritize partisan motivations by evaluating belief stasis (i.e., retaining one's preexisting belief in the face of strong counterevidence). We compared responses against the scale midpoints to determine whether participants thought it was overall good or bad for the protagonists to engage in these four tendencies. To increase power and reduce the number of tests being conducted, we first determined whether there were condition differences within each measure (for Study 1: political match and perspective; for Study 2: group conflict, belief type, and age group) by running four cumulative link mixed models

predicting evaluations for each question from the fixed effects of these condition variables and the random intercepts of scenario and participant. When comparing ratings to scale midpoints, we collapsed across all conditions that did not yield significant differences.

To further inform the results of Study 1, we conducted two additional studies, which are briefly summarized in the main text and reported in full in the Supplemental Materials. We have adjusted the ordering of our four studies to improve the narrative flow of the article, but the actual chronology of data collection was as follows: Study 2 (August 2021 through June 2022), Supplementary Replication Study (March 2023), Study 1 (September 2023 through January 2024), and Supplementary Baseline Study (May 2025).

Transparency and Openness

Hypotheses, methods, data collection procedures, exclusion criteria, and analyses for all studies were preregistered on the Open Science Framework (Study 1: https://osf.io/hxryn; Study 2: https://osf.io/z2cbt; Supplementary Replication Study: https://osf.io/epdxv; Supplementary Baseline Study: https://osf.io/5apxg). However, we deviated from our preregistrations by conducting one-sample Wilcoxon signed-rank tests in place of one-sample *t* tests, as our data were skewed and thus violated parametric assumptions of normal distributions. Similarly, we opted for cumulative link mixed models rather than linear mixed models, as our residuals violated assumptions of homoscedasticity and because ordinal tests are arguably more appropriate for analyzing Likert scale responses. For each study, we have reported all measures and manipulations, data exclusions, and sample size determinations, either in the main text or in the Supplemental Materials. Data, analysis code, and research materials are available at https://osf.io/mtqc6. Data were analyzed using R, Version 4.4.2.

All study protocols were approved by the Franklin and Marshall College Institutional Review Board. The methods were carried out in accordance with the relevant guidelines and regulations. Informed consent, including consent for publication, was obtained from all participants or their legal guardians. Verbal assent was also collected from children.

Study 1

Do people positively evaluate information-seeking and belief change in the case of meaningful issues that are linked to strong group identities? Answering this question calls for the identification of ideologically defined groups that differ in terms of beliefs that can be directly informed by evidence (e.g., about the economic costs or benefits of adopting a policy). An evidential basis for beliefs is critical for teasing apart endorsements of truth-seeking motivations and partisan motivations, because beliefs must be both falsifiable and linked to group identities to be influenced by such motivations.

Thus, Study 1 examined how people judge partisans who prioritize truth-seeking over partisanship in consequential real-world contexts. Adult participants evaluated scenarios in which Republican or Democrat protagonists encountered views from the opposite party and visited an authoritative, nonpartisan website that provided compelling reasons to change their stances on divisive issues. We also examined whether participants' own epistemic dispositions would predict their evaluations of others. Prior work has shown that people who are more intellectually humble are more magnanimous toward political opponents and are more willing to engage with them socially (e.g., Stanley, Sinclair, & Seli, 2020). We expected that people who are themselves intellectually humble and open-minded or who are not particularly prone to value group loyalty would be most likely to evaluate prioritizing accuracy as desirable even in high-stakes intergroup situations.

Method

Participants

We conducted a high-powered study in order to obtain a sufficient number of data points per political issue. In particular, with two scenarios per participant and 32 scenarios total (16 issues, each with a Republican-focused version and a Democrat-focused version), 400 usable participants were required to obtain 25 responses per scenario. Because we anticipated excluding up to 20% of the sample for missing comprehension checks or not identifying as having views that are aligned with either the Republican or Democratic parties, we preregistered a total sample size of 500 participants, with the aim of obtaining at least 400 usable participants. We obtained nationally representative quotas for age, gender, race, ethnicity, and education, with participants roughly split between Democrats and Republicans (see the Supplemental Materials for precise details of these quotas).

A total of 1,101 American adults completed the study online via Qualtrics. We excluded 629 of these participants, either for providing an incorrect answer (i.e., something other than a variant of "President Joe Biden") to an open-ended question asking: "What is the name of the person who is the current head of government in the country where you live (for example, who is your Prime Minister/President/Chancellor)?" ($n = 189$), for missing more than one comprehension or attention check regarding the scenarios ($n = 223$), for failing a comprehension check about the debriefing statement ($n = 87$), or for reporting that their views did not align more with either Democrats or Republicans ($n = 130$). Although we preregistered that we would additionally exclude participants who failed a yes/no manipulation check—"Were you specifically asked to imagine yourself in the main character's position when answering the questions (rather than evaluating these characters based on your own beliefs, and thus not being directly instructed to make evaluations from the standpoint of these characters)?"—more than half of the remaining participants ($n = 245$) failed this manipulation check. To maximize power, we decided to retain these individuals in our analyses, thus deviating from our preregistered exclusion criteria. This decision was buttressed by the finding that the effect of the perspective manipulation did not meaningfully impact responses when the 245 participants who failed the manipulation check were removed from the sample, suggesting that the manipulation was likely not sufficiently salient to participants, and our realization (in hindsight) that the manipulation check question was overly complex.[1] We acknowledge that there was an exceptionally high rate of exclusion in this study. However, we believe this downside is offset by the benefits of obtaining a nationally representative participant sample. Even though most of the data collected by Qualtrics were of poor quality, consistent with others'

[1] In fact, after rerunning the analyses reported in the main text with the subset of participants who passed the manipulation check, the effect of perspective (first-person vs. third-person) became slightly weaker and nonsignificant for the information-seeking question ($b = -0.60$, $SE = 0.31$, $p = .057$) and remained insignificant for the other three primary questions (all other ps $> .15$).

assessments that Qualtrics has overall worse data quality than alternative crowdsourcing sites like Prolific (Douglas et al., 2023), the responses we were able to retain for analysis appeared quite sensible. Furthermore, the analyses were very closely replicated in the results we obtained from our Prolific sample in the Supplementary Replication Study, thus increasing our confidence in the findings.

The final sample consisted of 472 participants (M_{age} = 50.10 years; 214 cisgender men, 250 cisgender women, two transgender men, three nonbinary individuals, three not disclosed; 350 White, 59 Black or African American, 27 Asian or Pacific Islander, two American Indian or Alaska Native, 13 biracial, 13 other, eight not disclosed; 71 Hispanic or Latino, 394 not Hispanic or Latino, seven not disclosed; 245 Democrat, 227 Republican).

Materials

We constructed 32 scenarios involving 16 different politically divisive issues. For each issue, there was one version with a Democrat protagonist and one version with a Republican protagonist. We sampled from a broad range of debated political topics, with the restriction that stances had to be largely based on perceptions of facts and defended by appealing to measurements or forecasting. These included some issues that are less well-known and not broadly polarizing (see Stanley, Henne, et al., 2020), as well as others that are highly polarized and morally laden (see Taber & Lodge, 2006). The content of the vignettes was adapted from information on a nonpartisan website (https://www.ProCon.org) in order to reduce potential experimenter bias in their construction. We also went to great lengths to ensure a balanced presentation of evidence across Republican-favoring and Democrat-favoring versions of the scenarios. By generating many scenarios and including them as a random effect in our analyses, we were able to draw conclusions about a broader population of possible scenarios, and we were able to ensure that any individual scenario was unlikely to exert a disproportionate influence on the results.

The full set of issues was as follows: minimum wage, defunding the police, banning assault weapons, tuition-free college, illegal immigration, corporate income tax, marijuana legalization, fracking, church tax exemptions, prescription drug regulations, student loan debt forgiveness, social security privatization, universal health care, the filibuster, corporate carbon tax, and private prisons. Each scenario was approximately 200 words in length (range = 191–220 words). In each scenario, a protagonist encountered somebody from the opposite political party who disagreed with them about a given political issue. The protagonist then decided to visit https://www.ProCon.org (a reputable and unbiased news platform) to learn more about the issue. They discovered that the evidence supported the reasons that their interlocutor had provided for their opposing viewpoint. The full text of the scenarios can be accessed via the Open Science Framework. An example scenario is as follows:

> Mark Young is a member of a movie club. One evening, the movie club went to see an award-winning movie about immigration. Mark, a Republican, has long believed that illegal immigration should be curbed. He has thought it is an economic burden because it reduces wages and strains taxpayers because they have to pay for the education of immigrant children. Other fellow Republicans who Mark has interacted with have agreed with him that illegal immigration is a major national concern.
>
> After the movie ended, Mark started discussing immigration policy with Ian Robinson, a Democrat member of the movie club. Ian has long believed that illegal immigration should not be curbed. He has thought it is not an economic burden because undocumented immigrants pay taxes, and they contribute heavily to the economy by filling essential jobs and investing in consumer goods.
>
> Mark went to ProCon.org to learn more about the unbiased, factual evidence regarding illegal immigration.
>
> In his assessment of the evidence presented by experts on ProCon.org, Mark concluded that the most compelling information supported Ian's beliefs much more than his own. To his surprise, the evidence convinced him that undocumented immigrants pay taxes and contribute to the economy by filling essential jobs and investing in consumer goods.

Each participant was presented with two scenarios. These were randomly selected from the total pool of 16 political issues, except that we ensured that each participant received scenarios about two separate political issues and that one scenario featured a Democrat protagonist while the other scenario featured a Republican protagonist. Half of the scenarios involved male characters, and the other half involved female characters, but we did not systematically balance characters' genders for each participant. We varied the perspective that participants were asked to take toward the protagonist (either a third-person perspective or a first-person perspective) in order to examine whether feeling further removed from the situation (i.e., taking a third-person perspective) would be associated with greater praise of prioritizing truth-seeking.

Procedure

Prior to each vignette, participants were asked to indicate their stance on the issue the vignette would focus upon (on a 5-point scale ranging from 1 = *strongly against* to 5 = *strongly for*).

Participants then read and evaluated two vignettes, with the primary questions interspersed throughout each scenario. Participants in the third-person condition were asked to evaluate the goodness or badness of the protagonist's decision to seek out new information that could contradict the ingroup belief (e.g., "How good or bad would it be for Mark to want to learn more about whether or not illegal immigration should be curbed?"), to adopt the outgroup belief (e.g., "How good or bad would it be for Mark to *start believing* that illegal immigration should not be curbed, like Ian and other Democrats believe?"), and to retain the ingroup belief (e.g., "How good or bad would it be for Mark to *keep believing* that illegal immigration should be curbed, like other Republicans believe?"). Responses were measured with a 5-point Likert scale ranging from 1 (*very bad*) to 5 (*very good*). Participants were also asked which belief they would tell an ingroup member is correct (e.g., "If a fellow Republican were to ask Mark whether or not illegal immigration should be curbed, what should Mark say?"), which we converted to a 5-point Likert scale ranging from *a clear endorsement of espousing the ingroup belief* (in the example scenario, *he should definitely say it would be good to support the policy*) to *a clear endorsement of espousing the outgroup belief* (in the example scenario, *he should definitely say it would be bad to support the policy*). Participants in the first-person condition were asked the same questions but were prompted to take on the protagonist's perspective while responding (e.g., "Imagine yourself in Mark's shoes"). After each rating, we prompted participants to explain the reasoning behind their response by endorsing the

relevance of five possible considerations (the importance of being open-minded, of knowing the truth, of maximizing benefits, of promoting harmony, and of respecting freedom of belief).

