ORIGINAL ARTICLE

Just a Glance, or More? Pathways from Counter-Attitudinal Incidental Exposure to Attitude (De)Polarization Through Response Behaviors and Cognitive Elaboration

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Using two-wave U.S. panel survey data, this study proposes a moderated serial mediation model to examine through what paths and under what conditions incidental exposure to counter-attitudinal information on social media would enhance or mitigate polarization. The findings suggest that such exposure can indirectly polarize attitude by eliciting passive scanning behaviors, but it can also indirectly attenuate attitude polarization first through active engagement with the counter-attitudinal information, then through cognitively elaborating on the information. However, the indirect depolarizing effect of incidental exposure to counter-attitudinal information on citizens' attitude depends on the extent to which they are instrumentally motivated. The indirect effect occurs when an individual's perceived utility of counter-attitudinal information is at a high and a middle level, but not at a low level. Implications of the findings are discussed.

Social media have changed the information landscape and have become one of the most popular sources where people get their news on politics and public affairs (Pew Research Center, 2020a). Not only can people proactively seek out news, but they can also come across it by accident when using social media for other purposes, such as entertainment (Kim, Chen, & Gil de Zúñiga, 2013). Some scholars point out that social media facilitate exposure to like-minded information because of the platforms' algorithmic information sorting and ideologically homophilous network (Bail et al., 2018), while others note that it facilitates exposure to cross-cutting

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information because of greater exposure to political difference and expanded connections with weak ties and diverse others (Bakshy, Messing, & Adamic, 2015; Barnidge, 2020; Weeks, Lane, Kim, Lee, & Kwak, 2017). Indeed, incidental exposure to political news has been a rising phenomenon on social media (Fletcher & Nielsen, 2018). Studies have shown that it enhances political knowledge (e.g., Lu & Lee, 2019; Wieland & Königslöw, 2020) and mobilizes political engagement (e.g., Kim et al., 2013; Valeriani & Vaccari, 2016). However, there is little research on the *attitudinal outcomes* of incidental exposure, especially counter-attitudinal information. This study fills gaps in the literature by examining whether and how incidental exposure to counter-attitudinal information on social media enhances or attenuates attitude polarization. We focus on issue polarization given that there have been increasing concerns about polarized public opinion on contentious issues in the United States (Baldassarri & Gelman, 2008).

This study furthers the line of research in several ways. First, instead of examining incidental exposure to news in general, this study focuses on counter-attitudinal exposure, which has long been considered essential for deliberation because it encourages people to consider diverse perspectives, develop greater understanding of subjects, and provide well-reasoned opinions (Benhabib, 1996; Gutmann & Thompson, 1996), which can potentially attenuate polarization (Kim, 2015; Sunstein, 2007). However, counter-attitudinal exposure may also lead to more polarization due to confirmation bias (Wojcieszak, 2011). Mixed results from previous studies suggest that the relationship between counter-attitudinal exposure and attitude polarization warrants more research.

Second, while most studies on incidental exposure have centered on its *direct* effect on political outcomes (e.g., Kim et al., 2013; Lee & Kim, 2017; Lu & Lee, 2019), this study adopts a process-oriented approach to examine the *indirect* effect of incidental exposure to counter-attitudinal information on polarization. Based on the revised communication mediation model developed by Shah et al. (2017), this study explicates the reasoning processes (i.e., responses to counter-attitudinal information and cognitive elaboration) between incidental exposure to counter-attitudinal information and polarization. In doing so, this research answers the call for studies to "move beyond a focus on participatory outcomes to consider a wider range of democratically consequential process variables" (Shah et al., 2017, p. 9). The heightened political and social divides in American society make polarization a key outcome that should be examined in the model.

Third, the study proposes two different behaviors in response to incidental exposure to counter-attitudinal information (i.e., passive scanning and active engagement) and a conditional-motivational factor (i.e., perceived utility of counter-attitudinal information) to understand the indirect effect of incidental exposure to counter-attitudinal information on polarization. Matthes, Nanz, Stubenvoll, and Heiss (2020) suggested that incidental exposure is a dynamic process rather than a static concept because people may switch processing goals and appraise incidentally encountered information differently, which could lead to different political
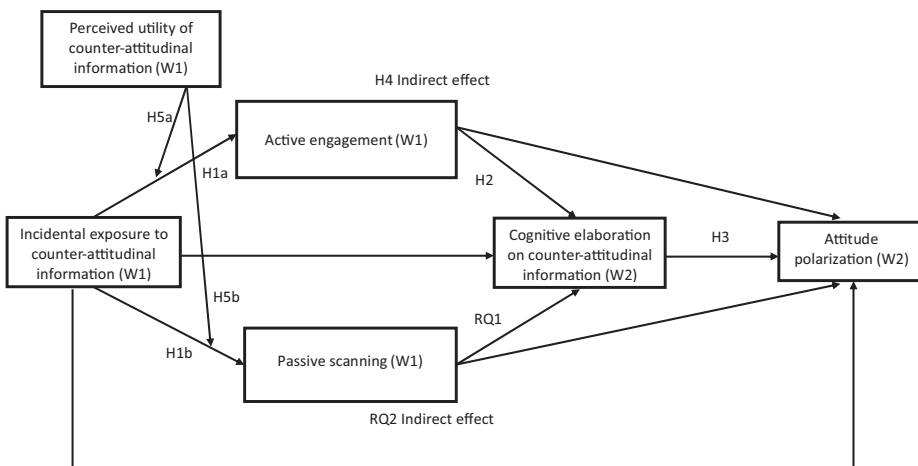
Figure 1 The proposed moderated serial mediation model: The indirect effect of incidental exposure to counter-attitudinal information on attitude polarization first through response behaviors and then through cognitive elaboration is contingent upon the level of perceived utility of the counter-attitudinal information.

outcomes. Thus, it is necessary to examine the underlying dynamic in the process of incidental exposure, going beyond mere incidental exposure as an umbrella term.

Considering the mediating and moderating factors, this study proposes a moderated serial mediation model (Figure 1) that can help to advance the literature on the consequences of incidental exposure and provide insights on how incidentally hearing the other side on social media would be conducive (or not) to a more deliberative democracy.

Disagreement and political polarization

Political polarization has become a salient feature of American politics. Not only has the number of citizens who hold consistently conservative or liberal opinions doubled over the past two decades (Pew Research Center, 2017a), but the gaps between Republicans and Democrats in terms of fundamental political values on different issues have become wider as well (Pew Research Center, 2017b), suggesting that issue polarization is prominent in today's politics (Mason, 2015). Thus, a significant way to understand how society is polarized is to examine "the extent to which opinions on an issue are opposed in relation to some theoretical maximum" (DiMaggio, Evans, & Bryson, 1996, p. 693).

In the face of intensifying political polarization, what factors enhance or mitigate polarization has been an important question. Exposure to counter-attitudinal information plays a significant role in understanding polarization as it is the starting

point in the process of perceiving what the other side thinks and argues, which may influence individuals' political attitudes and opinions (Huckfeldt & Sprague, 1995). However, there are mixed findings on the role of counter-attitudinal exposure in terms of whether it attenuates or exacerbates polarization.

