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Political Rumor Communication on Instant Messaging Platforms: Relationships With Political Participation and Knowledge

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Modern communication technologies have vastly increased the reach and influence of political rumors, with negative consequences for democratic political systems globally. Rumor communication can be theorized as a form of political talk that helps citizens grapple with the uncertainty inherent in politics, form opinions, and build solidarity with others. The present study examines how one type of communication technology—instant messaging platforms—might facilitate forms of rumor communication that can influence participation in and knowledge about politics. Using original panel survey data from the 2017 South Korean election, we find that rumor communication on the popular instant messaging platform KakaoTalk predicts increased campaign participation, but not campaign knowledge. Further, political rumor communication on instant messaging platforms appears to exacerbate participatory inequality between those with weak and those with strong political interest and ideology.

Keywords: political rumors, political participation, political knowledge, instant messaging, KakaoTalk, South Korea

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Rumors have been a part of politics since ancient Greece (Sunstein, 2014), helping to fuel popular revolutions and determine the fate of presidencies (Bartholomew & Hassall, 2015; Dunn, 1999). Political rumors—typically defined as pieces of political information that are circulated without verification, often outside official media channels (DiFonzo & Bordia, 2007b; Weeks & Garrett, 2014)—can also be theorized as one dimension of everyday political talk. By discussing political rumors, citizens grapple with the uncertainty inherent in politics and work to shape their own views and build solidarity with others (DiFonzo & Bordia, 2007a; Edy & Risley-Baird, 2016; Margolin, Hannak, & Weber, 2018). Edy and Risley-Baird (2016) highlighted the social nature of rumors in their concept of "rumor communities," which they used to describe the social networks that form among those who discuss rumors.

As modern communication technologies have increased the reach and influence of political rumors (Garrett, 2011; Sunstein, 2014; Weeks & Garrett, 2014), they have also expanded opportunities for rumor communities to develop and thrive. In particular, instant messaging and mobile chat platforms present intriguing, but relatively unexplored, contexts for rumor communication. Popular instant messaging apps such as WhatsApp and WeChat create the type of closed social networks populated by primarily close ties with rich potential for political talk (see Kligler-Vilenchik, 2019) and circulation of misinformation (Rossini, Stromer-Galley, Baptista, & Veiga de Oliveira, 2020). Yet to date, little is known about how rumor communication on instant messaging platforms can influence users' engagement in politics. Market research analysts estimate that the top three instant messaging platforms (WhatsApp, WeChat, and Facebook Messenger) have nearly 4 billion users internationally ("Global Social Media Ranking 2019," 2019). Understanding the way these widely used communication technologies are amplifying or transforming the age-old practice of political rumoring has important implications for political systems around the globe.

To help advance our understanding of rumor communication on instant messaging platforms, the present study examines the consequences of discussing political rumors on KakaoTalk, a popular South Korean instant messaging app that previous research indicates might help facilitate unique communities for political talk (Kligler-Vilenchik, 2019). In doing so, we emphasize the communicative dimensions of rumors and consider how talking about rumors on KakaoTalk might facilitate participation in and knowledge about political campaigns. Findings from our analyses of unique panel survey data—collected during the 2017 South Korean presidential election—offer three important insights into political rumoring on instant message platforms.

First, we found that more than 20% of the respondents in our sample reported using KakaoTalk for political rumor communication, supporting the possibility that instant messaging apps such as KakaoTalk are contexts in which rumor communities can emerge (Edy & Risley-Baird, 2016). Second, we examined whether rumor communication on KakaoTalk was related to increases in political participation and political knowledge, two key dimensions of democratic citizenship. Although using KakaoTalk for rumor communication predicted increased participation in political campaigns, it did little to help respondents learn about the campaign. This highlights one way in which the use of communication technology for rumors may have distinctly negative consequences for democratic governance (Fowler & Margolis, 2014). Third, although the popular conception is that the rumors circulated on social media are a danger to the politically naïve, we found evidence that those with higher levels of political interest and more extreme ideological identification may be most influenced by political rumors on KakaoTalk. Ultimately, the present study suggests that rumor communication on instant messaging platforms, such as KakaoTalk, may serve to boost

participation among those who are already oriented toward politics (Edy & Risley-Baird, 2016; Weeks & Garrett, 2014), while doing little to deepen their political knowledge.

Rumors and Political Talk

At the outset, it is important to distinguish political rumors from "fake news," dis-information, and propaganda, each of which has been heavily studied in the context of social media (see Tucker et al., 2018). Unlike these other types of misinformation, political rumors can vary in both truthfulness and intended effect on audiences. What typically defines political rumors is that they are circulated outside the journalistic verification process that produces mainstream news content (DiFonzo & Bordia, 2007b; Weeks & Garrett, 2014). Although rumors often do turn out to be untrue or maliciously spread, what distinguishes them is their lack of verification.

Another crucial defining feature of rumors is that they are socially constructed. DiFonzo and Bordia (2007a) argue that when individuals encounter ambiguous or threatening situations, they often seek resolution by reaching out to others to make sense of things. Rumors arise as individuals generate, discuss, and scrutinize "informal hypotheses" about some aspect of the world that causes them psychological distress (DiFonzo & Bordia, 2007a). Crucially, this makes rumor inherently *communicative*. This aspect of rumors is highlighted by the emergence of "rumor communities," within which people discuss rumors to achieve collective meaning making (DiFonzo & Bordia, 2007a; Edy & Risley-Baird, 2016).

Given this line of theorizing, the present study focuses explicitly on the communicative dimension of rumors. While many studies have examined how reception of rumors can lead to misperceptions or false beliefs (see Sunstein, 2014), we consider how the collective meaning-making process that motivates rumor communication might influence political knowledge and participation. Doing so helps us identify not only communication technologies that spread rumors (Margolin et al., 2018), but those that can facilitate more dialogic forms of rumor communication (Edy & Risley-Baird, 2016; Shin, Jian, Driscoll, & Bar, 2017). In the next section, we consider why instant messaging apps such as KakaoTalk are particularly well suited for this purpose.

