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Editorial Essay: A Reflection on Methodological Diversity in the Journal of International Crisis and Risk Communication Research

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KEYWORDS: editorial, crisis communication, risk communication, research methods, Journal of International Crisis and Risk Communication Research

In our previous editorials, we have touched on different aspects of diversity and diversification in crisis and risk communication research. We have argued that while the field is starting to expand from its focus on Western corporate perspectives to include non-Western countries, non-corporate crises, and more broadly embracing different perspectives, we also suggest that diversification needs to continue to develop and be supported (Diers-Lawson & Meißner, 2021a). Furthermore, we have reviewed the multidisciplinary character of crisis and risk communication research, involving researchers from fields like public relations, political science, sociology, journalism, public health, and others suggesting this is not only healthy for the continued development of crisis and risk communication research but also necessary to more fully understand the phenomenon (Diers-Lawson & Meißner, 2021b).
In this editorial, we would like to identify another aspect of diversity that we deem crucial: the importance of supporting methodological diversity in crisis and risk communication research. For both theory-building and theory-testing, it is fruitful, if not essential, to apply different methodological angles to increase the robustness of our findings and theories. In her analysis of the field’s development, Diers-Lawson (2020) points out that the methodological diversity of crisis communication journal articles has evolved with the field’s development with conceptual and best practices emerging first, followed by rhetorical, qualitative, quantitative, then experimental approaches.

**Summary of JICRCR’s Methodological Diversity, Volumes 1–4**

Because the *JICRCR* is only beginning its 5th year of publication, methodological diversity in the journal looks somewhat different than what Diers-Lawson (2020) describes for the field overall. For example, the results of one-way ANOVAs looking for differences in the method and volume number, crisis type (i.e., transgression, event, reputational, or disaster), or organizational context (i.e., corporate, governmental, nongovernmental, or stakeholder-focused) were not significant suggesting that there is no systematic difference in the methodological approaches in research published in the journal over time or based on core crisis contexts. Because there have been three different editors over the journal’s 5-year history, this also suggests that trends in methodology published are not attributable to editorial preference. However, when looking at the distribution of research methods, there are some clear trends in methods of the pieces submitted, reviewed, and published in the journal (see Figure 1).

Of the 58 pieces published in the last 5 years and 11 issues, 10 have been conceptual or theoretical (i.e., no new research reported), 13 have been rhetorical (e.g., thematic analyses or critical methods), 4 have been qualitative summaries of interview-based research, 6 have been quantitative content analyses, 2 have analyzed big datasets, 15 have been questionnaires, 4 have used experimental methods, and 4 have used mixed methods. Unsurprisingly, there are significant differences across the
publications in the application of different methods ($\chi^2\ (7) = 22.28; p < .01$) with conceptual, rhetorical, and questionnaire-based research generally being overrepresented in the articles while interview, content analysis, big data, experimental, and mixed methods pieces are generally underrepresented in the articles.

While we do not intend to change the editorial policy nor will we preference any methodology, we would especially encourage the submission of some of the less represented methods into the journal in upcoming volumes and issues. For example, we would welcome more qualitative and big data (i.e., computational methods) submissions. These methods have traditionally complemented the classical crisis and risk communication research toolkit, adding both depth and scale to their endeavors and as we continue to develop and apply theory to crisis and risk communication strategy, it makes sense that these methods would be better represented in the journal.
Qualitative research, especially interview-based data, can offer opportunities for in-depth analyses of the translation of the message (i.e., crisis and risk narratives) to different audiences. It can help the field better understand the messengers by connecting strategy and practice with the recipients of those messages to identify any opportunities to improve communication at critical times with targeted audiences. Of course, qualitative research is often viewed as instrumental in the development of theory; however, it should also be viewed as instrumental in evaluating theories that have been validated by quantitative methods to critically reflect on multiple measures of validity such as construct, content, and face validity. This may be particularly important as nations begin to emerge from the global experience of COVID-19, interview-based data presents an opportunity to ensure that, in the wake of the collective trauma, change, and challenge of the pandemic, people still perceive key crisis and risk communication issues like reputation, severity, and susceptibility (to name just a few) in the same way as before the pandemic. Perhaps the biggest strength of qualitative methods is that they enable us to reconstruct how different groups make sense of crisis and risk experiences. For example, Meißner’s (2018) reconstruction of the professional role concepts by Japanese journalists in the context of disaster reporting provides such an example.

Comparatively, computational methods have the advantage that large datasets can be analyzed relatively quickly—which is especially advantageous in the context of crises where global reactions to live situations and thus copious amounts of data can be produced in short time spans. An overview of how computational methods are applied in crisis communication research is provided by van der Meer (2016), who points out that the classification of texts is a primary function of these relatively new methodological tools. An example is the topic modeling of psychological concerns related to COVID-19 expressed on Facebook (Chen et al., 2021). A development of better tools and methods of analysis of computational data within the crisis and risk communication context would provide significant value to a community of academics and practitioners often needing to make critical decisions and
strategic recommendations in a time-sensitive, media-rich, and information-rich environment. There is also insufficient development in much of the computational methods in terms of the translation of present theory into big data; therefore, additional research in this area will help to advance both theory and practice in crisis and risk communication research.

We would also strongly encourage research that uses a mixed methods approach, particularly in the context of crisis and risk communication research because they can provide deep and systematic understanding of crisis-related phenomena. For instance, the digital ethnography approach by Sumiala et al. (2018, 2019) shows how automated classification of social media postings and qualitative analysis can mutually inform each other and generate a deep and systematic understanding of crisis-related text corpora.

These examples are, of course, only the tip of the iceberg. Employing rhetorical, critical, qualitative, quantitative, experimental, and mixed methodologies, there are many research designs that have and continue to make important contributions to theory and practice in crisis and risk communication. These are intended to show just a few of the opportunities our growing methodological toolkit has to offer.

Methodological Excellence in Volume 5, Issue 1 of the JICRCR

One of the strengths of the present issue of the journal is that it showcases some of the methodological excellence in crisis and risk communication research developed and applied by our colleagues. The first two of the pieces reflect an underrepresented method in the journal—experimental design. Lin et al.’s piece, “I Thought about It and I May Follow What You Said”: Three Studies Examining the Effects of Elaboration and Source Credibility on Risk Behavior Intentions is a three-study experimental analysis demonstrating that cognitive elaboration may be a critical factor to explain how people process risk information in different risk contexts. Likewise, Wang et al.’s piece, “I Lose” “I Gain” vs. “They Lose” “They Gain”: The Influence of Message Framing on Donation Intentions in Disaster Fundraising, provides a good example of experimental design in crisis and risk communication research finding that
there are significant differences in first- versus third-person messages on charitable donation which presents both theoretical and practical advice on message development after crises. The third piece in this issue, Ansah’s *COVID-19 Dialogue on Facebook: Crisis Communication’s Relationship between Ghanian Authorities and Citizens*, uses another underrepresented method in the journal—quantitative content analysis—in order to explore dialogue and engagement between the Ghanian Ministry of Information and citizens of the country revealing the communication challenges emerging from the pandemic. In analyzing crisis communication in Africa, this piece also supports our previous call for improving the diversity of cultural perspectives represented in the journal as well.

The final piece in this issue, Rice and Bloomfield’s *Commemorating Disorder in After-Action Reports: Rhetorics of Organizational Trauma after the Las Vegas Shooting*, represents a method often found in the journal—qualitative thematic analysis of documents—but represents a text not often explored in crisis communication research—the after-action report (AAR) and also uses theoretical approaches seldom used in crisis and risk communication research, thus blending new documents and older approaches to provide a novel understanding of the rhetoric of crisis renewal.

As a field, crisis and risk communication research is still developing and growing. As this volume demonstrates, crisis and risk communication research not only embraces different methods, perspectives, and approaches to understanding the phenomena studied, but also bridges the gap between theoretical and applied research. Thus, while it is right to celebrate and support this, we also recognize that we need to continue to develop and support diversity in crisis and risk communication research ranging from the perspectives and theories developed and adopted to the methods used to analyze data.

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Editorial Essay: A Reflection on Methodological Diversity

References


“I Thought about It and I May Follow What You Said”: Three Studies Examining the Effects of Elaboration and Source Credibility on Risk Behavior Intentions

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ABSTRACT

The induction of cognitive elaboration on information concerning risks may facilitate compliance with messages encouraging audiences to mitigate against risks. Nevertheless, cognitive elaboration and its relationship with other key variables in risk information processing have been largely understudied. Revisiting data from three experiments, this study examined how cognitive elaboration influences behavioral intentions associated with a risk, and the relationship between cognitive elaboration and behavioral intentions, as mediated by perceptions of source credibility. Results consistently found that cognitive elaboration directly predicted increases in both source credibility perceptions and behavioral intentions, along with an indirect effect of cognitive elaboration on behavioral intentions through credibility. Together, the comparative analyses suggest that cognitive elaboration may be a robust factor to aid risk information processing and can be examined in different risk contexts. Practical and theoretical implications, future directions, and limitations are discussed.

KEYWORDS: cognitive elaboration, source credibility, risk perceptions, behavioral intention, confirmatory factor analyses
Cognitive elaboration is the active process of linking recently acquired information with other information stored within an individual's memory, such as that acquired through personal experiences, or the process of creating new connections between pieces of information (DeFleur & Ball-Rokeach, 1989; Eveland, 2001). With respect to its application in mediated contexts, one of the central premises of cognitive elaboration is that active processing (whether by choice or induction) is related to mediated persuasion processes. Cognitive elaboration may have critical applications for risk communication. Risk is an interactive process and expands in intensity and complexity over time (Sellnow et al., 2008). Although a given risk might not bring visible damages to safety, health, financial, or public interest in the current state, it is often composed of uncertainties and conflicting perspectives regarding future events and consequences. Risk communication, therefore, often involves expressions of concerns, arguments, message placement, consideration of audience characteristics or personal reactions to risk management in the long-term (Lachlan, Spence, Lin et al., 2014; Lin, Lachlan, & Spence, 2016; Sellnow et al., 2008; Spence et al., 2010; Spence et al., 2019). The complexity surrounding a risk issue often fosters intense debates, primarily occurring among experts with diverse perspectives, which can lead to heightened risk uncertainty, increase confusion in issue interpretation, and undermine the credibility of official spokespersons (Kasperson et al., 2000; Ulmer et al., 2017). Thus, it is vital for individuals to deliberately sort through the available risk information in such contentious cases, which requires cognitive elaboration to govern the eventual response to a hazard. The effective induction of elaboration on risks to health, life, and property may facilitate compliance with messages encouraging audiences to prepare against such risks. To date, however, this concept and its relationship with risk processing have been largely understudied. This study examines the function of cognitive elaboration across a range of risk contexts.

Research examining the effectiveness of diverse online media affordances in risk communication and persuasions appears inconsistent. For instance, some studies have found retweeting risk messages enhanced trustworthiness perceptions, whereas
others indicated that retweets of warning messages reduced source credibility judgments (e.g., Lin et al., 2016; Lin et al., 2018; Lin & Spence, 2019). Such mixed findings call for further identification of the influence of mediators in risk information processing. One of the factors evident from the literature is cognitive elaboration (e.g., Westerman et al., 2014).

A small number of studies have examined related constructs in risk contexts. For example, a study by Homer and Kahle (1990) examined the effect of source expertise, time of identification of the source, and involvement (a concept like cognitive elaboration) on persuasion, and found a three-way interaction among attitudes toward the message, attitudes toward the product, and behavioral intention. They argue that, under high-issue involvement conditions, a high-credibility source was perceived as superior to a low-credibility source. Other literature looking at involvement found that those who engage in higher levels of information processing increased the probability of learning from the media (Fleming et al., 2006). Involvement “has been linked to media use motives that are grounded in the importance of the content and reflect a desire to acquire and share information” (Rubin & Perse, 1987, p. 63). Although not exactly the same construct, the relationship between involvement and elaboration suggests the possibility of elaboration as a vital issue in the potential processing of risk information.

Studies motivated by dual-process models have examined similar concepts in health and risk literature. For example, Emmers-Sommer and Terán (2020) examined source credibility, elaboration, and intentions related to celebrity sources and participant sex. Their results indicated that participants found celebrities more credible than medical experts; the data further indicated that elaboration and intention to change behavior varied across participant sex. Similarly, Jones et al. (2003) looked at exercise intentions and randomly assigned participants to receive information from a credible or a noncredible source (media doctor or high school science student). Drawing from Elaboration Likelihood and Prospect Theory, findings suggested that when a credible source alongside a positive frame was presented, elaboration and intentions to exercise were the strongest. Moreover, Trumbo and McComas (2003)
proposed a path model of risk regressed on information processing and source credibility perception. This work showed that, when perceiving high credibility for authoritative and professional sources or low credibility for citizen groups, participants tended to follow heuristic processing and perceived lower levels of risk.

These studies highlighted the roles of elaboration, credibility, and intentions to change behaviors and used dual-process models to explain credibility and behavioral intentions. Nevertheless, the willingness of individuals to establish perceptions of source credibility as a function of their elaboration on received messages is a different question. The idea of cognitive elaboration, as conceptualized by Perse (1990), focuses on involvement with the message and highlights that information processing is active and is not bound by characteristics of the message or source itself influencing credibility perceptions. To date, the use of this conceptualization in the study of social media messages is limited. Westerman et al. (2014) used similar logic to the above studies to examine elaboration and the recency of posts to a social media account in promoting information on heart disease risk. Their results suggest that credibility was not directly impacted by recency of updates but rather that cognitive elaboration mediated the relationship between recency and perceptions of credibility. These results were replicated and extended by Lachlan, Spence, Edwards et al. (2014) and Spence et al. (2016) in examinations of tweets by the Centers for Disease Control and Prevention which centered on the risk associated with flu seasons. Results supported that cognitive elaboration mediated the relationship between update speed on Twitter and the desire to seek additional information on a topic. Finally, Spence et al. (2020) examined the role of cognitive elaboration concerning self-disclosure and intentions to take prescribed behaviors. In this study, participants listened to a radio segment on the risk associated with tornado season and viewed the Facebook page of the radio personality. Their thorough analysis was post hoc but provided further evidence to support that cognitive elaboration may be an important and understudied area in risk communication. Their results found that cognitive elaboration mediated the relationship between self-disclosure and perceptions of source credibility in addition to behavioral intentions and desire
to seek additional information on the risk. Therefore, the current research contributes to examining how robust the mediating effect of cognitive elaboration is in predicting information processing outcomes in diverse risk contexts.

Furthermore, source credibility is a critical consideration in the effectiveness of crisis and risk messaging. Because risk messaging often stems from centralized sources, there is typically a power dynamic between messenger and receiver, such that receivers may be resistant to behavioral advice from government and public health officials. Establishing credibility is paramount in motivating audiences to listen, internalize information, and comply with recommendations (Lin & Spence, 2018; Renn & Levine, 1991). Perceived credibility will likely reinforce the legitimacy of the information, while suspicion concerning credibility (especially from abstract organizations) may hinder risk communication efforts and exacerbate negative consequences (Glik, 2007). Thus, if elaboration plays a role in the connection between credibility perceptions and compliance, risk communicators should aim to induce both.

The results of the reviewed findings, taken together, highlight that the act of thinking about risk may have specific positive implications for risk response, and that cognitive elaboration may be a critical component in processing credibility in risk messages and subsequent intentions to change behavior. Given those findings and the incomplete treatment of elaboration in the existing risk and crisis literature, the following research questions are offered:

**RQ1:** To what extent does cognitive elaboration influence behavioral intentions associated with a risk?

**RQ2:** To what extent is this relationship between cognitive elaboration and behavioral intentions mediated by perceptions of source credibility?

**Procedures**

Data from prior studies, both published and unpublished, were re-analyzed to examine the relationship between cognitive elaboration, credibility, and behavioral intentions (Lin, Spence, &
Lachlan, 2016; Lin & Spence, 2018). Although these studies contained experimental designs, the manipulations themselves are not germane to the current analysis; instead, the current findings examine the proposed relationships across all conditions in each study. Participants were independent across all three studies. All three studies contained identical measures of elaboration, competence, trust, and goodwill. Cognitive elaboration was measured with five questions from Perse (1990) on a five-point scale with anchors of “strongly agree” and “strongly disagree.” Participants were asked to respond to the given statements indicating their agreement concerning their actions in relation to the Twitter page viewed: “When I looked at the page, I thought about it over and over” and “When I looked at the page, I thought about what should be done.” Competence, trust, and goodwill comprise the source credibility measure that included 18 items with a 7-point semantic differential item response option format (McCroskey & Teven, 1999). Example response options include “honest/dishonest” and “informed/uninformed.” Although associated with two different outcomes, the questions regarding behavioral intentions were measured using similar five-item scales and operationalized behavioral intentions in the same way (seeking additional information regarding the risk). Because of the increased attention to elaboration and the potential utility of the findings, the existing data was revisited. A description of the data collection procedures follows.

**Study 1**

The first study is unpublished and consisted of an experimental design with two conditions concerning a risk-related tweet.1 There were 111 valid responses from respondents recruited from undergraduate courses at a Southern research university (see Table 1 for participant demographics). A food safety rumor embedding health threats affecting broad audiences was used for the stimuli. Specifically, participants read a tweet concerning the alert of contaminated watermelons in grocery stores. After viewing the tweet, participants responded to a measure of cognitive elaboration

1. Study One originally examined two conditions with retweets present and absent.
(Perse, 1990), source credibility (McCroskey & Teven, 1999), and a five-item scale concerning behavioral intentions with seven response options containing anchors of “not at all likely” to “very likely.” For example: “How likely are you to talk with a doctor or other health professional about toxic watermelons?”

