Communication Research
1–26

DOI: 10.1177/0093650215609676
crx.sagepub.com
SAGE

Connective-Collective Action on Social Media: Moderated Mediation of Cognitive Elaboration and Perceived Source Credibility on Personalness of Source

Elmie Nekmat[1], Karla K. Gower[2], Shuhua Zhou[2], and Miriam Metzger[3]

Abstract

Taking the logic of online connective action from an information-processing viewpoint, an online experiment (N = 208) was done to examine whether individuals' cognitive elaboration on messages received from different sources (personal: friends, family, vs. impersonal: organization) mediates their willingness to engage in connective-type collective activities on social media (e.g., commenting, "Liking"); and whether this indirect influence is biased by perceived source credibility. Results revealed significant influence from personal sources. Cognitive elaboration positively mediates this influence and was conditionally affected by high source credibility. Direct influence from personal issue involvement and perceived self and technological efficacy was also observed. Theoretical contributions (i.e., cognitive demands at individual level) and practical implications (i.e., enhancing organizational credibility, popularity of easy-to-do acts) are discussed.

Keywords

social media, collective action, connective action, source effects, cognitive elaboration, source credibility

[1]National University of Singapore, Singapore
[2]University of Alabama, Tuscaloosa, USA
[3]University of California, Santa Barbara, USA

Corresponding Author:
Elmie Nekmat, National University of Singapore, Blk AS6, #03-41, Singapore, 117416 Singapore.
Email: elmie@nus.edu.sg

One takeaway from the rapid development of previously unheard of activist causes and organizations into large-scale movements, such as Occupy Wall Street, is that social networking platforms are providing the "most common entrance to activism online" among uninitiated people (Harlow, 2011, p. 229). Research shows that in such *micro-mobilization* and *micro-contribution* contexts, "being asked" by others is the crucial factor that helps activate current as well as future individual participation in collective action (Garrett, 2006; McAdam, 1986; Mercea, 2012).

However, to cope with the abundance of messages disseminated by a multitude of senders, the social media user can only pay attention to and process a limited set of invitations to contribute toward collective causes. In this instance, little is known about whether messages coming from one's close circles or those coming directly from organizations are accorded more credibility and, consequentially, are more influential in motivating one's willingness to adhere to the requests. On the one hand, people may trust and rely on those close to them for advice, opinions, and information before deciding to contribute toward a cause. Yet, more authoritative, organizational sources may have advantages over personal acquaintances in terms of enhanced credibility by virtue of their experience, reputation, and resources. Moreover, users are faced with a myriad of activities they can choose to do to contribute toward a collective cause on social media (e.g., "liking" a cause/group, commenting, sharing materials, etc.), so beyond informing and inviting participants, steering them to engage in desired activities becomes an important aim of the message as well.

This study addresses these challenges of using social media to facilitate activism by comparing the potential of a personal message source (i.e., friends, family) with an impersonal message source (i.e., organization) in influencing individuals' willingness to participate in connective-type collective action on social media. Collective action is defined as "joint actions taken by two or more people in pursuit of common ends" (Tilly, 1978, p. 84). The uninitiated individual, the one receiving an invitation to contribute toward a cause or for an organization that he or she has not heard of, is the focus of this investigation as most prior research in collective action has examined individuals who have already participated in collective acts or were already involved with specific causes, movements, or groups in some way (e.g., Bimber, Flanagin, & Stohl, 2012; Fisher & Boekkooi, 2010; Lim, 2012; Maireder & Schwarzenegger, 2011; Tufekci & Wilson, 2012). In addition, we approach this investigation through the lens of persuasion and from an information-processing viewpoint (i.e., elaboration likelihood model [ELM]), bridging a gap in online collective action research that has tended to examine individual participation based on technological affordances, network structures, collective identification, and cost-benefit rationalization (see, for review, Garrett, 2006).

Specifically, we evaluate a moderated mediation path for individual participation in connective-collective action on social media by predicting that the influence of personalness of source to motivate individual participation will be mediated by the amount of cognitive elaboration given to messages received, and that this indirect effect is biased by perception of source credibility.

Connective-Collective Activities on Social Media

The present study focuses on *connective-type* collective action facilitated by social media as highlighted by Bennett and Segerberg (2012, 2013), which has been widely attributed by scholars for the successful recruitment and mobilization of individuals in some recent social and activist movements (e.g., Arab Spring revolution, Occupy movement; Harlow, 2011; Juris, 2012). The activities demand certain levels of *public expression* of personal ideas and opinions on contentious issues enabling others in the network to see who the contributor is based on his or her online profile. The exposition of personal identity when carrying out these activities on social media facilitates the crossing of the "private-public boundary" necessary for collective action participation and negates the "freeriding" dilemma, where rational, self-interested individuals can opt not to contribute toward shared causes when they can reap the benefits of others' labor without self-participation (Bimber, Flanagin, & Stohl, 2005). The activities are *connective* because one is able to perceive the personal opinions and ideas of others in his or her networks through their messages, and in turn imprint his or her own perspectives on the messages before disseminating them to others (Benkler, 2006; Bennett & Segerberg, 2012). Taken cumulatively, these activities contribute to a "connective public good" in terms of building a collective information pool of personalized messages and making available information resources that help enhance the visibility and connect others to protest activities (Shumate & Lipp, 2008).

Based on these conditions, four broad categories of connective-collective activities that occur typically on social media are identified and investigated. These are as follows: (1) commenting (e.g., Harlow & Harp, 2012), (2) relaying information received (e.g., Juris, 2012), (3) uploading materials (e.g., Lim, 2012; Tufekci & Wilson, 2012), and (4) affiliating (i.e., "Following," or "Liking"; for example, Segerberg & Bennett, 2011).

Influence of Personal Networks for Collective Action via Social Media

The logic of online connective action (Bennett & Segerberg, 2012, 2013) provides the theoretical frame that explains the influence of personal networks in motivating individual participation in connective-collective action on social media. The logic emphasizes the potential of personalized cause-related messages disseminated *through* multiple layers of social networks (e.g., acquaintances, colleagues) and *within* personal networks of friends or trusted others in creating large-scale movement networks. Ease of information dissemination in the social networking environment inclines people to share materials that are imbued with personal ideas, such as memes and photovoices, for example, with people in their networks; enabling network members to see how the cause is relevant to their close circles and thus, by extension, to themselves (Stengrim, 2005). Network members, in turn, reformulate the messages by imbuing their own opinions and ideas before disseminating them to others (Benkler, 2006). The centrality of personal networks in these processes echoes that of the communicative model of collective action that stresses the flattening of organizing structures—from

organizational to entrepreneurial—for collective action online (Bimber et al., 2005). Essentially, the model posits that personal modes of interaction should be viewed relative to impersonal modes (e.g., top-down communication from organization), and that, consistent with Klandermans and Oegema's (1987) postulated social motives, one's interest in socializing and affiliating with others can be strong determinants of one's collective action participation on social networking sites, for example (Bimber et al., 2005; Flanagin, Stohl, & Bimber, 2006).

Akin to social conformity theories, the influence of one's personal networks to motivate individual behavior is heightened as members of reference groups, whose collective opinions and perspectives help orient individuals to the significance of certain socio-political issues and how these issues should, and can, affect them (Glynn & Park, 1997; Oshagan, 1996). Indeed, as it pertains to motivating individual collective-action online, comments and feedback from these personal networks become crucial information bridges that connect protest participants to movements (Diani, 2000), raise issue salience and familiarize uninformed individuals to activist causes and protest-related activities (Fisher & Boekkooi, 2010; Mercea, 2012), and "affirm the suitability of different (protest) tactics (e.g. slogan, donation drives)" for individual participation (Thackeray & Hunter, 2010, p. 586).

From the perspective of Granovetter's (1973) strength of weak ties hypothesis, online social networks (both strong and weak) can avail individuals to information and resources for collective action (e.g., de Zúñiga & Valenzuela, 2011), with closer and more personal sources being more effective in spurring individual participation. A "61 million-person-experiment" on political mobilization via Facebook showed that invitations to vote by both close and distant social sources (i.e., seeing faces one know personally) account for greater individual involvement, including clicking an online voting banner and real-world voting as compared with information-only messages (Bond et al., 2012). Mobilization rate, however, increases when messages came from strong-tied close friends (i.e., greater Facebook interactions) as compared with weak-tied ones.

