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Toeing the party lie: Ostracism promotes endorsement of partisan election falsehoods

R. Kelly Garrett¹ and Daniel Sude

Ohio State University School of Communication

Paolo Riva

Department of Psychology University of Milano-Bicocca

Author Notes

1. Corresponding author: garrett.258@osu.edu

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Abstract

Research suggests that ostracism could promote endorsement of partisan falsehoods. Socially excluded individuals are uniquely attentive to distinctions between in-groups and out-groups, and act in ways intended to promote group belonging, potentially including a greater willingness to accept claims made by other group members. We test this assertion with a 2 (ostracism) X 2 (anonymity) X 2 (topic) mixed factorial design using the *Ostracism Online* paradigm with a demographically diverse online sample of Americans ($N = 413$). Results suggest that when ostracized, both Democrats and Republicans are more likely to endorse party-line falsehoods about the 2016 U.S. Presidential election. These effects are contingent on several individual-level differences, including strength of ideological commitment, cognitive reflection, and faith in intuition for facts. These patterns failed to replicate with fracking, a politically charged science topic.

Keywords: misperception, social exclusion, social influence, motivated reasoning, politics

Partisans frequently endorse beliefs that are compatible with views expressed by other members of their party but that are unsupported, and sometimes contradicted, by empirical evidence (e.g., Brulle, Carmichael, & Jenkins, 2012; Cohen, 2003; Darmofal, 2005; Kull, Ramsay, & Lewis, 2003). These partisan biases effect a host of issues and take a variety of forms, from mischaracterizations of empirical evidence (“there were WMDs in Iraq”) to conspiracy theories (“climate change is a hoax”). This behavior is a theoretical puzzle with important real-world implications: Democracy depends on citizens’ ability to weigh evidence and correctly update their beliefs about the world (Kuklinski & Quirk, 2000).

This paper focuses on one potential determinant of partisan falsehood endorsement: ostracism, that is, being ignored by others in a social group. Individuals consistently process information in ways that favor their political predispositions, a phenomenon commonly known as partisan motivated reasoning (Ditto & Lopez, 1992; Lodge & Taber, 2013). We assert that this tendency will be more pronounced when individuals experience ostracism. Ostracism is widely recognized as a means of sanctioning undesirable behavior, it is used frequently in everyday life, and it is highly influential (Hales & Ren, 2016; O’Reilly & Banki, 2016; Williams, 2009). Even modest levels of ostracism have been shown to produce changes in attitudes and behavior that are associated with social reconnection (Carter-Sowell, Chen, & Williams, 2008; Riva, Williams, Torstrick, & Montali, 2014). Endorsing a partisan falsehood is one important way that individuals can signal to other members of the political in-group that they belong.

We conduct an online experiment using a recently developed paradigm for manipulating social exclusion to test the hypothesis that being ostracized makes partisans more likely to embrace claims favored by their party, but that contradict readily available empirical evidence. Results indicate that these effects are contingent on a variety of individual differences.

Social motivations for falsehood endorsement

We have long understood the power of even short-term experiences of ostracism to induce conformity (e.g., Asch, 1951; Schachter, 1951). Ostracism can be subtle, as when an individual's social media post fails to garner a strong positive response from peers, or obvious, as when an individual is subjected to the "silent treatment" by a friend. Whatever the source, the psychological response associated with social exclusion is similar to that associated with physical pain (Riva, Wirth, & Williams, 2011), and there is evidence that the two forms of discomfort may rely on partly overlapping neural systems (Eisenberger, 2015). Some individuals go so far as to claim that physical abuse is preferable to being ignored (Wesselmann et al., 2016). Individuals who are the target of short-term exclusion typically experience a host of negative outcomes. Ostracism can threaten individuals' basic needs, such as the need to belong, and it can induce negative affective responses, such as anger and sadness (Bernstein & Claypool, 2012; Buckley, Winkel, & Leary, 2004; Wesselmann et al., 2016). In response, excluded individuals engage, often non-consciously, in a host of short-term behaviors that can mitigate these harmful outcomes (Bernstein, 2016). They act in ways that increase their prospects for other, more positive future social relationships, while also engaging in anti-social behaviors directed toward the specific source of the exclusion (Baumeister & Leary, 1995; Williams, 2009). These effects are evident even when the interaction leading to ostracism is superficial and takes place online (Williams, Cheung, & Choi, 2000).