Previously published studies have indicated strong reliability for McCrososkey and Teven’s (1999) source credibility scale; however, researchers have cautioned against making assumptions that the high validations of these scales hold across all subsequent

<table>
<thead>
<tr>
<th>TABLE 1 Study One: Reported Demographic Characteristics of Participants</th>
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<tr>
<td><strong>N (%)</strong></td>
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<tr>
<td><strong>Sex</strong></td>
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<tr>
<td>Male</td>
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<tr>
<td>Female</td>
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<tr>
<td><strong>Age (18–26)</strong></td>
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<td></td>
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<tr>
<td><strong>Race</strong></td>
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<tr>
<td>Caucasian</td>
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<tr>
<td>African-American</td>
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<tr>
<td>Asian</td>
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<tr>
<td>Latino</td>
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<tr>
<td>Others</td>
</tr>
<tr>
<td><strong>Income</strong></td>
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<tr>
<td>Under $20,000</td>
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<tr>
<td>$20,000–$30,000</td>
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<tr>
<td>$30,001–$50,000</td>
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<tr>
<td>$50,001–$70,000</td>
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<tr>
<td>$70,001–$100,000</td>
</tr>
<tr>
<td>Over $100,000</td>
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<tr>
<td><strong>N</strong></td>
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</table>
uses. Levine et al. (2006) argue in favor of reporting confirmatory factor analyses (CFA) on previously validated scales, particularly when subtle changes in wording is present. A CFA was conducted on the collected data using a maximum likelihood (MLM) solution in AMOS to confirm the scale’s three-factor structure. After removing one item from the goodwill scale (i.e., “self-centered; not self-centered”), the data was consistent with the three-factor solution and yielded good model fit indices: $\chi^2(116) = 229.43$, $\text{CMIN/df} = 1.98$, $\text{TLI} = .90$, $\text{CFI} = .92$, $\text{RMSEA} = .09$ (Levine et al., 2006). Reliabilities after CFA were $\alpha = .92$ for competence, $\alpha = .89$ for trust, and $\alpha = .87$ for goodwill.

**Study 2**

A total of 696 valid responses were obtained from participants recruited from undergraduate courses at a Southern research university (see Table 2 for participant demographics). The stimuli considered a relevant health risk topic for broad audiences including the participants.² Participants viewed a tweet concerning the risk of drug-resistant gonorrhea. They were then taken to a posttest survey about source credibility (McCroskey & Teven, 1999), cognitive elaboration (Perse, 1990), and a five-item scale concerning behavioral intentions with seven response options containing anchors of “not at all likely” to “very likely.” Example items include “How likely are you to talk with a doctor or other health professional about drug-resistant gonorrhea?” and “How likely are you to take steps to reduce your risk of contracting drug-resistant gonorrhea?” The data was consistent with the three-factor solution and yielded good model fit indices: $\chi^2(117) = 405.63$, $\text{CMIN/df} = 3.46$, $\text{TLI} = .96$, $\text{CFI} = .96$, $\text{RMSEA} = .06$ (Levine et al., 2006). Scale reliability for credibility was .95; reliability was detected at .93 for competence, .87 for goodwill, and .92 for trustworthiness.

**Study 3**

The third study consisted of an experimental design with nine conditions concerning a risk-related tweet.³ A total of 434 valid

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². See Lin, Lachlan, and Spence, 2016 for the detailed experimental design.
³. Study Three originally examined nine conditions with Twitter user identity and levels of retweets. See Lin and Spence, 2018.
responses from respondents were recruited from undergraduate courses at a Southern research university (see Table 3 for participant demographics). Specifically, participants read a tweet about the alert of contaminated watermelons in grocery stores (similar to Study One) and were then provided a questionnaire. Participants responded to the same measure of cognitive elaboration (Perse, 1990) and source credibility (McCroskey & Teven, 1999), and a five-item scale concerning behavioral intentions with seven response options containing anchors of “not at all likely” to “very likely.” Example items include “How likely are you to look for more information about toxic watermelons?” Again, a CFA was performed on the source credibility measures. After removing one item from the goodwill scale (i.e., “not understanding-understanding”), the data was consistent with the three-factor

### TABLE 2 Study Two: Reported Demographic Characteristics of Participants

<table>
<thead>
<tr>
<th>Sex</th>
<th>N (%)</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>307 (44.1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>365 (52.4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age (18–79)</td>
<td>366</td>
<td>20.89</td>
<td>6.43</td>
</tr>
<tr>
<td>Race</td>
<td></td>
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</tr>
<tr>
<td>Caucasian</td>
<td>497 (73.7)</td>
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</tr>
<tr>
<td>African-American</td>
<td>53 (7.9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td>64 (9.5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Latino</td>
<td>34 (5.0)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td>26 (3.9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Income</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under $20,000</td>
<td>85 (12.9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$20,000–$30,000</td>
<td>43 (6.5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$30,001–$50,000</td>
<td>75 (11.4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$50,001–$70,000</td>
<td>98 (14.9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$70,001–$100,000</td>
<td>104 (15.8)</td>
<td></td>
<td></td>
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<tr>
<td>Over $100,000</td>
<td>254 (38.5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>696</td>
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solution and yielded good model fit indices: $\chi^2(111) = 223.81$, CMIN/df = 2.11, TLI = .98, CFI = .98, RMSEA = .05. High reliabilities were detected for the individual scales, with $\alpha = .94$ for competence, $\alpha = .93$ for trust, and $\alpha = .87$ for goodwill.

### Results

Across all three datasets, the proposed model was tested using path analysis in AMOS. For Study One, diagnostic statistics supported the proposed model, CMIN = 1.23, CFI = .99, RMSEA = .05. Elaboration was found to significantly predict competence ($\beta = .33$, $p < .001$), trustworthiness ($\beta = .34$, $p < .001$), goodwill ($\beta = .15$, $p < .01$), and behavioral intentions ($\beta = .20$, $p < .001$).
There is a substantive indirect effect of elaboration on behavioral intentions at $\beta = .05$ (see Figure 1). Notably, direct effects were not detected for goodwill on behavioral intentions.

This same analytic approach was taken when re-examining the data from Study Two. Once again, support was found for the proposed model, $\text{CMIN} = 2.65$, $\text{CFI} = .99$, $\text{RMSEA} = .05$. Elaboration was found to significantly predict competence ($\beta = .27$, $p < .001$) and goodwill ($\beta = .13$, $p < .01$) but not trustworthiness; a significant direct effect was found for elaboration on behavioral intentions ($\beta = .42$, $p < .001$). An indirect effect of elaboration on behavioral intentions was also detected at $\beta = .02$ (see Figure 2).

Finally, analyses for the data from Study Three once again indicated evidence of strong model fit, $\text{CMIN} = 0.24$, $\text{CFI} = .99$, $\text{RMSEA} = .01$ (see Figure 3). Once again, elaboration significantly predicted competence ($\beta = .10$, $p < .05$), trustworthiness ($\beta = .03$, $p < .01$), and goodwill ($\beta = .17$, $p < .001$); and a significant direct effect was detected for elaboration on behavioral intentions ($\beta = .33$, $p < .001$). Once again, a small but relevant indirect effect was detected for elaboration on behavioral intentions at $\beta = .02$. As in Study One, direct effects were not detected between source credibility and behavioral intentions.
Discussion

Reanalyzing data from the prior three experiments, the current report attempts to identify the role of cognitive elaboration in risk information processing on social media. Although the risk contexts differed, CFAs indicated good to excellent measurement model fit in all three studies. The findings from the three CFAs were consistent, suggesting that cognitive elaboration may be a robust measure that can be examined in different risk contexts. In
short, the degree to which one elaborates on risk is relevant and can likely be assessed in multiple contexts.

In terms of the structural models, the results clearly and consistently indicated that cognitive elaboration directly predicted the increases in both source credibility perceptions and behavioral intentions. Thinking through risk information is predictive of source credibility and, perhaps more importantly, predictive of behavioral intentions related to risk avoidance. These findings are consistent with earlier work suggesting that elaboration may mediate the relationships between self-disclosure, source credibility, information seeking, and behavioral intentions (Savage & Spence, 2014; Spence et al., 2020). They are also consistent with several theoretical arguments, including the Elaboration Likelihood Model (Petty & Cacioppo, 1986) and the Heuristic Systematic Model (Chaiken et al., 1989), which stress the importance of active information processing in effective persuasion.

Across all three studies, elaboration directly and positively impacted behavioral intentions, and indirectly impacted them through perceptions of source credibility. This suggests a challenge for risk communication practitioners—it may be necessary to induce some degree of elaboration in order to maximize the effectiveness of risk messages (provided those messages are compelling and come from believable sources). Active processing of these arguments may heighten behavioral intentions both directly and indirectly. However, such active processing may have to be promoted for novel, underestimated risks, or about which the audience believes they know all they need to know. This is consistent with research in the dual modeling literature suggesting that people process information economically, using only what they believe necessary to reach a decision (Bohner et al., 1995; Chaiken, 1987; Thompson et al., 1994). Relatedly, it is also consistent with the notion of sufficiency thresholds in the Risk Information Seeking and Processing Model literature (see Griffin et al., 1999; Yang et al., 2011), which suggests that information seeking will be driven by a perceived need to acquire additional information until an individual believes they can make an informed decision. Given the consistent representation of this variable in the mainstream persuasion literature, as well as that explicitly related to environmental and
health risks, the current findings and those outlined in the literature review suggest the need for further consideration of elaboration in risk perception and motivation to respond, particularly its inclusion in structural models aimed at testing multipart theories. It may be the case that elaboration on risk messaging is not only directly driving compliance but also impacting other intervening variables (in this case, source credibility). These are, of course, empirical questions that require direct examination.

The current research examined elaboration with relationship to the conceptualization and operationalization of Perse (1990). However, regardless of the specifics concerning conceptualization, research on elaboration may focus on understanding if it is a trait of individual viewers, a product of the message, or a combination of these and other factors. This would help better answer questions about the persuasiveness of central and peripheral routes in persuasion. Although these questions are outside the scope of this report, the consistent findings here help move research in the direction of answering these and similar questions.

Notably, the results also indicated that the path coefficients for elaboration on behavioral intentions are stronger than the path coefficients for source credibility across all three models. It is noted that only Study Two indicated a significant direct effect for source credibility on behavioral intentions. While limited to these datasets, the current findings offer preliminary evidence that elaboration may be a stronger predictor of behavioral intentions than credibility perceptions. Therefore, the depth of elaboration on a risk issue would directly persuade an individual’s intentions for further information seeking and risk preventions, regardless of their position on the source credibility. The findings might also explain the online communication dynamics and the spread of rumors or false information, especially when the original information sources were absent. The more people actively engage in elaboration on risk messages, the more likely they would act upon them.

The models across the three studies all indicated elaboration had small indirect effects through source credibility on behavioral intentions. Although a growing number of studies in risk and
crisis communication also have placed emphasis on source credibility, the findings are mixed in terms of the relationship between credibility perceptions and online information acceptance. The gap between those hypotheses and results may be best explained in terms of cognitive elaboration. It is also noted that in Study Two, the path coefficient for elaboration on intentions was stronger than the results in Study One and Three. In Study Two, while source credibility weakly but significantly predicted behavioral intentions, the indirect effects for the overall model suggest that source credibility perceptions would facilitate elaborations in risk persuasion. There may be a threshold at which elaboration triggers certain levels of credibility perception and, in turn, source credibility is strong enough to evoke the subsequent risk behavioral intention persuasions. Although not testable with the current data, it may also be the case that elaboration is contingent upon perceived information sufficiency: When individuals believe that they shall require more information about a salient matter, they may be more active in pursuing and processing it. Once again, such a process would be consistent with HSM and arguments in the RISP literature on risk message processing (see Griffin et al., 1999; Yang et al., 2011).

This investigation demonstrates that it is fruitful to reexamine the prior data with comparative analyses on elaboration and risk information processing. For decades, persuasion theorists have tried to identify the components of solid arguments across a variety of contexts. Similarly, in promoting elaboration, the question can be asked, “What makes people think through information?” Moreover, with the plethora and ease of accessible information, people might believe they have accessed sufficient information to aid their decision-making. Because of this, it may be even more vital to motivate the public to think about risks. The literature outlined in this report provides a starting point for the consideration of these processes, such as involvement or media use motives. Regardless, this research highlights direct benefits to information seeking, perceptions of source credibility, and intentions to change behavior. Thus, elaboration is an important additional consideration for the study of risk messages.
Limitations and Future Directions

Given the data availability, the current research only considered three main factors: elaboration, source credibility, and behavioral intentions. Nevertheless, previous persuasion theories and practical operations suggest that other factors, such as personal attention and motivation, information literacy, and efficacy perceptions, might intervene in risk information persuasion. Thus, future research could consider examining the functions of those variables in the model. Taking those variables in the model in the future could fulfill the overall cognitive roadmap of risk persuasions providing a more comprehensive understanding of elaboration mediating the subsequent information processing and risk responses.

The findings also indicated that elaboration did not significantly predict trustworthiness in Study Two. It is possible that trustworthiness was not triggered in this risk topic as the risk contexts were identical in Study One and Three. Although the sample collections were independent across three studies, participants were convenient samples recruited from student volunteers. Thus, future research should apply more diverse risk and health topics to examine the risk persuasion effect and include more diverse participants for research generalizability.

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References


Spence, P. R., Eith, C., & Lachlan, A. (2010). Vulnerability of the underclass: Why the most vulnerable are always the last to know (pp. 317–335). In Rivera J. D. & Miller D. S. (Eds.), How ethnically marginalized Americans cope with catastrophic disasters: Studies in suffering and resiliency. Edwin Mellen Press.


“I Lose” “I Gain” vs. “They Lose” “They Gain”: The Influence of Message Framing on Donation Intentions in Disaster Fundraising

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ABSTRACT

Grounded in the 2018 California Camp Fire context, this study explores how message framing in charitable appeals influences individuals’ donation intentions. A 2 (first-person imagery perspective vs. third-person imagery perspective) × 2 (gain frame vs. loss frame) between-subject online experiment was conducted via Amazon’s MTurk (n = 475). Results showed that gain/loss framing and imagery perspectives interactively influenced participants’ donation intentions. Specifically, when a message is loss-framed, a first-person imagery perspective (“I lose”) message is more effective than a third-person imagery perspective (“they lose”) message in enhancing participants’ perceived issue relevance, induced empathy, and donation intention. In addition, when the message is framed with a third-person imagery perspective, a gain-framed (“they gain”) message is more persuasive than a loss-framed (“they lose”) message.

KEYWORDS: gain vs. loss framing, first vs. third-person imagery perspective, donation, disaster recovery, prosocial behavior

Wildfire disasters have become emerging global issues, occurring in Africa, Southeast Asia, and North America. In the United States, every year since 2000, an average of 72,400 wildfires burned an average of 7.0 million acres annually (Congressional Research Service, 2019). The prevalence of wildfire disasters can disrupt the functioning of society and cause calamitous impacts...
on the economy and human well-being. The 2018 Camp Fire, the deadliest and most destructive wildfire in California history, burned an area of 153,336 acres, destroyed 18,804 structures, caused economic losses of $16.5 billion, and killed more than 85 civilians (BBC, 2018).

During natural disasters, voluntary funding from NGOs, private sectors, and individual donors is a vital resource for communities to recover from disasters (Toyasaki & Wakolbinger, 2014). Charitable giving is often the quickest response to sudden disaster crises and provides timely resource assistance for survivors to rebuild their homes and for communities to strengthen resilience (Wei et al., 2019). Acknowledged as major service providers during a disaster, NGOs help to develop a sustainable community by delivering timely assistance to disaster victims and building networks with government, media, and other stakeholders (Nikkhah & Redzuan, 2010).

The fundraising capacity is essential for organizations to maintain sustainable developments and perform social responsibilities, which further makes the society fully functioning. However, charity fundraising has become much more competitive in the United States, given the increased number of charity organizations. According to the National Center for Charitable Statistics (2019), more than 1.5 million NGOs were registered in the United States. The growing number of NGOs in the United States has increased the competition for government funding (Castaneda et al., 2008). Individual donors comprise a significant portion of NGO funding. According to a report by the National Philanthropic Trust (2019), the number of individual donor-advised fund accounts at National Charities has increased from 129,34k in 2014 to 593,36k in 2018 in the United States. Therefore, attracting private donations could be a useful approach for NGOs to mobilize resources.

To mobilize resources in times of disasters, it is essential to understand how to design effective messages that persuade people to engage in prosocial behaviors. Specifically, the current study aims to examine the persuasiveness of two framing strategies (i.e., gain- vs. loss-framing and first- vs. third-person imagery perspective) in promoting people’s donation intentions, grounded in the context of the 2018 Camp Fire.


**Literature Review**

**First- vs. Third-Person Imagery Perspective**

Persuasive messages can ask recipients to visualize an event from different perspectives. In a *first-person imagery perspective*, individuals visualize the scene from an internal actor’s perspective, imagining that they will experience the consequences themselves. In a *third-person imagery perspective*, individuals visualize the scene from an external observer’s perspective, imagining other people will suffer the consequences (Ostinelli & Bockenholt, 2009; Vasquez & Buehler, 2007).

Scholars that have been interested in examining the effect of imagery perspectives on persuasion have based their research on the construal level theory. Construal Level Theory (CLT) proposes that people use higher levels of construal (i.e., abstract mental representations) to represent an object as the psychological distance from an object increases (Trope & Liberman, 2010). When thinking of distant targets (e.g., others), people often perceive a larger psychological distance than thinking of proximal targets (e.g., self). Based on CLT, a third-person imagery perspective imposes more psychological distance than a first-person imagery perspective; therefore, will induce a more abstract mental representation when individuals imagine the scenario; conversely, a first-person imagery perspective will trigger a more concrete mental representation (Vasquez & Buehler, 2007).