After participants had completed this primary task, they were asked several additional questions about the scenarios. First, they were asked if they had previously heard of https://www.ProCon.org/ (*yes* or *no*). Participants were also asked about their perception of https://www.ProCon.org/ as a reliable source of accurate, nonpartisan information on a 5-point scale ranging from 1 (*not at all*) to a maximum of 5 (*extremely*). Then, as an attention check, participants were asked to identify the two political issues they had read about in the scenarios, and they were asked how believable each of these scenarios seemed, on a 5-point scale ranging from 1 (*not believable at all*) to 5 (*extremely believable*). Finally, participants were asked whether they *would* and whether they *should* change their own beliefs if they encountered strong evidence indicating that their existing beliefs were wrong (these two questions yielded similar responses and were averaged into a Willingness to Change One's Own Beliefs index).

Participants then completed individual differences measures. To investigate whether participants' own epistemic tendencies predicted their evaluations of these tendencies in others, we administered a six-item General Intellectual Humility Scale (Leary et al., 2017), which employed a 5-point scale ranging from 1 (*not at all like me*) to 5 (*very much like me*), and an eight-item actively open-minded thinking about evidence measure (Pennycook et al., 2020), using a 5-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Each of these scales was designed to measure people's propensities to think critically about their own beliefs and to be open to changing their beliefs upon encountering compelling evidence. The orders of the two measures and the items within each measure were randomized across participants.

To measure partisan identity, we adapted a dynamic identity fusion measure (Aron et al., 1992; Jiménez et al., 2016). Two circles were shown, one labeled "me" and the other "Democrats." Participants used a sliding scale to indicate the extent to which their identity overlapped with the Democratic Party from a minimum of 0 (*not at all*) to a maximum of 100 (*completely*). Participants completed this same exercise for the Republican Party, in a randomized order; we analyzed the rating corresponding to each participant's political affiliation. To gauge participants' expectations that the protagonist (or themselves, in the first-person condition) would be ostracized for favoring the political outgroup belief, a six-item ostracism scale was added, adapted from Ferris et al. (2008).

Finally, we administered a demographics questionnaire. This included a question that allowed us to classify participants as Democrats or Republicans ("Do your political views align more closely with those of the Democratic Party or those of the Republican Party?"). To obtain a more continuous measure of political beliefs, we asked participants to indicate their levels of conservatism (on a scale from *very liberal* to *very conservative*) for both social issues and economic issues.

Results

Condition Differences

We first investigated whether the political match between the participant and the protagonist (same political party vs. opposing political party) and the participant's perspective (first-person vs. third-person) influenced evaluations of our four primary questions. To do this, we fit four cumulative link mixed models predicting evaluations for each of the primary questions from the fixed effects of the two condition variables and the random intercepts of scenario and participant. We initially included the two-way interactions but subsequently removed these to examine only main effects, as no significant interaction effects emerged in any of the four models ($ps > .35$).

An effect of political match was found for all four questions: information-seeking ($b = -0.46$, $SE = 0.14$, $p = .001$), belief change ($b = -1.21$, $SE = 0.12$, $p < .001$), belief stasis ($b = 1.15$, $SE = 0.13$, $p < .001$), and outgroup belief endorsement ($b = -1.12$, $SE = 0.13$, $p < .001$). An effect of perspective (first-person vs. third-person) emerged only for the information-seeking question ($b = -0.67$, $SE = 0.20$, $p = .001$; all other $ps > .10$). We therefore split the data by political match for all comparisons to the scale midpoints, but we collapsed across the first-person and third-person conditions for all but the first question.

Primary Analyses

Overall, participants positively evaluated prioritizing truth-seeking over partisanship, particularly when evaluating political outgroup members (see Figure 1). To test whether responses were significantly different from the scale midpoints, we conducted one-sample Wilcoxon signed-rank tests.

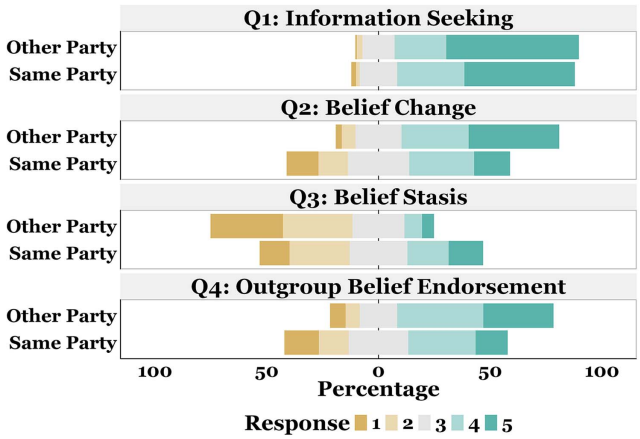
For information-seeking, ratings were far above the midpoint when there was a political mismatch, both for the third-person condition (86% of responses above the midpoint; $V = 23{,}134$, $p < .001$, $r = .87$) and for the first-person condition (78% of responses above the midpoint; $V = 17{,}276$, $p < .001$, $r = .79$). This was also true even when there was a political match, both for the third-person condition (81% of responses above the midpoint; $V = 20{,}501$, $p < .001$, $r = .82$) and for the first-person condition (78% of responses above the midpoint; $V = 16{,}698$, $p < .001$, $r = .75$). For belief change, participants gave higher-than-chance ratings both when there was a political mismatch (72% of ratings above the midpoint; $V = 64{,}450$, $p < .001$, $r = .69$) and when there was a political match (45% of ratings above the midpoint, with 28% of ratings at the midpoint; $V = 34{,}296$, $p = .005$, $r = .17$). For belief stasis, participants gave lower-than-chance ratings when there was a political mismatch (64% of responses below the midpoint; $V = 10{,}260$, $p < .001$, $r = .57$), but not when there was a political match (40% of responses below the midpoint; $V = 29{,}975$, $p = .686$, $r = .04$). For outgroup belief endorsement, participants' ratings were higher than the midpoint when there was a political mismatch (70% of responses above the midpoint; $V = 64{,}227$, $p < .001$, $r = .57$), but not when there was a political match (44% of responses above the midpoint; $V = 33{,}394$, $p = .060$, $r = .13$). In short, participants were more inclined to endorse behaviors that prioritized accuracy over loyalty when these led to a shift in belief toward their own ingroup and much less inclined to endorse such behaviors when they involved a shift in belief away from their ingroup.

Explanations of Responses

We next conducted four cumulative link mixed models predicting responses on the four primary questions from endorsements of five considerations that were provided as possible reasons underlying

Figure 1

Responses to Primary Questions in Study 1



Note. Responses are split by political match (i.e., whether or not the protagonist belonged to the same political party as the participant). For the first three questions, 1 (dark orange) corresponds to *very bad*, 2 (light orange) corresponds to *sort of bad*, 3 (gray) corresponds to *not bad or good*, 4 (light green) corresponds to *sort of good*, and 5 (dark green) corresponds to *very good*. For the final question, the scale ranges from 1 (dark orange), indicating a strong endorsement of the ingroup belief, to 5 (dark green), indicating a strong endorsement of the outgroup belief, with 3 (gray) indicating an expression of uncertainty. See the online article for the color version of this figure.

participants' judgments: the importance of being open-minded, the importance of knowing the truth, the importance of respecting others' freedom to choose what to believe, the importance of living in harmony with other people, and the importance of maximizing economic benefits. For all four questions, the importance of being open-minded was a significant predictor of ratings (information-seeking: $b = 0.53$, $SE = 0.11$, $p < .001$; belief change: $b = 0.38$, $SE = 0.08$, $p < .001$; belief stasis: $b = -0.20$, $SE = 0.08$, $p = .017$; outgroup belief endorsement: $b = 0.36$, $SE = 0.08$, $p < .001$). The importance of knowing the truth was also a significant predictor of all four ratings (information-seeking: $b = 0.48$, $SE = 0.10$, $p < .001$; belief change: $b = 0.29$, $SE = 0.08$, $p < .001$; belief stasis: $b = -0.26$, $SE = 0.08$, $p = .002$; outgroup belief endorsement: $b = 0.34$, $SE = 0.08$, $p < .001$). Finally, the importance of respecting others' freedom to choose what to believe was a significant negative predictor of belief change ($b = -0.20$, $SE = 0.07$, $p = .007$) and of outgroup belief endorsement ($b = -0.15$, $SE = 0.07$, $p = .034$) and a significant positive predictor of belief stasis ($b = 0.25$, $SE = 0.07$, $p < .001$). The other two considerations were not significant predictors for any question ($ps > .20$).

Investigation of Individual Differences

Finally, we conducted four cumulative link mixed models predicting responses on each of the four primary questions from political match and perspective, as well as stance (recoded as indicating the degree to which the participant's stance on the issue matched the dominant stance of the political ingroup), partisan identity, intellectual humility, actively open-minded thinking, willingness to change one's own beliefs, likelihood of ostracism, and interactions between political match and stance as well as between political match and partisan identity. Due to the large number of predictors, we used backward stepwise regression, in which we iteratively eliminated the predictor with the highest p value until we had systematically removed all nonsignificant predictors from the model. The results are presented in Table 1.

These findings demonstrate that responses were strongly predicted by actively open-minded thinking (see Figure 2 for a visualization of response tendencies associated with this trait and showing continuity across evaluations of political ingroups and political outgroups). Similarly, participants' beliefs that they should and would change their own minds if they received convincing evidence positively predicted endorsements of prioritizing accuracy, suggesting that people hold themselves to similar standards as others (as was also suggested by the absence of an effect of perspective, such that people gave similar responses regardless of whether they were instructed to put themselves in the shoes of the protagonist). Surprisingly, concerns about potential ostracism led people to positively endorse information-seeking and belief change and to condemn belief stasis, indicating that people thought it was more laudable to be motivated by truth-seeking in the face of potential social stigma, perhaps because it could counteract undesirable norms suppressing the pursuit of true beliefs. There was also a reliable interaction between political match and participants' political stances on the issues (i.e., having beliefs aligned with the political ingroup), such that stronger political stances increased endorsement of prioritizing accuracy for outgroup members and decreased endorsement of prioritizing accuracy for ingroup members (see Figure 3).

Table 1

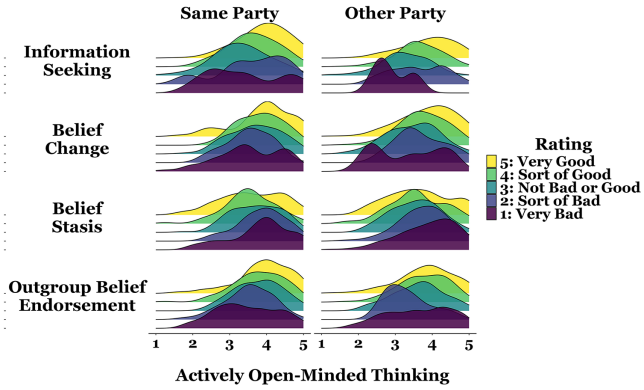
Predictors of Responses to Primary Questions in Study 1

Predictor (nested below each outcome variable)	b	SE (b)	p
Information-seeking			
Perspective	−0.77	0.19	<.001
Political match	0.34	0.15	.024
Intellectual humility	0.70	0.15	<.001
Actively open-minded thinking	0.85	0.16	<.001
Likelihood of ostracism	0.17	0.09	.049
Belief change			
Perspective	−0.35	0.13	.006
Willingness to change one's own beliefs	0.26	0.06	<.001
Intellectual humility	0.26	0.10	.012
Actively open-minded thinking	0.30	0.11	.008
Likelihood of ostracism	0.15	0.07	.026
Political Match × Stance	1.37	0.11	<.001
Belief stasis			
Willingness to change one's own beliefs	−0.22	0.06	<.001
Likelihood of ostracism	−0.33	0.07	<.001
Actively open-minded thinking	−0.39	0.11	<.001
Political Match × Stance	−1.09	0.10	<.001
Outgroup belief endorsement			
Willingness to change one's own beliefs	0.27	0.06	<.001
Actively open-minded thinking	0.34	0.11	.001
Political Match × Stance	1.09	0.10	<.001
Political Match × Partisan Identity	0.01	0.005	.024

Note. The table shows the significant predictors that emerged from the backward stepwise mixed effects models in Study 1. Random intercepts were included for scenario and participant. In the case of significant interactions, the main effects are not included in the table because these estimates are not straightforwardly interpretable. SE = standard error.

