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## **To Tweet or not to Tweet? The Impact of Expressing Sympathy Through Twitter in Crisis Management**

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## Abstract

The purpose of this study is to investigate the effects of social media and emotional support on consumers' crisis appraisal. This study uses 2 (medium: Twitter vs. news release)  $\times$  2 (emotional support: yes vs. no) factorial experiment. Two hundred and forty-five Twitter users recruited from the Amazon Mechanical Turk system participated in this study. The result demonstrates significant interaction between emotional support and a media channel; messages with sympathy delivered through Twitter help to lower perceived crisis responsibility and retain positive organizational reputation, in comparison with messages conveyed in news releases. Using Twitter significantly lessens people's sadness and anger. Respondents reading Twitter pages attribute less crisis responsibility to the company, and withhold higher perceptions on organizational reputation and purchase intention. Moreover, expressing sympathy significantly alleviates sadness and anger; respondents reading messages with emotional support report lower scores on crisis responsibility. This study is one of the few empirically-based studies in public relations research using an experiment to extrapolate the effects of social media use and emotional support on consumers' crisis appraisal. This investigation reinforces the need to consider social media not just at the individual level, but also as a form of communication that can have broader consequences at the organizational level.

Keywords: Public relations, Situational Crisis Communication Theory, Twitter, Crisis Management, Emotion

## **To Tweet or not to Tweet?**

### **The impact of expressing sympathy through Twitter in crisis management**

In the literature of public relations and other related areas, issues involving crisis communication claim widespread scholarly attention and are aligned with practical concerns developing over the past two decades. Scholars have produced much research on the determinants and consequences of crisis communication (Coombs, 2007). Aiming to identify appropriate crisis response strategies to sustain organizational reputation, Coomb's (2007) Situational Crisis Communication Theory (SCCT) presents a theoretical framework to understand the connection between crisis situations and response strategies. According to SCCT, PR managers are advised to adopt more accommodative crisis response strategies (e.g., apology and compensation) when the organization is believed to bear a higher level of crisis responsibility. The organization's performance history (e.g., brand awareness, past crisis management), also affects organizational management outcomes (Coombs & Holladay, 2009). Adding a new dimension to crisis communication research and moving beyond post-hoc analyses and case studies (Sisco, 2012), SCCT has inspired an increasing amount of empirical research in analyzing crisis situations and crafting effective crisis response strategies.

## **Literature Review**

### *Using Twitter in Crisis Communication*

Social media in general are seen as more dialogic, interactive and faster instruments for relationship building than traditional media (Seltzer & Mitrook, 2007). One of the fastest growing social networks is Twitter, a micro-blogging platform with short messages that enable social interaction, connection and promotion. Twitter's benefits include simplicity, more frequent postings, and linking to more detailed information on other sites (Greer & Ferguson, 2011). Individuals are not the only ones tweeting; many companies started using Twitter shortly after it was established in 2006 (Fischer & Reuber, 2011). Strategic communicators recognize its ability to reach a large number of stakeholders,

making Twitter the most used social media application in public relations, advertising, and marketing (Lovejoy, Watersb, & Saxtona, 2012). Accordingly, under consideration is a socially distributed model of public relations, in which individuals initiate and fulfill public relations responsibilities through online interactivity (Smith, 2010). This research paper focuses on Twitter due to its emphasis on public interaction.

Organizational research specific to Twitter is very scarce. It has not been included in a recent meta-analysis on online PR research, which is reported to have lagged behind by primarily concentrating on the usage of new media rather than the effects (Ye & Ki, 2012). Some evidence shows that organizations are not utilizing this medium to its fullest potential. One-way communication seems to be the more pronounced form of messaging strategy used by various organizations on Twitter (Rybako & Seltzer, 2010; Linvill, McGeeb, & Hicksa, 2012; Kim & Liu, 2012). On the other hand, social media, like Twitter, have opened up new possibilities for organizations to connect with stakeholders by allowing them to receive real-time feedback about organizational announcements (Gilpin, 2010). Real-time interactivity is a driving force of Twitter use, which leads to the cultivation of relational trust (Knight & Carpenter, 2012). Interactivity is dependent on technological facilitation (functional interactivity) and interdependent messaging (contingent interactivity). Users may be more satisfied that organizations are soliciting feedback and attempting to get them involved in both online and offline activities. Recent research has indicated that publics increasingly use social networking sites instead of blogs and the growth of Twitter as an effective crisis management tool (Jin, Liu, & Austin, 2014). Twitter amplifies the rapidity of the information exchange by limiting the size of the messages to easily digestible information pieces. Organizations, however, are only limited in how they use Twitter by the imaginations of their communicators. Savvy organizations can bypass the 140-character restrictions by demonstrating responsiveness through public messages; sharing information with retweets; building information communities by using hashtags; and presenting detailed information with hyperlinks. Twitter has been found to be especially effective for communicating with publics actively involved in a crisis (Briones, Kuch, Liu, & Jin, 2011; Smith, 2010). Schultz, Ultz, and Goritz (2011) argued that the medium mattered

more than the message; they found crisis communication via Twitter led to less negative crisis reactions compared to blogs and newspaper articles (Schultz *et al.*, 2011).

