Motivated Circulation:
How Misinformation and Ideological Alignment
Influence the Circulation of Political Content

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This article investigates the factors that shape the circulation of political content on social media. We analyze an experiment embedded within a nationally representative survey of U.S. youth that randomly assigned participants to see a short post designed to resemble content that circulates through social media. The post was experimentally manipulated to vary in both its ideology and whether it contained factually inaccurate information. In general, we found that participants' intentions to circulate a post on social media were strongly influenced by whether that post aligned with their ideology, but not by whether it contained misinformation. The relative effects of ideological alignment and misinformation were found to differ according to participants' level of political knowledge and engagement, indicating that different groups of young people are susceptible to particular kinds of misinformation.

Keywords: misinformation, social media, motivated reasoning, survey experiment

The ecology of political news has been transformed by technologies that allow individual users, who previously had been largely passive consumers, to play an important role in the creation and spread of information. Social media, in particular, allow individuals to take on a more participatory role that creates the potential to democratize the flow of information by moving from hierarchical modes of broadcast distribution to decentralized peer-to-peer networks. In a short period of time, social media have become a key source of political information: By 2017, two thirds of U.S. adults reported receiving at least some news from social media platforms (Pew Research Center, 2017) and social media are now the most common source of news for young people ages 13–18 (Robb, 2017). However, the bypassing of the gatekeeping role traditionally performed by news organizations has exposed democracy to a new set of challenges. For example, a recent study indicates that false news stories tend to diffuse more broadly and quickly on Twitter than stories verified as true (Vosoughi, Roy, & Aral, 2018). Indeed, the proliferation of "fake news" or misinformation, especially that motivated by political goals, has been increasingly recognized by the public, news media, and academics alike as a threat to democratic institutions (e.g., Allcott & Gentzkow, 2017; Hochschild & Einstein, 2015; Kavanagh & Rich, 2018; Knight Foundation, 2018; Lewandowsky, Ecker, Seifert, Schwarz, & Cook, 2012).

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Democratic theorists have long argued that debate and dialogue enable communities to come to understandings, question beliefs and the rationales for varied policies, and, ideally, reach more informed opinions and ultimately responsive or effective policies (Hochschild & Einstein, 2015; Mill, 1859/1956). The spread of misinformation interrupts and undermines this process in problematic ways. The circulation of inaccurate "information" prevents dialogue across difference from becoming a means of reaching common understandings or identifying new or better policy options. Especially in an era of heightened partisan polarization, this may well increase conflict and diminish the very legitimacy of democratic governance (Hochschild & Einstein, 2015). Consequently, understanding the forces that motivate the circulation of misinformation and whether there are protective factors that limit its spread are of paramount importance.

To respond to this need, in this article, we investigate factors that influence whether individuals choose to circulate political content on social media. Specifically, we report the results of an experiment embedded within a nationally representative survey of youth in the United States. Participants were randomly assigned to see a short post, designed to resemble content that circulates through social media, that expressed an opinion on income redistribution. The post was experimentally manipulated to vary in both its ideology and whether it contained a factual inaccuracy. This manipulation allowed us to compare the relative effects of ideological alignment and misinformation on participants' stated intention to circulate the post. This study also investigated individual-level factors that might moderate the effects of ideological alignment or misinformation on the likelihood of circulating political content online. As a result, our findings provide insight into the factors that encourage the spread of factually inaccurate content.

Misinformation, Motivated Reasoning, and the Circulation of Political Content

In the present media environment, individuals are no longer principally passive consumers of political news, but increasingly play prominent roles in the production and circulation of political content through social media. The rise of "spreadable media" (Jenkins, Ford, & Green, 2013) has put people who used to compose "the audience" in a position to exercise influence over which news and opinions are seen by their social networks. Throughout this article, we refer to this process as *circulation*: Through acts such as sharing YouTube videos, retweeting a microblog, and "liking" a Facebook post, social media enable individuals to circumvent the roles traditionally played by gatekeepers, such as newspaper editors or television producers.[1] These practices have become especially commonplace among youth. According to data from the 2013 Youth and Participatory Politics Survey, 30% of U.S. residents between 15 and 27 years of age reported having forwarded, re-tweeted or posted someone else's article, blog, picture or video about a political campaign, candidate or issue in the previous year.

These practices provide voice, but they can have deleterious consequences in the presence of partisan biases and widespread misinformation. Homophilous online networks, combined with highly partisan information and news outlets, the ease and speed with which information and perspectives can spread in the digital age, and the diminished ability of gatekeepers to vet varied truth claims all create a

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[1] Social media companies often refer to the acts of sharing, "liking," and commenting as "engagements." However, we use *circulation* to avoid confusion with the way the term *political engagement* is used in the academic literature to refer to participation in political activities or psychological attentiveness to politics.

context in which a great deal of political misinformation circulates online (Lewandowsky et al., 2012). The diffusion of the gatekeeping function means that the continued circulation of misinformation depends in large part on the individual decisions of the people who receive these messages and choose whether to share them with their own networks of friends and followers.

Of critical importance is whether these decisions are governed primarily by individuals' political predispositions or reflect a commitment to discern between fact and fiction. When individuals process new information, they may be motivated by accuracy goals, whereby they strive to come a correct conclusion, or by directional goals, whereby they try to justify conclusions that are consistent with their prior beliefs (Kunda, 1990). Which of these motivations is at work profoundly affects how the information will be received. When motivated by accuracy goals, "[individuals] expend more cognitive effort on issue-related reasoning, attend to relevant information more carefully, and process it more deeply, often using more complex rules" (Kunda, 1990, p. 481). On the other hand, when motivated by directional goals, individuals tend to accept uncritically information that is consistent with their prior beliefs and subject contrary information to greater scrutiny (Ditto, Scepansky, Munro, Apanovitch, & Lockhart, 1998).

Directional motivation often shapes the way that political information is processed. The effect of partisan motivation in the processing of political information has been shown to lead individuals to seek out information that aligns with their preexisting views, to work to dismiss perspectives that run counter to their prior beliefs, and to rate arguments that are consistent with their beliefs as stronger (Taber & Lodge, 2006). There is considerable evidence that similar biases affect individuals' decisions to circulate political content through social media. Survey research examining why individuals choose to circulate content demonstrates a consistent bias against the circulation of counterattitudinal content (i.e., material that contradicts individuals' preexisting beliefs; Arendt, Steindl, & Kümpel, 2016; Garrett, 2011; Weeks, Lane, Kim, Lee, & Kwak, 2017).

There is a debate in the literature on the degree to which these biases reduce individuals' exposure to divergent views (e.g., Bakshy, Messing, & Adamic, 2015; Gentzkow & Shapiro, 2011), and partisan motivation can be especially problematic in the circulation of misinformation. If individuals' decisions to circulate political "information" online are governed only by whether the message aligns with their prior views, irrespective of its accuracy, then there is little to stop the spread of misinformation. Indeed, studies of the spread of content on platforms such as Twitter and Facebook indicate that these networks enable false political information to spread at least as fast and far as does factually accurate information (Del Vicario et al., 2016; Schmidt et al., 2017; Shin, Jian, Driscoll, & Bar, 2016). At the same time, findings of partisan differences in responding to new political information do not necessarily imply that directional motivation outweighs accuracy motivation. As Druckman and McGrath (2019) argue, just because partisans might vary in whether they consider a new piece of information to be accurate does not mean that they are driven by partisan goals and not accuracy goals. For example, a liberal and a conservative equally motivated to be accurate could come to different conclusions regarding the accuracy of a new piece of information because they differ in their assessments of the source's credibility.