KakaoTalk as a Context for Political Rumors

Research has established that the Internet and social media can serve as environments for effective rumor circulation (Rojecki & Meraz, 2014; Shin et al., 2017). We argue that instant messaging apps may offer particularly fertile ground for rumor communication for three reasons. First, instant messaging platforms are primarily used for informal interactions among close ties such as friends, family, and coworkers. Studies have found that information from close ties is often perceived as more trustworthy and believable, which may in turn help promote rumor transmission (Garrett, 2011). Second, many instant messaging apps have group messaging features, which can create the type of relational conditions ideal for political rumor communication. Group chats can facilitate "micro-networks" in which users develop intimacy and a sense of belonging (Jin & Yoon, 2016; Lee, 2011). This may help further cultivate the formation of rumor communities, in which social interaction is of sufficient quality to support meaningful political talk (Kligler-Vilenchik, 2019). Third, many instant messaging apps host closed networks, which afford users a greater degree of control over the visibility of their communication. Talking about rumors may be less

socially risky in closed networks than in open networks (e.g., Twitter), where users' behavior is often visible to a large, mixed audience. On instant messaging platforms, discussion of rumors can occur without social observability concerns. Users may therefore perceive relatively lower social sanctions for discussing unverified information with others (Fine, 2007). Indeed, Rossini and associates (2020) found pervasive sharing of political misinformation on the mobile social media WhatsApp.

South Korea presents an ideal national context for examining rumor communication on instant messaging platforms. Not only is South Korea an advanced democracy, but it also boasts one of the highest rates of mobile phone use in the world (Silver, 2019). Further, the circulation of rumors on instant messaging platforms has played a prominent role in contemporary South Korean politics (Mosler, Lee, & Kim, 2017). In this study, we focus specifically on KakaoTalk, one of the most popular mobile messaging platforms in South Korea. KakaoTalk enables not only person-to-person instant messaging, but also various types of group conversations. Ninety four percent of South Korean adults use group chats, and each user engages in an average of 6.5 group chats every day (Han, 2018). As the dominant mobile messenger in South Korea, KakaoTalk is the number one place where people encounter political rumors according to press reports (Oh & Park, 2017). The circulation of political rumors in KakaoTalk is especially prevalent during election seasons, when the private lives of politicians are put under immense scrutiny (Lee, 2011). This makes KakaoTalk not only an important site for studying Korean politics, but also an ideal context for testing more general predictions about how rumor communication on instant messaging platforms influences political knowledge and participation.

Rumors and Political Participation

Given that the present study focuses on the communicative dimensions of political rumors, it is important to first consider how more general forms of political talk are related to political participation. Research suggests that the frequency, setting, and nature of political discussion can all influence whether or not citizens volunteer for campaigns, attend rallies, or cast their votes (Kwak, Williams, Wang, & Lee, 2005; Mutz, 2002). Various theoretical perspectives suggest that political talk can help individuals form considered opinions, build political solidarity, and become affectively engaged (Kim & Kim, 2008; Mutz, 2006). Can talking about political rumors on KakaoTalk similarly encourage participation?

Rumor communication in particular might be positively related to campaign participation for two main reasons. First, given the nature of close-tie, small-group-based communication on apps such as KakaoTalk, people are likely to encounter rumors that reinforce their existing political views. Individuals' close social networks tend to consist mostly of people who share similar political attitudes and preferences (McPherson, Smith-Lovin, & Cook, 2001; Mutz, 2006). In the context of political rumors, Garrett (2011) found that rumors shared among family and friends via e-mail were disproportionately slanted toward people's prior beliefs. One potential consequence of this attitude-consistent exposure is that it can strengthen political attitudes and reinforce political self-concepts (Knobloch-Westerwick & Meng, 2009; Mutz, 2006; Sunstein, 2014). Because extreme attitudes are more cognitively accessible and serve as greater decision cues, attitude strength can have a strong impact on political behavior (Lavine, Borgida, & Sullivan, 2000). Indeed, research shows that exposure to attitude-reinforcing information can drive people

to participate in campaigns and elections (Dilliplane, 2011; Feezell, 2016). We therefore expect rumor communication on KakaoTalk to motivate people to participate in politics by reinforcing their political beliefs.

Second, rumor communication may help build social and political solidarity. Individuals often intentionally produce and spread negative rumors about their adversaries to enhance the status of their group or to undermine opponents' credibility (DiFonzo & Bordia, 2007a). The social exchange of rumors can thus serve to communicate group norms and define group boundaries (DiFonzo & Bordia, 2007a). Higher identification with in-groups can fuel collective action, such as voting and taking part in demonstrations, to protect the group's welfare (e.g., Miller, Gurin, Gurin, & Malanchuk, 1981). Additionally, if people do encounter rumors intended to undermine their preferred candidates or disparage their closely held beliefs, they may experience motivating anger and thus take action (Valentino, Brader, Groenendyk, Gregorowicz, & Hutchings, 2011).

In spite of this research suggesting a positive relationship between rumor communication and political participation, there is also evidence supporting the opposite prediction; talking about rumors on KakaoTalk might discourage political participation. First, the dissemination of unverified and often deceptive claims may feed uncertainty regarding political candidates, which can lead to ambivalence among voters. Existing research shows that people who hold conflicting or ambivalent views are less likely to participate in campaign activities than those with clear preferences (Mutz, 2002; Nir, 2005). Second, unverified disparaging claims and scandalous allegations can create a climate in which politicians and politics are seen as long on "sleaze" and short on substance (Pattie & Johnston, 2001). The use of KakaoTalk for rumor communication may thus further damage public confidence and respect for political institutions, which is an essential condition for traditional political participation (Putnam, Leonardi, & Nanetti, 1994). During elections, politically distrustful citizens may choose to abstain from participation altogether (Bélanger & Nadeau, 2005; Pattie & Johnston, 2001). It is thus plausible that political rumors may damage citizens' trust and discourage participation in elections.