The perspectives that people take can influence their mental representations (Ruby & Decety, 2004), attitude (Vorauer & Sasaki, 2014), and behavior change (Rennie et al., 2014a). For example, Libby et al. (2005) found that imagining performing an activity from a third-person perspective produced less vivid mental reports than imagining an activity from a first-person perspective. Through two experiments, Rennie et al. (2014a) found that a first-person imagery perspective was more effective than a third-person imagery perspective in persuading people to donate blood and quit smoking. Rennie et al. (2014a) argued that visualizing engaging in a behavior from a first-person imagery perspective produced a more concrete image than a third-person imagery
perspective, which will enhance their motivation to perform this behavior. Although it seems that first-person imagery perspectives are more efficacious than third-person imagery perspectives in persuasive settings, it is unclear why perspectives have different impacts. Furthermore, scholars argue that the communication scholarship has been focused on how media represent suffering yet often fails to explain how to engage the public and connect the publics with distant others (Seu & Orgad, 2017). To fill these gaps, the first objective of this study is to examine how imagery perspectives influence individuals’ donation intentions and to explore the underlying psychological process.

**Imagination Perspectives on Perceived Relevance**

Perspectives can influence individuals’ perceived relevance of the situation (Hoever et al., 2012). Messages framed with a first-person imagery perspective seem to increase recipients’ perceived relevance compared to messages with a third-person imagery perspective (Libby et al., 2011). For example, Marx and Stapel (2006) found that people who were asked to think about a stereotyped target from a first-person imagery perspective perceived the situation as more self-relevant and reported more threat than those who were asked to think from a third-person imagery perspective. According to the construal level theory, proximal situations are more likely to be perceived as being closer or more relevant to oneself (Trope & Liberman, 2010). With a first-person imagery perspective, people think as if they are the ones who are experiencing the event, and they perceive a smaller social distance compared to when thinking from a third-person imagery perspective. Therefore, they will feel more proximal to the situation, have more vivid mental representations, and perceive the situation as more self-relevant. Hence, we hypothesize that:

H1: Individuals who are exposed to a first-person imagery perspective message will report higher perceived relevance of wildfire than those who are exposed to a third-person imagery perspective message.
Imagery Perspectives on Empathy

Empathy refers to “the capacity to understand and respond to the unique affective experiences of another person” (Lamm et al., 2007, p. 42). Previous studies found that first- and third-person imagery perspectives produce different levels of empathy. When prior studies have used a first-person imagery perspective, individuals have been asked to imagine themselves in another’s place and to think about how they, themselves, would feel; this perspective was believed to trigger more empathy than a third-person imagery perspective message that asked individuals to think as an observer (Vorauer & Sasaki, 2014). For example, Batson et al. (1997) found that people who were asked to imagine how they would feel in another person’s situation reported experiencing more empathetic emotions compared to people who were asked to remain objective. Similarly, Lamm et al. (2007) found when watching video clips of patients, people who were instructed to take a first-person imagery perspective (i.e., imagine themselves to be in the patients’ situations) reported higher empathetic concern than those who were instructed to imagine the feelings of the patient. When thinking from a first-person imagery perspective, individuals may experience feelings of relevance with message characters and feel as though they are living the experience that is being shared, which further increases empathy (Chen et al., 2017). Therefore, we hypothesized that:

H2: Individuals who are exposed to a first-person imagery perspective message will report higher induced empathy than those who are exposed to a third-person imagery perspective message.

Imagery Perspectives on Donation Intention

Previous studies have found that messages framed with a first-person imagery perspective can be more persuasive than a third-person imagery perspective. For example, Ostinelli and Bockenholt (2009) found that in advertising settings, a first-person imagery perspective message is more persuasive than a third-person imagery perspective message when marketers want to sell an experience (e.g., snowboarding). In another study about promoting healthy eating, Rennie et al. (2014b) found that health
messages that asked individuals to visualize engaging in fruit consumption from a first-person imagery perspective were more likely to engage in healthy eating compared to those who were asked to take a third-person imagery perspective. Although many studies have examined the influence of imagery perspectives on people’s risk perceptions and judgments (e.g., Libby et al., 2011), scant research is available on how first- vs. third-person imagery perspectives influence individuals’ intention to engage in prosocial behaviors.

We argue that messages with first-person imagery perspectives are more effective than messages with third-person imagery perspectives in persuading people to donate. When imagining from a first-person perspective, individuals are more likely to perceive the wildfire issue as self-relevant, which increases their identification with the victims and further triggers empathy (Chen et al., 2017). First-person imagery perspective can increase people’s empathetic concern, which is an important predictor of altruism motivation and helping behavior (Lamm et al., 2007). Similarly, Decety and Yoder (2016) found that people who exhibited more cognitive empathy were more sensitive to injustice for others and more likely to perform moral behaviors. Hence, we hypothesized:

H3: Individuals who are exposed to a first-person imagery perspective message will report higher donation intention than those who are exposed to a third-person perspective imagery message.

H4: Perceived relevance and empathy mediate the influence of perspectives (first- vs. third-person imagery perspective) on donation intention.

**Gain vs. Loss Framing**

Prospect theory suggests that people react to messages differently depending on how these messages are framed (Detweiler et al., 1999). Grounded in prospect theory, gain vs. loss message framing has been widely applied in persuasive communication to show the influence of message features on persuasive outcomes (e.g., O’Keefe & Nan, 2012). By definition, a gain-framed message emphasizes the desirable outcomes associated with compliance with the advocated behavior (e.g., “If you exercise regularly, you
will reduce your chance of developing heart disease”), while a loss-framed message highlights the undesirable consequences of not performing the advocated behavior (e.g., “If you don’t exercise regularly, you will increase your chance of developing heart disease”) (O’Keefe & Jensen, 2008).

**Relative Persuasiveness of Gain- vs. Loss-Frame**

Despite having numerous studies examine the persuasive effect of gain vs. loss message framing, there has been no unanimous conclusion on which framing is more persuasive (O’Keefe & Nan, 2012). Instead, the relative persuasiveness of gain- vs. loss-framing largely depends on the advocated behavior (O’Keefe & Jensen, 2007; O’Keefe & Jensen, 2008) and other message features (Lu, 2016). For example, previous meta-analysis studies found that gain-framed messaging is more persuasive than loss-framed messaging in promoting disease prevention behavior (O’Keefe & Jensen, 2007), whereas loss-framed messaging is more persuasive than gain-framed messaging in promoting disease detection behavior (O’Keefe & Jensen, 2008). When it comes to the relative persuasiveness of framing depending on message features, Lu (2016) found that gain framing is more effective than loss framing when a sadness appeal accompanies it; conversely, loss framing would be more persuasive than gain framing when it is juxtaposed with a hope appeal. Although several moderators have been identified by previous studies, empirical evidence regarding the relative persuasiveness of gain- versus loss-framed messages is still ambiguous (Nan, 2007), especially in a donation context. Therefore, more studies are needed to explore the boundary conditions of the persuasiveness of gain vs. loss message framing.

**The Moderation Role of Gain- vs. Loss-Framing**

According to the construal level theory, as social distance increases, information will be represented in more abstract terms (i.e., high-level construal); whereas when social distance decreases, information will be represented in more concrete terms (i.e., low-level construal) (Nan, 2007; Trope & Liberman, 2010). Nan proposed an integrated perspective combining construal level theory and
gain vs. loss framing, suggesting that a gain-framed message is associated with a higher construal level than a loss-framed message, and therefore a gain-framed message would be more persuasive when judgments are made for others than for oneself. Based on construal level theory, we argue that when a message is framed with a first-person imagery perspective, judgments will be made on socially proximal entities (e.g., selves), and information will be represented in low-level construal. Therefore, a loss-framed message should be more effective. Conversely, when a message is framed with a third-person imagery perspective, judgments will be made on socially distant entities (e.g., others), and information will be represented in high-level construal. Therefore, a gain-framed message should be more persuasive.

Moreover, empirical studies found that the relative persuasiveness of gain vs. loss framing varies based on individuals’ perceived relevance of the message (e.g., Wirtz et al., 2015). For example, Wirtz et al. found that when the message was considered personally relevant, a loss-framed message is more effective in persuading individuals to reduce alcohol drinking than the gain-framed message. Similarly, Bosone and Martinez (2017) found that a loss-framed message is more persuasive than a gain-framed message when promoting detection behaviors, but only when individuals perceive the issue as highly personally relevant. Therefore, we argue that when individuals are exposed to first-person imagery perspective messages, they will process this issue as experiencing it, perceive the issue as self-relevant, and therefore they will be more likely to be persuaded by loss-framed messages. In contrast, when individuals are exposed to third-person imagery perspective messages, they will process this issue as observing it; therefore, they will be less likely to perceive self-relevance and more likely to be influenced by gain-framed messages. Hence, we propose:

\[ \text{H5: The effect of perspectives (first- vs. third-person imagery perspective) on donation intention is more pronounced in a loss-framed condition than a gain-framed condition.} \]
Methods

Procedures

A 2 (first-person imagery perspective vs. third-person imagery perspective) × 2 (gain frame vs. loss frame) between-subject online experiment was conducted via Amazon Mechanical Turk (MTurk) crowdsourcing service in July 2019. The participants were informed that they would read a screenshot of a Facebook post from the American Red Cross.

Participants were randomly assigned to read one of four Facebook messages. In the first-person imagery perspective condition, the post asked participants to imagine that they were the victims of the wildfire disaster (i.e., “Not just in California, but wildfires are a common problem for Americans—More than 100,000 wildfires clear 4 million to 5 million acres of land in the U.S. every year. Imagine the wildfire happened in your community, what if one day you could face financial, emotional uncertainty due to the wildfires?”). In the third-person imagery perspective condition, the post asked participants to imagine the situations of victims who were experiencing the wildfire disaster (i.e., “A series of large wildfires erupted across the country including California—More than 100,000 wildfires clear 4 million to 5 million acres of land in the U.S. every year. An innumerable people lost their homes in the fire.”)
Countless people have faced financial, emotional uncertainty due to the wildfires.”). In the *gain frame condition*, the post informed participants that victims could rebuild their homes if donations were received (i.e., “With receiving support from the Wildfire Relief Fund, thousands of people affected by wildfire-related disasters could rebuild homes, get medical treatments, and save their lives. You can make a difference by clicking here!”). In the *loss frame condition*, the post informed participants that victims might lose their chance to rebuild homes if donations were not received (i.e., “Without receiving support from the Wildfire Relief Fund, thousands of people would lose their chance to rebuild homes, fail to receive medical treatments, and might lose their lives. You can make a difference by clicking here!”).

In total, 25.9% of the participants were assigned to the “I-gain” condition, 23.6% were assigned to the “they-gain” condition, 25.1% were assigned to the “I-lose” condition, and 25.5% were assigned to the “they-lose” condition. After being exposed to the Facebook message, participants completed posttest questions that addressed perceived relevance, empathy, donation intention, and demographic information.

**Participants**

There were 549 participants recruited for the online experiment, and each was compensated $1.00 for completing the study. Responses that did not pass attention checks or that contained missing values were filtered out before data analysis. In total, there were 475 valid responses for data analysis. The final dataset of participants consists of 51.8% (*n* = 246) males and 45.9% (*n* = 218) females. Among the participants, 31.8% (*n* = 151) were 18–29 years old, 39.6% (*n* = 188) were 30–39 years old, 13.9% (*n* = 66) were 40–49 years old, 10.1% (*n* = 48) were 50–64 years old, and 2.3% (*n* = 11) were 65 years old or over (unreported age: 2.3%). Of the sample, about 56% (*n* = 261) reported having attained some or higher level of a bachelor’s degree. About 7.8% (*n* = 37) of participants reported annual household incomes of $9,999 or below, 15.6% (*n* = 74) between $10,000 and $24,999, 30.1% (*n* = 143) between $25,000 and $49,999, 21.5% (*n* = 102) between $50,000
and $74,999, 14.3% (n = 68) between $75,000 and $99,999, and 6.8% (n = 32) of $100,000 or above (unreported annual household income: 1.9%).

**Measurement**

*Perceived relevance (RE).* Perceived relevance was indicated by three items measured on a 7-point scale (1 = *strongly disagree*; 7 = *strongly agree*) that asked participants to respond to the following statements: “Thinking back to the Facebook post about donation from American Red Cross, I think the message is relevant to my life,” “The message grabbed my attention,” and “The message said something important to me” (M = 4.49, SD = 1.55, Cronbach’s α = .85).

*Empathy (EM).* A three-item version of the basic empathy scale (Jolliffe & Farrington, 2006) measured empathy, including “I got caught up in the victims’ feelings,” “I felt sad when I imagined the victims’ feelings,” and “I can understand how the victims feel” based on a 7-point scale (1 = *Strongly disagree*; 7 = *Strongly agree*) (M = 4.59, SD = 1.51, Cronbach’s α = .83).

*Donation intention (DI).* Three items were employed to operationalize donation intention: (1) I would try to make a wildfire donation; (2) I intend to participate in wildfire donation; (3) I plan to participate in wildfire donation. Participants answered the items based on a 7-point scale ranging from 1 (*not at all likely*) to 7 (*very likely*) (M = 4.05, SD = 1.95, Cronbach’s α = .96).

**Analysis Plan**

A multigroup Structural Equation Modeling (SEM) was conducted using R package lavaan (Rosseel, 2012). Multigroup SEM analysis examined whether values of model parameters vary across different groups and is often applied in models with a categorical moderator (Kline, 2015). We took two steps in the analysis. First, we established the measurement model and examined the measurement invariance across the gain- and loss-framed groups. Second, we examined path coefficients invariance across the gain- and loss-framed groups and fitted the final structural model. Parameters and fit indices were estimated based on the maximum-likelihood
method. Indirect effects were estimated with bootstrapping procedures (bootstrap = 1,000).

Results

Model Fitting: A Multigroup SEM Model

The Measurement Model

First, we conducted a confirmatory factor analysis (CFA) to assess whether the measurement model demonstrates an acceptable fit to the data. The measurement model was specified to capture three latent factors (i.e., perceived relevance, empathy, and donation intention) with their associated indicators. All latent variables were allowed to covary freely with each other. To scale the metric of each latent factor, we set one loading of each factor as 1. Results found that the initial measurement model had an adequate fit (CFI = 0.98, SRMR = 0.04, RMSEA = 0.08) based on the cutoff criteria recommended by Kenny (2015). Therefore, we accept the initial measurement model as the final measurement model.

Examining Measurement Invariance

Second, we examined measurement invariance between the gain-framed group and the loss-framed group. Measurement invariance assesses the “psychometric equivalence of a construct across groups or across time” (Putnick & Bornstein, 2016, p. 1). Invariance of measurement would suggest that any differences between the gain-framed group and the loss-framed group stem from structural differences in path coefficients rather than measurement differences. Four measurement models were specified and tested (see Table 1). Model 1 was the baseline model, which was constructed without constraints. Model 2 constrained the factor loadings equal across groups. In model 3, factor loadings and item intercepts were modeled invariant. Model 4 constrained factor loadings, item intercepts, and means on latent variables equal across the gain- and loss-framed groups. The chi-square differences were not significant between model 2 and model 1 ($\Delta \chi^2 [6] = 9.58$, $p = .14$), between model 3 and model 2 ($\Delta \chi^2 [6] = 4.86$, $p = .14$), and between model 4 and model 3 ($\Delta \chi^2 [3] = 3.86$, $p = .28$). These findings suggest that the gain-framed group and the loss-framed
group had no significant differences in factor loadings, item intercepts, and group means on the latent variables. In other words, the two groups are invariant in terms of measurement.

**The Structural Model**

Next, we examined whether the structural model differs across the gain- and loss-framed groups. A series of SEM multigroup analyses were performed. First, we established a fully restricted model, in which all hypothesized structural paths were constrained equal across the two groups. Second, we established an unconstrained model in which all path coefficients were freely estimated. Both the fully restricted model (CFI = 0.98, SRMR = 0.05, RMSEA = 0.07, and $\chi^2$/df = 2.27) and the unconstrained model (CFI = 0.98, SRMR = 0.03, RMSEA = 0.07, and $\chi^2$/df = 2.27) yielded excellent model fit. The two models yielded a significant chi-square difference ($\Delta\chi^2$ [6] = 13.45, $p < .05$), suggesting that the gain-framed group and the loss-framed group differ significantly in the structural model.

To further identify the source of path inequality, we compared the fully restricted model with a set of less restricted models. In each less restricted model, one path coefficient was released from the constraint (i.e., freely estimated). A significant chi-square difference was found between model 1 (i.e., the fully restricted model)

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**TABLE 1  Testing for Measurement Invariance Across Gain- and Loss-Framed Groups**

<table>
<thead>
<tr>
<th>Measurement Model</th>
<th>$\chi^2$</th>
<th>df</th>
<th>$\Delta\chi^2$</th>
<th>$\Delta$df</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 1: Baseline model (no equality constraints imposed)</td>
<td>150.98</td>
<td>48</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model 2: Factor loadings modeled invariant</td>
<td>160.56</td>
<td>54</td>
<td>9.58</td>
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</tr>
<tr>
<td>Model 3: Factor loadings and item intercepts modeled invariant</td>
<td>165.41</td>
<td>60</td>
<td>4.86</td>
<td>6</td>
<td>0.56</td>
</tr>
<tr>
<td>Model 4: Factor loadings, item intercepts and latent means modeled invariant</td>
<td>169.27</td>
<td>63</td>
<td>3.86</td>
<td>3</td>
<td>0.28</td>
</tr>
</tbody>
</table>
and model 2 ($\Delta \chi^2 [1] = 7.22, p < .01$), suggesting that releasing the path from imagery perspectives to perceived relevance from the equality constraint significantly improved the model fit. In other words, the impact of imagery perspectives on perceived relevance differed significantly between the loss-framed group and the gain-framed group. Similarly, the path from perceived relevance to empathy was found to differ significantly between the gain-framed group and the loss-framed group ($\Delta \chi^2 [1] = 4.00, p < .05$). Conversely, the paths from imagery perspectives to empathy ($\Delta \chi^2 [1] = 0.04, p = 0.83$) and to donation intention ($\Delta \chi^2 [1] = 0.66, p = 0.42$), and the paths from perceived relevance ($\Delta \chi^2 [1] = 0.53, p = 0.47$) and empathy ($\Delta \chi^2 [1] = 0.29, p = 0.59$) to donation intention were found to have no significant difference between the gain-framed group and the loss-framed group. Results were summarized in Table 2.