With respect to directional motivation, previous research suggests that the degree of bias in favor of ideologically aligned content is greatest among individuals who are most informed and care most deeply about political issues. Taber and Lodge's (2006) experiments demonstrate that political knowledge is

associated with greater bias in favor of arguments consistent with individuals' prior attitudes. In particular, their findings suggest that knowledge enables individuals to subject contradictory arguments to greater critical scrutiny. They also find that the bias in favor on attitudinally congruent arguments is greatest for those with the strongest prior attitudes, as those who care most about an issue are most resistant to modifying their beliefs. Consistent with the former finding, a survey experiment by Kahne and Bowyer (2017) indicated that highly knowledgeable individuals are more likely than others to say that political messages that align with their prior beliefs are accurate and that messages they disagree with are not accurate (irrespective of the messages' actual accuracy). Similarly, Brannon, Tagler, and Eagly (2007) found that attitude strength is positively associated with the tendency to seek out information that aligns with one's prior attitudes. Consequently, our expectation is that the effect of directional motivated reasoning on the likelihood of circulating political content will be strongest among those who are the most engaged with and informed about politics.

At the same time, politically informed and engaged individuals might also be expected to be best prepared to identify political misinformation. Political knowledge has been found to be closely related to awareness of current events (Price & Zaller, 1993) and is negatively related to holding misperceptions of political facts (Nyhan & Reifler, 2010). Similarly, "issue publics" that are particularly well informed about certain issues (Converse, 1964; Krosnick, 1990) may be enabled by new media in acquiring information about their topics of interest, which further enhances their domain-specific knowledge (Kim, 2009). Most directly, Pennycook and Rand (2019) present a series of experiments in which participants were asked to assess the accuracy of headlines that were either factually accurate or entirely false. They found that individuals who scored higher on a test of analytic thinking tended to rate the real stories as more accurate and the fake stories as less accurate than other participants, irrespective of whether the stories were consistent with their political ideology. Thus, there is reason to expect that more politically informed and engaged individuals, in general, will be less susceptible to circulate misinformation, even when it aligns with their prior beliefs.

Method

To test how these factors influence the circulation of political content, we drew on an experiment that was embedded within the 2013 Youth and Participatory Politics Survey. The survey was taken by 2,343 individuals between 15 and 27 years of age in the United States. It was administered by GfK in English- and Spanish-language versions, either online or by telephone, and oversampled African American, Latino, and Asian American youth. This study analyzed data from those who took the survey online and in English.[2]

Experimental Design

Survey participants were shown an experimental treatment that was crafted to resemble political memes that circulate through social media. Specifically, they were randomly assigned to see a "post" that combined a political cartoon with a short textual comment that addressed tax policy and economic inequality.

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[2] Full details about the survey and the sampling procedures can be found on the Inter-university Consortium for Political and Social Research's Civic Leads website: https://www.icpsr.umich.edu/icpsrweb/civicleads/studies/36849.

As displayed in Figure 1, these posts were manipulated to vary in both political ideology[3] and whether they contained misinformation. Those in Groups A and B were shown a comment that reflected a liberal perspective regarding tax rates on the wealthy (the second sentence of the comment read, "Their taxes should go up!"). Participants in Groups C and D read a comment that presented a conservative position on taxes (the second sentence read, "Tax rates shouldn't go up!").
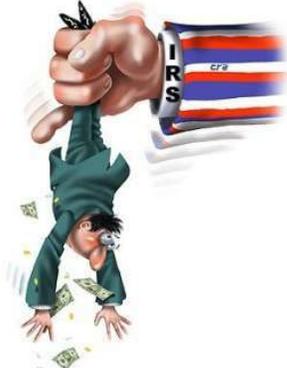
	Subjective Condition	Misinformative Condition
Liberal	Group A (*n* = 269) The rich can afford to pay higher taxes. Their taxes should go up!	Group B (*n* = 204) 90% of the rich don't pay any taxes at all. Their taxes should go up!
Conservative	Group C (*n* = 207) Successful Americans are already paying enough in taxes. Tax rates shouldn't go up!	Group D (*n* = 223) 1% of Americans pay 90% of all taxes. Tax rates shouldn't go up!

Figure 1. "Posts" seen by experimental groups by ideology and presence of misinformation.

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[3] Throughout this article, we use the term *ideology* rather narrowly to refer to positions on the question of the role of the government in the economy.

In total, 1,239 survey respondents were assigned to one of these four conditions. An additional experimental manipulation that varied the graphic included in the post is not analyzed here.[4] A further group of respondents was assigned to a control group that did not view any posts and are also excluded from this analysis. Finally, as described below, participants who could not be categorized as liberal or conservative were excluded, meaning that the responses of 903 participants were included in the data analyses.

Dependent and Independent Variables

Intention to Circulate

Survey participants' intention to circulate the post was the primary dependent variable for this study. Immediately after they were shown the post, respondents were asked whether they agreed with three statements about the post: "I would forward, retweet, share, or 'like,' this"; "I think the post makes a good point"; and "I think this comment is accurate." Participants were given four response options: *strongly disagree*, *disagree*, *agree*, and *strongly agree*. In the following analyses, we combined *agree* and *strongly agree* responses to the first statement to indicate the intention to circulate the post.[5]

Although the survey experiment did not measure participants' actual behavior on social media and only their self-reported intention, this intention is strongly related to other measures of sharing on social media. In particular, the intention to recirculate the experimental post was strongly correlated with participants' answers to a question asked elsewhere in the survey about the frequency with which they "forwarded, retweeted, or posted someone else's article, blog, picture or video about a political campaign, candidate or issue." Among respondents who said that they never recirculated political content on social media (64% of the sample), only 24% agreed that they would recirculate the post that they were shown in the experiment. Among respondents who stated they recirculated political content at least once a week (8% of the sample), 59% said that they would recirculate the post.

Ideological Alignment

We assessed the alignment between a given post and a respondent's prior beliefs by taking into account both the policy position embedded in the post and the respondent's answer to a question regarding the role that government should play in working to reduce income inequality. Prior to the experimental treatment, respondents were asked to situate themselves on a continuum of perspectives on governmental actions to reduce income inequality that ranged from 1 (*the government ought to reduce the income differences between rich and poor*) to 7 (*the government should not concern itself with reducing this income difference between the rich and the poor*). This variable was recoded in combination with the ideology of the post to which the participant was assigned to create a dummy variable that indicated whether the post was ideologically aligned with the participant's views. Participants who placed themselves on the liberal end of the scale (points 1–3, *n* = 567) were coded as "aligned" if they were

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[4] A description of this condition is available from the authors.

[5] The Appendix presents regression models that used the original 4-point scale. The results of these ordered logit models were substantively similar to the findings for the dichotomous variable presented.

assigned to Groups A or B and as "unaligned" if they were assigned to Groups C or D. Participants who placed themselves at the conservative end of the attitude scale (points 5–7, n = 336) were coded as "unaligned" if they were assigned to Groups A or B and as "aligned" if they were assigned to Groups C or D. Participants who placed themselves at the midpoint of the scale (4, n = 317) were excluded from the analyses, as the hypotheses regarding the effects of ideological alignment did not apply to individuals who were ambivalent on the issue.

Political Knowledge

We assessed political knowledge by asking respondents three factual questions about the American political system. These general knowledge items were drawn from the set of questions that Delli Carpini and Keeter (1996) found provide a reliable and valid measure of general political knowledge and sophistication.[6] Our analyses treated participants who answered two or three items correctly (60% of participants) as "high knowledge" and those who gave fewer than two correct answers as "low knowledge."

Issue Importance

We assessed the salience of the issue through a survey item, which followed immediately after the scale of attitudes toward government's role in reducing income inequality, that asked, "How important is this issue to you personally?" We grouped participants who answered "very important" or "extremely important" (31% of participants) and those who responded "not important at all," "not too important," or "somewhat important."