Given the mixed possibilities outlined earlier, we advance the following research question regarding the relationship between rumor communication on KakaoTalk and campaign participation:

RQ1:   How is KakaoTalk rumor communication Wave 1 (W1) associated with political campaign participation Wave 2 (W2)?

Rumor Communication and Political Knowledge

The next question is whether rumor communication on KakaoTalk helps citizens learn about politics. Many have argued that it is essential for citizens who participate in the political process to be well informed (Delli Carpini & Keeter, 1996). Participation in the absence of political knowledge can be misguided or result in outcomes that run counter to the interests of voters (Fowler & Margolis, 2014). Therefore, it is normatively desirable for communication that stimulates political participation to also increase political knowledge (Kwak et al., 2005).

There is reason to predict that the use of KakaoTalk for rumor communication is positively related to increased campaign knowledge. Rumors have the potential to encourage information-seeking behavior because they occur in situational contexts of ambiguity and uncertainty (DiFonzo & Bordia, 2007a). When events are unclear and unpredictable, people tend to experience anxiety, which motivates them to scrutinize their environment (Marcus, Neuman, & MacKuen, 2000). Given that rumor communication often involves uncertainty or anxiety, it follows that encountering rumors could encourage information-searching behavior. For example, Weeks and Southwell (2010) found that people were motivated to learn more about political topics after hearing rumors about them. Similarly, members of rumor communities respond to uncertainty by jointly producing and circulating rumors to give an interpretive frame to a topic and make it more predictable (DiFonzo & Bordia, 2007a). This inherently involves the exchange of ideas and opinions as people attempt to explain and evaluate rumors and to persuade others to believe or disbelieve them (Bordia & DiFonzo, 2004). Accordingly, those who take part in the circulation and discussion of rumors are not only exposed to the rumor itself, but also likely to encounter a wider range of information and views surrounding the rumor topic, which might lead to gains in broader political knowledge.

Despite these reasons to expect a positive relationship between rumor communication and political knowledge, there is also evidence supporting the opposite prediction. As we have noted, political rumors have the potential to foster cynicism or apathy (Pattie & Johnston, 2001), which may leave citizens unmotivated to engage in further information-seeking behavior. Although discussing rumors with others can potentially expose people to a wide range of information, the ability to tell facts from false information differs from person to person. Because many rumors turn out to be false, they may also lead people down the path toward more misinformation. Furthermore, the way people react to rumors is likely to be biased by their prior views—they are usually eager to accept attitude-consistent information that lacks a secure standard of evidence, and quick to reject well-supported views that challenge their previously held beliefs (i.e., motivated reasoning; Taber & Lodge, 2006). Because people are likely to scrutinize political rumors discriminately, they may actively search for more information to refute the rumors they disagree with, while failing to do so for rumors that reinforce their existing views (Weeks & Garrett, 2014). This may limit their ability to learn new information about political candidates. Given the conflicting evidence reviewed earlier, we propose the following research question:

RQ2:   *How is KakaoTalk rumor communication (W1) associated with campaign knowledge (W2)?*

The Moderating Role of Political Attitudes

Finally, we address the possibility that the relationships between rumor communication on KakaoTalk and campaign participation and knowledge might be moderated by individuals' preexisting political attitudes. This is an important possibility to examine for two reasons—one practical, one theoretical. First, a key question in the present study is: For whom might rumor communication be influential? Popular narratives surrounding misinformation and political rumors often involve the fear that the politically naïve will become misinformed and misguided (e.g., Wallace, 2017). If the politically naïve are indeed more vulnerable to rumor effects, rumor discussion could mobilize such disinterested citizens, helping them become more motivated and involved in politics. This would present an intriguing and underacknowledged upside to rumor communication. On the other hand, it may be that the effects of rumor communication are

limited to those with strong existing political attitudes. In this case, it is possible that rumor communication actually widens gaps in political participation and knowledge between the segment of the population with established political interest and ideology, and everyone else. The answer to this question thus has important practical implications for rumor communication within democratic political systems.

From a theoretical perspective, there is ample reason to suspect that the effects of rumor communication should be dependent on preexisting political attitudes. A variety of political communication studies have demonstrated that those with strong political interest, partisan affiliation, or political ideology are more likely to be affected by political media use (Tsfati & Cohen, 2013). This pattern has similarly been found in studies of political misinformation, in which individuals with strong partisan affiliations are more likely to both engage with and be affected by dubious political content (Guess, Nyhan, & Reifler, 2018; Weeks & Garrett, 2014). There is good reason to suspect that political rumors may also be most influential among those with established political attitudes. As we have noted, a defining characteristic of political rumors is that they are uncertain (DiFonzo & Bordia, 2007b). Accordingly, rumors offer prime fuel for motivated reasoning, because individuals can resolve uncertainty by adhering to their preexisting views or subscribed ideologies (Taber & Lodge, 2006; Weeks & Garrett, 2014). Such partisan-motivated reasoning can increase confidence in prior attitudes, which prompts action (Druckman, Peterson, & Slothuus, 2013). This suggests that for rumor communication to bolster participation via opinion reinforcement, individuals must have some established political views to begin with.