Efforts to forge new social connections and to reinforce existing connections can take many forms. Individuals tend to view potential new interaction partners more favorably after ostracism (Maner, DeWall, Baumeister, & Schaller, 2007). People who are ostracized are more likely to mimic, conform, comply, and obey others to increase their chances of future inclusion

(Lakin, Chartrand, & Arkin, 2008; Williams & Nida, 2011). Ostracized individuals also become highly attuned to their social environment (DeWall et al., 2010), and are more sensitive to distinctions between in-group and out-group (Sacco, Wirth, Hugenberg, Chen, & Williams, 2011). For some, ostracism increases attraction to groups that stress internal homogeneity, for example, by expressing greater interest in politically extreme groups (Hales & Williams, 2018). Of particular import here, after experiencing social exclusion individuals are more likely to conform to beliefs expressed by a group in which they are embedded, even when group “members” have no prior relationship (Hales & Ren, 2016).

These effects of ostracism—a desire to restore social connections, high levels of attention to social cues, and a tendency to conform—make in-group-favored falsehood endorsement more likely. Excluded individuals are fearful of further exclusion, and an in-group is among the most reliable sources of future social inclusion (Hirsch & Clark, 2019). For this reason, a condition of exclusion, even if only temporary, can lead individuals to value in-group inclusion more strongly. Even if the experience of ostracism has nothing to do with politics, endorsing beliefs expressed by other members of the in-group is an easy way to promote partisan group acceptance.

For all these reasons, we expect that ostracized individuals are more likely to endorse a falsehood favored by their party (*H1*).

Conditional effects of ostracism

The effect of ostracism on partisan falsehood endorsement is likely to be contingent on several other factors, some that we can manipulate experimentally and others that are grounded in individual differences. The first of these is whether the issue in question is explicitly political. The intuition behind this relationship is straightforward: the more an issue is linked to partisan

group identity, the greater the likelihood that endorsing the party line will lead to reconnection with in-group members. Conversely, the less explicitly political the issue, the less salient a marker of group belonging belief expression is, and the smaller the incentive for individuals to endorse a partisan position. In the context of this study, we predict that the effect of ostracism will be greater for election issues than for a politically charged science issue (*H2*).

The second experimentally manipulable moderator is the publicness of belief endorsement. Classic research showed that social pressure from a majority group increases conformity (Asch, 1951). However, this effect is reduced when participants answer privately. Thus, whether a statement of belief is made publicly or anonymously could alter ostracism's influence based on its signaling value. If an individual expects his or her position statement to be shared anonymously, there should be little value in adopting the party's position, as there is no way to connect the statement to its source. In other words, individuals will have less reason to endorse a falsehood when expressing themselves anonymously than publicly, as anonymous expressions have no bearing on how an individual is seen by the group. If this line of reasoning is correct, then ostracism will promote less in-group bias under conditions of anonymity than when a position is stated publicly (*H3*).

Next, we consider individual differences. There is ample evidence that responses to ostracism vary between individuals (see Wesselmann et al., 2016 for a review of these differences). For instance, those who are sensitive to rejection and who have a high need to belong tend to respond more strongly to social exclusion. We consider two types of individual differences that we expect to shape people's belief expressions after being ostracized.

Given our focus on politically motivated falsehoods, the first factor is political. Research suggests that the more strongly an individual embraces an ideological identity, the more likely

that individual is to endorse political untruths (e.g., Nyhan & Reifler, 2010). This is unsurprising: strong ideological commitment suggests that politics are an important part of an individual's identity, which makes it more likely that he or she will engage in motivated reasoning about the topic. Weaker ideologues, in contrast, are less likely to think about factual claims in terms of their political identity, suggesting that motivated reasoning will be less prevalent among this group. Thus, we anticipate that ostracism's influence will vary by ideological extremity. We have argued that ostracism encourages individuals to embrace positions supported by the in-group, but since strong ideologues already do this, ostracism is unlikely to alter their stated beliefs substantively. In comparison, the effect of ostracism will be stronger among weaker ideologues (*H4*), who otherwise would be unswayed by their party's position.