According to Situational Crisis Communication Theory, crisis managers should utilize more accommodative crisis response strategies when an increasing amount of crisis responsibility has been attributed to the organization (Coombs, 2007). Crisis response strategies can be viewed as being composed of two parts: the strategic message itself and the medium through which the message is transmitted. It is thus reasoned in the present study that by using a more interactive medium, such as Twitter, that crisis response strategy on its entirety might be perceived as more accommodative. Hence, the following hypothesis is put forward:

*H1.* When a crisis is unfolding, an organization using Twitter will receive more positive after-crisis perceptions and reactions (a: less negative emotions; b: less crisis responsibility; c: more positive attitude; and d: higher purchase intention) among the consumers compared to an organization using traditional news releases.

### *Emotional Support in Crisis Communication*

Individuals' perception of a crisis was not strictly a function of the crisis itself. It is worth noting that people experiencing different emotions in the crisis assess the situation differently (Jin, 2009). Emotion refers to "the organized cognitive-motivational-relational configurations whose status changes with changes in the person-environment relationship as this is perceived and evaluated (appraisal)" (Lazarus, 1991, p. 38). In the context of uncontrollable events such as crises, support components that diminish the severity of aversive emotions are beneficial, and can be conceptualized as emotional support. Emotional support refers to what the organization says or does to make consumers feel they have sympathy or empathy. Such support frequently takes the form of non-tangible types of assistance. Informational support refers to the help offered through the provision of actual information to people in need of assistance. Instrumental support refers to tangible help that the organization may provide such as doing a task for consumers (Knight & Carpenter, 2012). Emerging research finds that publics seek out

social media because they uniquely provide emotional support during crises through enabling publics to virtually band together, share information, and have a sense of community (Stephens & Malone, 2009). In the latest Situational Crisis Communication Theory model, emotion was only posited to influence behavioral intentions but not reputation (Coombs, 2007). However, Choi and Lin (2009) proposed a revised SCCT model, adding a direct path from emotion to organizational reputation, indicating that negative emotion (i.e., anger) evoked by a crisis can not only influence people's purchase intention, but also their perception of an organization's reputation. The emotional support publics receive can directly affect their perception of crisis response strategies (Coombs & Holladay, 2006) as publics deal with their feelings (Jin, 2010). Research finds an association between high crisis responsibility and negative public emotions as well as crisis engagement and publics' emotions (Jin, 2009; 2010). It was strongly advocated that public relations should play the role as coping facilitators and utilize both sensible and reasonable strategies (Jin, 2009). Jin, Pang and Cameron (2010) further argued that a more systematic emotion-based perspective should be integrated into the existent situation-based and audience-centered approach so that organizations can streamline their strategies to address stakeholders' specific needs.

Therefore, one particularly promising area where organizations can potentially embrace their relationship during crisis and better preserve organizational reputation is through fostering emotional support (Liu & Kim, 2011). Possible ways of achieving emotional support include informing people that the organization has realized how they feel and is trying to alleviate their stress and other negative emotions. Anger, fear, surprise, worry, contempt and relief were significantly associated with the perception of the organization's crisis responsibility (Choi & Lin, 2009). Compensation, apology, and sympathy were viewed as an indication of accepting responsibility; showing concern for victims and expressing sympathy, in particular, could be regarded as an accommodative response (Coombs, 2006). Based on the above discussion, the next hypothesis is presented:

*H2.* When a crisis is unfolding, an organization using emotional support in their crisis response messages will receive more positive after-crisis perceptions and reactions (a: less negative emotions; b:

less crisis responsibility; c: more positive attitude; and d: higher purchase intention) among the public compared to an organization not expressing such support.

Emotional support, as part of crisis response strategies, applies to both traditional media and social media. When exploring how government incorporated emotions into their respective traditional and social media crisis responses, results showed that an emotional feature was integrated more often in traditional media than in social media (Liu & Kim, 2011). One possible explanation might be the lack of strategies to guide social media responses; messages with emotional support are therefore conveyed via traditional media, such as news releases. One drawback of this approach, however, is that it relies on journalists to frame and present the events to the public, a process which PR practitioners have little control (Liu & Kim, 2011). In fact, recent research showed that people turned to social media in times of crisis because they uniquely provided emotional support (Choi & Lin, 2009). Therefore, this study will explore whether the emotional support delivered through Twitter is more effective in mitigating negative emotional responses and contributing to more favorable organizational perceptions than a news release. There is insufficient empirical evidence to allow for a directional hypothesis regarding the combined impact of the two factors. Two main effects-only hypotheses were raised based on the premises of SCCT. Nonetheless, an interaction between medium and emotional support might shed more light on the effectiveness of crisis management in a different context. Hence, the following research question is posed:

*R1.* Will the two factors (i.e., medium and emotional support) interact to affect after-crisis perceptions and reactions? And if so, what is the direction of the interaction?