Figure 2

Actively Open-Minded Thinking Distributions per Responses to Study 1 Questions



Note. Density ridgeline plots representing the distribution of participants' responses to the four primary questions in Study 1 as a function of their dispositions toward actively open-minded thinking about evidence (with 1 being *low* and 5 being *high*). Ratings are split by political match. See the online article for the color version of this figure.

Discussion

Study 1 investigated how people evaluate truth-seeking tendencies in the context of real-world political issues that are both meaningful and consequential (e.g., banning assault weapons). We found clear evidence that people think others' beliefs should be guided by the pursuit of accuracy rather than partisanship. Overall, participants endorsed belief change more highly than belief stasis in the face of contradictory evidence, although this effect was much more pronounced for evaluations of people from opposing political parties as compared to people from participants' own political parties.

Replicating previous work (Heltzel & Laurin, 2021), gathering additional evidence about alternative political viewpoints was evaluated especially positively. However, such praise weakened slightly when participants took a first-person rather than a third-person perspective, perhaps reflecting an awareness that people tend to engage in selective information-seeking themselves (e.g., Ditto & Lopez, 1992). This effect of perspective was absent from evaluations of belief change, belief stasis, and outgroup belief endorsement.

Conversely, evaluations of information-seeking became only slightly less positive when participants evaluated ingroup members, while evaluations of belief change, belief stasis, and outgroup belief endorsement were more dramatically impacted by the political match between participants and protagonists. When evaluating outgroup members, participants were much more consistent in their praise for truth-seeking tendencies, with well over half of participants' evaluations indicating approval of belief change and outgroup belief endorsement and well over half of evaluations indicating disapproval of belief stasis. When evaluating ingroup members, responses were much more inconsistent, only narrowly leaning in the direction of supporting truth-seeking over partisanship.

Positive evaluations of belief change are especially notable given that political beliefs are formed not only on the basis of facts but also on the basis of moral principles (e.g., considering freedom to be an unassailable right, regardless of its negative consequences). In this study, we specifically targeted issues that are amenable to empirical observations (such as illegal immigration, for which stances are at least partially informed by economic benefits and costs). Even in these cases, however, there are additional commitments (such as concerns about basic human rights) that typically factor into beliefs. Yet, the majority of participants believed it is good for people to shift their stances on political issues purely on the basis of a subset of factual evidence justifying the opposing stance.

Our data further demonstrated that actively open-minded thinking about evidence is a particularly strong predictor of positive attitudes toward others' prioritization of accuracy over partisanship. Conversely, partisan identity did not reliably predict prioritization of partisanship over accuracy, and the anticipation of ostracism predicted greater prioritization of accuracy rather than ingroup loyalty, suggesting that social considerations do not detract from endorsing truth-seeking. Participants also justified their responses by appealing to epistemic considerations (valuing open-mindedness and true beliefs) rather than social or pragmatic considerations (social harmony or economic factors).

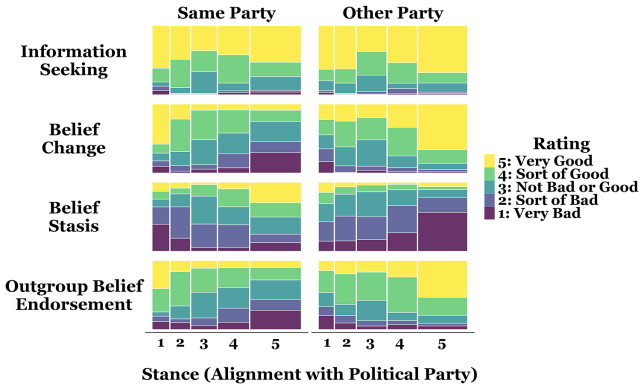
Supplementary Studies

Supplementary Replication Study

We conducted an internal replication of Study 1, using a convenience sample from Prolific rather than a nationally representative sample from Qualtrics. Aside from minor differences in the procedure, the study was identical to Study 1. The two samples produced strikingly convergent results. Full details are provided in the Supplemental Materials. As can be seen by comparing Figure 1 to Supplemental Figure S1, the proportions of responses at each level of the Likert scales were nearly identical. This replication inspires greater confidence in our findings.

Figure 3

Political Stance Alignment Distributions per Responses to Primary Questions in Study 1



Note. Mosaic plots demonstrating the associations between participants' responses to the four primary questions in Study 1 as a function of their political stance on the issues (with 1 indicating *strong agreement with the stance of the opposing party* and 5 indicating *strong agreement with the stance of the participant's political party*). Ratings are split by political match. See the online article for the color version of this figure.

Supplementary Baseline Study

Both Study 1 and the Supplementary Replication Study provided participants with strong reasons to endorse truth-seeking, as protagonists in the scenarios were convinced by nonpartisan information that their beliefs about political issues were inaccurate. By contrast, in the Supplementary Baseline Study, we explored how participants would respond in the *absence* of unequivocal evidence that the outgroup was correct. In this study, we retained the materials from the previous studies with one key exception: https://www.ProCon.org was described as indicating that there was *no clear evidence* on either side of the issue. For example, the final paragraph of the immigration vignette read as follows:

> In his assessment of the evidence presented by experts on ProCon.org, Mark concluded that neither stance could be supported by existing knowledge. Given the complexity of the immigration issue, it is not possible to predict what impact illegal immigration would have on taxpayers and the economy.

In the absence of a signal about which belief was accurate, participants were roughly split between expressing uncertainty or responding in a partisan fashion. More specifically, while 35% of responses indicated that it was neither good nor bad for protagonists to change their beliefs in the face of equivocal evidence, 42% endorsed partisan tendencies (i.e., evaluating belief change as good for outgroup members or as bad for ingroup members). Similarly, while 38% of responses indicated that it was neither good nor bad for protagonists to retain their beliefs in the face of equivocal evidence, 43% endorsed partisan tendencies (i.e., evaluating belief stasis as bad for outgroup members or as good for ingroup members). Finally, while 55% of responses indicated that protagonists should tell others that they do not know what is correct, 27% indicated that it was better for political outgroup members to tell others that the opposing stance was correct or for political ingroup members to tell others that their initial stance was correct. In each of these cases, the remaining participants advocated for an antipartisan tendency favoring outgroup beliefs, which can be partially explained by some participants holding beliefs that were at odds with their political party's typical stance. Significance testing uncovered a greater-than-chance tendency for people to endorse partisan tendencies in most instances. Overall, in the absence of clear evidence supporting the outgroup's stance, a substantial number of people think it is good to adopt and espouse ingroup beliefs. Full details are provided in the Supplemental Materials.

Study 2

Study 1 demonstrated that adults value the pursuit of truth-seeking in intergroup contexts. By investigating adults, we cannot discern the origins of this tendency and whether it emerges spontaneously or only after protracted maturation and/or socialization. In particular, is this tendency the result of metacognitive sophistication and years of firsthand experience participating in political conversations and consuming political media? Alternatively, is this tendency evident even at a time when metacognition is limited and prior to direct engagement in political groups? To answer this question, Study 2 investigated how 6- to 9-year-old children and adults evaluate information-seeking, belief change, belief stasis, and outgroup belief endorsement in situations where beliefs are diagnostic of group membership.

Unlike Study 1, Study 2 presented participants with scenarios involving fictional groups who held novel beliefs. This enabled us to use the same stimuli across child and adult participants. Such an approach is common in the developmental psychology literature, including in related studies on children's evaluations of individual beliefs that diverge from group-based beliefs (Roberts et al., 2021). Evaluations of hypothetical scenarios are devoid of relevant motivational elements and cannot be straightforwardly generalized to realistic situations (FeldmanHall et al., 2012). Therefore, focusing on novel beliefs in imaginary societies comes at the cost of reducing external validity. At the same time, this approach increases internal validity (Mook, 1983). By investigating psychological processes in highly controlled contexts, participants' prior beliefs and sympathies toward particular groups could not contaminate their evaluations of others' epistemic tendencies. The design of Study 2 therefore complemented the messy real-world focus of Study 1 by carefully controlling for all relevant details of the scenarios and preventing participants' preexisting knowledge, convictions, or allegiances from influencing their evaluations.

Method

Participants

Based on a power analysis (see the Supplemental Materials), we tested 160 participants with usable data. This was in accordance with our preregistered stopping rule, which was the satisfaction of the following conditions: (a) A minimum of 160 nonexcluded participants have been tested, (b) a minimum of 50 nonexcluded adult participants have been tested, and (c) a minimum of 20 nonexcluded child participants have been tested from each of four age groups (6–9), with at least one child from each age group assigned to each of the 16 possible combinations of scenarios.

There were three comprehension checks administered for each scenario. If child participants gave an incorrect answer, they were guided through the relevant portion of the story once more and then allowed up to two additional opportunities to provide the correct answer. If they missed three attempts in a row on any given comprehension check ($n = 4$) or if they missed two or more of their initial attempts on the set of three comprehension checks for any given scenario ($n = 15$), their data were excluded from analyses. Adult participants who provided more than one incorrect answer to a comprehension check on any given scenario ($n = 1$) were excluded from analyses. This resulted in 19 children and one adult being excluded and replaced, as per our preregistration.

Child participants ($n = 98$) ranged from 6 to 9 years of age (72–119 months; $M_{age} = 98$ months) and were recruited via a lab database and two online data collection platforms: Lookit and Children Helping Science. Their parents were recruited as adult participants ($n = 62$) to ensure that various demographic factors were matched across age groups. Demographic information (gender, date of birth, race, and ethnicity) was collected at the time of enrollment, via parental report for child participants and self-report for adult participants. Of nonexcluded child participants, 49 were identified as female, 48 as male, and one gender was not reported; 72 were identified as White, seven as Asian, 12 as two or more races, three as another race, and four were not reported. Of nonexcluded adults, 59 identified as women and three

as men (as mothers are anecdotally much more likely than fathers to sign up for and participate in developmental research); 48 identified as White, six as Asian, four as another race, and four did not report their race.

Materials

There were four scenarios in total, each of which was presented as an illustrated story. These stories featured pairs of novel groups who lived in faraway countries and who held divergent beliefs on a particular issue. We varied the scenarios in two primary ways. First, we manipulated whether the groups coexisted harmoniously or were in conflict due to their belief disagreement. Past work has shown that, while competition is not required for intergroup biases to emerge (Dunham, 2018), the presence of competition intensifies intergroup biases in adults (Cikara & Van Bavel, 2014) and in children (Nesdale et al., 2005). Competition also heightens children's perceptions of the salience of social boundaries between novel groups to which they do not belong (Rhodes & Brickman, 2011). We thus anticipated that condemnations of prioritizing accuracy would be especially likely in cases when beliefs are a central component of group membership, thus serving as a meaningful signal of group identity.

Second, we manipulated whether the focal beliefs were factual or moral. Children's epistemic stances have been found to differ across moral and factual content (Danovitch & Keil, 2007; Heiphetz & Young, 2017). Previous research has also indicated that, while most children think factual disagreements are permissible (Wainryb et al., 2001), they are relatively less tolerant of diversity of thought in the moral domain (Wainryb et al., 2004). Given the strong relevance of moral beliefs for children's group identities (Chalik & Rhodes, 2020) and adults' intolerance of ingroup divergences in moral beliefs (Wright, 2021), we expected that prioritizing accuracy would be evaluated more negatively in the moral domain.