On the one hand, deliberative theorists propose that exposure to counter-attitudinal viewpoints fosters respect for different perspectives (Gutmann & Thompson, 1996), enhances awareness of rationales and familiarity with legitimate arguments underlying opposing perspectives (Mutz, 2002b), and strengthens cognitive complexity as people are more likely to use nonredundant attributes when thinking about a political subject (Gastil & Dillard, 1999). Exposure to attitude-challenging viewpoints, therefore, is associated with more balanced political judgment (Gutmann & Thompson, 1996) and a more moderate attitude toward the subject (Meffert, Guge, & Lodge, 2004), which may make attitudes less polarized. Some studies have documented that exposure to counter-attitudinal information or discussion weakens political polarization (Kim, 2015; Parsons, 2010). Particularly, Beam, Hutchens, and Hmielowski (2018) found that counter-attitudinal news exposure increased over time on social media, which led to depolarization.

On the other hand, the effects of this exposure may not be as positive as we hope. When citizens encounter counter-attitudinal viewpoints, their preexisting political views can distort the deliberative process and intensify the conflict. They may be motivated to maintain their beliefs, which enhances thought consistency and ultimately promotes attitude polarization (Valentino, Banks, Hutchings, & Davis, 2009). Research on biased processing suggests that people who hold strong prior attitudes will be biased in perceiving, interpreting, and evaluating the information they receive (Taber & Lodge, 2006). People tend to rationalize their own views by accepting consonant messages easily (i.e., confirmation bias) and using more cognitive resources to denigrate dissonant ones with critical scrutiny (i.e., disconfirmation bias; Taber & Lodge, 2006). Social identity theory assumes that the "us" versus "them" mentality means that individuals will tend to favor the opinions, beliefs, and values held by in-group members and dismiss those held by out-group members (Tajfel & Turner, 1979).

Consistent with this explanation, studies have shown that merely increasing the salience of people's political identities in an experimental setting resulted in more polarized views on issues like climate change, such that attitudes and beliefs towards the issue were more aligned with the political party compared to when identity salience was not induced (Diamond, 2020; Unsworth & Fielding, 2014). This suggests that prior attitudes for one issue (e.g., gun control) can feasibly polarize attitudes towards another (e.g., climate change) when political identity is salient because both issues are closely aligned to a specific in-group identity in opposition to an out-group identity (i.e., Republican vs. Democrat).

Following this logic, this study examines the role of incidental exposure to counter-attitudinal information from others with different political stances in the process of attitude polarization for issues that are divisive in the United States.

The mixed findings in prior research suggest that there could be different underlying mechanisms in the effect of this exposure on attitude polarization. Furthermore, this study investigates incidental exposure specifically on social media platforms because there is a strong chance to be exposed to ideologically cross-cutting viewpoints rather than to only ideologically aligned content on social media and because of the affordances social media platforms offer that allow people to engage and interact with the information (Bakshy et al., 2015; Barnidge, 2020). The interactive nature of social media allows people to have different behaviors in response to the disagreeing information they are incidentally exposed to. Some may give a quick glance at the information, while others may have a full engagement with it. We acknowledge that different types of response behaviors to incidentally encountered counter-attitudinal information and the cognitive processing that follows may be key considerations that differentiate the effect of counter-attitudinal incidental exposure on political polarization.

Explicating the reasoning process in incidental exposure to counter-attitudinal information

Incidental exposure refers to encountering political information accidentally (Tewksbury, Weaver, & Maddex, 2001). While some people may intentionally seek out counter-attitudinal information for various reasons, others are likely to be exposed to it unexpectedly when using the Internet for nonpolitical purposes (Wojcieszak & Mutz, 2009). How people react to the counter-attitudinal information they are incidentally exposed to becomes a vital question because the way they further engage with and elaborate on it can, in turn, lead to different political outcomes.

The revised communication mediation model (Shah et al., 2017) integrates assumptions and concepts from the communication mediation model (McLeod et al., 2001) and the cognitive mediation model (Eveland, 2001). In the former, communication patterns such as media exposure and political expression mediate the relationship between individual predispositions and democratic engagement (McLeod et al., 2001). In the latter, the emphasis is on the cognitive processes by which mental elaboration and cognitive reflection on media exposure and discussions take place (Eveland & Dunwoody, 2002). Combined, the communicative and cognitive factors represent elaborative reasoning after exposure to information in producing political outcomes, such as political participation (Cho et al., 2009). As suggested by Shah et al. (2017), the revised communication mediation model should also examine democratically consequential political attitudes. Building on the revised model, the current study proposes behaviors in response to counter-attitudinal information as the communicative factor and cognitive elaboration on counter-attitudinal information as the cognitive factor and examines how they mediate the relationship between incidental exposure and polarization.

Distinction between passive scanning and active engagement in responses to counter-attitudinal information

Previous researchers have considered political discussion and online messaging as reasoning behaviors that enhance reasoned argumentation and cognitive elaboration (Jung, Kim, & Gil de Zúñiga, 2011). Incidental exposure to counter-attitudinal information on social media can be simple information exposure, but it can also be a give-and-take reciprocal interaction similar to political discussion depending on how people react to the information. We differentiate two possible reactions: *passive scanning* and *active engagement*. These reactions are not mutually exclusive given that people may not always scan nor engage with information they are exposed to incidentally. As Matthes et al. (2020) emphasize, incidental exposure should be treated as a dynamic process because individuals constantly appraise the information they incidentally encounter[1] and switch between passive and active responses to the information. Nevertheless, the two behaviors may influence cognitive processing and attitude polarization differently.

Passive scanning suggests that the user pays little attention to the counter-attitudinal information and therefore does not engage with it. The idea of passive scanning in the context of incidental exposure was first proposed by Matthes et al. (2020). It occurs when the user considers the information personally irrelevant (Matthes et al., 2020) or finds it psychologically uncomfortable (Festinger, 1957). It is also possible that if someone perceives that the majority of others in their social network do not support their opinions, they may self-censor and refrain from expressing their opinion so as to avoid social sanctions (Chen, 2018; Noelle-Neumann, 1974).

Conversely, incidental exposure to counter-attitudinal information may engender active engagement. Users may be motivated to engage with the information because it is relevant and interesting (Matthes et al., 2020). Coming across cross-cutting and challenging viewpoints may also lead to a psychological state of ambivalence, which can prompt additional steps to seek out congruent information to reinforce existing positions and incongruent information to learn more about opposing perspectives so as to be better informed for subsequent encounters with counter-attitudinal information (Chan, Chen, & Lee, 2021; Levine & Russo, 1995). These represent more active forms of response as people read, process, and interact more with the information, which entails a higher level of reasoning compared to passive scanning. Indeed, previous studies have shown that incidental exposure to counter-attitudinal information can prompt more active behavioral engagement (Lu, 2019; Oeldorf-Hirsch, 2018).