Will this also apply to the influence of rumors on political knowledge? Because people with established political views may employ motivated reasoning to reduce the uncertainty involved in rumor communication, they are more likely to focus on partisan cues than on substantive political facts (Druckman et al., 2013; Taber & Lodge, 2006). Consequently, rumor communication may do little to stimulate political learning among those with established political views. By extension, we could assume that in the absence of strong prior attitudes, individuals may be more open to new information, which could encourage learning. On the other hand, people without political interest or awareness may lack the motivation to carefully scrutinize political information, and therefore uncritically accept whatever rumors they encounter (Zaller, 1992). In fact, many of the arguments advanced earlier regarding the potential influence of KakaoTalk rumor communication on campaign participation and knowledge are dependent on individuals having some preexisting level of political interest or ideological affiliation. To test this possibility, we pose the following research question:

RQ3:   *Are the relationships between KakaoTalk rumor communication (W1) and campaign participation (W2) and campaign knowledge (W2) moderated by political interest (W1) or ideological strength (W1)?*

Method

Sample

To examine our research questions, we used data from an original survey collected during the 2017 South Korean national election. The survey was administered by the research company YouGov. Using its existing pool of South Korean adults, YouGov recruited respondents via strategic partnerships with a wide

range of websites and online advertisers. Although this sampling method was nonprobabilistic, a matching technique was employed in an attempt to collect a sample that was generally reflective of the population in terms of gender, age, and other demographic characteristics. In addition, quotas were set for gender, household income, and prefecture. Approximately 20,000 individuals were invited on April 11, a month before the 2017 South Korean national election, to participate in W1. A total of 2,040 individuals provided complete responses, resulting in a response rate of 10.2%. According to Korean Statistical Information Service (KOSIS) census data, this sample was generally reflective of the population in terms of percentage of female respondents (W1 = 49.8%, KOSIS = 49.95%). The average education attainment was slightly higher in W1, between junior college/other college and university (bachelor's degree), than in the KOSIS census data, roughly equivalent to junior college/other college. The average age was lower in W1 (34.81 years) than in the KOSIS data (46.82 years).

Invites for W2 were sent on May 3, immediately before the national election on May 9th. A total of 1,099 respondents from W1 provided valid responses for W2, resulting in a retention rate of 55.9%. The final sample (N = 1,099) had an average age of 38.4 (SD = 10.99), a slightly higher percentage of respondents who identified as female (54%), a median educational attainment of university (bachelor's degree), and a median household income of KRW 40,000,000–44,999,999.

Measures

KakaoTalk Rumor Communication (Independent Variable)

To tap into rumor communication on KakaoTalk, we asked respondents how often they discussed political rumors on the platform. Drawing on previous research, we defined political rumors as pieces of political information that are circulated without verification, often outside official media channels (DiFonzo & Bordia, 2007b; Weeks & Garrett, 2014). On a 6-point scale ranging from 1 (*never*) to 6 (*every day*), respondents reported how frequently they chatted about "news stories or videos about social issues or politics that were *not* covered in the mass media (일명 찌라시 –so-called Jjirasi)." The term *Jjirasi*, which was included in this question, does not have a direct English translation, but refers to tabloidlike stories or information that is not formally verified. Political rumors on social media or instant messaging apps in South Korea are often circulated explicitly under this term. Participants who did not use KakaoTalk at all were coded as 1 (*never*). The recoded item was labeled *KakaoTalk rumor communication* (M = 1.46, SD = 1.04). Approximately 20% of the sample reported at least some use of KakaoTalk for rumor communication. We also assessed how frequently respondents *received* ("got") political rumors on KakaoTalk using similar wording and the same 6-point scale: KakaoTalk rumor reception (M = 1.58, SD = 1.15). This variable was used as a control.

To validate the KakaoTalk rumor communication measure, we asked respondents whether they had read four rumors about different political candidates that were circulated on social media during 2017 (see rumor text in Supplemental Appendix, available at https://osf.io/g2c9v/). We counted the number of rumors that participants recalled seeing, and we labeled the resulting variable *rumor recall* (M = .71, SD = 1.15, Min = 0, Max = 4). There was a positive correlation between KakaoTalk rumor communication and

rumor recall (*r* = .29), suggesting that rumor communication on KakaoTalk was positively associated with recall of specific rumors.

Campaign Participation (Dependent Variable)

In each wave, respondents reported how frequently in the last 14 days they engaged in a variety of activities related to participation in political campaigns, including (1) attending a public hearing, town hall meeting, or city council meeting, (2) calling or mailing a public official or politician, (3) physically posting or distributing a political sign, banner, button, or bumper sticker, (4) attending a political event for a candidate, (5) participating in a political demonstration or protest, (6) volunteering for a political campaign, (7) signing a petition about a political issue, topic, or candidate, and (8) donating money to a political party, candidate, or political action committee in person or by mail. The following online activities were also included: (9) donating money to a political party, candidate, or political action committee online, (10) clicking a link to join a political group online, (11) "signing" an online petition about a political issue, topic, or candidate, (12) contacting a public official or politician online, and (13) volunteering for a politician or political party online. We then counted how many of these activities participants had engaged in at least once during each wave, and we labeled the resulting variables *campaign participation (W1)* (*M* = .97, *SD* = 2.56, Min = 0, Max =13, α = .94) and *campaign participation (W2)* (*M* = .90, *SD* = 2.46, α = .93), respectively. W1 and W2 campaign participation indexes were positively correlated (*r* = .71).

Campaign Knowledge (Dependent Variable)

To assess participants' knowledge about the 2017 South Korean presidential election campaign at W1, five questions measuring knowledge about political parties and candidates were administered (see Table 1). We summed the number of knowledge questions participants answered correctly and created a new variable labeled *campaign knowledge (W1)* (*M* = 3.51, *SD* = 1.58, Min = 0, Max = 5, α = .77).

Table 1. Wave 1 Knowledge Questions.