In each scenario, former compatriots were described as having split into two nations. In the group conflict condition, participants learned that the two groups split due to a dispute over the contested belief. In the group harmony condition, participants learned that the two groups peacefully split after a natural disaster. Across both conditions, each of the scenarios described a member of one of the groups going on vacation to the outgroup's country. There, the protagonist discovered that a belief they and their group members had long held was opposed by a contrary belief held by people living in this other country. The protagonist then decided to attend a lecture by a third-party expert in a neutral country to discern the truth about the issue. The expert provided compelling evidence favoring the outgroup's belief. Each scenario ended with the protagonist arriving home in time for a festival celebrating their ingroup's belief.

For example, one scenario described a disagreement about which species of animal would be permissible to take scales from in order to create medicine, as follows:

> These are the Hibbles. They live in a faraway country called Hibbleland. These are the Smickles. They live in a faraway country called Smickleland. A long time ago, Hibbles and Smickles used to live in the same country together. During that time, they discovered that the only way to cure a human disease was by taking scales from animals and turning them into medicine. The only animals with the right kinds of scales are called Smezzies and Heebos.
>
> All the Hibbles wanted to protect Heebos, and all the Smickles wanted to protect Smezzies. Hibbles thought it is wrong and bad to take scales from Heebos to make medicine, but okay to take them from Smezzies. Smickles thought it is wrong and bad to take scales from Smezzies, but okay to take them from Heebos. They could not agree what animal it was wrong and bad to take scales from for medicine. They got into such a big fight that homes were destroyed all over the country. Each group moved to a different place in order to be apart, and they created two separate countries. The Hibbles and the Smickles still don't get along today.
>
> Nowadays, in Hibble schools, Hibble kids always read a chapter from a very important Hibble book that teaches them about how it is wrong and bad to take scales from the Heebos to make medicine. They learn that scales should be taken from Smezzies. Hibbles want to protect the Heebos so much that every year the Hibbles have a special day called Protect the Heebos Day where they protest taking the scales of Heebos. They make posters and flyers that say "Protect the Heebos," and hang them up all over Hibbleland.
>
> Nowadays, in Smickle schools, Smickle kids always read a chapter from a very important Smickle book that teaches them about how it is wrong and bad to take the scales of the Smezzies to make medicine. They learn that scales should be taken from Heebos. Smickles want to protect the Smezzies so much that every year the Smickles have a special day called Protect the Smezzies Day where they protest the taking of Smezzies' scales. They make posters and flyers that say "Protect the Smezzies," and hang them up all over Smickleland.
>
> This is Harper, the Hibble. She grew up and lives in Hibbleland. One day, her parents decided to take her on a trip to see the beautiful lakes in Smickleland. Even though the Hibbles and Smickles really don't get along at all, it still seemed like a great place for a vacation. While Harper was in Smickleland, she saw that Smickle Magazine had a special article on important animals. The article was about how it is wrong and bad to use Smezzies' scales to make medicine, so people should use Heebos' scales instead. Harper was confused because she'd always been taught it was wrong and bad to take scales from Heebos, so medicine should be made with Smezzie scales instead.
>
> Before going home, Harper and her family visited a country called Yipit. In Yipit, Harper saw posters for an event at the Yipit Science Museum where an animal expert who was not a Hibble or a Smickle was going to talk about a big discovery that he and many other researchers made about taking scales from different kinds of animals. Harper decided to find out if it really was wrong and bad to take the scales of the Heebos or if it really was wrong and bad to take the scales of the Smezzies.
>
> At the talk, the animal expert explained that after 30 years of research, he and the other researchers discovered that it is wrong to use Smezzie scales for medicine. He brought photos and videos of his experiments showing how Heebos and Smezzies changed over time after having their scales taken off. No one had ever done these kinds of experiments before. The photos showed that a few years after taking their scales off, Smezzies had become weaker and unable to grow back scales to protect themselves from predators. Videos of the Heebos showed that they could run faster without their heavy scales, and they could easily escape predators. From the photos and videos, everyone could tell that removing scales hurt the Smezzies but helped the Heebos.
>
> After visiting Yipit, Harper and her family went back home to Hibbleland. They got back just in time for Protect the Heebos Day where all the Hibbles were protesting the use of Heebos' scales in making medicine. Harper's neighbors saved her a spot in the middle of the crowd, and they waved at her to come over and join the event. As she looked around at her fellow Hibbles during the protest, Harper realized that she had to make up

her mind about which animal it is wrong and bad to take scales from. She had to decide whether it's wrong and bad to take Smezzie scales, like the Smickles believe and like the expert said, or whether it's wrong and bad to take Heebo scales, like all of her Hibble friends and family believe.

This scenario was modified based on participant gender and condition (e.g., in the harmonious scenario, participants were told that a wildfire had forced the groups to separate). The other three scenarios were structurally matched but involved another moral issue (the offensiveness of saying particular words), an historical fact (who won an important race), and a scientific fact (which bird species is the oldest). The full text of the other scenarios can be accessed via the Open Science Framework (see Figure 4 for sample images).

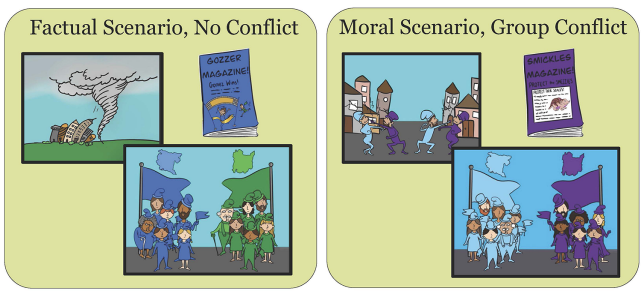
Procedure

Children participated in Zoom video calls with an experimenter; their parents were requested to leave the room or busy themselves during the study session. Child participants first completed a screen check to ensure that all parts of the screen share were visible. They then received three unrelated warm-up questions to practice using a 5-point Likert scale with anchors of *very bad* (two red thumbs down), *sort of bad* (one orange thumb down), *not bad or good* (one yellow thumb sideways), *sort of good* (one light green thumb up), and *very good* (two dark green thumbs up). This scale was then employed throughout the rest of the study.

Adult participants were provided an identical set of materials (with the same illustrated scenarios and questions) in an internet-based Qualtrics survey. Adults completed their surveys independently and at their own pace, typically prior to their child's Zoom session. Because the scenarios and questions were not read aloud by an experimenter, and adults typed their responses, there was no potential for children to overhear their parents' responses in a way that could have contaminated their subsequent responses.

Each participant was randomly presented with versions of two of the four scenarios, which were constrained to vary across both levels of intergroup dynamic (conflict vs. harmony) and belief type (fact vs. moral). The protagonist in each scenario was approximately matched to the participant's age, with gender counterbalanced across scenarios. For each scenario, participants were asked to evaluate the goodness or badness of the protagonist's choices to seek out potentially contradictory information (e.g., "How good or bad was it for Harper the Hibble to want to learn more about which animal it is wrong and bad to take scales from?"), to change their belief upon encountering the expert's evidence that their initial belief was false and that the outgroup's belief is true (e.g., "How good or bad would it be for Harper the Hibble to start believing that it is wrong and bad to take Smezzie scales for medicine, like the Smickles believe?"), and to retain their existing ingroup-aligned belief (e.g., "How good or bad would it be for Harper the Hibble to keep believing that it is wrong and bad to take Heebo scales for medicine, like the rest of the Hibbles believe?"). Responses to these questions were measured with a 5-point Likert scale ranging from a minimum of *very bad* to a maximum of *very good*. Participants were also asked what the protagonist should tell other ingroup members when questioned about their belief (i.e., whether they should endorse the belief of the ingroup, endorse the belief of the outgroup, or claim that they do not know the truth). Open-ended explanations were also requested after each of these four questions (e.g., "Why would it be sort of bad for Harper the Hibble to keep believing that it is wrong and bad to take Heebo scales for medicine?"). Child participants additionally played 5 min of "I Spy" between scenarios to counteract experimental fatigue. Additional exploratory questions were asked after the two scenarios; these are described in the Supplemental Materials.

Figure 4
Sample Stimuli From Two Scenarios in Study 2



Note. There were 14 total illustrations for each story. See the online article for the color version of this figure.

Results

Condition Differences

We first investigated whether age group (adults vs. children), intergroup dynamic (conflict vs. harmony), and belief type (fact vs. moral) influenced evaluations of our four primary questions. To do this, we fit four cumulative link mixed models predicting evaluations for each of the primary questions from the fixed effects of the three condition variables and the random intercepts of scenario and participant. We initially included all interactions but subsequently removed these to examine only main effects, as no significant interaction effects emerged in any of the four models ($ps > .15$).

An effect of age group was significant for each of the primary questions, as endorsements of truth-seeking were consistently more pronounced among adults. Compared to children, adults were more likely to praise information-seeking ($b = 1.55$, $SE = 0.54$, $p = .004$), as well as belief change ($b = 1.27$, $SE = 0.39$, $p = .001$), and communicating an outgroup belief to an ingroup member ($b = 2.53$, $SE = 0.73$, $p < .001$). Similarly, adults condemned retaining an existing belief more than children ($b = -2.02$, $SE = 0.35$, $p < .001$).

There were no effects of intergroup dynamic for any of the four primary questions: information-seeking, $p = .314$; belief change, $p = .280$; belief stasis, $p = .363$; and outgroup belief endorsement, $p = .112$. Similarly, there were no effects of belief type on three of the four primary questions: information-seeking, $p = .537$; belief change, $p = .060$; and outgroup belief endorsement, $p = .435$. In the single exception, participants were more prone to condemn belief retention for moral as compared to factual beliefs ($b = -0.76$, $SE = 0.22$, $p < .001$).

To examine whether there were developmental changes between 6 and 9 years of age, we reran the cumulative link mixed models with child participants only, substituting age in months for age group. These produced no significant effects of child age (information-

seeking: $p = .068$; belief change: $p = .954$; belief stasis: $p = .581$; outgroup belief endorsement: $p = .143$).

Primary Analyses

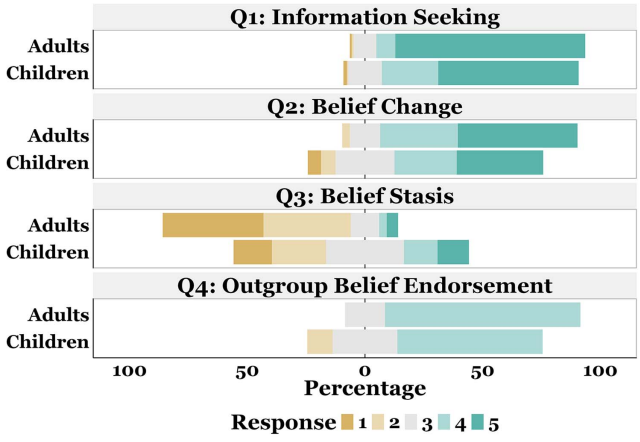
As can be seen in Figure 5, participants consistently and overwhelmingly endorsed the pursuit of accuracy. To test whether responses were significantly different from the scale midpoints, we conducted one-sample Wilcoxon signed-rank tests.[2] For the first three questions, the middle option on the Likert scale (*not bad or good*) served as the ordinal midpoint. For the final question about communicating to others, the response of uncertainty (thinking the protagonist should say "I don't know") was coded as the ordinal midpoint between endorsing the ingroup belief and endorsing the outgroup belief. Given the significant differences uncovered between adults and children, all comparisons to scale midpoints were split by age group. We also split the data by belief type for the question about belief stasis, given the significant difference uncovered in this case.