While incidental exposure to counter-attitudinal information could lead to both passive scanning and active engagement, it is worth noting that individuals in general are more likely to select and attend to like-minded information than dissenting information (Festinger, 1957; Stroud, 2011). For example, the Pew Research Center (2016) found that 83% of social media users try to ignore disagreeing posts and only 15% engage with political content that they disagree with. As a result, incidental

exposure to counter-attitudinal information should be more likely to prompt scanning behaviors than engagement behaviors.

Cognitive elaboration on counter-attitudinal information

This study distinguishes and focuses on active engagement and passive scanning in response to incidental exposure to counter-attitudinal information because these actions embody distinctive levels of reasoning behaviors that should exert differential effects on cognitive elaboration. Cognitive elaboration is "the process of connecting new information to other information stored in memory, including prior knowledge, personal experiences, or the connection of two new bits of information together in new ways" (Eveland, 2001, p. 573). It occurs when people reflect on media content (Eveland, 2001) or anticipate a conversation (Eveland, 2004). Scholars have examined cognitive elaboration to understand how it links citizens' news exposure and political discussion to information learning and political engagement (e.g., Cho et al., 2009; Jung et al., 2011).

Eveland (2004) found that cognitive elaboration is a major mediating factor in explaining the connection between political discussion and political knowledge because when individuals participate in discussion, they need to make an effort to understand the topics of the discussion. Similarly, in this study, active-engaging behaviors in response to counter-attitudinal information in an incidental exposure context represent an effortful engagement with the information that requires one to articulate opinions after a thorough organization of their thought. This engagement with information and processing of counter-attitudinal information drives the individual to think carefully about the information (Huckfeldt, Mendez, & Osborn, 2004) and to understand oppositional viewpoints (Mutz, 2002b). Moreover, engagement with diverse and counter-attitudinal content creates a larger pool of information and enhances individuals' knowledge of other political perspectives (Hively & Eveland, 2009). The literature on sender effects also provides an explanation for the positive relationship between active-engaging behaviors and cognitive elaboration. The acts of disseminating a message and expressing opinions are likely to affect message senders' cognitions and behaviors (Pingree, 2007). Thus, active engagement in response to counter-attitudinal information should enhance individuals' cognitive elaboration on it.

Compared to active engagement, the contribution of passive scanning to cognitive elaboration is questionable. Some scholars consider scanning behavior to be a type of informal learning in the online environment (Steinberg, 1989); however, others have found that scanning behavior reduces learning as people do not continue to process and engage with the information (Eveland & Dunwoody, 2002). Overall, after incidental exposure leads to active engagement and passive scanning, these two behaviors should influence cognitive elaboration in different ways. Thus, the following hypotheses and research question are proposed:

H1: Incidental exposure to counter-attitudinal information is positively related to active engagement (H1a) and passive scanning (H1b) in response to the counter-attitudinal information. In addition, the effect of incidental exposure is stronger on passive scanning than on active engagement (H1c).

H2: Active engagement is positively related to cognitive elaboration on counter-attitudinal information.

RQ1: Does passive scanning relate to cognitive elaboration on counter-attitudinal information?

This study further tests how response behaviors and cognitive elaboration serially mediate the relationship between incidental exposure and polarization. Cognitive elaboration, specifically on counter-attitudinal information, suggests a deeper reflexivity in reasoning about disagreeing content. Cognitively, it encourages the person to contemplate attitude-challenging messages and may result in an internal deliberative procedure that combines careful problem analysis. It may also promote adequate opportunities to present and internalize competing arguments in one's mind. The process could be similar to a deliberative interpersonal discussion that encourages a balance of argumentation (Friess & Eilders, 2015). The experience of the careful processing of counter-attitudinal information provides people with not only the rationales of oppositional political positions (Mutz, 2002b) but also a more in-depth and integrated understanding of the overall political context (Price & Zaller, 1993). This reflective thinking should decrease attitude polarization.

Attitudinally, cognitive elaboration on counter-attitudinal information may facilitate depolarization because processing attitude-challenging content can promote attitude ambivalence (Mutz, 2002a). Attitude ambivalence occurs when competing cognitive considerations and thoughts are present toward an object (objective ambivalence; Ajzen, 2001). Exposure to and elaboration on counter-attitudinal information increases the accessibility of a wider range of attitudes and makes people uncertain of their original positions with respect to issues or candidates. Although ambivalent and conflicting attitudes have been found to delay voting decisions and hinder participation (Chen & Lin, 2021; Matthes, 2012), they should also depolarize individuals' attitudes.

Accordingly, active engagement prompted by incidental exposure to counter-attitudinal information is expected to enhance cognitive elaboration on the information, which in turn depolarizes attitudes. Indeed, this elaborative processing may function under certain circumstances. In the next section, we further discuss an instrumental motivation—perceived utility of counter-attitudinal information—as the conditional factor that would influence the indirect effect of counter-attitudinal incidental exposure on depolarization.

The paths through scanning behaviors and elaboration on polarization, however, are not clear given the unsure relationship between scanning behaviors and elaboration raised above (RQ1). It is possible that scanning behaviors may affect attitude polarization directly without being mediated by cognitive elaboration because

scanning behaviors suggest that the incidentally encountered counter-attitudinal information is not only unexpected, but also unwanted. Unwanted incidental exposure is likely to trigger psychological reactance when it is considered a threat (Marcinkowski & Došenović, 2021). We propose the following hypotheses and research question:

> H3: Cognitive elaboration is negatively related to attitude polarization.
> H4: The indirect effect of incidental exposure to counter-attitudinal information on depolarization is mediated first through (enhancing) active engagement, then through (enhancing) cognitive elaboration.
> RQ2: How is the indirect effect of incidental exposure to counter-attitudinal information on (de)polarization mediated through passive scanning and cognitive elaboration?

The moderating role of informational utility

Individual motivational factors are powerful determinants in the media effects process. People who are motivated to gain information from the media will engage in effortful forms of processing to achieve their goals (Eveland et al., 2004). Thus, motivation can affect how individuals react to attitude-challenging messages and process the information. This study investigates informational utility, more specifically the perceived utility of counter-attitudinal information, as a potential motivational factor in counter-attitudinal incidental exposure.

Informational utility reflects instrumental goals and the fact that people seek out and engage with counter-attitudinal information under a variety of circumstances. A significant one is when people know that they will need counter-attitudinal information to solve practical problems, such as making decisions, learning about an issue, forming an attitude, or defending their position (Atkin, 1973; Canon, 1964; Knobloch-Westerwick & Kleinman, 2012). Research suggests that information utility can reduce the avoidance caused by cognitive dissonance when people are exposed to counter-attitudinal information (Knobloch-Westerwick, 2008) and further encourages engagement with it (Hmielowski et al., 2017). For instance, when exposure to counter-attitudinal information prompts attitude uncertainty, perceived utility of the information facilitates seeking additional information (Hmielowski et al., 2017). Thus, the perceived utility of counter-attitudinal information can affect the extent to which people react to the information after the exposure, in particular when information exposure is not intentional but incidental.