Finally, we consider differences in psychological predispositions. Individuals differ in how they approach novel information processing tasks. Some tend to rely on slow and careful thought processes, while others habitually rely more heavily on their intuition (e.g., Epstein, Pacini, Denes-Raj, & Heier, 1996; Kahneman, 2011). These tendencies can shape people's beliefs: individuals who habitually think analytically are less prone to reach conclusions biased by their predisposition (Pennycook & Rand, 2018, but see Kahan, 2013), and those with the most faith in their ability to intuitively recognize the truth are more likely to endorse false conspiracy theories (Garrett & Weeks, 2017). These characteristics are also likely to have implications for how ostracism affects individuals' endorsement of partisan falsehoods. The (a) less analytic and (b) more intuitive an individual is, the more partisan bias the individual will exhibit after being ostracized (*H5*).

Pretest

Method

Participants

Participants were recruited using Amazon's Mechanical Turk. Of the 204 individuals who completed the pretest, 104 identified as Democrat or Democratic-leaning (henceforth "Democrats"), and 60 as Republican or Republican-leaning ("Republicans"). Analyses focus on these 164 participants. The sample exhibited moderate demographic diversity. It was 36.6% male, participants were between 20 to 74 years old ($M = 41.9$, $SD = 14.0$), and the median educational attainment was a "Bachelor's degree in college."

Design and stimuli

Participants were randomly assigned to assess one of three messages correcting common misperceptions. Each message included empirical evidence and expert testimony that clearly and unambiguously contradicted the inaccurate claims it was meant to correct. Two messages explicitly referred to the political process, in this case the 2016 U.S. Presidential election, and one referred to a politically charged science topic, fracking. The election message targeting Republican misperceptions challenged the claim that voter fraud is widespread, while the message aimed at Democrats disputed the claim that Russia directly altered vote tallies in the 2016 Presidential election. In the science condition, Democrats were presented with evidence that fracking harms water quality (see online appendix for the full text of stimuli). We also tested a message targeting Republican misperceptions about fracking, but a flaw in the design prevents us from using data associated with this stimulus in this study.

Procedure

The pretest was administered online using Qualtrics survey software and typically took fewer than ten minutes to complete. After consenting to participate, participants were asked to provide feedback on a message attributed to a "popular fact-checking website." In reality,

participants were assessing one of three messages written by the research team based on content from various news and information sources in order to ensure comparability in length (word count: politics = 474 – 476, science = 417 words), readability (Flesch-Kincaid grade level: politics = 10.3 – 10.6, science = 12.5), and other features. After viewing a message for a minimum of one minute, participants answered a series of questions. There were measures of the *credibility* (twelve items) and *news value* of the message, *source expertise*, and participant's perceptions of *public opinion about the issue* (see online appendix for all question wording and descriptives).

Message comparisons

The election messages exhibited comparable credibility, $t(80) = -.96, p = .339$; interestingness, $t(80) = 1.69, p = .095$; newsworthiness, $t(80) = -1.04, p = .304$; and importance, $t(80) = .854, p = 0.401$. There was, however, a difference in perceived source expertise, $t(80) = -3.26, p = .0016, d = .35$. The message about voter fraud was judged more expert, $M = 4.32, SD = .76$, than the one about Russian hacking, $M = 3.76, SD = .12$.

Pretest data also confirm that the perceived accuracy of co-partisans about these issues differed by party. As predicted, Democrats were more likely than Republicans to say that members of their party tend to endorse inaccurate positions about the Democrat-threatening version of the election message, $t(83) = 1.77, p = .040, d = .39$; the pattern was reversed for the Republican-threatening issue, $t(39) = 3.04, p = .004, d = 1.00$.

Experiment

Participants

Sample size calculations were conducted using G*Power 3.1 (Faul & Erdfelder, 2007), with an alpha = .05 and power = .95, which suggested that the projected sample size needed to

detect a small effect size ($f = .10$) was $N=436$ for a mixed between-within groups comparison. Online panel company Research Now SSI recruited participants. Only adults who identified as either Democrat or Republican (leaning or stronger) were eligible to participate, and participants were not allowed to complete the study using a mobile device. There were 436 complete responses, of which 13 were dropped for straight lining (choosing the same response option for all items in a scale that included at least one reverse coded question) and ten were dropped for spending excessive time on the study (more than 15 minutes viewing a single message or more than three hours total) as these participants had become distracted from the task. The final sample included 413 participants and was demographically diverse. There was an even gender split (48.2% male), the average age was 44.1 years ($SD = 13.2$), the racial composition was similar to that of the U.S. (80.9% White, 12.3% Black), the median educational attainments was “Some college, but no degree”, and the median income was between \$50,000 and \$59,000.