## **Methodology**

### *Experimental Design and Participants*

Coombs and Holliday (2009) noted that research about crisis communication has evolved from case studies to more refined experimental research. The study employed a 2 (medium: Twitter vs. news release)  $\times$  2 (emotional support: Yes vs. No) between-subject experimental design. A total number of 409

participants in the United States took part in the online experiment and 388 participants completed it. The participants were recruited by using the Amazon Mechanical Turk, an online crowd-sourcing, micro-working system. An increasing amount of social science studies were made possible on Amazon Mechanical Turk and a growing number of literatures have confirmed both its internal and external validity (Horton, Rand, & Zeckhauser, 2011; Paolacci, Chandler, & Ipeirrotis, 2010; Buhrmester, Kwang, & Gosling, 2011). The possibilities of multiple responses were substantially overcome because each Mturk had a unique worker ID. Participants of the study had an equal chance of being directed to any one of the four experimental conditions. In addition, internal validity can be strengthened on MTurk because participants completed tasks without interacting with experimenters or other participants, possibly not even realizing that they were in an experiment (Paolacci *et al.*, 2010). For external validity, Mturk participants were slightly more demographically diverse than standard Internet samples and were significantly more diverse than American college samples (Buhrmester *et al.*, 2011; Paolacci *et al.*, 2010). They had the characteristics of being heterogeneous, yet not experiment-savvy (Horton *et al.*, 2011). Moreover, the quality of data provided by MTurk met or exceeded the psychometric standards associated with published research (Buhrmester *et al.*, 2011).

The population of interest for this study is American consumers who have experience using a coffee-maker and Twitter. Therefore, two hundred and forty-five participants who had registered on Twitter and used coffeemakers before were included in further data analyses. The final sample was 59% male, 68% college educated, 40% Caucasian, 29% African American, 15% Hispanic, and 9% Asian. The mean age was 23.6 years ( $SD = 1.26$ ), with a range from 18 to 53. According to the latest Pew Research survey (2013), there are roughly equivalent percentages of female and male Twitter users in the United States, with 45% Caucasian, 27% Black, and 12% Hispanic. Twitter's user base is getting younger, with more than half between 18 to 44 years of age, 65% are college educated. The demographic characteristics of participants in this study are highly similar with the national profile of Twitter users in the U.S., which enhances the external validity of this experiment.

#### *Experimental Stimuli*

After giving their consent for participation and filling out demographic information, each participant was randomly directed to one of the four conditions in which they read a scenario about how a company handled a coffeemaker explosion crisis facing an American coffee maker company “Brewmaster,” a fictional case company specifically designed for this study to avoid potential confounding effects of pre-existing knowledge of the organization and exposure to other news stories outside the experiment (Coombs & Holladay, 2009; Claeys, Cauberghe, & Vyncke, 2010). Similar procedures have been used in a couple of recent studies (e.g., Schultz et al., 2011; Jin *et al.*, 2014). The three-stage approach including pre-crisis, crisis, and post-crisis is most commonly used to separate the events surrounding a crisis (Combs, 2007). The crisis phase includes the trigger event, during which organizations try to limit the damage. This study focuses on the initial crisis stage, which is often characterized as unexpected, sudden, and lacking meaningful information. There are often questions about evidence, intentions and responsibility ascribed to crisis parties; the facts are changing rapidly (Kline, Simunich, & Weber, 2009). It is unknown where the responsibility mainly resides, the organization facing the crisis is not well known, with limited crisis history available for reference. For a media channel, participants were either directed to a Word document containing the news release or the company’s Twitter webpage via a link. The crisis was about one of Brewmaster’s coffeemakers reportedly exploded in Kansas City on August 18, 2012. The customer was operating the coffeemaker for breakfast in the early morning. The cause of the technical malfunction and resulting explosion remains under investigation; the customer remains under medical care at a local medical center. Brewmaster has deployed a crisis response team to assist local investigators in identifying the cause of this incident.

The company’s top priority is to fulfill the highest safety standards for its customers. News delivered via mass media has been frequently used to study crisis management, and most organizations that experience a crisis are able to upload a news release within 24 hours of the initial media coverage (Jin, 2010). As Coombs and Holladay (2009) argued, non-victims are most likely to experience a crisis through the news media. Unlike news articles written by journalists where information could get muddled during the news selection process, both news releases and Twitter represent direct responses from the official

channels of the organization. For internal validity purposes, the company's messaging remained almost identical between the two media channels. On Twitter, the messages were presented through the dialogue between several fictitious consumers and the company, reflecting the content shown in the news release. It is worth noting that on the timeline of the Twitter page, tweets are displayed in a descending order, which means the latest tweets are shown at the top and the earliest on the bottom. Therefore, to fully understand the company's crisis responses in chronological order, one should read from the bottom to the top, an uncommon reading habit. Accordingly, participants were instructed in details about the special sequence of the messages.

Adapted from Coombs and Holladay (2006), the emotional support variable was manipulated by inserting an extended statement from the company's CEO: "The customer who was injured has our deepest sympathy," said the CEO. "As the investigation is still at its infant stage and little details regarding this explosion are available, we understand that our customers are feeling angry and anxious right now. This is common when people receive little information at hand. We hope that you can remain calm and wait for more details from the ongoing investigation," added the CEO.

#### *Control and Dependent Measures*

*Product involvement.* In advertising literature, a consumer's product involvement has been shown to determine the manner in which he or she processes and responds to advertising messages (Chang, 2004). Whether and how this factor functions in a crisis management scenario has been underexplored. Therefore, we measured a control variable — participants' involvement with this particular product (a coffeemaker). The scale was composed of the following three items (Veer & Pervan, 2008): how intensive participants' search for product information is before purchase; how likely participants are to compare brands before purchase; and how closely participants examine product attributes before purchase (Cronbach's  $\alpha = .93$ ). Items were compiled into a mean index ( $M = 3.23$ ,  $SD = 1.01$ ).