**TABLE 2** Testing for Path Coefficients Invariance Across Gain- and Loss-Framed Groups

<table>
<thead>
<tr>
<th>Structural Model</th>
<th>$\chi^2$</th>
<th>df</th>
<th>$\Delta \chi^2$</th>
<th>$\Delta df$</th>
<th>Equality of Path Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 1: Baseline model (fully restricted model)</td>
<td>140.55</td>
<td>62</td>
<td>–</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>Model 2: Path IM $\rightarrow$ RE unconstrained</td>
<td>133.33</td>
<td>61</td>
<td>7.22**</td>
<td>1</td>
<td>unequal</td>
</tr>
<tr>
<td>Model 3: Path IM $\rightarrow$ EM unconstrained</td>
<td>140.51</td>
<td>61</td>
<td>0.04</td>
<td>1</td>
<td>equal</td>
</tr>
<tr>
<td>Model 4: Path RE $\rightarrow$ EM unconstrained</td>
<td>136.55</td>
<td>61</td>
<td>4.00*</td>
<td>1</td>
<td>unequal</td>
</tr>
<tr>
<td>Model 5: Path RE $\rightarrow$ DI unconstrained</td>
<td>140.02</td>
<td>61</td>
<td>0.53</td>
<td>1</td>
<td>equal</td>
</tr>
<tr>
<td>Model 6: Path EM $\rightarrow$ DI unconstrained</td>
<td>140.26</td>
<td>61</td>
<td>0.29</td>
<td>1</td>
<td>equal</td>
</tr>
<tr>
<td>Model 7: Path IM $\rightarrow$ DI unconstrained</td>
<td>139.89</td>
<td>61</td>
<td>0.66</td>
<td>1</td>
<td>equal</td>
</tr>
</tbody>
</table>

Note: * significant at 0.05 level, ** significant at 0.01 level. IM = Imagery perspectives, RE = Perceived relevance, EM = Empathy, DI = Donation intention.
Finally, based on the results of invariance in path coefficients, we established a final structural model, in which the path from imagery perspective to perceived relevance and the path from perceived relevance to empathy were freely estimated, and all other hypothesized structural paths were constrained equal across the gain- and loss-framed groups. The final model yielded an excellent model fit (CFI = 0.98, SRMR = 0.03, RMSEA = 0.07, and $\chi^2/df = 2.15$). Figure 2 presents the final structural model with unstandardized path coefficients.

**Hypothesis Testing**

**Effects of Imagery Perspectives on Perceived Relevance and Empathy**

First, we explored whether individuals who were exposed to a first-person imagery perspective message reported higher perceived relevance (H1) and induced empathy (H2) than those who were exposed to a third-person imagery perspective message. Results from the multigroup SEM analysis suggested that the effects of imagery perspectives differed across the gain- and loss-framed groups.

There was no significant difference between the first-person imagery perspective group (“I gain”) and the third-person
perspective imagery group (“they gain”) in individuals’ perceived relevance when the message was gain-framed ($b_{IM-RE} = -0.27$, $p = .13$). However, when the message was loss-framed, participants who were exposed to a first-person imagery perspective (“I lose”) message reported higher perceived relevance than those who were exposed to a third-person imagery perspective (“they lose”) message ($b_{IM-RE} = 0.48$, $p < .05$). Therefore, H1 was partially supported.

When the message was gain-framed, imagery perspectives had no significant direct ($b_{IM-EM} = 0.12$, $p = .33$) or indirect effect ($b_{IM-RE-EM} = -0.30$, $p = .13$, 95% CI = [−0.67, 0.08]) on empathy. However, when the message was loss-framed, imagery perspectives yielded a significant indirect effect on empathy through perceived relevance ($b_{IM-RE-EM} = 0.40$, $p < .05$, 95% CI = [0.04, 0.75]), suggesting that individuals who were exposed to the first-person imagery perspective (“I lose”) message reported significantly higher empathy than those who were exposed to the third-person imagery perspective (“they lose”) message. Therefore, H2 was partially accepted.

**Effects of Imagery Perspectives on Donation Intention**

Next, we examined the effects of imagery perspectives on donation intention and probed the underlying mechanism. Specifically, we proposed that a first-person (vs. a third-person) imagery perspective message had a positive effect on individuals’ donation intention (H3), which was mediated from perceived relevance and empathy (H4).

Results found that imagery perspectives had no significant direct effect on donation intention ($b_{IM-DI} = -0.08$, $p = .51$), regardless of whether the message was gain-framed or loss-framed. Three indirect paths from imagery perspectives on donation intention were examined. First, we examined the mediating role of perceived relevance. Results found that the indirect effect of first-person (vs. third-person) imagery perspective on donation intention through perceived relevance was significant when the message was loss-framed ($b_{IM-RE-DI} = 0.30$, $p < .05$, 95% CI = [0.02, 0.57]) but not significant when the message was gain-framed ($b_{IM-RE-DI} = -0.17$, $p = .14$, 95% CI = [−0.40, 0.06]). Second, we examined the mediating role of empathy. Results found that empathy was not a
significant mediator for both the gain-framed group and the loss-framed group ($b_{IM-EM-DI} = 0.05, p = .33, 95\% CI = [-0.05, 0.16])$. Third, we examined whether perceived relevance and empathy sequentially mediate the effects of imagery perspectives on donation intention. Results found that the indirect effect through perceived relevance and empathy was significant for the loss-framed group ($b_{IM-RE-EM-DI} = 0.18, p < .05, 95\% CI = [0.01, 0.35]$) but not for the gain-framed group ($b_{IM-RE-EM-DI} = -0.13, p = .14, 95\% CI = [-0.31, 0.05]$). These results suggested that the positive effect of the first-person imagery perspective on donation intention was significant when the message was loss-framed (“I lose”). The effect of imagery perspectives was operated through perceived relevance, which increased individuals’ donation directly as well as indirectly through empathy. Therefore, H3 and H4 were partially supported.

The Moderating Role of Gain- vs. Loss-Framing

Finally, we examined whether the advantage of a first-person (vs. third-person) imagery perspective message was more pronounced when the message was loss-framed compared to gain-framed (H5). To detect whether the overall effect of imagery perspectives on donation intention differs significantly across gain- and loss-framed groups, we computed the group difference in the total effects and the corresponding bias-corrected ($BC_{diff}$) bootstrap confidence intervals. The bootstrapping method has been widely applied for comparing group differences of total effects in multi-group SEM analysis (Ryu & Cheong, 2017). Results found that the overall effect of imagery perspectives on donation intention in the loss-framed group was 0.77 ($p < .05, BC_{diff} 95\% CI = [0.01, 0.35]$) significantly higher than that of the gain-framed group, suggesting that the persuasiveness of a first-person imagery perspective message was more pronounced in a loss-framed message than a gain-framed message. Therefore, H5 was supported.

Table 3 summarizes the descriptive statistics of individuals’ donation intention under the four experimental conditions. ANOVA analysis provided additional support for the interaction relationship between imagery perspectives and gain- vs. loss-framing ($F (1, 446) = 6.01, p < .05, \eta_p^2 = .013$). Specifically, when
### TABLE 3 Descriptive Statistics of Manipulation Groups on Dependent Variables

<table>
<thead>
<tr>
<th>Manipulations</th>
<th>N</th>
<th>Perceived Relevance</th>
<th>Empathy</th>
<th>Donation Intention</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Mean</td>
<td>SE</td>
<td>Mean</td>
</tr>
<tr>
<td>Gain × First person (&quot;I gain&quot;)</td>
<td>123</td>
<td>4.33</td>
<td>0.14</td>
<td>4.49</td>
</tr>
<tr>
<td>Gain × Third person (&quot;They gain&quot;)</td>
<td>112</td>
<td>4.58</td>
<td>0.15</td>
<td>4.58</td>
</tr>
<tr>
<td>Loss × First person (&quot;I lose&quot;)</td>
<td>119</td>
<td>4.73</td>
<td>0.14</td>
<td>4.86</td>
</tr>
<tr>
<td>Loss × Third person (&quot;They lose&quot;)</td>
<td>121</td>
<td>4.31</td>
<td>0.14</td>
<td>4.43</td>
</tr>
</tbody>
</table>
the message was loss-framed, a first-person perspective ($M = 4.12, SE = .15$) was more persuasive than a third-person perspective message ($M = 3.70, SE = .15, p < .05$). Additionally, when the message was framed with a third-person imagery perspective, the gain-framed message ($M = 4.03, SE = .16$) was more persuasive than the loss-framed message ($M = 3.70, SE = .15, p < .05$) in enhancing individuals’ donation intentions.

**Discussion**

Charitable giving is an important resource that helps individuals and communities to recover from disasters. This study set out to understand the role of message framing on people’s donation intentions in the wake of a natural disaster. Grounded in the context of the 2018 California wildfire, we examined the relative persuasiveness of two message features (i.e., gain- vs. loss-frames and first- vs. third-person imagery perspectives).

As expected, when a message is loss-framed, a first-person imagery perspective (“I lose”) message is more effective in enhancing individuals’ perceived relevance, inducing empathy, and increasing their intention to donate compared to a third-person perspective message (“They lose”). Notably, the influence of the first-person imagery perspective on individuals’ donation intentions was operated through perceived relevance, which increased donation intention directly as well as indirectly through enhancing empathy. These results suggested that for loss-framed messages, when exposed to the first-person imagery perspective (“I lose”), individuals are more likely to perceive the wildfire issue as self-relevant, experience feelings of empathy, and thus more likely to donate compared to being exposed to the third-person imagery perspective (“They lose”).

However, when the message was gain-framed, we did not find any difference between first- vs. third-person imagery perspective messages (i.e., “I gain” vs. “They gain”) in individuals’ reaction to the message and their donation intentions. This might be because people are more influenced by negativity bias when judgments are made for socially proximal entities (e.g., selves) than socially distant entities (e.g., others). Perspectives from evolutionary psychology
may also help explain the findings. When negative emotions are aroused from messages, a person’s self-protection system is activated (Griskevicius et al., 2009). We argue that when encountering a loss-framed message, individuals will be primed into self-protection thinking and will be more influenced by egoistic motivation. Therefore, an “I lose” message will be more persuasive than a “they lose” message in promoting donation intention.

Moreover, we found that the relative influence of gain- vs. loss-frames depends on the imagery perspectives of the message. When a message was framed with a third-person imagery perspective, the gain-framed (“they gain”) message more effectively persuaded people to donate than the loss-framed (“they lose”) message. This finding can be explained with the construal level theory. Vasquez and Buehler (2007) posited that a third-person imagery perspective would induce a higher construal level than a first-person imagery perspective. Nan (2007) proposed that a gain frame is associated with a higher construal level than a loss frame. As Nan argued, when the persuasive message is framed with a third-person imagery perspective, a gain-framed message can match it by inducing a high level of construal; therefore, it will be more persuasive than a loss-framed message that induces a low level of construal. However, when the message is framed with the first-person imagery perspective, there is no significant difference between gain frame (“I gain”) and loss frame (“I lose”). One possible reason is that when a message is considered self-relevant, even low-level construal will become salient (Nan, 2007). Therefore, the loss-framed message and the gain-framed message will not differ significantly in their persuasiveness when a first-person imagery perspective was presented.

**Theoretical Implications**

This study yielded several theoretical implications. First, this study highlights the role of imagery perspectives as a message framing technique in persuasion. The actor-observer effect has long been considered as one barrier to individuals’ prosocial behaviors (Fabes et al., 1989). According to the actor-observer effect, actors often attribute their own behavior to situational causes, whereas
observers attribute the behavior of others to person-based causes (i.e., selfishness) (Robins et al., 1996). However, the findings of this study show the possibility of overcoming such limitations. Our data revealed that framing messages with a first-person imagery perspective can effectively enhance perceived relevance, induce empathy, and promote helping behaviors for others. A first-person imagery perspective, which asks individuals to think as an internal actor rather than an external observer, may help people to understand others’ feelings and therefore increase their willingness to help. In this study, we examined the role of imagery perspectives (i.e., first- vs. third-person imagery perspectives) in a donation context. Future studies can continue to examine the role of imagery perspectives in other contexts such as prejudice reduction.

Second, this study contributes to gain-loss framing literature by testing the relative persuasiveness of gain-loss frames. Drawing upon construal level theory, we argued that when a message is framed with a third-person imagery perspective, individuals will use a high construal level. Therefore, a gain frame, which arouses a high construal level, will be more persuasive than a loss frame. Future studies can replicate our design in other contexts to see whether imagery perspectives consistently moderate the relative persuasiveness of gain-loss frames. We also encourage future studies to explore how message framing influences the construal level of mental representations.

**Practical Implications**

In addition to theoretical contributions, this study’s practical contributions should also be acknowledged. First, our data empirically revealed that framing charity appeals with a first-person imagery perspective and a loss-frame can more effectively enhance individuals’ donation intentions. Our results suggest that communication strategies (i.e., gain-or-loss framing and imagery perspectives in the current study) inspire corporates and nongovernmental organizations to design messages more effectively for resource mobilization, such as fundraising and achieving their communication goal. To promote prosocial behavior in fundraising campaigns, organizations can ask message recipients to put themselves in
others’ shoes and to imagine they are experiencing the disaster. Second, emotional appeal through empathy is an effective strategy in persuading people to donate. In order to promote altruism motivation, fundraising practitioners could involve emotional components in the message.

Limitations
There are limitations to this study. First, we used a single message as stimuli, which limits the generalizability of the findings to different messages. Second, we did not assess participants’ actual donation behaviors. Although behavioral intention is a strong predictor of behavior (Feldman & Lynch, 1988), it is unclear whether the effects detected in this study would apply similarly to actual behavioral outcomes. Third, we only assessed the immediate effects of messages. Future studies could examine whether message framing has a delayed or long-term effect on individuals’ donation intention. Fourth, this study employed convenient samples from MTurk. Although the obtained data quality from MTurk samples is generally decent (Chandler et al., 2019), concerns remain about diversity among MTurk workers. Our findings should be cautiously interpreted when generalizing to the general population. Moreover, this study is grounded in a U.S.-centric context. Studies have found that culture could impact the publics’ charitable giving intentions (Siemens et al., 2020); therefore, we recommend future research to replicate our studies in other cultural contexts.

Concluding Remarks
The current study contributes to an understanding of how imagery perspectives (i.e., first- vs. third-person imagery perspective) and loss-gain framing influence individuals’ donation intentions in the wake of a wildfire disaster. Findings in this study can shed light on message designs for future fundraising activities.

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References


“I Lose” “I Gain” vs. “They Lose” “They Gain”


COVID-19 Dialogue on Facebook: Crisis Communication Relationship between Ghanaian Authorities and Citizens

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ABSTRACT

The paper explored how the Ministry of Information (M.O.I.), the official mouthpiece of the government of Ghana, interacted with citizens during the COVID-19 outbreak within the context of crisis communication as a tool for authority-citizen engagement on Facebook. Content analysis of COVID-19 comments on the Ministry of Information's official Facebook page showed higher participation in the discussion from citizens. However, authorities only provided information by being inactive participants in the interaction. The dominant issues focused on Ghanaian authorities and their actions, the course of events surrounding the pandemic, infected cases and deaths, and Ghana's recovery efforts. The active publics provided information, asked and answered questions, and expressed their opinions as the discussions were ongoing. The comments portrayed negative, positive, and neutral tones. The paper also revealed diverse challenges that are likely to hinder crisis communication during the pandemic, from the inflexibility of action, quality of information, and disparity of knowledge.

KEYWORDS: COVID-19, crisis communication, authorities, citizen, Ghana

COVID-19, which was first reported in Wuhan, China, incited distress and unease across the world as millions of people were infected and died. Due to its danger, COVID-19 has gained widespread media coverage in Ghana and worldwide. Chinese officials notified the World Health Organization (WHO) on December 31, 2019, about the outbreak of pneumonia cases in...
Wuhan City of Hubei province, China. Furthermore, on January 30, 2020, the WHO stated that the novel coronavirus (COVID-19) is an epidemic and a Public Health Emergency of International Concern (WHO, 2020a). On March 11, 2020, the WHO declared COVID-19 a pandemic based on its dangerous spread worldwide (WHO, 2020b). As of February 18, 2021, there were 109,426,406 COVID-19 confirmed cases, including 2,419,363 deaths globally, according to the WHO (2020c). In Ghana, as of February 18, 2021, there have been 77,748 confirmed cases of COVID-19, including 561 deaths reported by the WHO (2020c).