Online Political Discussion

Two items were used to measure whether and with whom respondents have political discussions online. The first item asked, "How often do you discuss politics online?" We divided participants into two groups: "never" (53% of the participants) and "rarely," "sometimes," or "often." The latter group of respondents was asked the follow-up question, "How often do you discuss politics online with people who do not share your views?" We used this question to distinguish between those who discuss politics only with like-minded people (answers of "never" or "rarely"; 32% of participants) and those who engage in online discussions with people with whom they disagree "sometimes" or "often" (15%).

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[6] The three items included in the 2013 Youth and Participatory Politics Survey asked respondents to identify which party held the majority in the House of Representatives, which institution is responsible for judicial review, and which party is considered more conservative. The 2011 Youth and Participatory Politics Survey included the same three items plus two additional items asking about the majority required for Congress to overturn a presidential veto and which office Joe Biden held. Among the 2011 respondents, the full five-item scale of political knowledge was strongly correlated (r = .92) with the three-item scale used in the 2013 survey. Thus, we are confident that the three-item scale used here was a reliable measure of political knowledge.

Results

We first consider how the characteristics of the post influenced participants' intentions to circulate political content. Figure 2 displays the proportion of respondents who agreed that they would circulate the post to which they were exposed across ideological alignment and the presence of misinformation. Ideological alignment had a large effect on the intention to circulate, regardless of whether the post contained misinformation. Averaging across the subjective and misinformative conditions, 42% of participants assigned to an ideologically aligned post agreed that they would forward, retweet, share, or like it, compared with just 24% of those in a counterattitudinal condition. This difference between the pro- and counterattitudinal conditions was statistically significant for both the subjective and misinformative conditions ($p < .01$ for two-tailed t tests).
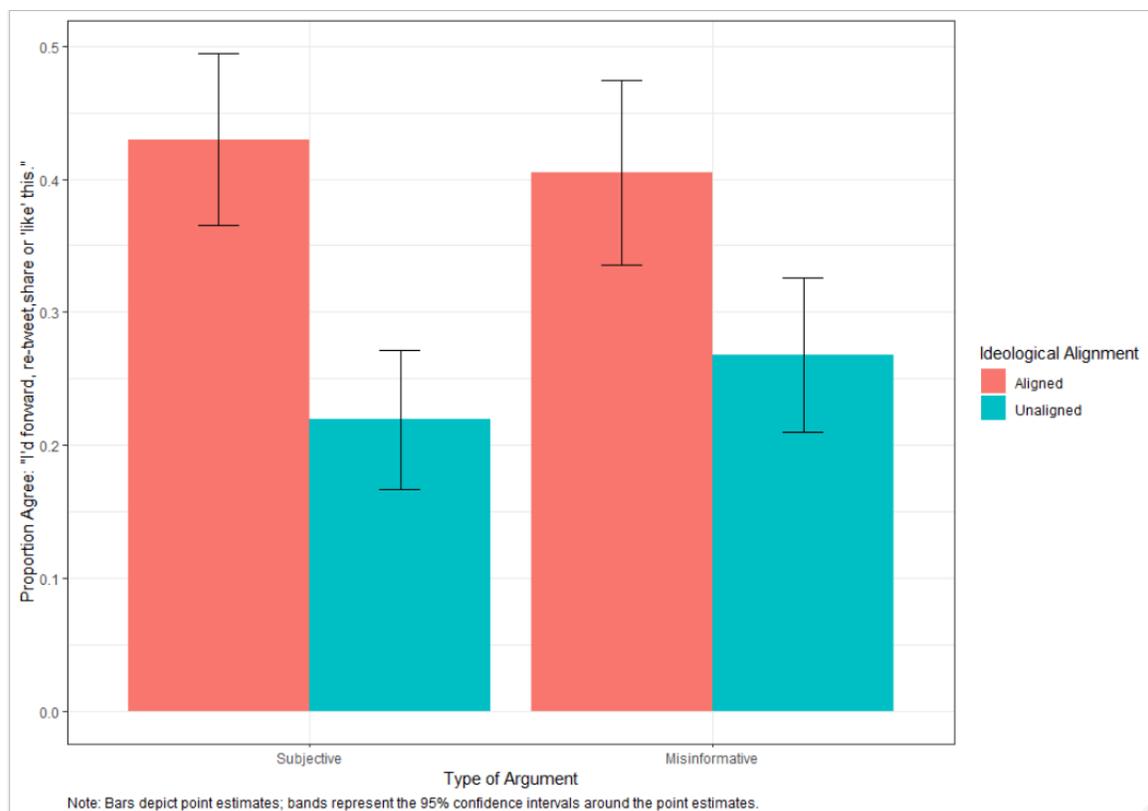

Figure 2. Intention to circulate by ideological alignment and presence of misinformation.

By contrast, the presence of misinformation did not appear to affect the intention to circulate. Averaging across the pro- and counterattitudinal conditions, 32% of participants who were exposed to a subjective condition said that they would circulate the post, compared with 33% of those assigned to a

misinformative condition.[7] This difference between the subjective and misinformative conditions was not statistically significant overall (p = .76 for a two-tailed t test) or when examining only proattitudinal conditions (p = .609) or counterattitudinal conditions (p = .222). Overall, then, it appears that the effect of ideological alignment dominated that of the presence of misinformation in individuals' decisions on whether to recirculate political content on social media.

Figure 3 displays how the effects of the experimental conditions varied across participants' level of political knowledge. For relatively knowledgeable participants, we observed a clear polarization based on the ideological alignment of the post. Highly knowledgeable participants were much more likely to say that they would circulate the post if they were assigned to an ideologically aligned post (44% in the subjective conditions and 42% in the misinformative conditions) than if they saw a counterattitudinal post (19% and 16%, respectively, for the subjective and misinformative conditions).[8] However, there was no significant difference between the subjective and misinformative conditions for this group, regardless of the ideological alignment of the post.[9] In essence, political knowledge appeared to serve as a brake that limited the spread of ideologically unaligned content, but it did not seem to inhibit the spread of misinformation that aligned with the individual's prior beliefs.

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[7] The 95% confidence interval for the proportion of participants who would circulate a misinformative post was [0.29, 0.38]. For participants assigned to a subjective post, the 95% confidence interval was [0.28, 0.36].

[8] These differences in mean intention to circulate were statistically significant (p < .001) regardless of whether t tests are conducted together or separately for the subjective and misinformative conditions.

[9] For high-knowledge participants, the difference in means between the subjective and misinformative conditions was not statistically significant in general (p = .80 for a two-tailed t test), for the proattitudinal conditions (p = .74), or for the counterattitudinal conditions (p = .52).