*Emotional responses.* After reading the company's crisis response, participants' emotions were measured using items selected from Izzard's (1993) Differential Emotions Scale. Participants were asked

to rate 1 to 5 (1 = *strongly disagree* and 5 = *strongly agree*) on how they felt after reading about this crisis. Each of the three discrete emotions was measured by three discrete emotions: sadness (sad, downhearted, and discouraged; Cronbach's  $\alpha = .93$ ,  $M = 2.73$ ,  $SD = 1.11$ ), anger (enraged, angry, and mad; Cronbach's  $\alpha = .95$ ,  $M = 2.55$ ,  $SD = 1.12$ ), and fear (scared, fearful, and afraid; Cronbach's  $\alpha = .94$ ;  $M = 2.34$ ,  $SD = 1.14$ ).

*Perceived crisis responsibility.* The organization's crisis responsibility was measured by five items adapted from McAuley, Duncan, and Russell's (1992) Causal Attribution Scale. Participants used a 5-point Likert scale on statements such as "The crisis is the fault of the company" and "External sources, other than the company, caused the crisis." Items were compiled into a mean index (Cronbach's  $\alpha = .82$ ).

*Organizational reputation.* The company's organizational reputation was measured using items from Fombrun, Cardberg, and Sever's (2000) Reputation Quotient Scale. Participants used a 5-point Likert scale on statements such as "The company is skilled in what they do," "The company makes trustful claims," "The company has a great amount of experience," "The company has great expertise," and "I trust this company." Items were compiled into a mean index (Cronbach's  $\alpha = .89$ ).

*Purchase intention.* Participants' purchase intentions were measured using the scale adopted from Meyers-Levy and Maheswaran's (2004) study. Participants rated 1 to 5 on the following questions (1 = *definitely no* and 5 = *definitely yes*): "Would you like to try this Premium Brew," "Would you buy this Premium Brew if you happened to see it in a store," "Would you actively seek out this Premium Brew," and "Would you like to try other coffeemakers from this company." Items were compiled into a mean index (Cronbach's  $\alpha = .88$ ).

## **Results**

### *Induction check*

A series of chi-square tests and two-way analyses of variance were conducted to check the success of random assignment. No significant demographic difference was found among the experimental

conditions. To ensure that the messages were received as intended, an induction check was performed. Besides the different set-up between the news releases and Twitter pages, we also asked participants to rate the level of interactivity of these two channels on a 5-point item “how interactive is the communicative process between the company and its consumers?” (1 = *Not at all* and 5 = *very interactive*). The results indicated that participants exposed to Twitter pages viewed this medium as much more interactive ( $M = 3.11, SD = 1.02$ ) than those who read a news release ( $M = 2.64, SD = .98$ ),  $t(243) = 3.64, p < .01$ . To check if there was a significant difference in perception of emotional support between participants exposed to emotional support messages versus those who were not, participants were asked to indicate the degree to which the company provided emotional support on a 5-point item (1 = *none*, 5 = *plenty*). A significant difference was noted:  $t(243) = 2.74, p < .01$ . Messages containing emotional support delivered the intended effect ( $M = 2.89, SD = .99$ ) more so compared to their counterparts ( $M = 2.51, SD = 1.17$ ). Hence, both manipulations were deemed satisfactory.

#### *Hypothesis testing*

Three negative emotional responses were significantly associated (sadness and anger,  $r = .63, p < .01$ ; anger and fright,  $r = .45, p < .01$ ; fright and sadness:  $r = .41, p < .01$ ). Perceived company responsibility, reputation and purchase intention exhibited strong correlations between each pair. There was a negative relationship between crisis responsibility and reputation,  $r = -.39, p < .01$ ; and a negative association between crisis responsibility and purchase intention,  $r = -.38, p < .01$ . Purchase intention was also positively related to organizational reputation,  $r = .56, p < .01$ . There were partial and moderate correlations between emotional responses and the three dependent measures. Sadness was correlated with perceived responsibility,  $r = .14, p < .05$ . Anger was positively correlated with perceived responsibility,  $r = .25, p < .01$ ; and negatively associated with reputation,  $r = -.26, p < .01$ . Finally, fright was positively correlated with perceived responsibility,  $r = .19, p < .01$ ; and negatively associated with reputation,  $r = -.13, p < .05$ . None of the three emotions was significantly associated with purchase intention. Table 1 summarizes the bivariate correlations among dependent variables.

Table 1: Zero-order Correlations among Dependent Variables

Sadness	1.00					
Anger	.63**	1.00				
Fright	.41**	.45**	1.00			
Crisis responsibility	.14*	.25**	.19**	1.00		
Reputation	-.12	-.26**	-.13*	-.39**	1.00	
Purchase intention	-.09	-.04	-.09	-.38**	.56**	1.00

Note: \*\* $p < .01$ , \* $p < .05$

Sadness, anger, and fright were highly correlated ( $p < .01$  for each pair). We conducted a multivariate analysis of covariance (MANCOVA) with univariate follow-up tests of simple effects. Medium and emotional support were entered as fixed factors and product involvement included as a control variable. Box's M-statistic was 22.65 ( $p = .23$ ), suggesting that the observed covariance matrices of the dependent variables were equal across conditions. Multivariate results showed that the two-way interaction between medium and emotional support was not significant. A significant main effect of emotional support emerged (Wilks'  $\lambda = 0.96$ ,  $F(3, 238) = 3.23$ ,  $p < .05$ , partial  $\eta^2 = .04$ ). The main effect of medium was also significant (Wilks'  $\lambda = 0.97$ ,  $F(3, 238) = 3.27$ ,  $p < .05$ , partial  $\eta^2 = 0.04$ ). Further examinations of univariate results and mean comparisons were conducted.