Participants overwhelmingly believed that it is praiseworthy to curiously seek out information about other groups' divergent factual and moral beliefs. Ratings were significantly above the midpoint for both adults (89% of responses; $V = 6{,}260$, $p < .001$, $r = .90$) and children (84% of responses; $V = 13{,}846$, $p < .001$, $r = .83$). Additionally, most participants believed that it is praiseworthy to change one's belief to match those of an outgroup when faced with compelling evidence. Again, ratings were significantly above the midpoint for both adults (84%; $V = 5{,}794$, $p < .001$, $r = .84$) and children (63%; $V = 9{,}322$, $p < .001$, $r = .58$). Similarly, most adults and children believed that, upon discovering that the evidence favors an outgroup's belief, a person should tell their fellow ingroup members that the outgroup's belief is correct. These ratings diverged from uncertainty for adults (83% of ratings; $V = 5{,}356$, $p < .001$, $r = .91$) and for children (62% of ratings; $V = 8{,}652$, $p < .001$, $r = .60$). Only a few participants (11% of children and no adults) thought it would be best for another person to tell their fellow ingroup members that the ingroup's belief is correct, while the remaining 17% of adults and 28% of children thought that it would be best to communicate uncertainty.

However, whereas most adults (80%) thought it would be bad (i.e., "very bad" or "sort of bad") for the protagonists to retain their existing beliefs in the face of conflicting evidence, many fewer children (39%) judged it to be bad to retain existing beliefs. Here, responses were somewhat contingent upon belief type. Adults reliably judged it to be bad to retain both existing moral beliefs (83% of responses below the midpoint; $V = 142$, $p < .001$, $r = .73$) and existing factual beliefs (77% of responses below the midpoint; $V = 152$, $p < .001$, $r = .69$). However, while children generally judged it to be bad to retain existing moral beliefs (51% below the midpoint; $V = 1{,}025$, $p = .029$, $r = .25$), their evaluations of retaining existing factual beliefs did not differ from the scale midpoint (only 28% of responses were below the midpoint, with 43% of responses being at the midpoint; $V = 859$, $p = .607$, $r = .04$).

Figure 5

Responses to Primary Questions in Study 2



Note. Responses are split by age group. For the first three questions, 1 (dark orange) corresponds to *very bad*, 2 (light orange) corresponds to *sort of bad*, 3 (gray) corresponds to *not bad or good*, 4 (light green) corresponds to *sort of good*, and 5 (dark green) corresponds to *very good*. For the final question, 2 (light orange) corresponds to *endorsing the ingroup belief*, 3 (gray) corresponds to *endorsing uncertainty*, and 4 (light green) corresponds to *endorsing the outgroup belief* (there were no options corresponding to 1 or 5). See the online article for the color version of this figure.

Discussion

Study 2 demonstrated that, in third-party intergroup contexts, both children and adults think that other people should pursue accurate knowledge and that others' beliefs should be updated in accordance with compelling evidence. We found very little indication that people ever think that it is bad for ingroup members to seek additional information about divergent beliefs or that it is bad for someone to change their mind to adopt an outgroup belief in the face of convincing evidence. Although the findings of Study 2 should be interpreted in light of the fictional nature of the scenarios, it is notable that participants across our two studies were inclined to praise individuals with motivations to form accurate beliefs, despite the considerable differences in content between these studies.

There was a reliable effect of age group, such that adults had stronger tendencies than children on all measures. However, both age groups had similar overall patterns of responding for most questions. Children responded much less systematically than adults when evaluating belief stasis, but this may have been due in part to the relative difficulty of thinking about omissions. Furthermore, there were no changes in response tendencies between 6 and 9 years of age. Overall, these findings provide evidence of developmental stability in judgments of epistemic tendencies.

Results were also robust across the two experimental conditions. We did not find any differences in evaluations between contexts in which groups were explicitly described as being in conflict over a contested belief and contexts in which groups were described as having a harmonious relationship. This diverges from previous findings that competitive contexts tend to influence social evaluations (e.g., Rhodes & Brickman, 2011), but aligns with work showing that competition does not reliably influence children's disapproval of dissenting from group norms (Roberts et al., 2017).

[2] In these tests, the test statistic (V) is not directly interpretable, as it depends on the number of observations. However, the effect size (r) provides a meaningful measure, describing the strength of the effect in a manner similar to a correlation coefficient.

Given that evaluations were positive in both contexts, it appears that the perceived value of truth-seeking transcends the perceived value of bolstering group identity in the face of competition, at least when it comes to evaluating hypothetical scenarios.

Furthermore, there were generally no differences in evaluations of truth-seeking for purely factual content (i.e., who won a race and what bird species is the oldest) as compared to morally relevant content (i.e., which word is harmful to say and which animal species is permissible to exploit). The exception is that participants were generally more accepting of omissions for factual beliefs as compared to moral beliefs. This effect was especially clear in the child sample; while approximately half of children's evaluations were below the midpoint for moral scenarios, less than a third of children's evaluations were below the midpoint for factual scenarios. It is possible that this difference can be explained by the greater harms caused by mistaken moral beliefs, rendering false beliefs more costly for these scenarios. However, as this effect emerged only for one question, it is difficult to draw any strong conclusions about the relative intolerance of adherence to sectarian beliefs for moral issues.

General Discussion

We increasingly inhabit intolerant groups in which alternative perspectives are maligned and mistrusted (Finkel et al., 2020; Nguyen, 2020). People often seek out and evaluate information in skewed and self-serving ways (Kunda, 1990), prioritize group loyalty over accuracy when forming and updating their own beliefs (Van Bavel & Pereira, 2018), and do not always think that they or others should reason in unbiased ways when confronted with unwelcome evidence (Cusimano & Lombrozo, 2023; Pennycook et al., 2020). These prior findings raise the possibility that people would regard truth-seeking and belief change with suspicion in intergroup situations and would laud certain false beliefs as being valuable signals of ingroup loyalty (Barlev & Neuberg, 2025). However, we found that partisan predispositions in people's own epistemic tendencies do not indicate that they think it is bad to prioritize accuracy over partisanship in intergroup contexts. Across two studies examining whether adults (Studies 1 and 2) and children (Study 2) commend or condemn considering, adopting, and espousing outgroup beliefs in the face of convincing evidence, our results clearly and strikingly demonstrated that people reflectively endorse prioritizing truth-seeking over partisanship. This tendency was apparent both in realistic contexts involving contested political beliefs (Study 1 and the Supplementary Replication Study) and in novel intergroup contexts for which participants did not have strong personal investments in the beliefs or groups they evaluated (Study 2). When there was no clear indication of what belief was true (in the Supplementary Baseline Study), participants tended to endorse acting in accordance with partisan motives.

Some might find it trivial that people value accuracy in cases where the evidence clearly supports a particular belief, particularly since truth-tracking is often essential for survival. For many ideological issues, however, false ideological beliefs lack direct personal ramifications. Given that people have little to gain other than knowledge itself by holding accurate beliefs in such contexts, yet risk losing a great deal by deviating from their copartisans, we find it remarkable that our participants considered accuracy motivations to be legitimately overriding even in cases where accurate beliefs are inconsequential. Our results thus speak against the all-too-common cynical view that people today no longer care about truth. Instead, it seems that many people today still care a lot about truth and care about it even more than they care about partisan loyalty.

Imbalanced Endorsements of Truth-Seeking

Although participants in both studies favored truth-seeking over partisanship in their evaluations of third parties, participants in Study 1 held political ingroup members to a different epistemic standard than political outgroup members. Motivated forms of reasoning did not impact evaluations of information-seeking, which was consistently praised, but there were indications of bias further downstream. When information was no longer inert but was integrated into existing belief systems and communicated to others, participants were highly supportive of truth-seeking tendencies in cases of political outgroup members who reconsidered their stances on polarized political issues upon acquiring relevant evidence from a nonpartisan source. This praise became more tepid when participants evaluated politically like-minded others. Additionally, participants tended to praise others who told group members that an outgroup belief supported by the weight of the evidence was correct, although this tendency was again stronger for outgroup views as compared to ingroup views. In sum, Study 1 and the Supplementary Replication Study show that people consistently endorse gathering all the relevant evidence regardless of what the evidence shows, but their political allegiances strongly influence their evaluations of belief change and outgroup belief endorsement on the basis of such evidence. While future research is needed to precisely discern an explanation for this pattern of findings, our data can provide initial insights.

One potential explanation for the effects of political match is that participants were primarily concerned with ingroup members retaining their shared political identities, even at the cost of accurate beliefs (Pereira et al., 2023). However, participants' partisan identities did not predict their evaluations in Study 1 or in the Supplementary Replication Study, and expectations of ostracism were associated with an *increase* in praising truth-seeking in Study 1. Additionally, participants did not justify their responses by appealing to considerations of harmonious social relationships. These findings suggest that pure sectarianism is unlikely to be the primary cause of evaluating ingroup members differently from outgroup members. Even though group identity can influence people's beliefs in intergroup contexts (Van Bavel & Pereira, 2018), we did not uncover evidence that partisanship is reflectively endorsed as a good reason to hold particular beliefs.

An alternative explanation for the diminished praise of truth-seeking among ingroup members is that participants' prior beliefs led them to be more dubious of evidence presented in support of the outgroup stances. Thus, participants may have genuinely and rationally thought that ingroup members had weaker reasons for belief revision and stronger reasons for belief stasis (see Baron & Jost, 2019). This explanation is primarily relevant for participants who have previously explored the arguments on their own and came into the study with substantial background knowledge. However, because self-reported understanding of the issues only weakly predicted less support for belief change in the Supplementary Replication Study and did not predict responses on any of the other three items (see Supplemental Table S1), this explanation was not clearly supported by our data.

Perhaps the most plausible explanation of participants' biased evaluations of ingroup members is that, regardless of their group

loyalties and the strength of their prior beliefs, participants were more inclined to moralize their stances on the issues. Greater moralization of their personal beliefs could have led participants to endorse nonevidential reasons for adopting their personally held beliefs or to endorse asymmetrically high thresholds for the amount of evidence considered necessary for overturning their existing beliefs (Cusimano, 2025; Cusimano & Lombrozo, 2021b).

Thus, participants may have believed the outgroup had weaker support for their positions in part because of motivated forms of thinking, rather than because of partisan identity per se, or because of greater personal knowledge about the issues. That is, participants' strong commitments to the truth of their personal stances on the issues may have contributed to skewed forms of reasoning about the vignettes, resulting from predispositions to more critically evaluate evidence favoring opposing beliefs (Stanley, Henne, et al., 2020; Stanovich et al., 2013; Taber & Lodge, 2006). Under this interpretation, the evidence from https://www.ProCon.org may have been considered sufficient for bolstering participants' favored stances but insufficient for overriding them. Tellingly, while participants' stances on political issues were irrelevant to their evaluations of information-seeking, their stances on the issues were more influential than their political allegiances in predicting their evaluations of belief change, belief stasis, and outgroup belief endorsement (see Figure 3). Yet, in the Supplementary Replication Study, participants' ideological valuations of the issues (as operationalized by an Issue Commitment index) predicted *greater* endorsement of information-seeking and did not predict ratings on the other three primary questions, so more research is needed to more thoroughly test this potential explanation.

Overall, because we matched the quality of evidence encountered by ingroup and outgroup protagonists by presenting participants with pairs of symmetrical scenarios in which both Republican and Democrat protagonists obtained information from the same website (https://www.ProCon.org), it is difficult to identify clear rational justifications for the imbalanced endorsements of belief change in outgroup members as compared to ingroup members. This feature of our study design suggests that the discounting of opponents' reasons was likely motivated at least in part by sociopolitical goals or biased reasoning. However, the problem of observational equivalence between competing explanations (Ditto et al., 2025; Druckman & McGrath, 2019) means that future research is needed to more directly investigate the degree to which participants were ideologically motivated in their thinking that ingroup protagonists were less warranted in changing their minds.