Note: Bars depict point estimates; bands represent the 95% confidence intervals around the point estimates.
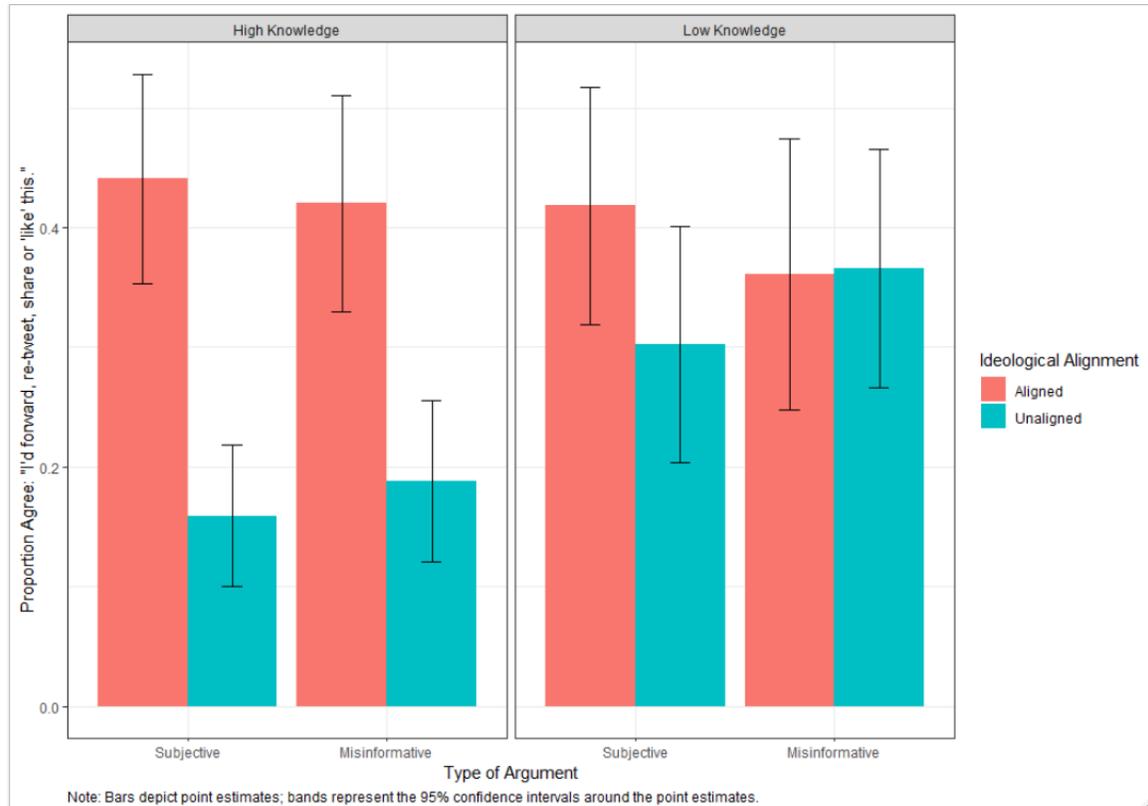
***Figure 3. Intention to circulate by ideological alignment, presence of misinformation, and
political knowledge.***

We observed a different pattern for less knowledgeable participants. In this group, participants were slightly more likely to share an ideologically aligned subjective post (42%) than an unaligned subjective post (30%), although this difference was not quite statistically significant (p = .10 for a two-tailed t test). However, there was no difference across ideological alignment for the misinformative posts: Thirty-six percent of less knowledgeable participants assigned to a proattitudinal misinformative post said that they would circulate it, compared with 37% in a counterattitudinal misinformative condition.[10] The differences between the subjective and misinformative conditions were small and not significant in either the proattitudinal or counterattitudinal conditions.[11] In short, for less knowledgeable respondents, there did not appear to be any more restraint on the spread of misinformation that ran counter to their beliefs than there was on misinformation that was consistent with their prior attitudes.

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[10] This difference was not statistically significant (p = .95 for a two-tailed t test).

[11] For low-knowledge participants, the difference in means between the subjective and misinformative conditions was not statistically significant in general (p = .99 for a two-tailed t test), for the proattitudinal conditions (p = .45), or for the counterattitudinal conditions (p = .37).

Figure 4 considers the effects of the experimental manipulations across the amount of importance participants placed on the issue. Unsurprisingly, those participants who were personally interested in the issue were much more likely to say that they would circulate the post (47%) than those who had little interest in taxes and income inequality (26%). Similar to the findings across political knowledge levels, we found that the differences across the conditions varied across the personal importance of the issue. The most interested participants displayed a clear polarization based on the ideological alignment of the post (61% would circulate a proattitudinal post and 34% would circulate a counterattitudinal post), but appeared to make little distinction between the subjective and misinformative posts.[12] Among participants who did not think that the issue was important, those who were assigned to a subjective condition were also more likely to say that they would circulate an ideologically aligned post than an unaligned post (35% vs. 17%).[13] However, this difference was small (30% to 25%) and not significant ($p = .26$) among those exposed to a misinformative condition. Overall, less interested participants were almost equally likely to circulate a subjective post (35%) as a misinformative post (37%).[14]

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[12] This difference between the proattitudinal conditions and the counterattitudinal conditions was statistically significant overall ($p < .001$ for a two-tailed t test), as were the tests of the differences among those assigned to a subjective post ($p = .001$) and among those who saw a misinformative post ($p < .001$). The difference in means between the subjective and misinformative conditions was not statistically significant in general ($p = .95$ for a two-tailed t test), for the proattitudinal conditions ($p = .74$), or for the counterattitudinal conditions ($p = .85$) among participants who were most interested in the issue.

[13] This difference was statistically significant ($p < .001$ for a two-tailed t test).

[14] This difference was not statistically significant ($p = .60$ for a two-tailed t test).
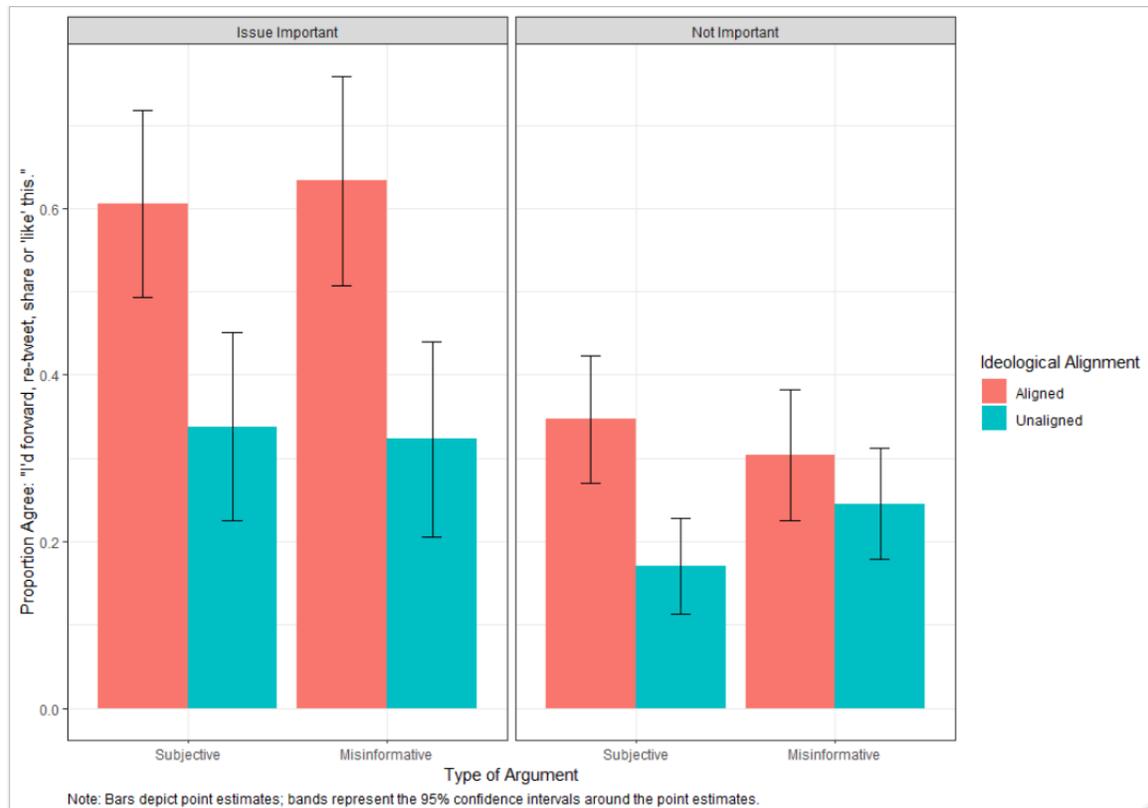
Figure 4. Intention to circulate by ideological alignment, presence of misinformation, and issue importance.