Univariate results indicated that compared to news releases, using Twitter significantly dampened respondents' sad feelings,  $F(1, 240) = 4.41$ ,  $p < .05$ , partial  $\eta^2 = 0.04$ . Participants who were exposed to Twitter pages reported less sadness ( $M = 2.89$ ,  $SD = 1.15$ ) compared to those who were exposed to the news releases ( $M = 2.59$ ,  $SD = 0.89$ ). Using Twitter also significantly mitigated respondents' anger,  $F(1, 240) = 5.24$ ,  $p < .05$ , partial  $\eta^2 = 0.03$ . Those who read Twitter content showed less anger ( $M = 2.70$ ,  $SD = 1.13$ ) compared to those who read news releases ( $M = 2.35$ ,  $SD = 0.89$ ). There was no main effect of medium on perceived fright. Secondly, univariate results indicated that expressing sympathy and showing emotional support in the crisis responses significantly alleviated sad feelings,  $F(1, 240) = 8.51$ ,  $p < .01$ ,

partial  $\eta^2 = 0.04$ . Participants who were exposed to messages equipped with emotional support reported less sadness ( $M = 2.53, SD = 1.05$ ) compared to those who were exposed to content without such support ( $M = 2.95, SD = 0.99$ ). By the same token, those who read messages with sympathy showed less anger ( $M = 2.33, SD = 1.02$ ) compared to those who read content without expressions of compassion ( $M = 2.69, SD = 0.89$ ),  $F(1, 240) = 6.38, p < .05$ , partial  $\eta^2 = 0.04$ . There was no main effect of emotional support on perceived fright. The covariate did not reach significance on either the multivariate or univariate test.

Perceived company responsibility, organizational reputation, and purchase intention were highly correlated ( $p < .01$  for each pair). We conducted another multivariate analysis of covariance (MANCOVA) using medium and emotional support as fixed factors and product involvement as a control variable. Box's M-statistic was 21.42 ( $p = .89$ ), suggesting that the observed covariance matrices of the dependent variables were equal across conditions. Multivariate results showed that the two-way interaction between medium and emotional support was significant, Wilks'  $\lambda = 0.98, F(3, 238) = 3.23, p < .05$ , partial  $\eta^2 = 0.04$ . A significant main effect of medium emerged, Wilks'  $\lambda = 0.88, F(3, 238) = 7.85, p < .001$ , partial  $\eta^2 = 0.12$ . The main effect of emotion was not significant. Further examinations of univariate results and mean comparisons were conducted.

Univariate analyses indicated significant medium  $\times$  emotional support interactions on company's crisis responsibility,  $F(1, 240) = 12.09, p < .01$ , partial  $\eta^2 = 0.06$ , and organizational reputation,  $F(1, 240) = 7.89, p < .01$ , partial  $\eta^2 = 0.04$ . Specifically, individuals reading Twitter messages reported lower scores on perceived crisis responsibility,  $M: 3.01$  vs.  $3.32, t = 4.75, p < .05$ , and higher scores of organizational reputation,  $M: 3.15$  vs.  $2.80, t = 2.89, p < .05$ , when the messages were equipped with emotional support. However, respondents reading news releases did not report significantly different scores on perceived crisis responsibility and organizational reputation, regardless of whether the content was with or without emotional support. Univariate analyses also revealed significant main effects of medium on the perceived company responsibility,  $F(1, 240) = 19.23, p < .001$ , partial  $\eta^2 = 0.08$ ; organizational reputation,  $F(1, 240) = 19.40, p < .001$ , partial  $\eta^2 = 0.08$ ; and purchase intention,  $F(1, 240) = 17.53, p < .001$ , partial  $\eta^2 = 0.07$ . Participants who were exposed to news releases were more prone to blame the organization for the crisis

( $M = 3.43$ ,  $SD = 0.76$ ) compared to those who were exposed to Twitter pages ( $M = 3.02$ ,  $SD = 0.60$ ). A disparity was also observed for organizational reputation: reading news releases resulted in less favorable reputation assessment ( $M = 2.50$ ,  $SD = 0.83$ ), whereas those who read crisis response from Twitter perceived the organization in a more positive light ( $M = 2.97$ ,  $SD = 0.77$ ). In addition, participants that read Twitter messages were more willing ( $M = 2.26$ ,  $SD = 0.82$ ) to purchase the products from the company than those exposed to news releases ( $M = 1.79$ ,  $SD = 0.84$ ). A significant main effect of emotional support on perceived company responsibility was found,  $F(1, 240) = 6.89$ ,  $p < .05$ , partial  $\eta^2 = 0.04$ . Participants who were exposed to messages with emotional support were less likely to blame the organization for the crisis ( $M = 3.23$ ,  $SD = 0.76$ ) compared to those who read non-emotionally charged materials ( $M = 3.02$ ,  $SD = 0.60$ ). There was no main effect of emotional support on reputation and purchase intention. The covariate did not reach significance on either the multivariate or univariate test.