In the same vein, Bennett, Breunig, and Givens (2008) showed that personal network ties (e.g., peers, acquaintances) provided a far stronger explanation for protest diffusion than one's association with impersonal networks (e.g., socio-political organizations such as churches and peace groups). Others showed that the more egalitarian manner of communication among interpersonal networks on social media better inducts potential participants for collective movements as opposed to an "authoritative" and "top-down" voice of persuasion that is deemed to come from organizational sources (Biddix & Park, 2008; Maireder & Schwarzenegger, 2011).

There are thus strong reasons to suggest that invitations from people in one's close personal circles are more influential as compared with those from impersonal organizational sources. Extending evidence onto the persuasive potential between these sources to motivate connective-collective action via social media, the first hypothesis of this study predicts the following:

Hypothesis 1 (H1): Receiving messages directly from personal sources (i.e., family, friends) as compared with impersonal sources (i.e., organizational source) will

lead to greater willingness to participate in connective-collective activities on social media.

To further refine existing knowledge of how these sources may or may not wield influence over the type of activity a person is willing to participate in via social media, the following research question is posed:

Research Question 1 (RQ1): Are there significant differences between personal and impersonal sources in influencing individuals' willingness to engage in the different types of connective-collective activities?

The Mediating Role of Cognitive Elaboration

A theoretical gap, however, exists in linking the influence of message source to motivate collective action via social media. When faced with an overabundance of information on social media platforms, source characteristics such as familiarity, likability, and attractiveness can heuristically induce users to form an overall impression of the message (e.g., reliable, important; Sundar, Knobloch-Westerwick, & Hastall, 2007) and affect its reception (see the heuristic-systematic model [HSM]; Chaiken, 1980). In this instance, source influence on individuals' willingness to participate in connective-collective action on social media can be deemed to occur with low mental effort.

However, for an individual who received an invitation to show support for a collective cause that was not heard of before, the source's ability to persuade should be indirectly affected by the individual's attention and consideration given to the message (i.e., the degree to which message recipients think more or less about the message). As illustrated in the ELM (Petty & Cacioppo, 1984), when a message is of low importance to the uninvolved individual, it commands low cognitive attention and is likely to be processed peripherally. In this instance, source attributes could motivate the individual to carefully process the message (i.e., central route processing), and subsequently determine his or her susceptibility to being persuaded (Briñol & Petty, 2009; Roskos-Ewoldsen, Bichsel, & Hoffman, 2002). The amount of cognitive effort that individuals dedicate to reading the message should thus positively mediate the source's ability to persuade them to accede to the request.

The literature, however, includes no studies showing how, specifically, *personalness* of source (e.g., a person belonging to one's close circles vs. people one does not know) affects individuals' cognitive elaboration of messages and, consequently, their willingness to act in accordance with the message. Nevertheless, it is inferred that a source who is part of one's personal life and in-group (e.g., friends, family, colleagues), as opposed to a source whom one does not know personally, signals trust and familiarity (Stiff & Mongeau, 2002), and would influence the receptiveness to the message by increasing attention and cognitive elaboration. Indeed, research finds that people think more about a persuasive message when it is presented by someone who shares common group memberships (Mackie, Worth, & Asuncion, 1990), or someone who is deemed to share similar interests due to group membership (van Knippenberg, Lossie,

& Wilke, 1994). In short, receiving messages from someone whom one is familiar with should increase one's attention and consideration of the message.

Studies in the ELM vein have also shown how message elaboration can be a key precondition that promotes greater individual compliance and attitudinal reaction to the message. For example, studies showing how source characteristics, such as perceived trustworthiness (e.g., Kaufman, Stasson, & Hart, 1999; Priester & Petty, 2003), perceived expertise (e.g., Heesacker, Petty, & Cacioppo, 1983; Jones, Sinclair, & Courneya, 2003), and ethnicity (e.g., White & Harkins, 1994), can alter individuals' thoughtful elaboration of messages have also shown that the heightened cognitive activity can affect individual attitudes and behavioral intentions toward the issues contended in the messages. Higher levels of cognitive elaboration can also lead to greater issue recognition and behavioral compliance to persuasive messages in moral settings by triggering systematic linking of mental schemas (Street, Douglas, Geiger, & Martinko, 2001). In the context of scarcity-based information (e.g., rarity of a situation), greater elaborative processing of messages is associated with heightened desires to adapt, understand, and cope with the situation, which, eventually, leads to more extreme attitudes regarding the situation (Brannon & Brock, 2001).

The present study thus extends evidence that the amount of thought expended on a message positively mediates a source's ability to persuade onto *personalness* of source in motivating individual participation in connective-collective action on social media by postulating the following hypothesis:

> **Hypothesis 2 (H2):** Cognitive elaboration will mediate source influence such that (a) personal sources will increase cognitive elaboration of the message, which will in turn (b) increase individuals' willingness to participate in connective-collective activities on social media.

Personalness of Source and Perceived Source Credibility

Perceived source credibility has been shown to affect attitudinal and behavioral compliance in various contexts including collective action, such as attending a meeting organized by activist groups (Dholakia, 1986) and signing petitions (Dholakia & Sternthal, 1977). It should be noted that a source that is perceived to be highly credible may not always lead to stronger persuasion than a low-credibility source (e.g., Cacioppo & Petty, 1982; Tormala, Briñol, & Petty, 2006), although a review of source credibility research by Pornpitakpan (2004) revealed that when these factors are accounted for (i.e., with identical messages), a source that is perceived as more credible tends to be more persuasive than one who is thought to be less credible.

The more pertinent question, however, is whether these perceptions of credibility affect the influence of different sources in encouraging individual compliance with their collective action requests. Are one's friends or family accorded more credibility than an organizational source on social media? And, if so, does their influence differ at different levels of perceived credibility? In some instances, organizational sources

can signal greater expertise and resources than personal sources, and thus may be deemed more reliable and accurate as the information disseminated lies within "the domains of their own experience" (i.e., cognitive authorities; Wilson, 1983, p. 15). This perception, however, can be easily compromised when individuals perceive a strong bias that the organization is looking to further its own interests. Moreover, studies on social media have identified personal recommendations and endorsements from people whom one knows as the "new arbiters of information credibility, authority, and trust" (Metzger, Flanagin, & Medders, 2010, p. 434). Personal sources are likely capable of motivating individuals to collective action (e.g., expressing support and relaying messages to others) by creating a sense of "distributed trust" arising from an online social community (Chadwick, 2007; Mercea, 2012). This is also consistent with the "bandwagon heuristic" used in credibility evaluation, whereby people attribute higher credibility to sources that others like when it implies collective endorsement (Sundar, 2008).

This research, taken together, suggests that attributions of credibility to personal and impersonal sources are perhaps more complex than previously thought, and that persuasion hinges on individuals' consideration of both the type of source (H1) and their perception of its credibility at the same time. Even though a relationship between personalness of source and its credibility can be observed, there is no certainty to this relationship to imply that personalness of source can directly affect its perceived credibility. For instance, an impersonal source such as an organization can, instead, lead to a greater perception of credibility than a personal source based on greater expertise and resources. Evidence thus alludes to a moderating role of perceived source credibility on source influence. In other words, source influence would differ between different levels of credibility accorded to them, and the greater the perceived credibility is, the stronger the influence would be. To sort out the implications of perceived source credibility on personalness of message source, and consequently, its effect on persuading participation in connective-collective action via social media, the following hypothesis is forwarded:

> **Hypothesis 3 (H3):** Perceived source credibility will moderate the influence of personalness of source, such that perceived credibility will be positively related to willingness to participate in connective-collective activities on social media.

The Role of Perceived Source Credibility in Cognitive Elaboration

To this point, it has been argued that the personalness of message source to motivate collective-action participation on social media is positively mediated by receivers' level of mindful elaboration of the message (H2) and is moderated by their perceived credibility of the source (H3). The relationship between personalness of source and perceived source credibility was also discussed. Turning our attention to the relationship between perceived source credibility and cognitive elaboration, the literature shows that the relationship between these two variables can go two ways.

On the one hand, guided by the HSM (Chaiken, 1980), research indicates that under low cognitive conditions where individuals take shortcuts to render decisions, source credibility is heuristically cued in a manner direct to their willingness to adhere to persuasive messages. On the other hand, the ELM presents the prospect that under similar conditions, heuristic cueing from source attributes such as credibility can lead to increases in attention and thoughtful evaluation given to the message (i.e., peripheral to central route processing; Petty & Cacioppo, 1984). This is particularly relevant in the social media context where, as cognitive misers, users tend to ritualistically and unthinkingly scroll through countless messages from a multitude of senders, deciding to pay mindful attention to only certain messages based on who sent the message and how credible the source is perceived to be, as was discussed for H2. In the same discussion, source characteristics pertaining to credibility (e.g., trustworthiness, likability) are thus expected to positively relate to message elaboration (e.g., Roskos-Ewoldsen et al., 2002).