Figure 5 illustrates how the effects of the experimental conditions varied according to participants' experience in online political discussion. When we averaged across the conditions, participants who never discuss politics online were much less likely to say that they would circulate the post (25%) than either those who discuss politics with only like-minded people (39%) or those who have discussions with people with differing views (45%). Among participants who never engage in online political discussion, the pattern looked similar to that observed for less knowledgeable and less interested individuals. As shown in the first panel of Figure 5, participants who do not discuss politics online were far less likely to say that they would circulate the post if they were assigned to a counterattitudinal, subjective post rather than to another condition.[15] However, there was no statistically significant difference between the two proattitudinal conditions or between the two misinformative conditions.[16]

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[15] Two-tailed *t* tests indicated significant differences between the subjective, counterattitudinal posts and both the subjective, proattitudinal posts ($p < .001$) and the misinformative, counterattitudinal posts ($p = .003$).

[16] A two-tailed *t* test for the difference between the subjective, proattitudinal posts and the misinformative, proattitudinal posts was not statistically significant ($p = .82$); nor was it significant for the difference between the misinformative, proattitudinal posts and the misinformative, counterattitudinal posts ($p = .46$).
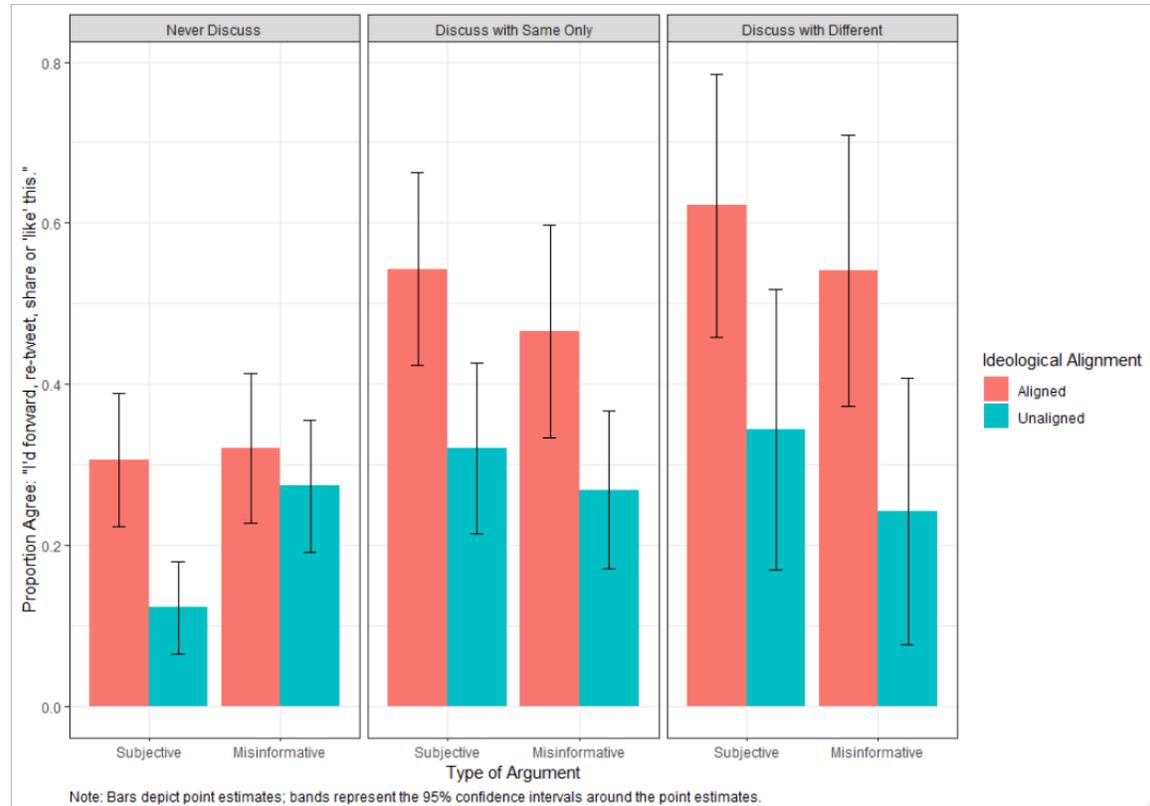
Figure 5. Intention to circulate by ideological alignment, presence of misinformation, and online political discussion.

By contrast, for participants who do discuss politics online, there was a large difference between the likelihood of circulating a proattitudinal post and that of a counterattitudinal post, and only small differences between the subjective and misinformative conditions. We observed the same pattern for participants who discuss politics online with only people who share their views and for those who sometimes discuss politics with people they disagree with. For both groups, the differences between the proattitudinal and counterattitudinal posts were large in both the subjective and misinformative conditions.[17] At the same time, none of the differences between the subjective and misinformative conditions were statistically significant. For both groups, in both counterattitudinal and proattitudinal conditions, misinformative posts were somewhat less likely to be shared than subjective posts. However, even when we pooled respondents, this difference was

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[17] These differences were statistically significant ($p < .05$ for two-tailed t tests) in all conditions for both groups. When we pooled respondents who discuss politics with like-minded people and those who discuss politics with people with different views, the difference between the proportion that would circulate a proattitudinal post (53%) and the proportion who would circulate a counterattitudinal post (29%) was significant ($p < .001$).

relatively small (45% would circulate a subjective post and 37% would circulate a misinformative post) and fell short of statistical significance (p = .103 for a two-tailed t test). Overall, Figure 5 suggests that the key differences seem to be based on whether, not with whom, individuals discuss politics online.

To further investigate the mechanism that underpins decisions to circulate posts, we supplemented the analysis of intentions to circulate with ratings of the post's accuracy.[18] Overall, 52% of participants said that they "agree" or "strongly agree" that the comment in the post was accurate. As with the intention to circulate, we observed a sizeable proattitudinal bias in perceptions of the post's accuracy: Sixty-seven percent of participants exposed to a proattitudinal post thought that the comment was accurate, compared with just 38% of those who saw a counterattitudinal post.[19] Interestingly, as indicated in Figure 6, the presence of misinformation also seemed to affect accuracy judgments, but only in the proattitudinal conditions. Among those who saw a proattitudinal post, we found a significant difference between the subjective condition (74% agreed it was accurate) and the misinformative condition (59%). However, for participants exposed to a counterattitudinal post, there was no difference between the subjective condition (39% said that the post was accurate) and the misinformative condition (38%).[20]

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[18] The full results of the analysis of perceptions of accuracy are presented in Kahne and Bowyer (2017).

[19] This difference was statistically significant (p < .001 for a two-tailed t test).