The influx of new media has impacted the way society shares information and networks during an emergency. Hence, social networking sites, like Twitter and Facebook, help broadcast information, share ideas amongst publics and organizations, and provide a platform for authority-citizen engagement during crises (Spence et al., 2015). Facebook is important for crisis communication during pre-crisis, in-crisis, and post-crisis stages of disasters. Therefore, social media is quickly incorporated into the emergency tools and merit systematic research due to its feasibility in supporting a developed community response (Mirbabaie et al., 2020). Social media’s proliferation has increased the networking system among publics, whereby easy sharing and communication happens regularly (Castells, 2012). The public voluntarily interacts with others by sharing, approving, or disapproving social media messages (Kang et al., 2019).

Scientific study has shown that government or health officials use social media to interact with citizens during health crises to increase awareness and engagement. Several studies have explored social media use during epidemics (Biswas, 2013; Guidry et al., 2017; Mollema et al., 2015). For instance, how developed countries and health organizations like the Netherlands, the U.S. Centers for Disease Control and Prevention (CDC), and the WHO have used Facebook and Twitter to share information and interact with the public about measles and Ebola outbreaks crises reports, health risk, dangers, and protect and prevention measures. There exists limited research about how authorities and citizens in developing countries use social media as a crisis communication setting during a pandemic. The publics’ comments on Facebook show their
sentiments and viewpoints regarding an issue (Cho, 2014), which impacts other people’s assessments of the real issue’s worth and trustworthiness (Gearhart & Kang, 2014). Hence, it is important to explore Ghanaian authorities’ and citizens’ discussions about COVID-19 as it impacts efficient crisis communication during a global health crisis.

Therefore, this study investigates how authorities in Ghana used Facebook to communicate crisis-related information with citizens during the COVID-19 pandemic. The second aim fills a research gap in crisis communication by focusing on Ghana, a developing country. Hence, this research helps discover the publics’ information desires and the nature of the relationship between authorities and citizens to understand the effective ways of using social media as a setting for crisis communication.

**Literature Review**

**Crisis Communication**

Currently, an increase can be noted in empirical studies about risk and crisis communication research on numerous issues, comprising “infectious diseases, public health interventions, disasters, terrorism, environmental issues, and misdeeds by organizations and their leaders” (Liu, 2019, p. 8). Crisis communication has increased in scope, but there are existing limitations with its usage in the social media era. Hence, in the new media era and the advancement of the world’s technological order (Castells, 2013), authority’s and citizens’ responsive engagement can help achieve effective crisis communication. Also, the internet helps citizens use social media for crisis information seeking and sharing (CISS) during pandemics or epidemics (Lee & Jin, 2019).

Previous studies have revealed that the publics’ likelihoods of seeking information via social media has increased rather than using traditional media due to the timely nature of communication messages and users’ posts (Brummette & Fussell, 2015; Utz et al., 2013). Due to the timeliness and easy accessibility of users’ comments, the publics have become vital participants that seek to be involved, usually in a period of emergency, as well as a platform for citizens to challenge authorities’ decisions (Palttala & Vos,
Previous scholars asserted that social media advances organizations and authorities’ informational scope to inform and educate the publics during crises. Hence, authorities should frequently monitor social media to support crisis communication during the crisis (Lin et al., 2016). The basic aim of public institutions is service to humanity or the publics (Bowden et al., 2016), which is also the primary objective of crisis communication. Scholars Stewart and Wilson (2015), through the STREMII model, encouraged authorities to “take into consideration the need for organizations to monitor and respond to contemporary communication processes and to develop a social media strategy and crisis management plan for when a crisis arises” (p. 639).

Therefore, it is prudent for authorities to be responsive in their engagement with the public when discharging their crisis communication duties. Crisis communication also involves a discourse on the dangers and recuperating and taking lessons from the catastrophe (Palttala & Vos, 2011). It is important to identify the citizens as stakeholders in crisis communication, who are not similar but entails diverse minor groups with various needs, which will lead to a better understanding of crisis messages.

Social Media, Crisis Communication, and Citizen Interactive Instrument

The numerous outbreaks of epidemics and pandemics in the past years (SARS outbreak in 2003, Ebola outbreak from 2013–2016, MERS outbreak in 2012, and H1N1 outbreak in 2009) corresponded with the influx of social media as a source of real-time global health information (Biswas, 2013). A concrete rapport amongst citizens and authorities is a forerunner to comprehending the public’s desires, prospects, and anticipations (Bowden et al., 2016), facilitating successful communication on social media during a crisis. Audiences offer their opinions on interactive social media platforms (Diehl et al., 2016).

Moreover, it is prudent for authorities to monitor citizens’ comments on social media to be aware of their institution’s image in this public’s space (Coombs & Holladay, 2014). The scholars further added that citizens also provide information, in either
criticism or support. In a study about citizens’ attitudes on Facebook during various crises in New Zealand and Australia in 2011, Taylor et al. (2012) discovered that citizens used social media for diverse reasons. The findings showed that some of the publics’ comments described events, asked and answered questions, offered information, and assisted other people in finding more facts. In agreement, Mollema et al. (2015) identified in a study about measles outbreaks in The Netherlands on different social media platforms that some of the main topics included information about the epidemic, supposed risk of getting infected or death, trust, and role of organizations.

Aside from Facebook, Twitter has proven to be one of the most used social media platforms as a crisis setting for online communication during disasters. A previous study examined the usage of Twitter during the early days of the landfall of Hurricane Sandy in October 2012. The results showed that Twitter was a source of crisis information (Lachlan et al., 2014). Research seems to agree that during a crisis, the publics use Twitter to describe events by retweeting official information and sharing their thoughts. Bruns et al. (2012) further explored the use of Twitter during the 2011 South East Queensland floods as the publics retweeted information with the hashtag #qldfloods, which enhanced the scope of the crisis messages. Therefore, there is strong convergent evidence for the publics using social media during the crisis to discuss the course of events (Austin et al., 2012).

Furthermore, some citizens might act negatively toward authorities, others more positively. Other scholars assert that sometimes online users may frame an issue as either positive or negative (Miller & Kendall, 2018); hence, there is a balance in the audience’s sentiments or tone of comments. Furthermore, in a cross-national study, Kang et al. (2019) examined tweets about the Samsung Galaxy Note 7 eruption disaster in Australia, South Korea, and the United States of America. The findings revealed that the negative tone was prevailing in the tweets about the crisis (Kang et al., 2019). In support of Kang et al., Atlani-Duault et al. (2015) explored the publics’ discussions in the comment section on websites and television outlets in France and discovered accusations by the people. The publics criticized the actions of
authorities, pharmaceutical firms, and other elites for European epidemic outbreaks. In a similar study about the online discussion of H1N1, Finnish citizens did not believe the government and their actions in eradicating the epidemic. Therefore, the Finnish government’s mediation approach to prevent fake news about the crisis in discussion forums was very late, and the resources were small (Tirkkonen & Luoma-aho, 2011). According to an Afrobarometer survey (Sanny & Selormey, 2020), most Ghanaians use social media as their source of information and view its impact as both positive and negative. The survey further revealed that more Ghanaians approve of unlimited access to the internet and social media than regulation by the government. However, most citizens expect authorities to curb the spread of fake news and other biased information. For this reason, the survey concludes that most Ghanaians are likely to believe false information on social media.

A public opinion study about novel vaccines on social media showed that most comments were positive and negative (Salathé & Khandelwa, 2011). Positive comments were likely to lead to people taking the vaccines, whilst negative comments likely led to less vaccine uptake and therefore many unprotected people, resulting in a potential increase in pandemic or epidemic outbreaks. Usually, the emotions shared by audiences on social media affect how the publics see an issue (Kim et al., 2016). Therefore, social media grants a platform for the publics to post positive or negative comments in support (Coombs & Holladay, 2014) or disagreement of the organization’s actions during a crisis (Pang et al., 2014). Bowden et al. (2016) posit that citizen participation in discussion forums is positive and sometimes negative; hence, government institutions should persistently monitor and partake in discussion with the public.

One problem with government institutions and health authorities’ social media usage as a crisis tool is their dominant preference for one-way communication. Biswas (2013) emphasized that Facebook enabled more interaction because of its participatory characteristics. However, the WHO and the CDC concentrated on one-way communication during the 2009 H1N1 pandemic (Biswa, 2013). Ding & Zhang (2010) support Biswas’s findings of the same pandemic that Chinese and U.S. government officials
used social media for one-way communication and limited two-way communication approaches to disseminate crisis information to the public during H1N1. Therefore, research seems to agree that all publics’ participation occurs after health specialists and government officials have finalized their resolutions about crisis communication plans (Grabill & Simmons, 1998).

The internet, and social media platforms precisely, have helped in the “faster and easier distribution of movement information, and [have] enabled individuals to stay in touch with more people, communities, and diverse causes” (Theocharis et al., 2015, p. 204). It has changed how users share crisis communication information on social media platforms (Miller & Kendall, 2018). Hence, social media is an important mechanism for emergency communication during various crises (Taylor et al., 2012). Authorities use social media to disseminate information and enhance publics’ involvement in crisis communication development. Based on the literature, the research questions below explore the issue at hand:

RQ1: Which issues did Ghanaian citizens address on Facebook concerning COVID-19?

RQ2: What was the nature of Ghanaian citizens’ comments during the COVID-19 discussion?

RQ3: What kind of tone did the citizens’ comments on Facebook concerning COVID-19 portray?

H1: Ghanaian authorities are less likely to actively participate in discussions with citizens on their Facebook platform during the pandemic.

Dilemmas of Authority-Citizen Crisis Communication

Four problems from the previous study by Tirkkonen & Luomaaho (2011) operationalized to analyze the authority–citizen crisis communication relationship during the COVID-19 outbreak in Ghana. These four problems portray difficulties concerning authorized communication by the Ministry of Information and Ghanaian citizens’ unauthorized communication on Facebook (see Table 1).
The first problem, inflexibility of action, shows that systematic and bureaucratic authority institutions cannot perform and respond as people interact and share messages and links on Facebook. The public sector institutions characterize the bureaucracy period with administrative obligations and tasks. The citizens focused on the post-bureaucratic way with a quick exchange, leveled, and easy-flowing interaction (Castells, 2004). Also, authorities have problems clarifying posts shared on Facebook. They are unaware of their dialogue allies and whether they are rightfully or wrongfully involved. Identifying Facebook users is difficult since people have diverse views and thoughts (Kavanaugh et al., 2011), usually using aliases. Authorities do not have the resources to filter the enormous volume of posts shared on Facebook (Kavanaugh et al., 2011).

The second problem is the diverse nature of information authorities and citizens have. Horizontal dissemination of information is more truthful and current (Bowden et al., 2016) than authorized information from the public sector. Results from a study about the Flint, Michigan, water crisis revealed an increase in public distrust of authorities and public institutions (Morckel & Terzano, 2018). When such situations happen, meaningful information about preventive actions is disregarded, misconstrued, or probed (Wachinger et al., 2013). Sometimes, the public could also be the source of false or fake news. In 2010, false information began to spread on Twitter, which brought about a needless evacuation of “the Grand Central Station” in the U.S. (Branicki & Agyei, 2014).

The third problem is knowledge disparity, which identifies authorities as specialists in a specific area. During catastrophes, authorities or specialists and citizens or laypeople usually have different views. The people’s views do not essentially associate with the crisis but can affect how the publics see an issue (Kim et al., 2016). On the other hand, experts make decisions based on their ideas and understanding of composite matters, in which people either trust or condemn information delivered by experts. Distrust lessens the usefulness of communication (Morckel & Terzano, 2018). Therefore, when citizens lose trust in authorities’
information, it emphasizes disbelief affecting how individuals view situations in their society.

The fourth problem exists in the crisis memory, which includes stigmatization. Stigmatization is a problem that brings about anger and violence based on a preconceived past (Lundgren & McMakin, 2013). Stigma is stored in a person’s memory and social media creates an avenue for storing information; hence, stigmatization can be facilitated. For instance, people with negative thoughts might create and share misinformation to sway others (Bowden et al., 2016). It brings another burden on authorities in crisis communication since they would treat the existing disaster and previous ones intensified by unpatriotic people.

RQ4: How did the four dilemmas characterize the Ministry of Information and active citizens’ relationship online?

<table>
<thead>
<tr>
<th>Problems</th>
<th>Citizens</th>
<th>Authorities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inflexibility of action</td>
<td>Post-bureaucracy</td>
<td>Bureaucracy</td>
</tr>
<tr>
<td>Quality of information</td>
<td>Speculation, biased</td>
<td>Official, confirmed</td>
</tr>
<tr>
<td>Knowledge disparity</td>
<td>Lay individuals</td>
<td>Experts</td>
</tr>
<tr>
<td>Crisis memory-stigma</td>
<td>Group of events</td>
<td>Single event</td>
</tr>
</tbody>
</table>

Source: Tirkkonen & Luoma-aho (2011)

**Overview of Ghana’s Media Landscape**

Ghana’s 1992 constitution stipulates that the country practices a democratic multiparty system of government. There are separation and balance of powers through the Executive, Legislative, and Judiciary as the three arms of government. The President is the Head of the Executive, while the Speaker of Parliament and the Chief Justice are the Legislature and Judiciary leaders, respectively.

Ghana has a vibrant mass media that actively participate in developmental issues, political dialogue, national discourse, and performs the *Fourth Estate* in the democratic dispensation. Notwithstanding a turbulent political past and numerous military
coup d'états after gaining independence in 1957, Ghana was touted as one of Africa's most established democratic nations. The freedom and independence of the media in Ghana are assured in Chapter 12 of the nation's 1992 Constitution (Asante, 2020). Ghana's 1992 Constitution further guarantees that all people enjoy the freedom of speech and expression. Therefore, the liberty to express a person’s viewpoint without restriction is a basic right assured by the Constitution of Ghana and further guaranteed by the Universal Declaration of Human Rights (Adams, 2010).

This constitutional requirement reflects the reality in Ghana, even though there have been some hitches in the past. Ghana has a vibrant, diverse, liberal media setting, regulated by an independent constitutional organization, known as the National Media Commission. The Ghanaian media landscape has state-owned and private-owned media. According to the Media Ownership Monitor Ghana (n.d.), numerous media sectors have a high audience focus. Radio is ranked as the most prevalent media in Ghana, followed by television, online, and newspapers. Radio has the highest audience scope of about two-thirds of the population. Regarding media ownership, state-owned newspapers are dominant in the printed press. The top four state newspapers (Graphic Communications Group Limited, Business and Financial Times Limited, New Times Corporation, Western Publications Limited) have 95.5% audience shares.

In another aspect, private organizations are dominant in the broadcasting scope. The television industry has a mixture of local and English languages, with the top four media conglomerate owners (Multimedia Group, Despite Group of Companies, Media General Ghana Limited, and state-owned Ghana Broadcasting Corporation) market share of 77.4%. The radio sector is more varied in audience share as the owners differ from its location. Despite Group of Companies and Multimedia Group of Companies dominate the radio market in Ghana. Since January 2020, the internet penetration rate in Ghana has stretched to 48%, from the 35% in the previous year. It signifies that a fair share of Ghana’s total population often uses the internet (Sasu, 2020).
Method

This study examined the crisis communication relationship between the Ghanaian government and citizens during the COVID-19 outbreak on social media, Facebook to be precise. The official Facebook page of Ghana’s Ministry of Information (MOI) was selected for the study’s data collection. The MOI is the official mouthpiece of the government of Ghana. According to Statcounter (2020), Facebook has a leading market share of 49.2% of Ghana’s social media space. The MOI has 762,200 followers on Facebook, the highest on any social media platform. Therefore, this study selected MOI’s official Facebook page to analyze the online discussion of Ghanaian authorities and citizens during the COVID-19 outbreak.

The study employed the quantitative content analysis to explore the authority–citizen relationship during the COVID-19 outbreak in Ghana. Facebook posts and comments for the first 6 months since Ghana had a COVID-19 case on March 12, 2020 (Zurek, 2020) to August 12, 2020, were analyzed. The first 6 months since Ghana had its first COVID-19 case were selected as the time frame of this study because it was the most critical period of the West African country’s battle against the pandemic. The Facebook posts included the President’s frequent COVID-19 address to the nation, Ministerial Press briefings, COVID-19 case-count updates by the government, and directives from various government sectors.

Statistical package for the social sciences (SPSS) was used to perform the z-scores to determine the nature of the association between the commenters and their comments on the MOI Facebook page. We analyzed 729 COVID-19 Facebook comments by Ghanaian citizens with SPSS to produce descriptive statistics for the dataset. Furthermore, this produced a new column of indicators that showed the z-score for each variable in the dataset. Based on the new column of the variables, the z-scores revealed how many standard deviations away a variable was from the mean. For instance, the results showed that with a positive z-score of 0.73, Answering/Giving advice was greater than the mean. To give another example: with a negative z-score –1.23, Provide information
was less than the mean. Based on these z-score results, it was concluded that Ghanaians are more likely to answer/give advice than provide information.

**Sampling**

Overall, 729 Facebook comments about the COVID-19 outbreak posted by citizens were used as the sample size of this study. Randomizer generated 2 constructed weeks for this paper due to the large quantity of the data (see Table 2). Moreover, at least 2 constructed weeks are necessary to precisely signify the content of online stories collected simultaneously (Hester & Dougall, 2007). Randomizer uses the “Maths.random” application for scientific study (Urbaniak & Plous, 2013). Specifically, the “most relevant” filter tool selected the important Facebook comments for this study. The Facebook comments by citizens and authorities were the unit of analysis.