In addition to promoting seeking additional information, information utility can drive expressive behaviors. Some scholars have suggested that information utility carries civic-minded motivations, such as monitoring the environment, developing evaluative dispositions, and forming attitudes (Eveland, Morey, & Hively, 2011; Gil de Zúñiga, Valenzuela, & Weeks, 2016), which encourage people to express their opinions and participate in political discussions. Thus, informational utility should

encourage people to handle disagreeing information with a more active and effortful approach (Valentino et al., 2009), and it could override confirmation bias (Knobloch-Westerwick & Kleinman, 2012).

We propose that informational utility serves as the moderator that enhances the effect of incidental exposure on active engagement with counter-attitudinal information, such as seeking more counter-attitudinal information, forwarding the information, or expressing opinions, and it should attenuate the effect of incidental exposure on passive scanning.[2] Together with the serial mediating relationship proposed above, this study posits that informational utility moderates the effect of incidental exposure to counter-attitudinal information on response behaviors, which in turn will affect cognitive elaboration on the information and further influence attitude polarization. The following hypothesis of a moderated mediation relationship is proposed:

> H5: The indirect effect of incidental exposure to counter-attitudinal information on attitude polarization through response behaviors and cognitive elaboration is conditionally affected by the perceived utility of disagreeing information. More specifically, in the moderated serial mediation model, the perceived utility of disagreeing information will strengthen the path from incidental exposure to active engagement (H5a) and weaken the path from incidental exposure to passive scanning (H5b).

Method

Data

The data for this study were drawn from a two-wave national panel study conducted in the United States by Qualtrics, an online survey panel company. To proportionally represent the U.S. population, Qualtrics employed stratified quota sampling with the age, gender, income, and education quotas specified so that the sample resembles the distribution of these demographic variables as reported by the U.S. Census (see Online Appendix A). Both waves of the survey were administered online. The first wave (W1) was conducted from 7 to 23 February 2018. A total of 1,131 participants completed the survey. The second wave (W2) of data collection took place from 31 March to 27 April 2018, when 716 original respondents completed the survey questionnaire, yielding an acceptable retention rate of 63.31%. Although the data were not collected during an election period, the political issues, including immigration, abortion, gun control, and same-sex marriage, tested (i.e., issue polarization) in this study have been frequently discussed in previous election periods and in citizens' everyday lives. The issues are controversial and considered important in U.S. politics, where there is a history of disagreement in terms of public policy and public opinion (Pew Research Center, 2019, 2020b).

Measures

Incidental exposure to counter-attitudinal information

The measure of counter-attitudinal incidental exposure is adopted from previous studies (Lu & Lee, 2019; Weeks et al., 2017). Respondents were asked how often they accidentally encountered (did not seek out or expect to see) news or political information on social media that (a) disagreed with your political views, (b) was critical of a politician or a political party you support, and (c) was favorable toward a politician or a political party you oppose from 1 = *never* to 5 = *always*. The three items were averaged to form an index of incidental exposure to counter-attitudinal information (W1: $\alpha = 0.86$, mean $[M] = 2.96$, standard deviation $[SD] = 0.91$).

Response behaviors to disagreement

For active engagement, respondents were asked to think about how often they engage in five activities when they encounter news, information, or posts that they disagree with, for example, (a) respond to posts that you disagree with by clicking emoticons or sharing, and (b) search for more information about posts you disagree with (from 1 = *never* to 5 = *always*). The five items were averaged to form an index of engaging behaviors in response to counter-attitudinal information (W1: $\alpha = 0.89$, $M = 1.85$, $SD = 0.87$; see Online Appendix B for the complete items of the measures). For passive scanning, respondents were asked how often they engage in four activities such as (a) ignore news/information or posts that you disagree with, and (b) read posts that you disagree with but do not react such as by commenting. The four items were averaged to form an index (W1: $\alpha = 0.86$, $M = 2.76$, $SD = 1.08$).

To check the construct validity, the nine items were subjected to a factor analysis (with the extraction method of generalized least square and varimax rotation). The results show a two-factor structure of response behaviors to counter-attitudinal information (active engagement: eigenvalues = 3.46, 38.41% of variance; passive scanning: eigenvalues = 2.89, 32.15% of variance) that presents the proposed two types of response behaviors.

Cognitive elaboration on counter-attitudinal information

Focusing on counter-attitudinal information on social media, respondents were asked to think about the disagreeing news/posts they encounter and cross-cutting discussions or comments about news on social media and to indicate to what extent they agree with each of eight statements from 1 = *strongly disagree* to 7 = *strongly agree* (e.g., Eveland, 2004). Four statements are specified in the news exposure context (e.g., I often think about how the news and information I encountered on social media, particularly ones that I disagree with, relate to other things I know). The other four statements are contextualized in the discussion or comments circumstances. The eight items were averaged to create an index of cognitive elaboration on counter-attitudinal information (W1: $\alpha = 0.97$, $M = 3.61$, $SD = 1.49$; W2: $\alpha = 0.97$, $M = 3.28$, $SD = 1.55$).

Attitude polarization

Previous studies have tested individuals' positions on contentious issues such as immigration and same-sex marriage, as those issues have driven attitude polarization (Gil de Zúñiga, Correa, & Valenzuela, 2012; Kim, 2015; Lee, Choi, Kim, & Kim, 2014; Mason, 2015). Following those studies, attitude polarization about political issues was also measured in the current study.[3] Four paired statements with one focus on each of four political issues (i.e., immigration, abortion, gun control, and same-sex marriage) were presented and respondents were asked to indicate which statement matched their opinion better on a 7-point scale of 1 = *strong conservative* position, 7 = *strong liberal* position, and 4 = *neutral*. Attitude polarization was measured by folding the scale such that higher values indicate greater polarization (range 1–4: W1: $\alpha = 0.84$, $M = 2.84$, $SD = 0.82$; W2: $\alpha = 0.73$, $M = 3.04$, $SD = 0.74$).

Perceived utility of counter-attitudinal information

To examine the motivations for using counter-attitudinal information for instrumental purposes, we adapted a measurement from previous studies on informational utility and focused on counter-attitudinal information (Atkin, 1973; Eveland, 2004; Gil de Zúñiga et al., 2016). We asked respondents about their agreement with seven statements regarding the reasons they engage with counter-attitudinal news or posts on a 7-point scale from 1 = *strongly disagree* to 7 *strongly agree*, such as (a) I get more up-to-date information or new perspectives, and (b) I get more understanding of what other people think about things. The seven items were loaded on one factor and were averaged to form an index of perceived utility of counter-attitudinal information (W1: $\alpha = 0.96$, $M = 3.93$, $SD = 1.57$).

Control variables

This study controls a host of variables from W1 in the analysis to avoid confounding effects on the proposed relationships (see Online Appendix C), including demographic characteristics (i.e., age, gender, race, education, and income), news media use, political interest, political efficacy, political ideology, and personal issue importance.