[20] The difference between subjective and misinformative conditions was statistically significant (p < .001) in the proattitudinal posts, but not significant (p = .62) in counterattitudinal posts for two-tailed t tests.
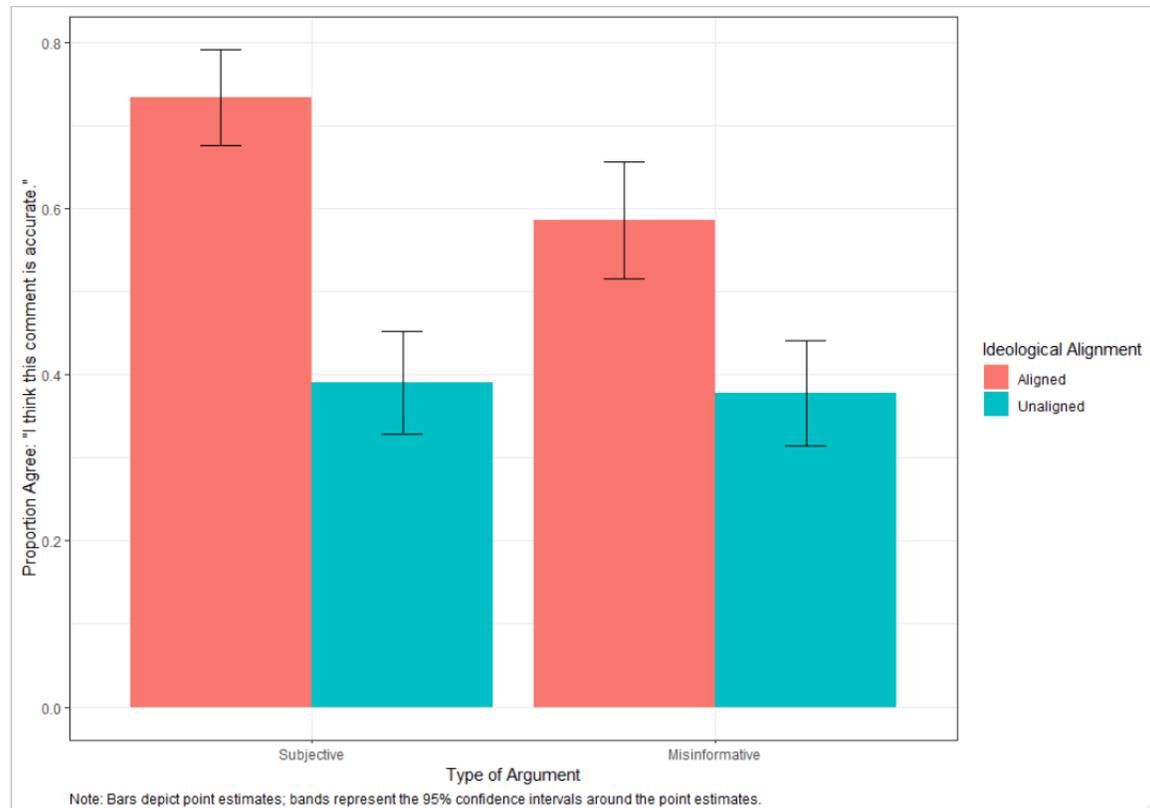
Figure 6. Perceptions of accuracy by ideological alignment and presence of misinformation.

The finding that the presence of misinformation in a post had some effect on participants' judgments of its accuracy but had no apparent effect on their intentions to circulate raises the possibility that at least some participants were willing to share a post that they believed to be untrue. The joint distribution of these outcome variables (displayed in Table 1) suggests, however, that this was a rare occurrence overall. Only 28 participants (3% of the total) agreed that they would circulate a post that they deemed to be inaccurate. This means that of the participants who agreed that they would circulate the post, 90% believed that it was accurate. And among those participants who believed that the post they saw was inaccurate, only 7% said that they would recirculate it. The proportion of participants willing to circulate a post they thought was inaccurate did not vary significantly across the experimental conditions.

Table 1. Joint Distribution of Accuracy Perceptions and Intentions to Circulate.

Intention	Not accurate	Accurate
Would not circulate, *n* (%)	384 (45)	198 (23)
Would circulate, *n* (%)	28 (3)	246 (29)

Because both perceptions of accuracy and intention to circulate were measured posttreatment, we could not assess the causal relationship between the two. One interpretation of the results is consistent with the theory of directional motivated reasoning. That is, the affect of the post drives both intentions to circulate and perceptions of accuracy: Both outcome variables are indicators of whether the individual agrees with the sentiment of the message. At the same time, the findings are also consistent with a theory that sees individuals as first evaluating whether a comment is accurate and then deciding whether they will share it further.

Seeking to adjudicate between these competing interpretations, we gained some further insight by comparing how accuracy perceptions varied across low- and high-knowledge participants. Figure 7 displays how accuracy perceptions of the different experimental conditions varied between these two groups. Among low-knowledge participants assigned to a subjective post, there was a large, statistically significant difference ($p < .001$ for a two-tailed t test) in the accuracy ratings between the pro- and counterattitudinal conditions, as expected. However, for low-knowledge participants who saw a misinformative post, the difference across ideological alignment was small and not significant ($p = .32$). Notably, a bare majority (51%) of less knowledgeable participants agreed that a factually false statement was accurate, even when the post was contrary to their views.
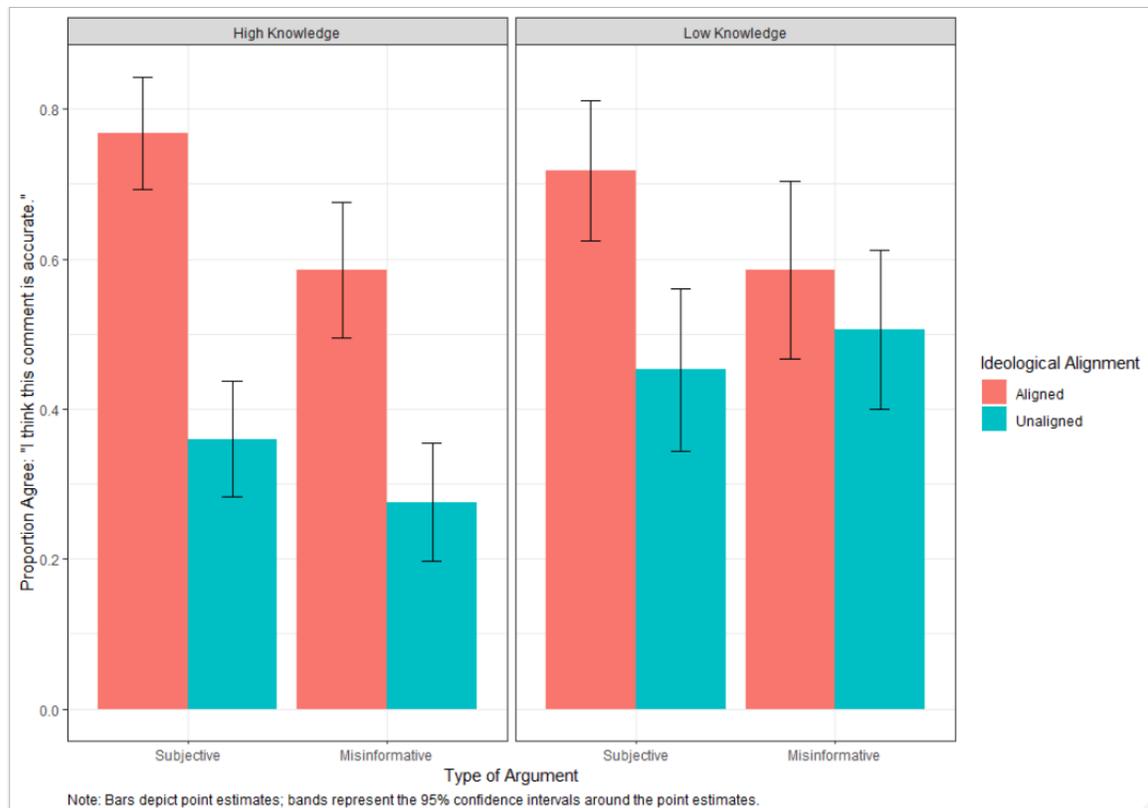

Note: Bars depict point estimates; bands represent the 95% confidence intervals around the point estimates.

Figure 7. Perception of accuracy by ideological alignment, presence of misinformation, and political knowledge.