The question then is how would source credibility factor in during individuals' careful reading of the message? Research indicates that perceived source credibility can bias one's thoughts during mindful evaluation of messages by affecting one's thought confidence, especially in cases where the arguments presented in the messages received are ambiguous (e.g., Chaiken & Maheswaran, 1994; Kaufman et al., 1999). Compared with a less credible source, a highly credible and trustworthy source imbues a greater perception of information validity that enhances confidence in one's thoughts when scrutinizing the message. Furthermore, having positive thoughts when evaluating messages passed by a perceptibly credible source in conditions of high elaboration likelihood was found to lead to more favorable attitudes in individuals through *self-validation* (Petty, Briñol, & Tormala, 2002; Smith, Houwer, & Nosek, 2013; Tormala et al., 2006). In a typical social media scenario, where requests to support a cause tend to be accompanied with background information on the cause (e.g., news links), perceived credibility of the sender should affect the recipient's receptiveness to the associated information when appraising it and, subsequently, his or her response to the sender's request. Thus, the following hypotheses are proposed, when it comes to messages informing and inviting individuals to contribute toward collective causes via social media:

Hypothesis 4 (H4): Perceived source credibility will moderate the influence of personalness of source on cognitive elaboration, such that perceived credibility is positively related to cognitive elaboration.
Hypothesis 5 (H5): Perceived source credibility will moderate the mediation of cognitive elaboration, such that the indirect effect of source via cognitive elaboration is greater at higher levels than at lower levels of perceived source credibility.

As discussed earlier, individuals are also able to choose between different types of connective-collective activities (e.g., commenting, relaying information received, uploading materials, affiliating, etc.) on social media to show support for collective

causes. The following question is thus asked to provide a more complete understanding of individuals' connective-collective action participation on social media:

Research Question 2 (RQ2): How do the different activities rank in terms of individuals' willingness to engage in them?

Method

An online experiment manipulating message source (i.e., close personal source vs. impersonal organizational source) was conducted. A total of 208 undergraduates enrolled in a large Southeastern public university in the United States participated in the study for extra credit. About 66% (n = 137) of participants were female. The average age of respondents was 19.2 (SD = 1.31) years. Two sets of questionnaires were administered. To reduce, if not remove, any systematic influences from participants' self-report of personal issue involvement, attitude toward activism, and perceived efficacy, data on these predispositional factors were collected as the study's control variables in the first questionnaire. Participants were then randomly assigned to one of two source scenarios in the second questionnaire administered 7 days later.

Stimulus

The two scenarios consisted of the same message by a fictional student environmental activist group on campus that read, "The University is removing the Quad [central park] to build classrooms and offices. The group Students for Nature is campaigning against this. Please support." Participants were given instructions that said, "You have received this message from [specific source variable tested] on one of your social media accounts (e.g., Twitter, Facebook, etc.)." All messages were less than 140 characters, and so could plausibly appear in any popular social media platform. Participants were also asked to indicate if they did not possess any personal account with any type of social media (e.g., Facebook, Twitter, MySpace, etc.). None indicated so. Participants were then shown a mock website belonging to a real campus news organization that consisted of a one-page objective report on the campaign issue. This was intended to simulate the typical scenario in actual social media use where such messages received from others tend to be accompanied with links and additional information pertaining to the issue.

Participants were either told that the message had come from (1) a member of their close personal network (i.e., "someone to whom you are very close. The person might be a family member, friend, classmate, or anyone else you know personally"; n = 102) or (2) an organizational source (i.e., "an official from the group Students for Nature"; n = 106). Participants who received the message from a close personal source were asked to write on the questionnaire the name of a person to whom they were close and connected to via social media, so as to create a more "personalized" and realistic scenario. All participants were reminded in the post-test questionnaire of the source that had sent them the message. Manipulation checks were performed by

Table 1. Results of Multivariate Multiple Regression Analysis (N = 208).

	Personalness of source			Cognitive elaboration		
	F	η_p^2	p	F	η_p^2	p
Activity 1	8.685	.040	.004	3.667	.018	.057
Activity 2	6.071	.029	.015	24.343	.107	.000
Activity 3	2.897	.014	.090	21.868	.097	.000
Activity 4	1.350	.007	.247	11.338	.053	.001
Activity 5	16.308	.076	.000	21.513	.095	.000
Activity 6	10.863	.051	.001	24.272	.106	.000
Activity 7	2.626	.013	.096	29.731	.127	.000
Activity 8	1.150	.006	.285	26.358	.114	.000

Note. Activity 1 = "Like" the message received on Facebook; Activity 2 = "Like" or "Follow" online group on Facebook or Twitter; Activity 3 = pass the message received to others; Activity 4 = join the activist group online page; Activity 5 = post personal comments about the campaign; Activity 6 = post personal comments on the message received; Activity 7 = provide links to other information pertaining to campaign; Activity 8 = upload materials related to campaign (e.g., photos, videos).

participants indicating on a 7-point scale (1 = *very little*, 7 = *very much*): (1) "How close are you to the person who sent the message to you?" (2) "How well do you know the person?" and (3) "How frequently do you meet with the person?" (Cronbach's $\alpha = .97$). Significant differences in the anticipated direction were found ($F(1, 207) = 543.13$, $p < .001$) for personal source ($M = 6.53$, $SD = 0.98$) versus organizational source ($M = 2.24$, $SD = 1.22$).

Dependent Variable

Connective-collective activities. Participants indicated on a 7-point scale (1 = *very unlikely*, 7 = *very likely*) the likelihood that they would carry out eight different connective-collective activities on any social media platform. Table 1 details the different activities, their mean comparisons, and correlations. Factor analysis using varimax rotation showed all items loading reliably onto a single factor with rotated scores ranging from .76 to .88, explaining about 70.2% of the cumulative variance (Cronbach's $\alpha = .93$). The average of all items was thus taken to indicate overall willingness to participate in connective-collective action on social media.

Mediating Variable

Cognitive elaboration. Two measurements were collected on a 7-point scale (1 = *very little*, 7 = *very much*) to indicate participants' cognitive elaboration on the message and news information received. First, participants reported (1) "How carefully did you read the information received?" and (2) "How much were you thinking about the information?" (Cronbach's $\alpha = .88$). Second, the level of systematic information processing was estimated with four items, such as how much participants thought about how the message

relates to other things, and how much they made connections between the information received with information elsewhere and to their own life (e.g., Neuwirth, Frederick, & Mayo, 2002). Factor analysis results showed all items cross-loading reliably onto one factor component with scores ranging between .78 and .87 and explaining about 69.62% of the total variance (Cronbach's $\alpha = .91$).

Moderating Variable

Perceived source credibility. Credibility was measured with participants indicating on a 7-point scale (1 = *strongly disagree*, 7 = *strongly agree*) whether the source that had sent them the message (1) is believable, (2) is a knowledgeable person, (3) has accurately described the matter, (4) is a trustworthy person, and (5) is very honest (Cronbach's $\alpha = .96$; for example, Eastin, 2001; Flanagin & Metzger, 2003).

Control Variables

Personal issue involvement. This variable indicates the degree to which one feels a specific issue is more personally important to him or her than to other people (Kim, 2009). Participants indicated their stance on the issue in *general* (i.e., environment) as well as the issue *specific* to the study's scenario (i.e., central park) on a 7-point scale (1 = *very little*, 7 = *very much*). General issue questions included (1) "To what extent do you feel that society should protect the natural environment (e.g., trees, rivers, lakes, etc.)?" and (2) "How important is the issue pertaining to conservation of the natural environment to you?" Issue-specific questions included (3) "To what extent do you feel that parks should not be removed to make way for buildings?" and (4) "How strongly do you feel about the conservation of parks?" Varimax rotation results showed both measurements, *general* and s*pecific* issue involvement, cross-loaded reliably onto one factor with scores ranging from .69 to .87, explaining about 65.4% of cumulative variance (Cronbach's $\alpha = .89$, $M = 5.02$, $SD = 1.17$).