Statistical analysis

The PROCESS macro with 10,000 bias-corrected bootstrap resamples and 95% confidence intervals (CIs) was used to examine the hypotheses and research questions (Hayes, 2018). First, we adopted template Model 80 from the PROCESS macro that examines a parallel-serial mediation model to assess the proposed direct (H1, H2, H3, and RQ1) and indirect relationships (H4 and RQ2). Statistical significance ($p < .05$) is achieved when lower bound and upper bound CI do not include zero. Second, we customized the Model 80 template following Hayes' (2018) instructions[4] to test perceived utility of counter-attitudinal information as the moderator in the

moderated mediation model (H5) by adding the moderating effects in the paths between incidental exposure and active engagement and between incidental exposure and passive scanning as shown in Figure 1.

We also took advantage of the two-wave panel design and incorporated a panel lagged and autoregressive analytic approach for the analyses to isolate the possible effects the dependent variables may have over time and to have a more robust analysis to assess the impact of each independent variable on the change in each outcome variable (Shah et al., 2005). In addition, given that the exposure to disagreement is in an incidental form (W1) that should prompt some immediate response, the measures of engaging and avoiding behaviors are both from W1. The measures of cognitive elaboration and attitude polarization are from W2 to capture the effects of incidental exposure and different response behaviors on cognitive and attitudinal outcomes. To make sure our proposed model is robust, we also adopted structural equation modeling to compare the proposed model with several alternative models (i.e., reversed causal direction and variables in different waves).

Results

Direct and indirect effects: The mediation model

As shown in Table 1, the results support that incidental exposure to counter-attitudinal information is positively related to engaging behaviors (Model 1: $B = 0.11$, standard error $[SE] = 0.03$, $p < .001$) and scanning behaviors (Model 2: $B = 0.17$, $SE = 0.04$, $p < .001$) in response to counter-attitudinal information, supporting both H1a and H1b. The standardized coefficient of the path from incidental exposure to engaging behaviors is 0.12 and the one to scanning behaviors is 0.15. We use the coefficients' corresponding 95% confidence intervals and 10,000 bias-corrected bootstrap resamples to test if the standardized coefficients are significantly different from each other (Cumming, 2009). The result shows that although the effect of incidental exposure is stronger on passive scanning (95% CI = [0.089, 0259]) than on active engagement (95% CI = [0.051, 0.169]), the difference is not significant (H1c; see Online Appendix D).

In addition, engaging behaviors (Model 3: $B = 0.29$, $SE = 0.08$, $p < .01$) are positively related to cognitive elaboration on counter-attitudinal information, supporting H2, but scanning behaviors are not (RQ1). The results in Model 4 show that cognitive elaboration is negatively related to attitude polarization ($B = -0.05$, $SE = 0.02$, $p < .05$), supporting H3.

The mediating analysis in PROCESS further demonstrates that there is a serial mediating relationship by which incidental exposure to counter-attitudinal information indirectly mitigates attitude polarization first by encouraging engaging behaviors in response to the information, then by enhancing cognitive elaboration on it ($B = -0.002$, $SE = 0.001$, 95% CI = [-0.004, -0.0002]), supporting H4 (see Online Appendix E for all indirect effects on polarization). However, counter-

Table 1. Regressions for the Serial Mediation Model and the Moderated Mediation Model

	Active engagement (W1) (Mediator)		Passive scanning (W1) (Mediator)		Cognitive elaboration (W2) (Mediator)	Attitude polarization (W2) (Criterion)
	Model 1	Model 1A	Model 2	Model 2A	Model 3	Model 4
Predictors and mediators						
Incidental exposure (W1)	0.11 (0.03)***	−0.10 (0.06)	0.17 (0.04)***	0.07 (0.09)	−0.04 (0.06)	0.02 (0.03)
Active engagement (W1)					0.29 (0.08)**	0.01 (0.04)
Passive scanning (W1)					0.04 (0.05)	0.06 (0.03)*
Cognitive elaboration (W2)						−0.05 (0.02)*
Moderator						
Perceived utility (W1)	0.11 (0.02)***	−0.05 (0.05)	0.16 (0.03)***	0.06 (0.07)	0.10 (0.04)*	−0.02 (0.02)
Interactions						
Incidental exposure (W1) × perceived utility (W1)		0.06 (0.01)***		0.03 (0.02)		
Control variables						
Age (W1)	−0.08 (0.02)***	−.07 (0.02)***	−0.00 (0.03)	0.00 (0.03)	−0.07 (0.04)*	−0.01 (0.02)
Education (W1)	−0.05 (0.02)**	−0.05 (.02)**	0.00 (0.03)	0.00 (0.03)	−0.03 (0.04)	−0.00 (0.02)
Income (W1)	−0.03 (0.02)	−0.03 (0.02)*	−0.02 (0.02)	−0.03 (0.02)	0.03 (0.03)	−0.00 (0.02)
Male (W1)	0.01 (0.05)	0.01 (0.05)	−0.42 (0.08)***	−0.41 (0.08)***	0.05 (0.11)	−0.05 (0.06)
White (W1)	−0.10 (0.06)	−0.08 (0.06)	0.04 (0.09)	0.06 (0.09)	0.03 (0.13)	0.16 (0.07)*
Political efficacy (W1)	0.11 (0.02)***	0.11 (0.02)***	−0.03 (0.03)	−0.03 (0.03)	−0.07 (0.04)	0.00 (0.02)
Political ideology (W1)	0.01 (0.02)	0.01 (0.02)	−0.01 (0.02)	−0.01 (0.02)	0.02 (0.03)	0.02 (0.02)
Political interest (W1)	0.00 (0.02)	−0.00 (0.02)	0.08 (0.02)***	0.08 (0.02)***	0.24 (0.03)***	0.08 (0.02)***
News media use (W1)	0.19 (0.03)***	0.18 (0.03)***	0.04 (0.04)	0.03 (0.04)	−0.00 (0.06)	−0.07 (0.03)*
Issue importance (W1)	0.02 (0.02)	0.01 (0.02)	0.05 (0.03)	0.04 (0.03)	−0.01 (0.04)	0.05 (0.02)*
Cognitive elaboration (W1)	0.21 (0.02)***	0.12 (0.03)***	0.22 (0.03)***	0.12 (0.04)**	0.33 (0.04)***	−0.02 (0.02)
Attitude polarization (W1)	0.01 (0.03)	0.02 (0.03)	0.01 (0.05)	0.01 (0.05)	−0.08 (0.06)	0.29 (0.03)***
Constant	0.38 (0.19)*	0.88 (0.24)***	1.07 (0.27)***	1.24 (0.35)***	1.13 (0.37)**	1.67 (0.19)***
R^2	0.42***	0.45***	0.22***	0.24***	0.29***	0.19***

Note: Entries are final unstandardized regression coefficients. Standard errors in parentheses.