Among more knowledgeable participants, we saw a clearer effect of both ideological alignment and the presence of misinformation on perceptions of accuracy. More knowledgeable participants were less than half as likely to rate a post as accurate if they were exposed to a contrary viewpoint (32%) rather than to one that was consistent with their prior viewpoints (68%), regardless of whether they were assigned to a subjective or misinformative condition.[21] They were also less likely to rate a misinformative post as accurate (42%) than a subjective post (55%), averaging across ideological alignment.[22] That said, it is worth noting that a majority (58%) of more knowledgeable participants agreed that a factually false, proattitudinal post was accurate: Whereas both ideological alignment and the presence of misinformation affected the accuracy perceptions of more knowledgeable participants, the former effects seemed to outweigh the latter.

There was also a difference between less and more knowledgeable participants in the relationship between accuracy perceptions and intentions to circulate the posts, as seen in Figure 8. Among those who believed the post to be inaccurate, there was a difference across political knowledge in the likelihood of circulating the post. Twelve percent of less knowledgeable participants who thought the post was not accurate were willing to share it, compared with just 4% of more knowledgeable participants who thought the post was inaccurate.[23] Moreover, although there was no difference across the experimental conditions in the proportion of high-knowledge participants who would circulate an inaccurate post, low-knowledge respondents were much more likely to share a post that they deemed inaccurate if it was proattitudinal (20%) than if it was counterattitudinal (7%).[24] Among the more knowledgeable participants, then, the group that would circulate a post was effectively a subset of the group that deemed the post to be accurate. However, among less knowledgeable participants, there was a sizeable minority that would circulate something that they did not believe was true, particularly if it aligned with their views.

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[21] These differences were statistically significant ($p < .001$ for two-tailed t tests).

[22] This difference was statistically significant ($p = .002$ for a two-tailed t test).

[23] The difference between less knowledgeable and more knowledgeable respondents was statistically significant ($p = .01$ for a two-tailed t test).

[24] This difference was statistically significant ($p = .03$ for a two-tailed t test).
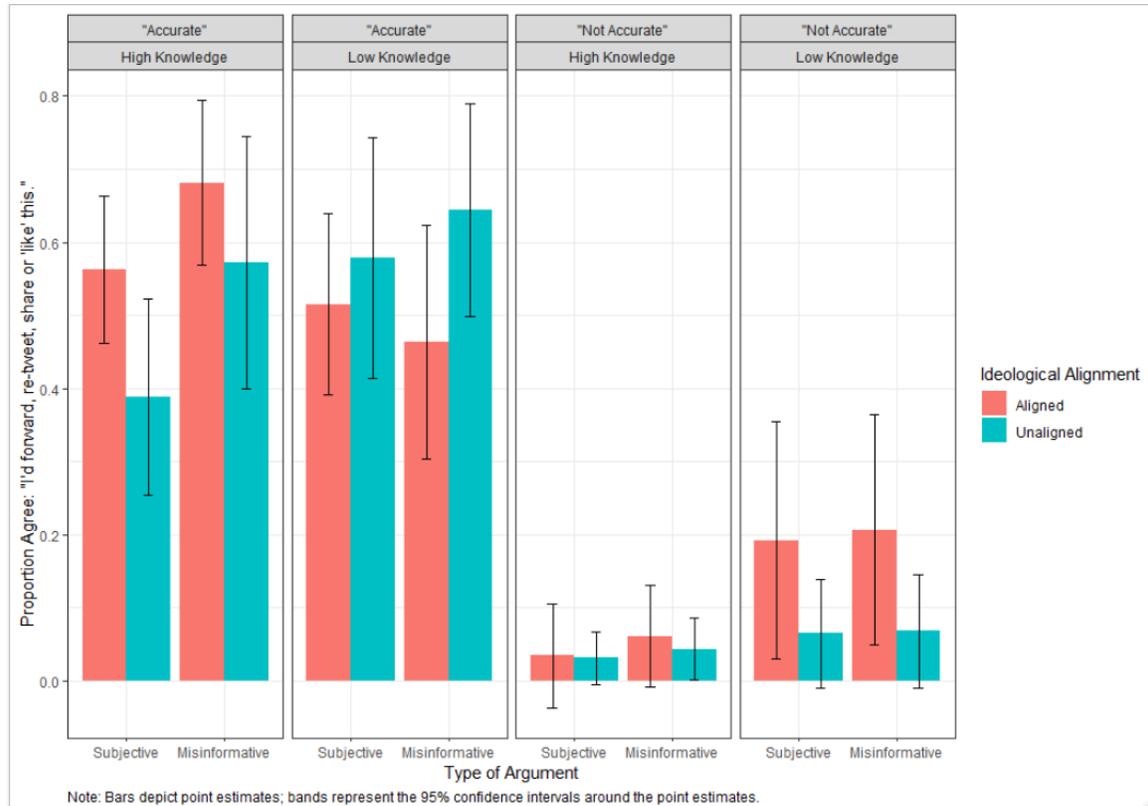
Figure 8. Intention to circulate by ideological alignment, presence of misinformation, political knowledge, and perceptions of accuracy.

Likewise, among those who perceived the post to be accurate, we observed different patterns for low- and high-knowledge participants in their intentions to circulate. For the less knowledgeable group, there were only small differences across the experimental conditions. Contrary to expectations, this group seemed somewhat more likely to circulate a counterattitudinal post (61%) than a proattitudinal post (50%), although this difference was not quite statistically significant (p = .102 for a two-tailed t test). There was no difference in the likelihoods of less knowledgeable participants circulating a subjective or a misinformative post (54% and 56%, respectively) that was believed to be accurate.[25]

By contrast, both aspects of the post seemed to affect the likelihood that more knowledgeable participants would circulate something they deemed to be accurate. Among posts perceived to be true, those who expressed proattitudinal views were more likely to share (61%) than those with counterattitudinal viewpoints (46%).[26] Having deemed a post to be accurate, high-knowledge participants were also more

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[25] This difference was not statistically significant (p = .79 for a two-tailed t test).

[26] This difference was statistically significant (p = .02 for a two-tailed t test).

likely to circulate misinformative posts (64%) than subjective posts (50%).[27] This helps to explain why we found no difference in the likelihood that high-knowledge participants would circulate a misinformative post relative to a subjective one, despite the fact that they were less likely to agree that the former posts were accurate. It seems that for these participants the misinformative posts were more compelling, perhaps because they had the form of a factual argument even if the "fact" was incorrect.

Discussion

This study used an experiment embedded in a nationally representative survey to examine the relative impact of varied factors on intentions to circulate a simulated social media post. In particular, it sought to uncover factors that might influence the spread of misinformation. Misinformation circulates widely on social media. This circulation of misinformation, in turn, is believed to undermine thoughtful assessment of policy options and varied candidates for office, to make dialogue among those who hold differing perspectives less productive and respectful, and, ultimately, to chip away at the legitimacy and effectiveness of democratic governance (Hochschild & Einstein, 2015). The stakes are high.

In general, we found that the presence of misinformation did little to diminish the likelihood that participants would circulate it. Instead, the aspect of a post that seemed to matter most was whether the ideology of the post aligned with an individual's prior beliefs. Given the broad and expanding importance of social networks as a source of news, this dynamic enables misinformation that serves particular political agendas to circulate widely. Indeed, ideologically homophilous social networks are often described as "echo chambers," but this analogy, with its implication of a closed system, may understate the problem. Unlike when false rumors are spread by word-of-mouth or by campaign mailers, when misinformation circulates online, each recipient becomes a potential distributor with the ability to amplify the message many times over through their social network.