Question	Response Options (correct answer in **bold**)
Do you happen to know for which party Seungmin Yoo is running as a candidate in this presidential election?	Liberty Korea Party The Minjoo Party People Party **Bareun Party** Justice Party
Do you happen to know which position the politician Heejung Ahn holds?	**Governor of Chungnam** Governor of Chungbuk Governor of Kyungbuk Governor of Kangwon Governor of Cheonbuk
Do you happen to know which party the politician Jongin Kim recently defect from?	Liberty Korea Party **The Minjoo Party** People Party Bareun Party Justice Party
Do you happen to know the name of the politician who recently resigned from the head of the emergency board of the Liberty Korea party?	Hak-gyu Son Kyeong-phil Nam Moo-seong Kim **Myeong-jin In** Jin-tae Kim
Do you happen to know the name of the presidential candidate who has recently been covered in the media regrading whether he should disclose his daughter's financial data?	Joonpyo Hong Jaein Moon **Chelsoo Ahn** Wonjin Cho Sungdong Kim

Note. "Don't know" was provided as an option for each question.

To assess campaign knowledge at W2, when the presidential campaign was in full swing, respondents were given a battery of five different questions about policy positions of presidential candidates (Table 2). This approach allowed for assessment of how respondents learned new information that emerged during the course of the election. Correct answers were summed: *campaign knowledge (W2)* (M = 2.17, SD = 1.45, Min = 0, Max = 5, α = .61). W1 and W2 campaign knowledge indexes were positively correlated (r = .57).

Table 2. Wave 2 Knowledge Questions.

Question Stem: "Please answer which candidate supports the following policy proposals. Please select 'I don't know' if you don't know the answer for the questions."	Response Options (correct answer in **bold**)
Abolishing the Ministry of Education	Jaein Moon
	Joonpyo Hong
	Cheolsoo Ahn
	Seungmin Yoo
	Sangjeong Shim
Creating 810,000 jobs in the public sector	**Jaein Moon**
	Joonpyo Hong
	Cheolsoo Ahn
	Seungmin Yoo
	Sangjeong Shim
Opposing the proposal to create an investigative agency for corrupt high-ranking officials	Jaein Moon
	Joonpyo Hong
	Cheolsoo Ahn
	Seungmin Yoo
	Sangjeong Shim
Placement of THAAD	Jaein Moon
	Joonpyo Hong
	Cheolsoo Ahn[†]
	Seungmin Yoo
	Sangjeong Shim
Law-enforcing employees to leave work on time	Jaein Moon
	Joonpyo Hong
	Cheolsoo Ahn
	Seungmin Yoo
	Sangjeong Shim

Note. Respondents were allowed to select more than one response option or to select "don't know" and were scored as answering correctly only if they selected correct answers.
[†] Because of lack of clarity on this candidate's position on this issue, related responses were excluded from knowledge score calculation.

Political Interest and Ideological Strength (Moderators)

To answer RQ3 regarding the moderating influence of political interest and ideological strength, we measured both constructs at W1. First, we asked respondents to report their agreement with the statement "I am interested in politics" on a 7-point scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*): *political interest (W1)* ($M = 4.78$, $SD = 1.5$). Next, we asked respondents to describe their political ideology on a scale from 1 (*very liberal*) to 7 (*very conservative*), with a midpoint of 4 (*neither liberal nor*

conservative). This item was "folded" such that individuals at the midpoint were given a 0, and those toward either end of scale were given incrementally higher values; those on either extreme were given a 3. This new variable, which ranged from 0 to 3, was labeled *ideological strength (W1)* (*M* = .82, *SD* = .83).

Control Variables

Finally, we used several W1 measures to control for demographic characteristics and different forms of media use that were likely related to the dependent variables. To control for more general political use of KakaoTalk for politics, respondents were asked to report how frequently in the past 14 days they used KakaoTalk to get information about social issues and politics. Responses were measured on a 6-point scale from 1 (*never*) to 6 (*every day*). Those who did not use KakaoTalk were coded as 1 (*never*), and the resulting variable was labeled *KakaoTalk for political information (W1)* (*M* = 2.47, *SD* = 1.99). Traditional news media use was assessed by asking respondents to report how often they used the following sources to get information about social issues and politics: (1) news program on network TV, (2) news program on cable TV, (3) newspaper (print only), and (4) news program on the radio. Items were measured on the same 6-point frequency scale and combined into a mean index of *traditional news use (W1)* (*M* = 2.69, *SD* = .98, α = .69). A similar single item was used to assess the frequency of online news site use: *online news use (W1)* (*M* = 4.05, *SD* = 1.22). Using the same 6-point frequency scale, we also controlled for more general social media use by asking respondents to report how often they used any social media to stay in touch with family and friends. Respondents who did not use social media were coded as 1 (*never*), and the variable was labeled *relational social media use (W1)* (*M* = 4.53, *SD* = 1.7). Age (*M* = 38.4, *SD* = 10.99), gender (54% female), and education (*Mdn* = university [bachelor's degree]) were also included as demographic control variables. Zero-order correlations are reported in Table A1 (Supplemental Appendix, available at https://osf.io/g2c9v/).

Results

Predictors of Using KakaoTalk For Rumor Communication

To get a better descriptive sense of who uses KakaoTalk for rumor communication, we first conducted a cross-sectional ordinary least squares (OLS) regression predicting KakaoTalk rumor communication (W1). In this model, to assess the impact of other predictors above and beyond more general use of the platform for politics, we controlled for the degree to which respondents used KakaoTalk to get political information. Results reported in Table 3 revealed that more frequent KakaoTalk rumor communication was positively associated with political interest (*b* = .07, *SE* = .02, *p* = .001), traditional media use (*b* = .17, *SE* = .03, *p* < .001), ideological strength (*b* = .07, *SE* = .03, *p* = .05), and use of KakaoTalk for political information (*b* = .19, *SE* = .01, *p* < .001). Social media relational use also emerged as a marginally significant predictor (*b* = .03, *SE* = .01, *p* = .054). In contrast, KakaoTalk rumor communication was negatively predicted by age (*b* = −.01, *SE* = .003, *p* = .003). These findings suggest that use of KakaoTalk for rumor communication is more frequent among the political interested, the ideologically extreme, those who use traditional media to get news, social media users, and respondents who are younger.