Table 2: ANCOVA Analyses of Emotional Responses by Medium and Emotional Support

	Sadness		Anger		Fright	
Medium	<i>F</i>	4.41*	<i>F</i>	5.24*	<i>F</i>	1.06
News release		2.89 <sub>a</sub> (1.15)		2.70 <sub>a</sub> (1.13)		2.41 <sub>a</sub> (1.01)
Twitter		2.59 <sub>b</sub> (0.89)		2.35 <sub>b</sub> (0.88)		2.28 <sub>a</sub> (0.99)
Emotional Support	<i>F</i>	8.51**	<i>F</i>	6.38*	<i>F</i>	3.71
No		2.95 <sub>a</sub> (0.99)		2.69 <sub>a</sub> (0.89)		2.48 <sub>a</sub> (0.84)
Yes		2.53 <sub>b</sub> (1.05)		2.33 <sub>b</sub> (1.02)		2.21 <sub>a</sub> (0.88)

Notes: Main effects are reported. Values in parentheses are standard deviations, values in the same column that do not share subscripts differ at \*\* $p < .01$  or \* $p < .05$ .

Table 3: ANCOVA Analyses of Crisis Responsibility, Reputation, and Purchase Intention by Medium and Emotional Support

	Crisis Responsibility		Reputation		Purchase Intention	
Medium	<i>F</i>	19.23**	<i>F</i>	19.40**	<i>F</i>	17.53**
News release		3.43 <sub>a</sub> (0.76)		2.50 <sub>a</sub> (0.83)		1.79 <sub>a</sub> (0.84)
Twitter		3.02 <sub>b</sub> (0.60)		2.97 <sub>b</sub> (0.77)		2.26 <sub>b</sub> (0.82)
Emotional Support	<i>F</i>	6.89*	<i>F</i>	1.54	<i>F</i>	1.29
No		3.23 <sub>a</sub> (0.76)		2.72 <sub>a</sub> (0.93)		1.97 <sub>a</sub> (1.02)
Yes		3.02 <sub>b</sub> (0.60)		2.75 <sub>a</sub> (0.97)		2.08 <sub>a</sub> (1.01)

Notes: Main effects are reported. Values in parentheses are standard deviations, values in the same column that do not share subscripts differ at \*\* $p < .01$  or \* $p < .05$ .

In summary, H1 was largely supported; using Twitter significantly lessened people's sadness and anger (part of H1a). Respondents reading Twitter pages reported lower scores on crisis responsibility (H1b), and higher scores on organizational reputation (H1c) and purchase intention (H1d). No significant impact of using Twitter to decrease respondents' fright was found. H2 was partially supported.

Expressing sympathy and emotional support significantly lessened people's sadness and anger (part of H2a); respondents reading messages with emotional support reported lower scores on crisis responsibility (H2b). No significant impact of emotional support on respondents' fright, assessment of organizational reputation and purchase intention was found. Regarding RQ1, the combination of Twitter as the medium with emotional support messages generated the lowest degree of perceived crisis responsibility and highest scores on organizational reputation, compared to other conditions. Univariate results on the main effects of medium and emotional support were summarized in Table 2 and 3. Two interaction effects between these two factors on crisis responsibility and reputation were illustrated in Figure 1 and 2.

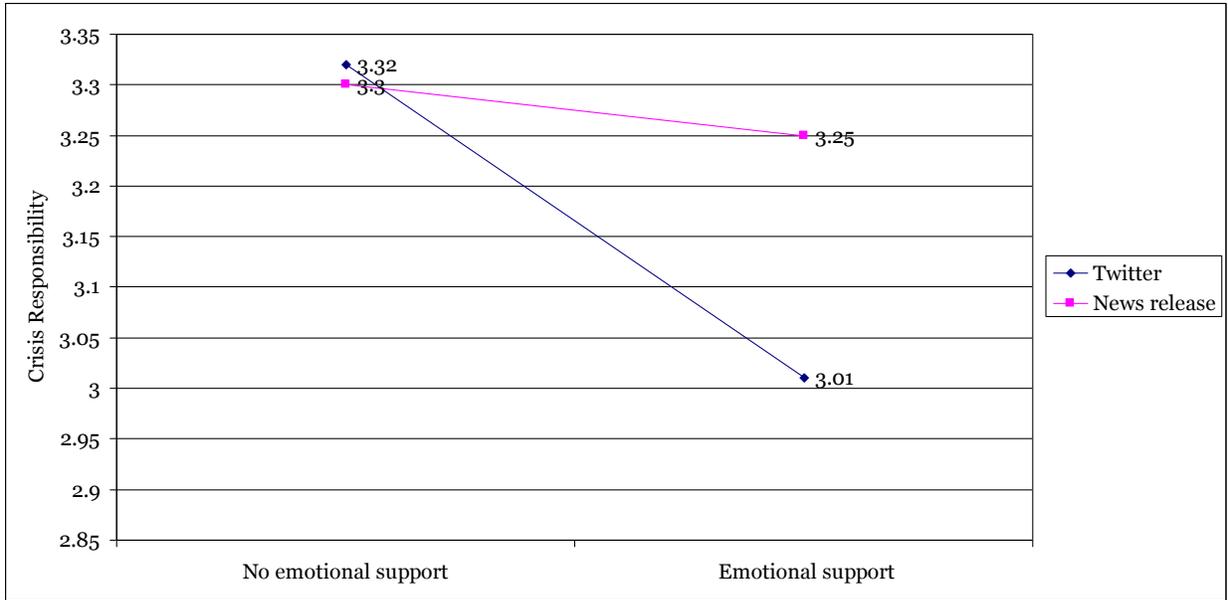


Figure 1. Interaction between Medium and Emotional Support on Crisis Responsibility ( $p < .05$ ).