Although the effects of ideological alignment generally trump the presence of misinformation, this study also indicates that their relative effects vary across different groups of young people. Young people who were less politically engaged or informed were almost as likely to share misinformative posts that were counterattitudinal as they were to share proattitudinal posts. It may be the case that the seemingly authoritative tone of the misinformative posts—the falsehoods are presented as if they were facts—was compelling enough to counterbalance the skepticism accorded to ideologically misaligned posts. Thus, it seems that less informed/engaged individuals stand out as being potentially susceptible to misinformation that runs contrary to their prior beliefs.

Among participants who were more politically engaged and informed, we observed greater bias in favor of circulating ideologically aligned content, consistent with research on partisan motivated reasoning (Taber & Lodge, 2006). This group's apparent skepticism toward counterattitudinal messages generally extended to both subjective and misinformative comments. At the same time, we found scant evidence that suggests that the intentions of more engaged and informed individuals to circulate a post were affected by the presence of misinformation. Perhaps most crucially, among those assigned to a proattitudinal condition,

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[27] This difference was statistically significant ($p = .02$ for a two-tailed t test).

there was little difference in the likelihoods of circulating a misinformative post or subjective post. More engaged and informed young people, thus, seem to be particularly susceptible to misinformation that aligns with what they already believe.

Consequently, it may seem that directional motivation outweighs accuracy motivation among this group. However, Druckman and McGrath (2019) caution that what seems like directional motivation actually may reflect accuracy motivation. Liberals and conservatives may be equally committed to circulating accurate content, but differ in the criteria they use in judging a message's credibility. When we examined individuals' perceptions of the posts' accuracy, we did find some evidence that is consistent with this interpretation. Among more knowledgeable participants, almost all of those who said they would circulate a post also believed that its message was accurate. This is consistent with a commitment to accuracy (or at least to appearing to be committed to accuracy). In addition, more knowledgeable participants were less likely to say that a proattitudinal post was accurate if it contained misinformation than if it was subjective. This is consistent with previous research (Pennycook & Rand, 2019) that indicates that more analytical thinkers possess a greater capacity to discern falsehoods. At the same time, a majority of this group believed that the comments made in the proattitudinal, misinformative posts were accurate. Those who did were even more likely to share it than their counterparts who believed that a proattitudinal, subjective post was accurate. So, although there is some evidence of accuracy motivation, its effects seem to be rather limited, and there appears to be a decidedly partisan tint to perceptions of accuracy.

The design of the survey experiment allowed us to test the effects of several potential moderators of the effects of ideological alignment and misinformation on the likelihood of circulating political content online. However, there are some important limitations to the inferences that can be drawn from the design. With respect to the study's internal validity, several key variables were measured observationally rather than experimentally manipulated. These include the survey questions relating to ideology, political knowledge, and issue importance. Thus, we need to be cautious in interpreting the causal relationship between these variables and the outcome variables. Similarly, because both intentions to circulate and perceptions of accuracy were assessed posttreatment, we could not test whether one of these outcome variables was conditional on the other.

With respect to its external validity, our study was restricted to a particular population—15- to 27-year-olds in the United States—at a particular point in time. Because youth tend to be much more frequent users of social media than older Americans, they might respond differently to the posts included in the experiment than those who are less familiar with memes and other pieces of the online repertoire. At the same time, as early adopters of these technologies and as the proportion of the population that might be considered "digital natives" continues to grow, this population may represent a harbinger of the future. Regarding the timing of the survey, the experiment was conducted in 2013, well before the 2016 election and its aftermath brought "fake news" into the lexicon and public consciousness. It is possible that attentiveness to misinformation may have risen subsequently; however, that has certainly not seemed to retard the spread of misinformation online, nor does it seem that the influence of partisan motivation has declined since the study was conducted.

Perhaps the most significant threat to external validity is that our dependent variable was measured by survey respondents' stated intentions to circulate the experimental treatment rather than by an observation of individuals' behavior on an actual social media platform. We lack data that would indicate whether this intention to circulate a post translates into behavior on social media. Nevertheless, our findings with respect to the effects of ideological alignment and of the presence of misinformation are consistent with studies that have relied on data drawn directly from social media platforms such as Twitter and Facebook (An, Quercia, Cha, Gummadi, & Crowcroft, 2014; Barberá, Jost, Nagler, Tucker, & Bonneau, 2015; Del Vicario et al., 2016; Himelboim, McCreery, & Smith, 2013; Schmidt et al., 2017; Shin et al., 2016).

More research is required to identify more precisely the mechanisms linking the cognitive processing of political messages through social media to behavioral decisions regarding the circulation of this content. Given the volume of political misinformation spread through social media and its troubling consequences for democratic politics, scholars need to focus on both system-level and individual-level strategies that enable the identification of misinformation and quell its spread. For instance, Lewandowsky et al. (2017) highlight several "technocognitive" approaches by which platforms such as Facebook and Google might limit their users' exposure to misinformation. In addition, it is clear that efforts to promote individual capacities and dispositions regarding misinformation are also needed. One approach that we believe deserves particular attention is media literacy education (see Vraga & Bode, 2017, for a discussion). The findings from this study underscore the need to examine whether media literacy education can foster a commitment to the critical evaluation of policy arguments and a commitment to rejecting factually inaccurate arguments, even when those arguments align with what one already believes. This demeanor is essential to democratic citizenship at any moment in time, but is especially vital in an age in which individuals are empowered as both producers and circulators of political content.

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Appendix:
Multivariate Models of Intention to Circulate Post

This appendix presents multivariate regression analyses of intentions to circulate the experimental post. These analyses employed the full range of this ordinal dependent variable, estimating a series of ordered logit models, which are reported in Table A1.

Table A1. Multivariate Models of Intention to Circulate Post.

Variable	Model I	Model II	Model III
Ideologically unaligned condition	−.821***	−.840***	−.891***
	(.127)	(.173)	(.129)
Misinformative condition	.026	.005	.065
	(.125)	(.179)	(.127)
Ideologically Unaligned × Misinformative Condition		.040	
		(.250)	
Female			.254*
			(.128)
Age			−.006
			(.018)
Black			.577**
			(.177)

Asian			.063
			(.207)
Latinx			.807***
			(.180)
Other/multiple races			.755*
			(.337)
Foreign born			.287
			(.230)
College degree			−.312
			(.192)
Metropolitan area			.110
			(.191)
Midwest			.080
			(.200)
South			.222
			(.187)
West			−.555**
			(.199)
Likelihood ratio	42.781	42.807	104.821
Nagelkerke R^2	.052	.052	.124
N	862	862	862

Note. Dependent variable, intention to circulate, was a 4-point ordinal scale ranging from *strongly disagree* to *strongly agree*. Entries are ordered logit coefficients; standard errors are within parentheses. *$p < .05$. **$p < .01$. ***$p < .001$ (two-tailed).

Model I included only the experimentally manipulated variables: ideological alignment and the presence of misinformation. Consistent with the results reported in Figure 2, it indicates that assignment to an ideologically unaligned condition had a statistically significant, negative effect on intentions to circulate. However, the presence of misinformation did not seem to have any effect on the likelihood that a post would be circulated.

Model II added an interaction between the two characteristics of the experiment; however, it was not statistically significant. Model III added a set of demographic variables: gender (male was the baseline category), age (measured in years), race/ethnicity (non-Hispanic White was the baseline), country of birth (U.S. was the baseline), educational attainment (no college degree was the baseline), metropolitan status (nonmetropolitan was the baseline), and region of residence (Northeast was the baseline). The inclusion of these control variables did not alter the substantive conclusions: The ideological alignment of the post had a large effect on intentions to circulate, but the presence of misinformation did not.