Table 3. OLS Regression Predicting KakaoTalk Rumor Communication (W1).

	Dependent Variable
	KakaoTalk rumor communication (W1)
Age (W1)	$-.01^{**}$ (.003)
Gender (Female) (W1)	$-.08$ (.06)
Education (W1)	.02 (.03)
Political Interest (W1)	$.07^{**}$ (.02)
Ideological Strength (W1)	$.07^{*}$ (.03)
KakaoTalk for Political Information	$.19^{***}$ (.01)
Traditional News Use (W1)	$.17^{***}$ (.03)
Online News Use (W1)	$-.02$ (.02)
Social Media Relational Use (W1)	$.03^{\#}$ (.02)
Constant	.30 (.22)
R^2	.25
Adjusted R^2	.24
Residual SE	.91 (df = 1089)
F statistic	39.96^{***} (df = 9, 1089)

Note. Unstandardized coefficients and standard errors reported. N = 1,099.
$^{\#} p <. 1. ^{*} p <. 05. ^{**} p < .01. ^{***} p < .001.$

Main Analyses[1]

To test research questions about the relationships between KakaoTalk rumor communication and campaign knowledge and participation, we used a series of lagged dependent variable OLS regression models. In each model, W1 levels of the dependent variables were included, allowing us to predict respondents' campaign knowledge at W2 while controlling for prior levels (Table 4). KakaoTalk rumor communication was a significant positive predictor of campaign participation (b = .22, SE = .08, p = .005; Table 4, Column 1), but not of campaign knowledge (b = $-.03$, SE = .05, p = .63; Table 4, Column 4). After controlling for demographic factors, media use, and political attitudes, using KakaoTalk to discuss political rumors was associated with more frequent political participation over the course of the campaign, but not any significant increase in knowledge about the campaign (RQ1 and RQ2).

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[1] All models have variance inflation factors of < 3, suggesting that multicollinearity does not substantially influence results.

Table 4. Lagged Dependent Variable Regression Models Predicting Campaign Knowledge and Participation.

	Dependent Variable					
	Campaign Participation (W2)			Campaign Knowledge (W2)		
KakaoTalk Rumor Communication (W1)	.22** (.08)	−.43# (.26)	.01 (.09)	−.03 (.05)	.25 (.18)	.03 (.07)
Political Interest (W1)	.04 (.04)	−.10 (.07)	.04 (.04)	.14*** (.03)	.21*** (.05)	.14*** (.03)
Ideological Strength (W1)	.14* (.07)	.13* (.07)	−.15 (.10)	−.03 (.05)	−.03 (.05)	.04 (.07)
KakaoTalk for Political Information (W1)	−.002 (.03)	.0005 (.03)	−.0002 (.03)	−.03 (.02)	−.03 (.02)	−.03 (.02)
Traditional News Use (W1)	.23*** (.06)	.23*** (.06)	.23*** (.06)	−.01 (.04)	−.01 (.04)	−.01 (.04)
Online News Use (W1)	−.01 (.05)	−.002 (.05)	−.01 (.05)	.05# (.03)	.05 (.03)	.05# (.03)
Social Media Relational Use (W1)	.04 (.03)	.04 (.03)	.04 (.03)	.03 (.02)	.03 (.02)	.03 (.02)
Age (W1)	−.004 (.01)	−.004 (.01)	−.004 (.01)	.01# (.004)	.01# (.004)	.01# (.004)
Gender (Female) (W1)	.05 (.11)	.05 (.11)	.05 (.11)	−.02 (.08)	−.02 (.08)	−.02 (.08)
Education (W1)	.02 (.06)	.02 (.06)	.02 (.06)	.10* (.04)	.10* (.04)	.10* (.04)
KakaoTalk Rumor Reception (W1)	−.05 (.07)	−.06 (.07)	−.04 (.07)	.02 (.05)	.03 (.05)	.02 (.05)
Campaign Knowledge (W1)	.01 (.04)	.02 (.04)	.02 (.04)	.44*** (.03)	.44*** (.03)	.44*** (.03)
Campaign Participation (W1)	.62*** (.02)	.61*** (.02)	.61*** (.02)	−.01 (.02)	−.01 (.02)	−.01 (.02)
interaction Terms						
KakaoTalk for Rumors (W1) x Political Interest (W1)		.11** (.04)			−.05 (.03)	
KakaoTalk for Rumors (W1) x Ideological Strength (W1)			.19*** (.05)			−.05 (.04)
Constant	−1.02* (.41)	−.25 (.50)	−.80# (.41)	−.97*** (.28)	−1.31*** (.35)	−1.03*** (.29)
R^2	.53	.53	.53	.35	.35	.35
Adjusted R^2	.52	.52	.53	.34	.34	.34
Residual SE	1.70 (df = 1085)	1.69 (df = 1084)	1.69 (df = 1084)	1.18 (df = 1085)	1.18 (df = 1084)	1.18 (df = 1084)

Note. Unstandardized coefficients reported. N = 1099.