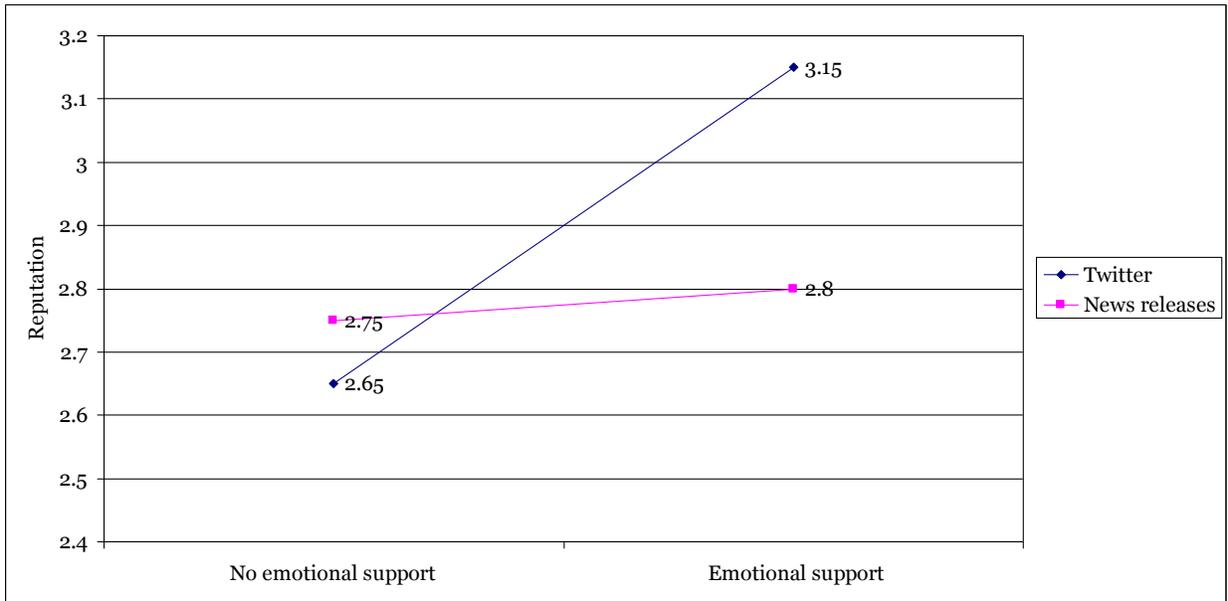


Figure 2. Interaction between Medium and Emotional Support on Reputation ( $p < .05$ ).

## Discussion

### *Theoretical and managerial implications*

The new participatory culture of the Internet is changing the way organizations communicate with stakeholders. Organizations explore Twitter as an additional application and potentially an effective tool for building relationships with the public, including in the situation of a crisis (Schultz *et al.*, 2011). Despite a plethora of discussion on the use of social media in public relations professional publications, research is still needed to provide evidence-based and generalizable guidelines to make the business case for incorporating social media into crisis management practices. Efforts are particularly needed to study the effects of crisis communication via Twitter in comparison to traditional media experimentally. This study is one of the few empirically-based studies in public relations research, using an experiment to extrapolate the effects of social media and emotional support on consumers' crisis appraisal. The hypotheses and research questions were raised based on the premises of Situational Crisis Communication Theory (SCCT). To the best of our knowledge, no effect sizes of using Twitter vs. other traditional media outlets have been reported so far. This study filled in the void of data analyses. The investigation reinforces the need to consider social media not just at the individual level, but also as a form of communication that can have broader consequences at the organizational level. It is our hope that this study yields theoretically indicative and empirically informative results.

Firstly, this study shows that there is significant difference in negative emotions (i.e., anger and sadness), perceived crisis responsibility, organizational reputation, and purchase intention between those who are exposed to Twitter and others who read news releases. The paradigm of using the Internet in crisis communication has shifted from one-way communication, where a corporation delivers information to the public, to two-way communication, where the public has easy access to interact with a company's messaging. Being more interactive and beneficial for relationship building, Twitter is considered a more accommodative medium in crisis communication through which strategic messages are issued. Crises often create opportunities for rapid adoption of new communication technologies (Thelwall & Stuart,

2007). The findings are consistent with previous studies on the effects of using new media on relevant outcomes (e.g. Schultz *et al.*, 2011); showing crisis communication via Twitter generates more desirable reactions compared to messaging via news releases. In general, the results indicate that the more interactive the communicative process has been, the less crisis responsibility the company is perceived to bear; more favorable organizational reputation and purchase intention are sustained. Phillips (2000) argues that the online interactive nature of communication for individuals and groups can be very promising for management practice. Studies report that Internet users prefer interactive information over static information during a crisis (Paul, 2001). Twitter is one of the most intrinsically dialogic medium of social media, a tool to engage in conversation with a variety of constituents (Seltzer & Mitrook, 2007; Gilpin, 2010). This study suggests that organizations should consider adopting and actively using Twitter for crisis management.