Attitude toward activism. This variable indicated participants' attitudes toward activism as well as toward activist groups and was measured on a 7-point semantic differential scale with anchors "positive/negative," "beneficial/harmful," "good/bad," "wise/foolish," and "favorable/unfavorable," asking participants their feelings about *activism in general*. The same questions were repeated, this time asking participants to indicate their attitudes toward *activist groups*. Participants were informed that "activism refers to organized activities by groups that aim to bring about or prevent changes to the law, the economy, the environment, and society" (Carty, 2010). Factor analysis results showed all 10 items cross-loading reliably onto a single factor retrieving scores ranging from .81 and .85, explaining about 72.9% of the total variance (Cronbach's $\alpha = .94$, $M = 4.90$, $SD = 0.89$).

Perceived efficacy. Three different perceptions of efficacy that were specific to the study's scenario were measured with a 7-point Likert-type scale (1 = *strongly*

disagree, 7 = *strongly agree*). These are perceived self-efficacy, technological efficacy, and group efficacy.

Perceived self-efficacy refers to individuals' feelings of self-competence in regard to affecting political and public affairs, and was measured with four statements such as "I consider myself to be well qualified to participate in campaigns against the university's administrators" and "I feel that my participation in campaigns against university administrators can help make a difference" (e.g., Jung, Kim, & de Zúñiga, 2011). *Perceived technological efficacy* refers to confidence in one's ability and understanding of how online participation works to aid activist campaigns online. Adapting Eastin and LaRose's (2000) Internet Self-Efficacy scale, participants answered three questions that included "I consider myself to be well qualified in using the Internet to participate in campaigns" and "Taking part in Internet activities to support a campaign is easy to me." Participants were informed that "campaigns refer to the collective activities organized by activist groups to create or prevent changes to law, economic, environment, and society." *Perceived group efficacy* is defined as the extent to which the activist group is perceived as competent and able to bring about the proposed outcomes. Participants indicated their views on whether "campaigns organized by student activist groups against university administrators" are (1) wise, (2) beneficial, (3) harmless, and if they (4) will be able to create changes, and (5) make it easier to achieve desired outcomes (e.g., Boyle et al., 2006).

Factor analysis extracted two factor components, explaining about 58.6% of the cumulative variance. Based on the results, two measurements of perceived efficacy were tabulated and used in the analyses. The first group, with scores ranging from .56 to .71, comprised the seven items that measured perceived self-efficacy and technological efficacy and was recategorized into (1) *perceived internal efficacy* (Cronbach's $\alpha = .85$, $M = 4.36$, $SD = 1.02$). The second with scores ranging from .63 to .67 comprised the five items that measured perceived group efficacy and was categorized into (2) *perceived external efficacy* (Cronbach's $\alpha = .86$, $M = 4.35$, $SD = 0.97$).

Data Analysis and Results

SPSS v.21 was used to test the various hypotheses in two inter-linked steps. First, hierarchical regression analysis and MANCOVA were done to test H1, RQ1, and RQ2. Second, analyses for mediation (H2), moderation (H3-H4), and moderated mediation (H5) were done through an SPSS-installed macro, PROCESS (Hayes, 2013). Control variables—personal issue involvement, attitude toward activism, and perceived internal and external efficacy—were blocked in regression analyses and accounted for in all analyses.

Direct Source Effects

H1 predicted that, when compared with messages passed by organizational sources, those passed by personally closer people (e.g., friends, family) would lead to greater willingness to participate in collective activities on social media. This was supported. Results from hierarchical regression analysis blocking for control variables showed

that personally closer sources were significantly more influential ($M = 5.44$, $SD = 1.21$) than organizational sources ($M = 4.02$, $SD = 1.41$), with $\Delta R^2 = .194$, $F(5, 207) = 15.98$, $p < .001$, $\beta = .44$, $f^2 = .394$, $R^2 = .27$ (adjusted). Among the covariates, significant relationships were found for personal issue involvement ($\beta = .210$, $p < .001$) and perceived internal efficacy ($\beta = .208$, $p < .01$).

RQ1 asked whether there are any significant differences between the influence of personal and impersonal sources on the different types of connective-collective activities that individuals are willing to do. Results from a multivariate multiple regression analysis (i.e., MANCOVA) that controlled for individual predispositional variables showed that the relationships between the type of source and the different activities individually were significant at $p < .01$, Wilks's $\lambda = .74$, $F(5, 202) = 8.42$, $p < .01$. To further understand individuals' willingness to engage in the different activities, additional MANCOVA tests were done with the two highest-level factors of personalness of source and cognitive elaboration loaded as fixed factor and accounted for as covariate, respectively. Results, as shown in Table 1, indicate that personal sources lead to greater willingness to carry out four types of activities: "Liking" the message received ($B = -.739$, $p < .01$), "Liking" or "Following" the group online ($B = -.649$, $p < .05$), posting personal comments about the campaign ($B = -.857$, $p < .001$), and posting personal comments on the message received ($B = -.777$, $p < .01$).

Mediation Analysis for Cognitive Elaboration on Source Effects

H2a and H2b predicted that cognitive elaboration will mediate the influence of source by being positively related to personalness of source as well as willingness to participate in the collective activities. The mediation test was done through PROCESS that provided a prespecified structural mediation model enabling the direct assessment of overall significance (i.e., p value) of full as well as partial mediation based on the Sobel indirect effects test. The unrealistic normality requirement in sampling distribution for the Sobel test in cases of low sample sizes was also accounted for in PROCESS that enables bootstrap computations with 1,000 to 5,000 resamples to a 95% confidence interval (CI; see Hayes, 2013). In accordance, the data were bootstrapped to 1,000 resamples drawn from our sample of 208.

As predicted, cognitive elaboration significantly mediated source influence ($F(6, 201) = 26.70$, $p < .001$, $R^2 = .39$) and is positively related to personalness of source ($B = .35$, $p < .01$) as well as willingness to participate in collective action on social media ($B = .43$, $p < .001$). Correspondingly, the significance of the direct effect from source is mitigated to $p < .05$, and the two-tailed significance indicated significance of an indirect effect (Sobel $Z = 3.35$, $p < .01$), with a 95% bias-corrected bootstrap CI ranging from .046 to .171. The data thus support H2a and H2b (see Table 2).

Moderation Analyses for Perceived Source Credibility

H3 predicted that perceived source credibility will moderate source effects by being positively related to willingness to carry out the collective activities. H4 predicted

Table 2. Regression Results for Mediation Analysis (Indirect and Total Effects; *N* = 208).

Variable	*B*	*SE*	*t*
Cognitive elaboration regressed on			
Source	.354	0.067	6.87**
Collective action participation regressed on			
Source	.308	0.055	6.68*
Cognitive elaboration	.427	0.056	7.60***
Personal issue involvement	.185	0.056	4.66*
Attitude toward activism	.033	0.057	0.588
Perceived internal efficacy	.128	0.055	4.24*
Perceived external efficacy	.051	0.055	0.197

	Value	*SE*	LL 95% CI	UL 95% CI	*Z*	*p*
Indirect effect normal distribution[a]						
Sobel	.108	0.029	0.0457	0.171	3.351	.006

Note. *B* = unstandardized coefficients; LL = lower limit; CI = confidence interval; UL = upper limit.
[a]Bootstrapped at sample size = 1,000.
*$p < .05$. **$p < .01$. ***$p < .001$.

that perceived source credibility will moderate the influence of source on cognitive elaboration and is positively associated with cognitive elaboration. Moderation analyses were carried out in PROCESS, and results showed significant interaction between personalness of source and perceived source credibility on willingness to participate in collective action ($F(7, 200) = 14.62$, $p < .01$, $R^2 = .44$), as well as cognitive elaboration ($F(3, 204) = 26.23$, $p < .01$, $R^2 = .28$). Figure 1 shows the interaction graph, and Table 3 details the regression results. In these interactions, perceived source credibility was positively related to willingness to participate in connective-collective action on social media ($B = .30$, $p < .01$) and to cognitive elaboration ($B = .47$, $p < .001$), as predicted by H3 and H4.

Moderated Mediation Analysis

H5 predicted that the indirect effect of source via cognitive elaboration on individual willingness to carry out connective-collective action on social media is conditional on different levels of perceived source credibility, with greater levels of perceived source credibility being more influential than lower levels. We performed this analysis through PROCESS by bootstrapping our sample to 1,000 resamples with 95% CIs (Preacher, Rucker, & Hayes, 2007). In addition, PROCESS centers the mean to 0, producing *p* values for moderated mediation at range for moderator variable ±1 *SD* from the mean. Therefore, conditional effects of source were tested at three levels of perceived credibility—at the mean (5.55), at 1 *SD* above the mean (6.80), and at 1 *SD* below the mean (4.29).