$p <.$ 1. * $p <.$ 05. ** $p <.01.$ *** $p <.001.$

Next, we examined whether the relationships between KakaoTalk rumor communication and the dependent variables varied across levels of political interest and ideological strength. When campaign participation was examined, there was a significant interaction between KakaoTalk rumor communication and both political interest ($b = .11$, $SE = .04$, $p = .01$) and ideological strength ($b = .19$, $SE = .05$, $p < .001$; Table 4, Columns 2:3). Figures 1 and 2 report Johnson-Neyman plots, which visualize the slope of KakaoTalk rumor communication when predicting campaign participation at different levels of political interest and ideological strength. KakaoTalk rumor communication is a positive predictor of campaign participation only among those with higher levels of political interest—approximately 5.2 and higher on the 7-point scale. This suggests that for those who are at least moderately interested in politics, the use of KakaoTalk to discuss rumors is associated with increased campaign participation. Figure 2 demonstrates a similar pattern in which KakaoTalk rumor communication is a positive predictor of campaign participation only for individuals with some minimal attachment to a political ideology, but not for individuals who described themselves as "neither liberal nor conservative." When predicting campaign knowledge, there was no significant interaction between KakaoTalk rumor communication and political interest ($b = -.05$, $SE = .03$, $p = .10$) or ideological strength ($b = -.05$, $SE = .04$, $p = .19$; Table 4, Columns 5—6).
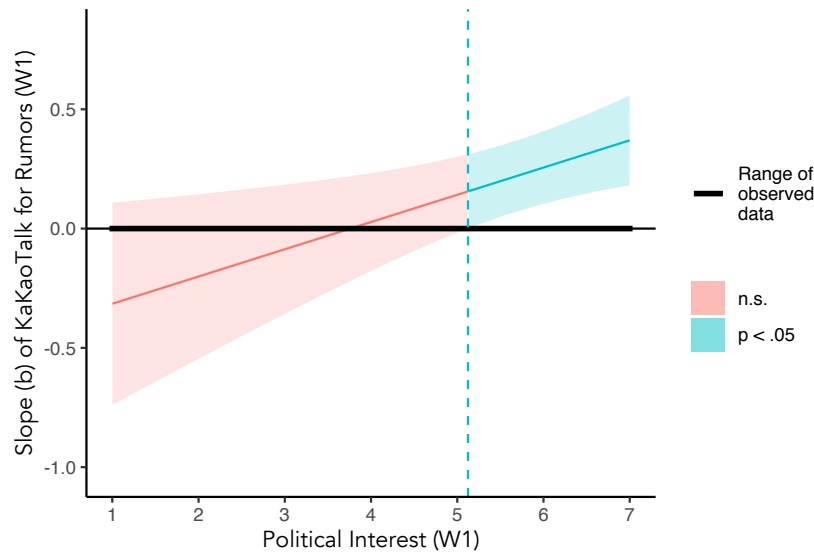

Figure 1. Johnson-Neyman plot of relationship between KakaoTalk rumor communication and campaign participation across levels of political interest.
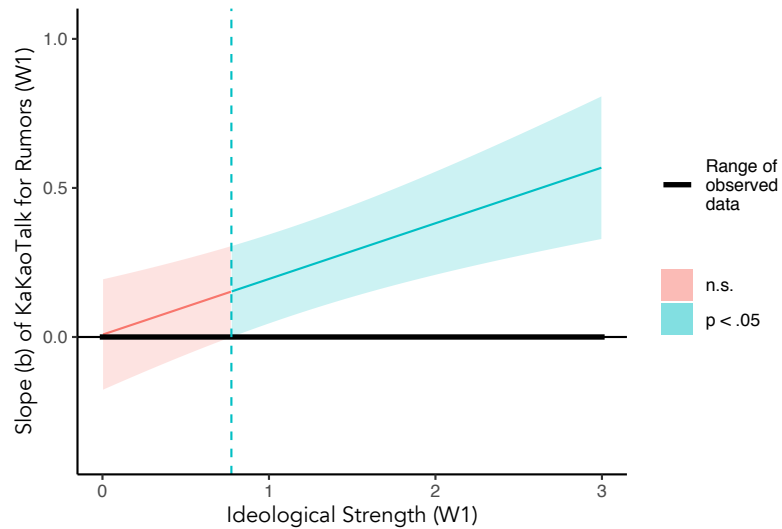
Figure 2. Johnson-Neyman plot of relationship between KakaoTalk rumor communication and campaign participation across levels of ideological strength.

Considering a "Multi-Causal Inventory"

Although panel data provide significant advantages over cross-sectional data, these data still limit our ability to draw causal conclusions and to rule out alternative explanations. Following the guidance of Margolin (2019), we sought to complement our preferred casual explanation by considering a "multi-causal inventory" (p. 238), which included other causal possibilities that our data allow us to examine. Our primary analyses found evidence consistent with a positive causal relationship between KakaoTalk rumor communication and increased campaign participation between waves. In addition, we considered (a) whether this relationship might actually be caused by baseline levels of political interest or ideological strength, or (b) whether the causal direction might be reversed. We stress that these possibilities would be best evaluated using more than two waves of data that allow for more sophisticated longitudinal analysis. In the absence of such data, we replicated our primary analyses using a cross-lagged path model (see Figure A1 in Supplemental Appendix, available at https://osf.io/g2c9v/). W1 levels of KakaoTalk rumor communication, campaign participation, campaign knowledge, political interest, and ideological strength predicted W2 levels of these variables, while including the controls used in previous models (see Figure A1, Supplemental Appendix, available at https://osf.io/g2c9v/). These results largely replicate those reported in Table 4. The relationship between KakaoTalk rumor communication (W1) and campaign participation and knowledge (W2) remained the same when cross-lagged paths for political interest and ideological strength were included. Further, neither W1 political interest nor ideological strength predicted W2 rumor communication (ps > .05). This did not offer evidence that we are simply observing political interest and ideological strength driving KakaoTalk rumor communication and campaign participation simultaneously. However, we did find evidence of reverse causality: W1 campaign participation was a significant positive predictor of W2 KakaoTalk rumor communication (b = .08, SE = .01, p < .001). This suggests that existing

engagement in politics might be a causal driver of rumor communication, a conclusion that is consistent with our moderation analyses.

Discussion

Recent research has highlighted the dangerous consequences of new communication technologies that increase the speed and reach of political rumors (Garrett, 2011; Sunstein, 2014; Weeks & Garrett, 2014). Findings from the present study suggest that rumor communication on instant messaging platforms such as KakaoTalk can also affect the more fundamental ways citizens engage in politics. The relationships we identify suggest that rumor communication on instant messaging platforms might asymmetrically boost political participation without increasing political knowledge and ultimately exacerbate existing participatory inequality between those with weak and strong political attitudes.