Design

Participants were randomly assigned to each of the between-participant factors: ostracism (49.6%) or inclusion, and (purported) anonymous (51.3%) or public reporting of responses. All participants saw corrections for one election and one science issue, in random order, and the associated corrections.

Procedure

The experiment was administered online using Qualtrics survey software and took about half an hour to complete ($M = 28$ minutes, $SD = 16$). After being consented, eligible participants were randomly assigned to be included or ostracized using the *Ostracism Online* paradigm (Wolf et al., 2015). We explained that participants would be completing a series of simple tasks with others via the Internet, and asked that they begin by creating a user profile, which entailed

choosing an avatar and typing a brief description of themselves. Then we asked participants to get to know others taking part in the study by reading and interacting with those users' profiles. Interaction was limited to clicking a "like" button located below each profile. After a several second delay, purportedly allowing participants to "connect" to the system, participants were shown a dozen profiles, including their own (see Figure S1 in the online appendix for a screenshot). Each profile was also associated with a popularity indicator that was automatically updated over the next three minutes each time a member of the group, including the participant, clicked "like." In reality, the participant was the only human present; computer software simulated all other interactions. Crucially, the number of likes that participants received varied depending on the condition. In the ostracism condition, they received only a single like, while other group members received several; in the inclusion condition, participants' likes were comparable to other users' (for more details about how conditions are set see Wolf et al., 2015).

After completing the ostracism manipulation task, participants were informed that one of their teammates was having technical difficulties, making it impossible to complete the original study; instead, participants were being redirected to a shorter alternative study. This deception was intended to minimize the risk that participants would recognize the connection between the social exclusion manipulation and the subsequent judgment task. Participants were randomly assigned to either a "public response" or "anonymous response" condition. In the former condition, participants were told that "**Your** responses will be included in a **public** report evaluating the accuracy of this [fact checking] site, and in associated news coverage", while in the latter, they were told that "Your anonymous responses will be used to write a report assessing the accuracy of this site; the specific information you provide will not be included in the report."

Participants were next presented with the first of two corrective message: the topic order

was randomized, and both messages were tailored by party affiliation, correcting misperceptions common among members of the political in-group. Immediately following message exposure, we asked the participant to answer a series of questions about the issue described in the message. For the two election messages, we asked a series of four fact-based questions derived from the message participants had just read (see online appendix for complete question wording). For the Democrat-threatening science message, there were three questions. Responses were given on a seven-point scale, were recoded so that higher values were more accurate, and were averaged to form a *belief accuracy* index ($M_{voteFraud} = 4.137$, $SD_{voteFraud} = 1.257$; $M_{voteAltered} = 3.793$, $SD_{voteAltered} = 1.095$; $M_{water} = 4.020$, $SD_{water} = 1.095$). This task was then repeated with the second corrective message.

All participants then completed four dimensions of the *Needs Threat Scale*, which is widely used as an ostracism manipulation check (NTS, see Williams, 2009): belongingness (“I felt like an outsider”), self-esteem (“I felt good about myself”), meaningful existence (“I felt invisible”), and control (“I felt powerful”). Items were rated on a five-point scale, anchored by “not at all” and “extremely,” and their order was randomized. Responses were recoded so that higher values corresponded to greater needs satisfaction, and the mean value was computed ($\alpha = .874$, $M = 3.475$, $SD = .690$).

Next, participants completed several psychological trait scales, including the *Cognitive Reflection Test (CRT)* and the *Faith in Intuition for Facts (FI-fact)* scale. All trait scales were presented in random order. The CRT (Frederick, 2005) is designed to measure an individual’s ability to rely on reason when faced with a question that has an intuitively appealing answer. (E.g., “If it takes 5 machines 5 minutes to make 5 widgets, how long would it take 100 machines to make 100 widgets?”) The test included three questions, and we constructed a dummy variable

indicating whether the participant answered at least one of the questions correctly (28% did so).¹ FI-fact is a measure of individuals' propensity to rely on intuition when assessing factual claims (Garrett & Weeks, 2017). The scale is composed of four items (e.g., "I trust my gut to tell me what's true and what's not") measured on a five-point scale, with higher values corresponding to more trust in intuition, and averaged ($\alpha = .792$, $M = 3.797$, $SD = .676$).