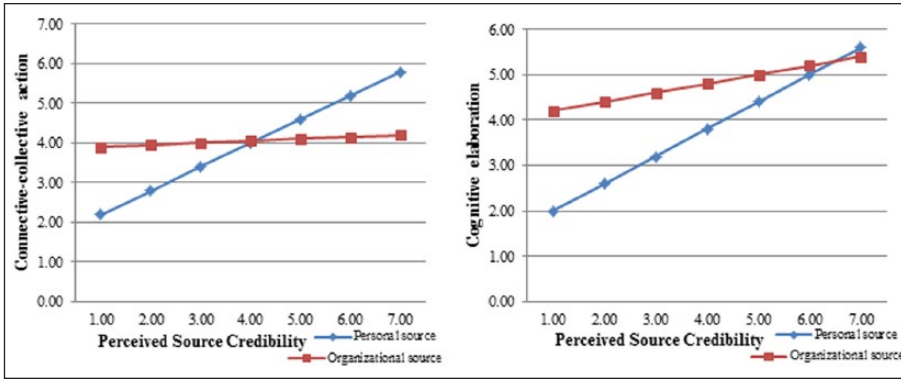

Figure 1. Willingness to participate in connective-collective action and cognitive elaboration as a function of personalness of source and perceived source credibility.

Table 3. Regression Results for Moderation Analyses (N = 208).

Variable	*B*	*SE*	*t*
Criterion: Willingness to participate in collective action			
Source	.326	0.183	5.34**
Perceived source credibility	.301	0.060	4.37**
Source × Perceived source credibility	.370	0.120	6.08**
Personal issue involvement	.202	0.061	3.32*
Attitude toward activism	.063	0.062	1.01
Perceived internal efficacy	.188	0.059	3.19*
Perceived external efficacy	−.017	0.061	−0.274
Criterion: Cognitive elaboration			
Source	.322	0.188	5.30**
Perceived source credibility	.472	0.061	7.69***
Source × Perceived source credibility	.369	0.123	6.00**

Note. Bootstrap sample size = 1,000; *B* = unstandardized coefficients.
*p < .05. **p < .01. ***p < .001.

Results indicated overall significance for moderated mediation at $F(8, 199) = 26.84$, $p < .001$, $R^2 = .46$. Specifically, effects from source via cognitive elaboration on willingness to participate in the collective activities differed significantly at mean (5.55; $t = 3.13$, $p < .01$) and at 1 *SD* above the mean (6.80; $t = 4.10$, $p < .001$), whereas no significant effect was found at 1 *SD* below the mean. Correspondingly, a conditional indirect effect was significant at $\alpha < .05$ in cases where the bootstrapped CIs did not contain 0, that is, when perceived source credibility was at the mean (CI = [0.807, 0.218]) and at 1 *SD* above the mean (CI = [0.512, 0.101]). In other words, conditional effects from personalness of source on willingness to participate in collective activities

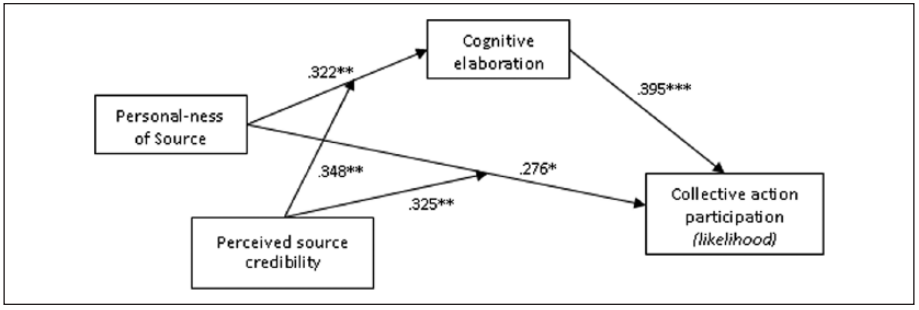

Figure 2. Result of moderated mediation path model.
*p < .05. **p < .01. ***p < .001.

Table 4. Results of Conditional Effects for Moderated Mediation (N = 208).

Perceived source credibility	Conditional direct effect at perceived credibility = M ± 1 SD			
	Value	*SE*	*t*	*p*
+ 1 *SD* (6.80)	0.875	0.238	4.100	.000
M (5.55)	0.627	0.201	3.726	.002
−1 *SD* (4.29)	0.279	0.320	0.873	.384
	Conditional *in*direct effect at perceived credibility = M ± 1 SD			
	Value	*SE*[a]	LL CI[a]	UL CI[a]
+ 1 *SD* (6.80)	.495	0.150	0.218	0.807
M (5.55)	.258	0.094	0.101	0.512
−1 *SD* (4.29)	−.020	0.112	−0.277	0.179

Note. LL = lower limit; CI = confidence interval; UL = upper limit.
[a]Bootstrapped at sample size = 1,000.

via cognitive elaboration are present when perceived source credibility is high but not when it is low. H5 was thus supported. It should be noted that the significant influence of personal issue involvement and perceived internal efficacy persisted throughout all analyses, retrieving values of B = .17 (p < .01) and B = .14 (p < .05) in the moderated mediation analysis, respectively.[1] Figure 2 shows the path results of the moderated mediation model with the final coefficients loaded, and Table 4 lists statistics for the conditional effects of moderated mediation.

RQ2 queried how the different activities ranked against one another in terms of individuals' likelihood to engage in them. As shown in Table 5, the activities are all significantly correlated to one another at p < .01 with respondents most willing to "Like" the message on Facebook (M = 5.13, SD = 1.75) and least willing to upload materials related to the campaign (M = 4.11, SD = 1.75).

Table 5. Ranked Mean Comparisons and Correlations Among Connective-Collective Activities (N = 208).

	M	*SD*	1	2	3	4	5	6	7	8
Activity 1	5.130	1.547	—							
Activity 2	5.083	1.708	.737	—						
Activity 3	4.927	1.517	.580	.617	—					
Activity 4	4.851	1.797	718	.764	.718	—				
Activity 5	4.737	1.730	.504	.524	.792	.552	—			
Activity 6	4.445	1.659	.489	.505	.788	.550	768	—		
Activity 7	4.171	1.377	.557	.610	614	.666	.701	.657	—	
Activity 8	4.107	1.653	552	.604	.682	.668	.665	.605	.729	—

Note. Activity 1 = "Like" the message received on Facebook; Activity 2 = "Like" or "Follow" online group on Facebook or Twitter; Activity 3 = pass the message received to others; Activity 4 = join the activist group online page; Activity 5 = post personal comments about the campaign; Activity 6 = post personal comments on the message received; Activity 7 = provide links to other information pertaining to campaign; Activity 8 = upload materials related to campaign (e.g., photos, videos).
All correlations significant at $p < .01$ (two-tailed).

Discussion

Findings in this study contribute empirical support for the logic of connective action by showing that, from an individual information-processing standpoint, communication (i.e., receiving messages) involving personal networks (e.g., friends, family) are stronger predictors of one's willingness to participate in connective-type collective activities on social media than impersonal ones (e.g., organizational sources). This bolsters the recently postulated weakening role of formal organizing structures (i.e., bureaucratic to entrepreneurial) in online collective action efforts (Bimber et al., 2005; Flanagin et al., 2006), and corroborates prior findings that "relational diffusion" or reliance on personal networks and social identities to relate to a cause are effective means of spurring collective action online (Biddix & Park, 2008; Diani, 2000; Fisher & Boekkooi, 2010; Postmes & Brunsting, 2002), especially in the *micro-contribution* context (Garrett, 2006).

More significantly, this study extends the theoretical premise of connective-collective action on social media by revealing that source influence on uninitiated individuals is not necessarily straightforward and is mediated by cognitive elaboration (i.e., personalness of source → cognitive elaboration of message → willingness to act). In fact, the amount of thought one gives to the message received was found to explain a greater proportion of variance in individuals' willingness to accede to the message request than did personalness of source, with those who were more willing to act having thought more about the message. A possible explanation for this extra burden in people's thoughts before deciding to "cross the private-public boundary" by expressing observable personal support for a cause on social media (Bimber et al., 2005) is how others in their online networks would perceive this show of support (i.e.,

their stance on the cause). This finding also echoes prior research that found expressing personal sentiments regarding social campaigns and disseminating them to recipients whom one knows personally takes more cognitive effort than does expressing them to unknown people (in blogs, for example; Nekmat, 2012). Carrying out connective-collective activities on social media may, therefore, be more cognitively demanding than previously assumed, despite the apparent ease of doing supposedly simple acts of expressing personal support (i.e., commenting, "Liking") or "connecting" the message received to others (i.e., hyperlinking information).