Open-Mindedness as a Critical Individual Difference

Study 1 showed that positive evaluations of prioritizing accuracy were especially pronounced among adults who self-reported stronger dispositions to think in open-minded ways. As is evident in Table 1, as well as in Figure 2, higher open-mindedness was consistently associated with greater endorsements of information-seeking, belief change, and outgroup belief endorsement and reduced endorsements of belief stasis. Moreover, this remained true across evaluations of political ingroup members and evaluations of political outgroup members. Even when using a different measure of actively open-minded thinking in the Supplementary Replication Study, this construct continued to significantly predict all four of our primary questions (see Supplemental Table S1). Notably, this was a main effect, unmoderated by political match (see Supplemental Table S2), such that people with lower open-mindedness were less likely to favor truth-seeking over partisanship regardless of whether they were evaluating ingroup members or outgroup members. Actively open-minded thinking therefore does not only protect against bias in evaluating copartisans but also increases the valuation of epistemic virtues in a more global fashion.

Our finding that participants who were open-minded themselves were most prone to endorse these tendencies in others is consistent with previous research showing that intellectually humble people harbor less animosity toward political outgroup members (Bowes et al., 2020), are less receptive to false news that is hostile to outgroups (Marie & Petersen, 2024), and are more receptive to engaging with alternative viewpoints on contentious political issues (Porter & Schumann, 2018). However, measures of actively open-minded thinking were consistently more predictive of participants' endorsements of truth-seeking than a standard measure of intellectual humility, suggesting that future research should focus even more on the former construct. Additionally, future research should examine possible causal relationships between open-minded thinking and endorsements of epistemic virtues. Perhaps being higher in open-mindedness causes people to elevate their praise of others who possess this trait, just as people more generally tend to value their own traits manifested in others. It is also possible that having a stronger positive evaluation of prioritizing truth-seeking causes people to more successfully cultivate strong accuracy motivations within themselves, thereby becoming more open-minded over time.

Notably, other individual differences were not particularly strong predictors of adults' evaluations of truth-seeking. In particular, contrary to accounts that partisan tendencies result from ingroup loyalties (e.g., Van Bavel & Pereira, 2018), we did not find any evidence that stronger political identity led to more endorsement of partisan tendencies. We also did not uncover differences between Democrats and Republicans. If anything, political conservatives were somewhat *more* inclined to endorse truth-seeking tendencies (with economic conservatism predicting slightly higher endorsements of belief change and social conservatism predicting slightly higher endorsements of outgroup belief endorsement in the Supplementary Replication Study). This finding aligns with research showing that political conservatives are not more prejudiced against ideologically dissimilar others than liberals (e.g., Brandt et al., 2014; Ditto et al., 2019).

Evidence of Developmental Stability

Middle childhood is a pivotal developmental period for gaining nuanced understanding of how others acquire and represent knowledge. The elementary school years are associated with major epistemic and metacognitive achievements, such as progressions in children's understanding of how beliefs are related to evidence (Kuhn et al., 2000; Lalonde & Chandler, 2002; Yang et al., 2023). In addition, children typically become more tolerant of divergent viewpoints as they get older (Wainryb et al., 1998). By comparing 6- to 9-year-old children and adults in Study 2, we were able to discern whether evaluations of epistemic tendencies vary in accordance with notable developmental changes in conceptual and metacognitive capacities and with age-related differences in experiences of belonging to belief-based groups.

Despite the myriad changes in social cognitive development that occur between 6 years of age and adulthood, the results of Study 2 (although cross-sectional) suggest that praise for truth-seeking emerges by elementary school and remains consistent across

middle childhood and into adulthood. Our findings therefore suggest that certain developments in thinking about beliefs are unnecessary for considering truth-seeking to be praiseworthy.

Our results also extend prior research showing that, even though children prefer others who share their beliefs (Heiphetz, 2018), children typically think it is better to believe the truth than to conform to an ingroup (Farooq et al., 2024; Roberts et al., 2021). Arguably, however, we did not test children in situations that maximized their partisan motives, which is a significant limitation of this work. The fictional issues we employed in Study 2 (e.g., determining which bird species is the oldest) were more arbitrary and inconsequential than the contested political issues investigated in Study 1 (e.g., defunding the police, restricting immigration), and children did not identify as a member of either group in the scenarios they evaluated. While many adults identify with such ideologically defined groups (with political identity being especially emblematic), group membership in childhood tends to be based exclusively upon outward features or nonevidential beliefs. We were unable to identify any real-world cases in which children identify strongly with groups which are defined by beliefs that could be overturned by relevant evidence.[3] This lack of relevant beliefs may be more of a sociological phenomenon than a cognitive developmental phenomenon. Nevertheless, it presents a significant limitation in studying partisan convictions from a cognitive developmental perspective.

Practical Implications

There is widespread consensus that societies would benefit from increased tendencies toward truth-seeking. The results of this research can speak to possible interventions. Most straightforwardly, our findings suggest that tendencies toward polarization might be ameliorated by focusing people's attention on their epistemic goals (e.g., their second-order beliefs that they should revise their first-order beliefs in the face of compelling evidence). Such interventions would need to be conducted with care, given that people are more supportive of truth-seeking outgroup members as compared to truth-seeking ingroup members. However, existing work has already promisingly demonstrated how increasing the salience of accuracy motivations reduces partisan sharing of false information on social media (Pennycook et al., 2021). Because prioritizing accuracy was most strongly praised in novel contexts in which participants had no personal stakes, providing people with the experience of endorsing truth-seeking in unfamiliar situations could conceivably have positive downstream effects in familiar situations with higher stakes. Research is needed to directly investigate this possibility and to compare its effectiveness to that of other interventions.

Our results also suggest that we should expect marked individual differences in the effectiveness of interventions that emphasize epistemic virtues. Given that actively open-minded thinking strongly predicts endorsing truth-seeking tendencies, open-minded people will likely be most readily nudged to explicitly commit to the pursuit of accuracy. Thus, it might be especially fruitful to cultivate dispositional tendencies toward open-mindedness, especially during childhood and adolescence (Baron et al., 2017). Although not many interventions have demonstrated large effects on actively open-minded thinking, several approaches—including training people to recognize their cognitive biases and to consider counterevidence (Morewedge et al., 2015) and reducing emotional reactivity toward outgroups through cognitive reappraisal (Halperin et al., 2013)—are promising (see Dolbier et al., 2025).

However, interventions on psychological and behavioral tendencies can only go so far when problems are exacerbated by structural forces. In our research, we went to great lengths to ensure that the outgroup-supporting evidence was acquired from a neutral, third-party source. Of course, such unbiased founts of information are increasingly difficult to find in everyday life. Given the biases that are frequently perceived in journalists, scientific experts, and other purveyors of wisdom, it is no wonder that people frequently mistrust expert arguments that support outgroup beliefs and instead place greater credence in those who have gained prestige within their own ingroups or social networks. Given that even skeptics can ultimately be convinced by high-quality arguments (Peresman et al., 2025), information ecosystems may be more at fault than individual cognition for perpetuating misguided partisan beliefs (Levy, 2022). When experts cannot be trusted to be impartial sources of information, we must intervene on "epistemic landscapes" rather than on human psychology in order to cultivate a greater availability of nonpartisan information.

Constraints on Generality

The United States is a highly sectarian country (Finkel et al., 2020), making it an ideal context to conduct our investigation. Future research should examine whether prioritizing truth-seeking over partisanship varies in accordance with country-level polarization.

Our developmental investigation in Study 2 found that evaluations of prioritizing accuracy were similar across 6- to 9-year-old children and adults. This suggests that we might expect to find substantial stability across the lifespan. However, it is conceivable that such evaluations shift during adolescence, resulting in a curvilinear developmental trajectory. Future research should therefore target a broader age range, particularly adolescents who are beginning to develop allegiances to ideologically defined groups. Longitudinal studies are also needed to speak to questions of developmental continuity and change within individuals.

Conclusion

It is increasingly critical to identify strategies for promoting open-minded discourse about divisive issues from an early age. It is additionally paramount for partisans to be willing to reevaluate their beliefs in light of the latest evidence. This is particularly true for political ideologies, which are typically comprised of an unsystematic mélange of beliefs (Pinsof et al., 2023), and where it is extremely unlikely that one side is reliably correct while the other side is reliably incorrect across a wide range of such orthogonal issues (Joshi, 2020).

[3] In our search, we narrowed ourselves to direct parallels of the types of beliefs investigated in Study 1. Although children identify with the ideological beliefs of their religious ingroups (e.g., that Jesus was the Messiah), as well as other community-based values (e.g., having a duty to be patriotic or inclusive), such beliefs are typically not empirically testable. While children often hold beliefs about the superiority of school groups or sports teams to which they belong, which could be overturned by relevant evidence, these beliefs are confounded by self-enhancement motives in ways that other partisan issues are not. Finally, although children can be led to adopt partisan beliefs within the context of minimal groups (Confer et al., in press), it would be a major challenge to create situations in which these beliefs would be experienced as deeply meaningful.

Thus, regardless of whether there are rational grounds for trusting ingroup members more than outgroup members overall, open-mindedness about ingroup consensus on any particular issue is clearly warranted.

Overall, we find it heartening that children and adults consider the pursuit of accuracy to be virtuous, even in intergroup situations. Although people are biased to endorse truth-seeking less among others who already share their beliefs, they do not think even fellow ingroup members should uncritically cling to baseless ideas. Valuing truth-seeking may prove to be a strong force for overcoming partisanship.

References

Aron, A., Aron, E. N., & Smollan, D. (1992). Inclusion of other in the self scale and the structure of interpersonal closeness. *Journal of Personality and Social Psychology*, *63*(4), 596–612. https://doi.org/10.1037/0022-3514.63.4.596

Baehr, J. (2011). *The inquiring mind: On intellectual virtues and virtue epistemology*. Oxford University Press.

Barlev, M., & Neuberg, S. L. (2025). Rational reasons for irrational beliefs. *American Psychologist*, *80*(1), 79–90. https://doi.org/10.1037/amp0001321

Baron, J., Gurcay, B., & Metz, S. E. (2017). Reflective thought and actively open-minded thinking. In M. E. Toplak & J. A. Weller (Eds.), *Individual differences in judgment and decision-making: A developmental perspective* (pp. 107–126). Routledge.