After answering a series of questions assessing participants' knowledge about science and politics (not used in these analyses), participants provided demographic information, including a measure of their ideological orientation on a seven-point scale, from very liberal to very conservative ($M = 3.92$, $SD = 1.991$). We used this item to construct a four-point measure of *ideological strength* by folding it at its mid-point ($M = 2.66$, $SD = 1.098$). Finally, participants were debriefed.

Preliminary Analyses

Manipulation check

Consistent with prior studies, participants in the ostracism condition scored lower on the Need Threat Scale, $M = 3.29$, $SD = .044$, than those in the control, $M = 3.66$, $SD = .048$, $t(411) = 5.609$, $p < .001$, $d = .55$. Since all the avatars used in the ostracism induction belonged to the same racial group (White), we also tested whether the manipulation's effect on NTS was contingent on participants' race. The interaction was non-significant, $F(1, 402) = .285$, $p = .09$, $\eta^2 = .007$.

Within-issue stimuli comparability

There are no significant differences between the accuracy of Democrats' and

¹ This performance is somewhat lower than has been reported in other studies (e.g., see Frederick, 2005, p. 29). We speculate that this may be because we recruited the sample using an opt-in online panel.

Republicans' responses to their respective versions of the election stimuli (Russia altering vote tallies versus voter fraud), $F(1, 409) = .101, p = .75, \eta^2 = .000$. In subsequent analyses, we pool Democrats and Republicans responses to election-related messages.

Results

Ostracism's effect on belief accuracy

To assess the influence of ostracism on belief accuracy, we estimated a pair of between-participant ANOVAs. Ostracism produced a significant drop in belief accuracy about the election, $F(1, 411) = 5.75, p = .017, \eta^2 = .014$. Participants in the ostracism condition were more likely to endorse the partisan falsehood, scoring lower on accuracy ($M = 3.81, SD = 1.20$), than in the inclusion condition ($M = 4.09, SD = 1.15$). The manipulation did not have a significant effect on fracking accuracy, $F(1, 219) = .12, p = .728, \eta^2 = .000$. H1 was supported for explicitly political issues.

Next, we compare the manipulation's effect across the two issues. Visual inspection (see Fig. 1) shows the expected pattern: the effect for the election-related issues appears larger than for fracking. To test the significance of this relationship, we re-estimated the models using OLS regression (see Table C1 in the online appendix) and conducted a Chow test. The coefficients were not significantly different, $\chi^2(1) = 2.04, p = .154$, suggesting that the observed pattern may be a product of chance. H2 is not supported.

[Figure 1 about here]

Publicness

We compute a pair of 2 (ostracism vs. inclusion) X 2 (public vs. anonymous) ANOVAs to assess the potential interaction between these manipulations. We find no evidence of a moderating relationship for either the election issue, $F(1, 409) = 2.49, p = .116, \eta^2 = .006$ or the

science issue, $F(1, 217) = .38, p = .537, \eta^2 = .002$. H3 is unsupported.

Individual differences shape Ostracism's effect

Next, we consider the influence of naturally occurring differences between participants on the effect of the ostracism manipulation.

Ideology

A pair of 2 (ostracism vs. inclusion) X 4 (ideological strength: middle of the road vs. weak vs. moderate vs. strong) ANOVAs allow us to assess whether the effect of ostracism varies by the strength of ideological commitment. The interaction of these two factors is significant for the election-related issues, $F(1, 405) = 3.62, p = .013, \eta^2 = .026$. A plot of estimated marginal means illustrates the relationship (see Fig. 2): the accuracy of participants who do not identify as liberal or conservative and those who identify only weakly drops, $difference = -.71, t(166) = 4.406, p < .001$ (one-tailed), $d = .68$, while participants who identify more strongly see very little change in accuracy, $difference = -.02, t(243) = -.149, p = .441$ (one-tailed), $d = .02$. The effect was not significant for the science issue, $F(1, 213) = .77, p = .510, \eta^2 = .040$. H4 is supported for explicitly political issues.