*$p < .05$; **$p < .01$; ***$p < .001$.

attitudinal incidental exposure does not indirectly influence attitude polarization first through scanning behaviors then through cognitive elaboration (RQ2). This finding is not surprising given that there is no significant relationship between scanning behaviors and cognitive elaboration. Although the serial mediating relationship does not exist when scanning behaviors and cognitive elaboration are considered serial mediators together, the mediating analysis documents that scanning behavior itself does mediate the relationship between incidental exposure and attitude polarization ($B = 0.010$, $SE = 0.006$, 95% CI = [0.0002, 0.023]). Together, the results from the two significant mediating paths indicate that incidental exposure to counter-attitudinal information can indirectly mitigate attitude polarization if it leads to active engagement, which in turn prompts cognitive elaboration on the information. However, counter-attitudinal incidental exposure can polarize individuals' attitude if it elicits passive scanning.

Conditional indirect effect

The moderated mediation model customized from PROCESS Model 80 further illustrates how perceived utility of counter-attitudinal information moderates the mediated pathways (H5). In Table 1, Models 1A and 2A present the two regression models from PROCESS that are used to examine the interaction effects in the moderated mediation model. The results show that perceived utility of counter-attitudinal information significantly moderates the path from incidental exposure to engaging behaviors by enhancing the relationship (Model 1A: $B = 0.06$, $SE = 0.01$, $p < .001$), supporting H4a. However, perceived utility of counter-attitudinal information does not moderate (weaken) the path from incidental exposure to scanning behaviors (H4b).

The bootstrapped 95% bias-corrected confidence intervals suggest that counter-attitudinal incidental exposure mitigates polarization by first boosting active engagement and then enhancing cognitive elaboration only when respondents had a high level ($B = -0.003$, $SE = 0.002$, 95% CI = [−0.007, −0.001]) and a middle level ($B = -0.002$, $SE = 0.001$, 95% CI = [−0.004, −0.0003]) of perceived utility of counter-attitudinal information, but not a low level ($B = -0.001$, $SE = 0.001$, 95% CI = [−0.002, 0.0002]; see Online Appendix F). The visualization of the moderating effect in the mediating relationship (Figure 2) demonstrates that perceived utility of counter-attitudinal information influences the portion (from incidental exposure to active engaging behaviors) of the indirect effect on polarization, and the moderating effect represents the divergent-positive type of contingent moderation under Holbert and Park's (2020) typology.

In sum, the results suggest that the varying indirect effects on attitude polarization are contingent on middle to high levels of perceived utility of counter-attitudinal information. In addition, when perceived utility increases, the indirect effect of counter-attitudinal incidental exposure on attenuating attitude polarization is enhanced. Figure 3 illustrates the final moderated serial mediation model.
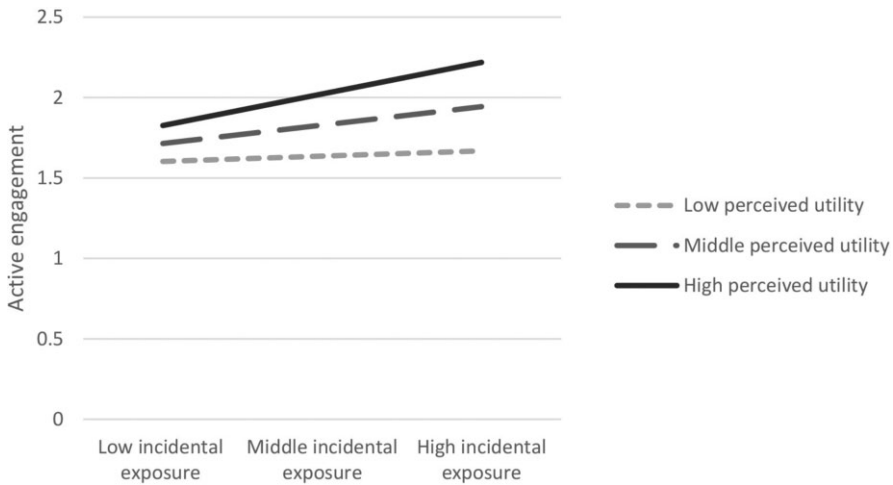
Figure 2 The moderating role of perceived utility of counter-attitudinal information in influencing the portion (from incidental exposure to active engagement) of the indirect effect on polarization.
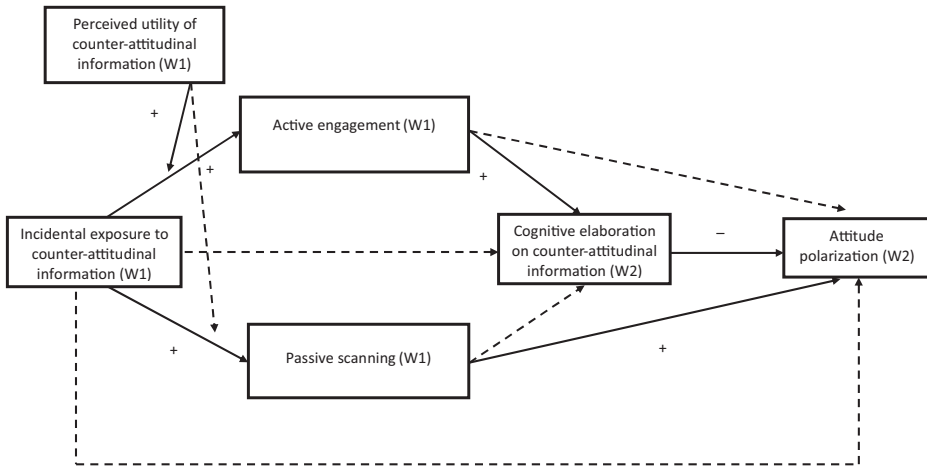*Note*: The figure is created with the information provided in PROCESS.

Figure 3 The final moderated serial mediation model.

Comparing the proposed and alternative models

To provide empirical support for the causal relationship in our model, we replicated the proposed moderated mediation model with structural equation modeling and compared it with alternative models. First, a confirmatory factor analysis was conducted for the measurement model, with each of the items included as reflective

indicators of their five respective unobserved constructs. All item loadings were significant ($p < .001$), and the overall model fit was very good: $\chi^2 = 991.595$, $df = 408$, $p < .001$; the comparative fit index [CFI] $= 0.969$, the Tucker–Lewis index [TLI] $= 0.965$, the root mean square error of approximation [RMSEA] $= 0.045$, and the standardized root mean squared residual [SRMR] $= 0.065$ (see Online Appendix G for the confirmatory factor analysis properties).

Second, the hypothesized structural model was tested. Only Akaike information criterion [AIC] and Bayesian information criterion [BIC] are provided when there are interaction effects between two latent variables, and they are used for model comparison. The hypothesized model with the observed variables was tested again and the results indicated that the model fits the data very well across goodness-of-fit indexes ($\chi^2 = 3.530$, $df = 5$, $p < .619$; CFI $= 1.000$, TLI $= 1.020$, RMSEA $= 0.000$, and SRMR $= 0.002$ (see Online Appendix H).

Third, we constructed four alternative models for comparison. For the first alternative model, we used the measure of cognitive elaboration in W1 instead of the one in W2; for the second alternative model, we used the measures of active engagement and passive scanning in W2 instead of those in W1; for the third alternative model, we tested a model with completely reversed paths; and for the fourth alternative model, we switched paths within waves. Online Appendix H presents the different figures and detailed information about the model comparison. According to the fit indicators for each of the models, our proposed model has the strongest empirical support.