Findings further showed that the mediation of cognitive elaboration in determining individuals' willingness to participate in connective-collective action on social media is positively moderated by perceived source credibility (i.e., when perceived source credibility is high but not low). This positive bias from source credibility during message evaluation echoes those of prior studies (e.g., Chaiken & Maheswaran, 1994; Kaufman et al., 1999), and corroborates those that reasoned how positive thoughts imbued by a credible source (i.e., information validity) would lead to more favorable attitudes in individuals (e.g., Petty et al., 2002; Smith et al., 2013; Tormala et al., 2006). The present findings further revealed the *underlying process* through which the influence of source credibility is implicated. As depicted in Figure 1, even though a personally close source (e.g., friends, family) does not consistently or necessarily make the message perceptibly more credible than an organizational source, the amount of thinking individuals spent on the message received and their willingness to participate in connective-collective action on social media increase at a larger rate as their perceived credibility of the source increases, especially when the source comprises people in their personal circles. While earlier studies showed that the credibility accorded to people in personal networks can influence individual participation in collective action online (i.e., the "distributed trust" arising from discussions with personal networks; Chadwick, 2007, p. 290; Mercea, 2012), the present study further shows that the perception of source credibility functions to increase and bias their thoughts when deciding to participate in connective-collective action on social media.

Several practical implications are proffered by the findings. For one, perceived credibility was found to be a significant factor that will positively affect the source's ability to motivate individuals to think more about a message and, consequently, their willingness to adhere to the request. In this light, activist or social organizations should be able to increase their influence by creating and maintaining a trustworthy and legitimate reputation. One way to achieve this on social media is to increase their online network size and, at the same time, forge a strong sense of shared belief and confidence with people who are part of the online networks (i.e., subscribed members, "followers"). In a socially distributed manner (Kelleher, 2009), the people in these networks serve as important links to other social networks that will include their close and personal acquaintances (e.g., family, friends, colleagues), who have been shown in the present study to be very influential advocates for spurring collective action. In short, activist organizations, particularly newly formed ones as examined in the present study, need to focus on creating a credible reputation and nurturing trustworthy relationships with people who are already part of their online networks.

As with prior research (e.g., Harlow & Harp, 2012), the present study found through RQ2 that individuals are most willing to "Like" and "Follow" the messages and groups on platforms such as Facebook and Twitter to show support for activist campaigns, and least likely to upload and disseminate additional campaign-related materials (e.g., photos). This is not surprising as activities such as "Liking" require relatively negligible time and effort to do as compared with others (e.g., providing opinions, uploading materials, etc.). However, these easy-to-do activities can pose serious implications in popularizing and enhancing the visibility and efficacy of mobilization efforts. In addition, the readily visible number of "Likes" received by a movement and its related messages can create the climate of opinion and perception of majority position on the group and its cause. When this happens, the "herd mentality" and possible fear of being isolated in disagreement with the majority (i.e., large number of "Likes"), especially if they constitute one's close friends and colleagues, may motivate individuals to not only act in support of the campaign but also to rethink their existing position on issues where their thoughts are contrary to the perceived majority's (McDevitt, Kiousis, & Wahl-Jorgensen, 2003; Noelle-Neumann, 1993).

Findings from RQ1 further show that when cognitive elaboration is accounted for, and consistent with the communicative model of online collective action (Bimber et al., 2005) and the social motives for collective-action perspective (Klandermans & Oegema, 1987), people are more willing to show their support for collective causes on social media in more *visible* (i.e., "Liking") and *communicative* (i.e., posting comments) ways that align and build rapport with endorsers whom they know personally, as compared with activities such as uploading materials and joining the online activist group page. Except for "Liking" the message received, willingness to carry out the different connective-collective activities is also directly related to the amount of thought given to the message. This finding reinforces "Liking" a message received as a simple and "easy-to-do" activity that one is willing to do to show support for a cause on social media, supporting its popularity as compared with the other connective-collective activities as revealed by RQ2.

The serious implications from seemingly simple and easy-to-do acts of "Liking" and "Following" to show support for an activist campaign on social media should thus be given more attention. This need is heightened when we consider the double-edged repercussion on individuals and organizations. On the one hand, previous analyses suggest that these low-effort activities can lead to more disengaged and non-committal participation that are devoid of emotional ties, loyalty, and commitment to any specific group or causes (Castells, 2001), perpetuating what scholars termed "slacktivism" (Van de Donk, Loader, Nixon, & Rucht, 2004) or "push-button activism" (Petray, 2011) that makes it difficult for activism to stimulate committed individuals to sustain efforts (Lim, 2012). On the other hand, carrying out these activities may be "foot-in-the-door" activities that can spur some people to more frequent and engaged collective action in the future (Mercea, 2012). More research is thus needed to flesh out what it means for individuals to carry out these easy-to-do activities on social media for collective action.

Limitation and Future Research Direction

The finding of the positive mediation of cognitive elaboration is premised on the notion that individuals, in principle, display a general predilection to think and behave positively toward the study's issue (i.e., protecting the environment). As such, thinking more about the message in a positive frame may have increased one's willingness to engage in collective action toward such causes (i.e., self-validation; Petty et al., 2002), confirming prior findings on the positive influence of increased cognitive elaboration in regard to environmental issues (e.g., Roskos-Ewoldsen et al., 2002). Scrutinizing messages pertaining to issues that are against one's personal standpoint or ideological orientation (e.g., polarized stances on morally loaded issues such as abortion and homosexuality), however, may not affect willingness to contribute toward collective action at all, or perhaps create reluctance to even elaborate on the messages received despite the sources.

Limitations due to the operationalization of close personal sources and measurement of cognitive elaboration should also be noted. The manipulation of source personalness based on the level of closeness, familiarity, and frequency of contact respondents have with the source does not account for the different dimensions of "closeness" that respondents may exhibit in regard to the source. Future studies could investigate whether the strong influence of personal sources to motivate collective action participation on social media as found in the present study can be further differentiated between other dimensions of source-individual "closeness" based on, for example, likability, homophily, ideology, and proximity. Future research should also consider other more direct and comprehensive measurements of cognitive elaboration. This may include thought-listing procedures such as reporting as many message details as possible (e.g., Koh & Sundar, 2010; Oh & Sundar, 2015), accurate recognition of message characteristics, timed recall of message details, personal description of message-related thoughts (Niederdeppe, Kim, Lundell, Fazili, & Frazier, 2012), or a combination of these techniques, including that of the present study. The findings here have also provided a concrete basis for future studies to further explore and theorize on the varying popularity of different collective activities on social media and individual engagement with them. Coupled with more precise forms of analyses, such as Gutmann measurements and factor analyses, future studies may endeavor to shed more light on the complexities of individual collective action participation on social media when faced with multiple ways to show personal support for collective causes via the platform.

Conclusion

The potential of social networking platforms to facilitate collective action for activism occurs in broad contexts and magnitude—from large-scale cross-border movements to narrower-focused grassroots mobilization. By providing insights from the individual information-processing perspective in the micro-mobilization context, this study distills common factors (greater influence of personal circles over organizational sources,

cognitive elaboration of messages, perceived source credibility) that can help determine individual participation in the different types of connective-collective activities on social media across broader contexts. Organizations aiming to use social media to engage more participants for collective causes and future research on the micro-mobilization for collective action online could benefit from this information.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The authors received no financial support for the research, authorship, and/or publication of this article.

Note

1. Post hoc analyses were done to check whether personal issue involvement and perceived internal efficacy (self- and technological efficacy) could be standalone factors that directly affect individuals' willingness to carry out connective-collective activities on social media. Multicollinearity checks revealed no significant relationships between the two predispositional factors and source on willingness to participate in the activities (issue involvement, $r = -.04$, $p = .29$, variance inflation factor [VIF] = 1.004; perceived internal efficacy, $r = -.02$, $p = .38$, VIF = 1.003). Hierarchical regression analysis blocking for other predispositional factors revealed no significant interaction effects between personalness of source and personal issue involvement ($\beta = -.07$, $p = .24$) as well as perceived internal efficacy ($\beta = -.09$, $p = .18$) on willingness to participate. The results suggest that individuals who feel strongly about a particular issue and who are confident in using social media are more willing to carry out connective-collective activities on social media, regardless of who invited them. Future studies should consider these individual factors as essential determinants of collective action participation on social media.

References

Benkler, Y. (2006). *The wealth of networks: How social production transforms markets and freedom*. New Haven, CT: Yale University Press.