Baron, J., & Jost, J. T. (2019). False equivalence: Are liberals and conservatives in the United States equally biased? *Perspectives on Psychological Science*, *14*(2), 292–303. https://doi.org/10.1177/1745691618788876

Bayes, R., Druckman, J. N., Goods, A., & Molden, D. C. (2020). When and how different motives can drive motivated political reasoning. *Political Psychology*, *41*(5), 1031–1052. https://doi.org/10.1111/pops.12663

Bowes, S. M., Blanchard, M. C., Costello, T. H., Abramowitz, A. I., & Lilienfeld, S. O. (2020). Intellectual humility and between-party animus: Implications for affective polarization in two community samples. *Journal of Research in Personality*, *88*, Article 103992. https://doi.org/10.1016/j.jrp.2020.103992

Bowes, S. M., Novick, K., Lourenco, S. F., & Tasimi, A. (2025). Do children value intellectual humility over intellectual arrogance? *Developmental Psychology*. Advance online publication. https://doi.org/10.1037/dev0001991

Brandt, M. J., Reyna, C., Chambers, J. R., Crawford, J. T., & Wetherell, G. (2014). The ideological-conflict hypothesis: Intolerance among both liberals and conservatives. *Current Directions in Psychological Science*, *23*(1), 27–34. https://doi.org/10.1177/0963721413510932

Bridgers, S., Buchsbaum, D., Seiver, E., Griffiths, T. L., & Gopnik, A. (2016). Children's causal inferences from conflicting testimony and observations. *Developmental Psychology*, *52*(1), 9–18. https://doi.org/10.1037/a0039830

Carpendale, J. I., & Chandler, M. J. (1996). On the distinction between false belief understanding and subscribing to an interpretive theory of mind. *Child Development*, *67*(4), 1686–1706. https://doi.org/10.2307/1131725

Celniker, J. B., & Ditto, P. H. (2024). Of preferences and priors: Motivated reasoning in partisans' evaluations of scientific evidence. *Journal of Personality and Social Psychology*, *127*(5), 986–1011. https://doi.org/10.1037/pspa0000417

Chalik, L., Over, H., & Dunham, Y. (2022). Preschool children weigh accuracy against partisanship when seeking information. *Journal of Experimental Child Psychology*, *220*, Article 105423. https://doi.org/10.1016/j.jecp.2022.105423

Chalik, L., & Rhodes, M. (2020). Groups as moral boundaries: A developmental perspective. *Advances in Child Development and Behavior*, *58*, 63–93. https://doi.org/10.1016/bs.acdb.2020.01.003

Chen, E. E., Corriveau, K. H., & Harris, P. L. (2013). Children trust a consensus composed of outgroup members—But do not retain that trust. *Child Development*, *84*(1), 269–282. https://doi.org/10.1111/j.1467-8624.2012.01850.x

Cikara, M., & Van Bavel, J. J. (2014). The neuroscience of intergroup relations. *Perspectives on Psychological Science*, *9*(3), 245–274. https://doi.org/10.1177/1745691614527464

Cohen, G. L. (2003). Party over policy: The dominating impact of group influence on political beliefs. *Journal of Personality and Social Psychology*, *85*(5), 808–822. https://doi.org/10.1037/0022-3514.85.5.808

Confer, J. A., Champ, A. M., Amir, D., Schleihauf, H., & Engelmann, J. M. (in press). Group membership biases children's evaluation of evidence. *Nature Communications*.

Cooper, M. R., & Olcaysoy Okten, I. (2024). Unveiling the perception of politicians' intellectual humility. *Acta Psychologica*, *250*, Article 104495. https://doi.org/10.1016/j.actpsy.2024.104495

Cusimano, C. (2025). The case for heterogeneity in metacognitive appraisals of biased beliefs. *Personality and Social Psychology Review*, *29*(2), 188–212. https://doi.org/10.1177/10888683241251520

Cusimano, C., & Lombrozo, T. (2021a). Morality justifies motivated reasoning in the folk ethics of belief. *Cognition*, *209*, Article 104513. https://doi.org/10.1016/j.cognition.2020.104513

Cusimano, C., & Lombrozo, T. (2021b). Reconciling scientific and commonsense values to improve reasoning. *Trends in Cognitive Sciences*, *25*(11), 937–949. https://doi.org/10.1016/j.tics.2021.06.004

Cusimano, C., & Lombrozo, T. (2023). People recognize and condone their own morally motivated reasoning. *Cognition*, *234*, Article 105379. https://doi.org/10.1016/j.cognition.2023.105379

Danovitch, J. H., & Keil, F. C. (2007). Choosing between hearts and minds: Children's understanding of moral advisors. *Cognitive Development*, *22*(1), 110–123. https://doi.org/10.1016/j.cogdev.2006.07.001

De Cruz, H. (2020). Believing to belong: Addressing the novice-expert problem in polarized scientific communication. *Social Epistemology*, *34*(5), 440–452. https://doi.org/10.1080/02691728.2020.1739778

Ditto, P. H., Celniker, J. B., Siddiqi, S. S., Güngör, M., & Relihan, D. P. (2025). Partisan bias in political judgment. *Annual Review of Psychology*, *76*(1), 717–740. https://doi.org/10.1146/annurev-psych-030424-122723

Ditto, P. H., Liu, B. S., Clark, C. J., Wojcik, S. P., Chen, E. E., Grady, R. H., Celniker, J. B., & Zinger, J. F. (2019). At least bias is bipartisan: A meta-analytic comparison of partisan bias in liberals and conservatives. *Perspectives on Psychological Science*, *14*(2), 273–291. https://doi.org/10.1177/1745691617746796

Ditto, P. H., & Lopez, D. F. (1992). Motivated skepticism: Use of differential decision criteria for preferred and nonpreferred conclusions. *Journal of Personality and Social Psychology*, *63*(4), 568–584. https://doi.org/10.1037/0022-3514.63.4.568

Dolbier, S. Y., Dieffenbach, M. C., & Lieberman, M. D. (2025). Open-mindedness: An integrative review of interventions. *Psychological Review*, *132*(1), 204–238. https://doi.org/10.1037/rev0000491

Douglas, B. D., Ewell, P. J., & Brauer, M. (2023). Data quality in online human-subjects research: Comparisons between MTurk, prolific, CloudResearch, qualtrics, and SONA. *PLOS ONE*, *18*(3), Article e0279720. https://doi.org/10.1371/journal.pone.0279720

Druckman, J. N., & McGrath, M. C. (2019). The evidence for motivated reasoning in climate change preference formation. *Nature Climate Change*, *9*(2), 111–119. https://doi.org/10.1038/s41558-018-0360-1

Dunham, Y. (2018). Mere membership. *Trends in Cognitive Sciences*, *22*(9), 780–793. https://doi.org/10.1016/j.tics.2018.06.004

Dunham, Y., & Olson, K. R. (2008). The importance of origins: Why cognitive development is central to a mature understanding of social cognition. *The Open Psychology Journal*, *1*(1), 59–65. https://doi.org/10.2174/1874350100801010059

Effron, D. A., & Helgason, B. A. (2022). The moral psychology of misinformation: Why we excuse dishonesty in a post-truth world. *Current Opinion in Psychology*, *47*, Article 101375. https://doi.org/10.1016/j.copsyc.2022.101375

Elashi, F. B., & Mills, C. M. (2014). Do children trust based on group membership or prior accuracy? The role of novel group membership in children's trust decisions. *Journal of Experimental Child Psychology*, *128*, 88–104. https://doi.org/10.1016/j.jecp.2014.07.003

Farooq, A., Adlam, A., & Rutland, A. (2024). Rejecting ingroup loyalty for the truth: Children's and adolescents' evaluations of deviant peers within a misinformation intergroup context. *Journal of Experimental Child Psychology*, *243*, Article 105923. https://doi.org/10.1016/j.jecp.2024.105923

FeldmanHall, O., Mobbs, D., Evans, D., Hiscox, L., Navrady, L., & Dalgleish, T. (2012). What we say and what we do: The relationship between real and hypothetical moral choices. *Cognition*, *123*(3), 434–441. https://doi.org/10.1016/j.cognition.2012.02.001

Ferris, D. L., Brown, D. J., Berry, J. W., & Lian, H. (2008). The development and validation of the workplace ostracism scale. *Journal of Applied Psychology*, *93*(6), 1348–1366. https://doi.org/10.1037/a0012743

Finkel, E. J., Bail, C. A., Cikara, M., Ditto, P. H., Iyengar, S., Klar, S., Mason, L., McGrath, M. C., Nyhan, B., Rand, D. G., Skitka, L. J., Tucker, J. A., Van Bavel, J. J., Wang, C. S., & Druckman, J. N. (2020). Political sectarianism in America. *Science*, *370*(6516), 533–536. https://doi.org/10.1126/science.abe1715

Funkhouser, E. (2022). A tribal mind: Beliefs that signal group identity or commitment. *Mind & Language*, *37*(3), 444–464. https://doi.org/10.1111/mila.12326

Gill, M., & Lombrozo, T. (2023). Seeking evidence and explanation signals religious and scientific commitments. *Cognition*, *238*, Article 105496. https://doi.org/10.1016/j.cognition.2023.105496

Hagá, S., & Olson, K. R. (2017). "If I only had a little humility, I would be perfect": Children's and adults' perceptions of intellectually arrogant, humble, and diffident people. *The Journal of Positive Psychology*, *12*(1), 87–98. https://doi.org/10.1080/17439760.2016.1167943

Halperin, E., Porat, R., Tamir, M., & Gross, J. J. (2013). Can emotion regulation change political attitudes in intractable conflicts? From the laboratory to the field. *Psychological Science*, *24*(1), 106–111. https://doi.org/10.1177/0956797612452572

Harris, P. L., Koenig, M. A., Corriveau, K. H., & Jaswal, V. K. (2018). Cognitive foundations of learning from testimony. *Annual Review of Psychology*, *69*(1), 251–273. https://doi.org/10.1146/annurev-psych-122216-011710

Heiphetz, L. (2018). The development and importance of shared reality in the domains of opinion, morality, and religion. *Current Opinion in Psychology*, *23*, 1–5. https://doi.org/10.1016/j.copsyc.2017.11.002

Heiphetz, L., & Young, L. L. (2017). Can only one person be right? The development of objectivism and social preferences regarding widely shared and controversial moral beliefs. *Cognition*, *167*, 78–90. https://doi.org/10.1016/j.cognition.2016.05.014

Heltzel, G., & Laurin, K. (2021). Seek and ye shall be fine: Attitudes toward political-perspective seekers. *Psychological Science*, *32*(11), 1782–1800. https://doi.org/10.1177/09567976211011969

Huynh, A. C., & Romero Gonzalez, R. A. (2024). The fine line between intellectual humility and arrogance: Perceiving humility among the intellectually humble and narcissistic. *The Journal of Positive Psychology*, *19*(4), 599–610. https://doi.org/10.1080/17439760.2023.2230455

Jaswal, V. K., & Kondrad, R. L. (2016). Why children are not always epistemically vigilant: Cognitive limits and social considerations. *Child Development Perspectives*, *10*(4), 240–244. https://doi.org/10.1111/cdep.12187

Jern, A., Chang, K.-M. K., & Kemp, C. (2014). Belief polarization is not always irrational. *Psychological Review*, *121*(2), 206–224. https://doi.org/10.1037/a0035941

Jiménez, J., Gómez, Á., Buhrmester, M. D., Vázquez, A., Whitehouse, H., & Swann, W. B. (2016). The dynamic identity fusion index: A new continuous measure of identity fusion for web-based questionnaires. *Social Science Computer Review*, *34*(2), 215–228. https://doi.org/10.1177/0894439314566178

Joshi, H. (2020). What are the chances you're right about everything? An epistemic challenge for modern partisanship. *Politics, Philosophy & Economics*, *19*(1), 36–61. https://doi.org/10.1177/1470594X20901346

Kahan, D. M. (2013). Ideology, motivated reasoning, and cognitive reflection. *Judgment and Decision Making*, *8*(4), 407–424. https://doi.org/10.1017/S1930297500005271

Kinzler, K. D., Corriveau, K. H., & Harris, P. L. (2011). Children's selective trust in native-accented speakers: Selective trust in native-accented speakers. *Developmental Science*, *14*(1), 106–111. https://doi.org/10.1111/j.1467-7687.2010.00965.x

Koetke, J., & Schumann, K. (2025). Do we really think our politicians should be intellectually humble? *Journal of Experimental Social Psychology*, *118*, Article 104729. https://doi.org/10.1016/j.jesp.2025.104729

Kuhn, D., Cheney, R., & Weinstock, M. (2000). The development of epistemological understanding. *Cognitive Development*, *15*(3), 309–328. https://doi.org/10.1016/S0885-2014(00)00030-7

Kunda, Z. (1990). The case for motivated reasoning. *Psychological Bulletin*, *108*(3), 480–498. https://doi.org/10.1037/0033-2909.108.3.480

Lalonde, C. E., & Chandler, M. J. (2002). Children's understanding of interpretation. *New Ideas in Psychology*, *20*(2–3), 163–198. https://doi.org/10.1016/S0732-118X(02)00007-7

Langenhoff, A. F., Engelmann, J. M., & Srinivasan, M. (2023). Children's developing ability to adjust their beliefs reasonably in light of disagreement. *Child Development*, *94*(1), 44–59. https://doi.org/10.1111/cdev.13838

Leary, M. R., Diebels, K. J., Davisson, E. K., Jongman-Sereno, K. P., Isherwood, J. C., Raimi, K. T., Deffler, S. A., & Hoyle, R. H. (2017). Cognitive and interpersonal features of intellectual humility. *Personality and Social Psychology Bulletin*, *43*(6), 793–813. https://doi.org/10.1177/0146167217697695

Levy, N. (2022). *Bad beliefs: Why they happen to good people*. Oxford University Press.