Discussion

Social media has evolved from a social network platform to a source of information. With the expansion of network heterogeneity serving as diverse information sources, there are ever more opportunities for exposure to counter-attitudinal perspectives on social media (Bakshy et al., 2015; Beam et al., 2018; Lee et al., 2014), which has raised questions about the influences that cross-cutting exposure on social media may have on the development of deliberative democracy. Although research has in general shown a positive influence of incidental exposure to news on citizens' cognitive development and behavioral engagement (Lu & Lee, 2019; Valeriani & Vaccari, 2016), it is not clear whether the prediction continues to be optimistic when the information individuals are incidentally exposed to is counter-attitudinal. Focusing on incidental exposure to counter-attitudinal information on social media, this study provides a more detailed mapping of its effect on attitude polarization by investigating how individuals respond to attitude-challenging information.

The extent to which people respond to disagreeing information is highly related to the amount of disagreeing information they are exposed to. As documented in this study, counter-attitudinal incidental exposure can lead to both passive scanning and active engagement, and the effect on passive scanning is stronger than on active engagement, though the difference is not significant. This suggests that people are

likely to ignore or just take a quick glance at the counter-attitudinal information they are incidentally exposed to and do not want to have further engagement with the information. This finding aligns with Festinger's (1957) cognitive dissonance theory: attitude-challenging information is likely to prompt cognitive dissonance, which gives rise to action to reduce or eliminate the psychologically uncomfortable state of dissonance. Although counter-attitudinal incidental exposure also prompts active engagement, though less compared to passive scanning, we expect that some conditional factor (i.e., perceived utility of counter-attitudinal information) can strengthen this path. The extent to which counter-attitudinal incidental exposure leads to passive scanning and active engagement is important because these actions may influence cognitive and attitudinal outcomes differently.

The results suggest that responding with an active-engaging or a passive-scanning approach has differential effects on whether people continue to cognitively engage with disagreeing information, which in turn will accentuate or mitigate attitude polarization. Our findings document two indirect paths for how counter-attitudinal incidental exposure affects attitude polarization, with one path mitigating polarization and the other exacerbating it. More specifically, incidental exposure to counter-attitudinal information can depolarize attitude by promoting active-engaging responses to the information followed by cognitive elaboration on it (i.e., a serial mediation). This suggests that the act of trying to actively engage with disagreeing information, such as by expressing opinions, sharing disagreeing information, and searching for more information related to the disagreeing content, helps to prompt more thoughtful consideration of diverse political viewpoints, and this internal deliberation may help to depolarize one's attitude. This finding echoes past research regarding the extent to which disagreement has a salutary influence on deliberative democracy (Gutmann & Thompson, 1996; Kim, 2015).

In contrast, counter-attitudinal incidental exposure indirectly polarizes attitude by promoting passive-scanning responses (i.e., a simple mediation), such as glancing at or ignoring the information and refusing to join the discussion. The act of staying away from the counter-attitudinal information one is incidentally exposed to suggests that the political information is *unwanted*, so the information may simply annoy them and make them desire to not continue to elaborate on it (Marcinkowski & Došenović, 2021). Without this internal deliberation process but feeling the uncomfortableness triggered by the dissonant information, people are likely to bolster their preexisting political attitude. This finding suggests why counter-attitudinal exposure, which is a critical element in deliberative democracy, may not be beneficial in certain circumstances.

While we may feel at ease in presuming that the effect of counter-attitudinal incidental exposure can contribute to depolarizing attitudes through active engagement and cognitive elaboration, this indirect effect is conditionally affected by one's perceived utility of counter-attitudinal information. The indirect effect is significant only when one's perceived utility is at a high or a middle level, but not at a low level. Individuals' motivation is often a determining factor in how they select, engage

with, and process information. When people are motivated by instrumental needs, they should be more accepting of disagreement and more open-minded to ponder the information for personal or public good. Thus, the perceived utility of counter-attitudinal information plays a critical role in our findings about whether people will take an engaging approach to respond to the information. Engaging and scanning responses further influence individuals' attitudes in opposite ways. Incidental exposure to counter-attitudinal information is, therefore, a double-edged sword that should be cautiously promoted.

Political disagreement is an essential component of the development of a deliberative democracy. Social media platforms provide an environment that offers more chances to be exposed to political disagreement through incidental encounters. This seemingly positive synergy, however, may not be optimistic all around. Our results highlight some significant theoretical contributions. First, as the previous literature shows mixed findings about the relationship between disagreement and deliberation (Kim, 2015; Wojcieszak, 2011), this study also suggests a mixed picture with a model that combines both positive and negative effects in contributing to a deliberative society. Nevertheless, it provides an explanation with underlying mechanisms (i.e., motivation, response to disagreement, and cognitive elaboration) that have been missed in previous research but which contribute to this mixed picture.

Second, media studies have long been shifting from examining media effects with the "Stimulus–Response" framework to investigating indirect effects by exploring what factors mediate the effect of media use on political outcomes (Cho et al., 2009; Eveland, 2001; McLeod et al., 2001). However, studies on incidental exposure have largely stayed within the direct association framework by examining the effect of incidental exposure on cognitive and behavioral outcomes. Using the revised communication mediation model, this study demonstrated the important communicative and cognitive factors that mediate the effect of incidental exposure on attitudinal polarization.

This study goes beyond the direct association and proposes a moderated serial mediation model to advance the literature on incidental exposure, political disagreement, and attitude polarization by detailing the reasoning process that involves different levels of engagement with the information and the conditional factors. We offer insight into the dynamic process of incidental exposure and provide empirical support for Matthes et al.'s (2020) argument that incidental exposure is not a static concept. Particularly when it comes to incidental exposure to counter-attitudinal information, we should take different mechanisms and factors (e.g., motivations, response behaviors, and elaboration) into consideration to better understand the nuanced effects of incidental exposure to counter-attitudinal information on attitudinal outcomes.

What matters for a beneficial effect of cross-cutting incidental exposure on depolarization turns out to be a strong perceived utility of counter-attitudinal information as it helps to encourage people to actively engage with disagreement through information- and expression-related behaviors on social media. Exposure

to disagreement is thought to be democratically valuable, but without being motivated to utilize attitude-challenging information for an instrumental purpose, people are likely to ignore it, thus diminishing its benefits. How to promote the perceived utility of counter-attitudinal information when incidental exposure to counter-attitudinal information typically occurs in entertainment or nonpolitical use on social media (Kim et al., 2013; Wojcieszak & Mutz, 2009) thus becomes a pressing question.