First, we found that the use of KakaoTalk rumor communication was positively associated with increased campaign participation. This reflects the well-established ability of rumors to affect behavior (DiFonzo & Bordia, 2007b; Weeks & Garrett, 2014) and suggests that rumor communication on the app may have reinforced individuals' existing political views and identities, which in turn facilitated more substantive political engagement. Although this indicates that rumor communication is similar to other forms of political talk in its ability to catalyze political participation (Kwak et al., 2005), it also may reflect the unique social function that rumors can play (DiFonzo & Bordia, 2007b; Edy & Risley-Baird, 2016). By discussing rumors on KakaoTalk, participants may have created or solidified politically like-minded networks (i.e., rumor communities), which can be crucial for motivating people to engage in politics (Mutz, 2002). On a theoretical level, this finding supports the potential for rumor communication to motivate political behavior. Given the nature of our data, we can only speculate on the potential mechanisms at work. Future studies should explore such mechanisms using multiple waves of data.

While using KakaoTalk to discuss rumors may have encouraged participation in the 2017 South Korean presidential election, we found little evidence that this improved participants' knowledge about the candidates. On the one hand, this may be expected, given that rumor communication itself does not entail direct exposure to the type of campaign knowledge assessed by our knowledge measures. However, as we suggested in the introduction, rumor communication could have stimulated information seeking, which could have, in turn, led to gains in political knowledge. Ultimately, we failed to find evidence that this was the case. This is troubling, given that in multiparty political systems such as South Korea's, understanding the candidates' policy positions is important for guiding participatory behavior and vote choice (Delli Carpini & Keeter, 1996). As Fowler and Margolis (2014) demonstrated, those who are less politically informed cast votes that are systematically misaligned with their interests. If rumor communication on KakaoTalk motivates people to participate without leaving them more knowledgeable, the resulting participatory behavior may not necessarily be aligned with their best interests. Our findings indicate a problematic asymmetry, given the normative expectation that those who participate more should also be better informed.

Further, we found evidence that the effects of using KakaoTalk for rumor communication may be confined to those with higher levels of political interest and stronger political ideologies. In fact, among those with little interest in politics or weak ideological preferences, KakaoTalk rumor communication had no

significant relationship with political participation. Our supplementary analysis found that those who were politically engaged at W1 were more likely to discuss rumors on KakaoTalk in the first place. Consistent with past research, this indicates that it is those with already developed political attitudes who are likely to be affected by rumors (Weeks & Garrett, 2014). Unfortunately, this suggests that the use of KakaoTalk for rumor communication may further widen gaps in participation. Rumors may push those who are already predisposed to engage in politics to participate more by stirring their emotions, stimulating political solidarity, or motivating them to protect others from what they perceive as harmful points of view. Yet, rumor communication does not appear to equip those with strong political attitudes with any additional political knowledge that might help them make more informed participatory choices.

Ultimately, the present study illustrates that instant messaging apps have expanded the possibilities for political rumor communication. The features of these platforms allow people to discuss rumors with their close contacts within the safety of closed networks. The ability of these platforms to facilitate asynchronous communication among small groups across long distances constitutes further advantages over face-to-face rumor communication. Given the global ubiquity of these platforms, studying rumor communication on instant messaging platforms such as WeChat and WhatsApp is an important task for future research. In addition to offering initial empirical evidence that talking about rumors on these platforms can have broader consequences for democratic life, we hope this study offers a theoretical entry point for future research in this area.

Although this study makes several important contributions to the study of political rumors on social media, we note several limitations. First, we examined a specific communication technology in a specific national context. Future studies should attempt to replicate our findings on other platforms and in other contexts to determine the generalizability of the relationships we observe. We do, however, consider the use of data from the South Korean election an advantage, given that the majority of political communication research continues to be conducted in North America or Europe. Our findings offer insight into the potential effects of rumors in one of the most technologically advanced democracies. Second, our measures of rumor communication on KakaoTalk rely on self-reports, and we are therefore unable to assess the valence, topic, or nature of rumor communication. Despite evidence supporting the validity of self-reported social media use (Guess, Munger, Nagler, & Tucker, 2019), future studies should attempt to more precisely capture nuances in rumor communication to clarify the role of rumor content and social networks. Relatedly, we cannot preclude omitted variable bias or alternative causal explanations. Although we believe our models are well controlled, we have also endeavored to discuss a range of causal possibilities in an effort to make our results more portable (see Margolin, 2019). Finally, recent research has highlighted issues with the measurement of political knowledge (Strabac & Aalberg, 2011). More sophisticated and extensive measures of political knowledge should be employed to strengthen our findings. Future research might also consider whether rumor communication on KakaoTalk helps cultivate political misperceptions among users.

Conclusion

Rumors will endure as an important way in which citizens make collective sense of politics (Edy & Risley-Baird, 2016). As discussion of political rumors on social media becomes a common feature of political life, it is vital to consider not only the way this form of political communication fuels misperceptions, but also

how it shapes engagement in the political process. Our findings illustrate that the contexts for rumor communication created by instant messaging platforms such as KakaoTalk have the potential to widen the participatory gap between those with strong political attitudes and everyone else. Further, such gains in participation do not appear to be accompanied by a commensurate boost in political knowledge. What are the implications for societies in which those at the ideological extremes are motivated to participate in politics, but no better informed? As Mason (2018) argued, the tendency to view all participation as normatively desirable misses the reality that engagement born out of competition between ideological or partisan groups can be unhealthy for political systems. The real concern is that political rumor communication on social media might fuel what Mason (2018) terms "activism for the wrong reasons" (p. 102). Future research should continue to explore this and other possibilities to clarify how new communication technologies are amplifying or changing the age-old practice of talking about political rumors.

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