<table>
<thead>
<tr>
<th>TABLE 2 Two Constructed Weeks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st week</td>
</tr>
<tr>
<td>Mar 14</td>
</tr>
<tr>
<td>2nd week</td>
</tr>
<tr>
<td>Mar 9</td>
</tr>
</tbody>
</table>

**Coding Scheme**

This study was operationalized based on Tirkkonen & Luoma-aho’s (2011) work to analyze the authority–citizen relationship during the COVID-19 outbreak in Ghana. The study relied on previous work about online authority crisis communication during the swine flu influenza pandemic of 2009–2010 in the framework’s operationalization (Tirkkonen & Luoma-aho, 2011). The previous study analyzed online discussions between citizens and authorities during a pandemic, which suits this study’s aim. Social media is creating new ways for authority–citizen communication during a global health crisis.

Also, comments were coded according to the emotions conveyed toward authorities’ posts: positive, negative, and neutral. All indicators were equally specific, signifying that only one choice could be selected to determine the comment examined. After
coding the comments, the data were statistically analyzed with SPSS. *Z-scores* statistics identified the relationship between the differences in the comments.

**TABLE 3  Coding Book**

<table>
<thead>
<tr>
<th>Day</th>
<th>Date when the comment was posted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commentor</td>
<td>1=Ministry of Info, 2=citizen</td>
</tr>
<tr>
<td>Name</td>
<td>Name of the commentator</td>
</tr>
<tr>
<td>Nature of the comment</td>
<td>1=providing information, 2= answering or giving advice, 3=asking question(s), 4= expressing strong opinion</td>
</tr>
<tr>
<td>Key issues addressed</td>
<td>1=describing course of events, 2=recovery efforts in Ghana, 3=infected cases &amp; death, 4=Ghanaian authorities &amp; their actions.</td>
</tr>
<tr>
<td>Content of comment</td>
<td>Written down for qualitative analysis.</td>
</tr>
<tr>
<td>Tone toward the authorities</td>
<td>1=positive, 2=negative, 3=neutral, 4=not clear</td>
</tr>
</tbody>
</table>

**Inter-Coder Reliability**

Two graduate students were trained to code 72 Facebook comments separately. They coded 10% of the total sample used for inter-coder reliability purposes. Cohen Kappa’s SPSS method was employed to calculate the reliability. The absolute reliability of the coefficient for “topics of comment” was 0.88 value, while that of the “nature of Citizen’s comment” had a 0.91 value. Also, inter-coder reliability for the tone of comments was 0.90, indicating a strong agreement level.

**Results**

The crisis communication relationship between Ghanaian authorities and citizens was examined during the COVID-19 outbreak on social media. This study’s content analyzed the key issues addressed on Facebook, the nature of Ghanaian citizens’ comments, the tone of their comments about COVID-19, Ghanaian authorities—
citizens discussion on Facebook, and dilemmas of authority–citizen crisis communication.

**Key Issues Addressed**

Regarding the first research question, Ghanaian citizens expressed their opinion on some specific issues. In 53.1% of the sample size, the leading comments were about Ghanaian authorities and their actions (387). The second highest was about describing the course of events, 32.4% (236). The third key frame was about the infected cases and deaths which had 9.3% (68) of the comments; the least comments were about recovery efforts in Ghana, 5.2% (38). The comments that focused on critiques about Ghanaian authorities’ management of COVID-19 were, “How are we going to do the voters’ registration as proposed by Electoral Commission, looking at confirmed cases in Ghana?” While other people supported officials’ actions with posts like “We the good citizens of this country know the Akuffo-Addo administration is working, so keep on, and the good Lord will bless Ghana.” Some citizens described the course of events surrounding COVID-19 as being politicized with comments like, “We have been taking this far too unserious. Let us be focused. The politics is enough.” At the same time, others focused on the global perspective of the pandemic that “Most schools abroad are improvising with online tuition.” The citizens shared their anxiety about the nature of the earliest infected cases, such as “My worry is, these people were in the plane with
other passengers who may likely be affected, so how do we track all these passengers?” There was calmness and support for how authorities have managed the situation to have more recoveries as a citizen posted that “We are still doing well as a country with the higher number of recoveries all glory be to God and God bless our President for his good leadership.”

**Nature of Comments**

The second research question focused on the nature of comments made by Ghanaian citizens during COVID-19 discussions. The statements showed that they intended to provide information about different issues concerning COVID-19. After Ghana’s borders (sea, air, land) were closed to prevent and contain the COVID-19 cases, some people were still using various means to enter the country, which made some citizens provide information about the incident such as “The border at Paga is only closed to prevent vehicle, but motorists from Burkina Faso are still gaining access into our country.” Other citizens shared news links to show how some health workers have been denied their severance pay: “Tension as Ridge Hosp. excludes some nurses from ‘front line’ package https://starrfm.com.gh/2020/04/tension-as-ridge-hosp-excludes-some-nurses-from-front-line-package/.” Subsequently, social media is a two-way form of communication; some of the citizens asked questions like “Any online market to buy commodities?” while a majority sought further understanding about government’s free water and electricity policy during the outbreak with queries such as “Prepaid users how are we going to get our 50%?” Since the Ministry of Information did not answer any of the questions posed by the public, some of the citizens answered the questions such as about the free water and electricity policy with a response like “If you pay 50% of the units you usually purchase or want to purchase . . . i.e., if 100 ghc ($17) is 100 units pay 50 ghc ($50) for the 100 units . . . (half of it).” While those who were not convinced with the responses from their fellow citizens asserted that “This 50% slash in utility (electricity and water) bills are not well understood.” On the other hand, certain citizens expressed their opinions in the strongest terms based on their dissatisfaction with the turn of events and their leaders’ actions. Those who
criticized the lack of urgency in Africa whenever calamity occurs
claimed that “In Africa when tragedy does not befall on us, we
refuse to act yet we have been saying prevention is better than cure.
The airport should have been closed.” The politicization of the pan-
demic was replicated in Ghana; hence some citizens bemoaned
such a problem “Why should this be about politics? Seriously we
need to change . . . what has President Nana Addo ought to do with
COV-19?” Overall, most of the nature of comments made by the
publics expressed strong opinions to show their dissatisfaction
during COVID-19 discussion between Ghanaian authorities and
citizens. To identify the relationship between the differences in
the comments, z-score performed a substantive conclusion. The
results suggested that there were positive z-scores for “Answering/
Giving advice” (0.73) and “Express strong opinion” (0.89), while
“Provide information” (–1.23) and “Asking Questions” (–0.39)
had negative z-scores. Therefore, commenters are more likely to
answer/give advice and express strong opinions rather than pro-
provide information or ask questions below the mean.

Since authorities did not respond to the citizens’ questions,
other people gave diverse responses to most of the questions.
Although the diversity of ideas is good, the nature of the discus-
sion in this situation gave a chance for conflicting opinions from
the publics. Therefore, the citizens were more likely to give answers
or advice than ask questions. For instance, when the government
initiated a 50% reduction in electricity and water initiative during
the COVID-19 outbreak, the publics did not understand the pol-
icy and asked questions about it. Such as, “50% of electricity bills
absorbed by the Government, how about those of us using pre-
paid meters, how is it going to work for us?” and “Any enlight-
enment for those using prepaid meters?” The citizens gave several
responses to this issue like “If you pay 50% of the units you usually
purchase or want to purchase . . . i.e. if 100 ghc ($17) is 100 units
pay 50 ghc ($50) for the 100 units . . . (half of it).” Meanwhile, those
who were not convinced with the responses from their fellow citi-
zens asserted that “This 50% slash in utility (electricity and water)
bills are not well understood.”

The citizens were more likely to express strong opinions
because they were dissatisfied with how their authorities managed
the COVID-19 situation and politicization of the pandemic in Ghana than provide information about the global health crisis. For instance, some citizens expressed strong opinions like “What prevented the government at the time to close the borders? Was it so costly than the $100 million?” and “Close the borders to protect our lives.”

TABLE 4  Descriptive Statistics

<table>
<thead>
<tr>
<th>Nature of Comment</th>
<th>Percentage</th>
<th>Z-score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provide information</td>
<td>6.50%</td>
<td>-1.23401</td>
</tr>
<tr>
<td>Answering/Giving advice</td>
<td>35.90%</td>
<td>0.72707</td>
</tr>
<tr>
<td>Asking Questions</td>
<td>19.20%</td>
<td>-0.38688</td>
</tr>
<tr>
<td>Express strong opinion</td>
<td>38.40%</td>
<td>0.89382</td>
</tr>
</tbody>
</table>

Mean = 25%, Standard Deviation = 14.992

**Tonality**

Ghanaians expressed varied attitudes on MOI’s Facebook platform during their COVID-19 discussion to show their satisfaction or dissatisfaction with the government’s efforts to combat
the pandemic. Most of the comments had a negative tone (36.8%) attached to them. It showed how dissatisfied the citizens were with the efforts of authorities in eradicating the global health crisis. Some of the negative comments are as follows: “Feel sad for this country. We always wait to take last-minute action. Oh Ghana,” “We have lost the fight so far as community spread is concerned.” The optimistic tone (30.7%) included satisfactory remarks or supportive comments for the government’s efforts, such as: “The good citizens of this country know Akuffo-Addo-led administration is working. The good Lord will bless Ghana,” “We are still doing well as a country even with the high number of recovery cases. All glory belongs to God. God bless our President for his good leadership.” The neutral comments (32.5%) did not contain any positive or negative remarks toward the government or officials. For instance: “The only thing we have to do is to observe the necessary protocols,” “The only thing we have to do is to obey all the protocols that are all. Through that, we can fight for COVID-19.”

**TABLE 5  Tone of Comments**

<table>
<thead>
<tr>
<th>Tone</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive</td>
<td>224</td>
<td>30.7%</td>
</tr>
<tr>
<td>Negative</td>
<td>268</td>
<td>36.8%</td>
</tr>
<tr>
<td>Neutral</td>
<td>237</td>
<td>32.5%</td>
</tr>
<tr>
<td>Total</td>
<td>729</td>
<td>100%</td>
</tr>
</tbody>
</table>

**Authorities’ Participation in Discussion**

Regarding the hypothesis, Ghanaian authorities did not post any comments under their Facebook posts by answering a citizen’s question, giving clarifications, or getting involved in a discussion. Therefore, there was no active participation between authorities and the citizens during the pandemic outbreak on Facebook, but it was just a limited two-way communication. Some of the public responded to their fellow citizens’ questions and frequently participated in the discussion. Hence, the hypothesis is supported.
The Four Dilemmas

Moreover, among the four operationalized problems in this paper, only crisis memory was not noticeable during the Facebook discussion. The inflexibility of action was evident when MOI, a public institution, could not reply to any citizens’ questions or concerns. The MOI followed the same technique in their posts by posting information but not partaking in discussions with citizens. Their inability to participate in discussions led to the second problem, the quality of information.

Furthermore, the third problem, disparity of knowledge amongst government and the people were evident. This difference was evident in the citizens’ comments like the government’s initial 50% absorption of electricity, the late closure of the country’s borders, the undertaking of contact tracing, the duration the total lockdown was going to last as the pandemic affected human survival. Last, the fourth problem, the crisis-memory stigma, was not that obvious in the Facebook interaction because it was the first time Ghana had experienced a pandemic. The closest Ghana came to such a global crisis was during the 2014 Ebola outbreak, but the country does not have any case to date.

Discussion and Conclusions

The current study advances the existing crisis communication-related studies within the context of the authority-citizen relationship. This study addressed several key topics about COVID-19 outbreak discussion between Ghanaian authorities and citizens; hence, the next stage is to explore the public’s opinion about authorities’ crisis communication efforts during different pandemics. The study further revealed that Facebook posts by the MOI impacted the nature of comments (Kang et al., 2019). It could also be employed to create attention for other health information connected to that specific issue (e.g., mitigation plans and taking precautionary actions). Hence, the use of these Facebook messages may have significant practicality in national and global public health. The results of this study suggest that practically it is important to develop a scientific system that automatically
programs comments concerning authorities–citizen communication messages about pandemics or other health-related issues. This automated system would help authorities analyze and respond to the high volume of messages because, in some situations, authorities do not have the resources to filter the enormous volume of comments posted on Facebook (Kavanaugh et al., 2011). In addition, the automated system would help discover the dissimilarities in opinions, feelings, and issues the publics focus on or comment on social media and will offer understanding into citizens’ characteristics. Therefore, this study posits that the main feature of Facebook within the context of crisis communication is the exchange of timely messages and the advancement of association, which acts as a vehicle of information first aid during the early stages of a pandemic.

The discussion on MOI’s Facebook platform was a good indication of people who understood the function of social media during the pandemic (Lee & Jin, 2019) and were active in crisis communication (Kang et al., 2019) by not only looking for information but also discussing it among themselves (Diehl et al., 2016). Due to the uncertainty and threats COVID-19 caused, the public sought information about happenings by asking questions. Therefore, some citizens emerged as information brokers (Palen, 2008, p. 78) or information hubs for COVID-19 on MOI’s Facebook page. Some of the public contributed to these hubs by answering and giving advice, expressing strong opinions, and providing information by posting Facebook comments. The crisis communication discussion system practically helped the public get COVID-19 updates from a variety of publics in diverse places and enhanced the presence of user-generated information. It also led to an increase in unofficial messages from unknown people and raised concerns about the precision of the information and rumors about the number of COVID-19 infected and recovery cases in Ghana provide by some citizens (Taylor et al., 2012). The MOI’s Facebook platform offered some of the publics a chance to express strong opinions about their dissatisfaction about how authorities were managing the COVID-19 pandemic. Therefore, since Facebook provides two-way communication, this study suggests that
future studies should facilitate competent crisis communication between authorities and citizens during disasters.

The framework of crisis communication and citizen interactivity on social media used in this study has numerous implications for practice and research. From a practical standpoint, this study demonstrates the important ways that authorities could use Facebook to inform, discuss with citizens, and enhance crisis communication activities during pandemics. Moreover, as explained in this study, the differences like citizens’ comments provide a chance for additional technical development of crisis communication practice and improved two-way communication during a crisis. Although an actual effort is needed to fully incorporate effective crisis communication into Facebook and other social media platforms, the potential opportunities to the public validate the venture.

Another point of comparison for this study is the tone of the citizens’ comments. In this regard, the results showed that positive and neutral sentiments were evident, but the negative tone was most significant. The positive comments showed the Ghanaian authorities’ management approach to the COVID-19 outbreak because some individuals supported how Ghanaian authorities managed the pandemic. The negative comments showed the failure of Ghanaian authorities’ crisis communication approach as individuals reacted negatively online (Coombs & Holladay, 2014). The neutral reactions did not contain positive or negative sentiments but mostly advised people to adhere to the COVID-19 protocols. The diversity in the tone of comments shows that Ghanaian authorities need to consider the different kinds of audience attitudes in their crisis communication efforts to enhance public engagement during pandemic outbreaks. To enhance the MOI’s crisis communication practically, authorities need to monitor the various tones of citizens’ comments, assess how individuals react to COVID-19 Facebook posts, and familiarize their crisis response to those reactions. This study has discovered that Facebook can ascertain the differences in citizens’ attitudes, the usefulness of coding positive, negative, and neutral comments for comparative reasons, and the importance of the understandings acquired from comparing
comments within different tones. The findings posit that positive, negative, and neutral comments are important to the crisis communication efforts of Ghana authorities. Therefore, more studies are necessary to develop the exploratory and practical significance of audience attitude or tone to two-way crisis communication.

Regarding the hypothesis, the results showed Ghanaian authorities did not actively participate in discussions with citizens on their Facebook platform during the pandemic outbreak; hence, they frequently used limited one-way communication. Therefore, the citizens’ comments and questions were not regarded as signs of public engagement or potential partners in decision-making about managing pandemics (Grabill & Simmons, 1998). Ghanaian authorities’ crisis communication method during the COVID-19 outbreak is categorized as limited two-way communication, as done by the U.S. health authorities during the H1N1 pandemic (Biswas, 2013; Ding & Zhang, 2010). The limited two-way communication did not help make the authority–citizen discussion successful, but eliminated the publics from playing an essential role in the crisis communication process. Therefore, it is prudent for future studies to conceptualize one-way, limited, and unlimited two-way communication within the crisis communication theory. It will help researchers and crisis communicators to understand the depth of the issue and develop effective theoretical and practical unlimited two-way communication strategies for authority–citizen communication on Facebook.

Authorities’ inability to participate in the Facebook discussion with Ghanaian citizens showed the inflexibility of their actions. Therefore, they were missing from discussions but only posted information on their Facebook platform. The lack of authorities’ participation led to increased rumors, fake news, and questionable quality of information perpetuated by some people on Facebook. Ghanaian authorities underrated the resources necessary for successful online discussion or were incapable of identifying the key issue arenas (Luoma-aho et al., 2013), where there were ongoing discussions on the matter. Some outcomes of the failed authority communications and proof of the increase in public’s negative comments during the COVID-19 outbreak were profound speculations, the recommendation of native drugs, and fabricated case
updates (Arthur, 2020) brought about misunderstanding and weakened civic education activities.

For authorities to reduce the knowledge disparity gap and enhance the quality of information, they should use Facebook or other social media functions, because social media have improved two-way communication capability (Tirkkonen & Luoma-aho, 2011). Ghanaian authorities must be proactive and create strong relationships with the citizens before outbreaks, but not during it. Earning citizens’ trust in crisis communication involves being available online, particularly in disaster happenings, when the desire for messages, updates, and responses is strong.

This research has two limitations, which will lead to future studies. First, this study focused on a single case study. Hence, future studies should involve two case studies to validate the results comparatively. Although the 6-month period enabled the researcher to obtain great insights into the authority–citizen relationship during a crisis, an extended time frame would explain such a relationship in the long-term.