Although this study advances our understanding of the effect of incidental exposure to counter-attitudinal information on attitude polarization, some limitations must be noted. Methodologically, the two-wave national panel data with demographic quota specified to resemble the U.S. population and the autoregressive analytic approach should help to establish causal order for our proposed indirect effect and provide a picture of a process that can be generalized to a broader population.[5] The two waves are about one and a half months apart, ensuring an acceptable retention rate (63%). However, the shortness of this period may raise some questions about clear causal relationships. Furthermore, it may not be easy to trace the causes and effects when it comes to the relationships between incidental exposure (W1) and response behaviors (W1) and between cognitive elaboration (W2) and attitude polarization (W2) because the variables were measured in the same waves. We did conduct model comparisons to assure that our proposed model has a strong theoretical and empirical support. Still, we must bear in mind that the findings cannot rule out every potential alternative mediator for the political outcomes (Chan, Hu, & Mak, 2020). Future researchers could collect data from multiple waves with a longer time period between the waves to identify a more conclusive causal effect.

In addition, the measurement and conceptualization of response behaviors are still broad. Although this study distinguishes behaviors into active-engaging and passive-scanning responses, it does not account for the attributes of these responses. For example, the engaging response could occur in an emotional or uncivil way by attacking the counter-attitudinal perspective. In this case, it is doubtful the reaction will lead to greater deliberative elaboration and less polarization. Future researchers can examine more types of responses with different attributes in more detail.

Another limitation is the measurement of social media use. Our study only asked about social media use in general terms without specifying the platform. Future researchers can design questions related to specific social media platforms given that each may have unique features and affordances by which the effects of incidental exposure and response behaviors may differ. In addition, our survey research relies on subjective self-reported measures of information exposure, behavioral engagement, and cognitive elaboration rather than observing respondents' actual activities. Future researchers may design an experiment to track participants' behaviors after being incidentally exposed to disagreement. A thought-listing task may also provide insight into participants' reasoning ability. Furthermore, our study only examined one individual-motivational factor (i.e., perceived utility) that conditionally affects the relationships. Future researchers could consider testing other

conditional factors, such as message, source, and situational factors, in influencing the indirect paths (Matthes et al., 2020), particularly the one through scanning behaviors. This would add to the understanding of under what conditions people would have a scanning response that could further polarize attitude.

The political outcome we measured is only one type of polarization. Similar to public opinion survey and deliberative polls that ask people's opinions and thoughts on different policies and political issues to understand opinion polarization (Fishkin, 2018; Mason, 2015), we measured political attitudes about four controversial issues and averaged the responses to capture issue polarization as the outcome variable. One may question why our other measurements are not issue-specific. Given that people are likely to get news and discuss politics on social media (Pew Research Center, 2019), social media users are likely to be exposed to prominent and controversial issues. Measures of exposure to disagreement focusing on a broad set of media content (e.g., counter-attitudinal information based on political views and partisanship) are therefore plausible. Our approach has also been adopted in previous studies to understand the relationship among media/social media use, disagreement, and issue polarization (Kim, 2015; Lee et al., 2014; Mason, 2015). Indeed, future researchers may wish to examine issue-specific relationships that tap into the notion of issue publics (Krosnick, 1990), but more resources will be needed when the number of measured issues increases. Researchers could also focus on other forms of polarization, such as ideological and affective polarization. For instance, affective polarization, which refers to the extent to which partisans feel antagonism toward political out-groups, has been evident in the United States (Garrett et al., 2014). Given the potentially harmful consequences of affective polarization, such as political cynicism, incivility, and intolerance (Layman, Carsey, & Horowitz, 2006), future researchers could also explore whether and how incidental exposure to counter-attitudinal information on social media is associated with it.

Finally, while the effect sizes of the indirect effects were relatively small, they are reasonable because effect sizes are generally smaller as more mediators are added to the serial mediation model (i.e., Hmielowski & Nisbet, 2016; Song & Fox, 2016). It is possible that the two proposed paths may partially cancel one another out. We compared the two indirect paths, and the differences between them were only marginally significant (B = 0.008, SE = 0.006, 90% CI = [0.0003, 0.019]. The indirect effect through passive scanning is marginally stronger than the one through active engagement and cognitive elaboration. The different magnitudes of the coefficients between the two mediators may indicate that the negative consequences of incidental exposure to counter-attitudinal information (i.e., reinforcing attitude polarization) can be slightly greater than the positive influences if individuals do not actively engage with diverse perspectives and just pass by those views. Thus, the role of active citizens who actively engage with various and different opinions is emphasized. In addition, as we argue, the perceived utility of counter-attitudinal information plays an essential conditional role as it can prompt active engagement, which can further strengthen the depolarizing effect and help to counteract the polarizing effect. Our

proposed model aims to generate insight into the pathways and mechanisms in the influence of incidental exposure to counter-attitudinal information that could be beneficial or detrimental to deliberative democracy.

Despite these limitations, we believe our proposed model advances the theoretical framework for examining incidental exposure and provides a clearer picture of the co-occurring effects of incidental exposure and cross-cutting exposure on social media. Social media provide a good opportunity for people to be exposed to different opinions and to learn from diverse political views; however, incidental exposure to counter-attitudinal information should be carefully promoted because several factors must be taken into account for disagreement to exert a deliberative influence on depolarization. Otherwise, the incidental exposure could boomerang and intensify political conflict.

Data availability

The data underlying this article will be shared on reasonable request to the corresponding author.

Supporting information

Additional Supporting Information may be found in the online version of this article.

Please note: Oxford University Press is not responsible for the content or functionality of any supplementary materials supplied by the authors. Any queries (other than missing material) should be directed to the corresponding author for the article.

Notes

1. Suggesting an understanding of incidental exposure as a dynamic process, Matthes et al. (2020) proposed two levels of incidental news exposure: the *passive scanning* of incidentally encountered political information (first level) and the *intentional processing* of incidentally encountered content appraised as relevant (second level). They consider that the two levels are sequential as people first scan the content and then decide to process it. We applied the idea of a dynamic process with a slight difference given that our model is built on the revised communication mediation model. We suggest that people can react to incidentally exposed content differently and the two types of response behaviors (i.e., passive scanning and active engagement which are parallel in the model) can influence cognitive processing and attitude polarization differently.
2. The first antecedent in the communication mediation model usually comprises people's predispositions, such as structural, cultural, and motivational factors the audience brings to the process of message reception, which influence the media effect. The factors can be treated as antecedents to understand what led to individuals' media use or exposure to certain types of messages. They can also be considered moderators to explain how media effects vary depending on an individual's predispositions (McLeod et al., 2001).

3. The issues of immigration, abortion, gun control, and same-sex marriage have been controversial throughout U.S. history, and citizens' attitudes toward these issues reflect strong views from different political orientations, providing a suitable context in which to examine polarization (Wojcieszak & Rojas, 2011).

4. Appendix B in Hayes' (2018) *Mediation, Moderation and Conditional Process Analysis* describes how to construct and customize models in PROCESS.

5. We had slightly more responses among the group of 35- to 44-year-olds (from 17.3% to 22.3%), and a small drop among the group of 55- to 64-year-olds (from 16.9% to 11.6%), but the distributions of other demographic characteristics and partisanship in W1 and W2 are very similar. Please see Online Appendix I for the distribution of partisanship in W1 and W2.

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Conflict of Interest

We have no conflict of interest to declare.

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