[Figure 2 about here]

Intuitiveness

To test the influence of cognitive reflection on ostracism, we use a pair of 2 (ostracism vs. inclusion) X 2 (CRT: low vs. high) ANOVAs. For both election accuracy, $F(1, 409) = 4.40, p = .037, \eta^2 = .011$, and fracking accuracy, $F(1, 405) = 6.48, p = .013, \eta^2 = .028$, the influence of ostracism varied by CRT score (see Fig. 3). For the election-related issues, post hoc analyses show that among low CRT participants, participants in the ostracism condition were less accurate ($M = 3.65, SD = 1.14$) than those in the inclusion condition ($M = 4.09, SD = 1.17$), $t(297) = 3.28$,

$p < .001$ (one tailed), $d = .38$. For the fracking-related message, high CRT participants saw the larger effect. Among this group, those in the ostracized condition were more accurate ($M = 4.50$, $SD = 1.02$) than those in the inclusion condition ($M = 3.93$, $SD = 1.30$), $t(58) = 1.83$, $p = .036$ (one-tailed), $d = .48$. H5a is supported.

[Figure 3 about here]

We also test whether ostracism's effect is contingent on participants' reliance on intuition using a pair of ANCOVAs testing the influence of ostracism in the presence of, and interacting with, FI-facts as a continuous covariate. The interaction is significant with the election-related messages, $F(1, 409) = 10.43$, $p = .001$, $\eta^2 = .025$, but not the fracking-related message, $F(1, 217) = .23$, $p = .631$, $\eta^2 = .001$. Post hoc analyses of election beliefs indicate that for those scoring at or above the median on FI-facts, participants in the ostracism condition are significantly less accurate ($M = 3.52$, $SD = 1.15$) than the those in the inclusion condition ($M = 4.09$, $SD = 1.20$), $t(208) = 3.52$, $p < .001$ (one-tailed), $d = .49$. H5b is supported for explicitly political issues.

Discussion

In the past decade, political systems around the world have been plagued by widespread public endorsement of political falsehoods. The problem has had an especially high profile in the U.S.: millions of Americans regularly reject statements of fact that are well supported by empirical evidence and by expert evaluation. These inaccuracies disproportionately fall along party lines: Democrats and Republicans alike tend to hold misperceptions that affirm the position espoused by members of their own party. This study adds nuance to our understanding of politically motivated reasoning by demonstrating that social exclusion can exacerbate this bias, at least in some cases.

For the election issues studied here, ostracism promoted partisan falsehood endorsement

in the face of a message carefully crafted to promote accuracy. When ostracized, both Democrats and Republicans were more likely to endorse party-line falsehoods about election-related issues. Effects sizes were small in this study, but this is likely due in part to the fact that the study used an online ostracism induction. Real world, face-to-face ostracism can be much more powerful (Martin, Smart Richman, & Leary, 2017; Williams et al., 2000). The fact that a short virtual interaction with strangers in an apolitical context can make someone more likely to express support for a false political claim in the face of detailed counter-evidence is striking. Individuals regularly experience ostracism in their daily lives. It can be related to politics, as when someone is “unfriended” over a political disagreement on Facebook, but it does not have to be. Individuals use ostracism to police a wide variety of non-political behaviors, too. This research suggests that even these apolitical sources of ostracism can have substantively important political consequences.

Importantly, however, the main effect of ostracism did not replicate for the message correcting misperceptions about fracking, a politically charged science issue. This could be due in part to the fact that this test used a smaller sampler, which makes variance estimates larger. However, the central tendencies for participants who were ostracized and those who were not are quite similar (see Fig. 1), raising doubts about this explanation. It might also be because the test only includes Democrats; however, there was no evidence of a difference between the two parties for the political issues. Perhaps the simplest explanation is the one that we offered when formulating Hypothesis 2: ostracism’s effects will be stronger when beliefs are more explicitly tied to politics and political identity. We have no empirical evidence for this interpretation: the coefficients describing ostracism’s effects in the explicitly political and politically charged science conditions were statistically indistinguishable—but our failure to replicate ostracism’s

effect in the latter merits additional scrutiny.