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**References**


Bruns, A., Burgess, J. E., Crawford, K., & Shaw, F. (2012). #qldfloods and @QPSMedia: Crisis communication on Twitter in the 2011 South East Queensland Floods. Brisbane: ARC Centre of Excellence for Creative Industries and Innovation (pp. 1–58).


Kang, S., Shim, K., & Kim, J. (2019). Social media posts on Samsung Galaxy Note 7 explosion: A comparative analysis of crisis framing and sentiments in three nations. *Journal of International Crisis and Risk Communication Research, 2*(2), 259–290. [https://doi.org/10.30658/jicrcr.2.2.5](https://doi.org/10.30658/jicrcr.2.2.5)
Kavanaugh, A., Fox, E. A., Sheetz, S., Yang, S., Li, L. T., Whalen, T., 
by government: From the routine to the critical. In Proceedings 
of the 12th Annual International Digital Government Research 

information in the age of big data: Exploring sentiment expression related to nuclear energy on Twitter. Journalism and 

Screaming into the wind: Examining the volume and content 
of tweets associated with Hurricane Sandy. Communication 


events on social media: A comparison of user reposting/retweeting behaviors on Twitter and Weibo. Computers in 

Liu, B. F. (2019). Editor’s essay: The critical need for crisis and 
risk communication research. Journal of International Crisis and Risk Communication Research, 2(1), 7–11. https://doi.org/10.30658/jiccr.2.1.1

handbook for communicating environmental, safety, and health risks (5th ed.). Wiley & Sons.

the issue arenas of the swine-flu discussion. Journal of 


Commemorating Disorder in After-Action Reports: Rhetorics of Organizational Trauma after the Las Vegas Shooting

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ABSTRACT

After-action reports are important texts that make sense of moments of crisis and restore organizational order. We add to existing research on these reports by incorporating the rhetorical concepts of terministic screens and the pentad to understand how reports commemorate disorder and organizational trauma. Analyzing the multiple reports created after the 2017 Las Vegas Shooting, we find that reports from different professional fields commemorate crises in disparate ways that select and deflect memories of trauma. This study extends risk and crisis studies of crisis documentation by highlighting the emotional role reports play in making sense of organizational trauma and considering how professional fields influence post-crisis rhetoric of renewal.

KEYWORDS: after-action reports, sensemaking, terministic screens, organizational rhetoric, rhetoric of renewal

The Las Vegas Shooting that occurred on October 1, 2017, was the deadliest mass shooting in U.S. history. A lone gunman fired down from a hotel room window into a country music festival on the Las Vegas Strip, killing 60 people and injuring hundreds more. Local, state, and federal law enforcement, fire departments, and emergency medical service providers flooded the scene to transport survivors to hospitals, locate the shooter, and ultimately launch an investigation into the effectiveness of the multiagency
response. In the aftermath of the incident, multiple organizations had to make sense of their shared crisis response. Five after-action reports captured the events of 1 October\(^1\) in attempts to make sense of what occurred that night, what organizations did effectively, and what organizational practices should be improved.

After-action reports (AARs), accident reports, and post-crisis inquiries are significant organizational texts that serve multiple purposes after crises.\(^2\) Reports can generate insight into preventing future crises and create an understandable narrative out of chaotic events (Brown, 2004; Gephart et al., 1990). Reports are not simply factual accounts of crises; instead, they are made up of decision points where rhetorical choices direct attention toward certain perspectives. That is, AARs seek to reconcile conflicting points of view to create a coherent and persuasive account of both the crisis and, often, who is at fault (Dwyer et al., 2021). Here, we use an organizational rhetoric lens to understand how AARs function as reflections of the various stakeholders involved in crisis response, their priorities, and their professional biases. Organizational rhetorical studies are interested in how organizations create written texts that help them achieve their goals by persuading and influencing readers (Offerdal et al., 2021), whether intentionally or as byproducts of their reconstruction of events.

Studies of AARs to date have focused on how reports restore order, but scholarship can do more to understand how multiple organizations make sense of the same crisis and even promote healing or renewal after the crisis (Ulmer et al., 2007). AARs are likely to be written more frequently in the coming decades as natural disasters escalate (Woods, 2020) and multiple organizations must respond to them. To contribute to our understanding of AARs and the ways they make sense of crises, we use two rhetorical concepts by Kenneth Burke that center decision-making and symbolic choices. First, we use the rhetorical concept of terministic screens to highlight that any recounting of a crisis necessarily

\(^1\) Henceforth we name this incident 1 October to mirror the local and report terminology (Montero, 2018).

\(^2\) After-action reports are also sometimes called after-action reviews or post-crisis inquiry reports. We refer to all reports in this genre as after-action reports throughout the paper.
selects certain events and details and simultaneously deflects other parts of organizational experiences (Burke, 1966). Second, we use the rhetorical concept of the pentad to understand how crises are reconstructed differently, with different emphases, which leads to different crisis responses and suggestions for future preparation. Guided by these rhetorical concepts, our qualitative content analysis of 1 October reports explores what reports emphasize and downplay and the differences that emerge between the reports.

This study extends risk and crisis communication research in two ways: First, it introduces new rhetorical tools to consider how different professional fields of risk and crisis practitioners influence post-crisis sensemaking, and second, it expands the rhetoric of renewal to consider official documents. In what follows, we first expand on the theoretical foundations of crisis communication, AARs, terministic screens, and the pentad. Then, we detail our methods before examining findings from our comparative analysis. We conclude by reiterating the importance of organizational rhetoric as an area of study and reflect on the points of convergence and divergence in AARs as impactful for public, organizational, and interorganizational memory.

**Literature Review**

Studying AARs creates the opportunity to examine how various organizations make sense of shared crises. An organizational crisis is an event that begins with an unexpected trigger and creates high levels of risk and potential loss for the organization (Seeger et al., 2003). While crises can be destructive to the organization’s members, reputation, and existence, crises are also opportunities for renewal, learning, and understanding (Seeger & Ulmer, 2002). As such, how organizations choose to remember crises and preserve corresponding lessons has implications for their future resilience (Rice & Jahn, 2020). AARs are an important site of remembering that can create improvements in organizational activities that prevent future crises. We should also recognize that reports are made up of rhetorical choices and thus serve an inherently persuasive function. Risk and crisis communication scholars have drawn on rhetorical concepts including narrative theory to understand how
order is restored via storytelling (Seeger et al., 2003) and ethos to examine challenges to authority during a crisis (Offerdal, 2021). Scholars proposing a rhetoric of renewal have argued that crises are opportunities for organizations to learn and heal after a crisis (Ulmer et al., 2007). This research tends to focus on leaders’ rhetoric (Ulmer et al., 2007); however, renewal expands beyond leader communication to include memorials (Veil et al., 2011) and, we argue, organizational texts.

Risk and crisis scholars have already documented numerous purposes of AARs. These reports serve as sensemaking tools for practitioners, creating a coherent and authoritative account of crises (Brown, 2004). They can also reestablish public trust and positive perception of the organization (Gephart et al., 1990). Reports tend to be treated as sites of rule development and organizational learning (Jahn, 2016). When findings are released, practitioners must make sense of the reports, assess their resonance, and adjust practices to accommodate report recommendations (Dwyer et al., 2021). Reports and their subsequent recommendations also serve as resources in member interactions and become tools that inform future actions (Jahn, 2016). Attempts at fact-finding are often complicated and incomplete due to the chaos caused by disasters (Andrade et al., 2020). While these studies highlight the role of reports in reestablishing order after a crisis, more research can be done to consider how reports can also contribute to renewal and healing.

After-action reviews can also be situated in the broader rhetorical situation of crisis response. Scholarship in this area has already identified and assessed rhetorical strategies available to organizations and individuals, including image repair strategies (Benoit & Henson, 2009; Coombs, 2006). Benoit and Henson, analyzing presidential rhetoric, found that strategies can include taking corrective action, bolstering the reputation of the speaker, and framing the crisis as an unprecedented challenge. AARs play an important part in what Coombs (2006) terms sharing “instructing information” about a crisis, or basic facts that stakeholders may need about the crisis (p. 246). Official documentation can also deny or diminish organizational blame for the crisis and answer questions about
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Further research can also examine what viewpoints are documented in AARs, especially as crises frequently involve and will continue to involve multiple organizations in coming decades (Rice, 2022). Professional fields, or viewpoints drawn from career expertise, play an important role in the interpretation of AARs (Dwyer et al., 2021). We know that risk and crisis practitioners must read and make sense of AARs to understand how these reports should inform how they do their jobs. Despite our understanding that professional fields influence the interpretation of reports, less is known about how professions influence the construction of reports in the first place. We consider how different professional fields created different accounts of the same event to enhance understanding of how multiple organizations converge or diverge on their interpretation of crises.

An Organizational Rhetoric Framework for Analyzing Reports

AARs function rhetorically by shaping organizational understanding of crises. We draw on Burke’s (1966) concepts of terministic screens and the pentad to examine how organizational understanding involves selections and deflections about the event that are informed by the organization’s perspective. Terministic screens refer to how all language involves selections and deflections in where we point our attention; thus, every choice to select one aspect or feature for inclusion in official reports is simultaneously a “deflection” of other choices (Burke, 1966, p. 44). Symbolic choices about how to represent events are biased and non-neutral. AARs are informed by the terministic screens of various professions that “direct attention away from some interpretations and toward others” (Burke, 1966, p. 45). Terministic screens become accepted vocabularies that may dictate future rhetorical choices. Different terministic screens lead to different choices of emphasis, which may result in very different perspectives and retellings of the same reality (Burke, 1966). Unlike the related concept of framing, terministic screens are self-reinforcing concepts whereby
the language, or terminology, that we use to understand reality influences the vocabularies available to us in future situations. In other words, our terministic screens develop over time to prevent us from considering other perspectives, vocabularies, and ways of knowing, which Burke referred to as a “trained incapacity” (Burke, 1966, p. 189). Over time, the development of one’s experiences, education and training can influence our perspectives, and “abilities can function as [inabilities]” that prevent certain ways of understanding situations (Burke, 1935, p. 7).

Burke proposed the term casuistic stretching to describe how we engage with adjustments to our terministic screens. At times of struggle, old vocabularies may be modified or extended to adapt to new situations (Burke, 1984). When that stretching cannot fully make sense of the new situation, the framework might break, causing a new one to be formed in its place. This process can upend people’s ways of life, so instead of adopting new frameworks, people often make language choices to “reduce perceived incompatibilities” between the old and new principles (Tschirhart & Bloomfield, 2020, p. 699). In other words, people tend to stick with pre-established vocabularies instead of stretching them but may be forced to stretch or abandon them given changing circumstances, such as those involved in crisis.

To explore these relative emphases in the retelling of events, Burke (1945) offered the pentad, which is a series of five terms (act, agent, agency, scene, and purpose) that compose the elements of any event. For Burke, retellings of all events include an emphasis on some of these elements and a de-emphasis of others, which indicates different underlying worldviews and ideologies (Bloomfield & Tscholl, 2018). Attending to pentadic terms can offer rhetorical insight into how various organizations engage with crises in how they characterize the act, the agents involved, the relevant agency and purpose, and the appropriate scope of the scene. In addition to focusing on individual components within the pentad, rhetorical scholars also track the ratios between the terms to interpret perspective, motive, and implications.

Organizational scholars have already engaged with the pentad to understand how the organization is framed as a scene that is positioned as dictating member choices (Meisenbach et al., 2008).
Scene has the potential to be powerful during sense-making in emergencies as well, as the emergency itself can be framed as dictating subsequent response. For example, does the surrounding Las Vegas community after 1 October count as part of the scene? Agents are additionally a potential point of selection and deflection for AARs, especially as these reports make sense of multiple responding agents from different organizations and professions and choose which activities and agents to draw attention to over others.

Using rhetorical theories, this project interrogates AARs from 1 October to ask the following research question:

*RQ:* How do after-action reports select and deflect aspects of the crisis relevant to their professional fields’ terministic screens?

**Methods**

**Data Collection and Analysis**

Data collection included a thorough search for reports related to the Las Vegas shooting conducted in the fall of 2020. By this time, the Federal Emergency Management Agency (FEMA), Federal Bureau of Investigation (FBI), Las Vegas Metropolitan Police Department (LVMPD), and Nevada Hospital Association (NHA) had all published reports, ranging from criminal investigations (LVMPD, the FBI) to AARs that sought to reflect on the organizational responses (FEMA, LVMPD, NHA). After conducting a complete search for reports, the authors read all five reports for first impressions of report purposes. We removed the criminal reports and focused on the three AARs for the purpose of analysis (for a summary of reports, see Table 1).

During data analysis, the three AARs were coded using NVIVO, a qualitative data analysis software. Analysis was conducted using multiple phases of coding. First, the first author engaged in primary level coding, asking what was occurring throughout each report and establishing codes to break segments of data down by line (Lindlof & Taylor, 2019). Analysis used the constant comparative method to compare new data to already created codes, generating new codes for new phenomena in the data and adding depth
<table>
<thead>
<tr>
<th>Agency</th>
<th>Report Purpose</th>
<th>Page Count</th>
<th>Key Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal Emergency Management Agency (FEMA)</td>
<td>“...distributing best practices and lessons learned for other communities around the country to better prepare for a mass casualty incident should one occur” (p. i).</td>
<td>61</td>
<td>“Strong cross-agency collaboration is critical for a quick and effective response. Response training that is tailored to address an incident of mass violence is an especially valuable preparedness investment. Coordinated, cross-agency planning for an incident of mass violence is necessary for successful outcomes” (p. 1).</td>
</tr>
<tr>
<td>Nevada Hospital Administration (NHA)</td>
<td>“provide supplemental hospital emergency management educational material via the case study of one of the worst mass-casualty incidents to occur in our nation’s history” (p. 3).</td>
<td>67</td>
<td>26 insights and recommendations, including: hospitals had no notice of the event, there was a lack of situational awareness, there was a surge in patients, throughput of patients was key, issues with patient registration, supplies ran low.</td>
</tr>
<tr>
<td>Las Vegas Metropolitan Police Department (LVMPD)</td>
<td>Detail overall police response and document “lessons learned” (p. 1).</td>
<td>164</td>
<td>93 findings organized by categories including preparedness, law enforcement departments, leadership, equipment, and training.</td>
</tr>
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and changing understanding to already created codes (Charmaz, 2014). Primary coding yielded 168 codes, indicating the breadth of topics covered throughout the reports. Informal observation of codes suggested that there were some points where reports converged and other points where they differed. As a result, the secondary coding cycle compared codes to the research question to clarify relationships (Charmaz, 2014). During secondary coding, the first author grouped codes together to create categories of like codes and to observe the relationship and value among those codes. This analysis yielded three points of convergence in the reports and two points of divergence, discussed next.

Results

Points of Convergence
The reports converged on three themes: (1) the scene as uncontrollable and controlling, (2) the clash of professional fields, and (3) the importance of future planning and lessons learned from this event.

Scene as Uncontrollable and Controlling
The reports converged upon the scene as influential over agents’ actions, deploying a scene–act ratio. The unprecedented nature of these events simultaneously compelled organizations to respond and challenged existing plans of action to launch appropriate responses to the unanticipated circumstances. The reports converge around the theme that the event scene was uncontrollable, thereby constraining the potential acts of agents within the scene. Instead of first responders having control over the scene and their actions, the AARs portrayed the scene as placing demands on the organizations involved and thereby causing them to act. Such a rhetorical choice can be a strategy to downplay culpability, shifting blame to a scene that compels action as opposed to being a conscious, free choice of the agent. These reports show a potential motive to downplay the responsibility of the agencies in the sense that the groups were doing the best they could under difficult, unprecedented circumstances and thus should not be admonished
but praised. Additionally, such an emphasis on the scene could also be a strategy to highlight the unique circumstances of the scene to garner attention to the problem and the importance of preparing for future incidents of this nature.

All of the reports mentioned the fatality count and qualified the mass shooting as the largest in U.S. history. For example, the FEMA report (2018) opened by saying that “public safety agencies worked together to mount a collaborative, coordinated response to an incident of mass violence unlike any the nation had ever seen” (p. 50). Other quantities, for example, the number of supplies needed, ambulances dispatched, and the square footage over which the victims were spread out, were used throughout the reports to characterize the shooting as vast in size and scope. The NHA report (Lake, 2018) emphasized that hospitals faced “the sudden unanticipated need to start more than 1,000 IVs on one night” (p. 12).

In addition to the number of victims, the reports often called this event “unpredictable and unprecedented” (Las Vegas Metropolitan Police Department, 2019, p. 11). In particular, the NHA report (Lake, 2018) repeatedly mentioned that victims began arriving at hospitals with little to no warning to those organizations. The report characterized the shooting by saying, “America has never seen an incident of this type or scale. This situation and subsequent response helped to identify areas where additional planning, exercises and assumptions are necessary based on the changing world and social environment in which we now live” (p. 3). As a result, the reports praised organizations by citing the size and scope of the incident to explain that the organizations operated well, given the constraints.

The FEMA report explicitly noted this by explaining that there was not enough tracking as patients were quickly transported to hospitals. FEMA (2018) concluded that “While foregoing patient documentation on scene allows for an expedited transport process, it complicates patient accountability at the hospital and possibly hinders family reunification. Due to the size, scope, and complexity of this incident, it is an acceptable deficiency” (p. 22). Each report treated the scene as creating demands that organizations
responded to as best that they could. These descriptions were used to praise organizational responses as constrained by a period of overwhelming trauma and thus situates deficiencies and difficulties as results of the scene and not the agents’ actions.