Bennett, W. L., Breunig, C., & Givens, T. (2008). Communication and political mobilization: Digital media and the organization of anti-Iraq war demonstrations in the US. *Political Communication*, *25*, 269-289. doi:10.1080/10584600802197434

Bennett, W. L., & Segerberg, A. (2012). The logic of connective action. *Information, Communication & Society*, *15*, 739-768. doi:10.1080/1369118X.2012.670661

Bennett, W. L., & Segerberg, A. (2013). *The logic of connective action: Digital media and the personalization of contentious politics*. New York, NY: Cambridge University Press.

Biddix, J. P., & Park, H. W. (2008). Online networks of student protest: The case of the living wage campaign. *New Media & Society*, *10*, 871-891. doi:10.1177/1461444808096249

Bimber, B., Flanagin, A. J., & Stohl, C. (2005). Reconceptualizing collective action in the contemporary media environment. *Communication Theory*, *15*, 365-388. doi:10.1111/j.1468-2885.2005.tb00340.x

Bimber, B., Flanagin, A. J., & Stohl, C. (2012). *Collective action in organizations: Interaction and engagement in an era of technological change*. New York, NY: Cambridge University Press.

Bond, R. M., Fariss, C. J., Jones, J. J., Kramer, A. D., Marlow, C., Settle, J. E., & Fowler, J. H. (2012). A 61-million-person experiment in social influence and political mobilization. *Nature*, *489*, 295-298. doi:10.1038/nature11421

Boyle, M. P., Schmierbach, M., Armstrong, C. L., Cho, J., McCluskey, M., McLeod, D. M., & Shah, D. V. (2006). Expressive responses to news stories about extremist groups: A framing experiment. *Journal of Communication*, *56*, 271-288. doi:10.1111/j.1460-2466.2006.00019.x

Brannon, L. A., & Brock, T. C. (2001). Scarcity claims elicit extreme responding to persuasive messages: Role of cognitive elaboration. *Personality and Social Psychology Bulletin*, *27*, 365-375. doi:10.1177/0146167201273010

Briñol, P., & Petty, R. E. (2009). Source factors in persuasion: A self-validation approach. *European Review of Social Psychology*, *20*, 49-96. doi:10.1080/10463280802643640

Cacioppo, J. T., & Petty, R. E. (1982). The need for cognition. *Journal of Personality and Social Psychology*, *42*, 116-131. doi:10.1037/0022-3514.42.1.116

Carty, V. (2010). New information communication technologies and grassroots mobilization. *Information, Communication & Society*, *13*, 155-173. doi:10.1080/13691180902915658

Castells, M. (2001). *The Internet galaxy: Reflections on the Internet, business, and society*. Oxford, UK: Oxford University Press.

Chadwick, A. (2007). Digital network repertoires and organizational hybridity. *Political Communication*, *24*, 283-301. doi:10.1080/10584600701471666

Chaiken, S. (1980). Heuristic versus systematic information processing and the use of source versus message cues in persuasion. *Journal of Personality and Social Psychology*, *39*, 752-766. doi:10.1037/0022-3514.39.5.752

Chaiken, S., & Maheswaran, D. (1994). Heuristic processing can bias systematic processing. *Journal of Personality and Social Psychology*, *66*, 460-473. doi:10.1037/0022-3514.66.3.460

de Zúñiga, H. G., & Valenzuela, S. (2011). The mediating path to a stronger citizenship: Online and offline networks, weak ties, and civic engagement. *Communication Research*, *38*, 397-421. doi:10.1177/0093650210384984

Dholakia, R. R. (1986). Source credibility effects: A test of behavioral persistence. In M. Wallendorf & P. Anderson (Eds.), *Advances in consumer research* (Vol. 14, pp. 426-430). Provo, UT: Association of Consumer Research.

Dholakia, R. R., & Sternthal, B. (1977). Highly credible sources: Persuasive facilitators or persuasive liabilities. *Journal of Consumer Research*, *3*, 223-232. doi:10.1086/208671

Diani, M. (2000). Social movement networks virtual and real. *Information, Communication & Society*, *3*, 386-401. doi:10.1080/13691180051033333

Eastin, M. S. (2001). Credibility assessments of online health information: The effects of source expertise and knowledge of content. *Journal of Computer-Mediated Communication*, *6*(4). doi:10.1111/j.1083-6101.2001.tb00126.x

Eastin, M. S., & LaRose, R. (2000). Internet self-efficacy and the psychology of the digital divide. *Journal of Computer-Mediated Communication*, *6*(1). doi:10.1111/j.1083-6101.2000.tb00110.x

Fisher, D. R., & Boekkooi, M. (2010). Mobilizing friends and strangers. *Information, Communication & Society*, *13*, 193-208. doi:10.1080/13691180902878385

Flanagin, A. J., & Metzger, M. J. (2003). The perceived credibility of personal Web page information as influenced by the sex of the source. *Computers in Human Behavior*, *19*, 683-701. doi:10.1016/S0747-5632(03)00021-9

Flanagin, A. J., Stohl, C., & Bimber, B. (2006). Modeling the structure of collective action. *Communication Monographs*, *73*, 29-54. doi:10.1080/03637750600557099

Garrett, R. K. (2006). Protest in and information society. *Information, Communication & Society*, *9*, 202-224. doi:10.1080/13691180600630773

Glynn, C. J., & Park, E. (1997). Reference groups, opinion intensity, and public opinion expression. *International Journal of Public Opinion Research*, *9*, 213-232. doi:10.1093/ijpor/9.3.213

Granovetter, M. S. (1973). The strength of weak ties. *American Journal of Sociology*, *78*, 1360-1380. Retrieved from http://www.jstor.org/stable/2776392

Harlow, S. (2011). Social media and social movements: Facebook and an online Guatemalan justice movement that moved offline. *New Media & Society*, *14*, 225-243. doi:10.1177/1461444811410408

Harlow, S., & Harp, D. (2012). Collective action on the Web. *Information, Communication & Society*, *15*, 196-216. doi:10.1080/1369118X.2011.591411

Hayes, A. F. (2013). *Introduction to mediation, moderation and conditional process analysis: A regression-based approach*. New York, NY: Guilford Press.

Heesacker, M., Petty, R. E., & Cacioppo, J. T. (1983). Field dependence and attitude change: Source credibility can alter persuasion by affecting message-relevant thinking. *Journal of Personality*, *51*, 653-666. doi:10.1111/j.1467-6494.1983.tb00872.x

Jones, L. W., Sinclair, R. C., & Courneya, K. S. (2003). The effects of source credibility and message framing on exercise intentions, behaviors, and attitudes. *Journal of Applied Social Psychology*, *33*, 179-196. doi:10.1111/j.1559-1816.2003.tb02078.x

Jung, N., Kim, Y. M., & de Zúñiga, H. G. (2011). The mediating role of knowledge and efficacy in the effects of communication on political participation. *Mass Communication and Society*, *14*, 407-430. doi:10.1080/15205436.2010.496135

Juris, J. S. (2012). Reflections on #Occupy Everywhere: Social media, public space, and emerging logics of aggregation. *American Ethnologist*, *39*, 259-279. doi:10.1111/j.1548-1425.2012.01362.x

Kaufman, D., Stasson, M., & Hart, J. (1999). Are the tabloids always wrong or is that just what we think? Need for cognition and perceptions of articles in print media. *Journal of Applied Social Psychology*, *29*, 1984-1997. doi:10.1111/j.1559-1816.1999.tb00160.x

Kelleher, T. (2009). Conversational voice, communicated commitment, and public relations outcomes in interactive online communication. *Journal of Communication*, *59*, 172-188. doi:10.1111/j.1460-2466.2008.01410.x

Kim, Y. M. (2009). Issue publics in the new information environment selectivity, domain specificity, and extremity. *Communication Research*, *36*, 254-284. doi:10.1111/j.1460-2466.2008.01410.x

Klandermans, B., & Oegema, D. (1987). Potentials, networks, motivations, and barriers. *American Sociological Review*, *52*, 519-531. doi:10.2307/2095297

Koh, Y. J., & Sundar, S. S. (2010). Heuristic versus systematic processing of specialist versus generalist sources in online media. *Human Communication Research*, *36*, 103-124. doi:10.1111/j.1468-2958.2010.01370.x

Lim, M. (2012). Clicks, cabs, and coffee houses: Social media and oppositional movements in Egypt, 2004–2011. *Journal of Communication*, *62*, 231-248. doi:10.1111/j.1460-2466.2012.01628.x