Our manipulation of the publicness of participants' belief expression had no effect for either issue. Interpreting non-significance is always fraught. Perhaps individuals do not account for their audience when deciding what beliefs to express. If true, this might raise questions about the claim that falsehood endorsement is a form of partisan cheerleading (Bullock, Gerber, Hill, & Huber, 2015). If belief expression is strategic, should we not expect public expressions to be more responsive to ostracism than anonymous expressions? It is, however, also possible that the problem lies in our manipulation. We told participants in one group that their belief statements would appear in a public report, and told the other group that their responses would be anonymous, but in both cases participants only answered online survey questions. The induction may have been too weak to have a meaningful influence.

The quasi-experimental component of our design suggests that individual-level psychological differences can influence an individual's response to being ostracized. Results demonstrate that ostracism has a more pronounced influence on weak ideologues than strong when assessing a claim about the election, as we anticipated. Although less ideologically oriented individuals might typically ignore party considerations when making factual claims, when ostracized it appears that the need for social reconnection induces in these individuals a sensitivity to party position that is more similar to stronger ideologues. Here again, though, the pattern did not replicate with the science issue.

Ostracism's effects also varied by individuals' propensity to think analytically versus intuitively. In this study, ostracism was more harmful among individuals who scored poorly on a test of cognitive reflection. For election-related issues, ostracism was associated with a drop in accuracy within this group. For the science issue, being ostracized was associated with an

increase in accuracy among the higher-scoring group. We observe a similar pattern when considering individuals' faith in their ability to recognize intuitively what is true, though only for the explicitly political issues: intuitive individuals' election-belief accuracy was disproportionately lower following ostracism. In short, individuals who habitually engage in analytic thinking are better able to keep ostracism's harmful influence in check. These results are consistent with other recent scholarship affirming the benefits of analytic thinking (Garrett & Weeks, 2017; Pennycook & Rand, 2018).

These results raise questions about how existing social divisions might influence citizens' receptivity to misinformation, at least on explicitly political issues like the ones tested here. Are socially isolated individuals, who live on the margins of society, at greater risk of endorsing partisan falsehoods? Citizens with the least social or economic power may be uniquely prone to seek social inclusion through the endorsement of unambiguously false claims made by members of their own political party. If true, this tendency could be easily exploited. For example, a politician could foster an environment in which political falsehoods are more likely to be embraced by reminding his supporters that other members of their society have ignored them. The fact that ostracisms' effect was most prominent among political moderates is also ripe for exploitation by political operatives. Motivating moderates is often key to winning elections, and using ostracism to promote falsehoods among this group could be an effective mobilizer.

This study has important limitations. First, the effect sizes observed here are small, the sample is not especially large, the range of topics and messages is limited, and the pattern of results was only replicated on two of the three messages tested. Such limitations are common in media effect studies, but they underscore the need for replication with a larger sample and across a more diverse set of issues.

The results also open up numerous additional questions. This experiment focuses exclusively on the immediate response to social exclusion. Williams' Temporal Need-Threat Model makes clear that this is only the first stage of a multi-stage reaction. The study tells us nothing about how people's belief endorsements would change in the face of ostracism given more time for reflection, or in the face of persistent ostracism. Second, although the effectiveness of ostracism manipulation used here is well documented, the effects of a short online interaction among strangers are likely to be much smaller than those associated with face-to-face interaction with people the participant knows. It would be useful to know whether feeling more ostracized, via a stronger induction, is associated with a greater willingness to endorse falsehoods. Third, although this study focuses on the effects of ostracism itself, it is also suggestive of how the *threat* of ostracism might shape belief expressions. By some accounts, the threat of ostracism and its occurrence have similar cognitive consequences (e.g., see Pickett & Gardner, 2005). Thus, we speculate that merely being aware that one could be ostracized for failing to endorse a party-favored falsehood could be sufficient to induce reactions similar to the ones observed here, though more research is needed.

This study also leaves open questions about precisely why ostracism promotes falsehood endorsement. In our theorizing, we focus on individuals' desire to reconnect; however, ostracism has other consequences that could also help explain the observed effects. For example, in the immediate aftermath of exclusion, negative emotions can be overwhelming (Riva, 2016, p. 200) which can produce a decrease in cognitive abilities for logic and reason-based (non-social) problems (Baumeister, Twenge, & Nuss, 2002). From this perspective, endorsing a partisan falsehood could be partially a result of exclusion-induced information processing errors: individuals may be less likely to recognize flaws in in-group arguments and/or strengths of out-

group's arguments. Ostracized individuals are also less able to self-regulate (Baumeister, DeWall, Ciarocco, & Twenge, 2005), which suggests that even if individuals can detect their own bias, they may be unable to keep it in check. Ostracized individuals have also been shown to be more dishonest (Poon, Chen, & DeWall, 2013), which suggests that they may be more likely to endorse falsehoods that they do not believe as a form of party cheerleading (Bullock et al., 2015). Additional research is needed to determine which of these mechanisms are responsible for the patterns observed here.