**Clash of Professional Fields**

Another point of convergence across the reports was the commitment to preserving the clashes between responding organizations. While this theme evokes disagreements between organizations involved, this shared finding preserves the conflicts as a challenge to the response that is important to keep in mind for future crises. These descriptions emphasized how terministic screens resulted in trained incapacities for communicating, collaborating, and responding effectively to the crisis caused by professional affiliations, norms, and training. In particular, multiple reports mentioned institutional barriers between professions; for example, U.S. patient privacy laws like HIPAA, which constrains what type of information can be released about hospital patients. The LVMPD and FEMA reports noted that this created challenges to victim identification. FEMA (2018) invalidated these concerns by saying that “perceived restrictions for sharing personally identifiable information made completing a deconflicted patient and deceased list very difficult” (p. 40, emphasis added). Conversely, the NHA report (Lake, 2018) explained this lag in identification as a professional necessity, as “the numbers of patients, tempo at which they arrived at area hospitals and acuity levels stayed steady, it was difficult to register everyone. Electronic health record (EHR) systems and registration clerks simply couldn’t keep up. Patients needed immediate surgery” (p. 12).

The reports also identified a lack of collaboration among professions as an area for future improvement. The LVMPD report (2019) said that hospital professionals were not in the shared “command post” during the response, had not been included in previous mass casualty exercises, and that “the inclusion of medical professionals may have facilitated the relatively urgent task of establishing patient identification and tracking” (p. 105). Similarly, the NHA (Lake, 2018) suggested that jargon from other professional
fields created confusion for hospital workers, and instead of using acronyms, “several hospitals felt it would have been better if callers simply explained who the parent organization is that they were working for” (p. 21). The reports all remembered conflict among responding organizations as a challenge throughout the response. In doing so, they converged on an identified problem in terms of collaboration and communication across professional fields that should be both remembered and addressed in the future.

The trained incapacities were caused by materials structures of the scene such as the technology used, but also by professional norms and jargon, which created terministic screens that prevented communication and collaboration. For example, norms of how to express information are not innate, but built through the professional agencies over time to become concretized as organizational norms that are not meant to be violated. In addition to a compelling and difficult scene due to the crisis, the scene of each organization’s norms and expectations also limited agents’ abilities to act. Each group’s terministic screens and trained incapacities resisted casuistic stretching and adjustment and thus halted clear and effective communication between the responding agencies.

Future Orientation

The reports all supported a future orientation: rather than looking back to cast blame for the shooting, the reports tended to focus on future planning and improving crisis responses. Overwhelmingly, the reports addressed failures from 1 October by suggesting more training. Although differences in training led to some of the perceived incompatibilities discussed in the previous section, trainings were still emphasized as a way to create future preparedness. LVMPD (2019) suggested additional training 16 times throughout the report, while FEMA (2018) suggested additional training 12 times. Of these suggested trainings, FEMA proposed training on triaging a bleeding person, training on ordering resources to the scene of an emergency, joint training with medical providers, and additional training for city and county employees. The NHA (Lake, 2018) suggested more documentation of knowledge so that
procedures are not based on “personalities” in future emergencies (p. 63). By this, the report suggested that current knowledge and relationships resided in individuals within the organizations rather than more formal documentation. LVMPD similarly recommended that procedures be formalized to preserve knowledge.

The reports also framed 1 October as part of a changing landscape of threat. The NHA (Lake, 2018) directed attention to this problem as part of the report’s purpose, saying that “This situation and subsequent response helped to identify areas where additional planning, exercises and assumptions are necessary based on the changing world and social environment in which we now live” (p. 3). The LVMPD linked the shooting to additional mass shootings around the world as if to argue that these events are proliferating, and more training and plans are needed to prepare for them. The LVMPD report (2019) found that despite the agency studying previous mass shootings, “policies were not sufficiently robust to handle the magnitude of what happened on 1 October” (p. 103). FEMA (2018) wrote that the incident could “inform future response efforts and protect responders and the communities they serve” (p. 50). The reports framed mass shootings as part of an inevitable future and positioned preparedness and training as necessary solutions.

By emphasizing the scene these reports directed attention away from blaming organizations to instead suggest improvements in responding to future threats. The implications of this choice is to remove culpability from the agencies authoring the reports regarding past incidents, but still position them as future agential heroes, which with future training could be even more equipped to respond within a changing scene.

Points of Divergence

Despite prominent overlaps, the reports diverged on two important themes, which reflected different selections and deflections of how to remember 1 October: (1) differences in negotiating old and new principles and (2) differences in responses to professional boundaries around trauma.
Negotiating Old and New Principles

First, the reports treated improvisation, adaptation, and changes to procedure differently, marking whether casuistic stretching of existing protocols was needed or whether to resist casuistic stretching by reifying old principles. Each report included remembrances of quick thinking that seemed necessary to the response, especially given the scope of help needed and the pace of unfolding events. However, the professional frames of the reports led to different conclusions. In particular, FEMA, representing the U.S. federal government perspective on 1 October, acknowledged improvisation but encouraged future preparedness to continue to follow rules and procedures, while the local reports treated improvisation as necessary and even generative of new knowledge. Such rhetorical differences may be expected due to FEMA’s scope being over national boundaries and thus needing to emphasize generalizability across a variety of different scenes. Local reports, however, are not beholden to such audience restrictions and may be more willing to celebrate the acts of groups operating within the unique circumstances of the Vegas scene.

The FEMA report (2018) included multiple findings that suggested that organizations failed to follow the rules. The report opened by saying that “when agencies followed pre-established plans and procedures, they improved communication and strengthened the response. Where plans were not integrated or not widely known and understood by responders across all responding agencies, difficulties arose” (p. 1). Here, the report tied plans and procedures to interorganizational success, as these guides facilitate shared actions. An illustrative example of this is that the FEMA report condemned ambulances for transporting patients without first checking in at a staging area. The FEMA report (2018) acknowledged that “timely patient care is critical for any incident, but some fire department units that assisted patients did not communicate to command or staging that they were occupied and unable to report to the staging area to receive an assignment” (p. 21). The FEMA report (2018) also criticized the improvisation of off-duty first responders, and noted that “as ambulances arrived, responders, concert-goers, and well-intentioned bystanders removed medical supplies from them to
support on-scene response; however, the ambulances in turn were being rendered less effective without these supplies” (p. 22). The terministic screen of FEMA, which emphasized the importance of existing protocols, deflected improvisation as a useful and prudent measure to incorporate into crisis management. These statements also communicate a resistance to casuistic stretching, whereby even the acknowledged difficulties of the scene should not deter agents from following standard procedures.

Conversely, the NHA report praised the improvisation of first responders and civilians. As the NHA (Lake, 2018) said, “human factors and ingenuity were observed from everyone involved. Many concert goers put themselves at great personal risk to save people they’d never met” (p. 37). The LVMPD report (2019) focused less on improvisation by the community and instead discussed the improvisation of on-duty police officers. For example, the LVMPD report (2019) praised a police officer who saw that the position of staging manager was unfilled and “assigned himself to the position where he remained until he was relieved” (p. 38). The reports ultimately suggested different actions (i.e., following previous trainings versus improvising) and treated interference with and adjustments to proper procedures differently in response.

The suggestions for organizational learning that followed from these findings also diverged. The FEMA report (2018) recommended further (FEMA) trainings to help personnel remember procedures during stressful situations to deter improvisation; it reinforced that additional trainings were needed because “protocol is especially critical when managing incidents of this geographic size, magnitude, and complexity” (p. 20). Conversely, NHA and LVMPD findings encouraged the codification of successful improvisations from the incident so that they could be remembered in future emergencies. The NHA (Lake, 2018) reported that “it was the hospitals’ ability to move the patient quickly through triage and the emergency department to surgery that was the main determinant of appropriate care. Steps should be taken to memorialize these processes and standard operating protocols created” (p. 34). LVMPD (2019) suggested that trainings should occur at the local level to bring multiple organizations together and encouraged the preservation of knowledge about how to perform various roles.
The NHA and LVMPD reports thus engaged in casuistic stretching whereby the old principles were modified to include the successful improvisations caused by the 1 October crisis. Instead of shattering the old protocols, as a group like FEMA might fear if old principles were to be modified, the NHA and LVMPD welcomed what they viewed as useful insights gleaned from the incident. All of the reports suggested memorializing knowledge, but this knowledge differed dramatically depending on the professional point of view, with the federal perspective suggesting a return to previous protocols and local organizations seeking to commemorate local improvisations.

**Professional Boundaries around Trauma**

The reports also differed in the treatment and boundaries around trauma, with some organizations acknowledging shared trauma among organizational members and other reports treating trauma as external to the organization and therefore outside of the scope of AARs. Here, terministic screens and the pentad help explain how professional orientations change the relevant scope of the crisis and the extent to which trauma is included as a relevant factor in crisis responses.

The NHA report (Lake, 2018) most clearly acknowledged emotional trauma to doctors and nurses caused by treating wounded patients. This included drawing from direct quotations of organizational members; for example, “‘I felt like I needed to be an emotional superhero for these people,’ and, ‘It was difficult not to break down yourself and cry with each story being sadder or more heart-wrenching than the next’” (p. 11). The NHA report (Lake, 2018) used words like “emotion” and “trauma” throughout; for example, “Many responders and staff members still suffer from the events of that day. The emotional and psychological wounds, horrific memories and difficult humanitarian interactions with the injured and their families may never fully dissipate” (p. 3). The NHA treated trauma as internal to hospitals, thereby including trauma under the scope of the scene of NHA’s (Lake, 2018) crisis response, especially by noting that hospitals felt their security was threatened. This was because “hospitals were being told that additional gunmen were seen on their campuses, and the rumors
of multiple attacks made hospitals feel as though they could be the next soft target” (p. 16). Trauma breached the organizational boundaries of hospitals, and, as a result, the NHA reported that hospitals developed strategies to defend those boundaries. The NHA report overtly named and remembered trauma as internal to the organization.

Conversely, the FEMA (2018) and LVMPD (2019) reports were more likely to acknowledge trauma to “victims” or civilians that first responders assisted. The reports used more formal and less emotional terms, like “debriefing” and “employee wellbeing,” to discuss the impact of the shooting on organizational members. The terministic screens of FEMA and LVMPD included more professional and formal language that consequently eschewed emotional engagement. For example, LVMPD (2019) reported that “leadership also needed to consider the health and wellbeing of LVMPD personnel—during and after the incident” (p. 88). This report also noted that many police officers returned to the debriefing site “exhausted” (p. 41). While the reports both mention offers of counseling, the LVMPD and FEMA reports referred to the reasons for this counseling as exhaustion and “mental and physical welfare” (FEMA, 2018, p. 48). When mental health was discussed, it was often labeled as “stress,” for example, in FEMA’s (2018) reporting of “stress debriefing” available to first responders (p. 48).

In the FEMA and LVMPD reports, civilians endured trauma, making the scene of trauma external to the organization. Both reports praised the victim assistance center opened after 1 October, and FEMA (2018) explained that it provided “long-term support to victims, many of whom were not injured but experienced mental health problems and associated issues, including lost wages due to post-traumatic stress disorder” (p. 47). This was, strikingly, the only mention of post-traumatic stress in the FEMA report. LVMPD (2019) similarly only mentioned post-traumatic stress once as something supervisors should look out for in case it emerged in any employees (p. 119). Thus, trauma was treated as hypothetical or only linked to civilian “victims” instead of an expected part of organizational impacts, thereby deflecting the potential to recognize trauma and value trauma responses broadly and within organizations.
The reports drew different boundaries around remembering trauma, thereby adjusting the scope of the scene and the ability of agents to suffer trauma within law and emergency management organizations and delegating trauma as part of the scene to be addressed (FEMA, 2018; LVMPD, 2019) or remembering trauma as internal to healthcare organizations, their work, and members (Lake, 2018). Ironically, even though all of the organizations deployed a scene-act ratio in acknowledging the restrictions the scene placed on their ability to act in their professional capacities, only the NHA acknowledged how the controlling, unprecedented power of the scene might also have influenced agents’ emotional and personal well-being beyond their agent status as first responders.

Discussion

We studied multiple AARs generated from the same crisis to understand how reports remember and forget organizational trauma. This research contributes to the understanding of risk and crisis communication in several ways: (1) by demonstrating that organizational documentation can work to commemorate disorder versus simply to restore order after a crisis, (2) by introducing new rhetorical analysis tools for understanding how crises are interpreted, and (3) by highlighting the importance of studying multiorganizational crisis response.

First, this study adds to scholarly understanding of crisis communication by analyzing how after-action reports and written texts more broadly contribute to rhetorics of renewal. Research on rhetorics of renewal has focused on leadership communication (Ulmer et al., 2007); however, organizational texts are also important rhetorical artifacts that serve a function in the crisis recovery process. Ulmer et al. suggested that renewal rhetoric is characterized by provisional communication, prospective outlook, optimism, and effective leadership. Here, we find that after-action reports can also engage in rhetoric of renewal, in particular by commemorating disorder. Previous studies of AARs have examined how these reports restore understanding of the world and trust in the organizations involved (Boudes & Laroche, 2009). An additional function of
AARs is to cope with highly stressful events. Therefore, AARs do not just function logically to restore order; they can also function to increase emotional understanding of these events. AARs need not produce certainty about a crisis, and, as demonstrated here, they can also be open and provisional in their retelling of events (Ulmer et al., 2007). The reports here included multiple aspects that went beyond restoring legitimacy and instead preserved the feelings of chaos, doubt, and confusion throughout the response. This analysis adds to our understanding of the rhetoric of renewal by noting that organizational texts may also serve a purpose in renewal; however, this process does not only include looking forward, but also looking back in order to commemorate the trauma and struggle of responding to the crisis.

Second, we introduce rhetorical tools to understand crisis rhetoric in new ways. Terministic screens allow us to examine how the same crisis can be interpreted in multiple ways as organizations involved select and deflect parts of that crisis (Burke, 1966). The use of pentadic analysis demonstrates the importance of considering a scene’s circumference in crisis communication (Burke, 1945). Studying multiple reports demonstrated that some organizations preserved organizational trauma as part of the experience while others downplayed trauma or treated it as external to the organization. A circumference broad enough to include the ongoing mental health impacts on responders and victims as part of the crisis might encourage deliberative actions with mental health within its scope. Conversely, narrowing the circumference eliminates such considerations by making them irrelevant (Burke, 1945).

Similarly, a circumference that includes employees and responders within the category of “victim” would direct attention to services and support for their mental well-being in addition to physical impacts. For practitioners, this introduction of new rhetorical tools demonstrates the policy effects of AAR choices. In the case of 1 October, an LVMPD fund for victims continued to downplay the mental effects of the shooting, with funds distributed based solely on the cost of treating bodily injuries (Survivor, 2018). Here, the report that downplayed trauma also corresponded with later organizational actions that ignored the importance of promoting mental, not just physical, recovery from that trauma.
Pentadic analysis allows risk and crisis scholars to consider how various elements of the crisis are highlighted and downplayed to create reasonable explanations during crisis response. AARs are just one aspect of crisis response strategies. They appear to serve several purposes identified in broader crisis response research, including crisis framing, self-enhancement for the organization and renewal (Diers & Donohue, 2013). Pentadic analysis in particular allows scholars to look at how these crisis response strategies are accomplished and which elements of the crisis play a role. The scene, in particular, appears to be an important rhetorical element that has already been identified as useful in the reputation management strategy of “defeasibility,” or describing the event as unprecedented (Benoit & Henson, 2009). Burke’s concepts allow crisis communication scholars to examine further questions about how the locus, or responsibility, for the crisis is constructed in texts (Sellnow & Ulmer, 2004). Ultimately, pentadic analysis adds to our understanding of crisis response strategies by providing a tool for understanding how these strategies are accomplished.

Third, this study adds to the understanding of AARs by examining multiple reports about the same event. As emergencies transcend single organizational boundaries, multiple report-authoring organizations can be involved in one crisis response. This study demonstrates that AARs can be a site of professional clash and that examining multiple reports from the same event creates opportunities to examine how different professional fields interpret the same events. Using an organizational rhetoric perspective, we find that professional fields function as terministic screens that select and deflect different aspects of the same crisis in their memory processes. This study adds understanding of how professional frames influence sensemaking (Dwyer et al., 2021). For example, the professional scope of FEMA constrained its ability to praise improvisation over federal standards and procedures. Conversely, the terministic screen of a more localized organization such as the LVMPD did not constrain the ability to acknowledge the need for on-the-ground adjustments to federal standards. Studying multiple reports of the same crisis generates insight into how reports
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interrelate (Boudes & Laroche, 2009). In AARs, organizations not only comment on the tragedy but also their organizational operations and how they intersect with other organizations. Part of the constraints of the particular scene of 1 October were the number of organizations involved.

Conclusion

AARs are sites of organizational communication that include rhetorical choices about how to remember crises. This study adds the consideration of new rhetorical tools that demonstrate that AARs can commemorate disorder differently in their attempts to create organizational renewal. We find that multiple organizational frames can clash in their post-crisis sensemaking efforts and that different professional fields function as terministic screens that select and deflect organizational trauma based on their own boundaries and norms. This finding has serious implications for organizational post-crisis learning, as reports that commemorated trauma also tended to praise improvisation and flexibility during crisis response. In other words, these reports were more likely to adopt a new frame that accounted for changes in understanding caused by shared trauma. This study extends crisis communication by highlighting that reports function as part of the rhetoric of renewal by commemorating the disorder of organizational trauma and looking toward future renewal. As cascading, increasing, and prolonged crises impact our world, multiple organizations will be called to respond and create resilience. AARs are an important site of this resilience work that demonstrates both rhetorical opportunities and challenges for organizations working together to respond to crises.

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References


Charmaz, K. (2014). *Constructing grounded theory*. SAGE.