Secondly, this study seeks to examine whether incorporating emotional support in crisis response strategies would alleviate participants' stress and result in more favorable post-crisis evaluation. The result demonstrates that delivering messages with emotional support via Twitter significantly lowers the level of crisis responsibility attributed to the company; a more positive organizational reputation is retained. According to SCCT, lower crisis responsibility attribution indicates that the organization is less pressured to put forward excessively accommodative responses, which could jeopardize the organization on the financial front. By strategically using relatively inexpensive crisis strategies to communicate with the public, crisis teams are able to balance the organization's reputational and financial priorities more effectively (Jin, 2010). This finding also sheds light on Coombs and Holladay's (2006) argument that emotion can facilitate the effectiveness of various crisis response strategies. Responding to the emotional needs of the public makes it easier for organizations to elicit more favorable perceptual or even behavioral reactions. As Jin (2010) maintains, when formulating crisis communication plans, public relations managers should integrate appropriate emotional features into their crisis responses to assist the public in coping with negative feelings. Few studies have empirically investigated the question of how to efficiently deliver emotional support, except voicing concerns about relying on journalists to deliver this

type of message since journalists focus on organizations' actions and consequences more than emotions (Liu & Kim, 2011). Filling this gap, our finding suggests that implementing emotional support messages via interactive social media like Twitter is a more effective crisis management strategy. A personalized platform featuring interactive elements with a friendly and informal tone, Twitter is endowed with a human touch compared to the formal news releases. It is the human face attached to Twitter that makes it a better candidate for sending out emotional support messages.

In public relations, Twitter seems to be more of a medium of professional use than a platform which favors the theoretical development of the field, at least directly. The results indicate the complex nature of crisis communication in the new era of socially mediated crisis communication. Organizations no longer have a choice about whether to integrate social media into crisis management; the only choice is how to do so. It is expected that this study will be of academic interest, as well as practical significance. The goal is to improve our understanding of the influence of social media and emotional support, and to assist public relations practitioners in strategizing more effective communications, particular in a time of crisis. Firstly, the changing media landscape requires organizations to adapt quickly and account for the more interactive and transparent nature of relationship building on social media (Gilpin, 2010). PR practitioners may consider a combination of traditional PR tactics (e.g., news releases) and social networking sites (e.g., Twitter) to maximize the use of various communication outlets during a crisis. The effectiveness of interactivity as a persuasive feature in crisis management needs to be further explored in research and practice. As Twitter continues to be the social media application used most often in public relations campaigns, understanding how organizations use the service is valuable for educational and professional purposes. Its text limitations should not be an obstacle for knowledge building and achieving public relations excellence; various organizations can get more out of 140 characters or less (Xifra & Graub, 2010). It is important to properly train public relations practitioners, who appreciate the two-way communication practice and value implementing these tools in a dialogic fashion with consumers. Secondly, the results of this study show that compassion messaging in accidental crisis events mitigates stakeholders' sadness and anger, decrease the attribution to the organization to bear the responsibility, and

better protect organizational reputation. Moreover, Twitter as an interactive social media, represents an optimal platform to implement emotional support strategies compared to traditional news releases.

### *Limitation and Future Research*

The conclusions reached are circumscribed by the research evidence in hand, and caution should be exercised during interpretation. In the meantime, this study introduces several new research ideas for public relations and organizational communication scholars. Firstly, the findings are based on one single fictional coffeemaker crisis, with only one type of crisis examined. This study can be replicated in the future using a real organization undergoing a real crisis. It would be especially interesting to test with multiple organizations facing different types of crises. The study only examines the effects of crisis management during the initial crisis response phase. Additional research is needed for pre-crisis and recovery phases to provide a more thorough and comprehensive picture of the crisis cycle. Secondly, the participants included in this experiment cannot be considered representative. Future research can expand the sample to a more general population with broader representativeness, which possesses more variability of individual factors. Additional research is needed to further segment public groups by media consumption habits and involvement level with the organization in crisis. Thirdly, this study uses one approach (i.e., expressing sympathy) to indicate emotional support, future research needs to explore other approaches regarding how to integrate the information supply with emotional support during crises. In addition, participants are only shown the company's Twitter page, future studies should ask participants to follow the organization's Twitter account and view updates from the company, further evaluating how effectively organizations can employ social media during crises. Unfamiliar Twitter users might be confused by the descending order of the messages, which may contribute to the limited effect size. However, in actual use, those consumers who receive information from a company's Twitter account are likely to be savvy users already (Briones *et al.*, 2011). Therefore, the discrepancy found between using Twitter and news releases is likely to emerge in real crisis handling situations as well, which is conducive to the ecological validity.

Social media is an ever-evolving communications tool, and by no means is the cure-all for organizational communication efforts. It should be noted that Internet-related public relations research is still in its growth stage as more new media sites continue to emerge and evolve, and accordingly more studies need to be conducted to keep pace with technological advancements. It would be important for future research to explore the synergistic impact of multiple media sources of crisis information dissemination. A series of field experiments using ongoing real crisis situations would be highly recommended. Lastly, the effect sizes for different factors revealed in this study are fairly small. Future studies need to study the impact of other variables that are closely related to the understanding and evaluation of crisis situations, such as response strategies and consumers' individual differences.

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