Finally, we note that our theorizing suggests that ostracism should exacerbate partisan differences in belief for issues about which the major political parties are divided, regardless of whether a claim is true or false. This article focuses on falsehoods because they are a prominent concern in the current political environment, but additional research testing the influence of ostracism on belief accuracy related to true statements would be valuable.

Conclusions

Ostracism can lead citizens to endorse a falsehood favored by members of their party despite exposure to highly credible evidence to the contrary, at least for election-related issues. The effect can be observed even when individuals are being excluded online, by a group to which they have no prior relationship, and which they anticipate no future interaction. This research demonstrates that ostracism can play a role in shaping the beliefs people endorse, and it may help to explain the large partisan divide over what is true today. In a political environment characterized by high levels of animosity directed toward the political out-group, and extensive reliance on social media as a source of political news and information, the role that ostracism plays in promoting partisan bias merits careful scrutiny.

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Fig. 1. Belief accuracy by ostracism.

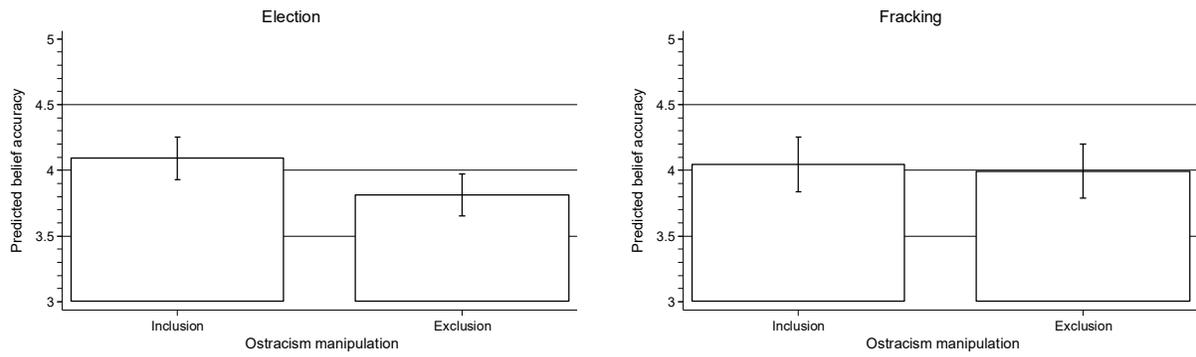


Fig. 2. Belief accuracy by ostracism and strength of ideology, political issues.

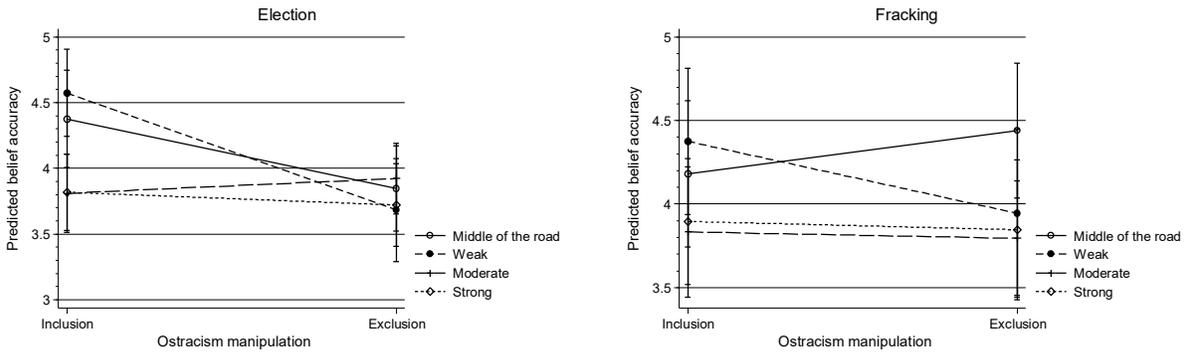


Fig. 3. Belief accuracy by ostracism and CRT performance.