Li, P. H., & Koenig, M. A. (2022). The roles of group membership and social exclusion in children's testimonial learning. *Journal of Experimental Child Psychology*, *216*, Article 105342. https://doi.org/10.1016/j.jecp.2021.105342

MacDonald, K., Schug, M., Chase, E., & Barth, H. (2013). My people, right or wrong? Minimal group membership disrupts preschoolers' selective trust. *Cognitive Development*, *28*(3), 247–259. https://doi.org/10.1016/j.cogdev.2012.11.001

Marie, A., & Petersen, M. B. (2024). Moralization of rationality can stimulate sharing of hostile and false news on social media, but intellectual humility inhibits it. *Political Communication*, *42*(1), 57–84. https://doi.org/10.1080/10584609.2024.2363542

Metz, S. E., Weisberg, D. S., & Weisberg, M. (2018). Non-scientific criteria for belief sustain counter-scientific beliefs. *Cognitive Science*, *42*(5), 1477–1503. https://doi.org/10.1111/cogs.12584

Misch, A., Over, H., & Carpenter, M. (2014). Stick with your group: Young children's attitudes about group loyalty. *Journal of Experimental Child Psychology*, *126*, 19–36. https://doi.org/10.1016/j.jecp.2014.02.008

Mook, D. G. (1983). In defense of external invalidity. *American Psychologist*, *38*(4), 379–387. https://doi.org/10.1037/0003-066X.38.4.379

Morewedge, C. K., Yoon, H., Scopelliti, I., Symborski, C. W., Korris, J. H., & Kassam, K. S. (2015). Debiasing decisions: Improved decision making with a single training intervention. *Policy Insights From the Behavioral and Brain Sciences*, *2*(1), 129–140. https://doi.org/10.1177/2372732215600886

Mosley, A. J., White, C. J. M., & Solomon, L. H. (2024). Children's moral evaluations of and behaviors toward people who are curious about religion and science. *Child Development*, *95*(4), e224–e235. https://doi.org/10.1111/cdev.14088

Nesdale, D., Maass, A., Durkin, K., & Griffiths, J. (2005). Group norms, threat, and children's racial prejudice. *Child Development*, *76*(3), 652–663. https://doi.org/10.1111/j.1467-8624.2005.00869.x

Nguyen, C. T. (2020). Echo chambers and epistemic bubbles. *Episteme*, *17*(2), 141–161. https://doi.org/10.1017/epi.2018.32

Pennycook, G., Cheyne, J. A., Koehler, D. J., & Fugelsang, J. A. (2020). On the belief that beliefs should change according to evidence: Implications for conspiratorial, moral, paranormal, political, religious, and science beliefs. *Judgment and Decision Making*, *15*(4), 476–498. https://doi.org/10.1017/S1930297500007439

Pennycook, G., Epstein, Z., Mosleh, M., Arechar, A. A., Eckles, D., & Rand, D. G. (2021). Shifting attention to accuracy can reduce misinformation online. *Nature*, *592*(7855), 590–595. https://doi.org/10.1038/s41586-021-03344-2

Pereira, A., Harris, E., & Van Bavel, J. J. (2023). Identity concerns drive belief: The impact of partisan identity on the belief and dissemination of true and false news. *Group Processes*, *26*(1), 24–47. https://doi.org/10.1177/13684302211030004

Peresman, A., Larsen, L. T., Mazepus, H., & Petersen, M. B. (2025). Do populists listen to expertise? A five-country study of authority, arguments, and expert sources. *Political Studies*. Advance online publication. https://doi.org/10.1177/00323217251323402

Pesch, A., Suárez, S., & Koenig, M. A. (2018). Trusting others: Shared reality in testimonial learning. *Current Opinion in Psychology*, *23*, 38–41. https://doi.org/10.1016/j.copsyc.2017.11.009

Pinsof, D., Sears, D. O., & Haselton, M. G. (2023). Strange bedfellows: The alliance theory of political belief systems. *Psychological Inquiry*, *34*(3), 139–160. https://doi.org/10.1080/1047840X.2023.2274433

Porter, T., & Schumann, K. (2018). Intellectual humility and openness to the opposing view. *Self and Identity*, *17*(2), 139–162. https://doi.org/10.1080/15298868.2017.1361861

Raabe, T., & Beelmann, A. (2011). Development of ethnic, racial, and national prejudice in childhood and adolescence: A multinational meta-analysis of age differences. *Child Development*, *82*(6), 1715–1737. https://doi.org/10.1111/j.1467-8624.2011.01668.x

Ransom, A., Blakey, K. H., & Ronfard, S. (2025). Children's developing understanding of the value of disagreement for learning. *Child Development*, *96*(4), 1373–1384. https://doi.org/10.1111/cdev.14253

Rathje, S., Roozenbeek, J., Van Bavel, J. J., & Van Der Linden, S. (2023). Accuracy and social motivations shape judgements of (mis)information. *Nature Human Behaviour*, *7*(6), 892–903. https://doi.org/10.1038/s41562-023-01540-w

Reifen-Tagar, M., & Cimpian, A. (2022). Political ideology in early childhood: Making the case for studying young children in political psychology. *Political Psychology*, *43*(S1), 77–105. https://doi.org/10.1111/pops.12853

Rhodes, M., & Brickman, D. (2011). The influence of competition on children's social categories. *Journal of Cognition and Development*, *12*(2), 194–221. https://doi.org/10.1080/15248372.2010.535230

Roberts, S. O., Gelman, S. A., & Ho, A. K. (2017). So it is, so it shall be: Group regularities license children's prescriptive judgments. *Cognitive Science*, *41*(S3), 576–600. https://doi.org/10.1111/cogs.12443

Roberts, S. O., Ho, A. K., & Gelman, S. A. (2021). Should individuals think like their group? A descriptive-to-prescriptive tendency toward group-based beliefs. *Child Development*, *92*(2), e201–e220. https://doi.org/10.1111/cdev.13448

Ronfard, S., Bartz, D. T., Cheng, L., Chen, X., & Harris, P. L. (2018). Children's developing ideas about knowledge and its acquisition. In J. B. Benson (Ed.), *Advances in child development and behavior* (Vol. 54, pp. 123–151). Elsevier Academic Press. https://doi.org/10.1016/bs.acdb.2017.10.005

Rozin, P. (2001). Social psychology and science: Some lessons from Solomon Asch. *Personality and Social Psychology Review*, *5*(1), 2–14. https://doi.org/10.1207/S15327957PSPR0501_1

Rutland, A., Killen, M., & Abrams, D. (2010). A new social-cognitive developmental perspective on prejudice: The interplay between morality and group identity. *Perspectives on Psychological Science*, *5*(3), 279–291. https://doi.org/10.1177/1745691610369468

Schleihauf, H., Herrmann, E., Fischer, J., & Engelmann, J. M. (2022). How children revise their beliefs in light of reasons. *Child Development*, *93*(4), 1072–1089. https://doi.org/10.1111/cdev.13758

Sinnott-Armstrong, W. (2018). *Think again: How to reason and argue*. Oxford University Press.

Ståhl, T., & Cusimano, C. (2024). Lay standards for reasoning predict people's acceptance of suspect claims. *Current Opinion in Psychology*, *55*, Article 101727. https://doi.org/10.1016/j.copsyc.2023.101727

Ståhl, T., Zaal, M. P., & Skitka, L. J. (2016). Moralized rationality: Relying on logic and evidence in the formation and evaluation of belief can be seen as a moral issue. *PLOS ONE*, *11*(11), Article e0166332. https://doi.org/10.1371/journal.pone.0166332

Stanley, M. L., Henne, P., Yang, B. W., & De Brigard, F. (2020). Resistance to position change, motivated reasoning, and polarization. *Political Behavior*, *42*(3), 891–913. https://doi.org/10.1007/s11109-019-09526-z

Stanley, M. L., Sinclair, A. H., & Seli, P. (2020). Intellectual humility and perceptions of political opponents. *Journal of Personality*, *88*(6), 1196–1216. https://doi.org/10.1111/jopy.12566

Stanovich, K. E., West, R. F., & Toplak, M. E. (2013). Myside bias, rational thinking, and intelligence. *Current Directions in Psychological Science*, *22*(4), 259–264. https://doi.org/10.1177/0963721413480174

Taber, C. S., & Lodge, M. (2006). Motivated skepticism in the evaluation of political beliefs. *American Journal of Political Science*, *50*(3), 755–769. https://doi.org/10.1111/j.1540-5907.2006.00214.x

Van Bavel, J. J., & Pereira, A. (2018). The partisan brain: An identity-based model of political belief. *Trends in Cognitive Sciences*, *22*(3), 213–224. https://doi.org/10.1016/j.tics.2018.01.004

Verkuyten, M., & Killen, M. (2021). Tolerance, dissenting beliefs, and cultural diversity. *Child Development Perspectives*, *15*(1), 51–56. https://doi.org/10.1111/cdep.12399

Wainryb, C., Shaw, L. A., Langley, M., Cottam, K., & Lewis, R. (2004). Children's thinking about diversity of belief in the early school years: Judgments of relativism, tolerance, and disagreeing persons. *Child Development*, *75*(3), 687–703. https://doi.org/10.1111/j.1467-8624.2004.00701.x

Wainryb, C., Shaw, L. A., Laupa, M., & Smith, K. R. (2001). Children's, adolescents', and young adults' thinking about different types of disagreements. *Developmental Psychology*, *37*(3), 373–386. https://doi.org/10.1037/0012-1649.37.3.373

Wainryb, C., Shaw, L. A., & Maianu, C. (1998). Tolerance and intolerance: Children's and adolescents' judgments of dissenting beliefs, speech, persons, and conduct. *Child Development*, *69*(6), 1541–1555. https://doi.org/10.1111/j.1467-8624.1998.tb06176.x

White, C. J. M., Mosley, A. J., & Solomon, L. H. (2024). Adults show positive moral evaluations of curiosity about religion. *Social Psychological and*

Personality Science, *15*(6), 670–681. https://doi.org/10.1177/19485506231195915

Williams, D. (2021). Socially adaptive belief. *Mind & Language*, *36*(3), 333–354. https://doi.org/10.1111/mila.12294

Wright, J. C. (2021). Morality as a regulator of divergence: Protecting against deviance while promoting diversity. *Social Cognition*, *39*(1), 81–98. https://doi.org/10.1521/soco.2021.39.1.81

Yang, Q. T., Sleight, S., Ronfard, S., & Harris, P. L. (2023). Young children's conceptualization of empirical disagreement. *Cognition*, *241*, Article 105627. https://doi.org/10.1016/j.cognition.2023.105627

Zmigrod, L. (2022). A psychology of ideology: Unpacking the psychological structure of ideological thinking. *Perspectives on Psychological Science*, *17*(4), 1072–1092. https://doi.org/10.1177/17456916211044140

Received May 15, 2024
Revision received August 31, 2025
Accepted September 5, 2025 ■