Mackie, D. M., Worth, L. T., & Asuncion, A. G. (1990). Processing of persuasive in-group messages. *Journal of Personality and Social Psychology*, *58*, 812-822. doi:10.1037/0022-3514.58.5.812

Maireder, A., & Schwarzenegger, C. (2011). A movement of connected individuals. *Information, Communication & Society*, *15*, 171-195. doi:10.1080/1369118X.2011.589908

McAdam, D. (1986). Recruitment to high-risk activism: The case of Freedom Summer. *American Journal of Sociology*, *92*, 64-90. Retrieved from http://www.jstor.org/stable/2779717

McDevitt, M., Kiousis, S., & Wahl-Jorgensen, K. (2003). Spiral of moderation: Opinion expression in computer-mediated communication. *International Journal of Public Opinion Research*, *15*, 454-470. doi:10.1093/ijpor/15.4.454

Mercea, D. (2012). Digital prefigurative participation: The entwinement of online communication and offline participation in protest events. *New Media & Society*, *14*, 153-169. doi:10.1177/1461444811429103

Metzger, M. J., Flanagin, A. J., & Medders, R. B. (2010). Social and heuristic approaches to credibility evaluation online. *Journal of Communication*, *60*, 413-439. doi:10.1111/j.1460-2466.2010.01488.x

Nekmat, E. (2012). Message expression effects in online social communication. *Journal of Broadcasting & Electronic Media*, *56*, 203-224. doi:10.1080/08838151.2012.678513

Neuwirth, K., Frederick, E., & Mayo, C. (2002). Person-effects and heuristic-systematic processing. *Communication Research*, *29*, 320-359. doi:10.1177/0093650202029003005

Niederdeppe, J., Kim, H. K., Lundell, H., Fazili, F., & Frazier, B. (2012). Beyond counterarguing: Simple elaboration, complex integration, and counterelaboration in response to variations in narrative focus and sidedness. *Journal of Communication*, *62*, 758-777. doi:10.1111/j.1460-2466.2012.01671.x

Noelle-Neumann, E. (1993). *The spiral of silence: Public opinion—Our social skin*. Chicago, IL: University of Chicago Press.

Oh, J., & Sundar, S. S. (2015). How does interactivity persuade? An experimental test of interactivity on cognitive absorption, elaboration, and attitudes. *Journal of Communication*, *65*, 213-236. doi:10.1111/jcom.12147

Oshagan, H. (1996). Reference group influence on opinion expression. *International Journal of Public Opinion Research*, *8*, 335-354. doi:10.1093/ijpor/8.4.335

Petray, T. L. (2011). Protest 2.0: Online interactions and aboriginal activists. *Media, Culture & Society*, *33*, 923-940. doi:10.1177/0163443711411009

Petty, R. E., Briñol, P., & Tormala, Z. L. (2002). Thought confidence as a determinant of persuasion: The self-validation hypothesis. *Journal of Personality and Social Psychology*, *82*, 722-741. doi:10.1037/0022-3514.82.5.722

Petty, R. E., & Cacioppo, J. T. (1984). Source factors and the elaboration likelihood model of persuasion. *Advances in Consumer Research*, *11*, 668-672. Retrieved from http://acrwebsite.org/volumes/6328/volumes/v11/NA-11

Pornpitakpan, C. (2004). The persuasiveness of source credibility: A critical review of five decades' evidence. *Journal of Applied Social Psychology*, *34*, 243-281. doi:10.1111/j.1559-1816.2004.tb02547.x

Postmes, T., & Brunsting, S. (2002). Collective action in the age of the Internet. *Social Science Computer Review*, *20*, 290-301. doi:10.1177/089443930202000306

Preacher, K. J., Rucker, D. D., & Hayes, A. F. (2007). Addressing moderated mediation hypotheses: Theory, methods, and prescriptions. *Multivariate Behavioral Research*, *42*, 185-227. doi:10.1080/00273170701341316

Priester, J. R., & Petty, R. E. (2003). The influence of spokesperson trustworthiness on message elaboration, attitude strength, and advertising effectiveness. *Journal of Consumer Psychology*, *13*, 408-421. doi:10.1207/S15327663JCP1304_08

Roskos-Ewoldsen, D. R., Bichsel, J., & Hoffman, K. (2002). The influence of accessibility of source likability on persuasion. *Journal of Experimental Social Psychology*, *38*, 137-143. doi:10.1006/jesp.2001.1492

Segerberg, A., & Bennett, W. L. (2011). Social media and the organization of collective action. *The Communication Review*, *14*, 197-215. doi:10.1080/10714421.2011.597250

Shumate, M., & Lipp, J. (2008). Connective collective action online: An examination of the hyperlink network structure of an NGO issue network. *Journal of Computer-Mediated Communication*, *14*, 178-201. doi:10.1111/j.1083-6101.2008.01436.x

Smith, C. T., Houwer, J. D., & Nosek, B. A. (2013). Consider the source: Persuasion of implicit evaluations is moderated by source credibility. *Personality and Social Psychology Bulletin*, *39*, 193-205. doi:10.1177/0146167212472374

Stengrim, L. A. (2005). Negotiating postmodern democracy, political activism, and knowledge production: Indymedia's grassroots and e-savvy answer to media oligopoly. *Communication and Critical/Cultural Studies*, *2*, 281-304. doi:10.1080/14791420500332527

Stiff, J. B., & Mongeau, P. A. (2002). *Persuasive communication*. New York, NY: Guilford Press.

Street, M. D., Douglas, S. C., Geiger, S. W., & Martinko, M. J. (2001). The impact of cognitive expenditure on the ethical decision-making process: The cognitive elaboration model. *Organizational Behavior and Human Decision Processes*, *86*, 256-277.

Sundar, S. S. (2008). The MAIN model: A heuristic approach to understanding technology effects on credibility. In M. Metzger & A. Flanagin (Eds.), *Digital media, youth, and credibility* (pp. 73-100). Cambridge, MA: MIT Press.

Sundar, S. S., Knobloch-Westerwick, S., & Hastall, M. R. (2007). News cues: Information scent and cognitive heuristics. *Journal of the American Society for Information Science and Technology*, *58*, 366-378. doi:10.1002/asi.20511

Thackeray, R., & Hunter, M. A. (2010). Empowering youth: Use of technology in advocacy to affect social change. *Journal of Computer-Mediated Communication*, *15*, 575-591. doi:10.1111/j.1083-6101.2009.01503.x

Tilly, C. (1978). *From mobilization to revolution*. Reading, MA: Addison-Wesley.

Tormala, Z. L., Briñol, P., & Petty, R. E. (2006). When credibility attacks: The reverse impact of source credibility on persuasion. *Journal of Experimental Social Psychology*, *42*, 684-691. doi:10.1016/j.jesp.2005.10.005

Tufekci, Z., & Wilson, C. (2012). Social media and the decision to participate in political protest. *Journal of Communication*, *62*, 363-379. doi:10.1111/j.1460-2466.2012.01629.x

Van de Donk, W., Loader, B. D., Nixon, P. G., & Rucht, D. (2004). *Cyberprotest: New media, citizens and social movements*. London, England: Routledge.

van Knippenberg, D., Lossie, N., & Wilke, H. (1994). In-group prototypicality and persuasion: Determinants of heuristic and systematic message processing. *British Journal of Social Psychology*, *33*, 289-300. doi:10.1111/j.2044-8309.1994.tb01026.x

White, P. H., & Harkins, R. G. (1994). Race of source effects in the elaboration likelihood model. *Journal of Personality and Social Psychology*, *67*, 790-807. doi:10.1037/0022-3514.67.5.790

Wilson, P. (1983). *Second-hand knowledge: An inquiry into cognitive authority*. Westport, CT: Greenwood Press.

Author Biographies

Elmie Nekmat is assistant professor in the Department of Communications and New Media at the National University of Singapore. His research focuses on media effects and the social-psychological processes and effects in computer-mediated communication.

Karla K. Gower is the Behringer Distinguished Professor in the Advertising and Public Relations Department of the College of Communication and Information Sciences at the University of Alabama and director of The Plank Center for Leadership in Public Relations.

Shuhua Zhou is Professor in the Telecommunication and Film Department at the College of Communication and Information Sciences at the University of Alabama. His primary research areas are media effects and human cognition of mediated messages.

Miriam Metzger is Professor in the Department of Communication at the University of California at Santa Barbara. Her interests lie at the intersection of media, information technology, and trust, centering on how information technology alters our understandings of credibility, privacy, and the processes of media effects.